

**The Role of Artificial Intelligence in
actioning Customer Insight to manage
Customer Experience throughout the Customer
Journey within Service Organizations in Jordan**

By

Abdulrahman Abdulaziz Kasaji

This thesis is submitted in fulfilment of the requirements for the degree of
Doctor of Business Administration

Supervisors:

Professor Susan Rose

Professor Moira Clark

University of Reading

Henley Business School

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Declaration

I confirm that this is my own work and the use of all material from other sources has been properly and fully acknowledged.

Name: Abdulrahman Kasaji

Date: August 2023

Signature:

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Dedication

In loving memory of my mother, this thesis is dedicated to the memory of my beloved mother, may she rest in peace, whose love and guidance continue to inspire and guide me even though she's no longer with us.

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List of abbreviations

AGI	Artificial General Intelligence
AI	Artificial Intelligence
BDA	Big Data Analytics
BI	Business Intelligence systems
CAQDAS	Computer-assisted qualitative data analysis software
CJ	Customer Journey
CJM	Customer Journey Mapping
CX	Customer Experience
CXBV	Customer Experience-Based View
CXM	Customer Experience Management
DBA	Doctor of Business Administration
DIKW	Data–Information–Knowledge–Wisdom
KBV	Knowledge-Based View
KP	Knowledge Process
MBL	market-based Learning
ML	Machine Learning
NLG	Natural language generation
NLP	Natural language processing
NLU	Natural language Understanding
RBV	Resource-Based View
ROI	Return on Investment
SECI	Socialization, Externalization, Combination, and Internalization
SEM	Structural Equation Modelling
TEA	Touchpoint Effectiveness Analysis

Abstract

Customer experience management (CXM) has emerged as a significant aspect of business strategy, acknowledged for its role in fostering sustainable competitive differentiation. In this context, the utilisation of artificial intelligence (AI) technology in CXM assumes paramount importance, as it enables organizations to revolutionize customer journeys through AI-driven CXM. Such AI advancements hold immense potential in improving customer experience and enhancing organizational performance. However, the CXM field faces challenges in reaching the expected level of maturity. This research focuses on the role of AI in actioning customer insights throughout the Customer Journey (CJ) to manage Customer Experience (CX). The study aims to explore how organizations can effectively utilize AI-derived customer insights to continuously enhance CX and develop a framework for understanding and managing CX based on AI-generated insights within service organizations in Jordan. This includes understanding how AI can be incorporated into the customer insight process and exploring the various ways organizations utilize AI-driven customer insights to comprehend and manage customer experience. Additionally, the research seeks to explore the different ways organisations assess the value of actioning customer insights derived from AI.

Due to the exploratory nature of the topic, a case study approach was deemed appropriate for investigating the contemporary phenomenon in-depth and within its real-life context. The study employed a multiple embedded case study design, with the organization as the holistic unit of analysis and the process of generating and actioning AI-enabled customer insights as the embedded sub-unit of analysis.

The researcher selected four service organizations in the banking and telecommunications sectors that have a customer experience management function, program, or practice in place, have adopted AI technologies, and are accessible and willing to participate. The data collection techniques provided a rich, detailed, and complete picture of the phenomenon under study. Purposeful sampling was utilized to collect evidence from multiple informants within each organization through semi-structured and in-depth interviews and document reviews.

The analysis of the case studies followed the 'stacking comparable cases' approach recommended by Miles and Huberman (2014), which involved within-case analysis, cross-case analysis, and systematic comparison and synthesis. Within-case analysis was used to describe, understand, and explain what happened in a single, bounded context, while cross-case analysis was used to identify themes that cut across cases. Finally, systematic comparison and synthesis were used to compare and contrast findings across sector-specific and all sectors.

The key findings of this thesis contribute to the realms of theory and empirical research, as well as the practical role and implementation of AI in the field of CXM. Firstly, the development of the Customer Experience-Based View (CXBV) framework introduces a significant theoretical advancement, demonstrating AI's transformative implications in CXM. Building upon the Resource-Based View (RBV) and Knowledge-Based View (KBV), the CXBV framework incorporates six critical capabilities central to successful CXM, which include customer experience strategy, customer journey management, customer intelligence approach, agile operations, the CX data-to-value process, and the harnessing of AI capabilities.

Further, this study brings to light the importance of additional dimensions such as customer experience strategy, customer journey management, customer intelligence, and agile operations, collectively substantiating the CX data-to-value creation process. It emphasizes the need for a comprehensive understanding of the transformation of customer data into customer experience actions.

Moreover, this research establishes the intermediary role of customer intelligence in the data-to-value creation process. It posits the necessity of interpreting and understanding customer insights prior to their implementation. The study identifies two specific categories of AI analytics, namely AI-enabled data-to-insights analytics and AI-enabled intelligence-to-action analytics, demonstrating AI's potential to transform customer data into actionable insights.

From a practitioner standpoint, this thesis offers actionable insights and recommendations, particularly tailored to the telecommunications and banking sectors. The study's findings provide insights into how organizations can leverage AI-generated customer insights to manage customer experience effectively. This is exemplified by strategies such as providing customized consumer experiences, delivering seamless customer service across touchpoints, innovating, and developing data-driven products, and refining organizational processes. The research also highlights the importance of assessing the value of AI-generated customer insights, which can enable organizations to optimize their CXM strategies and improve customer loyalty.

Lastly, the findings illuminate the immense latent value of AI-generated customer insights in enhancing various customer experience outcomes. It outlines how AI can enhance customer satisfaction, loyalty, and even facilitate revenue growth while enabling strategic customer acquisition. Furthermore, AI's predictive capabilities are highlighted as instrumental in facilitating proactive decision-making and aligning business strategies with future trends and customer expectations. These findings culminate in providing a comprehensive scholarly understanding of the intersection of AI and CXM in the business and management domain, enhancing the discourse in both academia and industry.

1 Introduction

The purpose of this chapter is to introduce the study and present the overall aim of the research. It highlights the intended contributions of the study, provides a summary of the findings, and describes the overall structure of the thesis.

1.1 Origins of Interests and Research Rationale

1.1.1 A Personal Perspective

The origins of my interest and research rationale in undertaking this research on the role of AI in actioning customer insights to manage customer experience stem from both my personal and professional experiences. Throughout my career, I have been deeply passionate about CX and CXM. As a business design, transformation, and consulting professional working at one of the big consulting companies, I have had the opportunity to collaborate with various organizations across different industries. During my interactions with these organizations, I have observed a common challenge they face, a shortage of guidance on how to effectively incorporate AI into their customer experience strategies and initiatives. While many organizations recognize the potential of AI in transforming customer experiences, there is often a lack of clarity on how to leverage AI technologies to their fullest extent. This gap becomes evident when attempting to bridge the gap between theoretical concepts and practical implementation.

Additionally, my previous positions, such as leading a department focused on enhancing customer experience management for one of the biggest communication service providers in the Middle East region, have provided me with valuable insights into the practical challenges of implementing customer-centric strategies. Having witnessed this shortage of guidance firsthand, I became motivated to bridge the gap between AI and customer experience management. I recognized the immense potential of AI to revolutionize the way organizations understand and interact with their customers. In addition to my professional experiences in customer experience management, it is worth noting that I have previously conducted research in engineering at the Master's level. Conducting research in the field of business and management presents unique challenges compared to the natural sciences, as the inquiry in social sciences differs in terms of philosophical orientations, research paradigms, methodologies, and methods. These experiences, coupled with my enthusiasm for the subject, led me to pursue a Doctor of Business Administration (DBA) degree to enhance my business knowledge and develop the skills needed to conduct rigorous and relevant research in the discipline of customer experience management.

1.1.2 A Literature Perspective

The research rationale for my study is deeply influenced by the existing literature on the role of AI in managing customer experience. The literature highlights the growing recognition of customer experience as a sustainable source of competitive differentiation and emphasizes the challenges faced by CXM in achieving maturity (Lemon and Verhoef, 2016; Forrester Research, 2019). Also, the role of AI in enhancing CX within service organizations has gained significant importance in recent years (Hodgkinson et al., 2021). As organizations strive to improve CX in the digital age, the integration of AI has emerged as a promising avenue. However, the combined impact of AI and CX remains relatively unexplored in existing research (Sikandar et al., 2022). The limited number of studies conducted in this specific area underscores the lack of knowledge about AI and CX in combination (Sikandar et al., 2022; Singh et al., 2020). Figure 1-1 illustrates the intersecting disciplines within the thesis, specifically encompassing CXM, AI, and customer insight. Through the integration of these interdisciplinary perspectives, this research endeavours to make contributions to multiple academic disciplines, namely AI, CXM, marketing, and service management.

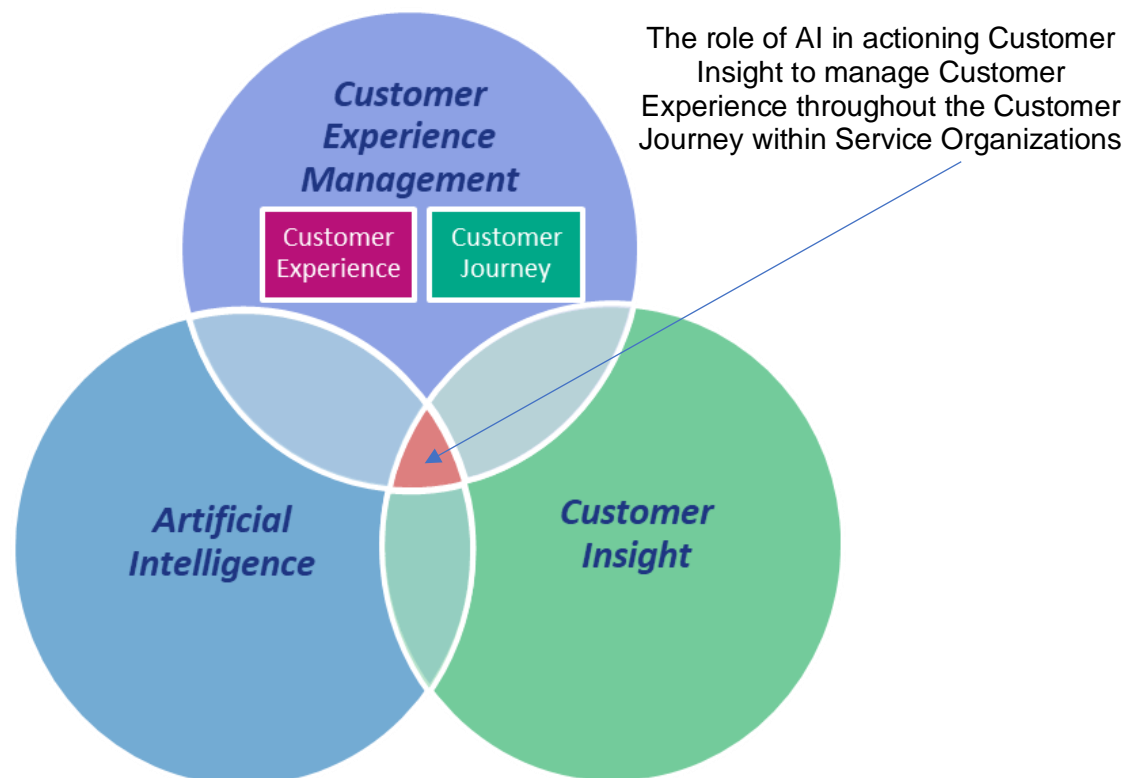


Figure 1-1 The position of the research within different disciplines

The research rationale for conducting a study on the role of AI in actioning customer insights is driven by the growing recognition of the criticality of CX for the success of service organizations (Holmlund et al., 2020; Sikandar et al., 2022).

This research aims to fill this gap by examining how AI can be effectively utilized to manage and enhance CX. By integrating AI into the customer insight process, organizations can leverage AI-driven insights to deliver exceptional customer experiences. This study employs empirical research methods and draw insights from both academic literature and industry practices to provide guidance on the practical implementation of AI-driven customer insights. The research also aims to contribute to the body of knowledge in this field and bridge the gap between researchers' and practitioners' perspectives on how to utilize AI in managing customer experience within service organizations in Jordan.

The significance of this research lies in uncovering the potential benefits of AI in CX management. By conducting in-depth analyses and exploring real-world case studies, this study seeks to offer actionable insights to organizations, bridging the gap between academia and industry.

1.2 Research Outline

1.2.1 Aim of the Research

With the growing number and complexity of customer touchpoints, organizations recognize the need to create positive experiences throughout the CJ to enhance overall performance (Klein et al., 2020; D'Arco et al., 2019). In this context, AI emerges as a disruptive technology with the potential to augment customer insights and enable continuous improvement in the customer experience (Evans, 2017; Ameen et al., 2020). However, there exist gaps in knowledge regarding the effective implementation of AI in CXM and the extraction of meaningful insights (Syam and Sharma, 2018; Singh et al., 2019). Therefore, there is a need to explore and address these gaps to harness the full potential of AI for CXM and gain a competitive edge.

Building upon this background, the aim of this research is to investigate the role of artificial intelligence in actioning customer insight to manage customer experience throughout the customer journey. More specifically, it is the process of actioning AI-enabled customer insights throughout the different customer journey phases that was scrutinized as the literature on this subject is sparse. In addition, the research aims to:

1. Understand the mechanisms of incorporating AI into the customer insight process along the customer journey to manage customer experience.

2. Explore the different ways organisations use AI-derived customer insights to understand and manage CX
3. Explore the different ways organisations assess the value of actioning customer insights derived from AI.

To accomplish this objective, the study centres on the investigation of the following research questions:

- RQ1 – “What is the role of AI on the process of actioning customer insights throughout the CJ to understand and manage CX?”
- RQ2 - “How do organisations incorporate AI technologies into the customer insight to action process to understand and manage CX?”
- RQ3 - “How do organisations use AI-derived customer insights to understand and manage CX?”
- RQ4 – “How do organisations assess the value of actioning customer insights derived from AI?”

The research questions in this study directly align with various relevant disciplines, as show in Figure 1-1, including AI, CXM, and customer insights. AI, which is a central discipline in this research question, as it forms the technology foundation for actioning customer insights and managing customer experience throughout the customer journey. CX is another key discipline directly associated with the research question, as the study focuses on how AI can be employed to enhance the customer experience across the entire customer journey. Customer insights and knowledge management, as a related discipline, holds relevance to the research questions, given that the customer insights theories are relevant to the research questions as they provide a theoretical framework for understanding how organizations can effectively acquire, assimilate, and apply external knowledge to improve their performance. Marketing, as the final relevant discipline, holds relevance to the research questions due to the application of AI in managing customer experience falls within marketing contexts.

By synthesizing these interdisciplinary perspectives, the study aims to effectively address the aforementioned research aims and attain a comprehensive understanding of the role of AI in actioning customer insights to manage customer experience within service organisations in Jordan, specifically, within the telecommunications and banking industries.

1.2.2 Research Design and Methodology

The research design aimed to achieve the research aims, to answer the research questions and to investigate the role of AI in actioning customer insights throughout the customer journey

to manage customer experience and how organizations assess the value of AI-derived customer insights. Due to the exploratory nature of the topic, this research adopts a multiple embedded case study design to investigate the role of AI in actioning customer insights throughout the customer journey, with the organization as the holistic unit of analysis and the process of generating and actioning AI-enabled customer insights as the embedded sub-unit of analysis. Yin (2018) contends that case study research is very well suited when researchers focus on “how” and on a contemporary set of events over which a researcher has little or no control. By focusing on contemporary events in a specific context, case study research also differs from phenomenological research with its focus on understanding experiences, narrative research with its focus on stories told by individuals and ethnographic research with its focus on describing and interpreting culture-sharing groups (Creswell and Poth, 2018; Verleye, 2019). According to Eisenhardt and Graebner, (2007, p. 25) “case studies emphasise the rich, real-world context in which the phenomenon occur” and are “likely to produce theory that is accurate, interesting and testable”.

The researcher selected four service organizations that have a customer experience management function, program, or practice in place, have adopted AI technologies, and are accessible and willing to participate. Purposeful sampling was utilized to collect evidence from multiple informants within each organization through semi-structured and in-depth interviews and document reviews. The data collection techniques provided a rich, detailed, and complete picture of the phenomenon under study.

The analysis of the case studies followed the 'stacking comparable cases' approach recommended by Miles and Huberman (2014), which involved within-case analysis, cross-case analysis, and systematic comparison and synthesis. Within-case analysis was used to describe, understand, and explain what happened in a single, bounded context, while cross-case analysis was used to identify themes that cut across cases. Finally, following the cross-case analysis, the research employs theory elaboration as a technique within the case study approach. Theory elaboration involves refining, expanding, or extending existing theories or conceptual frameworks based on empirical findings obtained from the analysis of specific cases (Smith et al., 2017). By utilizing case studies as a lens to understand the investigated phenomenon, new insights and patterns can emerge that challenge or surpass initial theories (Yin, 2018). Through the process of theory elaboration, empirical evidence from the case studies is integrated to refine or modify existing theories, incorporating new dimensions, variables, or relationships based on observed patterns and findings (Eisenhardt, 1989). This contributes to the advancement of knowledge by enhancing the explanatory power and practical utility of theoretical concepts, thereby refining and validating them (Flyvbjerg, 2006).

The philosophical stance of this research is placed within the critical realist philosophical orientation which has two major methodological implications for the study; firstly, the research philosophical orientation will help to evaluate knowledge according to the explanatory power and practical adequacy of variables explored, to understand the underlying meanings and causal mechanisms underpinning social phenomena (the interaction between people and technology) (Smith, 2006). Secondly, the research philosophy reflects the importance of analysing social phenomena within their real-life contexts (Sayer, 1992) in line with case study research strategy and methodology. Drawing from critical realism, the researcher proposes abduction as a research approach for this study. Such that, the generation of theory from a critical realist position relies on a continued iteration that involves moving beyond the experience of empirical phenomena to hypothesising about the unobservable (Downward and Mearman, 2002; Sayer, 2010).

1.3 The Intended Contributions of this Study

Identifying the intended contributions beforehand of a study is a crucial aspect of academic research. It helps researchers to clarify the purpose and direction of the study, ensuring that their efforts are focused and aligned with specific goals. This clarity enables researchers to allocate resources and design their research methodology, accordingly, optimizing the chances of achieving meaningful and impactful results. This section delves into the intended contributions of the study, as well as evaluate their significance, following the insights provided by (Summers, 2001^a, 2019^b; Easterby-Smith et al., 2015).

Researchers aim to make valuable contributions that fill gaps in the literature, expand theoretical frameworks, and generate new insights. The quality and significance of these contributions take precedence over quantity to ensure the research has substantial and meaningful impact. An original contribution in business and management research refers to a novel and significant advancement or insight that extends existing knowledge in the field, introducing new ideas, theories, methodologies, or empirical findings to contribute to the subject area's understanding and development. The contributions of a study can be broadly categorized as conceptual, empirical, methodological, or contributions to practice. Conceptual contributions refine and enhance definitions, identify new constructs, and develop theoretical linkages. Empirical contributions involve testing theoretical linkages, examining moderator and mediator variables, and assessing psychometric properties. Methodological contributions focus on refining research methodology, such as employing diverse measurement approaches, improving sampling procedures, considering alternative explanations, and enhancing construct validity. Lastly a contribution can be made by research to the development of practical recommendations or solutions that can be applied in real-world settings. This can involve using

research findings to inform policy decisions or developing new tools or strategies that can help organizations or individuals to improve their performance.

The intended contributions of this research are to advance knowledge of the role of AI in incorporating customer insights throughout the customer journey to effectively manage customer experience within organizations. The researcher aims with this research to develop a framework for understanding, monitoring, and managing CX based on customer insights resulting from AI within service organisations. In addition, the researcher aims to bridge researchers' and practitioners' perspectives of how to best tackle the challenges of managing CX within service organisations. Furthermore, the goal of the research is to explore how to action customer insights, generated at different touchpoints along the CJ, which are usually derived through AI and machine learning analytics can aid organisations' efforts to continuously improve CX.

This study aims to make contributions in the following three areas:

- Theoretical contribution:
 - Developing a framework for understanding, monitoring and managing CX based on customer insights resulting from AI within service organisations. This aims to contribute to the theoretical understanding of the role of AI in managing customer experience.
 - Addressing gaps in the literature, enhance the theoretical foundation, provide new insights, and contribute to the methodological advancements in the field.
 - By reviewing the existing literature on AI and customer experience, this study aims to identify the gaps in the literature and develop a new theoretical framework that explains how AI can be used to enhance customer experience in service organizations.
- Empirical Contribution:
 - Through interviews with service organizations in Jordan, this study aims to generate new empirical data on the use of AI in managing customer experience. It aims to provide insights into the current state of AI adoption, the benefits and challenges of using AI, and the impact of AI on customer experience.
 - This study aims to generate new empirical data on the use of AI in managing customer experience in service organizations in Jordan. By conducting interviews and surveys with service organizations in Jordan, this study aims to provide insights into the current state of AI adoption, the benefits and challenges of using AI, and the impact of AI on customer experience.
- Practitioner Contribution.

- Exploring the different ways to action customer insights, generated at different touchpoints along the CJ, which are usually derived through AI and machine learning analytics can aid practitioners' efforts to continuously improve CX, specifically within the telecommunications and banking industries.
- This study aims to provide practical recommendations for service organizations in Jordan on how to effectively use AI to manage customer experience. By identifying best practices and success factors for AI adoption, it aims to help organizations improve their customer experience and gain a competitive advantage.

1.4 Summary of the Research Study Findings

There are six main contributions to knowledge made by this study. These are described in detail in Chapter 6 and summarized here to provide an overall view of the main findings of the study:

Key Finding 1: The study has developed the Customer Experience-Based View (CXBV) framework, which extends the existing Resource-Based View (RBV) and Knowledge-Based View (KBV). The CXBV framework incorporates six key capabilities crucial for successful CX management:

- Customer Experience Strategy: Establishing a well-defined, customer-centric strategy is paramount for delivering exceptional customer experiences.
- Customer Journey Management: Effectively managing the end-to-end customer journey across various touchpoints and channels is essential to provide seamless and personalized experiences.
- Customer Intelligence Approach: The adoption of a robust customer intelligence approach, involving data collection, analysis, and insights generation, is critical for understanding customer needs, preferences, and behaviours.
- Agile Way of Operating: Organizations that embrace agile methodologies and processes can swiftly respond to changing customer expectations and market dynamics.
- CX Data to Value Creation Process: Leveraging customer data and converting it into actionable insights and value-creating initiatives is instrumental in driving business outcomes and customer satisfaction.
- Harnessing AI Capabilities: Integration of artificial intelligence technologies empowers organizations to automate and enhance various aspects of the customer experience, such as personalization, recommendation systems, and chatbots.

Key finding 2: The study has emphasized the need to explore additional aspects such as customer experience strategy, customer journey management, customer intelligence, and an agile way of operating. These aspects serve as vital support for the CX data-to-value creation process and contribute to a more comprehensive understanding of the process of actioning customer insights.

Key finding 3: The research has highlighted the significance of including customer intelligence in the data-to-value cycle between customer insights and customer actions. This intermediary role emphasizes the importance of understanding and interpreting customer insights before implementing them as CX management initiatives.

Key finding 4: The study has identified two distinct categories of AI analytics based on the phases in the data-to-value cycle: AI-Enabled Data to Insights Analytics and AI-Enabled Intelligence to Actions Analytics. These categories signify the diverse roles that AI plays in transforming raw data into meaningful insights and subsequently converting those insights into actionable strategies.

Key finding 5: The study has investigated the ways businesses can effectively harness AI customer intelligence. Through customer experience design, organizations can deliver unparalleled personalized experiences, aligning offerings with individual preferences and needs. Channel and journey optimization enable businesses to create seamless interactions across various touchpoints, fostering customer engagement and conversion rates. By integrating AI insights into innovation and product development, companies can identify untapped opportunities and develop novel offerings tailored to customer demands. Processes streamlining, improvement, and automation empower organizations to optimize operations, boost efficiency, and free up resources for value-adding initiatives. Furthermore, optimizing business performance with predictive insights enables proactive decision-making, aligning strategies with future trends and customer expectations.

Key finding 6: The study has revealed the immense value unlocked by AI-enabled customer intelligence across various customer experience outcomes. Businesses can generate sustainable value by improving customer satisfaction, loyalty, and revenue growth through AI-powered insights. Targeted customer acquisition becomes more precise as AI identifies high-value prospects, optimizing marketing efforts and investments. Proactive customer retention strategies are empowered by AI, predicting and addressing churn risks before they materialize. The personalization potential of AI drives customer loyalty and advocacy, contributing to positive brand reputation and increased word-of-mouth referrals.

1.5 Structure of the Thesis

The thesis is structured into seven chapters, here is an overview of each chapter:

Chapter 1	Introduction	This chapter sets the stage by introducing the study's purpose and overall aim. It includes sections that discuss the research origins, rationale, background, problem statement, research questions, potential contributions, summary of findings, and an overview of the thesis structure.
Chapter 2	Review of the Literature	In this chapter, a thorough analysis and synthesis of existing research in the field are presented. It covers key theories, empirical studies, and identifies gaps in knowledge. The chapter is divided into sections that outline the objectives of the literature review, provide a conceptual background, explore literature overlaps, and summarize the key findings.
Chapter 3	Research Design and Methodology	This chapter focuses on the research design and methodology employed in the study. It discusses the approach taken to address the research questions and outlines the chosen methodology, including data collection techniques and analysis procedures.
Chapter 4	Within-Case Analysis and Findings	This chapter presents the findings derived from the investigation of AI's role in actioning customer insights within individual case studies. It includes sections dedicated to each case study, providing context, data sources utilized, and a meticulous analysis of interview and document findings. Key insights from each case study contribute to the development of a conceptual model and framework.
Chapter 5	Cross-Case Analysis and Findings	Building upon the within-case analysis, this chapter undertakes a comprehensive cross-case analysis. By examining interactions and relationships between individual cases, it identifies overarching themes and patterns, resulting in a more holistic understanding of the role of AI in actioning customer insights to manage customer experience.
Chapter 6	Discussion and Conclusions	This chapter critically examines the previously presented findings in light of the theoretical perspective outlined in the literature review. It formulates novel theoretical contributions, draws conclusions, and offers recommendations based on the research's new theoretical frameworks.
Chapter 7	Contributions, Research Evaluation and Future Research	The final chapter discusses the contributions made by the study, evaluates the research process, and outlines potential avenues for future research. It reflects on the insights gained and their impact on the field of business and management.

2 Review of the Literature

2.1 Introduction

The literature review chapter aims to provide a comprehensive analysis and synthesis of existing research in the field, highlighting the key theories, empirical studies, and gaps in knowledge that serve as the foundation for the current study. This chapter is divided into twelve sections.

The first section of this chapter provides an overview of the objectives of the literature review and details the methodology used to conduct the literature search. The literature search for this study consisted of two distinct phases. The first phase involved a scoping literature review, guided by general research questions, to map critical ideas within the topic. The primary aim of this scoping review was to gain a comprehensive understanding of the breadth of information across various disciplines, including AI, Customer Insight, CX, CJ, and CXM. Following the scoping review, the second phase involved a systematic literature review. This systematic review focused on highlighting and examining the literature overlaps and intersections between the disciplines of AI, Customer Insight, CX, CJ, and CXM. The systematic review not only contributed to the theoretical foundation of the study but also helped establish the research's theoretical positioning, inform the development of research questions, and shape the conceptual framework.

This chapter provides a review of the relevant disciplines and positions this study within three theoretical disciplines that are relevant to the role of AI in actioning the customer insight to manage the CX, namely, CXM, customer insight and AI as depicted in Figure 2-1.

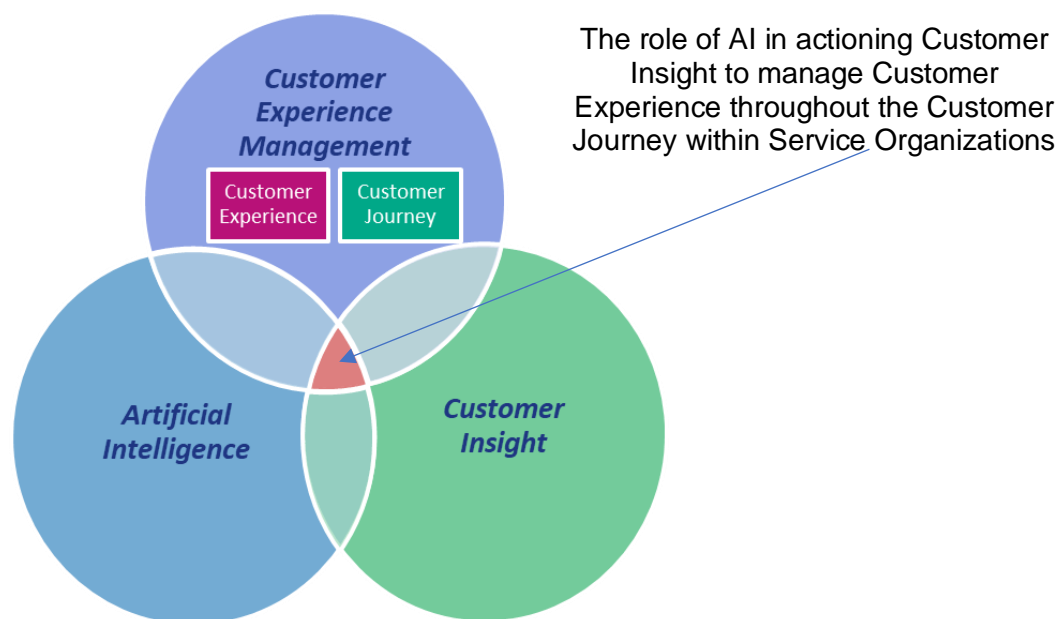


Figure 2-1 The position of the research within different disciplines

Section 2.2 explores into the origins, definitions, and key aspects of customer experience. By exploring the historical development of customer experience, the study gains insights into its evolution and significance in contemporary business contexts. Additionally, the study examines various definitions and interpretations of customer experience to establish a comprehensive understanding of this multifaceted concept. In Section 2.3, the study focuses specifically on CXM. This section begins by providing a definition of CXM, elucidating its core components and objectives. Furthermore, the study explores different perspectives on CXM, considering the diverse viewpoints and approaches adopted by researchers in the field.

Continuing the exploration of customer journey concept, Section 2.4 investigates into the definitions of a customer journey, outlining its stages and categorizing the touchpoints that shape the overall experience. Moreover, the study analyses the intersection between customer experience management and the customer journey, highlighting the synergistic relationship between these two concepts. Section 2.5 centres on customer insight, which plays a pivotal role in understanding customers' preferences, behaviours, and needs. Here, the study examines the definition of customer insight, shedding light on the literature on organizational learning, particularly focusing on market-based learning (MBL), knowledge process (KP) theory, and the concept of absorptive capacity.

In Section 2.6, the literature review shifts attention to AI and its applications in the field of marketing. The study begins by defining AI and exploring its varying levels of intelligence. Subsequently, examines the diverse applications of AI in marketing, showcasing its potential to revolutionize customer experiences. Section 2.7 establishes a crucial link between customer experience management and customer insight. By exploring the interplay between these two disciplines, the literature review highlights the complementary nature of effectively utilizing customer insights to inform and optimize customer experience management strategies.

Expanding upon the previous section, Section 2.8 focuses on the connection between AI and CXM. Here, the study examines how AI technologies can be harnessed to enhance and personalize customer experiences, offering insights into the transformative power of AI in the CXM landscape. Similarly, Section 2.9 investigates the relationship between AI and CI. The study explores how AI can be leveraged to extract meaningful insights from vast amounts of customer data, enabling organizations to gain a deeper understanding of their customers and their preferences. Section 2.10 outlines the key findings from the scoping study and the systematic literature review. In Section 2.11, the study identifies gaps in the existing literature and pose research questions that aims to guide future investigations. Finally, Section 2.12 concludes the literature review chapter, summarizing the main points discussed and setting the stage for the subsequent chapters of this research study.

2.1.1 Objectives of the literature review

The purpose of this literature review is to critically analyse the extant body of knowledge on the role of AI in actioning customer insights to manage customer experience throughout the customer journey in service organizations, specifically within the telecommunications and banking industries. Through an extensive review of relevant literature, this chapter aims to identify key themes, gaps, and opportunities for future research in the intersection of AI, customer insights, and customer experience management.

The literature review serves several critical purposes in academic research. First and foremost, it provides a comprehensive understanding of the research topic by reviewing and synthesizing the existing literature. A literature review must convey to the audience the level of knowledge that has been established on a certain topic and details about previous research. This helps researchers avoid “reinventing the wheel” and find out what remains to be done in the field and build upon that foundation. According to Cooper (2016), a literature review “provides an overview of previous research on a topic that critically evaluates, classifies, and compares what has already been published” (p. 9). This comprehensive understanding of the topic can help researchers identify key themes and concepts that have been explored in previous studies and provide a foundation for the development of research questions and hypotheses. Second, a literature review helps researchers to identify research gaps and areas for future investigation. According to Fink (2019), a literature review “helps identify what has been done, what has not been done, and what needs to be done” (p. 8). This identification of research gaps and areas for future investigation is critical because it can guide the development of research questions and hypotheses and inform the design of the research study. Third, a literature review helps researchers to develop hypotheses and research questions. According to Tranfield, Denyer, and Smart (2020), a literature review “can be used to develop hypotheses, research questions, and theoretical frameworks” (p. 140). By synthesizing the existing literature, researchers can identify gaps in the literature that suggest areas for further investigation and generate research questions and hypotheses that can be tested through empirical research. Fourth, a literature review helps researchers to determine the appropriate research methodology and data collection methods. According to Creswell (2014), a literature review “provides the background for the selection of a research design, a research method, and a data collection method” (p. 16). By understanding the existing literature, researchers can identify the most appropriate research design and data collection methods to address their research questions and hypotheses.

Finally, a literature review provides the necessary background information for the development of the research proposal and the justification of the research problem. According to Boote and Beile (2019), a literature review “provides the necessary context and background information for a research proposal” (p. 74). By synthesizing the existing literature, researchers can provide a justification for their research problem and demonstrate the significance of their study.

2.1.2 How the literature search was conducted

To understand the role of AI in actioning customer insights to manage CX throughout the CJ, a literature review was undertaken. This review of the literature involved two phases:

(1) a scoping literature review to 'map' critical ideas within a topic guided by one or more general research questions (Levac et al., 2010). This scoping literature review aims to get a sense of the breadth of the information on the different disciplines i.e., AI, CI, CX, CJ and CXM disciplines. The approach undertaken for scoping the literature followed Arksey and O'Malley's framework (Arksey and O'Malley, 2005) for scoping reviews and Novak's methodology for concept mapping (Novak et. al, 2004).

(2) a systematic literature review of the different disciplines to express the research's theoretical positioning before leading to the development of the study's research questions and the conceptual framework. Systematic literature reviews are an appropriate research method to use at the start of an interdisciplinary research project. It is a type of research synthesis that can be used to create an overview of the state of the art of research on a specific topic (Burgers, Brugman and Boeynaems, 2019). The literature overlaps and intersections between the disciplines of AI, Customer Insight, CX, CJ, and CXM are highlighted and examined in Section 1.3, the literature overlaps section.

2.1.2.1 Conceptual Background

This section provides an exploration of the main pillars of literature that have informed and laid the foundations for this research. Following Arksey and O'Malley's (2005) framework for scoping review, a scoping literature review was conducted to examine the extent, range, and nature of the disciplines and concepts. The scoping study aims to assess the relevance and size of the literature, consider cross-disciplinary perspectives, and provide an overview of the theoretical, practical, and methodological history and debates surrounding the field and sub-fields of study. Tranfield et al. (2003) highlight the importance of such a scoping study in this way: "Scoping studies are required to assess the relevance and size of the literature and to delimit the subject area or topic. Such studies need to consider cross-disciplinary perspectives and alternative ways in which a research topic has previously been tackled. The scoping study may also include a brief overview of the theoretical, practical and methodological history debates surrounding the field and sub-fields of study. Where fields comprise of semi-independent and autonomous sub-fields, then this process may prove difficult, and the researcher is likely to struggle with the volume of information and the creation of transdisciplinary understanding." p. 214.

Following Arksey and O'Malley's (2005) framework for scoping review and Novak's methodology for concept mapping (Novak et al., 2004), a comprehensive search was conducted across electronic databases such as EBSCO, Proquest, Emerald, Science Direct and JSTOR. The search utilized keywords related to the research question and review scope, focusing on studies published in English between 2010 and 2023. The identified studies underwent a screening process based on predetermined inclusion and exclusion criteria. Inclusion criteria aligned with the research question and scope, while exclusion criteria ensured the exclusion of studies that did not meet the required quality standards. Key information, including study design, research methods, and key findings, was extracted from the selected studies. (See Appendix A for full details of the scoping study).

2.1.2.2 Literature Overlaps

This section presents a review of the relevant disciplines to express this study's theoretical positioning before leading to the development of the study's research questions which are derived by analysing, synthesising, and harmonising the links between the different theoretical disciplines reviewed in this section. Also, this systematic literature review investigates the integration of the literature on CXM, CJ, CI and AI and delves into the different perspectives and aspects of the role and applications of AI in CJ and CXM disciplines, before leading to the development of the conceptual framework that explains the main areas to be studied and the interrelationships among the key factors, variables, and constructs.

As highlighted by Fink (2005), "A literature review is a systematic, explicit, and reproducible design for identifying, evaluating, and interpreting the existing body of recorded documents" (p.3). This systematic literature review serves multiple purposes, including identifying existing knowledge on the impact of AI on customer insights, CJ, and CXM; identifying new patterns and themes for the conceptual framework; informing the interview guide and protocol development; and utilizing existing literature for comparative analysis and generalizability of findings.

Searches were carried out on Web of Science databases which is considered the most exhaustive sources of scholarly articles and academic productions in the social sciences (Vieira & Gomes, 2009). To ensure the objectivity, transparency, and replicability of the researcher's bibliographic search, the process of the review adopted the steps guided by Tranfield, Denyer, and Smart (2003) (see Appendix B for full details of the systematic literature review).

2.2 Customer Experience Origin, Definitions, and Key aspects

The purpose of this section is to provide a succinct review of literature on CX. This section traces the different definitions of CX, provides details of the conceptualisation of CX in the marketing literature, builds on the literature of CJ to better understand the nature of CX, and how CX is the action object of CXM.

2.2.1 The Origin of Customer Experience

Initial research discussing the nature of CX can be traced to the work of Lawrence Abbott (1955) and can be summarised as “What people really desire are not products but satisfying experiences” (Abbott, 1955: 40). The idea of experience marketing was beginning to emerge when Holbrook and Hirschman advocated the critical role of emotions and introduced the significance of CX as a broad construct underlying consumer behaviour in their article *“The experiential aspects of consumption: consumer fantasies, feelings and fun” in Journal of Consumer Research* and concluded that experiential consumption value is a consumer’s perceptual and relative preference for products or services arising from the individual’s interaction with a consumption setting that facilitates or blocks achievement of their goals or purpose (Holbrook and Hirschman, 1982).

The origin of CX as an idea in marketing can be traced to the publication of Pine and Gilmore, *“The Experience Economy: Work Is Theatre and Every Business a Stage”* (Pine and Gilmore, 1998). The authors conceptualized the idea of “experiences” as distinct from goods and services and had stressed the importance of delivering engaging and memorable customer experiences for customer retention and referral. Other researchers, however, have argued for a much broader view of the CX. Schmitt (1999) took the perspective that CX is holistic in nature and incorporates the customer cognitive, emotional, sensory, social, and spiritual responses to all interactions with a firm. He introduced a five-dimensional model of how companies create experiential marketing. The model comprises five integral components that shape the overall customer experience. Firstly, there are sensory experiences, focusing on the gratifying sensory facets like sight, touch, and smell. Secondly, affective experiences come into play, encapsulating the realm of emotions, encompassing various moods and feelings. The third facet revolves around cognitive experiences, intricately tied to thoughtful and conscious mental processes. On another front, the fourth aspect encompasses physical encounters, behaviours, and lifestyles, all of which contribute to the customer experience, whether in relation to the product itself or its utilization. Lastly, the fifth component delves into social identity experiences, which emerge through connections with reference groups or cultures, entailing the intricate interplay of social context and interpersonal relationships.

2.2.2 What is meant by Customer Experience?

Multiple definitions of CX exist in the literature. For example, Meyer and Schwager (2007) define CX as “The internal and subjective response that customers have to any direct or indirect contact with a company. Direct contact generally occurs in the course of purchase, use, and service and is usually initiated by the customer. Indirect contact most often involves unplanned encounters with representatives of a company’s products, service or brands and takes the form of word-of-mouth recommendations or criticisms, advertising, news reports, reviews and so forth.” (p. 118). Verhoef et al. (2009) explicitly define CX in a retailing context as a multidimensional construct and specifically state that the CX construct is holistic in nature and involves the customer’s cognitive, affective, emotional, social, and physical responses to the retailer. Tynan and McKechnie (2009) view experience marketing as consistent with a Service-Dominant Logic approach (Vargo and Lusch, 2008) and the notion of “value in use” in which the customer jointly determines the value of the good or service offering. Other researchers also adopt a value-in-use approach to understanding CX in which CX is co-created by an alignment between the customer’s goals and an organization’s offering (Lemke, Clark, and Wilson 2010; Rose, Hair, and Clark 2012). In their empirical investigation of CX quality, Lemke et al. (2010) define CX as:

“The customer’s subjective response to the holistic direct and indirect encounter with the firm, including but not necessarily limited to the communication encounter, the service encounter and the consumption encounter.” (p. 848).

De Keyser and colleagues (2015) identified three fundamental principles that constitute the essence of CX. The initial principle underscores that CX invariably originates from interactions between customers and organizations. The subsequent principle asserts that experiences exist on a spectrum stretching from ordinary to extraordinary occurrences (Bhattacharjee and Mogilner, 2014). Ordinary experiences encompass commonplace, frequent activities that transpire in day-to-day life (Carù and Cova, 2003). Conversely, extraordinary experiences are infrequent, atypical, and surpass the boundaries of daily life (Bhattacharjee and Mogilner, 2014). The third fundamental CX principle pertains to its multifaceted nature. De Keyser et al. (2015) characterize CX as a construct that incorporates cognitive, emotional, physical, sensorial, spiritual, and social components, all of which define a customer's direct or indirect engagements with other participants in the marketplace.

By drawing on the concept of CX across different research traditions, Becker and Jaakkola (2020) defines CX “as nondeliberate, spontaneous responses and reactions to offering-related stimuli embedded within a specific context” p.638. However, De Keyser et al. (2020) is much more concerned with the broadness of this CX definition. They argue this definition does not

provide much help to scope and develop a manageable CX program. Expanding upon the aforementioned definition, they elaborate on several aspects. Firstly, they delve into the attributes that signify the characteristics of customer responses and reactions in relation to the components of quality (these attributes mirror how customers respond and react to their interactions with the brand or firm). Secondly, they explore the diverse range of stimuli tied to the offerings, aligning with touchpoint components (these are the junctures where customers and the brand/firm interact). Thirdly, they emphasize the intricate layers of the specific context, tied to context components (these encompass internal and/or external resources available to the customer in a given situation), which collectively culminate in the customer's assessment of value (De Keyser et al., 2020).

Furthermore, CX literature seems highly interrelated with three different marketing concepts: customer centricity, customer value and customer engagement which are now reviewed. First, customer centricity which has set the stage for customer experience by embedding the customer throughout the organisation. For example, “jobs-to-be-done” approach which has been developed by Christensen (Christensen et. al., 2007) focuses on examining and understanding the circumstances that arise in customers' lives that may lead them to purchase a product, thereby regarding the process truly from the customer perspective. Second, the customer value concept assumes that customer value arises from customer experience, considering value as inherently ‘experiential’ in nature (Vargo and Lusch 2008). Value does not reside within a specific product or service, but rather in the experiences derived therefrom (Leroi-Werelds et al. 2014).

Further support for the notion of values as arising from customer experience is provided by service dominant logic where customer value arises at the intersection of a customer and a firm through the process of consumption, in the form of value-in-use which is the customer's functional and/or hedonic outcome, purpose or objective that is directly served through product/service usage (Lusch and Vargo, 2006; Macdonald et al. 2009; Lemke et al. 2010). In their empirical investigation of customer experience quality, Lemke et al. (2010) draw on service-dominant logic to argue that customers appraise their experience with respect to its perceived contribution to value-in-use and propose that value-in-use mediates between experience quality and relationship outcomes such as satisfaction and retention.

Building upon the most prevalent definitions across different research traditions, and for the purpose of this study, this review provides a definition of CX as the main action object of CXM which has a set of distinctive attributes that reflect the nature of customer responses and reactions to interactions with the firm. Also, definition aligns with the CXM framework by Homburg et al. (2015), as explained in section 2.3.1.

2.3 Customer Experience Management Definitions, and Perspectives

The purpose of this section is to provide a brief review of literature on CXM. This section traces the different definitions of CXM and the different perspectives of CXM.

2.3.1 The Definition of CXM

The literature on defining CXM is rather scarce. However, a number of definitions of CXM exist in the literature. Early writings mainly focus on considering CXM as the discipline, methodology, and/or process used to manage a customer's cross-channel exposure, interaction, and transaction with a firm. For example, Schmitt (2003) defines CXM as the process of strategically managing a customers' entire experience with a product or company. In Schmitt's framework, CXM consists of five steps: (1) analysing the experiential world of the customers, (2) building the experiential platform, (3) designing the brand experience, (4) structuring the CX, and (5) engaging in continuous innovation. CXM encompasses every aspect of a company's offering, the quality of customer care, but also advertising, packaging, product and service features, ease of use, and reliability.

An important theme emerges from the literature focuses on value creation between the firm and the customer, as stated by Verohef et al. (2009) that CXM is a strategy to engineer the customer's experience in such a way as to create value both to the customer and the firm. Also, according to Arussy (2010) CXM is the science and art of creating, innovating, monitoring and managing the overall framework of the customer where creativity and analytical attitude is needed to maximize the value provided to customers. CXM oversees all interactions with customers across all touch points (Arussy, 2010).

Grewal et al. (2009) argued that CXM is a business strategy that creates a win-win solution for the service provider and its customers. In blending the above definitions, Georgescu and Popa (2014) gave a workable definition of CXM as: "Customer Experience Management is a strategic approach which can be characterized as an ongoing process to create sustainable competitive advantage, by combining both rational and emotional experiences and managing a company touch points wheel effectively. In other word, CEM is the managing of customer's perception and their rational, physical, emotional, subconscious and psychological interaction with any part of the organization. This perception affects consumer behaviour and builds memories, which drives customer loyalty and affects the economic value that an organization generates." (p. 7).

These definitions indicate that CXM is a broad field that attempts deliberately to align the enterprise and various activities in an enterprise ultimately to deliver good customer experiences that satisfy the firm's customers.

Only a few attempts have been made to delineate what CXM entails (e.g., Homburg et al., 2015; De Keyser et al., 2020; Becker et al., 2020; Silva et al., 2021). Some studies refer to CX as something created and offered to customers (e.g., Hamilton and Wagner 2014; Pine and Gilmore 1998), but others emphasize its emergence in customers' minds and suggest it cannot be managed directly (Heinonen et al. 2010; Helkkula and Kelleher 2010). However, Becker et al. (2020) postulate that firms cannot create CX, but they can monitor, design, and manage a range of stimuli that affect such experiences. Other researchers take an organizational perspective in managing CX. For example, Homburg et al. (2015) emphasized the firm-wide managerial implications of CXM through changes in cultural mindsets, strategic directions and the development of firm capabilities. Homburg et al. (2015) defines CXM as *"the cultural mindsets toward customer experiences, strategic directions for designing customer experiences, and firm capabilities for continually renewing customer experiences, with the goals of achieving and sustaining long-term customer loyalty"* (p. 8).

Expanding upon this delineation, Table 2-1 succinctly outlines the fundamental dimensions of CXM. Contemporary scholarly discourse conceptualizes CXM as an elevated-level reservoir encompassing cultural mindsets, strategic orientations, and organizational proficiencies (Homburg et al., 2015). This tripartite construct holds particular relevance in comprehending the comprehensive ambit of CXM and its ramifications for organizational metamorphosis (Malshe & Friend, 2018). Cultural mindsets underscore the importance of cultivating an organizational culture that perceives CX as an integral facet of a market ecosystem, necessitating the acquisition of customer data extending beyond mere inclinations towards sensory and behavioural responses. Strategic orientations posit that shaping CX demands a continual assessment of the essence of the value proposition and the means through which the value inherent in said proposition can be consistently delivered, demonstrating contextual acumen and interconnectivity among touchpoints. Conclusively, this framework identifies four organizational capabilities indispensable for maintaining equilibrium between incremental and transformative market innovations: monitoring touchpoint journeys, prioritizing touchpoints, adapting touchpoints, and designing touchpoint journeys.

Homburg and colleagues showcased that organisations should possess the capacity to orchestrate the trajectory across numerous touchpoints, capitalizing on internal competencies while also engaging in collaborative partnerships to attain and uphold enduring customer allegiance. Within the discourse of this investigation, the adept handling of CX across diverse touchpoints within a CJ assumes a pivotal role, elucidated further in subsequent sections. The present study aligns itself with Homburg's et al. (2015) framework for CXM. The focal point of this research resides in the strategic utilization of customer insights garnered from touchpoints through the application of AI. These insights serve as the operational bedrock for journey design, prioritization, monitoring, and adaptation, concurrently delineating management approaches tailored to various touchpoint categories.

Table 2-1 The key aspects of CXM (Adapted from Homburg et al. 2015)

CXM resource	second-order	CXM first-order resource	Description
Cultural mindsets		Experiential response orientation	The perspective that eliciting cognitive, sensorial, affective, relational, and behavioural customer responses at touchpoints holds equal significance in augmenting customer loyalty.
		Touchpoint journey orientation	The mindset that underscores the primacy of touchpoint journeys spanning pre-purchase, purchase, and post-purchase scenarios as the focal point for market-oriented decision-making across the entire organization.
		Alliance orientation	The perspective that a propensity towards forming alliances to align diverse touchpoints within an individual's contextual sphere contributes substantively to the augmentation of loyalty-fostering experiential responses.
Strategic directions		Thematic cohesion of touchpoints	The directive to expand core touchpoints in alignment with a brand's thematic essence, promising customers the realization of particular lifestyles or activities through the integration of multiple touchpoints.
		Consistency of touchpoints	The guidance to define and adhere to all major elements of corporate identity across an array of touchpoints, ensuring a consistent proliferation of loyalty-enhancing experiential responses throughout customers' touchpoint journeys.

	Context sensitivity of touchpoints	The instruction to establish touchpoints that not only cater to and optimize customers' situational contexts but also leverage the distinctive attributes of these touchpoints to cultivate value-enhancing perceptions along customers' touchpoint journeys.
	Connectivity of touchpoints	The imperative to seamlessly integrate multiple touchpoints across online and offline environments, facilitating seamless transitions between these domains
Firm capabilities	Touchpoint journey design	The competence to strategize potential touchpoint journeys as a mechanism for business planning and modelling, and the dissemination of prerequisites across functionally oriented competencies such as product development, sales, and communications.
	Touchpoint prioritization	The proficiency to oversee the ongoing implementation and refinement of touchpoints, consequently enabling the continual allocation of financial, technical, and human resources by drawing upon data-driven prioritization schemes within a designated planning timeframe.
	Touchpoint journey monitoring	The ability to orchestrate and depict an exhaustive array of touchpoint-specific performance indicators congruent with the organization's touchpoint journey orientation.
	Touchpoint adaptation	The capacity to continually interpret and enrich touchpoint-specific performance indicators through comprehensive customer research, thereby fostering the generation and dissemination of proposals for both incremental and radical new touchpoint journey propositions.

2.3.2 The Different Perspectives of CXM

The existing body of knowledge pertaining to the alignment and suitability of specific management activities with distinct contextual settings, scenarios, and customer typologies remains markedly limited. However, literature discloses that studies within the realm of CXM embody three primary disciplinary perspectives, as succinctly summarized in Table 2-2. This compilation not only elucidates the cardinal research viewpoints evident in the prevailing CXM literature but also underscores the diverse array of disciplinary methodologies adopted for CXM investigations. CXM has emerged as a crucial focal point in contemporary business strategies, aiming to create seamless and captivating interactions for customers across various touchpoints. The multifaceted nature of CXM has attracted attention from diverse disciplinary lenses, each offering distinct insights into enhancing customer experiences. This essay explores into the perspectives offered by the marketing, operations, and human resource management and organizational development disciplines, shedding light on their contributions to the understanding and implementation of effective CXM strategies.

From a marketing standpoint, the significance of crafting compelling customer experiences has prompted a revaluation of the traditional marketing mix. Scholars in this field have advocated for the strategic enhancement of the organizational marketing mix as a means to improve CXs. This entails tailoring product offerings, pricing strategies, promotional efforts, and distribution channels to align with the desired experiential outcomes for customers. Additionally, this perspective has underscored the pivotal role of meticulously mapping and measuring customer journeys. By meticulously plotting the course that customers navigate from initial interaction to post-purchase engagement, organizations gain insights that are integral for refining and optimizing CXs. This approach ensures a comprehensive understanding of touchpoints and their cumulative impact on customer satisfaction and loyalty.

The operations discipline brings to light the intricate and interdependent nature of service systems that underpin CXs. Here, the emphasis lies in orchestrating these systems to create smooth, consistent, and memorable experiences. The operations perspective recognizes that delivering positive CXs requires meticulous attention to detail, synchronization of processes, and efficient resource allocation. Through this lens, organizations explore ways to optimize internal operations, ensuring that each interaction, whether physical or digital, contributes to an

overarching positive impression. This viewpoint acknowledges the operational complexities in achieving seamless customer experiences and underscores the role of robust infrastructures and processes to attain CX excellence.

The human resource management and organizational development perspective investigates into the capabilities necessary for successful CXM. Organizations aspiring to create and sustain superior CXs need to develop and nurture a range of competencies. This includes aligning the workforce with the CXM ethos, fostering a customer-centric culture, and equipping employees with the skills to provide personalized and meaningful interactions. Moreover, this perspective emphasizes the organizational factors that underpin the implementation of CXM strategies. Furthermore, it highlights the critical role played by frontline employees who are the face of the organization and have the power to directly influence customer perceptions. Recognizing the significance of human resources in CXM, this perspective champions the integration of employee engagement and development initiatives into the broader CX strategy.

In early applied writings, the emphasis was predominantly on strategies to augment the organizational marketing mix for the purpose of enhancing CXs (e.g., Pine & Gilmore, 1998; Schmitt, 2003). Recent scholarship, in contrast, gravitates towards the mapping, administration, and evaluation of customer touchpoints throughout the customer lifecycle, often adopting a design-oriented approach to delineate how enterprises can systematically chart and appraise customer journeys (e.g., Edelman & Singer, 2015; Klaus, 2014). The cultivation of positive customer experiences necessitates the harmonious integration of information and processes across a multitude of touchpoints (Frow and Payne, 2007). Furthermore, certain researchers have focused their inquiries on identifying the requisite capabilities for effective CXM implementation (e.g., Homburg et al., 2015; Karpen, Gemser, & Calabretta, 2017; Maklan, Peppard, & Klaus, 2015).

Table 2-2 The different perspective on CXM

Disciplinary Literature	CXM perspective	Literature
Marketing	Enhance the organisational marketing mix to improve CXs	Pine & Gilmore, 1998; Schmitt, 2003; Shaw & Ivens, 2002 ; Ismail et al. (2011)
	Map and measure customer journeys for better CXs.	Edelman & Singer, 2015; Klaus, 2014; Meyer & Schwager, 2007; Clatworthy (2012), Frow and Payne (2007)
Operations	Orchestrate complex service systems to improve CXs.	Patrício, Fisk, & Falcão e Cunha, 2008; Grenha Teixeira et al., 2017; Fawcett et al. (2014)
Human Resource Management & Organisational Development	Capabilities needed for successful CXM.	Homburg et al., 2017; Karpen, Gemser, & Calabretta, 2017; Maklan, Peppard, & Klaus, 2015.
	Role of organisational factors in implementing CEM	Padilla-Meléndez and Garrido-Moreno (2014), Tracey (2014)
	Role of frontline employees in creating positive CX.	Gazzoli et al. (2013),

2.4 Customer Journey Definitions, Stages and Categories

CJ has become an increasingly important concept in marketing and CXM to understand complex customer behaviours and get insights into their experiences. The purpose of this section is to review CJ terminology and approaches within the research literature, mainly from the fields of management, and marketing.

Some researchers argue that even though the concept of customer journeys is one of the most recent topics in contemporary marketing (Marketing Science Institute, 2020), research on customer journeys already began in the 1960s with the buying process (Howard and Sheth 1969). The buying process describes the journey in which customers move from need recognition to purchase and evaluation of the purchased product. While the early work on the buying process primarily focuses on the customer's decision-making process and internal factors, the concept of the customer journey encompasses both internal and external interactions, including touchpoints within the organization. However, digitalization and the associated proliferation of new touchpoints are changing this linear path to purchase into a much more complex journey (Srinivasan, Rutz, and Pauwels 2016). Recent CJ literature has witnessed an expansion in the conceptual breadth of the CJ concept, transitioning beyond the confines of a single service cycle to encompass the broader expanse of CX across multiple service cycles. This progression is exemplified by Siebert et al. (2020), who distinguish between two distinct CJ models: the dominant "smooth journey" model and the alternate "sticky journey" model. In the former, customers experience a cyclical pattern of predictable encounters, engendering loyalty over time, referred to as a "loyalty loop." In contrast, the latter involves unpredictable experiences, fostering customer engagement and involvement, akin to an "involvement spiral." This dichotomy is contextualized by service type, with the smooth journey model ideally suited for instrumental services streamlining tasks, and the sticky journey model tailored for recreational services offering perpetual adventures.

Certain scholars have been particularly invested in scrutinizing the goal-oriented perspective within customer journeys (Halvorsrud et al., 2016; Hamilton and Price, 2019). A notable illustration of this is observed in the work of Becker et al. (2020), wherein the CJ is conceptualized as a hierarchically structured, customer-centric framework characterized by goal-oriented attributes. This delineation provides insight into the iterative cognitive and behavioural processes undertaken by consumers as they navigate towards higher-order goals,

engendering a goal-oriented view of the CJ. The authors present a tri-level framework encompassing the consumer journey, the CJ, and touchpoints. The consumer journey pertains to a consumer's directed efforts toward achieving higher-order objectives, often involving a spectrum of distinct services and activities. Becker et al. contend that by viewing CX as a catalyst for behavioural motivations, the notion arises that negative experiences can contribute to an overall positive encounter, a phenomenon that unfolds while pursuing higher-order objectives. This perspective enriches the comprehension of how consumers formulate goals, endeavour to modify or sustain their experiential circumstances, and ultimately contribute to a comprehensive understanding of the dynamics within customer journeys. They present three key levels of the CJ – the consumer journey, the CJ, and touchpoints. The consumer journey focuses on a consumer's processes toward a higher-order goal and likely involves several distinct services and activities. They argue that by considering CX as a behavioural driver, they postulate that negative experiences can contribute to a positive overall experience that emerges in the process of pursuing a higher-order goal.

2.4.1 Defining Customer Journey

The literature presents a multitude of definitions pertaining to the concept of CJ, commonly accentuating the inherently customer-centric nature inherent in this perspective. For instance, Zomerdijsk and Voss (2010) illuminate that "case study companies often referred to a series of touchpoints as the CJ. The CJ involves all activities and events related to the delivery of a service from the customer's perspective" (p. 74). Patrício et al. (2011) articulate the CJ as "a series of touchpoints, involving all activities and events related to the delivery of the service from the customer's perspective" (p. 182). A parallel sentiment is echoed by Kankainen et al. (2012), who portray the CJ as "the process of experiencing service through different touchpoints from the customer's point of view" (p. 221). These distinct definitions collectively underscore the centrality of customer experience and perception in the realm of CJ analyses.

The concept of the CX journey is commonly defined as the continuous experience encountered throughout the various phases of a service cycle (Følstad and Kvale, 2018). These distinct phases have been variously identified in CJ literature as "pre-purchase, purchase, and post-purchase situations" (Homburg, Jozic', and Kuehnl, 2017, p. 384), "pre-core, core, and post-core service encounters" (Voorhees et al., 2017, p. 270), and "search, purchase, experience, and reflect" phases (Dellaert, 2019, p. 243). Lemon and Verhoef (2016) have presented a

conceptualization of the CJ as a customer's enduring interaction with a firm over time, spanning the pre-purchase, purchase, and post-purchase phases, and traversing multiple touchpoints. Throughout these stages, customers encounter touchpoints, some of which are under the firm's purview, while others are beyond its control. This process is characterized by iteration and dynamism, incorporating prior experiences, including past purchases or consumption episodes, as well as external influences. Previous experiences shape expectations of current encounters, and over time, attitudes towards past experiences can undergo changes.

Much of the existing literature conceptualizes the CJ through the lens of well-established consumer behaviour models (e.g., Howard and Sheth, 1969), resulting in a rather conventional approach. This conceptualization is frequently utilized in studies centred around attribution models (e.g., Li and Kannan, 2014). Notably, the prevailing understanding posits that the complexity of customer journeys has heightened due to the proliferation of customer touchpoints. The increasing array of touchpoints available escalates the intricacy associated with both engaging with customers and managing these journeys effectively. As the touchpoint landscape expands, the challenge of comprehending and orchestrating intricate customer interactions becomes even more pronounced.

A growing body of literature indicates a potential nexus between CJ and CXM, considering CJ as a pivotal avenue for augmenting and orchestrating CX through the systematic monitoring, design, and management of an array of touchpoints that profoundly influence CXs (McColl-Kennedy et al., 2019). This perspective aligns seamlessly with Homburg and colleagues' (2015) definition of CXM, as elaborated in section 2.3 of this study. In a similar vein, this study adheres to the framework laid out by Lemon and Verhoef (2016), underscoring that a customer Journey encompasses three distinct phases, as visually represented in Figure 2-2.

Crucially, it must be acknowledged that a given customer journey can encompass either all or only specific segments of the three phases, namely, pre-purchase, purchase, and post-purchase. The determination of the extent of coverage hinges on the precise objectives and priorities of the company under examination. For instance, an enterprise might be motivated to scrutinize the customer journey solely within the purchase phase in response to customer grievances, or alternatively, they might concentrate their efforts on comprehending the post-purchase phase to address retention-related concerns. Thus, the scope of a customer journey analysis remains adaptable, tailored to address particular facets of the overarching customer experience, thereby offering a flexible framework to cater to distinct organizational objectives.

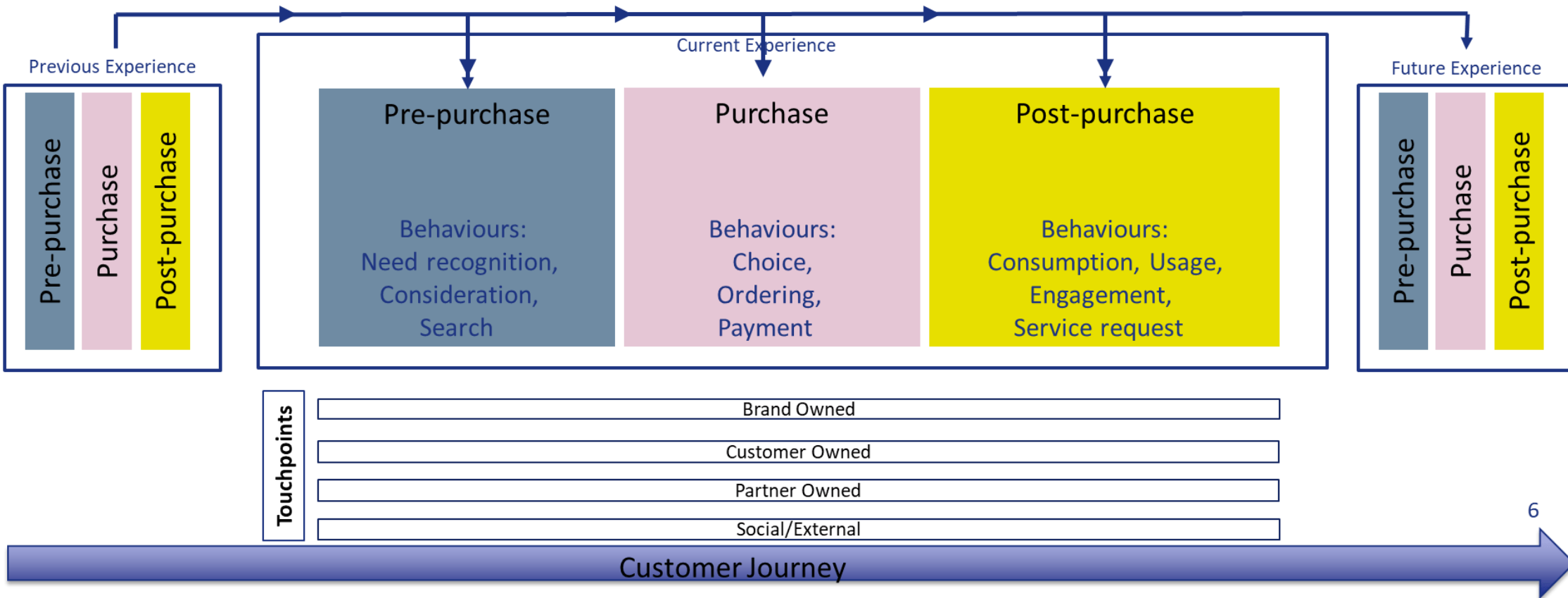


Figure 2-2 Process Model for CJ and Experience

(Adapted from Lemon and Verhoef, 2016)

2.4.2 The Stages of the Customer Journey

The process of the CJ is systematically articulated through three discernible stages:

The initial stage, known as pre-purchase, entails the customer's journey from the inception of a need or goal to the contemplation of fulfilling that need, goal, or impulse through a purchase (e.g., Hoyer, 1984; Pieters, Baumgartner, and Allen, 1995). This phase also encompasses a range of touchpoints that align with diverse customer behaviours, encompassing awareness, need recognition, search, and deliberation. This exposure occurs through various channels such as web content, advertisements, user-generated materials, word-of-mouth, and other stimuli. Significantly, the pre-purchase stage serves to cultivate emotional affinities with the brand, nurturing the connection from the point of need recognition to purchase consideration.

Subsequently, the second stage, the purchase phase, involves consumers utilizing the provided information to make informed selections and proceed with the payment process. Within this stage, a spectrum of touchpoints corresponds to distinct customer behaviours, including the act of choice, order placement, and payment (Lemon and Verhoef, 2016).

The culmination of the journey unfolds in the final stage, the post-purchase phase, encompassing the span of customer interactions with the brand and its surroundings subsequent to the actual purchase. This phase encompasses touchpoints that align with an array of customer behaviours, spanning product usage, consumption, post-purchase satisfaction, referrals, and loyalty (Lemon and Verhoef, 2016). Embracing meticulous design principles, this stage accommodates elements like service recovery, product service experiences, and the dynamic interplay between positive and negative post-purchase engagement phenomena (Lee et al., 2018; Shankar, 2014, 2018). Through these three stages, the Customer Journey unveils a comprehensive narrative of the customer's experience, elucidating their evolving interactions and emotional bonds with the brand across diverse touchpoints.

2.4.3 The Categories of Touchpoints

Touchpoints, delineated as pivotal junctures of interaction between customers and a brand or firm, constitute an assortment of discrete encounters serving specific functions such as information acquisition, payment processing, unboxing, and usage (Homburg, Joz'ic, and Kuehn, 2017; Lemon and Verhoef, 2016). These touchpoints manifest throughout the distinct

phases of the CJ, spanning pre-purchase, purchase, and post-purchase stages, aligning with corresponding consumer behaviours and activities.

Scholarship in this domain classifies touchpoints into distinct categories based on their ownership. These categories encompass touchpoints under the purview of the firm (brand-owned), touchpoints orchestrated by the firm's partners (partner-owned), touchpoints influenced by customers themselves (customer-owned), and touchpoints shaped by external and social forces (social/external) (Lemon and Verhoef, 2016). Remarkably, research by Homburg et al. (2015) underscores the significance of a "touchpoint journey orientation" in organizations, highlighting their emphasis on managing or influencing every touchpoint within the marketplace. Furthermore, touchpoints furnish a strategic compass for the formulation of CX designs, accentuating attributes like coherence and consistency across various touchpoints. Lastly, the process of touchpoint design, prioritization, monitoring, and adaptation serves as a mechanism through which firms cultivate the capabilities essential for the continual refinement of CX, demonstrating the dynamic interplay between touchpoint management and the overall enhancement of customer experiences.

2.4.4 CXM and the Customer Journey

Organizations routinely depict and endeavour to manage CX by traversing the comprehensive expanse of the CJ, encompassing an extensive array of touchpoints that symbolize direct or indirect interactions between customers and the organization. Across each of these touchpoints, customers undergo cognitive, affective, behavioural, sensorial, and social responses—precisely the subjective responses elucidated within the CX definition—unfolding throughout the triadic framework of the CJ's three pivotal stages: pre-purchase, purchase, and post-purchase (Voorhees et al., 2017; Kranzbühler et al., 2018; Kuehnl et al., 2019; McColl-Kennedy et al., 2019). Over the course of these distinct stages, customers encounter diverse stimuli, some of which are under the company's jurisdiction, while others may lie beyond their control. This amalgamation of stimuli collectively crafts an intricate "experiential context" from which individualized customer experiences emerge, encapsulating the nuanced interplay of contextual factors that shape the mosaic of customer encounters (Jacob, Pez and Volle, 2021).

The management of customer journeys assumes a pivotal role within the realm of CXM, given that these journeys effectively shape the experience—comprehended as the subjective response of customers towards the company's offerings—across the trajectory of the journey

itself (Lemon and Verhoef, 2016). Effectively steering CX necessitates organizations to concurrently manage a multitude of touchpoints, while also uncovering and effectively managing pivotal "moments of truth" (Homburg et al., 2017; Voorhees et al., 2017). It is noteworthy that the elements influencing CX transcend the confines of the pre-defined and controlled CJ set forth by the service provider (Kandampully, Zhang, & Jaakkola, 2018). In essence, CXM transcends understanding the organizational aspect alone; it encompasses deciphering customer perceptions of the organization and the encompassing ecosystem (Meyer & Schwager, 2007). Consequently, successful CXM mandates organizations to harness insights not merely from their proprietary touchpoints, but also from those owned by partners, customers, and external entities (Lemon & Verhoef, 2016). These insights span the digital, physical, and social domains (Bolton, 2018), ultimately aimed at the continuous and proactive refinement of CX to engender customer loyalty and sustainable growth.

A thorough grasp of customer journeys is heralded as a prerequisite for the development of exceptional customer experiences (Kuehnl et al., 2019). Holvorsrud et al. (2016), adopting a design science approach, constructed the Customer Journey Framework (CJF), which encompasses touchpoints, channels, and customer journeys. Additionally, they formulated the Customer Journey Analysis (CJA) within the context of service delivery, designed to model, map, analyse, and compare both planned and actual individual customer journeys. This initiative seeks to identify service gaps and facilitate the enhancement of CX (Halvorsrud, Kvale, and Følstad, 2016).

Although CJ investigations have predominantly concentrated on the utilization of discrete touchpoints, there exists a distinct lack of exploration into how organizations harness the potential of CX data and insights generated from these touchpoints through the integration of AI and Machine Learning (ML). The current understanding of this area remains sparse. To the best of the knowledge presented in this review, limited research has been undertaken to investigate into the role of AI in orchestrating the entirety of the CJ across diverse channels and touchpoints. This underlines a critical area for future inquiry, where the transformative potential of AI in CXM within the realm of multichannel touchpoint engagement remains to be fully explored.

2.5 Customer Insight Definitions and organisational learning literature

The generation of customer insight is a key input into strategic decision making for organizations and is regarded as a strategic tool for managers to analyse customers' needs and measure customers' perception of value that is being created by the company (Wills and Williams, 2004). Customer insight helps in establishing profitable, customer-focused growth (Langford and Schulz, 2006) supporting the organisation's response to environmental change (Smith and Raspin, 2008) as a result of an organization's understanding of present and future customer behaviour (Macdonald et al., 2012).

CX insights are systematically categorized into distinct dimensions encompassing attitudinal, psychographic, behavioural, and market insights (Holmlund et al., 2020). Attitudinal insights delve into customers' dispositions towards their present, past, and future interactions with organizations. In parallel, psychographic insights encapsulate the transient mental states that customers adopt in their engagement with experiences—manifesting as thoughts or emotions—that are inherently influenced by their cumulative experiences. Behavioural insights explore into the actions and decisions undertaken by customers as direct consequences of their encounters. Lastly, market insights equip organizations with the means to evaluate and survey their CX performance vis-à-vis competition, facilitating a comprehensive assessment of the overarching impact on the organization's brand equity (Dixon, Freeman, & Toman, 2010; Hui, Huang, Suher, & Inman, 2013; Wedel & Kannan, 2016; Holmlund et al., 2020). By embracing these diverse facets of CX insights, organizations are equipped to holistically understand, evaluate, and optimize their customer experiences, engendering enhanced competitiveness and fostering brand distinction within the market landscape.

Before proceeding to examine the body of knowledge that inform the use of customer insight, it is important to provide a definition of the customer insight concept.

2.5.1 What is Customer Insight?

An overview of the extent literature offers various theoretical definitions of customer insight and its' use for organisations. In the RBV and KBV of the organization (Day, 1994; Barney, 1997; Hooley, 1998). Customer insight is a strategic asset that shares VRIO characteristics (i.e., value, rarity, inimitability, and organizational embeddedness) that can generate a competitive advantage (Smith et al., 2006). For example, Smith, Wilson, and Clark (2006) define customer insight as knowledge about customers which meets the criteria of an organisational strength; that is, it is valuable, rare, difficult to imitate and of potential use. Similarly, literature views customer insight itself as being an asset to the company (Wills and Webb, 2007). Customer

insight incorporates disciplines like market research, segmentation, and customer analytics, combining transactional and external customer data (Bailey et al., 2009). customer insight is found to support the firm's response to environmental threats and opportunities and helps achieve customer-focused growth (Langford & Schulz, 2006; Smith & Rospin, 2008) as a result of an organization's understanding of present and future customer behaviour (Macdonald et al., 2012). Therefore, customer insight is distinct from customer information, as information requires transformation to generate insight (Smith & Rospin, 2008; Smith et al., 2006).

Managers aggregate information, tacit information and explicit information, from multiple sources, including market research, database analytics, customer and market intelligence (explicit information) and managers' cognitive processing, their knowhow and their experiences (tacit information) into a customer insight (Smith and Culkin, 2001; Wills and Williams, 2004).

Having defined what is meant by customer insight, and for the purpose of this study while also ensuring customer insight actionability, this study follows Smith, Wilson, and Clark (2006) data-to-value process cycle, as depicted in Figure 2-3. Table 2-3 provides definitions of types of firm-generated knowledge regarding customers.

Table 2-3 Data to Value Cycle (Adapted from Smith, Wilson and Clark, 2006)

Term	Definition
Customer data	Customer data is the recording of transactions or interactions with customers, quantitatively or qualitatively, explicitly or implicitly.
Customer information	Customer information is data which has been organised into patterns
Customer knowledge	Customer knowledge is information which has been placed into the context of the relevant situation
Customer insight	Customer insight is knowledge about customers which meets the criteria of an organisational strength; that is, it is valuable, rare, difficult to imitate and which the organisation is aligned to make use of.
Marketing actions	Marketing actions are changes to the core, extended or augmented product or service which impact significantly on the customer
Customer value	Customer value is the degree to which the customers' preference for a product or service is changed by marketing actions

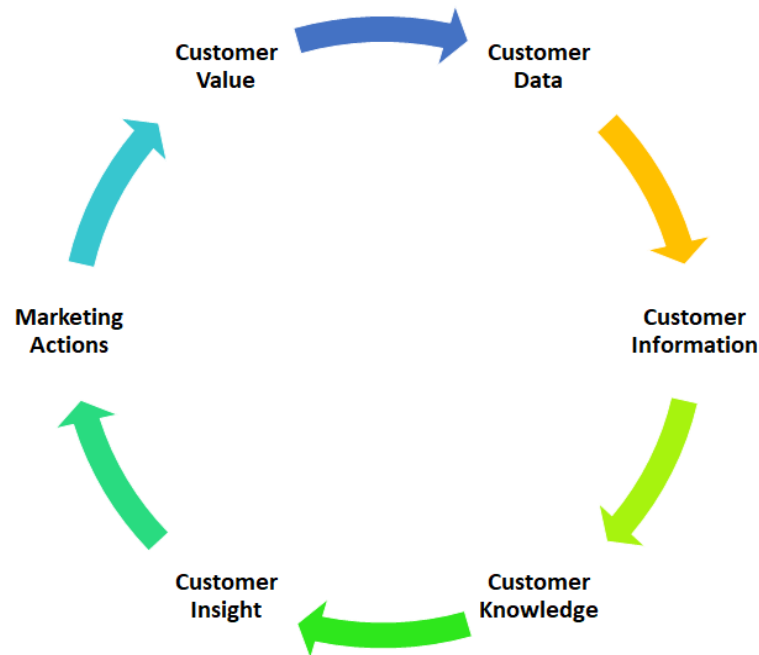


Figure 2-3 The data-to-value cycle (Adapted from Smith, Wilson and Clark, 2006)

2.5.2 Organisational learning literature

The phenomenon of customer insight is largely explained by organisational learning literature. The following section appraise organisational learning literature that are relevant to the use of customer insight: market-based Learning (MBL); knowledge process (KP); and absorptive capacity, each of which will be discussed in the next sections.

2.5.2.1 Market-based Learning (MBL)

MBL theory (Sinkula, 1994; Sinkula, Baker, & Noordewier, 1997; Zahra and George, 2002) elucidates the intricate process of customer insight generation and its subsequent application. Central to the MBL framework are four critical stages of organizational learning that facilitate the generation and dissemination of knowledge across diverse functions within a company: acquisition, assimilation, transformation, and exploitation.

The MBL literature investigates into the intricate dynamics of how organizations harness customer insights to navigate shifts within the market landscape. This is achieved through the adoption of three distinct forms of insight utilization: "action-oriented use," "knowledge-enhancing use," and "development of intelligence for affective use" (Slater and Narver, 2000). These behaviours closely align with the propositions elucidated by Beyer and Trice (1982) concerning the various modes of customer insight utilization within organizations. These modes encompass instrumental, conceptual, and symbolic uses of customer insight. Instrumental use entails the focused application of curated knowledge to address specific issues or dilemmas linked to immediate opportunities (Diamantopoulos & Souchon, 1997; Maltz & Kohli, 1996;

Maltz et al., 2006). Conceptual use centers on leveraging customer insights for broader enlightenment, influencing the cognitive processes of individuals within the organization, thereby influencing choices and behaviours in more indirect ways than instrumental use, which often relates to tangible problem-solving (Beyer & Trice, 1982; Cillo et al., 2010; Maltz & Kohli, 1996). Lastly, symbolic use involves the utilization of customer insights to substantiate and perpetuate previously held positions (Beyer & Trice, 1982). By recognizing these distinct modes of insight utilization, organizations gain a nuanced understanding of how customer insights can be strategically harnessed to steer organizational decisions, actions, and overarching trajectories within dynamic market contexts.

2.5.2.2 Knowledge Process (KP) Theory

Within the realm of KP theory, the evolution of information into knowledge is delineated as a cognitive endeavor characterized by behaviours that cyclically transform explicit knowledge into tacit knowledge and vice versa—an iterative cycle termed the "knowledge spiral" (Boisot and Macmillan, 2004; Crossan et al., 1999; Nonaka and Takeuchi, 1995).

At its core, the KP theory postulates that assimilated market information undergoes a metamorphosis before its propagation among distinct users within the organization. Recognizing the innate complexities of knowledge transfer across individuals (Boisot, 1998), managers are entrusted with the task of translating and reshaping customer, market, and competitor data into coherent narratives, intelligible for fellow managers to comprehend (Boisot and Macmillan, 2004; Crossan et al., 1999; Nonaka and Takeuchi, 1995). In the course of interpretation and application, managers internalize the insights garnered from their interactions with customer intelligence and solidify them within the organizational memory. This learning takes on diverse forms, spanning from individuals' tacit knowledge—an intangible reservoir of personal or implicit knowledge residing within one's cognitive domain (following Polanyi, 1962), encompassing the realm of "know-how" that manifests through practical application (Grant, 1996)—to organizational (explicit) knowledge—an impersonal form of scientific knowledge (after Polanyi, 1962), denoting the sphere of "know-what" that is codified and readily transferable (Grant, 1996), encapsulated within documents or databases. By navigating this intricate knowledge spiral, organizations facilitate the seamless circulation of insights, fostering the dynamic transformation of information into actionable knowledge within an evolving intellectual ecosystem.

2.5.2.3 The Absorptive Capacity

The concept of absorptive capacity encapsulates the dynamic efficacy of a company in acquiring knowledge and systematically harnessing this newfound knowledge to attain a competitive edge over other firms within the market landscape (Zahra and George, 2002).

Studies on absorptive capacity explore into the mechanisms by which organizations bolster their ability to assimilate and leverage new knowledge—a process intricately interwoven across three successive stages: recognition of value, assimilation, and the application of knowledge (Cohen and Levinthal, 1990, p. 128).

Indeed, absorptive capacity represents an organization's dynamic proficiency in not only acquiring but also judiciously harnessing new knowledge to secure a competitive advantage vis-à-vis rival entities (Zahra and George, 2002). This notion of absorptive capacity serves as a metric gauging a company's prowess in assimilating and deploying novel external knowledge—a dynamic that profoundly shapes the organization's ability to channel and apply knowledge within the realms of strategy formulation and execution. Cohen and Levinthal (1990) offer a concise definition, characterizing absorptive capacity as the "aptitude to identify the value of fresh, external information, imbibe it, and strategically employ it for commercial pursuits" (p. 128). The progression towards becoming a learning organization entail honing the ability to augment absorptive capacity by cultivating tacit competencies and nurturing the aptitude to cultivate incentives for prospective research endeavours (Carayannis, 2012). In essence, the notion of absorptive capacity underpins an organization's capacity to evolve, innovate, and thrive in a dynamic market environment by seamlessly integrating and capitalizing upon external knowledge resources.

Having discussed the different organisational learning literature that inform the concept of customer insight, turning now to the implications of such theories on CXM. For instance, customer centricity is defined as the result of the knowledge management process within a firm which involves acquisition, storage and retrieval of customer-centric information and knowledge (Lamberti, 2013). Superior customer knowledge has a positive impact on customer loyalty (Komejani and Mohaghegh, 2017) which in turn translates into competitive advantage (Pereira et al., 2016). Furthermore, knowledge management initiatives focused on customer centricity involve deep tacit components (Wind and Rangaswamy, 2001) such as generating customer intelligence (Lamberti, 2013; Sharma and Sheth, 2004), co-creating value along with them and gathering such tacit information and building the organizational tacit knowledge base (Payne and Frow, 2005).

Overall, the organisational learning theories highlight the interrelationships between customer insights, customer centricity, knowledge management and competitive advantage. However, the extent to which organisation learning literature plays a role in actioning customer insights, remains yet to be understood. Several unanswered questions remain about the role of AI in actioning customer insights which this review aims to address in section 2.9 which deals with linking artificial intelligence and customer insights bodies of knowledge.

2.6 AI Definitions and Applications of AI in Marketing

The purpose of this section is to set the context for this research in relation to AI. Since this research is related to the role of AI in actioning customer insights within service organizations, the first step is to gain an understanding of what AI is. To understand what AI is capable of, it makes sense to look at the definition first; several AI definitions have been explored to build a profound understanding of the term. Also, in order to understand AI better, a close affiliate of AI (Machine learning) is also discussed. Then, the different application on the use of AI in marketing will be discussed.

2.6.1 Defining Artificial Intelligence

AI is a construct with varying definitions and potentially broad interpretations. It makes sense to look at the basic definition first: AI is intelligence exhibited by machines (Russell, Norvig and Chang, 2020). As a starting point it is useful to distinguish between general and narrow AI (Broussard, 2018) based on the level of intelligence at each stage of AI.

2.6.1.1 Level of Intelligence

What constitutes intelligence or in other words, how can a machine possibly think? In today's terminology, we distinguish different evolutionary stages of AI, ranging from application-specific, narrow AI to Artificial General Intelligence (AGI).

Artificial General Intelligence (AGI)

"General artificial intelligence" refers that is, to the intelligence of a machine that can understand or learn any intellectual task that a human being can. Nothing like this currently exists (De Bruyn et al., 2020). Several researchers believe that it would be beneficial if one used the term "AI" only when referring to "artificial general intelligence" (AGI) (Goertzel, 2015; Thórisson, et al., 2015). AGI, or Artificial General Intelligence, is a theoretical form of machine intelligence that represents a level of intelligence equivalent to human capabilities. It is important to note that AGI, as described, is still a goal that has not been fully realized in practice. While significant progress has been made in the field of AI, achieving a self-aware consciousness with the ability to solve problems, learn, and plan for the future at the level of human intelligence remains an ongoing pursuit. Thus, it is crucial to acknowledge that AGI, in its truest form, is yet to be achieved, and current AI systems still exhibit limitations compared to the breadth and depth of human intelligence.

Narrow AI

“Narrow AI” refers to computer software that relies on highly sophisticated, algorithmic techniques to find patterns in data and make predictions about the future. Narrow AI is tailored to a specific problem or task and cannot deal with other challenges without being re-trained and/or modified. Narrow AI systems lack the flexibility of human intelligence; they fall short in terms of the scope of components that comprise human intelligence but can be very powerful in their domain. In fact, they typically aim to beat humans in their specific domain, and once they achieve this, they get a lot of media attention.

AI is a broad concept including and referring to multiple sub disciplines and technologies. The High-Level Expert Group on AI of the European Commission (2020) defines AI as:

“A scientific discipline, AI includes several approaches and techniques, such as:

- ML (of which deep learning and reinforcement learning are specific examples),
- Machine reasoning (which includes planning, scheduling, knowledge representation and reasoning, search, and optimization),
- Robotics (which includes control, perception, sensors and actuators, as well as the integration of all other techniques into cyber-physical systems)”. p. 1.

One classic textbook in the field of AI by Russell and Norvig defines AI as the study of the “general principles of rational agents and on components for constructing them.” “Agents” in this context refers to any system that can perceive the world around it in some way and take action on the basis of those perceptions. Paschen, Pitt, and Kietzmann (2020) offer a knowledge management-oriented conceptualization of AI, focusing on the amalgamation of foundational AI components to convert data into information and knowledge. Their definition characterizes artificial intelligence as “the theory and practice of developing systems (such as machines or computer programs) that receive inputs, process them, and generate outputs to achieve the most favourable expected outcome” (p. 1412). Within their framework, various AI technologies are envisaged as follows:

At the core of their framework lie diverse AI technologies, each weaving its unique thread into the rich body of knowledge management: Natural Language Understanding (NLU) emerges as a key player, empowering AI systems to imbue human language—both spoken and written—with meaning and context (Zhuang et al., 2017). This profound capability is further complemented by NLG, a facet that crafts written narratives in the fluidity of conversational language, establishing a bridge between the machine's output and human comprehension (Kietzmann, Paschen, & Treen, 2018).

Under the overarching umbrella of NLP, AI technologies are primed to decipher the subtleties of human language—interpreting meaning, making decisions, and crafting responses with uncanny fluency (NLG). But the scope of AI transcends linguistic realms, delving into the realm of Computer Vision. This facet translates visual imagery into intricate internal representations, facilitating seamless interaction between different AI technologies (Forsyth & Ponce, 2011). Another facet, Image Generation, embodies the reverse of image recognition, where AI systems, provided with image descriptions—even laden with missing data—synthesize complete images as outputs (Lu & Zhang, 2002). Beyond this, AI's prowess extends to realms of Problem Solving, exemplifying the capacity to navigate a spectrum of alternatives to attain predetermined objectives (Tecuci, 2012).

Reasoning emerges as a cornerstone, as AI harnesses logical principles to derive insightful conclusions from the available data, furnishing a sophisticated layer of cognition (Pecora, 2014). Embedded within this intricate tapestry is Machine Learning (ML)—a suite of techniques enabling machines to learn from experience and refine their performance without rigid predefined rules (Cohen & Levinthal, 1990). Finally, Robotics refers to the incorporation of information in machines that engage with and transform their environment physically (Evans, 2003).

By aligning these facets, Paschen, Pitt, and Kietzmann (2020) delineate a comprehensive panorama of AI, capturing its varied dimensions and applications, and elucidating its pivotal role in transforming raw data into actionable insights and knowledge. Moreover, the definition put forth by Paschen, Pitt, and Kietzmann (2020) holds greater relevance from a marketing perspective as it emphasizes the importance of making optimal decisions based on available information. In this context, Marketing AI can be defined as the development of artificial agents that utilize the information they possess about consumers, competitors, and the company to propose and implement marketing actions aimed at achieving the best marketing outcomes.

Turning now to the historical evolution of Artificial Intelligence (AI), the trajectory is observed to be marked by significant advancements. Initial enthusiasm in the 1950s for computer science milestones led to the exploration of machine capabilities that held potential to match and even surpass human abilities. Researchers theorised that, rather than providing computers with explicit, sequential task instructions, machines could potentially be trained for independent task performance (McCorduck, 2004). As a pivot point in this trajectory, the Summer Research Project on AI, undertaken at Dartmouth University in 1956, is recognised as a seminal event for formalised AI research (McCarthy et al., 1956). This project aimed to create machines capable of utilising language, forming abstractions, solving complex problems, and improving themselves.

Between the 1980s and 90s, Machine Learning (ML) emerged as a critical subfield of AI research. This evolution shifted the focus from fixed-rule systems to those capable of learning from data (Russell & Norvig, 2016). Advancements continued in pace, and by the late 1990s, the union of burgeoning computational power and sophisticated algorithms solidified AI as a powerful tool for such tasks as natural language processing and robotics (Agrawal et al., 2018).

Deep Learning, a subset of ML simulating human brain functions via artificial neural networks, gained prominence in the 2010s (Goodfellow et al., 2016). Factors such as improved computational power, larger datasets, and advanced algorithms equipped Deep Learning with unprecedented potential, evident in tasks like image and speech recognition and natural language processing (LeCun et al., 2015).

This research, positioned within the realm of ML and analytics, capitalises on these historical advancements to obtain valuable customer data insights. As these capabilities evolve, the objective extends beyond solely advancing technology. There is also a need to enhance the understanding of how these advancements integrate with strategic customer experience management. In this context, this research highlights the potential of ML and AI-enabled analytics in actioning customer insights.

For the purpose of this research, the researcher adopts the definition by De Bruyn and team who defines AI as “machines that mimic human intelligence in tasks such as learning, planning, and problem-solving through higher-level, autonomous knowledge creation.” p92. This definition has several advantages: (1) it confines the definition of intelligence to three specific subtasks, (2) it restricts AI to algorithms that autonomously generate new constructs and knowledge structures and (3) focus on the benefits of AI in marketing through the lenses of knowledge creation and knowledge transfer.

Building on above definition, ML is a type of AI that gives machines the ability to learn automatically and improve from experience without being explicitly programmed. ML algorithms detect patterns and learn how to make predictions and recommendations by processing data and experiences rather than by receiving explicit programming instruction. ML is a powerful tool for mining large sets of data, providing marketers the opportunity to gain new insights into consumer behaviour and to improve the performance of marketing operations (Cui, Wong, & Lui, 2006).

2.6.2 Applications of AI in Marketing

The literature on adopting AI in business has highlighted several outcomes; creating more opportunities following sales and marketing trends, enhance customer service through improving responsiveness and efficiency, better social media reach, marketing personalization, better data collection and less marketing costs (Kumar et al., 2015).

AI has been and will continue to dramatically transform marketing (Huang & Rust, 2018; Huang & Rust, 2020; Rust, 2020). Marketing practices such as digital search and advertising, social media interaction, mobile tracking and engagement, online purchase, and in-store shopping experience, are increasingly powered by scalable and intelligent algorithms.

Khan and Qudari (2014) demonstrates the role that AI plays in advancing Business Intelligence systems (BI). It states that BI systems can improve operational efficiency through high level of automation, enhance market trends analysis and reveal undiscovered customer spend patterns. Advances in the field of big data provide marketers the ability to collect and aggregate vast amounts of information, with the ultimate aim of turning data into insight or actionable strategy. AI can greatly assist marketers in this process by drawing conclusions from unstructured data about causes and effects within extremely large data sets. With the ability to detect and extrapolate upon patterns, AI can help marketers identify opportunities and act upon them in real time (Wood, 2011).

Overgoor and team (2019) define business analytics as “the practice and art of bringing quantitative data to bear on decision making.” p. 159. So, marketing analytics is bringing quantitative data to bear on marketing decision making. AI, ML, and data mining are all techniques that can help in making better decisions using data, but there are other related methods, such as classical models that could also be used to develop marketing analytics; thus, though these terms, AI, ML, data mining, and marketing analytics, all overlap and relate to each other, they are distinct in their own right. Marketing analytics involves collection, management, and analysis—descriptive, diagnostic, predictive, and prescriptive— of data to obtain insights into marketing performance, maximize the effectiveness of instruments of marketing control, and optimize firms' return on investment (ROI).

A major difference between AI & ML and more traditional techniques such as linear regression, logistic regression, classification and regression trees, or support vector machines, is that AI & ML can automatically and autonomously identify higher-level constructs in the data. De Bruyn and team (2020) argue that what truly distinguishes recent ML methods from traditional statistical methods is their ability to generate higher order learning, autonomously, and without relying on human expert knowledge. This distinction is built upon in section 2.9 (linking AI and CI section).

AI has become increasingly prevalent in CXM, and there several current applications in CXM, including analysing customer feedback, personalizing customer experiences, forecasting future customer behaviour, understanding customer feedback, streamlining customer service, enhancing customer journey, providing AI-supported solutions, and improving customer satisfaction. For instance, the applications of AI in customer experience management have demonstrated significant potential in transforming various aspects of businesses' interactions with their customers. These applications, offer valuable insights and solutions for enhancing customer experiences and overall business performance.

AI-driven analysis of customer feedback has proven effective in identifying areas for improvement in products and services (Sumitha, 2023). Furthermore, the ability of AI to personalize customer experiences by analysing vast amounts of customer data and providing personalized recommendations has significantly improved customer engagement. The integration of predictive analytics, powered by AI algorithms, enables businesses to forecast future customer behaviour and optimize pricing based on demand, resulting in more informed decision-making processes (Lee et al., 2023). AI's application in sentiment analysis has also proven beneficial, allowing businesses to better understand customer feedback and sentiments to enhance their products and services accordingly.

AI-enabled chatbots have streamlined customer service operations, offering quick and efficient support, freeing human agents to handle more complex issues (Zeng & Li, 2019)). Additionally, AI optimizes each stage of the customer journey by providing personalized recommendations, streamlining processes, and delivering improved customer service. Moreover, AI offers proactive solutions to customers, anticipating their needs and providing AI-supported assistance, leading to increased customer satisfaction and trust in the brand . By building trust and strong relationships through a more pleasant shopping experience, AI contributes to unlocking significant value for businesses, creating a virtuous circle of better service, higher satisfaction, and increasing customer engagement.

Furthermore, AI has empowered behavioural segmentation for targeted products and marketing, enabling personalized product recommendations and targeted marketing campaigns (Dwivedi et al., 2019). Predictive analytics, another valuable AI application, enables businesses to forecast future customer behaviour, anticipate needs, and tailor offerings accordingly. AI's ability to optimize pricing based on demand by analysing market data and customer behaviour ensures competitive pricing while maximizing revenue. Additionally, sentiment analysis powered by AI helps businesses gain insights into customer sentiment, leading to better-informed decisions and improvements in customer experience.

2.7 Linking Customer Experience Management and Customer Insight

This section examines the relationship between customer experience (management) CX(M) and customer insight, as depicted in Figure 2-4.

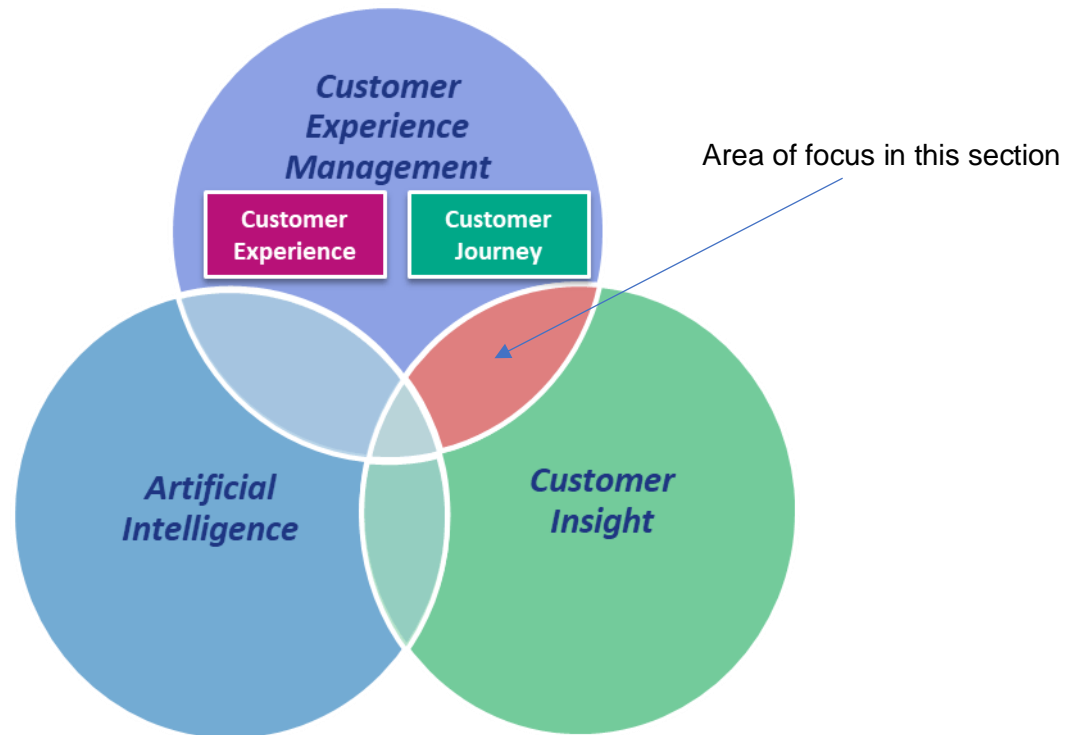


Figure 2-4 The intersection between CXM and customer insight literature

In relation to CX and customer centricity literature, researchers have shown that customer knowledge and customer insight results in customer centricity which is the result of the knowledge management process within a firm which involves acquisition, storage and retrieval of customer-centric information and knowledge (Lamberti, 2013).

Superior customer knowledge has a positive impact on customer loyalty (Komejani and Mohaghegh, 2017) which in turn translates into competitive advantage (Pereira et al., 2016). Researchers show that customer knowledge enhances customer centricity by better understanding the needs and expectations of the customers, which in turn promotes customer loyalty and thereby enhances competitive advantage (Pereira et al., 2016). A variety of methodologies have emerged for categorizing customer knowledge, with the seminal work by Gebert et al. (2003) standing as particularly influential. This taxonomy differentiates three primary forms of customer knowledge: knowledge about customers, knowledge from customers, and knowledge for customers. Another classification pertains to explicit and tacit customer knowledge. Explicit knowledge, often denoted as technical knowledge, primarily

pertains to innovation and co-creation contexts. It embodies solutions to issues that consumers encounter while utilizing products (Busacca et al., 2008; Roberts et al., 2016). This category boasts the advantage of being relatively discernible, capturable, and transferrable. On the contrary, tacit knowledge, while elusive in nature, encapsulates notions, competencies, and experiences that individuals possess but cannot be readily encoded or articulated due to the inherent unawareness of their knowledge and its potential utility to others (Polanyi, 1966).

Diverse varieties of customer knowledge are accessible through distinct data sources. Holmlund et al. (2020) propose that consumer data can be either solicited or unsolicited, as well as structured or unstructured. Among these, unsolicited and unstructured data offer the most significant potential for extracting insights regarding customer experiences, often uncovering concealed and tacit aspects of knowledge (Holmlund et al., 2020). The extraction of customer insights is frequently facilitated through analytical procedures (Wedel & Kannan, 2016).

In relation to customer insights, the realm of CX insights can be methodically classified into three distinctive categories: attitudinal/psychographic, behavioural, and market insights. The first two of these categories pertain to comprehending the underlying factors that wield influence over individuals' perceptions of their customer experience, while the third revolves around discerning an organization's performance in terms of customer experience within the context of the market.

Predominantly, attitudinal/psychographic CX insights garner notable attention from practitioners, who attach significance to comprehending factors such as satisfaction, advocacy, and perceived effort (Dixon, Freeman, & Toman, 2010). An illustrative instance involves the scrutiny of customers' verbal and nonverbal expressions, thereby capturing their affective dimensions, encompassing emotions, moods, and stress (Lu, Cao, Zhang, Chiu, & Fan, 2019). Recent advancements suggest that personality traits like extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience can be inferred through the analysis of user-generated images on social media platforms (Liu et al., 2016).

Shifting to behavioural CX insights, organizations aim to fathom the tangible behavioural demonstrations and repercussions, encompassing actions and decisions, that stem from customer experience. Procuring these insights necessitates the capability to trace consumers' choices across the customer journey. An exemplar in this realm is Google Analytics, providing real-time insights into consumer interactions with the digital touchpoints owned by a company, facilitated by descriptive big data analytics (BDA). Predictive BDA-powered recommendation systems, as observed in entities like Netflix and Amazon, offer tailored consumer suggestions based on past behaviours, streamlining decision-making and encouraging further consumption

(Verhoef, Kannan, & Inman, 2015). In an era dominated by omni-channel dynamics, comprehending behaviours not just in the digital but also in the physical domains becomes pivotal.

Market insights, the third category, yield valuable perspectives for organizations to assess their market standing, brand equity, and competitive positioning. Given CX's role as a sustainable competitive differentiator (Homburg et al., 2017), market insights take on heightened importance as they unveil the performance of organizations concerning customer experience within the broader marketplace context. Monitoring and assessing both an organization's and its competitors' brand messages and visuals can unveil consumer sharing patterns on social media (Villarroel et al., 2018). Further augmented by predictive BDA, these insights equip organizations to monitor market shifts and strategies that safeguard their market share (Wedel & Kannan, 2016). Leveraging online keyword search data from platforms like Google Trends offers a strategic tool for marketing intelligence, facilitating the identification and tracking of overarching market trends.

Building on existing literature and knowledge around the overlap between customer insight and CXM, the discourse has primarily revolved around acquiring insights from individual interactions with a company. Yet, despite the extensive discussions regarding obtaining CX insights from isolated encounters, the current body of research has exhibited limitations in capturing a comprehensive perspective of the CX, particularly in terms of comprehending how customers perceive a sequence of activities encountered throughout their journey towards a specific objective. This broader viewpoint is conspicuously accentuated within the realm of Customer Journeys (CJ), as organizations have progressively shifted their focus from merely overseeing discrete touchpoints within the customer journey to orchestrating the entire continuum of the journey. Furthermore, the practical operationalization of customer insights remains significantly underexplored within the existing literature.

Against this backdrop, this study seeks to bridge the existing knowledge gap by unravelling the intricate role played by AI in effectively translating customer insights into actionable strategies across the entirety of the holistic customer journey. While much attention has been directed towards grasping customer perceptions through distinct interactions, there exists a substantial void in understanding how these insights are harnessed in practice to facilitate the holistic CX journey. Consequently, this research endeavours to elucidate the multifaceted influence of AI in actualizing customer insights within the context of the comprehensive customer journey, thereby shedding light on the uncharted territory where technological advancements intersect with the intricate intricacies of customer behaviour and experience.

2.8 Linking Artificial Intelligence and Customer Experience Management

This section traces the links between AI and CXM, as depicted in Figure 2-5.

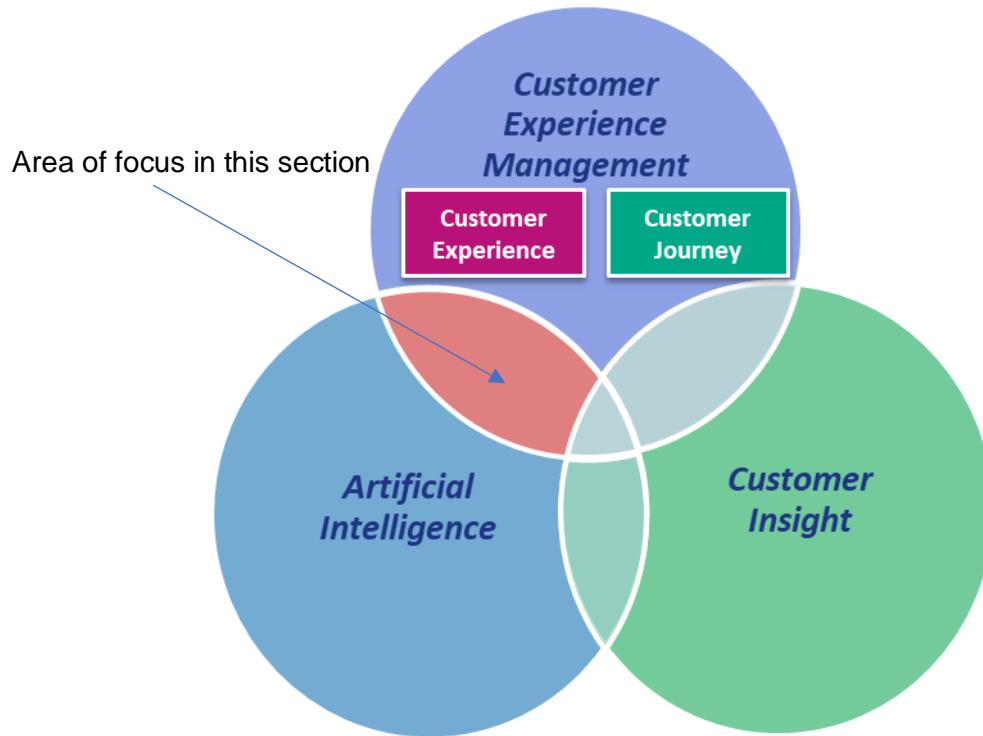


Figure 2-5 The intersection between CXM and AI literature

AI has been and will continue to dramatically transform marketing, including customer engagement, brand loyalty, new business models/products/services, and CX. CX is one of the most influenced disciplines by the superior benefits and applications offered by AI such as advanced data analytics based on ML, enhanced decision making and process automation (Shahid and Li, 2019; Huang & Rust, 2018; Rust, 2020).

According to a study by IBM, organizations use AI to enhance CX in three main areas: improving customer insights where AI can reveal insights that help employees rapidly make informed decisions that impact CX; from refining their overarching CX strategy to providing real-time responses to customer inquiries; and improving customer interaction where organisations can integrate AI into customer-facing experiences or devices that customers can interact with directly, such as chatbots and robots, as well as automation where AI can automate behind-the-scenes processes, such as targeted automated marketing promotions and messaging (IBM, 2018)

Advances in the field of AI and ML provide marketers the ability to collect and aggregate vast amounts of information, with the ultimate aim of turning data into insight or actionable strategy.

AI can greatly assist marketers in this process by drawing conclusions from the data about causes and effects within extremely large data sets. With the ability to detect and extrapolate upon patterns, AI can help marketers to better understand, predict, identify opportunities and engage with customers in real time. (Wood, 2011). Highlighted by Kumar et al. (2015), the strategic implementation of AI agents for the purpose of gathering and analysing both customer and competitor information stands as a pivotal avenue. This approach not only facilitates the responsive tailoring of innovative value propositions but also serves as a catalyst in positioning the company as an avant-garde supplier within the industry.

Within the discourse of AI's influence on brand and marketing domains, certain scholars argue that the most conspicuous impact lies in its potential to optimize operational efficiency. This optimization is manifested through the integration of advanced business systems capable of dissecting customer preferences, thus enabling the organization to curate customer-centric products or services that accentuate the functional advantages extended to the consumer. This pursuit of operational consistency can further be instrumental in upholding the promises that a brand extends to its customer base. Consequently, the confluence of AI within this context emerges as a facilitator of differentiation by augmenting the functional value conferred upon customers, thereby exerting a significant impact on customer perception and brand positioning (West et al., 2017; Nadimpalli, 2017).

In view of all that has been mentioned so far in reviewing the extent literature of CXM, one may view the CX as a journey, comprised of multiple touchpoints over time consisting of value creation elements, discrete emotions, and cognitive responses at touchpoints (De Keyser et al., 2020). This view is supported by Lemon and Verhoef (2016) and McColl-Kennedy et al. (2012) who highlight the importance of both emotions and cognitive responses at the various touchpoint and context over time. Hence, CXM requires organisations to use data stemming not only from their own touchpoints but also from partner-owned, customer-owned, and external touchpoints in the digital, physical, and social realms (Bolton, 2018) with the primary goals of continuously improving CX to achieve customer loyalty and long-term growth.

Several recent studies investigating the ways of leveraging AI along the CJ have been carried out. According to Kietzmann et al. (2018), AI can allow advertisers to deepen their understanding of customer and the CJ by leveraging AI systems such as, natural language processing (NLP), natural language generation (NLG), speech recognition, speech generation, image recognition, image generation, and ML. Researchers also highlight the role of AI in market research and segmentation through utilizing new trends (e.g., chatbots) that applies NLP in order to collect and mine unstructured data such as texts or voice and turn it into meaningful information (West et al., 2017).

ML analytics can be implemented at each stage of the CJ, offering intelligent suggestions when researching and buying, and for onboarding support, customer care and billing. While ML can be applied to every aspect of customer lifecycle management, it is especially useful for marketing campaigns based on personalization, dynamic pricing and churn prediction. It can be a key to revenue generation by converting interactions into insights across CJ. ML also enables service providers to offer personalized content and offerings in real time which improves conversion rates and their share of wallet (O'Boyle, 2018).

For instance, within the pre-purchase phase, information acquired during this stage may be employed to construct customer profiles, aiding marketers in comprehending their clientele's identities, inclinations, and desires. This perspective enables companies to discern customer attributes (demographics) and behavioural tendencies (psychographics) (Hofacker et al., 2016). In the purchase phase of the customer journey, AI mechanisms can effectively monitor consumer sentiments (Kirilenko et al., 2018; D'Arco et al., 2019; Buhalis & Sinarta, 2019) and quantitatively extract customer needs from social media platforms (Kühl, Mühlthaler, & Goutier, 2019). Transitioning to the post-purchase phase, the incorporation of Intelligent Conversational Bots (Pradana et al., 2017) serves a dual purpose by enhancing customer service while concurrently amassing pertinent data. Moreover, the strategic utilization of AI analytics, as emphasized by George and Wakefield (2017), holds the potential to integrate collected data into predictive models, thereby facilitating the timely identification of at-risk customers and the subsequent implementation of tailored strategies as a response.

Kaur et al. (2020) outline three central AI research domains in banking: strategy, process, and customer. The authors propose AI's potential in bolstering operational efficiency, refining customer experiences, and fostering novel business models. Moreover, AI's ability to discern customer needs and preferences can enable personalized services and products. The study highlights AI's applications in banking encompassing fraud detection, credit scoring, chatbots, and virtual assistants, aiding in cost reduction, elevated customer satisfaction, and augmented revenue. Ledro et al. (2022) conduct a literature review focusing on AI in customer relationship management (CRM), suggesting that AI can heighten customer engagement, retention, and loyalty. Personalized marketing messages and offers are also emphasized for increased sales. Similarly, Bahrammirzaee (2010) surveys AI's role in banking, particularly risk management, credit scoring, and fraud detection, which can be refined for augmented revenue. Alshammari et al. (2022) presents an AI-oriented analysis of marketing, asserting AI's value in furnishing tailored recommendations, offers, and messages to enhance customer experiences. AI is also recognized for its potential in refining marketing strategies through better understanding customer needs and preferences.

2.9 Linking Artificial Intelligence and Customer Insights

This section looks at the literature relating to AI and customer insights, as depicted in Figure 2-6.

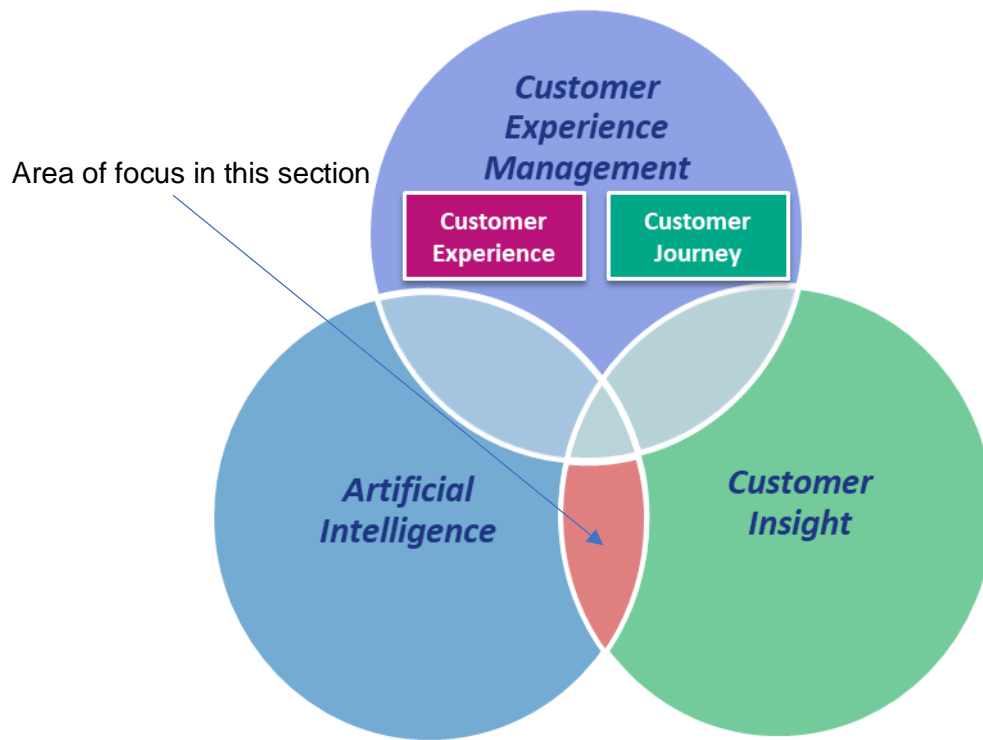


Figure 2-6 The intersection between AI and customer insight literature

Previous studies suggest that a firm's journey from an AI foundation to an AI orientation is akin to the data–information–knowledge–wisdom (DIKW) hierarchy as depicted in Figure 2-7 (Zins, 2007; Campbell et al., 2020), which describes the hierarchical relationship between data, information, knowledge, and wisdom. The hierarchy is used to contextualize data, information, knowledge, and sometimes wisdom, with respect to one another and to identify and describe the processes involved in the transformation of an entity at a lower level in the hierarchy (e.g., data) to an entity at a higher level in the hierarchy (e.g., information). The implicit assumption is that data can be used to create information; information can be used to create knowledge, and knowledge can be used to create wisdom (Rowley, 2007; Ackoff, 1989).

From here, AI and ML functionality transforms useful and relevant data into information. This information, when blended with context, expertise, and intuition, becomes knowledge. Finally, wisdom adds value, which requires the mental function of judgment (Wallace, 2007). For the purpose of this research, the DIKW hierarchy, as shown in Figure 2-7, is extended to the data-to-value process (Smith, Wilson, and Clark, 2006) as explained in section 2.5.

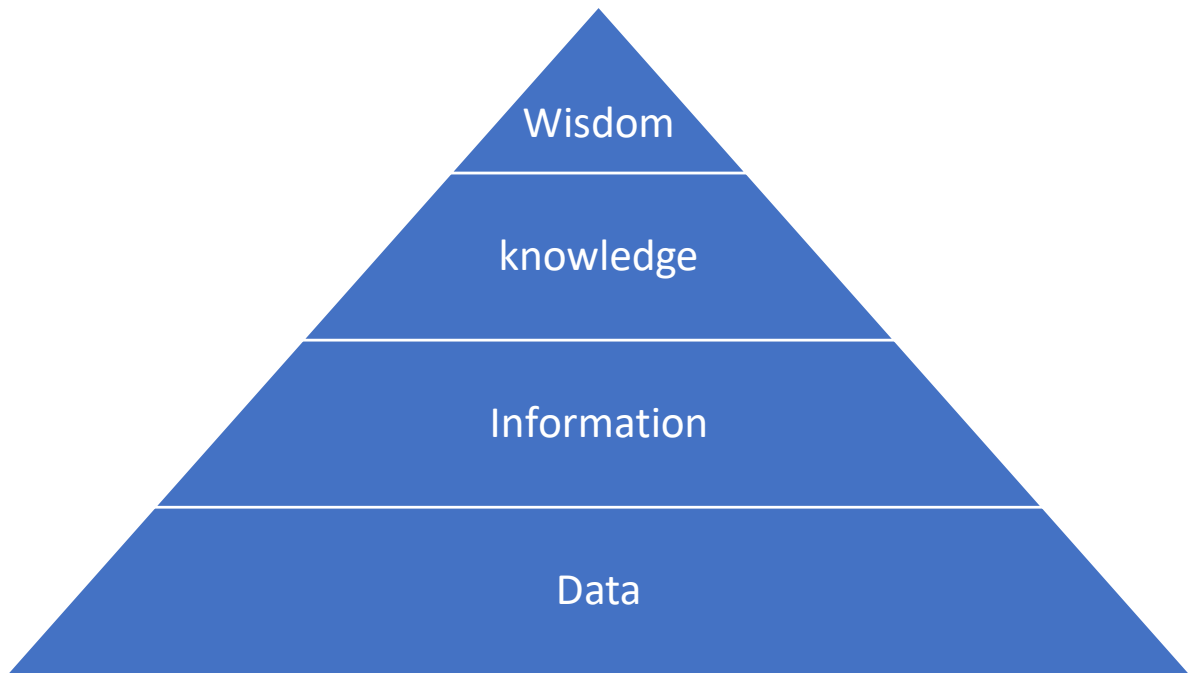


Figure 2-7 The DIKW hierarchy (Source: Ackoff, 1989)

In the Knowledge Process (KP) theory, as explained in section 2.5.2, knowledge can be distinguished conceptually in two categories: explicit knowledge, which is codified and shared through files, documents, databases, repositories that usually form part of knowledge management systems; and tacit knowledge is the knowledge that that which cannot be fully explained even by an expert and can be transferred to another person only through a long period of apprenticeship. Lim (1999) suggests that tacit knowledge comprises of skills and “know-how” that cannot be easily shared.

Tacit knowledge plays an important role in marketing, and its flow within the organization and across marketing functions is a key driver of a firm's competitiveness. The importance of tacit knowledge transfer within a marketing organization applies to AI modelling efforts as well (Atefi et al., 2018; Chan, Li, & Pierce, 2014). Recent research contends that marketing organizations should diligently focus on the transfer of tacit knowledge from various marketing stakeholders to the AI algorithm; but also, from the AI algorithm back to the experts to contribute to organisational memory (De Bruyn et al., 2020).

In the socialization, externalization, combination, and internalization (SECI) model, as depicted in Figure 2-8, addresses the knowledge sharing and the knowledge conversion process that occur in organizations, the model explains how new knowledge is created and managed through the repeated transfer of tacit knowledge to explicit knowledge and back (Nonaka & Takeuchi, 1996).

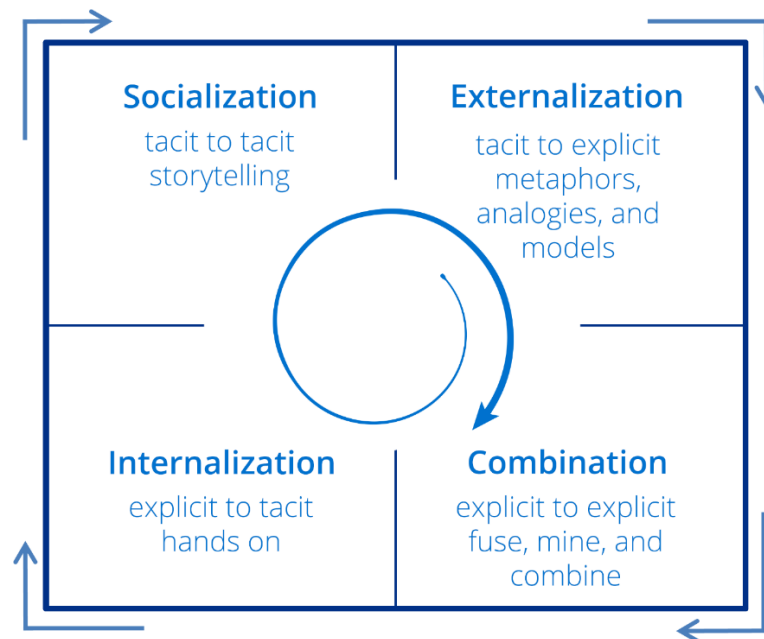


Figure 2-8 knowledge spiral model. Source: Nonaka and Takeuchi (1995)

The same process could be applied to marketing. This means that AI would have also a role, together with humans, in the knowledge conversion, creation and sharing process. Another challenge and opportunity that AI brings is the capability to process and codify knowledge that in traditional KM is considered tacit knowledge, transforming it into explicit knowledge. AI enables the codification of more intuitive and sophisticated knowledge.

Another potential application from an organizational standpoint involves utilizing AI-driven marketing technologies to harness the implicit expertise held by the sales team, thus enhancing the efficacy of marketing endeavors. Through AI-powered mechanisms, latent knowledge can be captured, tested, and subsequently incorporated into algorithms that strike a balance among various stakeholders' interests within the ecosystem (De Bruyn et al., 2020). This approach facilitates the identification of pertinent causal factors by AI applications, facilitating the creation of fresh explicit or formal knowledge. This process of knowledge generation aligns with Nonaka's framework, progressing to the internalization or learning phase, wherein newly generated explicit knowledge contributes to generating new tacit knowledge or refining existing tacit knowledge (Nonaka, 1994).

De Bruyn and colleagues (2020) underscore this as a noticeable gap in the current research. They argue that "AI's capacity to operate independently from experts' implicit knowledge could also be its most significant drawback in fields where tacit knowledge is crucial. This is particularly relevant in numerous marketing disciplines, including advertising, brand management, customer experience, engagement and loyalty, international marketing and joint ventures, service quality, and brand portfolio management" (p. 102).

The transfer of implicit knowledge from human agents (such as marketing experts, front-desk personnel, sales representatives, and consumers) to machines becomes essential for generating novel products, services, solutions, and relationships. In a reciprocal manner, conveying the machine's "learnings" back to human experts becomes vital to pinpoint biases and inaccuracies, cultivate increased trust in AI machines, and instill greater confidence in their decisions.

For the scope of this study, the researcher adopts the definition presented by De Bruyn and colleagues, as elucidated in section 2.6.1, characterizing AI as "machines that emulate human intelligence in activities such as learning, planning, and problem-solving through autonomous higher-level knowledge creation" (p. 92). This divergence from traditional statistical methods hinges on the capacity of contemporary AI applications to autonomously foster higher-order learning devoid of human expert input. The deployment of independent AI models introduces challenges to the practices of knowledge transfer and customer insight processes, whether from expert to AI model or vice versa. While technology has previously been perceived as a conduit for knowledge communication and sharing, the introduction of AI transforms the technology into both a producer and consumer of knowledge.

While certain studies have overtly acknowledged the connections between the process of knowledge creation and transfer and the realm of AI (as evidenced by Campbell et al., 2020; De Bruyn et al., 2020), an analysis of the existing literature brings to light an unexpectedly sparse exploration of this substantive domain. This apparent dearth in research constitutes a knowledge gap that complicates the integration of AI analytics into the customer insight process across the customer journey, aimed at comprehending, quantifying, and overseeing the customer experience. Notably, within the scope of this literature review, no discernible research has been dedicated to comprehending the intricate interplay between the data-to-value cycle (Smith et al., 2006) and the realm of AI.

Hence, this research seeks to address this gap in knowledge by formulating a comprehensive framework that advances understanding, monitoring, and management of customer experience grounded in customer insights harnessed from AI applications within service-oriented organizations.

2.10 Key Findings form the scoping and systematic literature reviews

This section aims to provide a concise overview of the existing literature pertaining to the role of AI in actioning customer insights to manage customer experience throughout the customer journey. The scoping and systematic literature reviews conducted in this study have yielded several key findings that shed light on various aspects of CX, CXM, CJ, CI, AI, and their interrelationships. These findings offer valuable insights for the current research study. This section presents a summary of these findings, providing valuable insights for the current research study.

1. This review aims to extend the notion of CX as the main action object of CXM in a way that firms cannot create the customer experience, but they can monitor, design, and manage a range of touchpoints that affect such experiences, as explained in section 2.2.
2. This study will follow Homburg's et al. (2015) definition of CXM. This research will focus on how to action customer insights resulted from touchpoints through AI as they provide the operational foundation for journey design, prioritisation, monitoring and adaptation and specify management activities that are suited to different types of touchpoints, as explained in section 2.3.
3. This review considers CJ as a means to enhance and manage CX by monitoring, designing, and managing a range of touchpoints that affect CXs (McColl-Kennedy et al., 2019). Also, to be in line with Homburg's et al. (2015) definition of CXM. This study will follow Lemon and Verhoef (2016) and highlight that CJ consists of three phases, pre-purchase, purchase, and post-purchase, as explained in section 2.4.
4. This study follows Smith, Wilson, and Clark (2006) data-to-value process cycle, which describes the relationship between customer data, customer information, customer knowledge, customer insights, marketing action, and customer value, as explained in section 2.5. Such process cycle provides the basis of examining the interrelationship between customer insights, marketing action and value.
5. For the purpose of this research, the researcher will adopt De Bruyn's and team definition of AI. This definition has several advantages: (1) it confines the definition of AI to three specific subtasks, (2) it restricts AI to algorithms that autonomously generate new constructs and knowledge structures and (3) focus on the benefits of AI in marketing through the lenses of knowledge creation and knowledge transfer, as explained in section 2.6.
6. Much of the literature focuses on the BDA analytics use for CXM. However, the contribution of ML analytics has received little attention within the extent literature, as explained in section 2.8.
7. Studies have failed to provide a comprehensive framework in which CX insights are actioned upon throughout the customer journey, as explained in section 2.9

8. Although there is a lot of discussion about gaining CX insights of specific interactions with the company. However, the research to date has failed to capture the holistic customer journey view of the CX by gaining the insight on how customer view a collection of activities that they encountered along their journey to achieve a specific goal, as explained in section 2.9.
9. While some studies have explicitly mentioned the interrelationships between knowledge creation and transfer process and AI, this review of the literature reveals that unexpectedly little research has delved into this substantive area, as explained in 2.9
10. To the best knowledge of this review, no known research has focused on understanding the relationships between the data to value cycle (smit et al., 2006) and AI, as explained in section 2.9.

2.11 Gap in the Literature and Research Questions

Investigating the role of AI in actioning the customer insights to manage CX requires an interdisciplinary view. Thus, throughout this research, literature from other disciplines such as AI and data science that are complementary with marketing discipline was referred to and evaluated. This study draws on three distinct bodies of knowledge, namely, CXM, customer insights, and AI, as depicted in Figure 2-9.

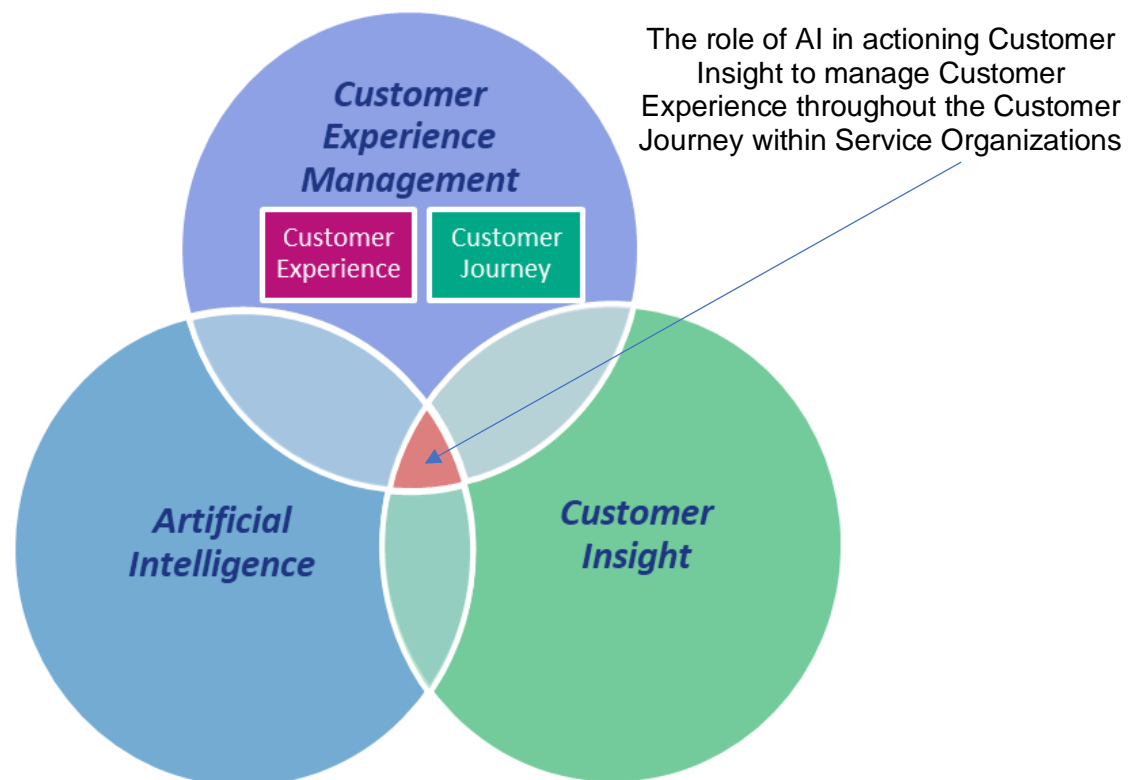


Figure 2-9 The position of the research within different disciplines

AI has become increasingly prevalent in various industries, including CXM. The use of AI in understanding customer insights and optimizing the customer journey has the potential to revolutionize the way businesses interact with their customers. However, there are still gaps in the literature when it comes to the linkages between AI and CXM, AI and customer insights, and AI and the customer journey. This section aims to explore these gaps and highlight the importance of bridging them to fully leverage the potential of AI in managing customer experience.

Given that the primary aim of conducting a literature review in the realm of management research is to generally formulate research inquiries, the process of conducting a "Systematic review of literature" can effectively substantiate and qualify the eventual research question that is posited (Tranfield et al., 2003: p. 212). From the standpoint of synthesizing literature, systematic reviews facilitate the adoption of explicit and rigorous methodologies. By amalgamating findings on a selected theme, the outcomes of such reviews are anticipated to yield a heightened level of comprehension and foster conceptual or theoretical advancement beyond what can be accomplished through individual empirical studies (Tranfield et al., 2003). The research gaps that become evident through a methodical review of existing literature can be delineated as follows:

1. The research to date has not fully captured the holistic customer journey view by examining how customers perceive a collection of activities encountered along their journey to achieve a specific goal. Specifically, there is a lack of research on how customers view the entire journey and how each touchpoint contributes to their overall experience.
2. Although there is literature on customer insight, there is limited research on how companies are practically implementing customer insights. Specifically, there is a lack of understanding on how companies are using customer insights to improve their CX strategies and how they are integrating these insights into their overall business operations.
3. While there is literature on CX frameworks, there is a lack of comprehensive frameworks that provide guidance on how CX insights can be actioned upon throughout the customer journey. Specifically, there is a need for a framework that can help companies identify the most critical touchpoints in the customer journey and how they can use CX insights to improve the customer experience at each touchpoint.
4. To the best knowledge of this review, there has been no evidence on how an organisation can apply different types of AI analytics to different types of CX data, with the aim of gaining different types of CX insights that can be used to take different types of CX actions.

5. Little research has explored into the interrelationships between knowledge creation and transfer process and AI. This represents a gap in knowledge that renders the incorporation of AI analytics into the customer insight process along the CJ to understand, measure and manage CX difficult.
6. Existing literature has yet to explore the intricate relationships between the data-to-value cycle and AI applications comprehensively. While individual studies have separately investigated data-to-value processes and the implementation of AI in various domains, a literature gap persists in providing a cohesive analysis of how these two critical elements interconnect and influence each other
7. Despite the growing recognition of AI's potential in CXM, there exists a gap in understanding the specific linkages between AI and CXM practices. While some studies have explored AI applications in CXM, such as chatbots, recommendation systems, and sentiment analysis, there is a need for a comprehensive framework that illuminates how AI can be effectively leveraged to enhance CXM strategies. Research by Nguyen, Wetzels, and Gruber (2019) emphasizes the importance of understanding the mechanisms through which AI can be deployed to improve customer experiences and drive business outcomes. Therefore, there is a need for further exploration and empirical investigation into the practical implementation of AI in CXM, elucidating the strategies, processes, and outcomes that arise from this integration.
8. Customer insights serve as a valuable resource for organizations to understand customer preferences, behaviours, and needs. However, the literature falls short in addressing the linkages between AI and customer insights. While AI has the potential to analyse vast amounts of customer data, extract meaningful patterns, and generate actionable insights, there is a dearth of research exploring how AI can facilitate the generation and utilization of customer insights within CXM practices. Research by Chen, Ching, and Liu (2019) emphasizes the need for AI-enabled tools and techniques that enable organizations to effectively transform customer data into valuable insights for decision-making. Therefore, further investigation is required to bridge the gap between AI and customer insights, exploring methodologies, algorithms, and frameworks that facilitate the extraction, interpretation, and application of insights derived from AI-driven processes.
9. The customer journey encompasses various stages, touchpoints, and interactions that shape the overall customer experience. However, the literature lacks comprehensive research on the linkages between AI and the customer journey. While some studies have examined specific touchpoints or stages of the customer journey in relation to AI applications, there is a gap in understanding how AI can be integrated across the entire customer journey to deliver consistent and personalized experiences. Research by

Verhoef et al. (2020) highlights the potential of AI in mapping and analysing customer journeys to identify pain points, optimize touchpoints, and enhance overall customer satisfaction. To address this gap, future research should focus on developing AI-driven frameworks that holistically analyse and manage the customer journey, leveraging AI technologies to drive real-time personalization, seamless interactions, and proactive interventions.

10. The customer journey encompasses all the touchpoints and interactions a customer has with a business, from the initial awareness stage to post-purchase support. AI has the potential to optimize each stage of the customer journey by providing personalized recommendations, streamlining processes, and improving customer service. However, there is a gap in the literature when it comes to understanding how AI can effectively support and enhance the customer journey.
11. Another gap in the literature is the limited research on the linkages between AI and customer insights. Customer insights play a crucial role in understanding customer behaviour, preferences, and needs. AI has the potential to analyse vast amounts of data and extract meaningful insights that can inform decision-making processes. However, there is a lack of research on how AI can effectively leverage customer insights to improve CXM.

Figure 2-10 presents a map of the literature illustrating previous research on CXM and literature gaps.

Therefore, in order to achieve the aim of this research and address some of the limitations of previous research, the author aims to address this research by focusing on below proposed areas of research. The study is intent on answering two questions emerging from the literature review above, these gaps in the extant literature led to two research questions (RQs):

- RQ1 – “How can organisations incorporate AI analytics into the customer insight process along the CJ to understand, measure and manage CX?”
- RQ2 – “How to action customer insight at organisational level using AI to improve CX throughout the CJ?”.

However, as the study progressed, characterized by the accumulation of more insights and the development of the conceptual framework, it became necessary to revisit and refine the research questions. The revision of the research questions was aimed at better aligning them with the research objectives and contributing to the knowledge in the field. The revised research questions served as a framework for the subsequent research design and methodology. This process of revising the research questions is catalysed by the ongoing refinement process undertaken in section 3.1.2 of this study.

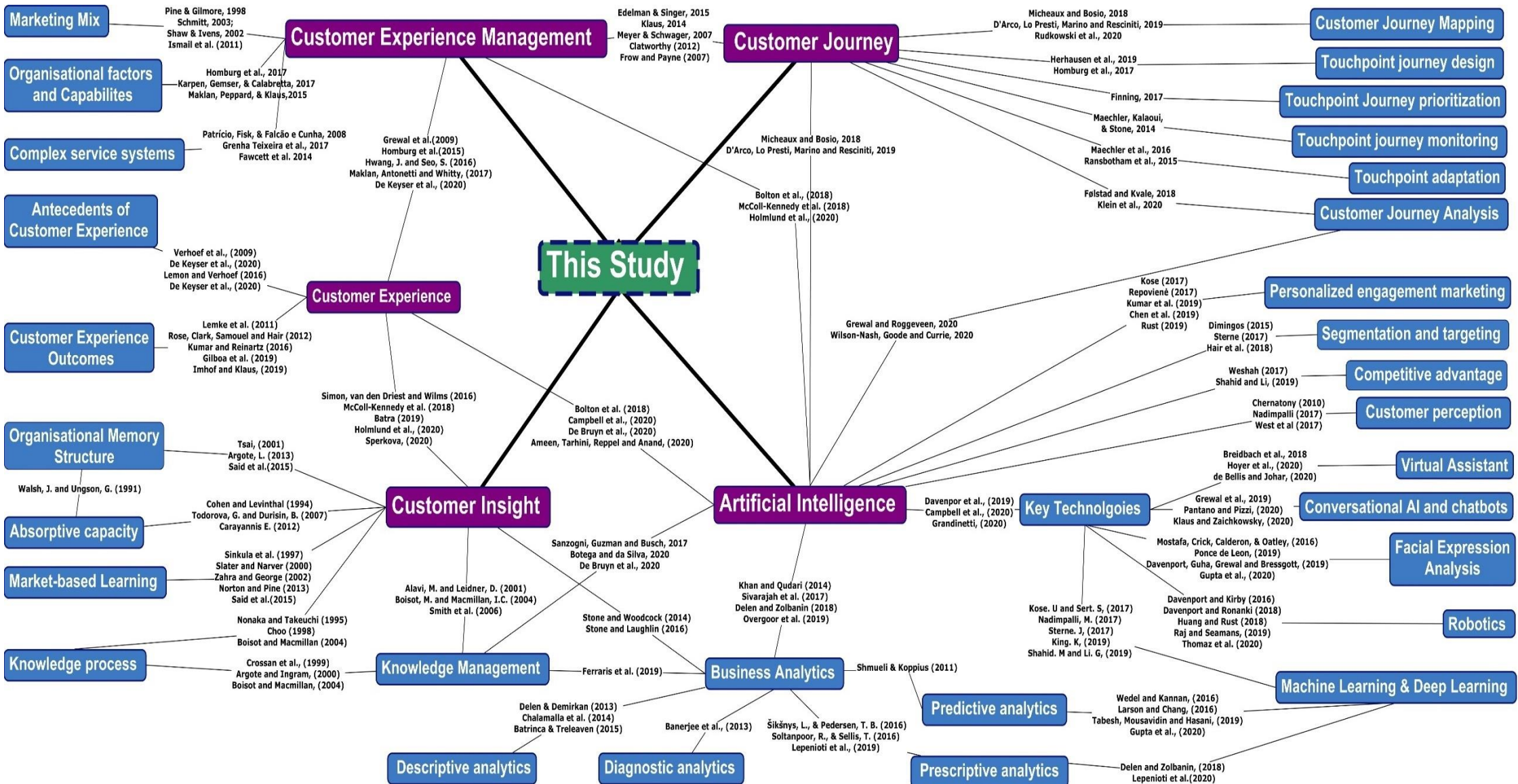


Figure 2-10 Map of the Interdisciplinary literature – CXM, Customer Insight, and AI

2.12 Chapter Summary

The literature review chapter provides an overview of the main pillars of literature that have informed and laid the foundations for the research. It begins with a scoping literature review, which examines the extent, range, and nature of the disciplines and concepts related to the study. The importance of such a scoping study is highlighted, considering cross-disciplinary perspectives and providing an overview of the theoretical, practical, and methodological history and debates surrounding the field and sub-fields of study.

The chapter then presents key findings from the scoping study, focusing on various aspects of CX and CJ. It emphasizes the role of managing touchpoints that affect CX and highlights the relationship between customer insights, marketing action, and customer value. The review also discusses the definition of AI in marketing and its benefits in knowledge creation and transfer.

Following the literature review, the chapter discusses the theoretical positioning of the study and the development of research questions. It highlights the integration of literature on CXM, customer journey, customer insights, and AI, leading to the conceptual framework that explains the main areas to be studied and the interrelationships among key factors, variables, and constructs.

The chapter further presents key findings from the systematic literature review, identifying research gaps in the existing literature. These gaps include the lack of understanding of holistic customer journey views, the need for comprehensive frameworks to action CX insights throughout the customer journey, and the limited research on applying different types of ML analytics to gain CX insights. Additionally, gaps in knowledge regarding the interrelationships between knowledge creation and transfer processes, AI, and the data-to-value cycle are highlighted.

The literature review process for this research was continuous and aimed to consolidate and capture the most recent scholarly works. Throughout the research journey, regular checks were conducted to ensure that the theoretical framework remained comprehensive. By consistently revisiting the literature and incorporating newly published studies, the review process contributed to the richness and relevance of the discussion chapter. This approach allowed for the consideration of the latest insights and developments in the field, ultimately strengthening the overall theoretical foundation of the study.

At the conclusion of this research, an additional literature review was conducted to consolidate and enhance the theoretical framework. This final literature review aimed to ensure that the most recent and pertinent scholarly works were considered, providing an up-to-date understanding of the research field.

3 Research Design and Methodology

This chapter presents the research design and methodology employed in this study. Research design should be “an integrated statement of and justification for the technical decisions involved in planning a research project” (Blaikie, 2007: p. 15), ranging from general assumptions to specific methods of data collection and analysis (Bryman & Bell, 2007; Creswell, 2009). Thus, the research design provides a structure for the empirical procedures to guide its implementation (Grunow, 1995; Bryman & Bell, 2007). On the other hand, Saunders, Lewis, and Thornhill (2019) describe research design as “the blueprint that outlines the overall approach to the research, showing how the key components of the research process fit together.” (p. 85). They emphasize that research design encompasses decisions regarding the research strategy, data collection methods, sampling techniques, and data analysis procedures. Similarly, Sekaran and Bougie (2020) define research design as “the set of decisions and choices made by the researcher that enables them to describe, explain, predict, and/or control the phenomenon under investigation.” (p.22). They highlight that research design involves selecting appropriate research methods, determining the research design type (such as exploratory, descriptive, or explanatory), and designing a research instrument to collect relevant data. Furthermore, Hair, Black, Babin, and Anderson (2019) assert that research design is “the master plan that specifies the methods and procedures for collecting and analysing the needed information.” (P.35). They emphasize that a well-designed research plan incorporates considerations for the research approach, data collection instruments, sampling strategy, and statistical techniques to analyse the collected data.

Five fundamental elements or considerations constitute a research design: (a) RQs and purpose, (b) philosophical perspectives, (c) research strategy, (d) research methodology, and (e) research methods (i.e., data collection and analysis methods) (Partington, 2000; Blaikie, 2007; Creswell, 2009). Each should be aligned with the others to result in a successful study (Partington, 2000).

The research design for this study is explained below in terms of the five elements: The chapter begins by discussing the initial conceptual framework and the revisited research questions that guide the investigation. Subsequently, the philosophical orientation of the study is elaborated upon, followed by an exploration of various research design considerations. The chapter then explores into the research methodology, outlining the fieldwork plan, methods for data collection, and the process for data analysis. Finally, a summary of the chapter is provided, highlighting the key points covered.

At the outset of the research, a preliminary conceptual framework was developed to provide a theoretical foundation for the investigation, as depicted in Figure 3-1. However, as the study

progressed and further insights were gained, it became necessary to revisit and refine the research questions. This section presents the initial conceptual framework and highlights the modifications made to the research questions shown at section 3.1, incorporating the evolving understanding of the research context and objectives. The revised research questions serve as a framework for the subsequent research design and methodology.

As explained in section 3.2, the philosophical orientation underpinning this research is of utmost importance as it shapes the overall approach and interpretation of findings. In this section, the philosophical perspective adopted for this study is discussed in detail. The rationale for selecting a specific philosophical stance, i.e., critical realism is presented, taking into account the ontological, epistemological, and methodological assumptions. The chosen philosophical orientation provides a lens through which the research design and methodology are constructed and applied, as elaborated in section 3.2.5.

The research design encompasses the overall plan and structure of the study, ensuring the achievement of research objectives and addressing the research questions. This section explores the key considerations in designing the research, including the selection of an appropriate research approach, the determination of the study design, and the identification of the target population and sampling strategy. The section also addresses ethical considerations and potential limitations inherent in the chosen research design, as elucidated in section 3.3.

The research methodology outlines the systematic procedures employed to collect, analyse, and interpret data. Section 3.4 provides an in-depth explanation of the chosen methodology, justified by the research questions and the overall research design. Specifically, it encompasses the fieldwork plan which delineates the steps and activities involved in gathering primary data from the research setting. This section describes the research contexts, the duration and timing of data collection, and the logistical considerations for conducting fieldwork. It also highlights the access and permission requirements, as well as any potential challenges or constraints anticipated during the data collection phase. To address the research questions effectively, appropriate methods for data collection are employed. This section details the specific data collection techniques utilized, such as interview and documentation. The rationale behind the selection of these methods is discussed, along with the strategies employed to enhance the validity and reliability of the data collected. Data analysis is a critical component of any research study, enabling the extraction of meaningful insights and the development of conclusions.

In the final section, a concise summary of the key findings obtained from the chapter is presented. This summary encapsulates the main insights and outcomes derived from the research design chapter.

3.1 The Initial Conceptual Framework and Revisited Research Questions

3.1.1 The Initial Conceptual Framework

The development of a conceptual framework is a crucial step in guiding the research design as it provides a structure for understanding the research problem, identifying research variables, and developing research questions. According to Miles, Huberman and Saldaña (2014) building a conceptual framework explains the main things to be studied—the key factors, variables, or constructs—and the presumed interrelationships among them. Also, Yin (2004) contend that the development of a rich theoretical framework is vital for establishing the assumptions of the research, through exploring the underlying conditions and contextual factors under which a phenomenon is likely or unlikely to occur (Yin, 2004).

The conceptual framework assists in identifying gaps in knowledge and areas that require further research. Also, Green and Thorogood (2018) argue that a conceptual framework is an essential component of a research design, as it helps to clarify the research questions and hypotheses and guide the selection of appropriate methods. Creswell and Poth (2017) emphasize that a conceptual framework provides a roadmap for the research process, guiding the selection of appropriate data collection and analysis methods, as well as the interpretation of findings. By linking the literature review to the conceptual framework, researchers can ensure that their research is grounded in existing theory and knowledge, and that they are asking relevant research questions that can contribute to the advancement of the field.

This sub-section discusses the process of developing a conceptual framework to guide the research design, drawing on the works of Miles, Huberman, and Saldaña (2014), Yin (2004), Fusch and Ness (2015), and other researchers in the field. Fusch and Ness (2015) propose a four-step process for developing a conceptual framework, including identifying the research problem, reviewing the literature, identifying key concepts and relationships, developing a visual representation of the framework, refining the framework based on feedback, and testing the framework through data analysis. The first step in developing a conceptual framework is to conduct a thorough literature review. The literature review helps to identify the key concepts, theories, and empirical research that are relevant to the research problem. The literature review also helps to identify gaps in the existing knowledge, which inform the research questions and objectives, please refer to Section 2.11. According to Kofinas and Kafetsios (2016), a comprehensive literature review allows researchers to identify key concepts and theories that inform the research problem, and in turn, inform the development of the conceptual framework.

The second step is to develop a preliminary framework based on the literature review which should include the key concepts and variables that are relevant to the research problem, as well as the interrelationships between these concepts and variables. The preliminary framework should be flexible, allowing for changes as the research progresses. According to Miles et al. (2014), the preliminary framework should be tested through data collection, analysis, and interpretation to ensure that it is accurate and comprehensive. The third step is to refine the conceptual framework based on the data collected during the research process. As data is collected, the conceptual framework should be refined to reflect the emerging findings. The conceptual framework should be a dynamic tool that guides the research process and provides a structure for organizing and interpreting data. According to Hesse-Biber and Leavy (2010), the conceptual framework should be refined throughout the research process to ensure that it is relevant and comprehensive. The fourth step is to use the conceptual framework to guide the research design. The conceptual framework provides a structure for developing research questions, hypotheses, and data collection instruments. The conceptual framework also helps researchers to identify the appropriate methods for data collection and analysis. The research design should be informed by the conceptual framework, and the results of the research should be interpreted in light of the conceptual framework. In conclusion, the development of a conceptual framework is essential in guiding the research design. The process of developing a conceptual framework involves conducting a thorough literature review, developing a preliminary framework, refining the framework based on the data collected, and using the framework to guide the research design. The conceptual framework should be a dynamic tool that guides the research process and provides a structure for organizing and interpreting data.

The researcher proposes a tentative conceptualization as depicted in Figure 3-1 and detailed out in Table 3-1.

Table 3-1 The initial conceptual framework from literature

Term	Framework Variables	Literature source
customer data, Information, and knowledge	Transactional, Demographic, Interaction and Engagement data, Customer feedback and sentiment data	(Smith et al., 2006; Holmlund et al., 2020; McColl-Kenned et al., 2019; De Bruyn et al., 2020; Krasnova, H., Veltri, N. F., & Günther, O., 2021; Zhang, Y., & Li, X., 2021)
Customer Experience Analytics	Attitudinal Insights, Experiential Insights Psychographic Insights, Behavioural Insights Market Insights, and Contextual Insights	Holmlund et al., 2020;
Customer Experience Actions	Touchpoint journey design, Touchpoint prioritization Touchpoint journey monitoring, And Touchpoint adaptation	(Li, X., & Li, D., 2021; Wang, Y., & Li, X. (2021)



Figure 3-1 The Initial Conceptual Framework

Adapted from Literature (Holmlund et al., 2020; McColl-Kenned et al., 2019; De Bruyn et al., 2020; Smith et al., 2006)

The conceptual framework includes four main components: (1) customer experience data, Information, and knowledge, (2) customer experience analytics, (3) customer experience insights, (4) the customer experience actions, and (5) customer experience value. Each component is discussed below.

Customer experience data, information, and knowledge

Customer data play a crucial role in understanding customer behaviour and shaping effective strategies. The literature provides insights into various types of data used in customer analysis. Transactional data encompasses customer interactions and transactions, providing insights into preferences, buying patterns, and product usage. (Kumar & Rajan, 2018). Demographic and socioeconomic data includes characteristics such as age, gender, and income, aiding in segmentation and personalization efforts (Dholakia & Zhao, 2017). Interaction and engagement data capture customer interactions across touchpoints, offering insights into engagement levels and channel preferences (Rust et al., 2021). Customer feedback and sentiment data, including reviews and sentiment analysis, help gauge satisfaction and brand perception (Verhoef et al., 2020). Customer journey data involves mapping and analysing the end-to-end experience to identify pain points and opportunities for improvement (Gebauer et al., 2018). According to Verhoef, Lemon, and Parasuraman (2017), customer data can be obtained from a variety of sources, including customer feedback, operational data, and customer behaviour. Customer feedback can be collected through surveys, reviews, and social media channels, while operational data such as purchase history and website usage can provide insights into customer behaviour.

Customer experience analytics

Customer experience analytics refer to the tools that are used to collect, analyse, and interpret customer data, such as descriptive analytics, diagnostic analytics, predictive analytics, and perspective analytics. Descriptive analytics is the most basic type of analytics, which involves the use of data to describe past events and identify trends. It is used to answer questions such as "what happened?" and "what is happening now?". Descriptive analytics is often used to summarize large amounts of data and present it in a way that is easy to understand. Diagnostic analytics is used to answer the question "why did it happen?" It involves the use of data to identify the root cause of a problem or issue. Diagnostic analytics is often used to identify areas of a business that are underperforming or to diagnose problems with a product or service. Predictive analytics is used to answer the question "what will happen in the future?" It involves the use of data and statistical algorithms to make predictions about future events. Prescriptive analytics is the most advanced type of analytics, which involves the use of data and statistical algorithms to make recommendations about future actions. It is used to answer the question

"what should we do?" Prescriptive analytics is often used to optimize business processes and to identify the best course of action in a given situation (Holsapple, Lee-Post, & Pakath, 2014; Kusiak, 2018; Zhang & Liu, 2021).

Customer experience Insights

Customer insights are crucial for organizations aiming to understand and meet the evolving needs and preferences of their customers. The literature provides several perspectives on the types of insights derived from customer data. Behavioural insights focus on understanding customer actions and behaviours, such as transaction history and browsing behaviour, to identify trends and preferences (Choudhury & Harrigan, 2014). Attitudinal insights investigate into understanding customer attitudes and perceptions through surveys and sentiment analysis, aiding in customer engagement and loyalty (Verhoef et al., 2015). Experiential insights capture customer feedback and emotions, facilitating a holistic understanding of the customer journey (Lemon & Verhoef, 2016). Contextual insights consider environmental factors like demographics and social influences, enabling tailored experiences (Hennig-Thurau et al., 2015). Predictive insights utilize advanced analytics to forecast future behaviour and optimize marketing efforts (Fader & Hardie, 2018). Revisiting research questions in light of these insights allows for a comprehensive understanding of customer behaviour and the development of effective customer experience strategies. The customer insights include the understanding that is gained from analysing customer data, such as customer preferences, behaviours, and needs, and are used to inform the development of personalized experiences for customers. By analysing customer data across different touchpoints and stages of the customer journey, organizations can gain a holistic view of the customer and develop more effective strategies for improving the customer experience. The customer journey touchpoints refer to the different points of interaction between the customer and the organization, such as social media, email, website, and customer service. The customer journey stages refer to the different phases that the customer goes through during their relationship with the organization, such as awareness, consideration, purchase, and loyalty (Rosenbaum and Massiah, 2011). The strategic framework presented by McColl-Kennedy et al. (2019) is to develop insights from the data analysis. This stage involves interpreting the data to gain a deeper understanding of customer behaviour, preferences, and needs. The insights generated in this stage can inform the design of customer experiences and the development of targeted marketing campaigns. To develop insights from data, firms can use various analytical techniques, such as clustering, segmentation, and predictive modelling (De Bruyn et al., 2020). These techniques can help firms identify patterns in customer behaviour and preferences and predict future behaviour.

Customer Experience Actions

The customer experience actions refer to the ways in which the use of AI to action customer insights can improve the overall customer experience, such as touchpoint journey design, prioritisation, monitoring and adaption (McColl-Kenned et al., 2019). Touchpoint journey design, touchpoint prioritization, touchpoint monitoring, and touchpoint adaptation have been extensively studied. Lemon and Verhoef (2016) introduced the Customer Journey Mapping (CJM) technique, which aids in mapping out customer interactions and understanding their emotions, needs, and expectations at each stage. Rawson, Duncan, and Jones (2013) emphasized the significance of "moments of truth" in touchpoint design, as these moments greatly influence customer satisfaction and loyalty. Touchpoint prioritization is crucial for resource allocation, and Homburg, Jozić, and Kuehnl (2017) proposed the Touchpoint Effectiveness Analysis (TEA) method to assess the importance and performance of touchpoints. Touchpoint monitoring, as highlighted by Rosenbaum and Massiah (2011), involves real-time collection of customer feedback to identify issues and track sentiment. Verleye, Gemmel, and Rangarajan (2015) stressed the need for agile touchpoint adaptation, utilizing data analytics and machine learning to dynamically personalize touchpoints. These recent studies contribute to our understanding of touchpoint management, providing insights into journey design, prioritization, monitoring, and adaptation throughout the customer experience.

Overall, this conceptual framework provides a comprehensive approach for understanding the role of AI in actioning customer insights to manage customer experience along the customer journey. By considering the interplay between AI capabilities, customer insights, customer journey touchpoints and stages, and customer experience action. This stage requires firms to translate the insights into actionable strategies and initiatives that can improve the customer experience. For example, firms can use the insights to design personalized marketing campaigns, develop new products and services, or improve customer service processes (Smith et al., 2006).

Based on the above conceptual framework, the analysis of different types of customer insights and customer experience data highlights the need to revisit the research questions in order to gain a more comprehensive understanding of the factors influencing customer behaviour and the effectiveness of customer experience strategies. The insights gained from recent studies prompt a reassessment of research questions.

3.1.2 Research Questions Revisited

The research questions play a crucial role in guiding the inquiry and providing a focused direction for the study. In the context of incorporating AI analytics into the customer insight process to enhance CX, the research questions undergo a refinement process after the development of the conceptual framework. This paragraph aims to introduce the revised research questions and their significance, drawing upon the insights of prominent authors in business and design.

Initially, the research questions before the literature review posed by the researcher were as follows:

- RQ1 – "How can organisations incorporate AI analytics into the customer insight process along the CJ to understand, measure, and manage CX?" and,
- RQ2 – "How to action customer insight at the organizational level using AI to improve CX throughout the CJ?" These questions provided a starting point for investigating the integration of AI analytics in the customer insight process.

However, as the study progressed and further insights were gained, and the conceptual framework were developed, it became necessary to revisit and refine the research questions. the research questions underwent revision to better align with the research objectives and contribute to the knowledge in the field. The revised research questions serve as a framework for the subsequent research design and methodology.

The refined research questions are as follows:

- RQ1 – "What is the role of AI on the process of actioning customer insights throughout the CJ to understand and manage CX?"
- RQ2 - "How do organisations incorporate AI technologies into the customer insight to action process to understand and manage CX?"
- RQ3 - "How do organisations use AI-derived customer insights to understand and manage CX?"
- RQ4 – "How do organisations assess the value of actioning customer insights derived from AI?"

By revisiting and refining the research questions after the development of the conceptual framework, this study aims to contribute to the existing body of knowledge on incorporating AI analytics in the customer insight process to improve CX. The refined research questions reflect the researcher's deeper understanding of the topic, informed by relevant literature and theoretical foundations, and provide a robust framework for addressing the research objectives in a comprehensive and rigorous manner.

3.2 The Philosophical Orientation – The Philosophical Perspective

It is considered necessary to situate social research within the context of an appropriate philosophical framework to ensure that the resulting research yields high quality and defensible findings (Blaikie, 2010; Easterby-Smith et al., 2015; Chia, 2002). According to Creswell (2003) the main philosophical aspects that researchers should consider while designing a research are ontological aspects (what is the nature of social reality and the role that people play in relation to that reality), epistemological (what is the nature and purpose of knowledge, how we know it, and what 'good' knowledge should look like), axiological (what values go into it), rhetorical (how we write about it) and methodological aspects of what are the processes of studying it.

Descriptions of research philosophical assumptions (ontological, epistemological, and orientations) differ among leading authors and texts, with varying terminology used to represent different philosophical perspectives. For the purpose of this paper, it is the philosophical framework created by Rose et al. (2015) that is applied to the analysis and definition of the ontological and epistemological underpinnings of this paper. Rose et al. describe four philosophical orientations that combine the different epistemological and ontological assumptions of a business and management research as shown in Table 3-2.

Table 3-2 Philosophical orientations in research (Source: Rose et al. (2015))

	<i>Philosophical orientation</i>			
	<i>Positivism</i>	<i>Interpretivism</i>	<i>Social constructionism</i>	<i>Critical Realism</i>
Epistemology	Objectivist	Objectivist	subjectivist	subjectivist
Ontology	(Direct) Realist	Idealist	Idealist	(Depth) Realist
Emphasis of research	Explanation in terms of universal 'laws'	Understanding lived experience and shared culture	Understanding the process of social construction	Explanation in terms of causal mechanism
Typical research approach	Deductive	Inductive	Inductive	Abductive/ Inductive
Dominant research methods	Quantitative, with qualitative research in a subordinate role	Qualitative	Qualitative	Quantitative/ Qualitative

This chapter will present the philosophical foundations of business and management research, the different methodological perspectives on customer experience and customer experience management, and a rationale for the selected research philosophical approach.

3.2.1 Research Approaches

In Blaikie's view, the choice of research approach constitutes the second most important research design decision after the formulation of research question and purpose. Furthermore, he considers that knowledge can only be advanced in the social sciences by using one or a combination of three research approaches, the Inductive, Deductive, and Abductive. The three research approaches, or logic of inquiry, provide a set of procedures for answering research questions. They present alternative starting- and concluding-points, and different sets of steps between these points (Blaikie, 2010).

A **deductive** (or hypothetico-deductive) research approach involves testing theory, it commences with the development of a clear theoretical argument, usually based on general principles derived from the literature. The task is to test the theory through its component premises by collecting and analysing data within the same conditions as those the theory is predicted to hold (Saunders et al., 2012). When the results of this analysis are consistent with the premises, the theory is corroborated; where they are not consistent, the theory must be either rejected or modified. Therefore, according to this research approach, knowledge of the social world is advanced by means of a trial-and-error process (Balike, 2010).

In contrast to the theory testing of a deductive approach, an **inductive** research approach seeks to build theory on the basis of observations. The researcher is likely to be particularly concerned with the research context within which the theory is being built and starts by developing a feel of what is happening so as to better understand the nature of the problem. Different possible views of the phenomenon would be established in response to the research question then proceeds to derive generalizations using inductive logic to build a theory about what is going on from those observations. So, it is an attempt to move from specific observations to more general theory, but, as Blaikie (2000) argues that "*all attempts to generalise must be tentative . . . Consistent findings can support generalization but never prove it to be true.*" p.104.

Rather than moving from data to theory (as in induction) or from theory to data (as in deduction), an **abductive** approach moves back and forth, in effect combining deduction and induction (Suddaby, 2006). The term is associated with the philosopher Charles Peirce, who used it to describe a form of reasoning that he called 'inference to the best explanation' (Honderich, 1995). Abductive reasoning begins with the observation of a 'surprising fact' or phenomenon and then develops a plausible theory of how this could have occurred. According to Rose et al. (2015) when considering an abductive approach there are two requirements to think about beforehand. Firstly, the researcher needs to collect data that is detailed and rich enough to explore the phenomenon and identify themes and patterns. Secondly, the research process needs to be sufficiently flexible to support the iteration between theory and data.

3.2.2 Ontology

Ontology is concerned with the nature of social reality and the role that people play in relation to that reality (Bryman, 2007). The ontological aspect relates to how the researcher perceives the nature of reality, whether reality exists externally to social actors, or whether reality is constructed from the social actors' perceptions and actions. These two opposed views can be illustrated by contrasting two ontological positions, realism and idealism.

Ontological realism assumes the existence of a mind-independent reality and suggests that the social phenomena exist independently to the observer or their mind, are beyond our reach and influence, and are out there to be discovered (Bryman, 2007).

Ontological idealism, on the other hand, challenges that assumption. The idealist view suggests that social phenomena have no independent existence, and are products of people's minds (Blaikie, 2007), and are continually being accomplished by social actors (Bryman, 2007).

3.2.3 Epistemology

Epistemology is the branch of philosophy concerned with the theory of knowledge and studies the nature and purpose of knowledge. In social sciences, epistemology usually refers to questions of how we know what we claim to know, and what are the most appropriate ways of studying a particular reality (Rose et al. 2015; Easterby-Smith et al. 2015).

There is a fundamental contrast which should be made between an objectivist epistemology and a subjectivist epistemology which will help to illustrate the appropriateness of the approach being suggested in this research as follows:

An objectivist epistemology assumes the possibility of gathering data through the theory-neutral (objective) and value-free observation of the social world. Data are assumed to be objective facts that already exist in the social world, and the role of the researcher is to discover the truth that lies within the object of investigation, with reality existing independently of any consciousness (Crotty 1998; Charmaz 2006; Rose et al. 2015).

A subjectivist epistemology rejects this view, as stated by Hugly and Sayward (1987) that "there is no objective truth to be known" and emphasises the diversity of interpretations that can be applied to the world. Subjectivist research assumes that all observation is theory laden, and the role of the researcher is to construct an impression of the world as they see it (Ratner, 2008), this also follows Lincoln and Guba's (1985) view that the *"investigator and the object of investigation are ... interactively linked so that the 'findings' are literally created as the investigation proceeds"*.

3.2.4 Philosophical Orientations

According to Rose et al (2015) these ontological and epistemological assumptions can be combined in different ways to contribute to alternative philosophical orientations to business and management as shown in Table 3-2. These philosophical orientations differ in their goals of research, appropriate research approach, and preferred research methods.

Positivism

Positivism is a philosophical orientation that advocates the application of the methods of the natural sciences to social and organizational related issues (Fisher, 2007; Bryman and Bell, 2011). It is an approach to science which is rooted in the ontological belief that an objective reality exists, and that social reality is believed to exist independently of the perceptions of the individual (Daymon and Holloway, 2011). In other words, the world is external to the researcher, and that its key proprieties should be measured through objective methods, rather than being inferred subjectively through sensation, reflection or intuition.

Positivism separates the researcher from the researched phenomena and fails to acknowledge the interactive and co-constructive nature of data collection with human beings (Hennink, Hutter and Bailey, 2011). The role of the researcher in positivist research is to uncover universal laws and give an objective picture of the world (Daymon and Holloway, 2011), look for causality in the form of universal laws by means of controlled observation and measurement and deductive theory testing by formulating hypotheses and testing them (Saunders et al., 2015). Positivism is closely associated with quantitative methods and research designs.

Interpretivism

Interpretivism rejects the positivist assumption that the methods of the natural sciences apply to the social sciences, Interpretivist researchers argue that the social world of business and management is far too complex to lend itself to theorising by definite 'laws' in the same way as the physical and natural sciences (Saunders et al., 2015). Interpretivism emerged as a radically different philosophical orientation in social sciences research which aimed to establish a distinct approach to the world and to knowledge by differentiating the social sciences from the natural sciences (Daymon and Holloway, 2011).

For interpretivists, ontological reality is an outcome of social interactions and there is nothing called a reality that objectively exists independently of an observer following an ontological idealism position. Interpretivism adopt an objectivist epistemology where the researchers need to put aside their presuppositions and own assumptions in favour of understanding the organisational issue being researched on its own terms (Rose et al., 2015). Consequently, for interpretivists, there is no single but only multiple realities constructed within the same context.

Interpretivists therefore adopt more flexible research structures which capture meanings from human interaction (Carson et al., 2001; Black, 2006).

As interpretivism acknowledges that people's perceptions and experiences of reality are subjective, there can be multiple perspectives of reality, rather than a single truth as proposed in positivism. Thus, understanding of the social world therefore requires understanding it from the point of view of the people directly involved in the social process (Burrell and Morgan, 1979; Hennink et al., 2011). Interpretivists seek to understand people's life experience from the perspective of the people themselves, which is often referred to as the 'emic' perspective or the 'inside' perspective. This involves studying the subjective meanings that people attach to their experiences; so rather than focusing on facts.

Interpretivist researchers seek to understand subjective meaningful experiences within the context in which people live (Snape and Spencer, 2003; Hennink et al., 2011), they carry out inductive research in which the theory is developed based on observation and interpretation. Thus, to observe is to collect information about events, while to interpret is to make meaning of that information by drawing inferences or by judging the match between the information. It attempts to understand phenomena through the meanings that people assign to them. Also, to find patterns that are repeated in similar situations (Deetz, 1996; Creswell, 2003).

Social constructionism

Social constructionism emphasizes the 'constructed' nature of social reality and focuses on the ways that people make sense of the world, especially through sharing their experiences which is structured in the minds and formed by the effects of time and space as a form of perception (Kant, 1787), with others via the medium of language. Phenomena like management and organization are not determined by some internal essence that makes them what they are but are instead constructed through our social processes (Berger and Luckman, 1966); Shotter, 1993). Constructionism recognises that reality is constructed by individuals perceiving that reality (Blaikie, 2007; Hennink et al., 2011). It is "*socially constructed and consists of individuals' interpretation of their circumstances*" (Partington, 1997: p. 52).

Social constructionism shares interpretivism's ontological idealism, but it rejects the objectivist leanings in favour of epistemological subjectivism and that the researcher is part of what is being observed. So, the role of constructionist researcher to make sense out of meanings, drawing from reflexive approaches to generate understandings as a basis for theory creation (Easterby-Smith et al., 2012).

Reflexivity thus becomes an essential part of the research process. Without reflexivity, social constructionist research remains sensitive to the researchers' own interests and values (Hammersley and Atkinson, 2007).

Critical Realism

Critical realism is a philosophical approach associated with Roy Bhaskar, which combines a transcendental realism with critical naturalism to describe an interface between the natural and social worlds. Critical realism initially started by posing this question “*what properties do societies and people possess that make them possible objects of knowledge for us*” (Archer and Bhaskar, 1998, p. 13). This question evolved into an approach that focuses on “*what the world must be like to generate a particular phenomenon*” (Smith, 2006, p. 199).

Critical realism views social reality to be derived from the underlying structures and mechanisms through which events and actions are generated (Bhaskar, 1989). Within critical realism, this world is stratified between the real, the actual and the empirical (Archer and Bhaskar, 1998). The real domain, which comprises causal powers and mechanisms that cannot be detected directly, but that have real consequences for people and society, at that level, mechanisms come to play to generate events; the actual domain, which comprises events and actions that take place, whether these events may – or may not – occur; and the empirical domain, which comprises the experiences and perceptions that people have; at that level, a subset of these events may be observed or experienced (Bhaskar, 1978; Mingers, Mutch and Willcocks, 2013). Within this stratification, the real is where mechanisms, events and experiences reside, and “*the picture of the real is thus one of a complex interaction between dynamic, open, stratified systems, both material and non-material, where particular structures give rise to certain causal powers, tendencies, or ways of acting*” (Mingers et al., 2013, p. 796).

Critical realism adopts a subjectivist epistemology, that there is a reality independent of our knowledge of it and this reality constrains the ways in which we can construct our world and cannot be understood independently of the social actors involved in the knowledge derivation process (Dobson, 2002). Observation in the realist view is always theory laden but it is not theory determined that we could identify what we don't see through the practical and theoretical processes of the social sciences through the abductive research approach (Bhaskar, 1989; Rose et al., 2015). Critical realist researchers “*take some unexplained phenomenon and propose hypothetical mechanisms that, if they existed, would generate or cause that which is to be explained*” (Mingers, Mutch and Willcocks, 2013, p. 797). Within critical realism, “a mechanism is basically the way of acting or working of a structured thing” (Lawson, 1997, p. 21). The role of the researcher is that in order to understand what is going on in the social world, one need first to understand the social structures that have given rise to the phenomena that we are trying to understand. In other words, physical objects or social processes “*possess causal or emergent powers which, when triggered or released, act as generative mechanisms to determine the actual phenomena of the world*” (Lawson, 1997, p. 21). Therefore, the main

aim for the researcher is to “*use perceptions of empirical events to identify the mechanisms that give rise to those events*” (Volkoff, Strong and Elmes, 2007, p.835).

According to Blaikie (2000), critical realists aim to discover structures and mechanisms which are the causal powers or the essential nature of things, that are independent of the events they produce. Blaikie claims that such structures and mechanisms “*exist at a 'deeper' level of reality and may counteract each other to produce no observable event. Therefore, the constant conjunctions of Positivism are merely the observed regularities that need to be explained by establishing what links them*” p.101. One of the limitations of critical realism proposed by Fairclough (2005) is that it lacks the methodological development to incorporate an analysis of discourse as a predecessor to its use, where discourse is captured as recorded empirical data (Bogna et al., 2020). Fairclough summarises this dilemma where “*one cannot reach relations between discourse and other social elements, including the constructive effects of discourse, in the absence of methods for analysing*” p. 927. This limitation was addressed by Bogna and colleagues (2020) in their conceptual paper by integrating critical realism and social constructionism to enable the interpretation of social phenomena as well as the determination of its causality.

3.2.5 Rationale for adopting critical realist stance

Before presenting the specific research design adopted for this project, it is necessary to situate this social research within the context of an appropriate philosophical framework (Johnson and Duberley, 2000) as a mean to maintain coherence in research and enhance the internal validity of the research (Punch, 2005). The philosophical position of this study which is to explore a set of phenomena and to generate theory around these issues, assumes a realistic ontological view that is reality comprises things, structures, events and underlying generative mechanisms and knowledge is advanced through the process of theory-building (Bhaskar, 1978). These theories seek to accurately mirror an externally existing reality. Objects of investigation such as an organisation and its processes are regarded by the realist as independent of their observers and therefore amenable to systematic analysis and comparison (Chia, 2002). Following Bhaskar’s realist ontology (Bhaskar, 1978), this research is concerned with the process of actioning customer insight (the ‘real domain’, drawing from Bhaskar’s stratified reality approach) and secondly, how customer insight is used in different touchpoints to manage and improve customer experience (the ‘empirical domain’). In a subjective epistemological stance, knowledge is generated from the position of critical realism where knowledge production is fallible and theory-laden. However, this study cannot overlook the potential effect of the researcher’s own values and interests in the phenomenon studied, as a result of his background, past experience and use of customer insight in his organisation’s operations. Therefore, this stance is taken to allow the researcher to engage more with the social world of the organisation under study.

Following the above discussion, this study is placed within the critical realist philosophical orientation. Critical realism accepts the fallibility of knowledge production about reality when reality is abstractly resolved and theory-dependent yet emphasises the need for empirical evidence in the generation of theory (Van de Ven, 2007; Easton, 2010). Within critical realism, social processes “*possess causal or emergent powers which, when triggered or released, act as generative mechanisms to determine the actual phenomena of the world*” (Lawson, 1997, p. 21). Drawing from critical realism, the researcher proposes abduction as a research approach for this study. Such that, the generation of theory from a critical realist position relies on a continued iteration that involves moving beyond the experience of empirical phenomena to hypothesising about the unobservable (Downward and Mearman, 2002; Sayer, 2010), by moving from descriptive elements of empirical work to the analysis of phenomena in establishing the underlying conditions and casual mechanisms which shape the social phenomena under study (Sayer, 2010; Easton, 2010). The application of Critical Realism is particularly suitable to the study of the complex nature of innovation processes. Critical realism was taken up by business and management researchers as a fruitful approach to study the nature of social reality in conjunction with the role of technology. Perry and colleagues (1999) recommend adopting a realist position in response to criticisms that research into business and marketing strategy has failed to capture real-world complexity (Faulkner and Runde, 2013). Therefore, the main aim for the researcher is to “*use perceptions of empirical events to identify the mechanisms that give rise to those events*” (Volkoff, Strong and Elmes, 2007, p. 835). Through observation and engagement with events at the level of the empirical (how customer insight resulting from AI is used in different touchpoints to manage and improve customer experience) to theorise the mechanisms operating at the level of the real (the process of actioning customer insight).

The philosophical stance of this research has two major methodological implications: firstly, the research philosophical orientation will help to evaluate knowledge according to the explanatory power and practical adequacy of variables explored, to understand the underlying meanings and causal mechanisms underpinning social phenomena (the interaction between people and technology). Hence, this philosophical stance views social reality to be derived from the underlying structures and mechanisms through which events and actions are generated (Bhaskar, 1989), that the researcher has to “*move beyond the human-technology interface to uncover the core properties of technology and how malleable they are*” (Smith, 2006, p. 205). Secondly, the research philosophy reflects the importance of analysing social phenomena within their real-life contexts (Sayer, 1992) in line with case study research strategy and methodology.

3.3 Research Design Considerations

3.3.1 Research Design Alternatives: The case for a case study design

In the field of business and management studies, researchers have numerous research design alternatives available. Selecting an appropriate research design is crucial for investigating research questions and gaining meaningful insights. This section aims to shed light on research design alternatives, starting with the distinction between quantitative and qualitative approaches. It will then explore various alternatives within qualitative research, highlighting contrasting characteristics and implications. Ultimately, this exploration will lead to considering the case study as a preferred research design.

Quantitative research design is grounded in positivism, aiming to establish causality, measure variables, and test hypotheses using numerical data (Bryman & Bell, 2015). This approach emphasizes objectivity and generalizability, employing statistical techniques to analyze large datasets (Creswell, 2014). By using surveys, experiments, or secondary data analysis, quantitative researchers seek patterns, trends, and statistical relationships. Quantitative research design offers advantages, including generalizability to larger populations, enhancing external validity, a structured framework for hypothesis testing, facilitating replication, and knowledge development (Trochim, 2006). Moreover, it enables the use of advanced statistical techniques to uncover complex relationships among variables. However, quantitative research design may overlook nuanced contextual factors crucial for comprehensive understanding (Eisenhardt, 1989) and lacks depth in capturing human experiences and perceptions (Merriam, 2009).

Qualitative research design is rooted in interpretivism, focusing on understanding social phenomena from participants' perspectives (Creswell, 2014). It explores meanings, values, and subjective experiences through methods like interviews, observations, and document analysis (Denzin & Lincoln, 2011). Qualitative research design aims to uncover context-specific insights, providing rich descriptions and in-depth understandings. A significant strength lies in capturing the complexity and diversity of human experiences (Creswell, 2014) by engaging participants in natural settings, gathering detailed narratives that reveal factors shaping behaviors and decision-making (Yin, 2017). Qualitative research design allows flexibility, enabling adaptation based on emerging findings (Creswell, 2014). However, its findings are often context-specific and lack generalizability (Merriam, 2009). Critics argue that subjectivity in data interpretation can introduce bias (Silverman, 2013). To address these concerns, researchers have developed alternative qualitative research approaches.

Broadly, the main research design alternatives for qualitative researchers are phenomenological research, ground theory, ethnographic research, narrative research, action research, participatory research and case study research (e.g., Robson, 2002; Easterby-Smith, Jackson & Thorpe, 2015). The various research design alternatives for social science researchers are evaluated as shown in Table 3-3 below.

Table 3-3 Research Design Alternatives for Social Science

Research Design Alternative	Key Features	Data Collection Methods	Strengths	Limitations	Form of Research Questions
Phenomenological Research	Focuses on lived experiences and essence	In-depth interviews, diary studies	Captures subjective meanings	Limited generalizability	Exploratory, subjective
Grounded Theory	Theory-building from empirical data	Interviews, constant comparative analysis	Emergent theories, systematic approach	Time-consuming data analysis	Exploratory, evolving
Ethnographic Research	Immersion in natural settings for cultural insights	Participant observation, interviews, document analysis	Contextual understanding, rich descriptions	Time-intensive, potential researcher bias	Exploratory, descriptive
Narrative Research	Focuses on storytelling and personal narratives	Interviews, life stories, oral histories	Captures individual experiences	Potential bias in participant narratives	Exploratory, subjective
Action Research	Collaborative approach for social change	Participant observation, interviews	Practical solutions, engagement with stakeholders	Limited generalizability, potential bias	Problem-solving, participatory
Participatory Research	Involves participants as co-researchers	Interviews, focus groups, participatory activities	Empowers participants, community engagement	Time-consuming, potential power imbalances	Participatory, co-created
Case Study Research	In-depth investigation of a specific case	Interviews, observations, document analysis	Holistic understanding, contextual insights	Limited generalizability, potential bias	Descriptive, explanatory

Phenomenological research design, influenced by Husserl, seeks to understand individuals' lived experiences and the essence of a phenomenon (Moustakas, 1994). By conducting in-depth interviews or diary studies, researchers uncover the subjective meanings individuals assign to their experiences (Smith, Flowers, & Larkin, 2009). Phenomenological research design explores participants' perceptions and interpretations, emphasizing context and individual perspectives.

Grounded theory, introduced by Glaser and Strauss (1967), aims to generate theories grounded in empirical data. It involves a systematic process of data collection and analysis, allowing theories to emerge (Charmaz, 2014). Researchers identify patterns and categories through interviews and constant comparative analysis, developing conceptual frameworks that explain phenomena. Grounded theory research design emphasizes theory-building for understanding social processes.

Ethnographic research design, rooted in anthropology, immerses the researcher in participants' natural settings to understand culture, behaviors, and social interactions (Hammersley & Atkinson, 2007). Researchers use participant observation, interviews, and document analysis to uncover cultural norms and practices shaping the phenomenon (Denzin & Lincoln, 2011). Ethnographic research design provides rich descriptions and contextual insights, highlighting cultural context in understanding business and management phenomena.

Narrative research, a qualitative approach, explores storytelling and personal narratives. Scholars like Smith, Flowers, and Larkin (2009) discuss its foundations and methods. This approach captures individuals' experiences through interviews, life stories, and oral histories. Narrative researchers aim to understand how individuals construct their identities and make sense of their lives by examining unique stories and meanings.

Action research, known for its collaborative nature, addresses social issues in business and management. Scholars like Greenwood and Levin (2007) discuss its theoretical foundations. It involves stakeholders in identifying and solving practical problems through participant observation and interviews. Action research facilitates social change and problem-solving.

Participatory research, rooted in empowerment and social justice, engages participants as co-researchers. Scholars like Cornwall and Jewkes (1995) discuss its foundations. This approach uses interviews, focus groups, and participatory activities to involve participants in generating knowledge and addressing inequalities. Participatory research empowers participants and promotes social justice.

Case study research design deeply investigates a case or a few cases for holistic understanding (Yin, 2017). Researchers gather data from interviews, observations, documents, and archival records, providing rich insights into real-world situations.

By contrasting these approaches, we can appreciate their differences and understand how they contribute to case study research. Phenomenological research focuses on understanding lived experiences and the meaning individuals attribute to them. Grounded theory generates theories from data. Ethnographic research delves into culture and context. Narrative research explores storytelling. Action research addresses practical issues collaboratively. Participatory research empowers participants. Case study research provides holistic understanding.

Given the exploratory purpose of this research and the focus on contemporary issues of a subject under study in its natural setting distinguishes it from other methods of research, case study seems to be the closest possible choice. Moreover, this research has an overarching “what” question, with many “how” sub-questions. Yin (2018) contends that case study research is very well suited when researchers focus on “how” and on a contemporary set of events over which a researcher has little or no control.

From the above description, it is apparent that case study research design distinguishes itself from other research design methods in two major ways:

- The case study’s focus on contemporary issues of a subject under study in its natural setting distinguishes it from other methods of research, such as historical analysis that does not focus on contemporary events (Yin, 2018).
- The case study focuses on in-depth investigations and distinguishes itself from other methods of research, such as experiments (Yin, 2014). For example, rather than adopting experimental designs that involve controlling a phenomenon from its context.
- The case study research design enables us to triangulate data from various sources, enhancing the validity and reliability of our findings. By employing multiple methods such as interviews, observations, and document analysis, we can gather rich and diverse data that provides a comprehensive perspective on the research questions.
- The case study research design allows for an exploration of both the subjective experiences and the broader contextual factors that influence the phenomenon. This aligns with our intention to understand the interplay between individual perceptions, organizational dynamics, and external influences in the business and management context.

3.3.2 Selection of the Case Study Method

Within the marketing and management literature, case studies hold a prominent position. They appeal to both academics and practitioners for their proximity to organizational realities and their capacity to address the intricacies of organizational phenomena (Fiss, 2009). Case studies are used to contribute knowledge on individual, group, organizational, social, and related phenomena (Yin, 2009, 2018).

Prominent researchers have extensively discussed case study research techniques. Yin (2009) presents a comprehensive method encompassing design logic, data collection tools, and analysis approach. Daymon and Holloway (2011) argue that case study research examines issues, events, processes, or problems within specific contexts. Yin (2018) defines case study as an 'empirical inquiry into a contemporary phenomenon within its real-life context, especially when boundaries between phenomena and context are unclear' (Yin, 2018, p. 17). Stake (1995) describes case study methodology as an inquiry strategy exploring programs, activities, processes, or individuals in depth. Case study research is a qualitative approach in which investigators explore real-life, contemporary bounded systems or multiple systems over time through comprehensive data collection from multiple sources, resulting in case descriptions and themes (Creswell, 2013).

According to Yin (2018), case studies excel in addressing "how" or "why" questions. Edmondson and McManus (2007) agree that case studies are particularly suited for answering "how" and "why" questions in unexplored research areas. Yin (2018) categorizes case studies as explanatory, descriptive, and exploratory. Explanatory case studies explain complex real-life interventions, exploring "how" or "why" something occurred. Exploratory case studies are used when there is no clear set of outcomes. Descriptive case studies describe interventions or phenomena and their real-life contexts, focusing on "what is happening or has happened." Case studies are relevant when rich descriptions or insightful explanations are needed to address research questions (Yin, 2018). They are adopted to increase knowledge about contemporary events and processes (Yin, 2018), especially when questions about "how" and "why" are central (Yin, 2018). This study employs a descriptive and exploratory research strategy.

Yin (2018) notes that case study research goes beyond exploration, description, or explanation. Eisenhardt argues that case study research is crucial for developing testable, relevant, and valid theories. Piekkari and Welch (2018) advocate expanding the role of case study research in theory development. According to Eisenhardt and Graebner (2007, p. 25), case studies emphasize the rich real-world context, likely producing accurate, interesting, and testable theories.

Given the above, case study research is the most suitable method for this study, which aims to gain an in-depth understanding of implementing AI-enabled customer insights in managing customer experience. This study uses case studies to build a theoretical framework and propose research propositions on AI usage in B2C service organizations. Due to the exploratory nature of the topic, a case study research approach is fitting for "investigating a contemporary phenomenon in depth and within its real-life context" (Yin, 2018; 2009, p.18). A case study aligns with the exploratory "how" and "what" questions guiding this study. Furthermore, it allows triangulation of data from multiple sources, enhancing findings' validity and reliability (Yin, 2014). This approach suits the need for comprehensive exploration of AI in managing customer experience within service organizations.

The case study approach was chosen based on the need for an in-depth exploration of AI in managing customer experience, considering its complexity and dynamism. It also allows the exploration of the context in which AI is used, essential for understanding its effectiveness. The previously developed conceptual framework forms the basis for the case study, further validating it.

3.3.3 The Choice of Multiple Case Study

The choice of multiple case studies in case study research is influenced by several factors, including research questions, philosophical perspective, and the need for theoretical generalization.

Critical realism, which emphasizes understanding the causal mechanisms underlying social phenomena (Bhaskar, 2013), is pertinent to case study research. It offers a framework to explore these mechanisms and structures. The research questions in this case study aim to investigate AI's role in leveraging customer insights for managing customer experience in the telecom and banking industries. They focus on identifying key mechanisms and structures contributing to success and their operation in various contexts. Multiple case studies align with these research questions, allowing exploration of these factors in different organizational and contextual settings.

A multiple case study approach is essential to achieve theoretical generalization when studying AI's role in enhancing customer experience. The term "theoretical generalization" refers to applying research findings beyond the specific study. It involves drawing inferences and making predictions about broader contexts. Qualitative research emphasizes theoretical generalizability, extending findings from a sample to a larger population or similar circumstances. While not absolute, it is statistically probable (Flyvbjerg, 2006). A multiple case study approach addresses the need for theoretical generalization by examining various contexts, situations, and populations, providing a broader understanding of the phenomenon under study.

The choice of four case studies, two from the telecom and two from the banking industry, is based on several considerations. Firstly, these sectors are actively involved in customer experience transformation and AI implementation, making them ideal subjects for study. Secondly, studying two cases in each industry allows for in-depth exploration of underlying mechanisms and structures across diverse settings within each sector. This approach seeks theoretical generalization by identifying common mechanisms transcending specific contexts. Scholars have suggested that more cases enhance understanding of a phenomenon (e.g., Blaikie, 2010; Yin, 2009). However, this decision must balance with available resources, leading to the choice of multiple case studies.

3.3.4 Case Selection & Purposive Sampling

The process of sampling for case study research occurs at two levels: the case itself and the informants or participants (Daymon and Holloway, 2011). The selection of the cases in a multiple-case study should follow a replication rather than sampling logic. And there are a number of ways to justify the selection of case studies: intrinsically interesting, illustrative, typical, or extreme cases. Intrinsically interesting cases are the ones selected because the researcher thinks and is able to demonstrate what is interesting about the cases they select (Bellamy, 2012). Based on Stake (2006), the logic of selection is because the case is intrinsically interesting or because it is instrumentally useful in being able to illustrate practical or theoretical features of value to the study. The selection of this research case study is guided by both intrinsic and instrumental logic.

Organizations participating in this study were required to conform to four qualifying criteria.

1. The first required organizations to have a CXM function, programme or practice in place.
2. The second criterion required participating organizations to have adopted AI technologies in their operations.
3. The third criterion required organizations to rely on multiple users of customer insight, located in different functions within the organization.
4. Accessibility and willingness to participate.

For the investigation of this research, the researcher has proposed a qualitative multiple case study approach. In line with Eisenhardt's (1989) suggestion that replication logic is central to building elaboration from case studies, four cases were selected according to this principle – that is, the cases provided differences rather than similarities, and so covered a range of different industries: financial services, and mobile telecommunications as below:

- Case A which is a leading bank in Jordan, providing a range of financial products and services to individuals and businesses. The bank is known for its focus on customer experience and has received multiple awards for its customer service.
- Case B which is another leading bank in Jordan, providing a range of financial products and services to individuals and businesses. The bank has a strong reputation for innovation and is known for its use of technology to improve the customer experience.
- Case C is one of the largest telecommunications companies in Jordan, providing mobile and internet services to millions of customers. The company is known for its innovative products and services, as well as its focus on customer experience.
- Case D is another major telecommunications company in Jordan, providing mobile and internet services to millions of customers. The company has a strong brand reputation and is known for its high-quality services.

A purposeful sampling approach is employed to collect evidence from multiple informants within each organization (Piekkari et al., 2010). Collecting evidence from multiple embedded sub-units of analysis is considered more robust and compelling (Herriott and Firestone, 1983; Yin, 2009). Consequently, adopting a multiple case analysis in this project enhances the collection of richer and more informed data within different contextual settings. Data triangulation, achieved through semi-structured interviews, document research, and archival research, further bolsters the validity of the findings (Yin, 2009).

This research employs a non-probability sampling strategy using a purposive technique, one of the most common techniques in qualitative research (Miles and Huberman, 1994). This approach allows the researcher to select participants who can best serve the study's purpose and address the research questions. Purposeful sampling is particularly well-suited for in-depth qualitative studies (Miles, Huberman, and Saldaña, 2014). It occurs when the researcher selects a sample from which the most can be learned (Daymon and Holloway, 2011). The interviewees are chosen based on specific features or characteristics that enable a detailed exploration and understanding of the constructs under study and the research questions.

In addition to purposeful sampling, snowball sampling is also utilized within the context of this study. Snowball sampling involves asking interviewees to identify other individuals they know who meet the selection criteria (Ritchie et al., 2014). The list of interviewees is provided in Appendix W, corresponding to each of the four case studies. This combined approach ensures a comprehensive and diverse selection of informants, enhancing the depth and richness of the data collected for analysis.

3.3.5 Unit of Analysis

This section addresses the aspect of unit of analysis selection within the context of multiple case study research. Deliberate consideration has been given to this decision in order to ensure methodological rigor and enhance the study's ability to glean meaningful insights. The unit of analysis refers to the specific entity or entities that will serve as the focal point of investigation and analysis within each case study. Miles and Huberman (1994) suggest that it is the heart of the research study and that it highlights the research boundaries. Yin (2018) provides some advice in this regard:

1. The unit of analysis has to be very closely linked to the RQs.
2. To enable comparison and generalization, the unit of analysis has to be either similar to that of existing research, or totally different

Given the research objective of examining the role of AI in actioning customer insights to manage customer experience, the selection of an appropriate unit of analysis is crucial. This involves identifying and defining specific entities and processes integral to understanding the interplay between AI implementation and customer experience management. To address the complex research question, a multiple embedded case study research is adopted. The main research question seeks to understand the role of AI in customer experience management, with the organization as the holistic unit of analysis and the process of generating and actioning AI-enabled customer insight as the embedded sub-unit.

According to Eisenhardt and Graebner (2007), case studies are useful for theory-building research questions, providing deep insights into subject understanding and exploring variable interactions. Bryman and Bell (2015) argue for their usefulness in exploratory research questions. Case study research can generate both variance and process theories, explaining linkages between variables and sequences of events leading to outcomes (Langley, 1999; Kouamé and Langley, 2018). This study adopts a process theory-building approach to create a theoretical framework for actioning customer insight to manage customer experience.

A replication strategy enhances case study findings' robustness, provides a foundation for theory building, and allows for broader generalization. Case studies are not statistically generalizable but can be analytically generalizable to theoretical propositions (Yin, 2018; Verleye, 2019). Replication can be literal, predicting similar results, or theoretical, predicting contrasting results for anticipatable reasons (Voss et al., 2016; Yin, 2018). The research will attempt a theory elaboration mode, appropriate when a general theory is identified but explored with flexibility and serendipity, using abductive logic to combine theoretical insights and empirical data (Dubois and Gadde, 2002; Gioia et al., 2013; Ketokivi and Choi, 2014).

The study employs a process theory-elaboration approach, focusing on the nature of social reality and technology's role. Actioning customer insight is a dynamic process requiring an examination of mechanisms in socially and temporally dynamic situations (Van De Ven, 1992; Reed, 2009).

3.3.6 Quality Criteria governing this Study

Case study research is acknowledged for generating and testing theory in the management field (De Massis and Kotlar, 2014). However, there's been debate over case studies' scientific nature and conduct (Fiss, 2009). To address concerns about case study rigor, this study ensures fair reporting of evidence and takes specific steps to ensure reliability and validity according to established criteria and logical tests for empirical social research (Yin, 2018). Yin (2018) identifies four widely used quality tests for case study design:

1. Construct Validity: Establishing correct operational measures for studied concepts. It reduces subjectivity by using data triangulation from multiple sources, including interviews, presentations, and internal documents. Reviewing interview transcripts and case study drafts with key informants also aids construct validity.
 2. Internal Validity (not applicable for this study): This study doesn't investigate causal relationships.
 3. External Validity: Establishing the domain for generalizing findings. This is achieved through analytic generalization, not statistical. Cases are selected for replication logic, and findings relate to a robust theoretical framework.
 4. Reliability: Demonstrating that the study's operations can be repeated with the same results. Case study protocols, including interview protocols and analysis procedures, ensure reliability.
- These criteria enhance the qualitative case study approach's validity, generalizability, and reliability. They draw from authoritative authors and research in the case study and qualitative research field, ensuring high research standards and contributing to knowledge advancement (De Massis and Kotlar, 2014; Fiss, 2009; Denzin and Lincoln, 2005; Yin, 2018; Pettigrew, 1990; Herriott and Firestone, 1983; Miles and Huberman, 1994).

3.4 Research Methodology

This section presents the research methodology used in this study. Wayne et al. (2014) define research methodology as "the systematic investigation into and study of materials and sources to establish facts and reach new conclusions." They stress the importance of a systematic approach to research, involving careful data gathering and analysis to uncover new knowledge. Creswell et al. (2017) define research methodology as "the procedures used to systematically solve the research problem," emphasizing its role in guiding the researcher throughout the research process, from identifying the problem to analysing data. Research methodology involves informed choices about research design, data collection methods, and analysis techniques.

3.4.1 Fieldwork plan

The purpose of this fieldwork plan is to outline the data collection and analysis process for this study. The study spanned 18 months, from January 2022 to June 2023, covering four service organizations. Six months were dedicated to data collection, followed by an intensive 12-month data analysis phase. This extended timeframe facilitated an in-depth exploration of the research question, fostering a thorough understanding of the context.

The fieldwork plan followed a sequential case-by-case data collection and analysis process, as shown in Figure 3-2.

Each case's fieldwork plan involved systematic steps to ensure a comprehensive exploration of the research context, providing a structured approach to the study:

1. Conducting virtual interviews using Microsoft (MS) Teams software with gatekeepers for access to the organization. Key informants within the organization were identified based on their roles and expertise in customer experience and AI.
2. Conducting semi-structured interviews virtually with key informants to gather data on AI usage in customer experience management. These interviews aimed to gather information on AI initiatives, challenges, benefits, and future plans.
3. Collecting secondary data, including annual reports, company websites, and news articles, to complement primary data from interviews.
4. Analysing the data using thematic analysis, coding it based on AI's role in customer experience management, and identifying emerging patterns.
5. Writing up the case, including a description of AI usage in customer experience management, challenges, benefits, and future plans after data analysis.

During the fieldwork, the researcher faced several challenges. Securing interviews with key informants proved difficult due to their busy schedules, resulting in data collection delays. Additionally, there was a shortage of secondary data for some organizations, making it challenging to supplement interview data. Certain organizations hesitated to share internal data, citing confidentiality and privacy concerns, limiting access to comprehensive information on their AI use in customer experience management. Furthermore, the study had to balance fieldwork across four organizations within a tight six-month timeframe due to limited time and resources. Despite these obstacles, the fieldwork was successfully completed, providing valuable insights into AI's role in managing customer experience in service organizations in Jordan.

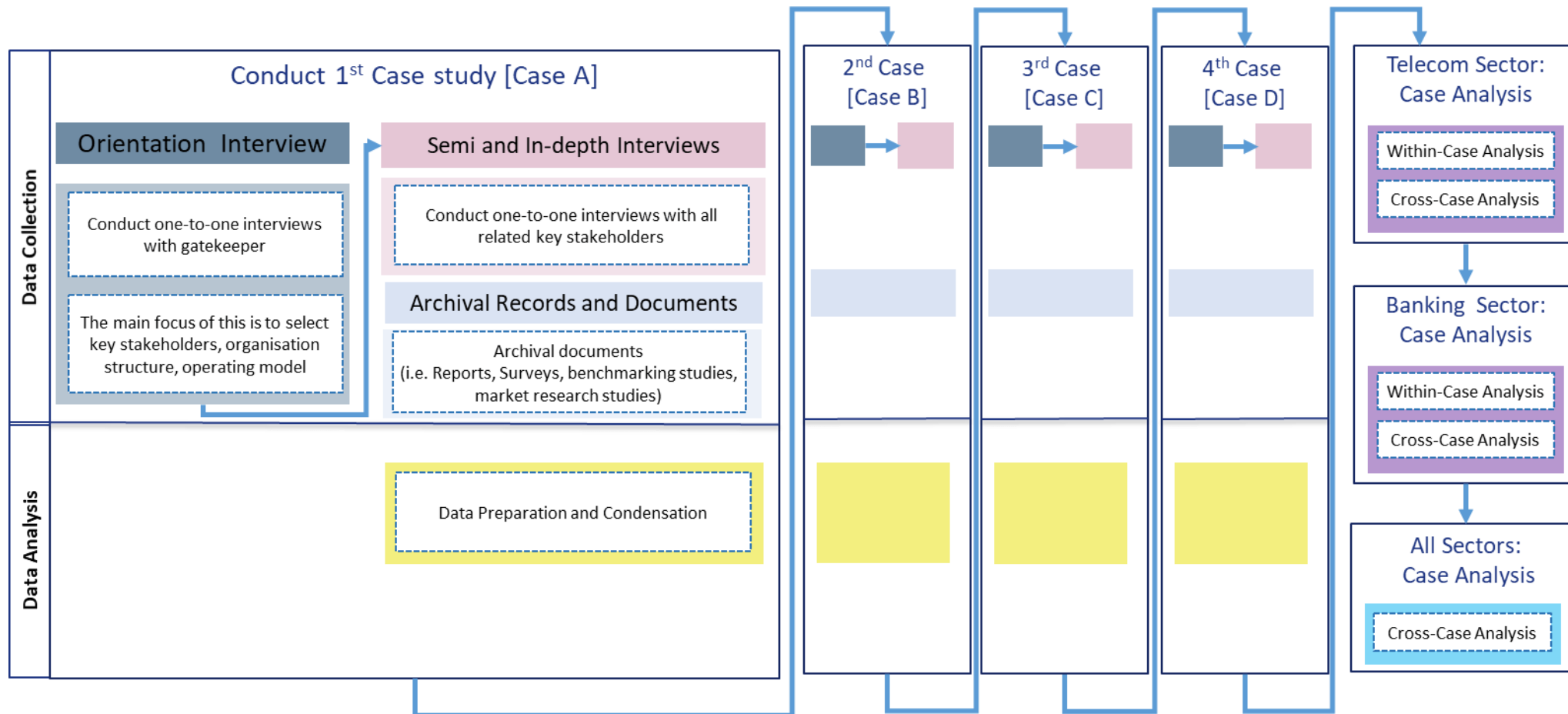


Figure 3-2 Plan for data collection, within-case analysis, and cross-case analysis - Sequence of data collection and analysis phases for each case organisation (Source: Author)

3.4.2 Methods for Data Collection

Unlike many other forms of research, the case study approach does not utilise a particular method of data collection. It allows the researcher to use multiple sources of data and a variety of research methods to explore the research question which, in turn, fosters the validation of the data through triangulation (Yin, 2014). Therefore, a combination of data collection techniques is selected in this study to provide a rich, detailed, and complete picture. Multiple methods utilised in this study include in-depth interviews, document reviews, archival records, and observation. Thus, the findings and conclusions are likely to be more compelling and accurate (Yin, 2003).

Within the broader case study approach, the main data collection techniques included in-depth interviews, company documents, archival records, and direct observation. For this study, data were collected from the below mentioned sources:

- In-depth interviews with relevant internal management and staff: guided conversations to provide opportunities for mutual discovery, understanding, reflection, and explanation focusing on case study topics.
- Company documents: including such documents as company policies, annual reports, information/published documents in the public domain, archives, etc., based on availability

Figure 3-2 summarizes the above data collection sequence, showing how each case started with initial qualitative interviews, intended to establish a direction for the rest of inquiry as well as rapport with study participants.

3.4.2.1 Orientation Interviews

The main purpose of this stage of the research is to get a general overview of the structure and functioning of the organisation, such as obtaining an organization chart which is useful in ensuring that the researcher is aware of the work of the departments. Hartley (2014) advise that it can be valuable to be 'walked round' the organization following the workflow and observing the work being undertaken. In this way the researcher can map out where the principal sources of data are likely to be and gain an idea of when are the best (and worst) times and occasions on which to talk to people and this will help to plan the field work. After gaining an overview of the organisation, structure, process, and key informants. The researcher can plan out the people and the groups that he wants to talk with/observe and the research methods you want to use.

3.4.2.2 Semi-Structured Interviews

In exploratory qualitative research, interviews are the most popular method employed to collect data, (Bryman, 2012). For the design of the interviews a number of considerations are needed. First, the type of interview method and second the questions needed to capture relevant data, particularly depending on the degree of flexibility and data collection stage of the research (King, 2014). Inherently there are three broad types of interviews, ranging from the more 'closed' types of questions in fully-structured interviews, to more flexible yet pre-determined questions in semi-structured interviews where the sequence and wording can be altered according to the interview context and finally to open-ended and in-depth unstructured interviewing, which typically does not involve a set of specific questions (Robson, 2002).

Semi-structured and in-depth interviews approach is selected to complete data collection. The other option was selecting structured questionnaire to be filled out by participants. However, the latter option was not selected, as it doesn't offer the flexibility to build in-depth understanding stemming from participants experiences (Saunders et al 2015). Semi-structured and in-depth interviews are often the main data sources in case study method (Eisenhardt and Graebner, 2007). An in-depth interview is a one-to-one method of data collection that involves an interviewer and interviewee discussing specific topics in detail (Rubin and Rubin, 2012). The in-depth aspect of the method is crucial as it reinforces the purpose of gaining a detailed insight into the research issues from the perspective of the study participants (Daymon and Holloway, 2011). For the purpose of this research semi-structured interviewing will be employed for all interviews and a set of open-ended questions will be asked to allow for an in-depth interviewing.

Interview Guide

Preparing an interview guide is crucial in case study research, particularly when employing a semi-structured and in-depth interview approach. As pointed out by Yin (2018), an interview guide helps ensure consistency and reliability in data collection by providing a structured framework for the researcher and guiding the conversation with participants. According to Stake (2006), "The interview guide is the road map for the journey of inquiry" (p. 100), emphasizing its importance in guiding the researcher's exploration of relevant topics while allowing for flexibility and capturing rich insights from participants. By utilizing an interview guide, researchers can effectively probe into specific areas of interest, maintain focus, and gather comprehensive data to address the research questions at hand. The interview guide was prepared based on the findings of the literature review, the research questions, the initial conceptual framework as well as the objectives and aim which provides guidance in the interviews to cover the relevant topics about the subject matter, as shown in appendix E.

3.4.2.3 Documents

Yin (2012: p. 103) suggests that “*systematic searches for relevant documents are important in any data collection plan.*”. A document is any substance that gives information about the investigated phenomenon and exists independently of the researcher’s actions (Saunders, Lewis and Thornhill, 2009). Bryman and Bell (2011) suggest that formal documents give insight into an organisation’s cultural and technical operations. They have the advantage of being written without prior knowledge that they might be used for research and are able to set the organisational historical context (Bryman and Bell, 2011). These documents are normally produced for specific purposes other than those of research (Yin, 2012). Yin (2003) asserts that for case studies, the most important use of documents is to corroborate and augment evidence from other sources. Data from documents can be used to augment evidence from other sources (Wesley, 2009; Yin, 2012). Documents as a source include the collection of organizational documents, such as annual reports, company’s vision/mission statements, shared customer insights presentations, or shared reports amongst different departments. This study will use company documents to gain an understanding of the organisation through a structured way of collecting relevant documents for review, such as company’s vision/mission statements, shared presentations and reports, sample customer journeys, and existing innovation or process delivery reports related to artificial intelligence.

3.4.2.4 Triangulation

Data collection triangulation is a research technique used to enhance the validity and reliability of data collected in qualitative research. Triangulation involves the use of multiple methods or sources to collect data on the same research topic or phenomenon. This approach allows the researcher to cross-check the data collected from different sources and methods, which helps to increase the credibility and trustworthiness of the data. According to Denzin (1978), triangulation involves the use of multiple methods, data sources, and investigators to study the same phenomenon. This approach helps to reduce the potential for bias or error in the data collected, as different methods and sources are used to collect and analyse the data. Triangulation can also help to identify patterns and themes in the data that may not have been apparent using a single method or source. In the case study research, data collection triangulation was used to enhance the validity and reliability of the data collected. The study utilized multiple sources of data, including interviews with key informants and document collection. Method triangulation was also used, as the study utilized both interviews and observation to collect data. The use of data collection triangulation in the study helped to enhance the credibility and trustworthiness of the data collected. By using multiple methods and sources to collect data, the study was able to validate and cross-check the data collected from different sources, which helped to identify patterns and themes in the data.

3.4.3 Data Sources Used

The data sources used encompass a combination of interviews and documents. Notably, the interviews were conducted virtually via Microsoft Teams, allowing for seamless communication, and ensuring the accurate recording and transcription of each session. The interviews took place over a period extending from January 2022 to August 2022, with each interview lasting an average duration of 60 minutes. The conducted interviews were semi-structured, carefully organized around specific sections within an interview guide. This deliberate structuring aimed to facilitate in-depth probing and exploration. For a more detailed and comprehensive outline of the interview guide, kindly refer to Appendix E. Also, refer to Appendix W for full details of the data sources used for each of the four cases.

3.4.4 The Process for Data Analysis

Data analysis in qualitative research involves preparing, organizing, and reducing non-numerical data into themes through coding and synthesis (Rose et al., 2015; Creswell, 2013). This analysis process includes iterations between data collection and analysis steps, as depicted in Figure 3-3, and follows recommended strategies (Rose et al., 2015; Miles and Huberman, 2014; Yin, 2018) to improve data quality. The process begins with Step 1, data preparation, which includes transcription, creating interview logs, and data organization. Immersion in the data aids in understanding context. Step 2 involves developing a coding system based on literature and interview guide, with initial code definitions. Steps 3 and 4 focus on basic coding, category system development, and fine coding, guided by Saldana's framework (2016) and grounded theory principles (Strauss and Corbin, 1998), as depicted in Figure 3-4. Selective coding emphasizes relevant codes. Throughout, researchers identify emerging patterns, categories, and themes, following an iterative process (Miles and Huberman, 1994). Step 5 includes within-case and cross-case analysis, as shown in Figure 3-5, to generate deeper insights. The final phase involves case study write-up.

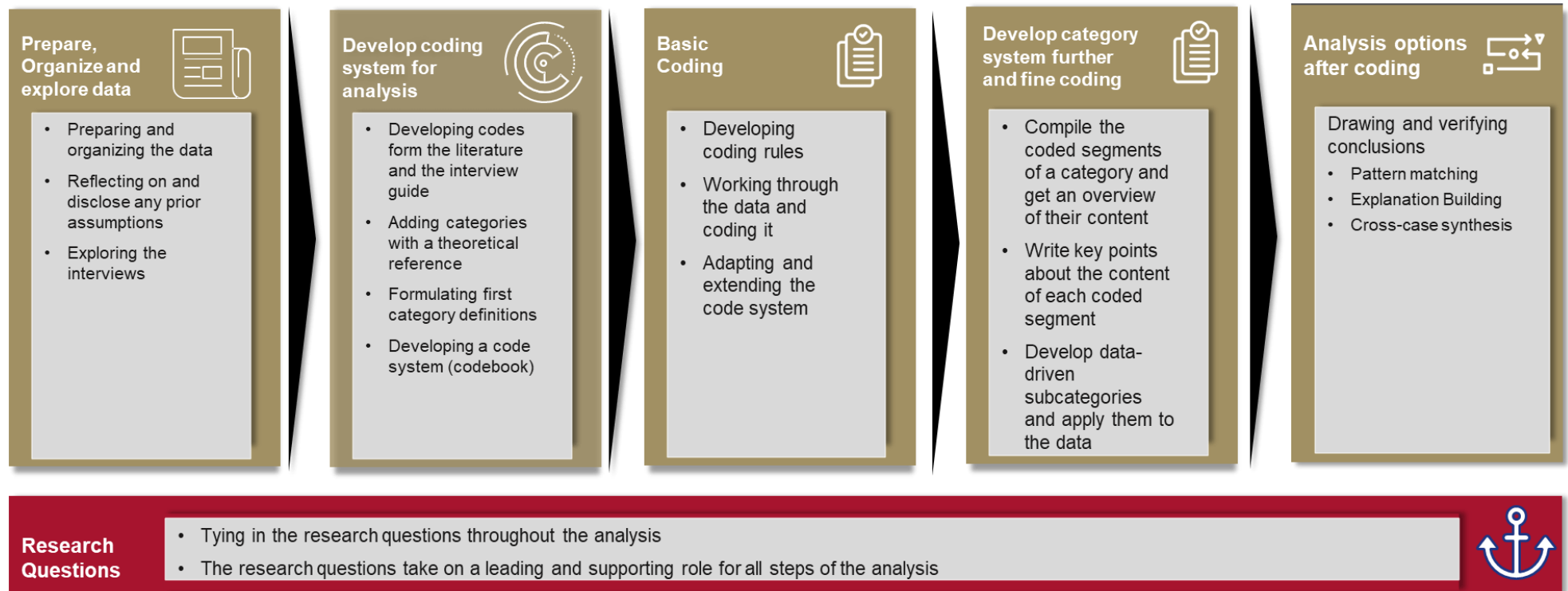


Figure 3-3 The process of data analysis (Adapted from Miles and Huberman's (2014), Rose et al. (2015) and Yin (2018))

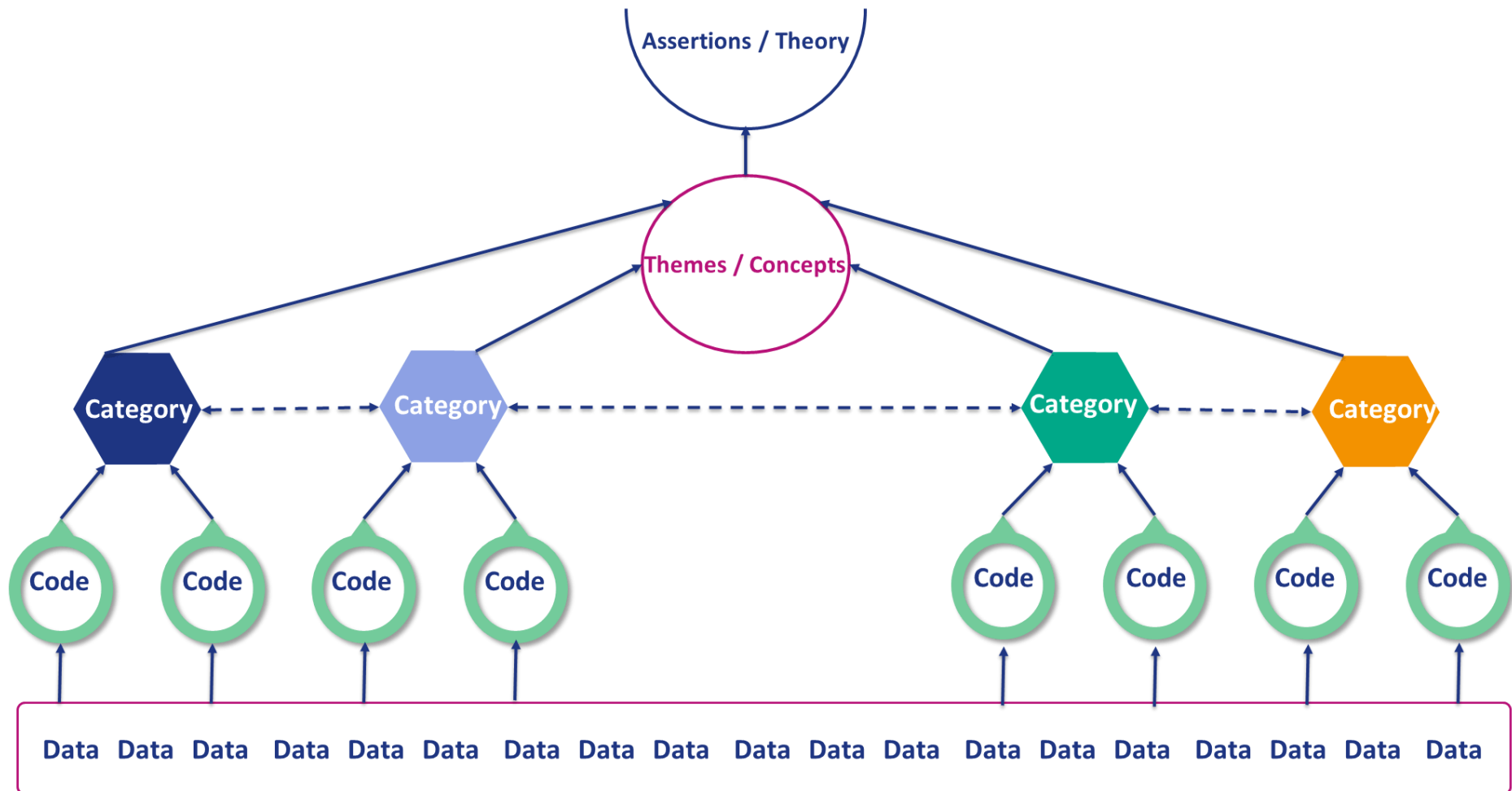


Figure 3-4 Codes to category to themes – Adapted form Saldana (2016)

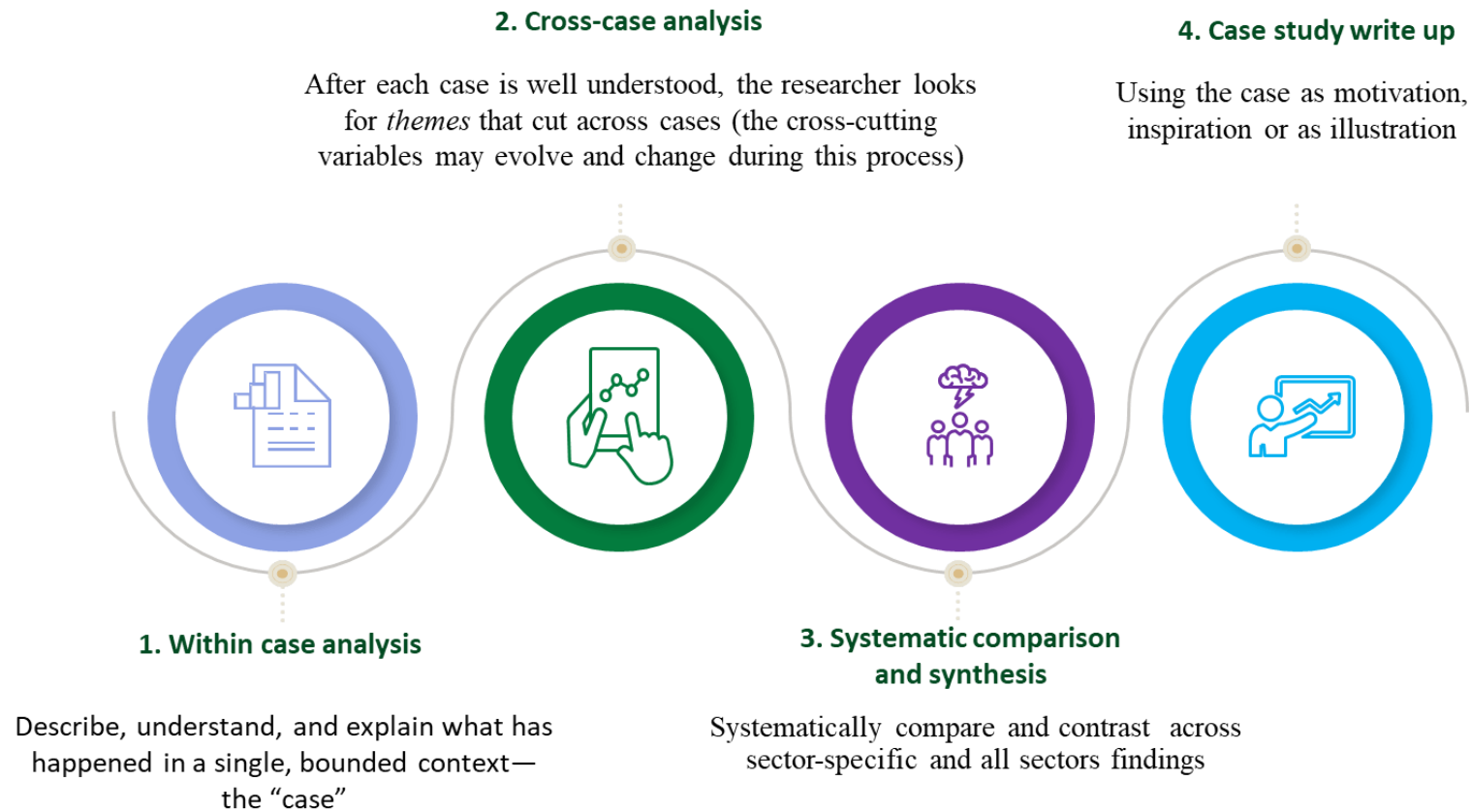


Figure 3-5 the analysis of case study (Source: Author)

3.4.4.1 Step 1: Data Preparation Phase - Prepare, organise, and explore data

The data preparation phase is a crucial step in the research process. This phase involves several key steps, including organizing and structuring the data, transcribing interviews, uploading the transcripts into a QDA software, and preparing the data for the coding phase.

Firstly, the interviews were recorded and transcribed using Microsoft (MS) Teams software, which provides a recording feature along with an automatic transcription service. However, the researcher checked the transcripts word-by-word to ensure accuracy, as automated transcription services may make mistakes or inaccuracies.

Secondly, the transcripts were uploaded into MAXQDA, a CAQDAS (Computer-assisted qualitative data analysis software), to facilitate the coding phase. The software allowed the researcher to highlight text and assign codes to it, making it easier to identify and organize similar themes or concepts. The researcher carefully read through the data to identify key themes, concepts, and patterns that emerged from the data. It is important to note that while CAQDAS programs can assist in the analysis of data, the strength of any analysis ultimately relies on the researcher's judgement. A computer system is not a substitute for the researcher's expertise in evaluating the data. Therefore, some manual or personal evaluation of the data is necessary to ensure that appropriate interpretations are made. The researcher should always remain close to the data, even when using CAQDAS to manage large volumes of data, to extract the full meaning from it. In this study, MAXQDA was used as the chosen CAQDAS software. During the organization and structuring of the data, the researcher drafted case summaries in memo style, including notes about stimulating topics. It was necessary to anonymize the organization's name and function for the four cases.

Finally, the researcher began to prepare the data for coding. This step involved reading through the data several times, creating categories and subcategories, and assigning codes to different segments of data. As the coding phase progressed, the researcher continually reviewed and revised the codes and categories to ensure that they accurately reflected the data.

3.4.4.2 Step 2: Develop coding system for analysis – Create initial codebook from literature and Interview Guide

Developing a comprehensive coding system is a critical component of the data analysis process. The process of developing a coding system can be broken down into several steps. First, a code system can be created from the literature that has been reviewed. This code system can provide a useful starting point for analysing the data and can be supplemented as needed. Second, the interview guide can also be used as a starting point for developing codes. The guide focuses the interview on relevant topics and serves as a bridge between the

researcher's interests and the field. Developing codes from the interview guide can be a useful approach. In order to conduct focused analysis of qualitative interviews, it is essential to develop a coding system based on the interview guide and the literature. This system should be flexible and adaptable, allowing for changes and refinements as the analysis progresses. The ultimate goal is to develop a comprehensive and nuanced understanding of the data, and a well-designed and executed coding system is an essential component of achieving that goal.

Initial coding scheme from literature

Creating an initial coding scheme from literature is a common approach in qualitative research. This involves conducting a thorough review of existing literature on the research topic and developing an initial set of codes based on key themes and concepts that emerge from the literature. This approach not only helps in developing a comprehensive coding system, but also assists in identifying gaps in the literature that the research can potentially address. Several scholars, such as Saldaña (2015) and Charmaz (2014), advocate for the use of literature in developing initial codes for qualitative analysis. As per Appendix F, a number of codes with code descriptions were produced. These codes were developed based on the initial coding scheme, which was generated from the literature and the interview guide. Each code represents a unique theme or concept that emerged from the data. By systematically applying these codes to the data, the research was able to identify patterns and relationships within the data, which helped to answer the research questions.

Initial coding scheme from the Interview Guide

In qualitative research, using an interview guide is a common practice to structure interviews with participants. Researchers use an interview guide to define the topics to be discussed, which ensures that the data collected is relevant to the research question. The guide also enables the researchers to compare interviews and ensures that they gather data in a systematic and organized manner. Witzel and Reiter (2012) have discussed the design of the interview guide in detail. They suggest that the guide has a twofold function: it helps focus the interview on topics relevant to the researchers' previous knowledge and enables the comparison of interviews. The guide should not be overly detailed, as this can lead to a "guide bureaucracy" where questions are ticked off, and no communicative process takes place. Therefore, the guide must strike a balance between providing enough structure to guide the interview and allowing for flexibility and spontaneity in the interview process.

As shown in Appendix G, a number of codes were produced based on the interview guide that was developed during the preliminary work of the focused analysis of qualitative interviews. The categories were developed by translating the questions in the guide into core points that were summarized into one or more appropriate words. The labels of the categories were chosen in a way that maintained their correspondence to the questions in the guide.

3.4.4.3 Step 3: First Cycle coding- Basic Coding

In a case study research approach, the first step in qualitative data analysis is to perform basic coding. This involves reading through the data, identifying important words or phrases, and assigning codes to those words or phrases. As noted by Yin (2018), coding is a "process of categorizing qualitative data into meaningful groups for analysis". The first cycle of coding involves the initial process of analysing the data. According to Saldaña (2015), during this stage, the researcher identifies patterns and themes within the data, using a process of open coding. Open coding involves breaking down the data into smaller, more manageable units and attaching descriptive labels, or codes, to each unit. These codes are used to organize and categorize the data into meaningful groups. The aim of basic coding is to identify and generate codes that are grounded in the data. Saldaña (2015) defines a code as "a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data". (p.4)

From a critical realist perspective, basic coding involves identifying both the empirical and underlying causal mechanisms that are present in the data. These mechanisms are the key drivers of the phenomena under investigation, and the goal of the research is to identify them and to understand how they interact. Critical realist scholars argue that basic coding should go beyond surface-level observations and should focus on identifying the underlying mechanisms that drive the phenomena under investigation. This involves identifying the structures and processes that are at work in the case, as well as the social and historical context in which they operate. As noted by Bhaskar (1978), critical realist research should aim to uncover the underlying causal mechanisms that explain social phenomena, rather than simply describing them. By identifying the causal mechanisms that are present in the data, researchers can develop a deeper understanding of the phenomena under investigation and can develop theories that explain why certain patterns and themes emerge. This study utilizes the following basic coding techniques, including descriptive coding, in which labels or codes are assigned to data segments for the purpose of summarizing and describing the content without introducing theoretical interpretations, and in vivo coding, which entails employing participants' own words or phrases as codes to preserve the authenticity and richness of their expressions and highlight their unique perspectives and experiences. Furthermore, process coding is applied to capture the dynamic and temporal dimensions of the data, involving the coding of actions, sequences, interactions, or changes over time, thereby accentuating the processual nature inherent to the phenomenon under investigation.

The results of the first cycle coding process for the four case studies under investigation are presented at Appendix H providing a summary of the first cycle codes, including their descriptions and sub-codes. The table also shows the extent to which each code is manifest in each case study

3.4.4.4 Step 4: Second cycle coding- Develop Category System

The second cycle of coding involves a more focused approach to analysing the data. During this stage, the study uses the codes generated in the first cycle to develop categories and patterns. The categories and patterns provide a framework for understanding the data and help to organize the data into meaningful groups (Braun & Clarke, 2006). The aim of the second cycle is to develop a deeper understanding of the emerging patterns and themes by selecting the most relevant codes and grouping them into categories. These categories are then used to develop broader themes that explain the patterns within the data. In the initial stage, the researcher reviews the data and identifies patterns that emerge from it. Once a set of categories are identified, the researcher can then explore the relationships between the codes through axial coding (Charmaz, 2014). Axial coding is an iterative process where the researcher continues to analyse the data, adding new codes and refining their relationships to develop a more nuanced understanding of the patterns and identify broader themes. Selective coding is employed during the second cycle to identify the most relevant categories and themes that are central to the phenomenon under investigation. This process helps refine the analysis and develop a more focused understanding of the data (Corbin & Strauss, 2014). Selective coding involves selecting core categories, integrating them with each other, and filling gaps in the data with new data or analyses.

In this cycle, the codes identified in the first cycle are grouped together into categories based on their similarities and differences, facilitating the organization of the codes into broader categories that make sense of the data (Miles & Huberman, 1994). The resulting categories from the second cycle coding can help answer research questions and provide a deeper understanding of the phenomenon under investigation (Stake, 1995). This involves refining the initial codes and identifying more abstract concepts and relationships between them (Miles & Huberman, 1994). The process of second cycle Coding also involves constant comparison between the data and the emerging categories to compare new data to existing categories, refining or modifying them as necessary. This iterative process allows for a more nuanced understanding of the data and the refinement of categories to better capture the underlying causal mechanisms.

By presenting the second cycle codes and mapping to the associated first cycle code across the four case studies, Appendix I provides a summary of the second cycle codes across the four case studies as well as a more nuanced and detailed understanding of the patterns and categories in the data. The table shows the extent to which each code is manifest in each case study. This information can be used to guide the third cycle coding processes, as well as to draw conclusions about the phenomena under investigation.

3.4.4.5 Step 5: Third Cycle coding – Develop Theme System

Mapping of Themes to Second Cycle to First Cycle Coding

In the third cycle of coding, an iterative process building upon the preceding cycles, the primary objective is to further deepen the understanding of the data. This process commences with the identification of the most salient themes that emerged during the second cycle of coding, which involved categorizing data based on the initial codes. These discerned themes serve as the foundational elements for constructing a coherent theme system, thus facilitating a more profound comprehension of the data.

The overarching aim of this cycle is to develop a comprehensive and interconnected theoretical framework that aids in interpreting the data holistically. As elucidated by Saldaña (2015), the third cycle of coding is inherently geared towards the formulation of a theoretical framework capable of elucidating the underlying patterns and themes within the data. This theoretical framework, rooted in the identified themes, enables a more profound understanding of the phenomenon under investigation, thereby providing the basis for addressing the research questions.

Following the critical realist perspective, this phase ensures that the theme system is firmly grounded in the generative mechanisms identified earlier, aligning the themes with relevant concepts and relationships and reflecting the causal mechanisms underpinning the phenomena. Subsequently, this theme system is employed to recognize intricate patterns and relationships within the data and derive conclusive insights pertaining to the phenomena in question. Furthermore, the theme system serves as a guiding framework for structuring and presenting the research findings in the final report. It organizes the results in a coherent manner and aids in their effective communication.

Appendix J presents a mapping of the themes, categories, and codes across the four case studies, offering a comprehensive overview of the entire coding process. This mapping demonstrates the progression from the third cycle, where themes were developed, to the second cycle, which involved the identification of categories, and finally to the first cycle, dedicated to the establishment of individual codes. By aligning themes with research questions, researchers establish a coherent and logical connection between the analysis and the overarching study objectives. This alignment serves as a robust foundation for subsequent analysis and interpretation, guiding researchers in formulating comprehensive and coherent findings firmly grounded in both research objectives and empirical evidence. Moreover, it ensures that the analysis remains focused on pertinent aspects of the data, enhancing the development of meaningful and well-supported conclusions.

Mapping of Themes to Research Questions

In qualitative and case study research, the mapping between themes and research questions serves as a crucial step in drawing connections between the data analysis and the overarching aim and objectives of the study. The next mapping involves linking the identified themes to the specific research questions that guided the investigation. This alignment is fundamental for researchers to ensure that the themes extracted from the data are directly relevant to the research objectives and can provide meaningful insights. According to Charmaz (2006) and Miles and Huberman (1994), the ultimate goal of qualitative research is to generate theories or explanations about the world based on the perspective of the participants. By mapping themes to research questions, researchers can ensure that the analysis focuses on the relevant aspects of the data and facilitates the formulation of theoretical constructs.

This mapping process allows researchers to demonstrate how the identified themes contribute to answering the research questions and achieving the study's objectives. It provides a systematic link between the empirical findings and the theoretical framework, ensuring the coherence and relevance of the research outcomes. By establishing this connection, researchers can validate the significance of their study and its contribution to the existing body of knowledge. Moreover, the mapping between themes and research questions enhances the rigor and credibility of the qualitative and case study research. It demonstrates the researchers' ability to derive meaningful insights from the data and supports the development of generalizable findings. By aligning the themes with the research questions, researchers can establish the theoretical and conceptual foundations of their study, drawing on the works of qualitative and case study researchers such as Saldaña (2015), Stake (1995), and Miles and Huberman (1994).

Appendix K presents the mapping of themes to research questions, providing a comprehensive overview of how the identified themes align with the specific objectives of the study. This mapping process highlights the direct relationship between the themes derived from the data analysis and the research questions that guided the study. By visually representing this alignment, it allows for a systematic examination of how each theme contributes to the overall understanding of the phenomena under investigation. Furthermore, the table provides a reference point to track the progress of their analysis and ensure that the findings are firmly rooted in the research questions.

3.4.4.6 Step 6: Analysis Options after Coding

Selecting an appropriate analysis option after coding in a case study research approach is an important step in drawing conclusions about the data. The choice of analysis option is guided by the researcher's theoretical framework and research questions and should reflect the underlying causal mechanisms that drive the phenomena under investigation. The researcher remains reflexive and constantly compare the findings to the theoretical framework and research questions, thus, allows the researcher to ensure that the findings are grounded in the data.

Analysis in case study research goes beyond the mere examination of coded data; it involves delving deeper into the patterns, themes, and relationships that emerge within and across cases. Two primary options for analysis are within-case analysis and cross-case analysis. Within-case analysis focuses on exploring the intricate dynamics and context-specific details within each individual case, unravelling unique patterns and themes, according to Eisenhardt (1989) "Within-case analysis enables a comprehensive exploration of the dynamics within each individual case, uncovering rich context-specific details that may contribute to theory development". On the other hand, As stated by Yin (2018), "Cross-case analysis helps researchers identify common patterns and relationships that transcend individual cases, contributing to a deeper understanding and theory development that extends beyond specific contexts", this analysis involves comparing and contrasting data across multiple cases to identify commonalities, differences, and overarching patterns that contribute to a broader understanding of the phenomenon under investigation.

Within-Case Analysis

Within-case analysis is a key component of case study research that can help to uncover the underlying causal mechanisms that produce the observed patterns and relationships within each case. Within-case analysis is a critical component of case study research that involves examining the data within each case to identify patterns, themes, and relationships (Miles & Huberman, 1994). From a critical realist perspective, within-case analysis should aim to uncover the underlying causal mechanisms that produce the observed patterns and relationships, rather than simply describing the surface-level phenomena.

Within-case analysis is the process of exploring and analysing the data collected within individual cases in case study research. It involves a systematic examination of the rich details and context-specific information within each case to gain a deep understanding of the phenomenon under investigation. As noted by Eisenhardt (1989) "The within-case analysis enables us to explore the dynamics and intricacies of individual cases, uncovering the rich context-specific details that may contribute to theory development"

Within-case analysis can involve several different methods, each with its own strengths and limitations. One commonly used method is pattern matching, which involves comparing the data patterns within each case to the expected patterns based on the research questions and theoretical framework (Yin, 2018). This method can help to identify consistencies and inconsistencies within the data and can help to refine the research questions and theoretical framework. Yin highlights the importance of pattern matching, which involves comparing the observed patterns in the data with either pre-existing patterns from empirical research or predicted patterns based on theories or hypotheses. "Pattern matching involves matching the empirical pattern of the findings to either an empirically based pattern or a predicted one. [...] Researchers using pattern matching examine whether the predicted relationships are present in the data" (Yin, 2018). Also, Eisenhardt emphasizes that pattern recognition is a key aspect of within-case analysis, wherein the analyst identifies similarities or differences in events or processes within the case. This recognition of patterns aids in understanding the unique characteristics and dynamics of each case. "Pattern recognition involves an analyst recognizing that an event or process is similar to, or different from, other events or processes" (Eisenhardt, 1989). Another method of within-case analysis is explanation building, which involves developing a causal explanation for the observed patterns and relationships within each case (Flyvbjerg, 2006). This method involves identifying the underlying mechanisms, contextual factors, and causal processes that produce the observed outcomes, and developing a coherent and plausible explanation that accounts for the data. A third method of within-case analysis is process tracing, which involves examining the sequence of events and actions within each case to identify the causal mechanisms that produce the observed outcomes (George & Bennett, 2005). This method is particularly useful for studying complex and dynamic phenomena, such as organizational change or policy implementation, where the causal mechanisms may be non-linear and multi-faceted.

Analysis of the four case studies involved the utilization of three key methods. Firstly, pattern matching was employed to compare data patterns within each case and identify consistencies or inconsistencies, refining research questions and theoretical frameworks. Secondly, explanation building was utilized to develop causal explanations for observed patterns and relationships, accounting for underlying mechanisms and contextual factors. Lastly, process tracing examined the sequence of events within each case to identify the causal mechanisms driving observed outcomes (Yin, 2018; Flyvbjerg, 2006; George & Bennett, 2005).

Chapter 4, details within-case analysis presented for each of the four case studies. The within-case analysis includes an exploration of the context, the findings, and the implications for theory and practice.

Cross-case Analysis, Synthesis

By systematically comparing and contrasting categories and themes across multiple cases, the study identifies patterns, variations, and explanations that contribute to a more comprehensive analysis and generate valuable insights for theory development and practical applications. As highlighted by Miles and Huberman (2014), cross-case analysis is particularly useful when seeking to develop or refine theories, identify best practices, or inform practical applications. It allows for the generation of theoretical propositions or practical recommendations based on the cumulative evidence gathered from multiple cases. The cross-case synthesis strategy is similar to the case-based approach which seeks to preserve integrity of the entire case and then compare or synthesise all within-case patterns across the cases (Yin, 2018).

According to Yin (2018), cross-case analysis involves the comparison of findings across multiple cases to identify patterns and relationships, as well as to develop and test hypotheses. Drawing on the critical realist perspective, the cross-case analysis in this study is informed by the idea that social phenomena are shaped by underlying mechanisms and structures that can be identified through careful analysis of empirical data (Bhaskar, 1989). By analysing similarities and differences across the four cases, the study aims to identify commonalities and variations in the mechanisms and structures that shape the research questions and to develop a more nuanced understanding of the theoretical implications of the findings.

Various methods can be used to conduct cross-case analysis, including pattern-matching, explanation-building, and time-series analysis (Yin, 2018). Pattern-matching involves comparing patterns of findings across cases to identify similarities and differences, while explanation-building seeks to develop explanations of the patterns and relationships identified in the cases. Time-series analysis involves examining the relationships between variables over time to identify causal mechanisms and structures. In this study, the cross-case analysis will be guided by the critical realist perspective and will involve the use of pattern-matching and explanation-building methods to identify patterns and relationships across the four case studies. The analysis will aim to identify commonalities and variations in the mechanisms and structures that shape the research questions and to develop a more nuanced understanding of the theoretical implications of the findings.

The analysis and findings of the cross-case analysis is presented in Chapter 5 of this research thesis, covering the analysis for the four selected case studies, examining patterns and findings. The subsequent Chapter 6 discusses the theoretical implications and builds upon the identified patterns and relationships within the context of existing literature.

3.4.4.7 Step 7: Testing for Credibility and Reliability

Credibility refers to the trustworthiness of the research findings and the extent to which they accurately represent the phenomenon being studied (Yin, 2018). One way to enhance credibility is through member checking, which involves sharing the findings with participants to verify their accuracy and interpretation (Lincoln and Guba, 1985). Another way to enhance credibility is through peer debriefing, which involves having other researchers or experts review the research process and findings to ensure accuracy and completeness (Miles and Huberman, 1994). Testing for reliability is another important aspect of case study research. Reliability refers to the consistency and repeatability of the research findings. One way to test for reliability is the use of a systematic and explicit coding scheme, as explained in the previous sections, which can be developed through an iterative process of testing and refinement to ensure its reliability (Yin, 2014). Another method is to use multiple researchers or coders to analyse the data independently and then compare the results to ensure consistency (Miles and Huberman, 1994). This can also involve using a standardized coding system or protocol to ensure consistency across different cases.

For the purpose of ensuring robust intercoder reliability in the qualitative analysis of this case study research, two independent people were engaged to code the same transcripts separately and discussing and refining the codes throughout the process, each with a specific academic background. The first coder holds a doctorate in Business Administration, while the second coder has an MSc in Business Management. In a one-hour one-to-one meeting, each external coder was familiarised with the author's study, an explanation of the data, and how the author proceeded. Initially, their agreement on coding assignments resulted in a percentage of agreement of 53% and 64%, respectively. Recognizing the importance of achieving a higher level of consensus, a round of intensive discussions was undertaken which were structured to foster open and collaborative dialogue, allowing all parties to express their viewpoints, concerns, and perspectives on the coding assignments.

This collaborative effort led to a substantial improvement in intercoder reliability, with the percentage of agreement increasing to above 90% for both coders. This level of agreement aligns with the recommended minimum percentages advocated by other scholars in the field, ensuring the reliability and validity of the qualitative analysis conducted in this study. According to Patton (2002) suggests aiming for a percentage agreement of 70% or higher, indicating a substantial level of agreement among coders. Saldaña (2016) argues for a minimum agreement of 80% to ensure a high level of reliability and reduce the likelihood of chance agreement. Miles and Huberman (1994) emphasize the importance of aiming for a level of agreement above 85% as a reasonable threshold, while noting that higher levels are preferred to enhance validity and rigor. The intercoder reliability table, capturing the agreement percentages and results of the discussions and recoding, is presented in Appendix L. This table provides a comprehensive overview of the initial agreement percentages between the two external coders, as well as the subsequent increase in agreement after the round of discussions.

3.5 Research Ethics

Research ethics play a crucial role in maintaining the integrity and trustworthiness of conducting research, ensuring that it is carried out in an ethical and responsible manner. Adhering to ethical principles and guidelines is essential to protect the rights and welfare of research participants, maintain the integrity of research findings, and uphold public trust in research (Rose et al., 2015). This section aims to explore the concept of research ethics, highlight their significance, discuss key ethical concerns in research, and explain how ethics were addressed in the study. Furthermore, it incorporates the ethical guidelines provided by the University of Reading Ethics Committee.

Research ethics refers to the moral principles and values that guide the conduct of research. It involves ensuring that research is conducted with integrity, respect, and transparency. Ethical considerations are crucial in research to protect the rights and well-being of participants, maintain confidentiality and privacy, and ensure the validity and reliability of research findings. Research ethics also involve disclosing any potential conflicts of interest and adhering to professional standards and guidelines. Research ethics are of paramount importance for several reasons. Firstly, they safeguard the rights and welfare of individuals who participate in research studies. Ethical conduct ensures that participants are treated with respect, their autonomy is upheld, and any potential harm is minimized. Secondly, research ethics contribute to the credibility and reliability of research outcomes. By adhering to ethical guidelines, researchers uphold the integrity of the study and maintain public trust in the scientific community. Additionally, research ethics help prevent misconduct, unethical practices, and potential legal implications (Rose et al., 2015).

In this study, ethical guidelines provided by the University of Reading Ethics Committee were consulted and integrated into the research design and data collection procedures. These include:

1. **Informed Consent:** Researchers must obtain informed consent from participants, ensuring they understand the purpose, procedures, risks, and benefits of the study. The University of Reading Ethics Committee guidelines emphasize the importance of informed consent and provide specific requirements for obtaining and documenting consent. The study obtained informed consent from all participants, (refer to Appendix D for details), following the University of Reading Ethics Committee guidelines. Participants were provided with detailed information about the study, its purpose, procedures, and potential risks and benefits. They were given the opportunity to ask questions and provide their consent voluntarily.

2. Confidentiality and Privacy: Protecting the confidentiality and privacy of research participants is crucial. Researchers must ensure that participants' personal information is kept confidential, and that data is stored securely. The study implemented measures to protect the confidentiality and privacy of participants. Each participant was assigned a unique identifier code to detach their responses from personal information. This ensured that any information shared could not be traced back to a specific individual. Also, data was anonymized and stored securely, following the University of Reading Ethics Committee guidelines for data management.

3. Data Management: Ethical data management involves collecting, storing, and analysing data in a manner that protects participants' privacy and confidentiality. The University of Reading Ethics Committee guidelines outline best practices for data management, including data anonymization and secure storage. The study followed the data management guidelines provided by the University of Reading Ethics Committee. Data was collected and stored in a manner that ensured the privacy and confidentiality of participants.

4. Conflict of Interest: Researchers must disclose any potential conflicts of interest that could influence the design, conduct, or reporting of the research. The University of Reading Ethics Committee guidelines require researchers to declare any conflicts of interest and take appropriate measures to address them. The researchers declared any potential conflicts of interest and took appropriate measures to address them. The University of Reading Ethics Committee guidelines were followed to ensure transparency and integrity in the research process. Furthermore, to address potential conflicts of interest, transparency was maintained throughout the study. Any potential biases or affiliations were disclosed, and steps were taken to mitigate their influence on the research process and findings. Additionally, power dynamics between the researchers and participants were carefully managed, fostering a respectful and equitable environment for open dialogue and participation.

3.6 Chapter Summary

The chapter on research design and methodology provides an overview of the technical decisions and framework employed in this study. It begins by defining research design as an integrated statement that justifies the choices made in planning the research project. The research design encompasses various elements, including research questions, philosophical perspectives, research strategy, research methodology, and research methods.

The initial conceptual framework is discussed, which served as a theoretical foundation for the study. However, as the research progressed, the framework and research questions were refined to align with the research objectives and context. The revised research questions serve as a framework for the subsequent research design and methodology. Here are the revised questions:

- RQ1 – “What is the role of AI on the process of actioning customer insights throughout the CJ to understand and manage CX?”
- RQ2 - “How do organisations incorporate AI technologies into the customer insight to action process to understand and manage CX?”
- RQ3 - “How do organisations use AI-derived customer insights to understand and manage CX?”
- RQ4 – “How do organisations assess the value of actioning customer insights derived from AI?”

The chapter then focuses on the philosophical orientation adopted for this study, which is critical realism. This philosophical stance acknowledges the fallibility of knowledge production and emphasizes the generation of theory based on empirical evidence. The choice of critical realism is suitable for exploring the complex nature of innovation processes and the interaction between people and technology.

The research design considerations are explored, including the selection of an appropriate research approach, study design, target population, and sampling strategy. Ethical considerations and potential limitations are also addressed.

The research methodology section explains the systematic procedures employed for data collection, analysis, and interpretation. It outlines the fieldwork plan, including the research context, duration, timing, and logistical considerations. Specific data collection techniques, such as interviews and documentation, are discussed, along with strategies to enhance data validity and reliability. The importance of data analysis in extracting meaningful insights and developing conclusions is emphasized.

4 Within-case Analysis and Findings

This chapter presents a comprehensive examination of the findings derived from the investigation conducted on the role of AI in actioning customer insights to manage customer experience. The chapter consists of six sections, commencing with a restatement of the research objectives and research questions. Following this, four sections are dedicated to the within-case analysis, each focused on a specific case study. For each case study, comprehensive context is provided about the company. Additionally, an overview of the data sources utilized in the analysis, including interviews and relevant documents, is presented. The findings from both the interviews and documents are meticulously examined and analysed to extract valuable insights. The interview findings capture the perspectives, experiences, and insights shared by the interviewees regarding the incorporation of AI into the customer insight process and its impact on managing customer experience. On the other hand, the analysis of relevant documents, such as company reports, customer feedback records, and AI implementation guidelines, provides a deeper understanding of the documented practices and strategies.

By synthesizing the interview and document findings, key insights emerge across different themes. These insights shed light on the specific ways in which AI is leveraged to understand and manage customer experience, addressing the research questions and contributing to the overall objectives of the study. The key insights serve as guidance for the subsequent cross-case analysis and play a pivotal role in the development of the conceptual model and framework. These insights not only inform the understanding of each individual case but also contribute to the broader analysis that integrates multiple cases.

Lastly, the chapter concludes with a final section that provides a synthesized overview of the entire chapter, summarizing the key findings and implications derived from the collective analysis. By systematically analysing the findings from these case studies, this chapter lays the foundation for the subsequent analysis in the next chapter, which is the cross-case analysis. The cross-case analysis will further explore the common themes, patterns, and insights that emerge from the comparison and integration of the individual cases. It is through this cumulative analysis that a more comprehensive understanding of the role of AI in actioning customer insights to manage customer experience will be achieved.

4.1 Within-Case Analysis

The study was designed to investigate the mechanisms of incorporating AI into the customer insight process along the customer journey to manage customer experience, with the following aims and objectives:

- Understand the mechanisms of incorporating AI into the customer insight process along the customer journey to manage customer experience.
- Explore the different ways organizations use AI-derived customer insights to understand and manage CX.
- Explore the different ways organizations assess the value of actioning customer insights derived from AI.

The research aims and objectives, along with the corresponding research questions, form the foundation of the within-case analysis. To guide the within-case analysis, the following key themes and aspects is analysed for each case study, (1) Customer experience strategy, (2) Customer Journey Management, (3) Customer Intelligence Approach, (4) Agile way of operating, (5) CX Data to Value Creation Process, (6) Harnessing AI capabilities. The structures of the individual cases may vary due to their unique trajectories. The generation of themes in the research process has been facilitated through the utilization of the third cycle coding approach. Detailed elucidation of the third cycle coding methodology can be found in Section 3.4.3.5 (Third Cycle coding – Develop Theme System), and a tabular representation of the theme system is provided in Appendix J.

By examining the key themes and mapping them to the research questions, as shown in table 4-1. The analysis will provide a comprehensive understanding of how AI is integrated into the customer insight process, how organizations leverage AI-derived insights, and how they evaluate the value of AI-driven customer insights. The findings from the within-case analysis will contribute to a deeper comprehension of the role of AI in managing customer experience, informing subsequent discussions and enhancing the overall conceptual framework of this research.

Table 4-1 Mapping of Research Questions to Themes

Research Questions (s)	Themes
Research Question 1: “What is the role of AI on the process of actioning customer insights throughout the CJ to understand and manage CX?”	<ul style="list-style-type: none"> • Customer Experience Strategy • Customer Journey Management • Customer Intelligence Approach • CX Data to Value Creation Process
Research Question 2: “How do organisations incorporate AI technologies into the customer insight to action process to understand and manage CX?” &	<ul style="list-style-type: none"> • CX Data to Value Creation Process • Harnessing AI Capabilities
Research Question 3: “How do organisations use AI-derived customer insights to understand and manage CX?”	<ul style="list-style-type: none"> • Customer Intelligence Approach • Agile Way of operating • CX Data to Value Creation Process
Research Question 4: “How do organisations assess the value of actioning customer insights derived from AI?”	<ul style="list-style-type: none"> • Customer Intelligence Approach • CX Data to Value Creation Process • Harnessing AI Capabilities

4.2 Case A: Within-case Analysis and Findings (Teleco A)

In this section, I present the insights from the first case. The description of the telecommunications company is based on interviews with participants, the documents provided by participants, the organisation's website, and data published by the holding organisation.

4.2.1 Background

4.2.1.1 Company

This case study is in line with the case selection criteria as discussed in the case selection section (section 3.3.4). Case A, focusing on the telecommunications sector, specifically Teleco A is a leading telecommunications company based in Jordan that provides mobile and fixed-line services, including voice, data, and internet services. The company operates a 3G, 4G, and 5G network and offers a range of plans for individual and business customers, including options for data, minutes, SMS, roaming, and international calling.

Figure 4-1 outlines Teleco A's organizational structure, the organization is structured around a customer-centric model, with a focus on delivering an exceptional customer experience and driving digital transformation throughout the company. Teleco A's structure reflects the diverse telecommunications industry, comprising consumer and enterprise marketing, technology and operations, finance, regulatory and corporate affairs, HR, quality and business excellence, engineering and networks, and legal departments. Each department plays a crucial role in the company's operations and success. The consumer marketing department develops strategies for individual customers, while the enterprise marketing department focuses on business customers. Technology and operations manage the network infrastructure and service delivery. The finance department handles financial operations, including budgeting and forecasting. Regulatory and corporate affairs ensure compliance and manage stakeholder relationships. HR manages the company's human capital. Quality and business excellence ensure high standards and resilience. Engineering and networks handle infrastructure design and implementation. The legal department provides legal counsel. Finally, CX and digital transformation department is responsible for driving the overall strategy and vision for enhancing the customer experience and leading digital transformation initiatives. By leveraging emerging technologies, market insights, and customer feedback, the department aims to optimize the customer journey, foster meaningful engagements, and deliver exceptional experiences across all touchpoints.

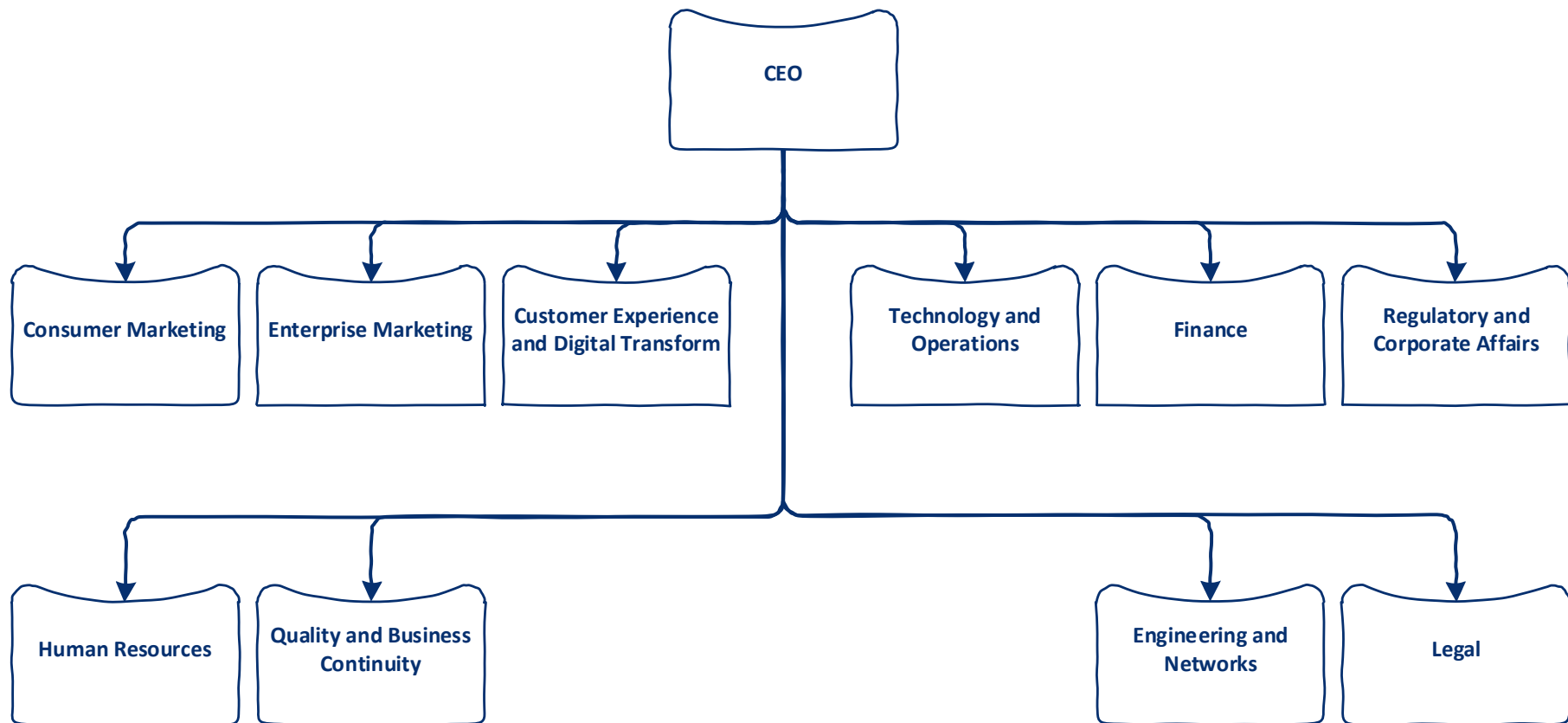


Figure 4-1 Teleco A's Organizational structure

4.2.2 Key Findings from Case A (Teleco A)

This section presents the findings of a comprehensive case study conducted on Case-A. The key findings for Teleco A have been derived from a rigorous analysis of the collected data, resulting in the identification of 6 key themes and 24 categories. These key themes, categories, and codes are visually presented in Figure 4-2 and Figure 4-3, facilitating the systematic categorization and organization of the data. In the subsequent sections of the study, a comprehensive exploration of each of the six themes will be undertaken, accompanied by an in-depth analysis of the associated categories for each theme. Furthermore, the study will present the key findings extracted from the analysed documents, thereby contributing to a comprehensive understanding of the case under investigation. The study presents the six key themes: Customer Experience Strategy, Customer Journey Management, Customer Intelligence Approach, Agile Way of Operating, CX Data to Value Creation Process, and Harnessing AI Capabilities. Through an in-depth analysis of Case-A's interviews and documents, this section aims to provide valuable insights into the role of AI in actioning customer insights to manage customer experience in the highly competitive telecom industry.

Building upon these insights, the subsequent section explores deeper into the findings. Appendix M highlights the identified codes and their respective frequencies of occurrence, also categorizes them, offering a comprehensive overview of the emerging patterns. By quantifying the frequency of occurrences within both the interviews and the documents, this analysis provides a measure of the relative importance and prominence of each code within its corresponding category. Such an in-depth exploration of the data enriches our understanding of how AI-driven customer insights can be actioned effectively to enhance customer experience in the telecom sector. For a detailed presentation of the codes, their respective frequencies of occurrence, categories, and the total frequency of codes, please refer to Appendix M, which presents the findings from the analysed documents and interviews, providing evidence and the frequency of occurrence across the four categories.

In this analysis, the frequency of occurrences refers to the number of times specific codes were identified and mentioned within the data obtained from both the interviews and the documents. This frequency count provides valuable insights into the relative importance and prominence of each code within its respective category.

Teleco A focused on CX as a key competency and strategic priority. The organization emphasized the significance of understanding customer expectations and aligning brand promise with actual brand delivery. Customer experience was viewed as an end-to-end process, starting from pre-decision stages to after-sales support. The organization displayed a strategic focus on enhancing customer interactions and integrating customer experience as a key competency. Key insights from the interviews included the alignment of brand promise with actual brand delivery, assessing brand perception, and creating awareness among the target market. The findings underscored the importance of monitoring touchpoints, striking a balance between personalization and privacy, and closing the cycle of customer experience by involving various departments.

The documents further reinforced the significance of customer journey mapping, understanding customer behaviour, and maintaining a customer-centric culture. Building strong organizational capabilities and fostering a collaborative and agile mindset were identified as essential elements in driving customer intelligence and enhancing the customer experience. Customer journey management played a vital role in the organization's CX strategy. Customer journey mapping, understanding customer behaviour, and monitoring touchpoints were essential for optimizing the customer journey. The organization aimed to strike a balance between personalization and customer privacy, ensuring tailored experiences without being intrusive.

To drive customer intelligence and enhance the customer experience, Teleco A adopted an agile way of operating. Agile methodologies and practices were implemented across the organization to drive efficiency, collaboration, and timely delivery of projects. Creating a customer-centric culture involved a dedicated function collaborating with all departments to change the organization's operating mindset. The organization's customer intelligence approach involved a data-driven strategy. Understanding customers and their preferences through segmentation and profiling enabled personalized experiences and targeted marketing efforts. Data collection, aggregation, and analysis were key in gaining insights into customer segments.

Leveraging digital channels, Teleco A collected vast amounts of customer data with consent to bridge the gap between offline and online experiences. Implementing advanced analytics capabilities, including churn modelling and AI-driven customer intelligence, enabled actionable insights and improved customer satisfaction. The organization's implementation of AI capabilities aimed to enhance customer value management (CVM) and customer experience. Utilizing AI technologies, such as recommendation engines and chatbots, personalized customer interactions were delivered, and proactive customer management became possible.

Codes			Category	Theme
Defining Customer Experience	Defining CXM	CXM Adoption Challenges	Defining Customer Experience	Customer Experience Strategy
Brand Positioning	Brand Identity		Developing Brand Promise	
Customer Expectation	Value of Money		Setting Customer Expectations	
Setting Customer Ambition	Crafting Customer Promise		Developing Customer Promise	
Customer Empathy	Touchpoints	Pain points and Opportunities	Customer Journey Mapping	Customer Journey Management
	Purchase	Post-Purchase	Customer Journey Phases	
Touchpoint Identification	Performance Evaluation	Benchmarking	Touchpoints Monitoring	
Redesign touchpoints	Personalize the Experience	Streamline the Journey	Customer Journey Design and Optimisation	
CXM Function Position	People Capability Building	Organizational Learning	Organisational Capability	Agile Way of Operating
Scrum		Product Owner	Agile Approach	
Collaboration	Cross-Functional		Holistic Alignment	
Fact Finding/ Empathy	Design	Action Planning	Customer-centered Design Workshops	

Figure 4-2 Teleco A - Theme to Category and Codes (1 of 2)

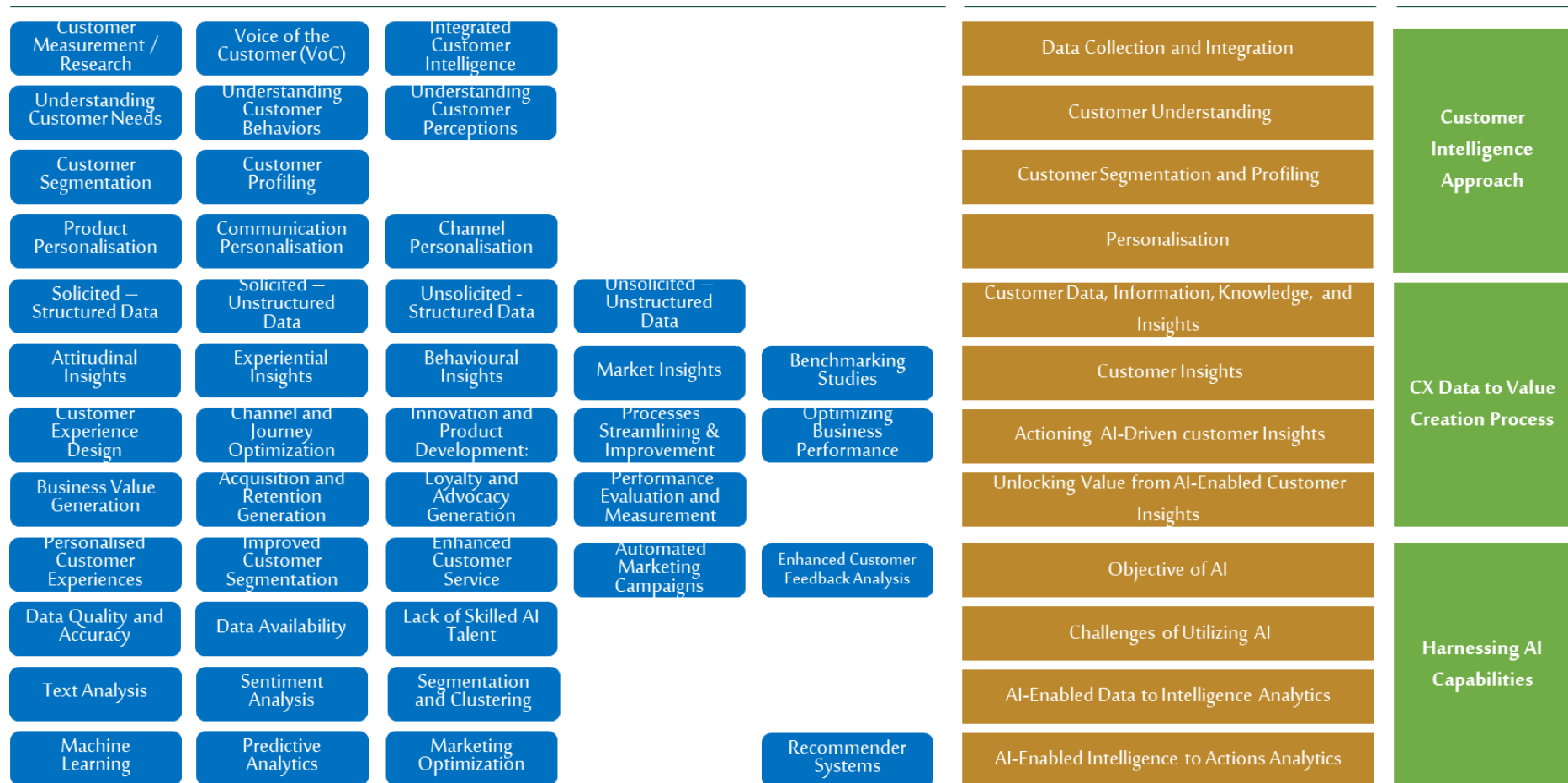


Figure 4-3 Teleco A - Theme to Category and Codes (2 of 2)

4.2.2.1 Theme 1: Customer Experience Strategy

The first theme explored in this section is Customer Experience Strategy. Figure 4-2 and Figure 4-3 provides an overview of the categories within this theme, including Defining Customer Experience, Developing Brand Promise, Setting Customer Expectations, and Developing Customer Promise. Each category was analysed by coding the data obtained from interviews and documents. The number of occurrences identified under each category are as follows: Defining Customer Experience (21 times), Developing Brand Promise (4 times), Setting Customer Expectations (8 times), and Developing Customer Promise (10 times). Appendix M provides an overview of these categories, accompanied by the number of codes assigned to each. This comprehensive analysis sheds light on the key elements and strategies associated with the Customer Experience Strategy theme.

When exploring the concept of customer experience, multiple interviewees highlighted its significance and its integration within the organization. The Chief Marketing Officer defined customer experience as the end-to-end process of customer interaction, starting from pre-decision stages such as advertising and interactions with the company, to the product usage experience and after-sales support. The Chief Marketing Officer highlighted the importance of understanding customer expectations and bridging the gap between customer expectations and business deliverables, stating,

"I would say customer experience is basically the process that the customer will go through while interacting or during the decision-making process... customer experience management is basically to be able to understand those expectations... the best customer experience would be at the point where the customer expectations meet the companies that have deliverables... customer experience management is not knowing the gap between the expectations of the customers and the deliverables of the businesses or the company."(Chief Marketing Officer, UTELE02)

The Organisational Learning and Development Manager emphasized the shift in core behavioural competencies to prioritize customer experience as one of the organization's key competencies, stating,

"We have changed the core behavioural competencies of the organization to introduce customer experience as one of our core competencies." (Organisational learning & Development Manager, UTELE11)

This demonstrates a strategic focus on enhancing customer interactions. Collectively, these insights from the interviewees emphasize the organization's commitment to prioritizing customer experience, recognizing it as a key competency, and acknowledging the need to meet and exceed customer expectations at every stage of the customer journey.

In developing the brand promise, interviewees provided insights into the factors that contribute to a successful customer experience. The Chief Marketing Officer emphasized the importance of aligning brand promise with the actual brand delivery, stating,

“If the brand promise is very close to what the brand is delivering, then the customer experience and satisfaction would be higher.” (Chief Marketing Officer, UTELE02)

The Customer Insights and Analytics Manager highlighted the importance of brand and awareness assessment in shaping the customer experience, stating,

“A lot of what we do, insights on that front is brand. The majority is brand, brand, and awareness assessment” (Customer Insights and Analytics Manager, UTELE04)

This indicates the significance of assessing brand perception and creating awareness among the target market. These insights emphasize the organizational focus on aligning the brand promise with customer experiences and the need for a designated department to oversee the implementation of the brand promise.

The Broadband Product Manager mentioned that customer experience has become a DNA and a pillar in the company's strategy, indicating its central role in shaping the organization's direction. Additionally, the Strategic and Business Planning Manager highlighted the connection between the customer promise and the company's mission and vision, stating,

“As a strategy that is reflected back to the company objectives and company mission and vision related to being the number one service provider.” (Strategic and Business Planning Manager, UTELE07)

Findings from the collected documents reinforce the significance of customer experience within the organization and the strategic focus on enhancing customer interactions. The documents highlight the organization's commitment to prioritizing customer experience as a core competency, as mentioned by the Organisational learning & Development Manager. The documents emphasize the need for aligning the brand promise with actual brand delivery, as mentioned by the Chief Marketing Officer, and the significance of assessing brand perception and creating awareness among the target market, as highlighted by the Customer Insights and Analytics Manager. Finding from Brand Health Tracking report shows the importance of assessing brand perception and link to the actual experience.

“Only a minority of customers are aware of [Teleco A] brand promise. Those who are aware believe that the promise is to improve the services provided by [Teleco A], to enhance the coverage and to put forward better offers. Even though the majority were not familiar with [Teleco A] brand promise, yet more than 8 in 10 of [Teleco A] users believe that [Teleco A] delivers on its promises and find their actual experience with the brand to match the promised expectations.” (Brand Health Tracking, DU02)

4.2.2.2 Theme 2: Customer Journey Management

Within the Customer Journey Management theme, this study investigates several categories: Customer Journey Mapping, Customer Journey Phases, Touchpoints Monitoring, and Customer Journey Design and Optimization. Appendix M provides an overview of these categories, accompanied by the number of codes assigned to each. The data analysis process involved examining data collected from interviews and documents. The analysis yielded 14 occurrences for Customer Journey Mapping, 12 occurrences for Customer Journey Phases, 15 occurrences for Touchpoints Monitoring, and 7 occurrences for Customer Journey Design and Optimization. This comprehensive analysis sheds light on the strategies and practices associated with Customer Journey Management.

Customer journey mapping plays a crucial role in today's competitive landscape, where differentiation is key to success. As emphasized by the Consumer Marketing Director,

"Once you see the brand, it means that the customer journey started, and from here, you go through the whole different customer journey. So, you have to provide the right experience to the customer at each and every milestone or transaction." (Consumer Marketing Director, UTELE03)

Customer journey mapping involves considering various factors, including demographics, lifestyle, and social media usage. In building the customer journey, it is vital to consider both the product journey and the overall experience, as highlighted by the Customer Engagement & Loyalty Manager,

"So, it's very important to building the customer journey beside the product journey." (Customer Engagement & Loyalty Manager, UTELE06)

Monitoring touchpoints is crucial for understanding and optimizing the customer journey. As emphasized by the Customer Insights and Analytics Manager,

"When you do business analytics or data analytics, there is a reason why you are doing it. So, if we're not doing it on databases to understand the behaviour and monitor the customer behaviour, and coming up with insights," (Customer Insights and Analytics Manager, UTELE04)

Monitoring touchpoints provides valuable insights into customer behaviour and enables organizations to make data-driven decisions.

Designing and optimizing the customer journey requires a careful balance between personalization and maintaining customer privacy. As mentioned by the Director of Customer Experience & Digital Transformation,

"The main drive on digital channels is how can we personalize the customer experience without sacrificing everything or being too invasive. Phones are becoming more personal, so we don't want to appear like we know too much or nothing at all." (Director of Customer Experience & Digital Transformation, UTELE01).

This highlights the importance of personalized experiences tailored to individual customers while respecting their privacy boundaries.

Additionally, the Consumer Marketing Director emphasizes the need to close the cycle of customer experience by ensuring that all departments, including sales and retail, are aware of the product design and the target segment. He states,

"I try as much as I can to close the cycle of the customer experience through my department. However, when we use different channels, such as e-shops, I prefer to interact with the customer experience department as they receive requirements from different departments and can determine the attention each product and service should receive." (Consumer Marketing Director, UTELE03)

This collaboration with the customer experience department allows for informed decision-making on product placement and service delivery, optimizing the customer journey based on insights from various departments.

These findings from the documents align with the insights from the interviews regarding the significance of customer journey mapping, understanding customer behaviour, monitoring touchpoints, and balancing personalization with privacy. The documents provide further guidance and best practices for organizations to enhance the customer experience throughout the various phases of the customer journey.

"[Teleco A] has a clearly defined Customer Journey matrix mapped against the customer lifecycle,, An additional benefit of the NPS programme will be to measure the customer journey more accurately using NPS scores and feedback mapped against each touchpoint" (Net Promoter Score (NPS) Framework, DU01)

4.2.2.3 Theme 3: Agile Way of Operating

The fourth theme explored in this study is Agile Way of Operating, which encompasses several categories: Organizational Capability, Agile Approach, Holistic Alignment, and Customer-centred Design Workshops. Appendix M provides an overview of these categories and the corresponding number of codes assigned to each. The analysis process involved examining the organizational capability to adopt agile practices, the implementation of agile approaches, the alignment of various departments and functions, and the utilization of customer-centred design workshops. The number of codes identified for each category are as follows: Organizational Capability (13 times), Agile Approach (12 times), Holistic Alignment (14times), and Customer-centred Design Workshops (9 times). This comprehensive analysis sheds light on the strategies and approaches employed in embracing an Agile Way of Operating.

The findings emphasize the importance of organizational capability in driving customer intelligence and enhancing the customer experience. To thrive in the agile operating environment, organizations must invest in building strong organizational capabilities, fostering a customer-centric culture, and ensuring effective collaboration across functions and teams.

Creating a customer-centric culture requires dedicated efforts and a shift in organizational mindset. The Organisational learning & Development Manager stresses the need for a dedicated function that collaborates with all departments to

"Change their way of working, how we operate and our processes." (Organisational learning & Development Manager, UTELE11).

The Chief Marketing Officer supports this viewpoint, highlighting the creation of a separate function reporting to the CEO to draw attention to the importance of customer experience, stating that it is essential to

"Guide the entire organization to follow certain business conduct when it comes to customer data and managing customer experience." (Chief Marketing Officer, UTELE02).

The agile approach focuses on the implementation of agile methodologies and practices within the organization to drive efficiency, collaboration, and timely delivery of projects. The interviews shed light on the benefits of adopting an agile approach and the strategies employed to embrace this mindset. The Organisational learning & Development Manager acknowledges the fast-paced nature of the telecommunications industry and the need to adapt quickly to changes. She states that agility is not just a nice-to-have, but a necessity,

"I think it's about the the, the industry and the changes, ..., We work in a fast-paced industry. So, we need to adapt easily with any kind of change that's happening around

us. We need to execute and deliver. A very quickly and very easily so. Adopting the agility is not something that is nice to have. It becomes a necessity so." (Organisational learning & Development Manager, UTELE11).

The agile approach is not limited to a single department but extends to the entire organization, with the goal of embracing agility as a necessity and changing the way work is executed. By adopting an agile mindset, organizations can adapt quickly to industry changes and deliver value to their customers in a timely manner. The Broadband Product Manager emphasizes the advantages of working in sprints and following the agile methodology, stating,

"Other teams use the scrum and the agile method that utilized by the product development team was responsible to coordinate with the digital team and the IT team,, so the team is focusing more end up with the A product that is solid,, which is finally and reflected to the customer experience and customer satisfaction who's buying this offer from [Teleco A]." (Broadband Product Manager, UTELE05).

The Customer-Centred Design Workshops highlights the importance of involving customers in the design process to create tailored and optimized experiences. By incorporating customer-centric design practices, organizations can create tailored experiences that meet and exceed customer expectations. The Strategic and Business Planning Manager mentions the need for clear and documented customer journeys, stating,

"Actually, we recently just revamped all the let's say the call centre and the touch points KPIs and objectives and it was hand in hand with the customer journey. It was an exercise that was approved by our customer, experience director, CX director." (Strategic and Business Planning Manager, UTELE07)

To enhance customer-centred design practices, members of the organisation often participate in workshops. The Contact Center Senior Manager refers to attending workshops that focus on customer care, AI, and digital transformation, stating,

"This is the main challenge how to tackle how to track, how to build your business scope and how to be aligned with all the road map from all the different stakeholder in order to avoid any impact in your customer experience." (Contact Center Senior Manager, UTELE09)

These workshops provide insights, best practices, and methodologies to incorporate into the organization's design processes, highlights the primary challenge of effectively tracking, building a business scope, and aligning with various stakeholder roadmaps to prevent any negative impact on the customer experience

4.2.2.4 Theme 4: Customer Intelligence Approach

Under the theme of Customer Intelligence Approach, this study explores several categories: Data Collection and Integration, Customer Understanding, Customer Segmentation and Profiling, and Personalization. Appendix M outlines these categories along with the number of codes assigned to each. The coding process involved analysing data collected from various sources. The analysis resulted in 24 occurrences for Data Collection and Integration, 20 occurrences for Customer Understanding, 17 occurrences for Customer Segmentation and Profiling, and 19 occurrences for Personalization. This comprehensive examination provides valuable insights into the strategies and practices associated with Customer Intelligence.

Customer measurement and research play a crucial role in understanding customer behaviour, assessing satisfaction levels, and making informed decisions. As the Chief Marketing Officer points out,

"...as digital channels give you more tools to collect more data. That's one of the good things about having these digital channels is that you can collect as much data as you want. And but it's easier to collect data and understand the customer behaviour, ..., and then understanding so most of the data we've been collecting is like most behavioural data usage data." (Chief Marketing Officer, UTELE02).

This data-driven approach enables businesses to make informed decisions based on behavioural and usage data. Understanding customers and their preferences is crucial for personalized experiences and effective cross-selling strategies. The AI and Data Analytics manager highlights the importance of customizing the app interface based on individual preferences, stating,

"We know his preferences. based on the preferences and the personalization engine, we were able to show the users the other promotions that we have, and this is a way for cross-selling using the app." (AI and Data Analytics manager, UTELE08)

This illustrates the use of personalization and customization to tailor the customer experience and promote relevant offers. Moreover, the Contact Center Senior Manager emphasizes the importance of understanding customer behaviour and needs to improve customer service, stating,

"We are understanding the customer behaviour, understanding our promotions, understand how to split the queues between our customers, understand the customer needs, the customer nature." (Contact Center Senior Manager, UTELE09).

This highlights the significance of analysing customer behaviour, segmenting customers based on their value, and tailoring services to meet their specific needs. Customer segmentation and

profiling involve the collection, analysis, and modelling of customer data to identify distinct segments, personalize experiences, and drive targeted marketing efforts. By understanding customer behaviour and preferences, organizations can deliver tailored solutions and enhance customer satisfaction.

The Director of Customer Experience & Digital Transformation emphasizes the process of data collection, aggregation, and analysis to understand customer segments, stating,

"You have the data, you collect the data, you aggregate the data... you start to do clustering analysis, segmentation based on the data, trying to understand... how can we personalize the customer for that person... going down that segmentation layer and trying to get to smaller segments" (Director of Customer Experience & Digital Transformation, UTELE01).

This highlights the importance of segmenting customers based on their behaviours and preferences while respecting their privacy. In addition, the Customer Insights and Analytics Manager discusses consumer-based segmentation and propensity modelling, stating,

"Within our area, consumer-based segmentation, propensity to X, and all that is something I look after." (Customer Insights and Analytics Manager, UTELE04)

This demonstrates the focus on segmenting customers based on their behaviour, preferences, and propensities to drive targeted marketing strategies.

Personalization plays a crucial role in enhancing the customer experience across various dimensions. The Director of Customer Experience & Digital Transformation emphasizes the goal of achieving personalized experiences, stating,

"Trying to understand, trying to get to a personalized experience... going down that segmentation layer... reduce the number of seconds... personalize some of the experiences." (Director of Customer Experience & Digital Transformation, UTELE01)

This highlights the importance of personalizing interactions based on customer segments without being too intrusive or impersonal. The challenge lies in striking the right balance and understanding customers' preferences, such as gender.

The company's collection of documents and reports, such as the Net Promoter Score (NPS) Framework, Brand Health Tracking, Net Promoter Score Report, and Customer Satisfaction Report, serves as supporting evidence for the interviewees' perspectives. These reports provide valuable insights into customer understanding, segmentation, and profiling, further affirming the viewpoints expressed by the interviewees.

4.2.2.5 Theme 5: CX Data to Value Creation Process

Within the CX Data to Value Creation Process theme, this study investigates several categories: Customer Experience Data; Customer Insights; Actioning AI-Driven Customer Insights; and Unlocking Value from AI-Enabled Customer Insights. Appendix M provides an overview of these categories, accompanied by the number of codes assigned to each. The data analysis process involved assessing the collection and utilization of customer experience data, the generation of customer intelligence, the utilization of AI-driven customer intelligence in decision-making, and the strategies for Unlocking Value from AI-Enabled Customer Insights. The analysis yielded 17 occurrences for Customer Experience Data; 26 occurrences for Customer Insights; 22 occurrences for Actioning AI-Driven Customer Insights; and 16 occurrences for Unlocking Value from AI-Enabled Customer Insights. This comprehensive analysis sheds light on the utilization of CX data and AI-driven customer intelligence in the value creation process.

A number of the interviewees shed light on the importance of digital channels in collecting vast amounts of customer data, understanding customer behaviour, and bridging the gap between offline and online experiences. For instance, one interviewee highlighted the advantage of digital channels in collecting data with customer consent:

"Definitely, as digital channels give you more tools to collect more data... You can collect as much data as you want or like potentially with the consent of the customers" (Director of Customer Experience & Digital Transformation, UTELE01).

The challenge of bridging offline experiences with digital interactions was acknowledged, with the interviewee stating,

"You have two silos, no matter what you try, there are still two silos... You need to create these bridges between the two and try to understand the full cycle of the experience" (Director of Customer Experience & Digital Transformation, UTELE01).

Additionally, the analysis highlighted the importance of studying customer behaviour to address pain points and improve the customer experience. The Broadband Product Manager discusses the importance of understanding the customer journey, segment, and behaviour was emphasized as key to improving engagement and satisfaction, stating,

"They understand the customer engagement transaction and translate it to events and incidents. They surprise you with their output... how they understand your brain and how they look for the customer journey per customer, per segment, per behaviour" (Broadband Product Manager, UTELE05).

The interviews shed light on the importance of analysing collected data, implementing advanced analytics capabilities, and utilizing open-source systems for effective customer

intelligence. The Director of Digital transformation & Information Technology highlighted the significance of analysing data collected on a big data platform. He emphasizes that collecting data without proper analysis serves no purpose. The intention behind data collection is to drive actionable insights, particularly in terms of determining the next best action for customers. By leveraging data-driven approaches, organizations can better understand customer preferences, history, and status, allowing them to offer tailored solutions and avoid customer dissatisfaction. This aligns with the objective of enhancing the customer experience, as emphasized by the Director of Digital transformation & Information Technology, stating,

"Technically, on the big data platform. From a concept point of view, there is no point of collecting this data if we don't analyse it. So, this is just the. The one of the intentions is to have next best action so that the., ..., What would be proposed by the system so it will not be left to the customer care agent to decide what to offer" (Director of Digital transformation & Information Technology, UTELE10).

The interviewees also discussed the need for comprehensive data collection across all customer interaction channels. By analysing this data, organizations can identify areas of improvement and align their strategies with customer expectations. The AI and Data Analytics manager supported this perspective, stating that organizations should register every customer event and establish correlations to better understand and engage with customers, stating,

"Where it comes from, the digital channels like the. So, we have the data from the mobile app from the website, from the chat. So, all these information are stored into [Teleco A] Hadoop platform. And you are utilising this information and these data for different uses for and at vary from descriptive analytics to machine learning engagement" (AI and Data Analytics manager, UTELE08)

Actioning AI-Driven customer insights involves leveraging AI technologies and data analytics to improve customer satisfaction, anticipate customer needs, and optimize business processes. The interviewees discussed various channels for customer interaction, including contact centres, mobile apps, websites, AI chatbots, and smart IVRs (Interactive Voice Response) systems. The Contact Center Senior Manager emphasizes the importance of providing customers with multiple communication options, stating,

"We have the contact centre... the mobile app... the [Teleco A] website... the AI advanced chatbot... and our smart IVR" (Contact Center Senior Manager, UTELE09).

One of the key objectives of customer intelligence is to minimize customer interactions and proactively address issues before they arise. The director of Customer Experience & Digital Transformation emphasizes the importance of resolving problems without customer complaints, stating,

"How can you make the customer not need to interact with you? How can you solve the problem before they complain?" (Director of Customer Experience & Digital Transformation, UTELE01).

Churn modelling emerged as a successful application of customer intelligence in the telecom industry. Interviewees highlighted the effectiveness of churn models in retaining customers and measuring the success of such projects, stating,

"Churn over the years has reached to a point where it's a successful project... you get more than what you pay... you end up retaining more and more customers" (UTELE01, Director of Customer Experience & Digital Transformation).

Machine learning was discussed as a significant component of customer intelligence. Interviewees highlighted collaborations with suppliers and vendors to develop churn models and advanced data science capabilities, stating,

"We have engagement with the different suppliers and vendors for churn model... for the digital team, we took an advanced step towards machine learning and data science" (UTELE08, AI and Data Analytics manager).

Teleco A aims to automate processes and gain real-time insights into customer behaviour. They utilize business analytics and AI to automate customer cycles, monitor customer interactions, and facilitate data-driven decision-making. The Broadband Product Manager highlights that application of RPA "Robotic Process Automation, stating,

"We need to automate the cycle and to have more insights real-time... what's happening with the customer at that stage" (Broadband Product Manager, UTEL05).

Furthermore, Unlocking Value from AI-Enabled Customer Insights is a crucial focus for telecom companies. The interviewees shared their perspectives and experiences on driving customer satisfaction, increasing profitability, and optimizing customer experiences through AI-enabled strategies, as summarized below:

1.Top-Line Focus:

The interviewees emphasized the significance of customer experience in driving top-line growth and profitability. They highlighted the importance of happy customers who return and pay more, and how improving customer happiness and experience ultimately impacts a company's financial performance, stating,

"Normally companies start to care about that when customer experience eventually what drives the top line... You need to improve your customer happiness and customer experience... driven by top line and by KPIs" (Director of Customer Experience & Digital Transformation, UTELE01).

2.Shareholder Value:

Increasing shareholder value through creating happier and more satisfied customers was a key goal discussed by the interviewees. They recognized the direct link between customer satisfaction and organizational success, stating,

"The ultimate goal was for us to be the data user... to get the modelling, to get the data... it's about creating more happier and satisfied customers eventually" (Director of Customer Experience & Digital Transformation, UTELE01).

3.Customer Satisfaction as the Main Purpose:

The interviewees emphasized that customer satisfaction is the primary purpose of organizations. They highlighted the importance of ensuring a positive customer experience to drive high revenues and customer loyalty, stating,

"Customer satisfaction is the main purpose of organizations... high revenues should be a consequence of customer experience... create a positive word of mouth, and then you can bring a cheaper way of acquiring customers" (Chief Marketing Officer, UTELE02).

4.Churn Reduction:

Churn reduction was identified as a key metric for the success of campaigns. The interviewees highlighted the use of control groups, response rate measurement, and historical campaign performance analysis to improve churn rates and campaign effectiveness, stating,

"For churn, it's like reduction in churn rates... response rate to the control group... rely on historical campaigns performance" (Strategic and Business Planning Manager, UTELE07).

The document "DU06 Agile Use case Development" provides findings that reinforce the perspectives expressed by the interviewees regarding various use cases. Specifically, the findings in the document support the interviewees' verbatim in relation to churn prediction use cases, Robotic Process Automation (RPA), as well as channel and customer interaction use cases based on AI. The document affirms the importance of these use cases in enhancing operational efficiency, improving customer engagement, and predicting churn behaviour. By aligning with the interviewees' verbatim, the findings in "DU06 Agile Use case Development" validate the significance and relevance of these use cases in driving business value and optimizing customer experiences.

4.2.2.6 Theme 6: Harnessing AI Capabilities

The final theme explored in this study is Harnessing AI Capabilities, which encompasses the following categories: Objective of AI; Challenges of Utilizing AI; AI-Enabled Data to Intelligence Analytics; and AI-Enabled Intelligence to Actions Analytics. Appendix M provides an overview of these categories and the corresponding number of codes assigned to each. The analysis process involved examining the objectives of AI implementation, the challenges faced in utilizing AI, the utilization of AI for data to intelligence analytics, and the application of AI for intelligence to actions analytics. The number of codes identified for each category are as follows: Objective of AI (31 times); Challenges of Utilizing AI (5 times); AI-Enabled Data to Insights Analytics (13 times); and AI-Enabled Intelligence to Actions Analytics (30 times). The number of codes identified for each category are as follows: Objective of AI (31 times); Challenges of Utilizing AI (5 times); AI-Enabled Data to Insights Analytics (13 times); and AI-Enabled Insights to Actions Analytics (30 times). This comprehensive analysis sheds light on the utilization of AI capabilities in harnessing data and generating actionable intelligence.

The objective of AI implementation in Teleco A is to enhance customer value management (CVM) and improve customer experience through various use cases and channels. The organization aims to leverage AI and machine learning to optimize operations, increase revenues, and provide personalized interactions to customers.

AI capabilities play a pivotal role in transforming customer experience in the telecom industry. From recommendation engines to ready-made AI models, organizations utilize AI technologies to deliver personalized experiences, as stated by the AI and Data Analytics manager. Machine learning models help predict customer complaints and behaviour, enhancing proactive customer management. By harnessing AI capabilities, telecom companies can optimize marketing efforts, improve churn management, and explore upselling and cross-selling opportunities, stating,

".. have engagement with the with the different suppliers and vendors for churn model. Who might churn out of the network, we took an advanced step as I mentioned towards machine learning and data science" (AI and Data Analytics manager, UTELE08)

One of the challenges in utilizing AI is linking and aggregating data from various sources, as mentioned by the Director of Customer Experience & Digital Transformation. The collection of data, both aggregated and granular, poses difficulties in merging and correlating them effectively. This challenge persists in many areas and remains unsolved. Additionally, the Interviews highlights the need to cluster and segment data to gain insights and personalize customer experiences. However, striking the right balance between personalization and privacy poses a challenge, especially as devices become more personal, stating,

“We do have challenges because you know the privacy laws and. Uh customer information protection but having all this data. Yeah, you’re building a great knowledge about your customer” (Director of Customer Experience & Digital Transformation, UTELE01).

Another challenge emphasized in the Interviews, by the Director of Customer Experience & Digital Transformation, is the quality and granularity of data. Ensuring accurate and detailed data, free from errors and inconsistencies, is crucial for successful AI implementation. Moreover, the Interviews mentions the scarcity of experienced professionals in the field of AI and data science, leading to a reliance on fresh graduates and the need for training, stating,

“It is a problem that we face. we are having huge turnover in this in this area, both sides and the technical side and the business side. It is very difficult to find experienced people and we have to depend on new hires, basically fresh graduates and to train them.” (Director of Digital transformation & Information Technology, UTELE10).

AI-Enabled Data to Insights Analytics plays a crucial role in extracting valuable insights from various sources, including text analytics, sentiment analysis, and market insights analytics. This theme focuses on utilizing advanced AI techniques to transform raw data into actionable intelligence, enabling organizations to make informed decisions and gain a competitive edge. The Interviews provided shed light on the usage of surveys, sentiment analysis, and the role of the digital team in leveraging data for machine learning and data science.

Surveys and market research are essential for understanding customer satisfaction and identifying pain areas. These surveys provide valuable insights that contribute to assessing brand health and key performance indicators (KPIs) related to customer experience. Additionally, sentiment analysis, particularly through social media listening, provides a different set of insights altogether, as emphasized by the Customer Insights and Analytics Manager. By analysing sentiment expressed by customers on social media platforms, organizations can gauge public opinion, identify trends, and respond effectively, stating,

“It would always have a profiling element to it, ..., and by lifestyle, I mean the likes of interests, leisure activities. a social media usage. recently, social media influencers is becoming a thing and something we track to all of that. And when it comes to communication, it's to a large extent around perceptions, likeability, awareness” (Customer Insights and Analytics Manager, UTELE04).

To monitor and evaluate customer satisfaction, organizations like Teleco A conduct surveys at every touchpoint and rely on internal monitoring systems, as well as third-party research companies, to assess their market position. These surveys, conducted among both Teleco A subscribers and the broader market, offer valuable feedback and contribute to understanding customer preferences and requirements, stating,

“We have this kind of surveys at every touch point we send like surveys after the end of any interaction. So, we have an internal monitoring for these KPIs. And we also have like an A third party research company that frequently comes and runs these surveys on the market, not just [Teleco A] subscribers.” (Strategic and Business Planning Manager, UTELE07).

Furthermore, the digital team at Teleco A engages in advanced analytics beyond descriptive analytics. They explore perspective analytics and diagnostic analytics using their data sources and data lakes, enhancing marketing strategies and decision-making processes. These use cases involving machine learning and data science have gained recognition in the market, contributing to the organization's competitive advantage, as stated by the AI and Data Analytics manager,

“Let's say perspective analytics and the diagnostic analytics using data sources and data lakes. But for machine learning, ..., we took an advanced step as I mentioned towards machine learning and data science, and if you would like to go through these use cases, I'm fine. I think that these use cases already published and known by the by, by the market.” (AI and Data Analytics manager, UTELE08)

The insights derived from AI-enabled intelligence analytics can lead to different actions and outcomes. Organizations may validate assumptions, fix issues impacting customer experience, introduce new products or communication strategies, target specific customer segments, or explore new mediums for customer engagement. The information gathered from intelligence analytics helps organizations make informed decisions and adapt to market dynamics, stating,

“Basically, it's either we fix our issues if we know that there is something that is harming the customer experience, for example, or usually we can come up with a new product or a new way of communicating. Yeah, and set the message to specific segment or either start using a new medium to be able to reach the customers in a different way” (Consumer Marketing Director, UTELE03)

Churn prediction is a mature practice within the telecom industry, allowing organizations to assess the accuracy and value of predictive models. Monitoring the accuracy of churn prediction models and conducting post-assessment helps evaluate their effectiveness. A/B testing practices, involving control groups and test groups, enable organizations to compare churn rates and validate the success of their models, stating,

“Basically, we monitor the accuracy of the models. The nice thing about churn for instance, it lends itself to post assessment very easily. So, we assess accuracy of the models we do have. I mean, our A/B practices, A/b testing practices, basically control groups, test groups” (Customer Insights and Analytics Manager, UTELE04).

The Interviews emphasizes the use of AI capabilities for customer value management (CVM) and customer experience management. One example is the CVM system implemented by SAS, which analyses data from the data warehouse to generate targeted offers for customer retention and value enhancement (Customer Insights and Analytics Manager). This demonstrates how AI can be employed to increase customer satisfaction and loyalty, stating,

“I will say AI will be included into CVM campaigns. You can start building your own models and predictions on the next weeks action based on a predefined attributes or predefined. Then you let the machine decide what comes next.” (Customer Insights and Analytics Manager, UTELE04).

Another use case mentioned is complaint prediction, where AI was used to predict customer complaints and take proactive actions to address them effectively. However, the success of this use case was hindered by poor data quality, as stated by the Director of Digital transformation & Information Technology). This highlights the importance of ensuring high-quality data for AI applications to achieve accurate predictions and actionable insights. Furthermore, the Interviews mentions customer classification based on payment behaviours, utilizing clustering concepts. This ongoing project shows promising progress in understanding customer preferences and behaviour. By leveraging AI algorithms and techniques, organizations can gain valuable insights into customer segments and tailor their offerings accordingly, stating,

“We went with the clustering model, and we use the K-means Model to build to cluster our base based on their behaviour on the on the on the Dunning process. so it has to do with the with the how many times the subscriber has been suspended and how fast they come back from the suspension and how many times the subscriber has been suspended.” (Director of Digital transformation & Information Technology, UTELE10)

In addition, the Interviews mentions the implementation of AI-driven solutions, including chatbots, voice-bots, and smart IVR systems. These AI-powered channels enhance customer interactions, automate processes, and improve operational efficiency. By leveraging AI technologies in contact centres and mobile apps, organizations can provide round-the-clock support and predictive customer interactions, leading to enhanced customer satisfaction and reduced handling time. The Director of Customer Experience & Digital Transformation, stating,

“Basically, providing a different Options for the customer to interact with only a through the mobile media. social media, and lately introducing the chatbot and I think on that form, and we get well. Over there is a lot of things that need to be.” (Director of Customer Experience & Digital Transformation, UTELE01)

4.3 Case B: Within-case Analysis and Findings (Teleco B)

In this section, I present the insights from the second case. The description of the telecommunications company is based on interviews with participants, the documents provided by participants, the organisation's website, and data published by the holding organisation.

4.3.1 Background

4.3.1.1 Company

In Case B, pertaining to the telecommunications industry, namely Teleco B, is a telecommunications company based in Jordan, offering a range of mobile, fixed line, and broadband services to consumers and businesses. The company is known for its innovative products and services and its commitment to providing high-quality connectivity to its customers. Figure 4-4 sets out a summary of the organizational structure of Teleco B which has a number of other business units focused on areas such as technology, digital services, and media. The organization comprises of several departments, each with a specific role in ensuring the success of the organization. These departments include Marketing, Sales and Distribution, Customer Care and HR, Strategy and Business Development, Finance, Technology, and the CEO office, which comprises four sub-offices, namely Customer Experience Office, Business Analytics and Data Science, Regulatory and Legal, and Project and Transformation Office.

The marketing department promotes products and services to personal and business customers, collaborating with other departments for effective targeting and positioning. The sales and distribution department ensures timely and efficient product delivery. The customer care and HR department manages human resources and handles customer inquiries. The strategy and business development department formulates business strategies and explores growth opportunities. The finance department manages financial resources and reports performance. The technology department oversees technological resources and innovation. The CEO office oversees overall operations, including customer experience, business analytics and data science, regulatory and legal compliance, and project and transformation management. The data science office provides insights for customer-centric strategies, while the customer experience office focuses on enhancing customer satisfaction and engagement through personalized services and targeted marketing, resulting in increased loyalty and retention. Teleco B has been selected as a case study for this research due to the organization's practices in data science and customer experience. The organization's ability to leverage data science and artificial intelligence to improve customer experiences aligns with the research questions that the study seeks to address.

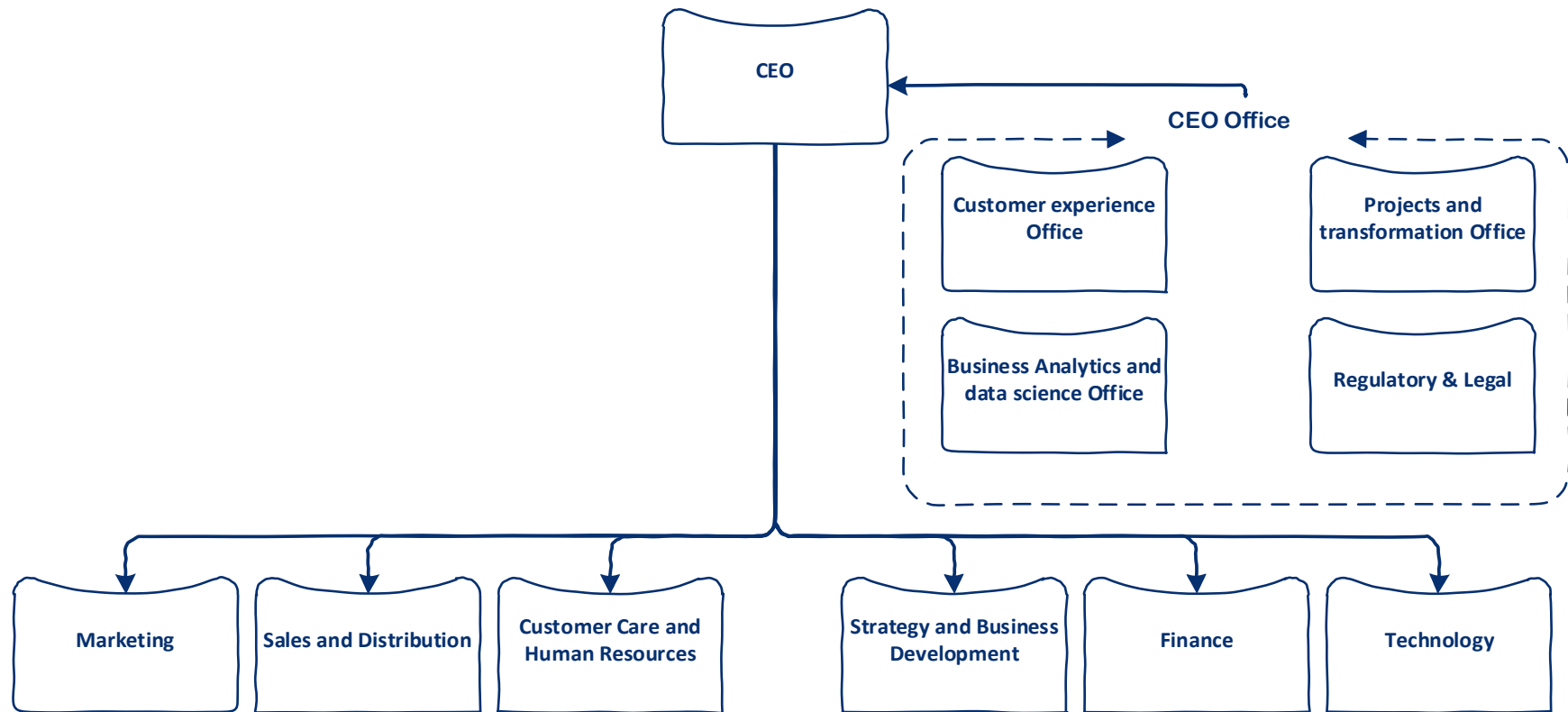


Figure 4-4 Teleco B's Organisational structure

4.3.2 Key Findings from Case B (TeleCo B)

This section presents the findings of a comprehensive case study conducted on Case-B. The key findings for Teleco B have been derived from a rigorous analysis of the collected data, resulting in the identification of 6 key themes and 24 categories. The key themes, categories, and codes are presented in Figure 4-5 and Figure 4-6, allowed for the systematic categorization and organization of the data. In the subsequent sections of the study, each of the six themes will be explored in detail, accompanied by the associated categories for each theme. Furthermore, the study will present the key findings extracted from the analysed documents, thereby providing a comprehensive understanding of the case under investigation.

The section investigates into the findings of a case study examining the operations and strategies of Case-B. The study explores six key themes: Customer Experience Strategy, Customer Journey Management, Customer Intelligence Approach, Agile Way of Operating, CX Data to Value Creation Process, and Harnessing AI Capabilities. By analysing Case-B's approach to these themes, this chapter sheds light on the company's ability to optimize customer experiences, streamline processes, leverage customer data effectively, embrace agility, drive value creation, and harness AI technologies in the context of the ever-evolving telecom landscape. This section conducts a thorough examination of the findings. Appendix N presents a detailed account of the identified codes, their respective frequencies of occurrence, and their categorization, offering a comprehensive overview of the emerging patterns. This analysis quantifies the frequency of occurrences in both interviews and documents, providing a measure of the relative importance and prominence of each code within its corresponding category. Such a deep exploration of the data enhances our understanding of how AI-driven customer insights can effectively enhance the customer experience in the telecom sector. For a comprehensive presentation of the codes, their frequencies of occurrence, categories, and the total frequency of codes, please see Appendix N, which presents the findings from the analysed documents and interviews, providing evidence and frequency of occurrence across the four categories.

Throughout this analysis, the frequency of occurrences represents the number of times specific codes were identified and mentioned in the data collected from both interviews and documents. This frequency count offers valuable insights into the relative importance and prominence of each code within its respective category.

The interviews emphasize the significance of customer experience integration within the organization, defining it as the end-to-end process of customer interaction, encompassing emotional and physical aspects. This plays a crucial role in setting customer expectations and brand positioning. Positioning customer experience as a governance role, similar to the audit

department, ensures long-term objectives aren't sacrificed for short-term revenues. Customer journey management enhances customer experience. Journey mapping provides insights into interactions and pain points, while touchpoint monitoring tracks interactions and gathers feedback. Journey design and optimization involve agile methodologies and technology integration for personalized experiences and improved journeys.

To implement agile customer experience, organizations create "customer journey factories" with champions for each sub-journey. Cross-functional collaboration is essential, with workshops ensuring a unified approach. The organization captures the voice of the customer through various channels and integrates feedback with operational data. Technology-driven tools aid in analysing customer behaviour. Satisfaction, first call resolution (FCR), and net promoter score (NPS) are captured through surveys. Personalized interactions, AI-enabled IVR, and chatbot support enrich traditional channels.

AI enhances customer value management and experience. Personalization is achieved through recommendation engines and AI models. Challenges include data integration, personalization versus privacy, and scarcity of experienced professionals. AI-driven data analytics extract insights for improved interactions and operational efficiency. Digital channels collect customer data, bridging the gap between offline and online experiences. Comprehensive data collection across channels is essential. Data analysis drives actionable insights. AI solutions enhance customer intelligence and engagement. Teleco B showcases commitment to customer experience, employing agile methodologies, integrating technology, and leveraging AI to optimize operations.

Interviewees highlight AI's significance and integration within the organization. They adopt two approaches: reusing existing AI components and building custom use cases. Reusing components allows for faster implementation, while custom use cases ensure relevance.

AI's objective in the telecom industry is enhancing customer experience through digitalization and AI technologies. This involves gathering real feedback, predicting satisfaction, retaining customers, and providing personalized interactions through AI-powered systems. Teleco B emphasizes AI in real-time feedback analysis and customer categorization. Challenges include customer frustration, limited technical resources, and AI-enabled analytics. Sentiment analysis predicts satisfaction during interactions, improving customer experience. AI-enabled intelligence to action analytics enhances overall service quality, meeting customer expectations.

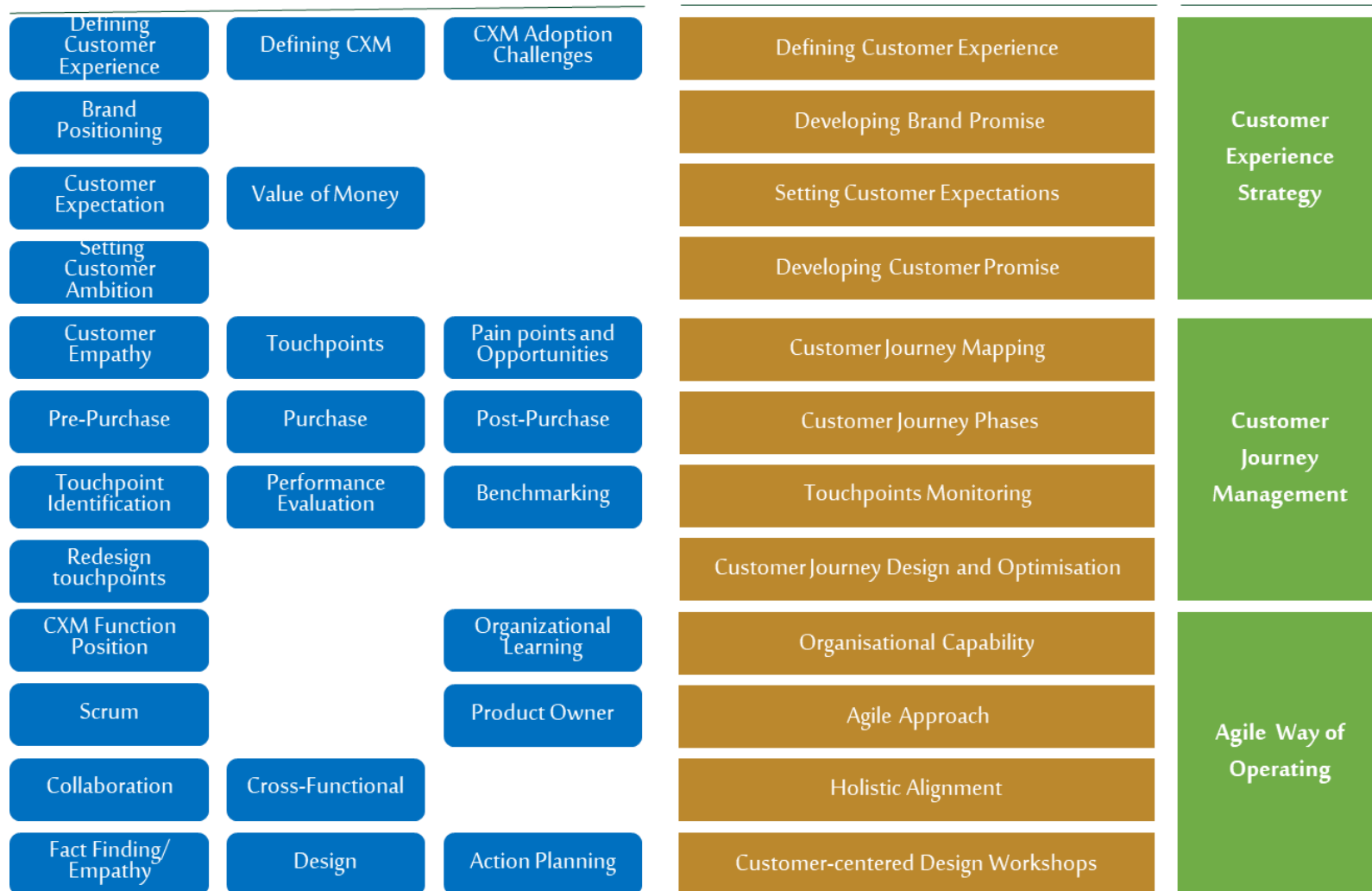


Figure 4-5 Teleco B - Theme to Category and Codes (1 of 2)

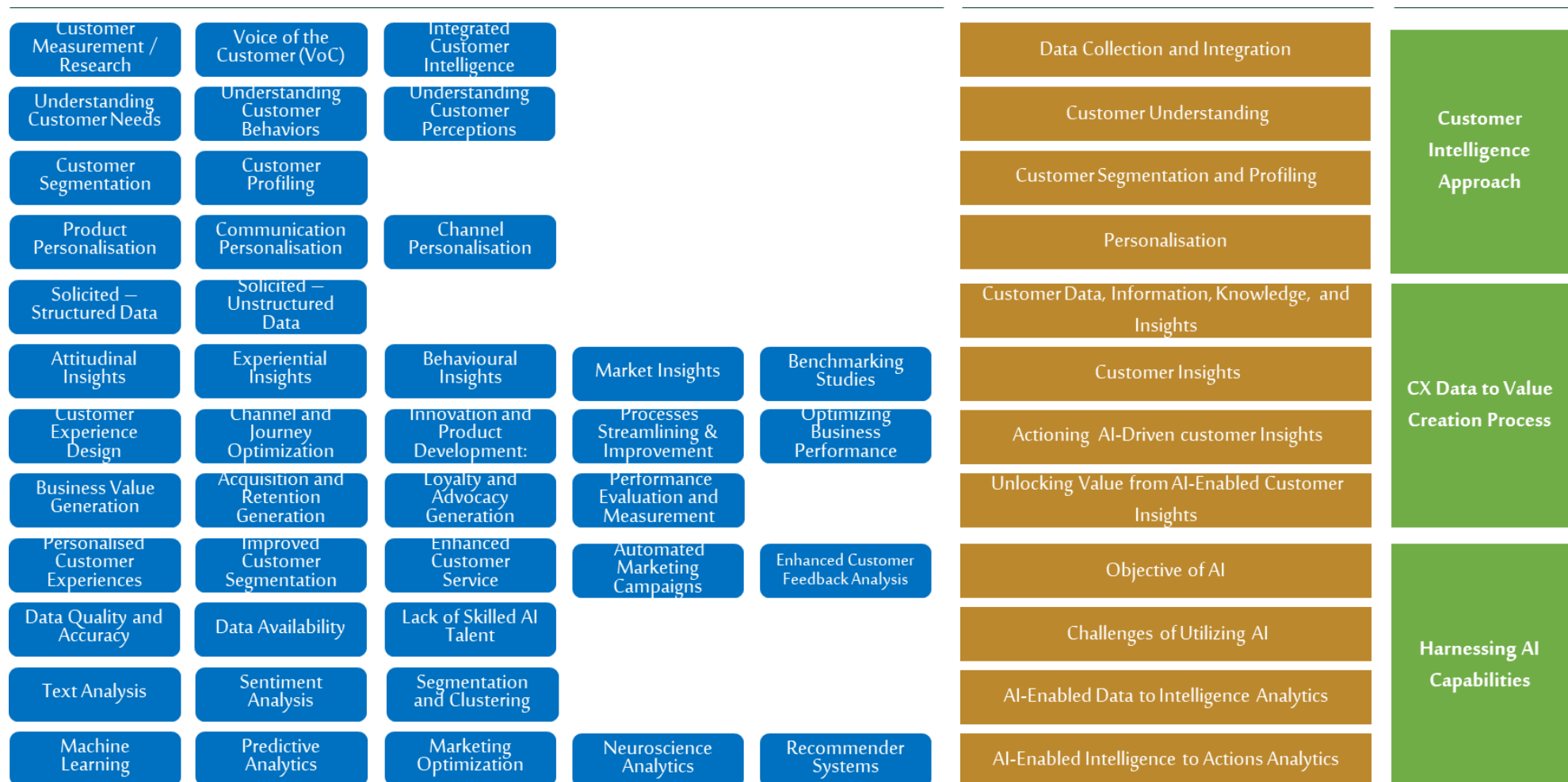


Figure 4-6 Teleco B - Theme to Category and Codes (2 of 2)

4.3.2.1 Theme 1: Customer Experience Strategy

Within the Customer Experience Strategy theme, this case examines four distinct categories: Defining Customer Experience, Developing Brand Promise, Setting Customer Expectations, and Developing Customer Promise. Appendix N outlines these categories along with the respective number of codes assigned to each. The data coding process involved analysing information gathered from interviews and documents. The results yielded 19 occurrences for Defining Customer Experience, 1 occurrence for Developing Brand Promise, 9 occurrences for Setting Customer Expectations, and 2 occurrences for Developing Customer Promise. To support the findings, Appendix N presents the evidence extracted from the analysed documents, highlighting the frequency of occurrence across the four categories. This comprehensive analysis provides valuable insights into the various components and strategies encompassing the Customer Experience Strategy theme.

Several interviewees emphasized the importance of customer experience and its integration within the organization when delving into the concept of customer experience, the interviews provided valuable insights into its significance and integration within the organization. The Group Director of Customer Experience emphasized the importance of defining customer experience from an outside-in perspective, rather than an inside-out approach, stressing the need to understand the customer's perspective and perception of the experience across various touchpoints. He highlighted that customer experience encompasses both the emotional and physical layers of the experience, stating,

"We have to define things from the outside in which is outside the organization looking inside rather than inside out. Now, customer experience as a definition. it is the experience that the customer is going through with your organization across various touch points. And then when we see what various touch points we have to differentiate later on between a channel and a touch point, but as a definition of customer experience, is the perception of your customer to the experience that is getting in every interaction with your organization and this perception is in his conscious and subconscious mind. So, we have combined together the two layers of the experience which is the emotional and the physical layer of the experience." (Group Director of Customer Experience, ZTELE03)

Also, the Group Director of Customer Experience stressed the governance role of customer experience, akin to the audit department, in ensuring a sustainable experience. He highlighted the conflict of interest between marketing, focused on short-term revenues, and customer experience, which aims for a sustainable experience, stating,

“...., So, customer experience, carries a governance role. Otherwise, if for example, and that's very famous where customer experience is put within the organization of marketing, marketing and customer experience they got to collaborate, but there is a conflict of interest because marketing is about making revenues and, and they are worried about short term revenues. Meanwhile, customer experience is worried about sustaining a sustainable experience, which is a challenge, and which is conflicting., That's where we have to carry out this balance. So I will position customer experience as a department similar to the audit Department reporting to the board or maybe reporting to the CEO” (Group Director of Customer Experience. ZTELE03).

Furthermore, customer experience was found to play a crucial role in setting customer expectations. The Head of CXM "Customer Experience Management discussed the strategic decision of determining the level of customer experience based on the organization's target market and positioning, stating,

“On the ground by experience, I've noticed that it's actually always deviated the set of customer expectation. Of your services and what they expect to have from you, deviate from only the core. Uh services that you are providing” (Head of CXM "Customer Experience Management, ZTELE01)

In addition, the interviews emphasised the significance of customer experience in developing a brand promise and brand positioning, the Customer Experience and Digitisation Manager asserts that,

“So, when we think about the strategy of the organization, we have to think about the positioning of the organization. So basically, we're thinking about the brand. And when we think about the brand, we're not talking about advertising, we're talking about the brand positioning in the mind of, of your customers, and the brand perception and the brand positioning is very crucial.” (Customer Experience and Digitisation Manager, ZTELE02,).

4.3.2.2 Theme 2: Customer Journey Management

The second theme explored in this study is Customer Journey Management. Within this theme, several categories were identified, including Customer Journey Mapping, Customer Journey Phases, Touchpoints Monitoring, and Customer Journey Design and Optimization. Appendix N provides an overview of these categories and the number of codes assigned to each. The data analysis process involved examining data collected from interviews and documents. The number of codes identified for each category are as follows: Customer Journey Mapping (20 times), Customer Journey Phases (13 times), Touchpoints Monitoring (21 times), and Customer Journey Design and Optimization (7 times). To support the findings, Appendix N presents the evidence obtained from the analysed documents, highlighting the frequency of occurrence within each category. This comprehensive analysis sheds light on the strategies and practices related to Customer Journey Management.

Customer journey management plays a vital role in enhancing customer experience. Through effective customer journey mapping, organizations gain insights into customer interactions and pain points. Understanding customer journey phases allows for targeted improvements, while touchpoint monitoring helps track customer interactions and gather feedback. Finally, customer journey design and optimization involve setting ambitious goals and using agile methodologies for continuous improvement. By focusing on these aspects, organizations can transform customer journeys and create exceptional experiences.

One of the key findings in investigating the nature of the customer journey management is the importance of customer journey mapping. the Customer Experience and Digitisation Manager emphasizes the significance of understanding the customer journey from end to end, including all physical and emotional interactions. By mapping the customer journey, organizations gain valuable insights into the customer's experiences, pain points, and areas for improvement, as explained below,

“You need to look to the journey of the customer. All the interactions and the customers either physical or emotional. So each interaction [No audio] The customer journey we need to work more on it to be to be a customer experience that is a pleasure for the customer and interesting for the customer. We need to change the customers from detractors to passive, ..., look to each activity and check if this is the right way that we can handle. This activity or this step with the customer in the correct way and this is what the customer needs and what the customer is interested and enjoyed this journey. Uh. During the whole from A-Z Journey” (Customer Experience and Digitisation Manager, ZTELE02).

Also, the Artificial Intelligence Project manager emphasizes the importance of customer journey mapping as a tool to identify pain points and areas for improvement. They highlight the need to involve multiple stakeholders from different departments to gain a holistic understanding of the customer journey.

"Customer journey mapping is a powerful tool that helps us identify pain points and critical touchpoints where we can make a difference. It's important to involve representatives from different departments to get a complete view of the journey and ensure we address all the customer pain points." (Artificial Intelligence Project manager, ZTELE04).

The Group Director of Customer Experience describes a structured approach to managing customer journeys, which involves breaking them down into sub-journeys and assigning dedicated teams to each sub-journey. This enables a comprehensive assessment of customer pain points and facilitates targeted improvements.

"We start to make what we call wave one and wave two and wave three, wave one where we assess what's happening... So we have the voice of the customer from one hand. But we don't know what's happening on reality... So now when we make the root cause we connect the dots of mine... and we have a complete story, which is wave one." (Group Director of Customer Experience, ZTELE03).

Monitoring touchpoints throughout the customer journey is another crucial aspect of customer journey management. The Product development Manager emphasizes the need for continuous touchpoint monitoring to identify areas of improvement and proactively address customer issues. He suggests leveraging technology and data analytics to gather insights from customer interactions across different touchpoints.

"Monitoring touchpoints is crucial for understanding the customer's journey and identifying areas where we can improve. By leveraging technology and data analytics, we can gain valuable insights from customer interactions and take proactive measures to address their needs and concerns." (Product development Manager, ZTELE08).

Furthermore, the Product development Manager emphasizes the role of technology in designing and optimizing the customer journey. They highlight the use of automation, AI, and personalization to enhance the customer experience at various touchpoints,

"Leveraging technology is essential for designing and optimizing the customer journey. Automation, AI, and personalization can significantly enhance the customer experience across different touchpoints. By leveraging these tools, we can create seamless and personalized interactions." (Product development Manager, ZTELE08).

4.3.2.3 Theme 3: Agile Way of Operating

The Agile Way of Operating, the fourth theme investigated in this study, comprises several categories: Organizational Capability, Agile Approach, Holistic Alignment, and Customer-centred Design Workshops. Appendix N provides an overview of these categories, along with the number of codes assigned to each. The analysis process involved assessing the organization's capability to adopt agile practices, the implementation of agile approaches, the holistic alignment of various departments and functions, and the utilization of customer-centered design workshops. The resulting number of codes for each category are as follows: Organizational Capability (13 times), Agile Approach (15 times), Holistic Alignment (20 times), and Customer-centred Design Workshops (10 times). To support these findings, Appendix N presents the evidence extracted from the analysed documents, demonstrating the frequency of occurrence within each category. This comprehensive analysis provides valuable insights into the strategies and approaches related to the Agile Way of Operating.

According to the interviews, it is crucial to position customer experience within the organization in a way that carries a governance role, similar to the audit department reporting to the board or CEO. The interviews highlight the importance of positioning customer experience within the organization in a way that carries a governance role. This helps to avoid conflicts of interest and ensures long-term objectives are not sacrificed for short-term revenue gains. One interviewee suggests positioning customer experience similar to the audit department, reporting directly to the board or CEO. This ensures that customer experience is given the necessary authority and attention it deserves. This helps avoid conflicts of interest with departments focused on short-term revenues. The Group Director of Customer Experience asserts that,

"So, customer experience, but to carries a governance role... Meanwhile, customer experience is worried about sustaining a sustainable experience... which is a challenge, and which is conflicting. So, when it comes at the end of the day to the chief marketing officer or the head of marketing, he might accept to sacrifice the long-term objective of customer experience for the sake of short term revenue... That's where we have to carry out this balance." (Group Director of Customer Experience, ZTELE03)

To implement agile customer experience, organizations form teams known as the "customer journey factory," with champions assigned to each sub-journey. These teams assess customer feedback, connect it to operational realities, and identify root causes through fact-finding. By adopting a scrum approach, organizations can align their strategic direction with their desired customer journey, assigning tasks to individuals from various departments, including legal, finance, and IT.

The adoption of an agile approach is crucial for implementing customer experience improvements. Organizations establish teams called the "customer journey factory" and assign champions to each sub-journey. These teams follow a structured process that includes fact-finding, root cause analysis, and designing the customer journey. By connecting customer feedback to operational realities, organizations gain a comprehensive understanding of the customer experience and can make informed decisions to enhance it. The scrum methodology is employed to assign tasks and ensure efficient collaboration among team members. The Head of Customer Experience Management, stating,

"So, when we assess what is happening, we go and dig deep into the root cause... we connect the dots of mine... and accordingly, we start to assign tasks to people using the scrum approach and agility way of doing things." (Head of Customer Experience Management, ZTELE01)

Holistic alignment is essential, involving collaboration between departments and workshops to ensure legal compliance, regulatory approval, and addressing any operational issues. Through this collaborative and agile approach, organizations can transform their customer journeys and enhance the overall customer experience. Successful customer experience transformation requires holistic alignment and collaboration across departments. Legal, finance, IT, and other relevant departments should be involved in workshops and discussions to ensure regulatory compliance, legal approval, and effective integration of customer experience initiatives. The interviews emphasize the importance of disconnecting from office distractions during workshops to ensure focus and intensity. Collaboration between departments helps in connecting the dots and creating a unified approach towards improving customer journeys, as asserted by the Product development Manager,

"A collaboration between all the departments that need to align with each other to connect all of the dots. Uh, between the different uh customer lifecycle stages to make sure that the customer has. One unified and seamless journey that he don't feel that you are having different departments or you are having different, uh. Uh treatment and different stages." (Product development Manager, ZTELE08)

The Manager of contact centre / channel management emphasises on the collaboration between all the departments, stating,

"So before designing the workshop, the scrum workshop, and the journey factory redesign, you have to agree and think of the players,, maybe I would create a customer experience club" (Manager of contact centre / channel management, ZTELE07)

4.3.2.4 Theme 4: Customer Intelligence Approach

The third theme explored in this study is Customer Intelligence Approach, which encompasses several categories: Data Collection and Integration, Customer Understanding, Customer Segmentation and Profiling, and Personalization. Appendix N provides an overview of these categories and the corresponding number of codes assigned to each. The analysis process involved collecting and integrating data from various sources. The number of codes identified for each category are as follows: Data Collection and Integration (21 times), Customer Understanding (25 times), Customer Segmentation and Profiling (17 times), and Personalization (23 times). To provide further evidence. This comprehensive analysis sheds light on the strategies and approaches employed in the Customer Intelligence domain.

The interviews emphasize the significance of a customer-centric approach in gathering and analysing customer data, understanding their needs, and personalizing the customer experience. The integration of operational insights, feedback from representative samples, and the use of technology-driven tools are key components in driving customer intelligence and improving customer satisfaction. The interviews highlight the importance of capturing the voice of the customer through various channels and touchpoints. The Group Director of Customer Experience emphasizes the need to capture feedback after every customer interaction, such as calls to the contact centre, visits to retail shops, and mobile application usage. They also mention the significance of gathering feedback from a representative sample of customers periodically to understand the overall customer experience and compare it to the competition. This multi-dimensional data collection approach helps in capturing both operational feedback and generic customer sentiment. As asserted by the Group Director of Customer Experience,

" We believe in capturing the voice of the customer at every touchpoint and interaction. For instance, after every customer interaction, whether it's a call to the contact centre, a visit to a retail shop, or even using our mobile application, we make it a point to capture feedback. This helps us understand the customer's experience in real-time and identify any operational issues that may be affecting their satisfaction" (Group Director of Customer Experience, ZTELE03)

The company is focusing on using a new product platform for data warehousing, data lakes, and data science tools. They are also building dashboard tools. Customer behaviour data from various sources, such as billing, charging, calls, SMS, and internet usage, is collected for analysis. Customer satisfaction, first call resolution (FCR), and net promoter score (NPS) are captured through surveys. As highlighted by the Artificial Intelligence Team lead,

"Buying a new product platform in terms of data warehouse, data lake and data science tools, ..., the data collected from different data sources as example customer behaviour on billing and charging." (Artificial Intelligence Team lead, ZTELE05).

The interviews highlight the importance of capturing the voice of the customer at various touchpoints and integrating it with operational data. They also emphasize the need to understand customer journeys and leverage technology to gain deeper insights into customer behaviour. By employing tools such as eye tracking, brain readers, and heat maps, the organization can identify areas for improvement and enhance the customer experience, as explained by the Artificial Intelligence Project manager,

" We have invested in various technologies and tools to gain insights into customer behaviour and preferences. For example, in our customer experience lab, we use eye tracking and user experience tests to understand how customers interact with our digital channels. If we observe that customers are struggling or facing challenges, we take it as an opportunity to improve and simplify their journey. Additionally, we use technologies like brain readers to gauge customer emotions and heat maps to analyse customer behaviour on our applications. By combining these tools with customer feedback and surveys, we can identify pain points, optimize our customer journeys, and ensure a better overall experience."(Artificial Intelligence Project manager, ZTELE04).

The company is focusing on improving customer experience through personalized interactions, AI-enabled IVR, and chatbot support. As pointed out by the Manager of contact centre / channel management, the company is working on enriching traditional channels like IVR (Interactive Voice Response) with AI. They are building a smart IVR that can analyse customer history and interactions to provide personalized options. The chatbot is used for self-service, and if it fails, the conversation is transferred to a human agent. The company monitors customer satisfaction, NPS, and user experience through surveys, feedback, and analysis of website interactions.

"We're working on enriching the traditional channels such as the IVR Interactive voice with artificial intelligence, we built many features on the chatbot to cover the extra conversations we're receiving on the digital channels." (Manager of contact centre / channel management, ZTELE07)

4.3.2.5 Theme 5: CX Data to Value Creation Process

Under the theme of CX Data to Value Creation Process, this study explores several categories: Customer Experience Data; Customer Insights; Actioning AI-Driven Customer Insights; and Unlocking Value from AI-Enabled Customer Insights. Appendix N outlines these categories along with the number of codes assigned to each. The coding process involved analysing the collection and utilization of customer experience data, the generation of customer intelligence, the utilization of AI-driven customer intelligence in decision-making, and the strategies for Unlocking Value from AI-Enabled Customer Insights. The analysis resulted in 12 occurrences for Customer Experience Data; 26 occurrences for Customer Insights; 26 occurrences for Actioning AI-Driven Customer Insights; and 19 occurrences for Unlocking Value from AI-Enabled Customer Insights. To reinforce the findings, Appendix N presents the evidence derived from the analysed documents, showcasing the frequency of occurrence within each category. This comprehensive examination provides valuable insights into the utilization of CX data and AI-driven customer intelligence in the value creation process.

Customer data and insights play a crucial role in understanding customer behaviour, preferences, and needs. By analysing various data sources such as transactional data, customer interactions, survey results, and behaviour patterns, companies can gain valuable insights that can drive business decisions and improve the customer experience. The interviews shed light on how organizations utilize customer data and insights to enhance their understanding and provide personalized experiences to their customers. Teleco B rely on various data sources for customer intelligence. These include data from business intelligence teams, data warehouses, analytical tools, digital platforms, market feedback, customer care, and sales teams. The combination of these data sources provides a comprehensive understanding of customer behaviour and preferences

The Artificial Intelligence Project Manager highlights the use of customer behaviour and experience data to drive marketing campaigns and actions through digital channels. Also, the Artificial Intelligence Project Manager mentioned,

"We analyse the data coming from customer behaviour and experience...to push the best action through marketing campaigns or digital channels." (Artificial Intelligence Project Manager, ZTELE04)

The Artificial Intelligence Team lead mentions the utilization of various data sources, including CRM, billing, charging, and Deep Packet Inspection data, to study customer behaviour and make informed decisions. Also, highlights the use of AI and technologies like natural language processing to analyse customer complaints and behaviour. The Artificial Intelligence Team lead explains,

"Data collected from different sources...to study behaviour in terms of calls, SMSs, internet usage, and more, ..., we can analyse customer complaints and behaviour using technologies like natural language processing...to improve decisions." (Artificial Intelligence Team lead, ZTELE05).

The Director of Digital Services highlights the use of transactional and strategic data to understand customer behaviour and preferences. This includes analysing roaming patterns, payment behaviour, credit scores, and conducting outbound calls for further insights.

"We heavily rely on transactional data...from credit scores to outbound calls for segmentation and understanding customer behaviour."(Director of Digital Services, ZTELE10).

The Manager of contact centre / channel management discussed the importance of chatbots that continuously learn and improve. This highlights the potential for AI-driven chatbots to enhance customer interactions and provide personalized support.

"Smart chatbot flowchart has to cater for the customer because it's made to learn and be enriching continuously." (Manager of contact centre / channel management, ZTELE07).

The Head of CXM "Customer Experience Management mentioned the integration of Robotic Process Automation (RPA) and AI to optimize internal processes and overcome issues. AI-driven customer intelligence can automate tasks and improve efficiency in handling customer interactions.

"We have this kind of small processes related to RPA and it's like there is an RPA process that will automatically work out certain issues for the chatbot."(Head of CXM "Customer Experience Management, ZTELE01).

The Group Director of Customer Experience discussed using gamification to train employees on enhancing the customer journey. AI-driven customer intelligence can be leveraged to create interactive training programs that improve employee understanding of customer needs.

"We worked on something called gamification in the gamification portal, training our employees via games." (Group Director of Customer Experience, ZTELE03).

Real-time Campaign Management: The Director of Digital Services mentioned the integration of AI-driven campaign management systems that trigger personalized communications in real-time. This demonstrates the potential for AI-driven customer intelligence to enhance marketing automation and deliver targeted offers to customers.

"Integrate the next best offer with a marketing automation tool and real-time campaign management system." (Director of Digital Services, ZTELE10).

4.3.2.6 Theme 6: Harnessing AI Capabilities

The Harnessing AI Capabilities theme, the final focus of this study, includes the following categories: Objective of AI; Challenges of Utilizing AI; AI-Enabled Data to Intelligence Analytics; and AI-Enabled Intelligence to Actions Analytics. Appendix N provides an overview of these categories, along with the number of codes assigned to each. The analysis process involved investigating the objectives of AI implementation, the challenges faced in utilizing AI, the utilization of AI for data to intelligence analytics, and the application of AI for intelligence to actions analytics. The resulting number of codes for each category are as follows: Objective of AI (33 times); Challenges of Utilizing AI (5 times); AI-Enabled Data to Insights Analytics (13 times); and AI-Enabled Insights to Actions Analytics (28 times). To support these findings, Appendix N presents the evidence extracted from the analysed documents, demonstrating the frequency of occurrence within each category. This comprehensive analysis provides valuable insights into the harnessing of AI capabilities for data analysis and generating actionable intelligence.

When exploring the use of AI to enhance customer experience, multiple interviewees highlighted its significance and its integration within the organization. They adopt two approaches: reusing existing AI components developed by other vendors and building their own use cases specific to the telecom market. Reusing components allows for faster implementation and leveraging of AI capabilities, while building custom use cases ensures relevance and alignment with the business backlog. As explained by the Artificial Intelligence Project Manager,

"We are trying to build both capacity means that you can have the ability to reuse and shortcut the applications of AI that is already developed and can be convenient to be used directly... The other approach is to build our own use cases, which is more relevant to the business backlog of use cases that is relevant specifically for the telecom market."
(Artificial Intelligence Project manager, ZTELE04).

The findings shed light on the significance of AI and digitalization as powerful tools for delivering excellent customer experiences, while also highlighting the challenges and opportunities associated with their implementation. For Instance, the Director of Digital Services emphasizes the objective of AI in driving customer behaviour and segmentation. They mentioned using micro-segmentation to analyse customer behaviour, such as international calls, roaming calls, and data usage. By understanding customer preferences and patterns, they aim to promote desired behaviours, cross-sell products, and identify loyal customers. Furthermore, the Manager of Contact Centre / Channel Management, highlighted the objective of AI in improving customer service and operational excellence. They mentioned using AI tools to analyse and

enhance call centre operations, monitor performance, and provide better customer care. They mentioned implementing real-time feedback (RTF) systems and utilizing AI models to analyse customer complaints, emotions, and behaviours. By leveraging AI, they aim to improve IVR utilization, reduce call transfers to agents, and enhance customer satisfaction, stating,

“The RTF scores are low normally in the IVR, but after implementing such as a solution the RTF will increase. it's like customer satisfaction of the IVR will increase, the customer respected that. So, he will be satisfied, in addition to that, the IVR utilisation, how much the IVR are handling the calls completely without transferring it to the agents.” (Manager of contact centre / channel management, ZTELE07).

The Group Director of Customer Experience provided a broader perspective on the objective of AI, emphasizing that the primary goal is to improve customer experience through digitalization and AI technologies. The objective is not solely focused on digitalization itself but rather on leveraging these technologies to enhance customer experience excellence, stating,

“There's a broad view of the of the artificial intelligence, and digitalization, I'm saying digitalization and artificial intelligence came to serve the customer experience to be better, it will be with the objective, ..., The objective is not to digitalize because if the objective is to digitalize only, it will be catastrophic. The objective is customer experience, better customer experience, customer experience excellence via digital, and artificial intelligence tools.” (Group Director of Customer Experience, ZTELE03).

The Product development Manager emphasized the importance of leveraging AI and segmentation techniques to drive customer behaviour and promote upselling and cross-selling opportunities. By identifying customer preferences, such as international calls and data usage, telecommunications companies can offer personalized incentives and tailored services to encourage desired behaviours, stating,

“In the first place, this is the first phase that will be where babysetting phase. After that, we start gradually trying to uplift some of the behaviour, drive the traffic into a certain behaviour like international calls, roaming calls... we try to give them, for example, a free small amount of data just to entice the behaviour and they start to build a new behaviour to upsell some of their products and start to cross-sell with a broadband.”(Product development Manager, ZTELE08)

The Manager of contact centre / channel management discussed the benefits of implementing AI in real-time feedback (RTF) analysis and customer categorization. By leveraging AI technologies, telecom companies can gain valuable insights from customer feedback and categorize them efficiently, leading to improved customer satisfaction and reduced call centre costs,

"The RTF scores are low normally in the IVR, but after implementing such a solution, the RTF will increase... the IVR utilization also increased because... we decreased the number of calls transferred to agents... we enhanced the customer or the user experience in the IVR." (Manager of contact centre / channel management, ZTELE07).

While AI and digitalization offer numerous benefits for enhancing customer experience in the telecommunications industry, there are also significant challenges that need to be addressed. The interviews conducted with industry experts shed light on some of these challenges. The following excerpts from the interviews provide valuable insights into the obstacles faced, the AI and Data Director highlighted the potential frustration customers may experience when interacting with AI systems. In certain cases, the lack of flexibility and limited options in the system can lead to a deadlock, leaving customers unable to find a resolution,

"So sometimes people will hate the artificial intelligence or the electronic way of doing things because it's a deadlock. Rather than being a way to help me better, there are particular segments where they don't need to talk to somebody... The more you enrich your glossary with use cases and allow for an exit from the closed loop, the greater the success." (AI and Data Director, ZTELE06).

The CVM (Customer Value Management) Manager emphasized the scarcity of technical resources, such as data scientists or AI engineers, who possess the expertise to implement and maintain AI systems. This scarcity poses a challenge for telecommunications companies, as it becomes difficult to provide dedicated resources for different disciplines, such as customer value management (CVM), acquisition, and pricing,

"Basically, you need someone that is a data scientist or artificial intelligence engineer, but you can't build that within someone whose main domain is business... The challenge here is that these technical resources are scarce in the industry. It becomes challenging to provide each entity with dedicated personnel for CVM, acquisition, pricing, etc." (CVM (customer value management) Manager, ZTELE09).

AI-Enabled Data to Insights Analytics plays a crucial role in improving customer experience within the telecommunications industry. For Instance, The Artificial Intelligence Project manager mentioned a project focused on sentiment analysis from the voice of the customer. By analysing customer satisfaction levels during call centre interactions, the company can predict whether a customer is satisfied or not. Based on this analysis, appropriate actions can be taken, such as forwarding the customer to a channel where they can receive personalized assistance or offering targeted campaigns and offers, *"We have a project regarding sentiment analysis from the Voice of the customer. We can predict if the customer is satisfied or not on the call centre... We can either forward the customer to a channel who can work with the customer and help him,*

or we can offer him a campaign or send him an offer." (ZTELE04, Artificial Intelligence Project manager).

AI-Enabled Intelligence to Action Analytics is focused on utilizing artificial intelligence and digital technologies to enhance the customer experience. As mentioned by ZTELE01,

"The basic objective is customer experience, utilizing and defending and capitalizing upon artificial intelligence and digital technologies." (Head of CXM "Customer Experience Management, ZTELE01).

This objective underscores the importance of leveraging AI and digital tools to provide a better overall experience for customers.

To achieve this, telecom companies are using AI to gather real feedback from customers, as highlighted by ZTELE02,

"So basically, we are indeed having real feedback from customers in addition to the operational KPIs that we are trying to capture." (Customer Experience and Digitisation Manager, ZTELE02).

This goes beyond the capabilities of human employees and enables telecom companies to capture valuable insights and improve their services.

Additionally, ZTELE04 highlights the role of AI in marketing: "Marketing was always seeking to predict the churners and try to retain them." By leveraging AI, telecom companies can identify customers who are likely to churn and take proactive measures to retain their business.

Furthermore, ZTELE06 emphasizes the use of AI in various customer touchpoints: "We're using artificial intelligence in multi-tools or systems such as the chatbot solution for Zain, the main chat solution on our digital channels" and "We are building a new experience from the IVR with artificial intelligence capabilities to make it flexible, dynamic based on the customer history, customer interaction history or communication with the company." These AI-powered solutions enhance the customer journey by providing personalized and dynamic interactions based on individual customer preferences and history.

The adoption of AI and digital technologies in the telecom industry allows for AI-Enabled Intelligence to Action Analytics, which focuses on utilizing artificial intelligence to enhance the customer experience. By leveraging AI to gather real feedback, predict customer satisfaction, retain customers, and provide personalized interactions, telecom companies can improve their overall service quality and meet the evolving expectations of their customers. As ZTELE07 asserted that AI-enabled sentiment analysis techniques are utilized to understand and analyse customer sentiments and emotions. This helps telecom companies gauge customer satisfaction

and identify areas for improvement. The Manager of contact centre / channel management mentions,

"We have something we call sentiment analysis. It is working on the call centre, and it measures the emotion of the customer." (Manager of contact centre / channel management, ZTELE07).

AI-driven analytics enable telecom companies to create personalized campaigns and offers tailored to individual customer preferences. Artificial Intelligence Team lead mentions using AI to predict churners and retain them. By understanding customer behaviour and preferences, telecom companies can design targeted campaigns that resonate with customers and increase engagement.

"Where technology started to accommodate digesting such data and being able to translate it to data via to business value. So as an example. A. Previously we were having the calls of the customer and based on the calls behaviour we may detect a churner. But today we are taking the data from the network props. As example, we're having more insights of the detailed customer uses. Uh, and at capacity to even analyse more features and more. Dimensions of the customer experience on the network." (Artificial Intelligence Team lead, ZTELE05)/

Chatbots with AI capabilities are employed to improve customer service and provide quick and accurate responses to customer queries. ZTELE07 mentions the use of chatbot solutions on digital channels, indicating how AI-powered chatbots enhance the customer experience by offering instant assistance and reducing response times, stating,

"So, with the chatbot, but we managed to answer more than 95 or for our customers within. Yeah. A realistic time frames. So, Facebook mentioned us as one of the success stories on their website mentioning that they are mentioning that success. Also, RingCentral mentioned us and success story too, we did not invest too much in the human capabilities at the digital channels as we have a chat bot, we invested in the chatbot, but we built many features on the chatbot." (Manager of contact centre / channel management, ZTELE07).

IVR (Interactive Voice Response) systems are enhanced with AI capabilities to provide dynamic and personalized experiences based on customer history and interaction. ZTELE07 mentions building a new IVR experience with AI capabilities to make it flexible and dynamic. This ensures that customers receive relevant and context-specific information during their interactions with the company, stating:

“In the artificial intelligence with the tools or the current tools, they are working on. For example, we're working on and enriching the traditional channels such as the IVR Interactive voice. recognition with the artificial intelligence for example we are building a smart IVR by analysing the customers who are contacting us, why they contact us and we provide them with the best. Uh. Match for their need I on the first option the IVR, you know the IVR is normally flow.” (Manager of contact centre / channel management, ZTELE07).

ZTELE03 mentioned is the use of eye-tracking tools in a customer experience lab. By observing how customers interact with digital platforms, such as mobile apps, companies can identify areas of confusion or difficulty and redesign the user interface to make it more intuitive.

“In our customer experience lab, we have we have an eye tracking tool. So, we bring the customer for a user experience test. And we tell him, can you recharge your balance on your prepaid card, and we open the page, or we open the mobile app and we follow what's happening with him. If it was intuitive, and he was able to spot where can he recharge and it went easy, less effort than we're doing right? If he kept on suffering, and we're following the mouse and you know that application is allowing us to see how many moves he made and where he was confused, then we failed and then we have to redo our work in order to make it easier for him. So, using the technologies for a better experience” (Group Director of Customer Experience, ZTELE03).

ZTELE03 is the use of brain reader technology to detect customer emotions and levels of effort during interactions with customer care or when filing complaints. This data can help identify pain points and areas for improvement in order to enhance the customer experience., stating,

“we have the brain reader. It reads the emotion for the helmet well when you put it and it reads your emotion, so every time for example, you do an experience of, for example, filing a complaint or raising a case to the customer care, etc. And we have this signal, because it's showing us it's similar to the, you know, to the heart reading. So basically, we're able to tell the customer is angry here. This is high effort. This is annoying him for for as an example. We have the heat map of the of the application” (Group Director of Customer Experience, ZTELE03).

4.4 Case C – Within-case Analysis and Findings (Bank A)

In this section, I present the insights from the third case. The description of the financial services company is based on interviews with participants, the documents provided by participants, the organisation's website, and data published by the holding organisation.

4.4.1 Background

4.4.1.1 Company

Case C, which represents the banking sector, denoted as Bank A, is one of the leading banks in Jordan, offering a range of banking and financial products and services to individuals, businesses, and institutions. Some of the products and services offered by the bank include Personal banking: Bank A offers a variety of personal banking products and services, including checking and savings accounts, credit cards, loans, and investment options. Business banking: The bank also provides a range of business banking products and services, including business checking and savings accounts, loans, and trade finance options.

Case Study C is a bank that operates in a highly competitive financial services industry. The bank's organizational structure encompasses several key departments as depicted in Figure 4-7. Consumer banking serves individual customers with personalized products and services. Investments and Treasury manage the bank's assets and aim to maximize returns. Innovation and transformation focus on developing customer-centric solutions. Finance oversees budgeting and financial reporting. Audit assesses internal controls and identifies risks. Human resources attract and develop talent. Marketing and corporate communications promote the bank's brand. Compliance ensures regulatory adherence. Operations handle day-to-day activities, with the Data Science office analysing data for efficiency and customer experience improvements.

Notably, the bank's structure is underpinned by two critical departments, namely, Innovation and transformation and Operation, which house the Customer Experience and Data Science offices, respectively. The Customer Experience office within Innovation and transformation focuses on developing and implementing customer-centric strategies that enhance the bank's competitive edge, while the Data Science office within the operation department is responsible for analysing vast amounts of data to generate valuable insights that inform decision-making across the organization. The interplay between these two offices is critical to the bank's success in meeting the evolving needs and expectations of its customers, making Case Study C an excellent candidate for investigating the role of AI in actioning customer insights to manage customer experience throughout the customer journey with the banking industry.

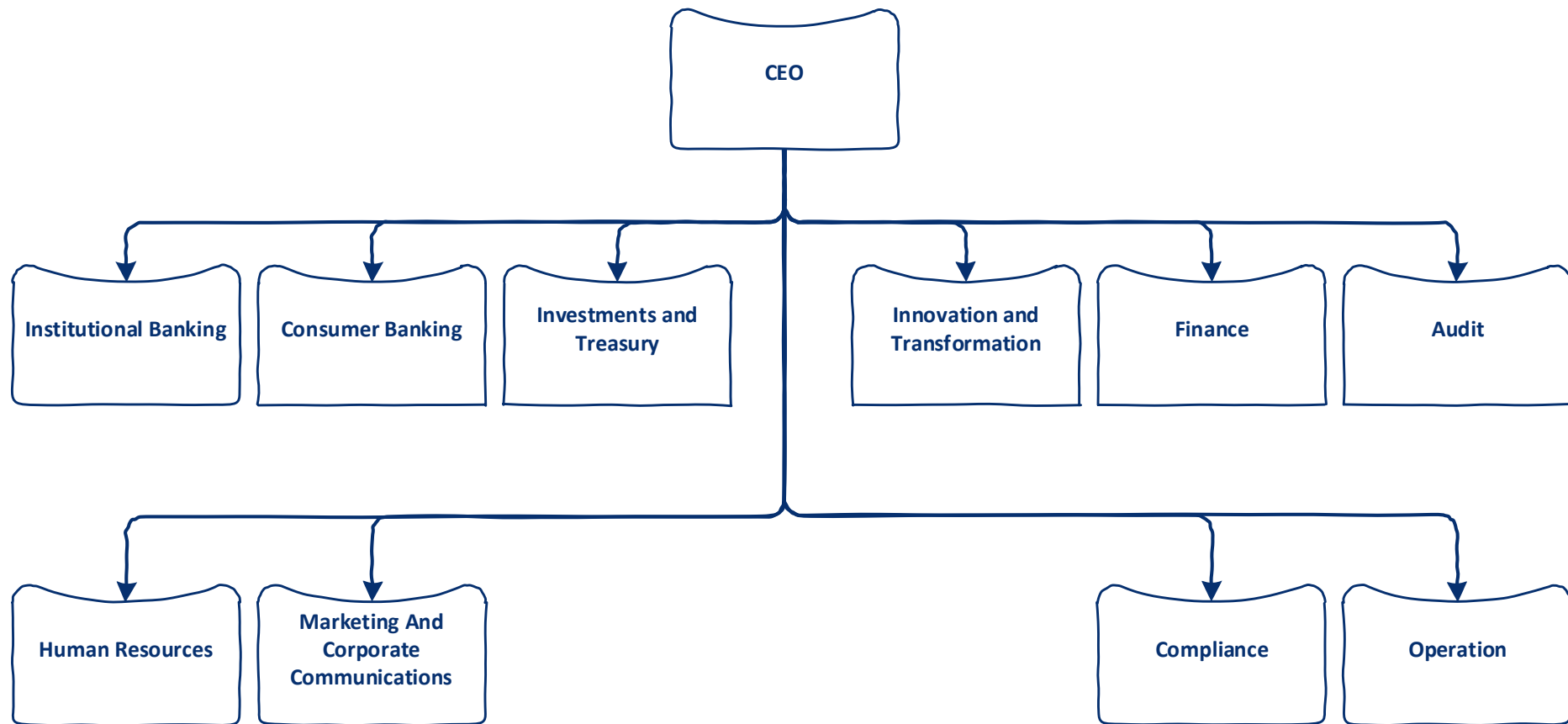


Figure 4-7 Bank A's Organisational Structure

4.4.2 Key Findings from Case C (Bank A)

This section presents the findings of a comprehensive case study conducted on Bank A. The key findings for Bank A have been derived from a rigorous analysis of the collected data, resulting in the identification of 6 key themes and 24 categories. The key themes, categories, and codes are presented in Figure 4-8 and Figure 4-9, allowed for the systematic categorization and organization of the data. In the subsequent sections of the study, each of the six themes will be explored in detail, accompanied by the associated categories for each theme. Furthermore, the study will present the key findings extracted from the analysed documents, thereby providing a comprehensive understanding of the case under investigation.

This section presents the findings across six pivotal themes: Customer Experience Strategy, Customer Journey Management, Customer Intelligence Approach, Agile Way of Operating, CX Data to Value Creation Process, and Harnessing AI Capabilities. By examining Case-C's approach to these themes, this chapter offers valuable insights into how the bank leverages customer-centricity, journey optimization, data intelligence, agile practices, value creation, and AI technologies to deliver exceptional customer experiences and maintain a competitive edge in the banking industry. This section explores deeper into the findings. In Appendix O, you can find a comprehensive presentation of the identified codes and their respective frequencies of occurrence, along with their categorization, providing an in-depth overview of the emerging patterns. This analysis quantifies the frequency of occurrences within both interviews and documents, offering a measure of the relative importance and prominence of each code within its corresponding category. By conducting such an extensive exploration of the data, we enrich our understanding of how AI-driven customer insights can effectively enhance the telecom sector's customer experience. For a detailed account of the codes, their frequencies of occurrence, categories, and the total frequency of codes, please refer to Appendix o, which presents the findings from the analysed documents and interviews, providing evidence and the frequency of occurrence across the four categories.

In this analysis, the frequency of occurrences indicates the number of times specific codes were identified and mentioned in the data collected from both interviews and documents. This frequency count offers valuable insights into the relative importance and prominence of each code within its respective category.

Bank A integrates customer experience into its strategy, reflecting a customer-centric approach. Products and services align with customer expectations, addressing potential pain points in the customer journey for a positive experience. Resolving critical paths is crucial for satisfaction. Managing customer emotions and expectations is a priority.

Customer journey mapping, touchpoint monitoring, and continuous optimization are key. Advanced technologies, like AI, ML, and robotics, enhance processes, especially account opening. Agility, flexibility, and seamlessness across touchpoints are the focus. Organizational capabilities, agile approaches, holistic strategies, and customer-centred design workshops enhance the experience.

Bank A focuses on leveraging its organizational capabilities, adopting an agile approach, aligning its strategies holistically, and conducting customer-centred design workshops to enhance the customer experience and drive business growth. The bank follows an agile framework with tribes, squads, product owners, Scrum Masters, and business analysts optimizes processes. Understanding the business and generating product value is emphasized. Feedback is actively collected through surveys, mystery shopping, and QR codes.

Bank A recognizes the importance of customer intelligence in improving business operations, sales, and customer experience. They utilize data science, AI, and ML provide insights. A hub-and-spoke approach to AI and data analytics is followed. Customer feedback and engagement drive success. A seamless experience across touchpoints is prioritized, leveraging automation and AI.

Bank A effectively utilizes demographic, behavioural, transactional, and operational data, along with benchmarking studies, are utilized for actionable intelligence. Surveys and transactional data are correlated to uncover hidden feedback reasons. Various KPIs measure performance, including acceptance ratio, turnaround time, and waiting time. Data and AI predict behaviour and offer personalized offers.

Bank A widely uses artificial intelligence, which helps in understanding customer behaviour, improving performance, identifying potential business opportunities, and detecting and preventing potential fraud cases. The bank has a dedicated team that uses advanced analytics and machine learning techniques to monitor and mitigate risks. Collaboration between business and data teams is essential to extract value from AI and machine learning capabilities. The bank follows a federated approach, combining centralized and decentralized elements, with a data office at the group level serving as a centre of excellence and hub for data and analytics. Machine learning algorithms are employed to identify bottlenecks in services and make necessary system changes to enhance customer experience. Data mining and modelling are used to understand customer behaviour, optimize processes, and offer personalized experiences. Banks leverage data to understand current customer behaviour and predict future behaviour, enabling personalized offers, discounts, and value-added services.

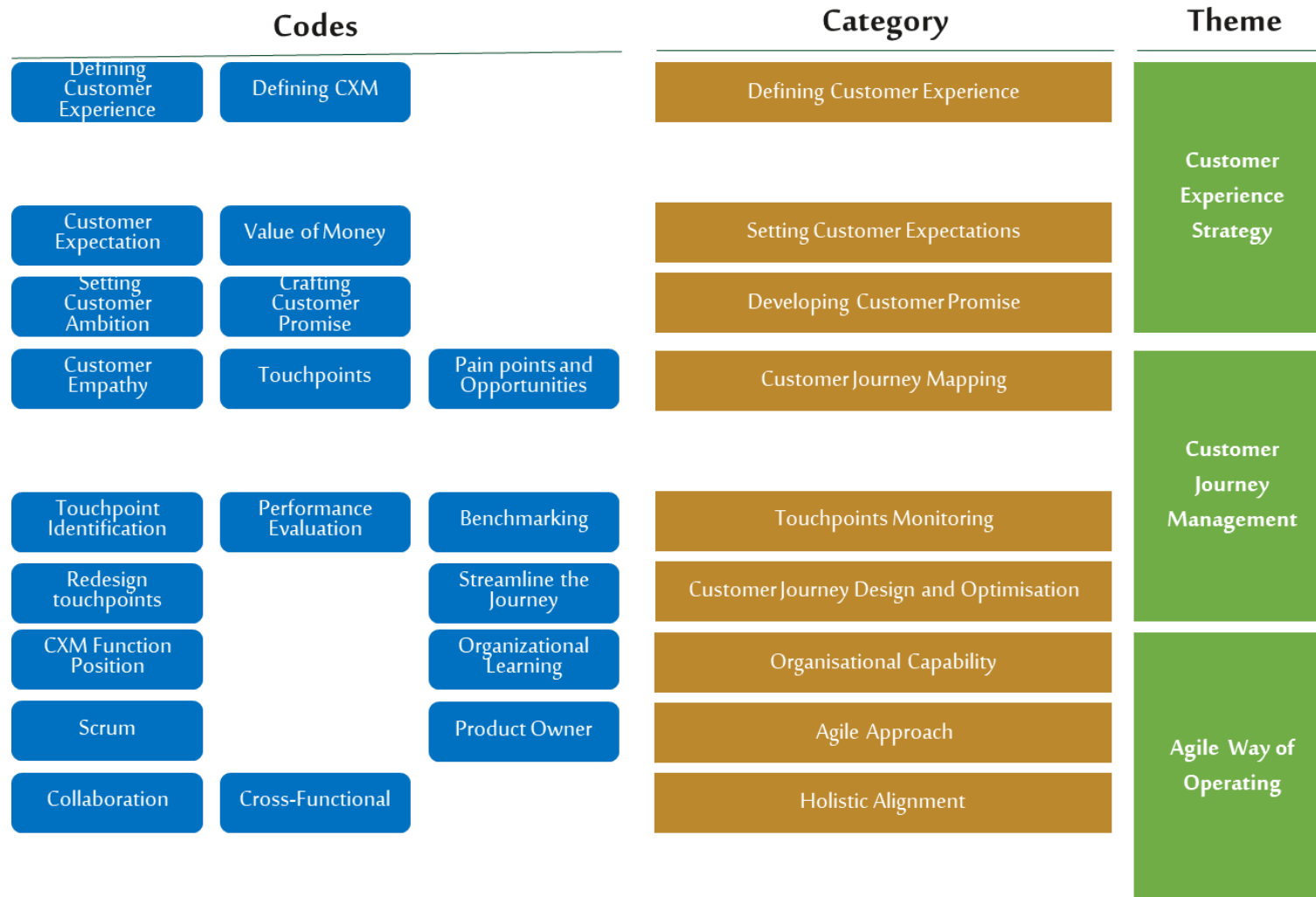


Figure 4-8 Bank A - Theme to Category and Codes (1 of 2)

Codes					Category	Theme
Customer Measurement / Research	Voice of the Customer (VoC)	Integrated Customer Intelligence			Data Collection and Integration	Customer Intelligence Approach
Understanding Customer Needs	Understanding Customer Behaviors				Customer Understanding	
Customer Segmentation	Customer Profiling				Customer Segmentation and Profiling	
Product Personalisation	Communication Personalisation	Channel Personalisation			Personalisation	
Solicited – Structured Data	Solicited – Unstructured Data	Unsolicited - Structured Data	Unsolicited – Unstructured Data		Customer Data, Information, Knowledge, and Insights	CX Data to Value Creation Process
Attitudinal Insights	Experiential Insights	Behavioural Insights	Market Insights	Benchmarking Studies	Customer Insights	
Customer Experience Design	Channel and Journey Optimization	Innovation and Product Development:	Processes Streamlining & Improvement	Optimizing Business Performance	Actioning AI-Driven customer Insights	
Business Value Generation	Acquisition and Retention Generation	Loyalty and Advocacy Generation	Performance Evaluation and Measurement		Unlocking Value from AI-Enabled Customer Insights	
	Improved Customer Segmentation	Enhanced Customer Service	Automated Marketing Campaigns	Enhanced Customer Feedback Analysis	Objective of AI	Harnessing AI Capabilities
	Data Availability				Challenges of Utilizing AI	
	Sentiment Analysis	Segmentation and Clustering			AI-Enabled Data to Intelligence Analytics	
Machine Learning	Predictive Analytics		Neuroscience Analytics	Recommender Systems	AI-Enabled Intelligence to Actions Analytics	

Figure 4-9 Bank A - Theme to Category and Codes (2 of 2)

4.4.2.1 Theme 1: Customer Experience Strategy

The Customer Experience Strategy theme, explored in this study, investigates into various categories: Defining Customer Experience, Developing Brand Promise, Setting Customer Expectations, and Developing Customer Promise. Appendix O presents these categories and the number of codes assigned to each. The coding process involved analysing data obtained from interviews and documents. The number of codes identified for each category are as follows: Defining Customer Experience (14 times), Setting Customer Expectations (4 times), and Developing Customer Promise (4 times). To provide further evidence, Appendix O showcases the findings derived from the analysed documents, demonstrating the frequency of occurrence across the four categories. This in-depth analysis contributes to a comprehensive understanding of the Customer Experience Strategy theme.

Bank A integrates customer experience into its overall strategy, reflecting a customer-centric approach where the customer remains at the core of their business. The bank aims to design products and services that are flexible, easy to understand, and aligned with customer expectations. This strategic focus demonstrates their commitment to delivering a superior customer experience. As stated by the Director of Customer Experience,

"Customer experience is part of our strategy to be customer-centric. So, the customer is in the heart of anything we do in the business. We always try to make sure that our criteria are flexible, easy, and understandable." (Director of Customer Experience, CBNK02)

Bank A recognizes the importance of customer journey milestones in shaping the overall customer experience. By identifying these milestones, the bank is able to proactively address any potential pain points and ensure a positive experience throughout the customer's interaction with the bank. As emphasised by the Customer Experience Transformation Manager,

"Customer experience journey milestones are identified and addressed to ensure a positive customer experience." (Customer Experience Transformation Manager, CBNK03).

Resolving critical paths within banking operations is crucial for enhancing the customer experience and satisfaction. By continuously improving the features and capabilities of their solutions, the bank can increase customer satisfaction and establish a strong dependency on their offerings. As highlighted by the Director of Innovation & Customer Experience,

"So once the bank reaches up to this level, then you can realize that the experience of the customer with your solution is very high and that comes only from the features and capabilities that you add to your solution to resolve the critical path of any process." (Ex-Director of Innovation & Customer Experience, CBNK01).

Bank A places significant importance on managing customer expectations and emotions. This is particularly vital in the banking industry, given the competitive landscape and the need to align business objectives with customer satisfaction. By focusing on this aspect, the bank aims to create positive emotional connections with customers while achieving their business targets. As stated by the Director of Customer Experience,

"We have to focus on managing achieving our numbers in alignment with customer expectations and managing their emotions. This is what I'm doing at the bank. I have a lot of challenges because this topic is very sensitive." (Director of Customer Experience, CBNK02).

Bank A utilizes key performance indicators (KPIs) to measure the effectiveness of their customer experience initiatives. These KPIs cover various aspects such as acceptance ratio, turn-around time, waiting time, and digital channel performance. The bank also places a strong emphasis on simplifying processes, reducing actions, and providing seamless services to customers. As highlighted by the Chief Data Officer and the Head of Business Analysis & Business Process, respectively,

"Customer experience is all about customer satisfaction and going beyond that. It has to do with operations, turn-around times, and process complexity. We use KPIs to measure our performance." (Chief Data Officer, CBNK05).

and,

"We try to simplify the processes, have fewer actions, and provide smooth services to customers. Customer experience is one of our focus points." (Head of Business Analysis & Business Process Reengineering, CBNK06).

Personalizing solutions based on individual customer needs, wants, and lifestyle is a key priority for Bank B. By understanding customers on a deeper level, the bank strives to deliver tailored experiences that result in higher customer satisfaction and loyalty. As highlighted by the Online Banking channels & Digital Innovation manager,

"Customer experience means customizing solutions for each customer, considering their needs, wants, and lifestyle." (Online Banking channels & Digital Innovation manager, CBNK09).

4.4.2.2 Theme 2: Customer Journey Management

The Customer Journey Management theme, the second focus of this study, encompasses several categories: Customer Journey Mapping, Customer Journey Phases, Touchpoints Monitoring, and Customer Journey Design and Optimization. Appendix O presents an overview of these categories along with the number of codes assigned to each. The analysis involved examining data obtained from interviews and documents. The resulting number of codes for each category are as follows: Customer Journey Mapping (16 times), Touchpoints Monitoring (11 times), and Customer Journey Design and Optimization (7 times). To support these findings, Appendix O presents the evidence extracted from the analysed documents, demonstrating the frequency of occurrence within each category. This comprehensive analysis provides valuable insights into the strategies and approaches associated with Customer Journey Management.

The interviews enforce the importance of customer journey mapping, monitoring touchpoints, and continuously designing and optimizing the customer experience. The challenges lie in addressing the critical path in account opening, achieving seamlessness across all touchpoints, and leveraging technology to improve the process. The focus on customer-centricity and data-driven insights drives the efforts to enhance the overall customer journey.

The Director of Innovation & Customer Experience emphasizes their company's focus on enhancing the customer experience and developing solutions using advanced technologies such as artificial intelligence, machine learning, and robotics. He mentions the importance of customer journey mapping in understanding the critical path of managing account opening processes.

"We are always seeking to enhance the experience of the customer. So we came up with another approach of opening the new accounts in the bank. Of course, there are a lot of approaches like digital onboarding, but all these approaches always end up with that system or the real system which is managing the account opening... So whatever approach you add to that system, it doesn't resolve the critical path." (Ex-Director of Innovation & Customer Experience, CBNK01).

The Customer Experience Transformation Manager outlines the different phases of the customer journey in their bank, starting from branch visits, signing features, obtaining a debit card, and completing the process with additional documentation.

"Once you open your account, first of all, the customer comes to our branches... Then he will start signing the features and make the deposit.... The next step in the journey is to go to the seller... sometimes the customer chooses to go through the online service, and once he comes to our branch, we continue the journey from signing the papers and explaining the details of that account." (Customer Experience Transformation Manager, CBNK03).

The Director of Customer Experience highlights the importance of all touchpoints in the customer journey, including branches, mobile apps, and online platforms. He emphasizes the need for agility, flexibility, and seamlessness across all channels. The challenge lies in measuring performance across these touchpoints to understand the bank's standing,

"All touchpoints are important... What matters the most is to have the journey itself, irrespective of in which channel it will be or which touchpoint it will be. It has always to be seamless as much as we can... This is basically the biggest challenge... that's why we always go for automation, for AI, for machine learning, for a lot of tools and technology to help us achieve this." (Director of Customer Experience, CBNK02).

The Business Development Manager - Digital Channels discusses the shift in banks' perception of customer data and transactions, with a focus on optimizing processes, reducing clicks, and segmenting customers based on transaction patterns,

"We've seen a huge shift in how banks perceive customer data and customer transactions... How they can optimize the process and the number of clicks on the application itself... We've done a study... to segment customers... based on the fees collected... on the number of transactions frequency." (Business Development Manager - Digital Channels, CBNK07).

Also, the Customer Lifecycle Management Lead highlights the key factor of putting the client at the heart of their approach. They aim to create a seamless banking experience by addressing pain points that they personally encountered as clients. This customer-centric focus drives their efforts in journey design and optimization. The Customer Lifecycle Management Lead emphasizes the customer-centric approach in their journey design, aiming to eliminate pain points and create a seamless experience based on their own experiences as clients.

"The key factor was putting the client at heart... We wanted to make everything seamless... All the pain points that we used to encounter during our engagements, we try to overcome that." (Customer Lifecycle Management Lead, CBNK08).

4.4.2.3 Theme 3: Agile Way of Operating

Under the theme of Agile Way of Operating, this study explores several categories: Organizational Capability, Agile Approach, Holistic Alignment, and Customer-Centred Design Workshops. Appendix O outlines these categories along with the number of codes assigned to each. The coding process involved analysing the organization's capability to adopt agile practices, the implementation of agile approaches, the holistic alignment of various departments and functions, and the utilization of customer-centred design workshops. The analysis resulted in 5 occurrences for Organizational Capability, 9 occurrences for Agile Approach, and 9 occurrences for Holistic Alignment. To reinforce the findings, Appendix O presents the evidence derived from the analysed documents, showcasing the frequency of occurrence within each category. This comprehensive examination provides valuable insights into the strategies and practices associated with the Agile Way of Operating.

Overall, the bank is focused on leveraging its organisational capabilities, adopting an agile approach, aligning its strategies holistically, and conducting customer-centred design workshops to enhance the customer experience and drive business growth. The use of data science, AI, and machine learning is seen as crucial for gaining insights, improving operations, and achieving a competitive advantage.

The interviews highlight the importance of organizational capability in delivering a satisfying customer experience. By opening accounts and catering to customer needs, banks can increase their revenues, expand their customer base, and grow their business. This requires serving multiple functions within the bank, including retail banking, corporate banking, risk management, compliance management, and financial departments, the Business Development Manager - Digital Channels, stating,

"Can we use data science to solve my problem and make my life easier? That is the only thing that works." (Business Development Manager - Digital Channels, CBNK07).

The agile approach is emphasized as a key component of the banking operations in Bank A. Teams within the bank work in scrums, following the principles of Agile methodology. Daily meetings are conducted to discuss tasks, track progress, and identify any bottlenecks the innovation and digital banking - Product Owner, stating,

"We're doing an agile framework 100%. We have a bit of a edited framework, but we are following agile methodology from the implementation perspective." (Innovation and digital banking - Product Owner, CBNK10).

The bank has adopted the Spotify model, using tribes, squads, product owners, Scrum Masters, and business analysts to break down silos, optimize processes, and work collaboratively, the Online Banking channels & Digital Innovation manager, stating,

"So to transform to agility... the goal is to optimize their component... to develop an actual product, you need expertise from all over the company... when we speak about agile as a framework, we have the two levels on that framework... the squad level activities and the organizational level activities... these practices are put in place to control large-scale projects... the most notable ones is safe, scaled as a framework for enterprises." (Online Banking channels & Digital Innovation manager, CBNK09).

Holistic alignment is crucial in ensuring a seamless customer journey across various touchpoints and channels. All touchpoints need to be agile and flexible, taking into account the diverse needs and preferences of customers. The bank aims to align different business functions within tribes to ensure coordination, integration, and effective communication.

"What do you need to do is to develop an actual product... in order for the squad to function, we need the product owner, the Scrum master, and the squad members... each tribe, in order for the squad to function, we need the product owner, the Scrum master, and the squad members... so these three layers contribute on how to actually function as a tribe." (Director of Customer Experience, CBNK02).

Customer-centred design workshops are employed to gain insights into customer behaviour and preferences. Data science and AI are used to extract value from customer data and enhance sales and customer experience (CBNK02). The adoption of a federated approach allows the bank to centralize expertise and infrastructure while empowering business lines with light capabilities (CBNK02). Communication with stakeholders focuses on demonstrating the value of data-driven insights and aligning with business goals (CBNK02).

" And in in collaboration, hand in hand with the real business owner, which was the retail banking head, Consumer banking head, etc..." (Director of Customer Experience, CBNK02).

4.4.2.4 Theme 4: Customer Intelligence Approach

The Customer Intelligence Approach, the third theme investigated in this study, comprises several categories: Data Collection and Integration, Customer Understanding, Customer Segmentation and Profiling, and Personalization. Appendix O provides an overview of these categories, along with the number of codes assigned to each. The data analysis process involved collecting and integrating data from various sources. The resulting number of codes for each category are as follows: Data Collection and Integration (14 times), Customer Understanding (11 times), Customer Segmentation and Profiling (8 times), and Personalization (11 times). To support these findings, Appendix O presents the evidence extracted from the analysed documents, demonstrating the frequency of occurrence within each category. This comprehensive analysis provides valuable insights into the strategies and approaches related to Customer Intelligence.

Bank A recognizes the importance of customer intelligence in improving their business operations, sales, and customer experience. They actively collect customer feedback, follow a customer-centric strategy, and strive for seamless experiences across all touchpoints. They are working towards addressing pain points and meeting customer expectations in the evolving banking landscape.

Bank A follows a hub-and-spoke approach to AI and data analytics. While they have a centre of excellence and expertise in AI, machine learning, and data science, they also have business lines and functions with lighter capabilities in these areas. The centre of excellence provides tools, infrastructure, and knowledge to support other teams in achieving their goals. And the centre of excellence takes a two-way approach to extracting value from data through AI. Sometimes, business teams approach the AI team with specific requests or problems they want to solve. In other cases, the AI team proactively identifies areas where they can add value and approaches the business teams with solutions that can provide value based on data analysis.

As well as it follows an agile framework for its operations, although there are some modifications to suit the corporate environment. They emphasize the importance of understanding the business and generating value from the products. The product owner works with subject matter experts, development teams, and executives from different lines of business. The bank leverages customer feedback and scrum iterations to improve its products. As asserted by the Innovation and digital banking - Product Owner,

"We're doing an agile framework 100%... there are some let's say tweaking to what we do. We have a bit of a like edited framework, but we are following agile methodology from the like implementation perspective and the coming up with ideas." (Innovation and digital banking - Product Owner, CBNK10)

Bank A actively collects customer feedback through various channels such as surveys, mystery shopping, random checks, and QR codes. This demonstrates their commitment to gathering insights directly from customers. The Customer Experience Transformation Manager mentioned,

"We have a systematic approach to collect customer feedback through surveys and mystery shopping. This helps us understand their preferences, pain points, and expectations." (Customer Experience Transformation Manager, CBNK03).

Also, the bank also emphasizes the importance of understanding customer expectations and needs to develop logical and effective practices. They have plans to implement changes based on customer expectations but acknowledge that technology implementation takes time. This shows that they recognize the value of data in driving decision-making. As one interviewee stated,

"We have plans to improve our systems and processes based on customer expectations. However, it takes time to implement technology changes, and we expect to see the results in around two years."(Ex-Director of Innovation & Customer Experience, CBNK01).

Bank A emphasizes the importance of understanding customer expectations and needs to develop logical and effective practices. Also, the bank focuses on innovation and aims to do things differently, not limited to traditional banking practices. They benchmark and analyse the market and customer needs to develop products that enhance the customer experience. The bank also pays attention to the SME segment, aiming to provide digital channels that add value to their businesses. As explained by a number of interviewees,

"We try to look at things from different perspectives, benchmark to other places and even benchmark in the technique... My products are mainly online digital channels... My focus now is doing online digital channels that would help SME create value to their business through their banking channel." (Innovation and digital banking - Product Owner, CBNK10)

And,

"Sometimes an idea comes from benchmarking... when we get that idea, we go back into analysis, ideation, and doing... some sort of gap analysis to see how the solution would differ in our markets,, sometimes we might create a product... we might just create a link or push a campaign... we can do lots of action on an insight... it might be tweaking an existing product or a full-fledged solution." (Chief Data Officer, CBNK5)/

The bank recognizes the need to understand their customers' preferences and pain points. They have business teams that work closely with the AI team to provide a business perspective on the data. This collaboration helps in understanding the data from a customer-centric viewpoint. An interviewee mentioned,

"Our business teams work closely with the AI team to provide insights into customer needs and pain points. This collaboration allows us to extract value from the data using AI and machine learning techniques." (External expert - AI and Data, CBNK04).

Customer feedback plays a crucial role in the bank's customer intelligence efforts. They actively collect feedback through different channels. This indicates their commitment to gaining insights directly from customers. As one interviewee stated,

"We collect customer feedback through surveys, mystery shopping, and other channels. This feedback helps us understand customer pain areas, identify service gaps, and take appropriate action." (Director of Customer Experience, CBNK02).

The bank considers customer engagement as a leading indicator of success. They measure customer usage, feedback, and reports of issues to assess customer engagement. The focus is on creating value for customers and optimizing product delivery based on customer needs and priorities.

"Relate to customer engagement... engagement. So those are the two main let's say leading indicators we have... monetary value and engagement,, we have a huge amount of data... so the data analytics team might provide insights... for a big let's say product. From our perspective, maybe not on the product level, but at least at the portfolio level." (Customer Lifecycle Management Lead, CBNK08).

The bank aims to provide a seamless customer experience across all touchpoints. They utilize automation, AI, machine learning, and other technologies to measure and enhance customer experience. This indicates their intention to personalize customer interactions and deliver tailored experiences. The Customer Experience Transformation Manager asserts,

"We strive for seamless customer journeys across all channels and touchpoints. Our goal is to provide a personalized experience to each customer, regardless of the channel they choose to engage with us." (Customer Experience Transformation Manager, CBNK03)

4.4.2.5 Theme 5: CX Data to Value Creation Process

The CX Data to Value Creation Process, the fifth theme investigated in this study, comprises several categories: Customer Experience Data; Customer Insights; Actioning AI-Driven Customer Insights; and Unlocking Value from AI-Enabled Customer Insights. Appendix O provides an overview of these categories, along with the number of codes assigned to each. The analysis process involved assessing the collection and utilization of customer experience data, the generation of customer intelligence, the utilization of AI-driven customer intelligence in decision-making, and the strategies for Unlocking Value from AI-Enabled Customer Insights. The resulting number of codes for each category are as follows: Customer Experience Data (14 times); Customer Insights (18 times); Actioning AI-Driven Customer Insights (25 times); and Unlocking Value from AI-Enabled Customer Insights (10 times). To support these findings, Appendix O presents the evidence extracted from the analysed documents, demonstrating the frequency of occurrence within each category. This comprehensive analysis provides valuable insights into the utilization of CX data and AI-driven customer intelligence in the value creation process.

The interviews demonstrate that the effective utilization of demographic, behavioural, transactional, and operational data, along with benchmarking studies, enables the bank to collect, model, and analyse data from various sources, derive actionable intelligence, and design customer experiences that optimize channels and journeys, streamline processes, and drive innovation, ultimately leading to business value generation, targeted customer acquisition, proactive customer retention, and personalized upsell and cross-sell opportunities. The bank conducts surveys to gather feedback from customers after certain services, both in branches and digital channels. These surveys help in understanding customer satisfaction and areas for improvement (CBNK02).

"In terms of accounts today, if you have a normal thing, but you will give it to the customer with a lovely smile and with a nice warm hospitality, this will be your differentiating factor and will prove that we are a real customer-centric bank." (Director of Customer Experience, CBNK02).

To gain deeper insights into customer behaviour, the bank needs to correlate transactional data with information from card providers, networks, switches, and other systems. This allows them to uncover hidden reasons behind customer feedback and identify areas for improvement (CBNK03)

"Sometimes the feedback from customers is not enough to have more insight and understanding about the pain... there are hidden reasons they will be discovered later on... should be fixed so." (Customer Experience Transformation Manager, CBNK03).

The bank uses various KPIs to measure and evaluate their performance in customer experience. Examples include acceptance ratio, reject reasons, turnaround time, service time, and waiting time. Analysing these metrics helps in identifying patterns, making recommendations, and improving overall customer satisfaction (CBNK05).

By having a centralized system connected to all payment service providers, the bank gains a holistic view of customer behaviour in terms of financial transactions. They analyse clustering, customer segments, and transaction patterns to provide insights to participants and banks on managing liquidity, understanding customer behaviour, and optimizing services (CBNK07).

"We see the full picture holistic view of all the payments and data coming from banks related to customers... allows us to actually understand customer behaviour in terms of financial transactions." (Business Development Manager - Digital Channels, CBNK07).

The bank understands the power of data and AI in predicting customer behaviour and providing personalized offers. By analysing customer patterns, preferences, and purchase history, they can offer relevant discounts and cross-sell products based on individual needs and preferences (CBNK07, CBNK08).

"The power of data... to predict your next purchases, to know your customer" (Customer Lifecycle Management Lead, CBNK08),

and,

"Banks actually... provide targeted ads or targeted products to customers based on the customer himself or herself... understanding the customer based on the data they have to provide or to retain customers." (Business Development Manager - Digital Channels, CBNK07).

Deriving actionable intelligence from customer data was a key aspect discussed in the interviews. One interviewee mentioned conducting surveys, mystery shopping, and random checks to gather customer feedback and measure satisfaction levels (CBNK06). The importance of understanding customer pain points and implementing actions to address them was emphasized (CBNK06).

"So, we analysed the data and the number of complaints and what's the complaint content and what's the actions that should be taken and how to transform it through a project or initiative.,, by analysing this data, banks can uncover valuable information about customer preferences, expectations, and pain points... This analysis enables them to identify areas for improvement, develop new features or services, and make data-driven decisions." (Head of Business Analysis & Business Process Reengineering, CBNK06).

4.4.2.6 Theme 6: Harnessing AI Capabilities

Under the theme of Harnessing AI Capabilities, this study explores several categories: Objective of AI; Challenges of Utilizing AI; AI-Enabled Data to Intelligence Analytics; and AI-Enabled Intelligence to Actions Analytics. Appendix O outlines these categories along with the number of codes assigned to each. The coding process involved analysing the objectives of AI implementation, the challenges faced in utilizing AI, the utilization of AI for data to intelligence analytics, and the application of AI for intelligence to actions analytics. The analysis resulted in 12 occurrences for Objective of AI, 2 occurrences for Challenges of Utilizing AI, 12 occurrences for AI-Enabled Data to Intelligence Analytics, and 23 occurrences for AI-Enabled Intelligence to Actions Analytics. To reinforce the findings, Appendix O presents the evidence derived from the analysed documents, showcasing the frequency of occurrence within each category. This comprehensive examination provides valuable insights into harnessing AI capabilities for data analysis and generating actionable intelligence.

Artificial intelligence, particularly in the form of business intelligence solutions, is widely used in banks to analyse data, provide insights, and make predictions. It helps in understanding customer behaviour, improving performance, and identifying potential business opportunities. The Director of Innovation & Customer Experience stating,

"AI taking a very vital role in all banks in Jordan and outside Jordan as well, The artificial intelligence is taking a vital role to answer the second two questions or the second two types of analytics, the last two types of analytics, which is predictive analysis and the prescriptive analysis..." (Ex-Director of Innovation & Customer Experience, CBNK01)

The bank utilizes artificial intelligence to analyse customer transactions and behaviour patterns, allowing them to detect and prevent potential fraud cases. This has led to enhanced security for customer accounts, the Director of Customer Experience, stating,

" With the use of artificial intelligence, the bank is able to identify patterns in customer transactions and behaviour. This helps in detecting potential fraud cases and taking preventive measures. It has significantly improved the security of customer accounts." (Director of Customer Experience, CBNK02).

The bank has a dedicated team that uses advanced analytics and machine learning techniques to monitor and mitigate risks. Ensuring data quality is essential for the effectiveness of these risk management measures.

"We have a dedicated team that constantly monitors and assesses the risks associated with our banking operations. They use advanced analytics and machine learning techniques to identify and mitigate potential risks. Data quality plays a critical role in the

effectiveness of these risk management efforts." (External expert - AI and Data, CBNK04).

The interview discusses the need for an organization to build core competencies and a suitable structure to effectively incorporate artificial intelligence. The focus is on designing an organization that can harness the potential of AI and integrate it into various functions and processes.

"Our organization has a separate AI department that focuses on research and development, implementation, and continuous improvement of AI solutions. We have a team of data scientists and AI experts who work closely with other departments to identify opportunities and deploy AI applications." (Chief Data Officer, CBNK05).

Bank A follows a federated approach, where the data office at the group level serves as a centre of excellence and hub for data and analytics. The business lines and different functions within the bank have light capabilities in data science and analytics, and they rely on the expertise and infrastructure provided by the data office to achieve their goals. It's a hybrid approach that combines centralized and decentralized elements. Collaboration between business and data teams is essential to extract value from AI and machine learning capabilities, as CBNK05 asserts,

"Within [Bank A], we have adopted what we called a Federated approach... So, it's more of a hub-spoke kind of an approach, a hybrid approach not centralized or not decentralized,, when it comes to hardcore maybe data science and machine learning and AI, that sits within my office basically" (Chief Data Officer, CBNK05).

The bank focuses on metrics related to customer experience, such as acceptance ratio for transactions, failure patterns in ATM networks, and performance of digital channels. Machine learning plays a crucial role in analysing and extracting actionable insights from the overwhelming amount of data, helping the bank identify areas of improvement and streamline processes.

"For customer experience as an example, the KPIs that we look at are things around acceptance ratio, failures, cash replenishment process time, and performance of digital channels." (Director of Customer Experience, CBNK02).

When it comes to evaluating the impact of AI and ML initiatives, the bank uses control groups and compares the outcomes with model predictions. For example, if they create a model for predicting the next best offer or propensity to sell a credit card,

"We are currently at an early stage where we are using some AI algorithm to extract insights out of the data. Actionable insights out of that data and you know that will help us improve our business, our sales and even our customer experience." (Chief Data Officer, CBNK05).

The bank offers a personalized offerings based on insights, as asserted by the Customer Lifecycle Management Lead,

"The power of data not only in understanding the current behaviour but also in predicting the next behaviour and actually cross-selling different products later on... Giving a personalized experience, personalized offers, discounts, and value-added services to each and every client based on their own behaviour." (Customer Lifecycle Management Lead, CBNK08).

Machine learning algorithms are employed to identify bottlenecks in services and make necessary system changes to enhance customer experience. "We were able to extract a lot of insights when it comes to the bottlenecks in the service... even forecast these rejections and their peak hours and accordingly of course do some system changes, some fine-tuning to improve that service and improve our customer experience." (Chief Data Officer, CBNK05).

The bank also uses data mining and modelling to understand customer behaviour, optimize processes, and offer personalized experiences. They segment customers based on their behaviour and provide targeted ads and products to retain and attract customers. Using machine learning for improving services,

"We were able to extract a lot of insights when it comes to the bottlenecks in the service. And the rejections that are happening to the customers, you know even forecast these rejections and their peak hours and accordingly of course do some system changes, some fine-tuning to improve that service and improve our customer experience." (Chief Data Officer, CBNK05).

Understanding customer behaviour through data,

"We do clustering to customers... That would allow us to actually understand customer behaviour in terms of financial transactions, ..., we do clustering to customers... That would allow us to actually understand customer behaviour in terms of financial transactions." (Business Development Manager - Digital Channels, CBNK07).

Data analysis techniques like clustering help banks understand customer behaviour and tailor personalized offerings. Banks leverage data not only to understand current customer behaviour but also to predict future behaviour, enabling personalized offers, discounts, and value-added services.

"The power of data not only in understanding the current behaviour but also in predicting the next behaviour and actually cross-selling different products later on... Giving a personalized experience, personalized offers, discounts, and value-added services to each and every client based on their own behaviour." (Customer Lifecycle Management Lead, CBNK08).

4.5 Case D – Within-case Analysis and Findings (Bank B)

This section presents the insights from the fourth case. The description of the financial services company is based on interviews with participants, the documents provided by participants, the organisation's website, and data published by the holding organisation.

4.5.1 Background

4.5.1.1 Company

In Case D, which pertains to the banking industry, specifically Bank B, is a well-established financial institution in Jordan that has a long history of serving the banking and financial needs of individuals, businesses, and institutions in the country. The bank has a strong focus on providing high-quality customer service and innovative financial products and services.

Customer experience is an important aspect of banking with Bank B. The bank strives to provide its customers with a positive and seamless experience when interacting with the bank and using its products and services. Bank B serves as an intriguing case study for examining the evolving landscape of customer experience management. With a commitment to delivering exceptional customer experiences, Bank B recognizes the transformative potential of AI technologies in revolutionizing traditional banking practices and enhancing customer satisfaction. By focusing on Bank B as a case study, this research seeks to explore into the role of AI in actioning customer insights to manage customer experience throughout the customer journey within the banking industry.

The organizational structure of Bank B is depicted in Figure 4-10, providing a visual representation of its traditional hierarchical arrangement. However, in response to the dynamic and fast-paced nature of the banking industry, Bank Al Etihad has adopted an agile organizational structure based on the concept of tribes and squads, as illustrated in Figure 4-11. This agile approach emphasizes cross-functional collaboration, flexibility, and rapid decision-making. Within Bank B, there are two distinct tribes, the product tribe and the services tribe. Tribes represent self-organized units comprising individuals from different departments with shared goals and responsibilities. These tribes are further divided into smaller units called squads, each consisting of multidisciplinary team members working closely together on specific projects or initiatives. This agile structure enables Bank B to foster innovation, responsiveness, and adaptability in a highly competitive banking landscape, ensuring efficient coordination and effective implementation of customer-centric strategies.

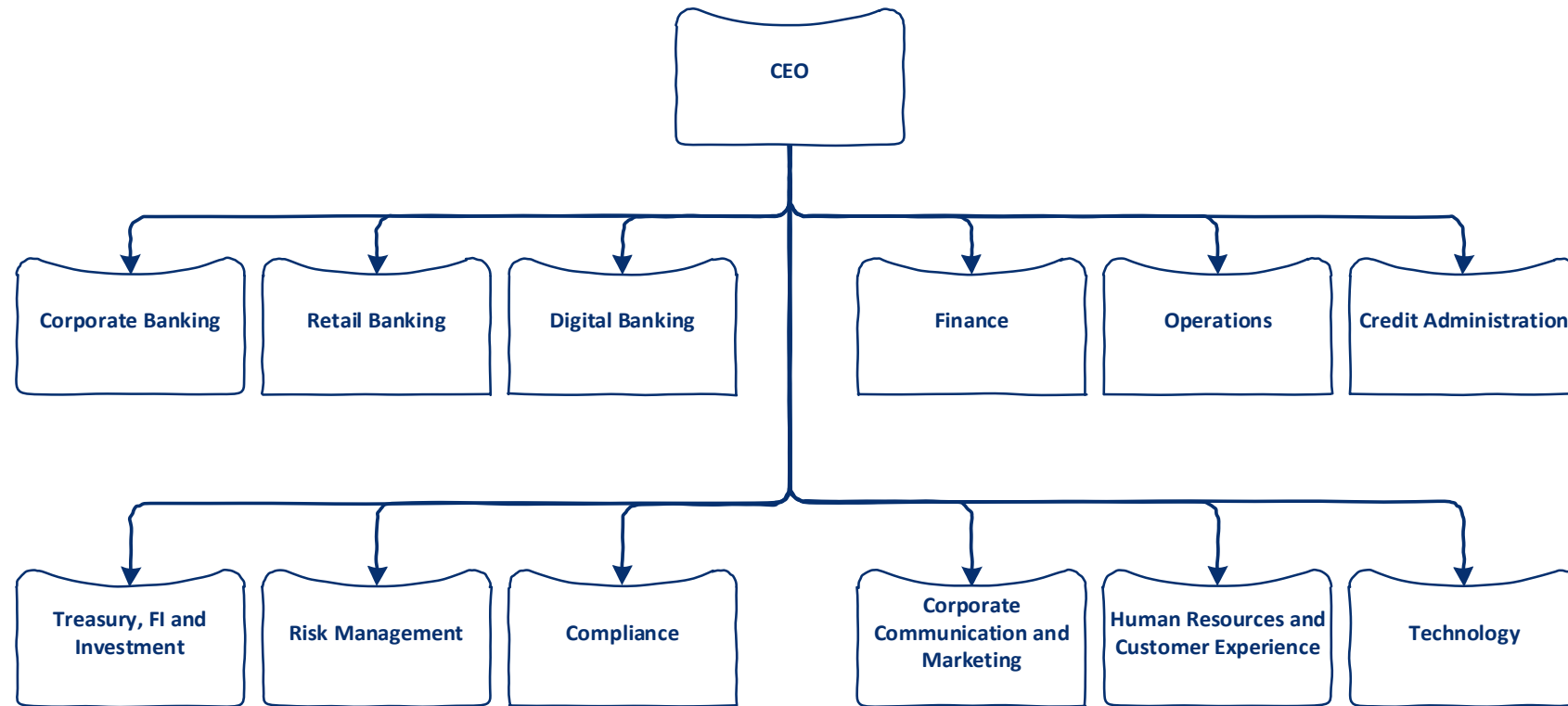


Figure 4-10 Bank B's Organisational Structure

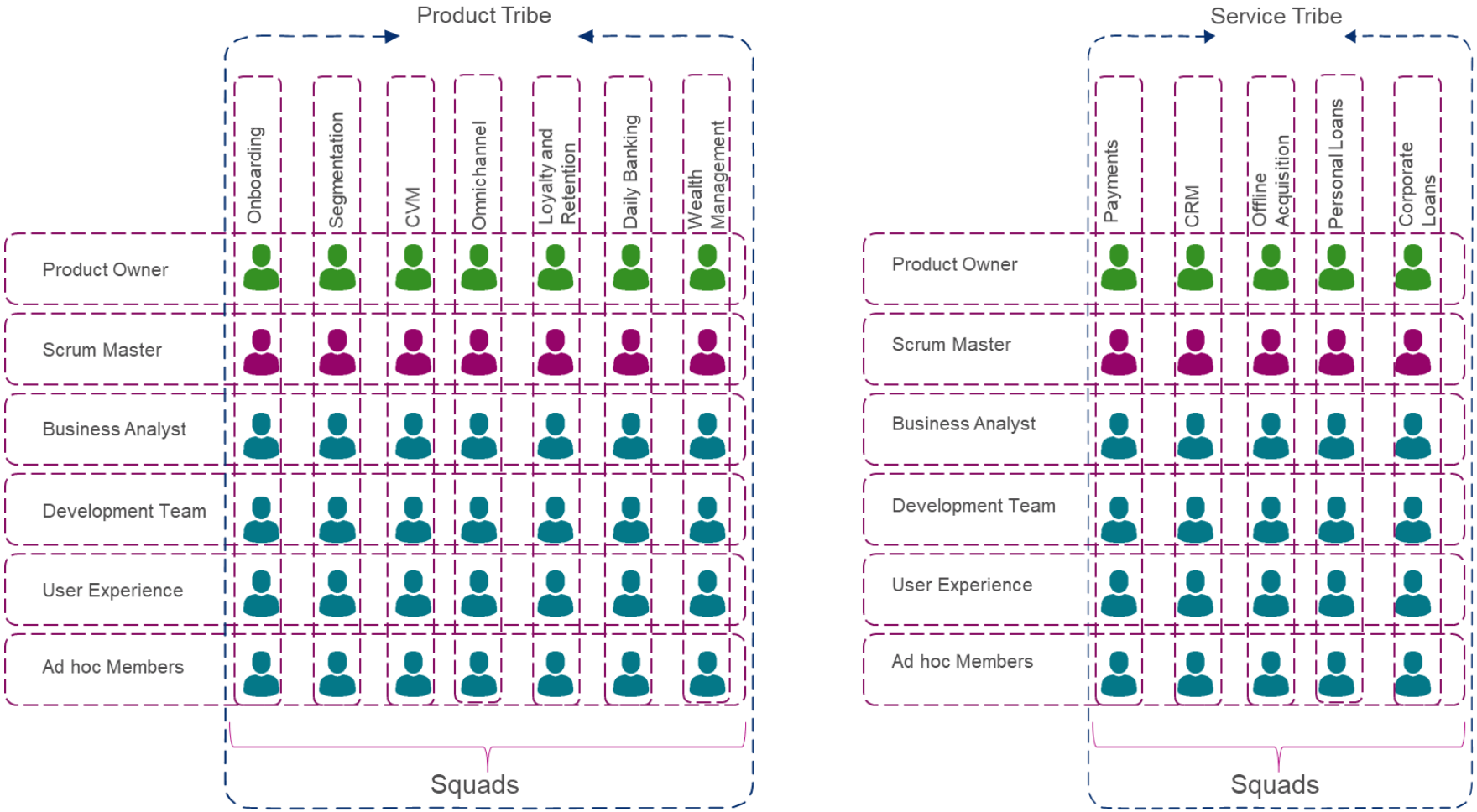


Figure 4-11 Bank B's Agile Structure

4.5.2 Key Findings from Case D (Bank B)

This section presents the findings of a comprehensive case study conducted on Bank B. The key findings for Bank B have been derived from a rigorous analysis of the collected data, resulting in the identification of 6 key themes and 24 categories. The key themes, categories, and codes are presented in Figure 4-12 and Figure 4-13, allowed for the systematic categorization and organization of the data. In the subsequent sections of the study, each of the six themes will be explored in detail, accompanied by the associated categories for each theme. Furthermore, the study will present the key findings extracted from the analysed documents, thereby providing a comprehensive understanding of the case under investigation.

The following section presents the findings of a comprehensive case study conducted on Bank B. The study explores six key themes: Customer Experience Strategy, Customer Journey Management, Customer Intelligence Approach, Agile Way of Operating, CX Data to Value Creation Process, and Harnessing AI Capabilities. By examining Case-D's implementation of these themes, this chapter offers insights into how the bank strategically enhances customer experiences, manages customer journeys, harnesses customer data, adopts agile practices, drives value creation, and harnesses AI capabilities to meet the evolving needs and expectations of its customers. This section embarks on a more profound exploration of the findings. Appendix P showcases the identified codes and their corresponding frequencies of occurrence, while also categorizing them, thus offering a comprehensive overview of the emerging patterns. This analysis quantifies the frequency of occurrences within both the interviews and documents, thereby providing a measure of the relative importance and prominence of each code within its relevant category. This comprehensive examination of the data enhances our understanding of how AI-driven customer insights can be effectively applied to improve the customer experience in the telecom sector. For a detailed presentation of the codes, their respective frequencies of occurrence, categories, and the total frequency of codes, please consult Appendix P, which presents the findings from the analysed documents and interviews, providing evidence and frequency of occurrence across the four categories.

Throughout this analysis, the frequency of occurrences denotes the number of times specific codes were identified and mentioned in the data collected from both the interviews and documents. This frequency count provides valuable insights into the relative importance and prominence of each code within its corresponding category.

Bank B demonstrates a strong commitment to customer experience as a core component of its strategic approach. The bank acknowledges customer experience as part of its "North Star" and integral to its overall strategy. Customer experience is defined as all interactions a customer has with the bank, aiming to enhance loyalty, satisfaction, and create personalized experiences.

The bank has a comprehensive framework composed of six pillars to make the bank more customer-centric. These pillars include customer experience strategy, customer understanding, experience design improvement, innovation, measurement, organizational adoption, and culture. This approach highlights the importance of customer centricity in strategic planning and integrating customer experience throughout the bank's operations and culture.

Bank B has a robust approach to customer journey management, with a focus on strategy, understanding, design, measurement, and optimization. The bank involves teams, leverages customer feedback, and continuously improves the customer experience across various touchpoints and journey phases. Journey mapping is conducted for different departments to understand and define customer stages and scenarios.

Bank B follows an agile structure, emphasizing cross-functional collaboration. Teams work in weekly sprints, allowing for continuous iteration and improvement based on customer behaviour and feedback. The bank focuses on upskilling its employees, providing training in agile methodologies like Scrum, to foster an agile mindset and enhance individual and team capabilities.

Bank B leverages customer intelligence to drive data-driven decision-making. The bank conducts surveys and collects customer feedback to gain insights and improve customer experience. AI and data analytics are utilized to understand customer needs, preferences, and behaviour, categorizing customers into segments for tailored campaigns and messaging.

Customer intelligence is used to optimize business performance, streamline processes, automate operations, and deliver tangible business value. The bank emphasizes targeted customer acquisition and proactive customer retention through data-driven insights.

The bank utilizes AI to analyse customer data and gain actionable insights for informed decision-making. Customer feedback, surveys, and data analysis aid in understanding customer needs, preferences, and pain points, allowing the bank to refine its services and offerings.

AI-driven predictive models are used for churn prediction, anticipating customer behaviour, and trends. The bank strives to unlock value from AI-enabled customer intelligence to offer personalized services, recommendations, and enhance customer experience.

Bank B aims to leverage AI to better understand customer behaviour, predict customer needs, and deliver personalized experiences. Employee training and adoption of AI technologies are crucial to successfully integrate AI into banking operations. AI-driven data analytics allows the bank to extract meaningful intelligence from vast amounts of data, enabling data-driven decision-making and proactive measures to address customer needs effectively.

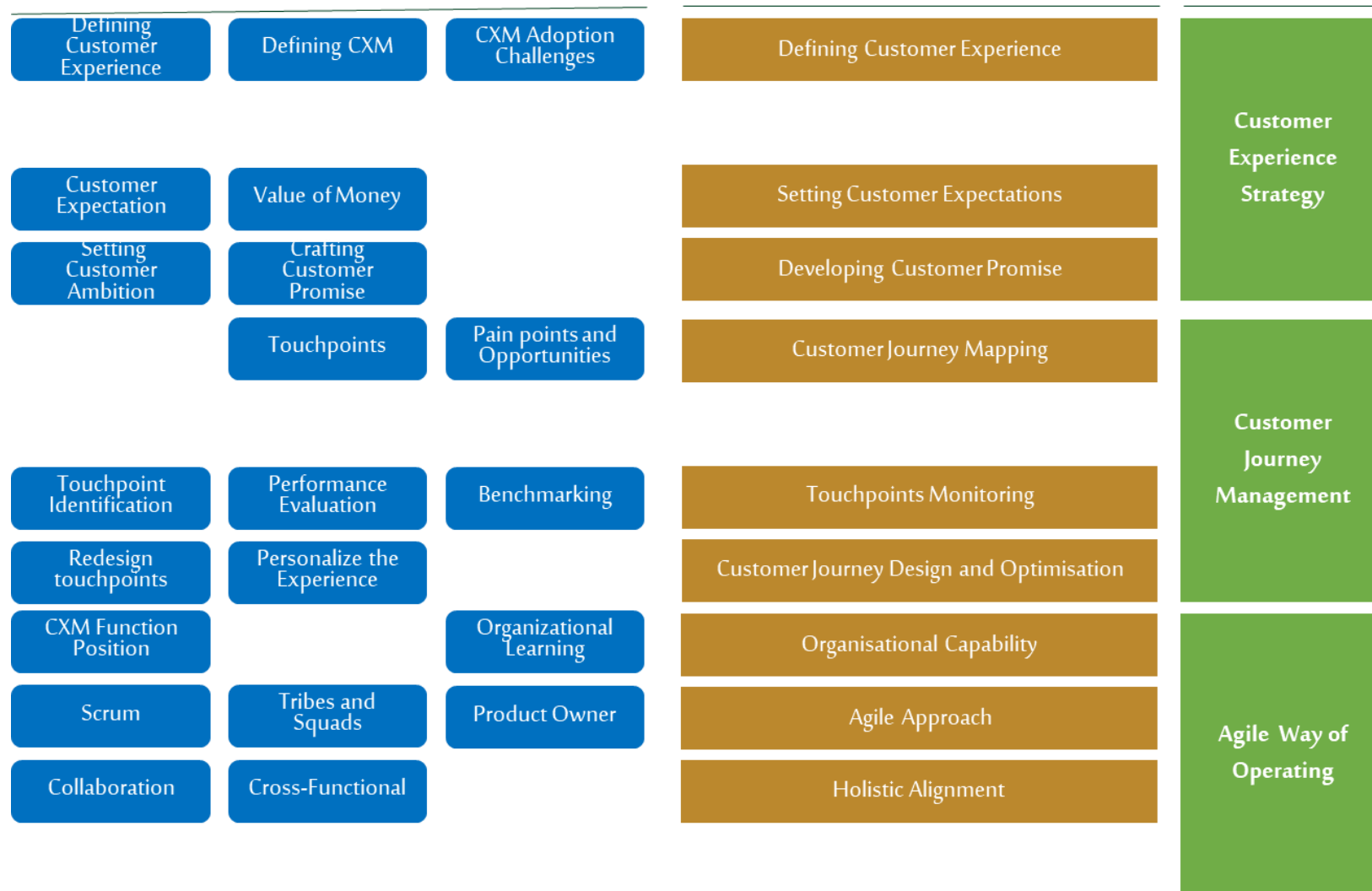


Figure 4-12 Bank B- Theme to Category and Codes (1 of 2)

Codes					Category	Theme
Customer Measurement / Research	Voice of the Customer (VoC)	Integrated Customer Intelligence			Data Collection and Integration	Customer Intelligence Approach
Understanding Customer Needs	Understanding Customer Behaviors	Understanding Customer Perceptions			Customer Understanding	
Customer Segmentation	Customer Profiling				Customer Segmentation and Profiling	
Product Personalisation	Communication Personalisation	Channel Personalisation			Personalisation	
Solicited — Structured Data		Unsolicited - Structured Data	Unsolicited — Unstructured Data		Customer Data, Information, Knowledge, and Insights	CX Data to Value Creation Process
Attitudinal Insights	Experiential Insights		Market Insights	Benchmarking Studies	Customer Insights	
Customer Experience Design	Channel and Journey Optimization	Innovation and Product Development:	Processes Streamlining & Improvement	Optimizing Business Performance	Actioning AI-Driven customer Insights	
Business Value Generation	Acquisition and Retention Generation	Loyalty and Advocacy Generation	Performance Evaluation and Measurement		Unlocking Value from AI-Enabled Customer Insights	
	Improved Customer Segmentation	Enhanced Customer Service	Automated Marketing Campaigns	Enhanced Customer Feedback Analysis	Objective of AI	Harnessing AI Capabilities
Text Analysis	Sentiment Analysis	Segmentation and Clustering			AI-Enabled Data to Intelligence Analytics	
Machine Learning	Predictive Analytics			Recommender Systems	AI-Enabled Intelligence to Actions Analytics	

Figure 4-13 Bank B - Theme to Category and Codes (2 of 2)

4.5.2.1 Theme 1: Customer Experience Strategy

The Customer Experience Strategy theme in this case encompasses four distinct categories: Defining Customer Experience, Developing Brand Promise, Setting Customer Expectations, and Developing Customer Promise. Appendix P presents an overview of these categories, accompanied by the corresponding number of codes assigned to each. The coding process involved analysing data gathered from interviews and documents. The analysis identified 18 occurrences for Defining Customer Experience, 7 occurrences for Setting Customer Expectations, and 14 occurrences for Developing Customer Promise. Furthermore, Appendix P presents the findings extracted from the analysed documents, providing evidence, and showcasing the frequency of occurrence within each category. This comprehensive examination sheds light on the strategic components and approaches associated with the Customer Experience Strategy theme.

The findings of this study reveal the bank's commitment to customer experience as a core component of their strategic approach. One of the key findings is the acknowledgment of customer experience as part of the bank's "North Star" and integral to their overall strategy. As stated by the Director of learning and development, stating, "It's part of our North Star... Yes, it's part of our strategy." (Director of learning and development, EBNK10).

Additionally, the research findings demonstrate the bank's understanding and definition of customer experience management. According to the Senior Associate Customer Experience, customer experience encompasses all interactions a customer has with any organization. The bank focuses on how it acts or reacts to customer engagement in various stages and journeys. The aim is to enhance customer loyalty, satisfaction, and create personalized experiences, stating,

"Customer experience, in my opinion, is like all interactions that the customer deals with while interacting with any organization... to increase customer loyalty, customer satisfaction, and to create a more personalized experience for these customers."(Senior Associate | Customer Experience, EBNK02)

Also, the Director of learning and development asserted that customer experience encompasses everything that affects customers, including their perception, feelings, and interactions with the bank's services and products.

"Customer experience is that the business related to anything that affects the customers... It's this relationship with the customer and his perception of the bank's services and products and how he feels about interacting with us." (Director of learning and development, EBNK10).

These findings emphasize the holistic nature of customer experience, the importance of customer centricity in strategic planning, and the integration of customer experience into the bank's overall operations and culture. The bank acknowledges the significance of understanding customer expectations and perceptions to deliver a positive experience throughout the customer journey. Therefore, the bank has a framework composed of six pillars, including customer experience strategy, customer understanding, experience design improvement, and innovation. They aim to make the bank more customer centric by working on all these disciplines, the Director of Customer Experience explained as below,

"We work together to make the bank more customer centric. So, this is our ultimate goal, and we have a framework that we use for that, composed of six pillars, one is customer experience strategy, customer understanding, the second one, third one is experience design improvement and innovation. But then we have some measurement, organizational adoption, and culture. So, we work on all these six disciplines in order to deliver on our overall objective, which is making the bank more customer centric." (Director of Customer Experience, EBNK01).

The findings of this study shed light on the bank's focus on customer understanding and the actions taken based on customer feedback and behaviour. One significant finding is the bank's proactive approach to listening to customer feedback and ensuring that it is channelled to the respective teams for appropriate action. As stated by the Director of Customer Experience,

"The second part of the customer experience management is actually doing or covering very important pieces of the puzzle... where we make sure that all customer feedback, all customer behaviour is tuned to it, we understand it, and it's channelled internally to the related teams to take the right actions." (Director of Customer Experience, EBNK01).

The findings also emphasize the distinction between customer experience and customer service. Customer experience encompasses the entire end-to-end journey, from the customer's initial interaction with the bank to their departure. As stated by the Research Manager, Customer Experience and Channel,

"It's the whole journey. It's the end to end... It's not the service as the service by itself. It's the experience, it's the whole experience." (Research Manager, Customer Experience and Channel Performance, EBNK04).

This finding highlights the bank's recognition that customer experience encompasses more than just individual service interactions and encompasses the entirety of the customer journey.

4.5.2.2 Theme 2: Customer Journey Management

Under the theme of Customer Journey Management, this study investigates several categories: Customer Journey Mapping, Customer Journey Phases, Touchpoints Monitoring, and Customer Journey Design and Optimization. Appendix P outlines these categories along with the number of codes assigned to each. The coding process involved analysing data gathered from interviews and documents. The analysis resulted in 10 occurrences for Customer Journey Mapping, 10 occurrences for Touchpoints Monitoring, and 4 occurrences for Customer Journey Design and Optimization. To reinforce the findings, Appendix P presents the evidence derived from the analysed documents, showcasing the frequency of occurrence within each category. This comprehensive examination provides valuable insights into the strategies and practices related to Customer Journey Management.

When exploring the concept of customer journey management, multiple interviewees highlighted its significance and its integration within the organization. The findings demonstrate the bank's comprehensive approach to customer journey mapping, focusing on strategy, understanding, design, measurement, and optimization. The bank strives to involve teams, leverage customer feedback, and continuously improve the customer experience across various touchpoints and journey phases. On one hand, the bank emphasizes the importance of designing customer journeys from a customer point of view and aims to identify gaps or areas of improvement within these journeys. As explained by the Chief Research Officer, Customer Experience and Channel Performance,

"So, they throw in the word customer journey... It needs the element of first, you are the management, the internal management of how they identify this customer journey to begin with." (Chief Research Officer, Customer Experience and Channel Performance, EBNK03).

Also as asserted by the Senior Associate, the bank conducts journey mapping for different departments to understand and define the stages and scenarios that customers can experience.

"In the past year, we tried to focus again on the journey mapping regard... We did like journey mapping for one of the departments with the Wealth Management department here at the bank." (Senior Associate | Customer Experience, EBNK02).

The bank supports teams in designing customer journeys by providing training, guidance, and resources such as customer journey mapping and personas. As asserted by the Director of Customer Experience,

"Our role is to support them with the customer-centric process... supporting them with the customer journey mapping, personas, etc." (Director of Customer Experience, EBNK01)

The bank categorizes customer journeys into three types: transactional, episodic, and continuous/relationship journeys.

"You have transactional, you have episodic, and you have continuous... So, at transactional, maybe I went to the branch to deposit cash... Episode means a longer interaction, right? But that has an end point... Continuous/relationship." (Chief Research Officer, Customer Experience and Channel Performance, EBNK03).

The bank measures customer experiences at different levels, including relationship level (e.g., retail, business, premium, VIP customers), journey level (e.g., loan application, money transfer), and touchpoint/transaction level (e.g., branch visits, call center interactions), stating,

"We measure customer experiences on multiple levels... relationship level... journey level... touchpoint transaction level... all these measurements and metrics are available for everyone to see all the stakeholders to see so they're transparent and real-time." (Director of Customer Experience, EBNK01).

The bank continuously tests and monitors the designed customer journeys, gathers feedback from customers, and identifies areas of improvement.

"Once you design a journey, it becomes like sort of standard... We make sure that we test it out... It's an opportunity to see how we're doing and it's an opportunity to improve... We always provide feedback... We always have a periodic customer surveying where we send out surveys to understand how the customer feels about it." (Senior Associate | Customer Experience, EBNK01).

The bank follows a customer-centric process for designing customer journeys, involving analysis, surveys, and collaboration with frontliners and customers to identify pain points and improvement opportunities.

"We do a lot of analysis... We talked to our frontliners, we talked to our customers, we do a lot of surveys... We sit with the teams, and we design the journey... What's the customer goal? What's the touchpoint? What's the process they go through? What's their friction points and what are the improvement points or ideas?" (Director of Customer Experience, EBNK01).

4.5.2.3 Theme 3: Agile Way of Operating

Within the Agile Way of Operating theme, this study investigates several categories: Organizational Capability, Agile Approach, Holistic Alignment, and Customer-centred Design Workshops. Appendix P provides an overview of these categories, accompanied by the number of codes assigned to each. The data analysis process involved assessing the organization's capability to adopt agile practices, the implementation of agile approaches, the holistic alignment of various departments and functions, and the utilization of customer-centred design workshops. The analysis yielded 4 occurrences for Organizational Capability, 12 occurrences for Agile Approach, and 10 occurrences for Holistic Alignment. To support these findings, Appendix P presents the evidence extracted from the analysed documents, highlighting the frequency of occurrence within each category. This comprehensive analysis sheds light on the strategies and practices associated with the Agile Way of Operating.

The interviews, shed light on the organization's implementation of an agile structure and its emphasis on cross-functional collaboration. The Director of Customer Experience provides evidence of this collaborative approach,

"Currently, we work where the team is positioned in the HR and CX department. So we report to the chief of CX & HR, but our scope and our collaborations are with all the other departments internally." (Director of Customer Experience, EBNK01).

Also, the interview reveals the organization's adherence to agile principles in its project management approach. The Director of Customer Experience provides detailed insights into the agile practices followed within the organization,

"We have an agile structure that works with cross-functional teams, units, squads... They have weekly sprints... they always start the process by analysis and the business analysts... and then they design the solution... after testing it out, they improve on the solution... they launch it to the customer... continuously gathering customer feedback and monitoring... working in an agile way, which is... they have weekly sprints... it allows them to keep reiterating and improving on it." (Director of Customer Experience EBNK01).

The Director of learning and development mentions the inclusion of individuals from relevant branches in the onboarding squad,

"We made sure to have people from the branches to be in that squad... they open the account, and they know exactly the functionality of that." Furthermore, the interview reveals the organization's focus on upskilling: *"We do upskill people in that area... they need to have... the agile methodology, the scrum master, etc... we do upskill people in that area."* (Director of learning and development, EBNK10).

This demonstrates the organization's commitment to providing relevant training to employees, equipping them with the necessary skills and knowledge for their roles.

The bank conducts customer-cantered design workshops to gather insights, define strategies, and align teams on the vision and roadmap.

"The product owner is responsible for the strategy and the roadmap and the vision... the Scrum master is responsible for coaching the team, removing the blockers... the squad members are focusing on actually doing the job... the customer-cantered design workshops help to align the teams." (Director of Enterprise Agile Transformation, EBNK09).

The interviews highlight the organization's commitment to Agile practices and its impact on organizational capability. The tribal structure and squad composition allow for specialized expertise and focused development efforts. Cross-functional collaboration promotes effective teamwork and self-organization within squads. The organization recognizes the importance of an agile mindset and provides upskilling opportunities to enhance individual and team capabilities. Furthermore, the customer-centric approach ensures that solutions align with customer needs and expectations.

The Head of digital banking acquisition explains the organization's division into two tribes: the product tribe and the service tribe,

"We have like two tribes. We have a product tribe and a service tribe, the product tribe is responsible for developing new products, such as loyalty programs and omni-channels, while the service tribe focuses on automating processes to enhance efficiency. The squads within these tribes are responsible for specific areas, such as cards operations or services for the branches. This division allows for specialized expertise within each tribe and facilitates focused product/service development." (Head of digital banking acquisition, EBNK07).

The third theme, Agile Mindset and Upskilling, focuses on the organization's efforts to foster an agile mindset and provide upskilling opportunities. The Director of Enterprise Agile Transformation, stating,

"So yes, we do upskill people in that area, yet they need to focus more about what they're doing." (Director of Enterprise Agile Transformation, EBNK09).

4.5.2.4 Theme 4: Customer Intelligence Approach

Within the Customer Intelligence Approach theme, this study investigates several categories: Data Collection and Integration, Customer Understanding, Customer Segmentation and Profiling, and Personalization. Appendix P provides an overview of these categories, accompanied by the number of codes assigned to each. The data analysis process involved collecting and integrating data from various sources. The analysis yielded 13 occurrences for Data Collection and Integration, 15 occurrences for Customer Understanding, 4 occurrences for Customer Segmentation and Profiling, and 12 occurrences for Personalization. To support these findings, Appendix P presents the evidence extracted from the analysed documents, highlighting the frequency of occurrence within each category. This comprehensive analysis sheds light on the strategies and practices associated with Customer Intelligence.

The bank conducts surveys and collects customer feedback through calls, reports, and inbound/outbound interactions to gather insights and improve customer experience. As asserted by the Head of digital banking acquisition,

"We always seek customer feedback from the calls from the reports we have... When we do surveys... I have insights... depending on the issue... we need to collect the feedback from that call." (Head of digital banking acquisition, EBNK07).

Also, Bank B analyses reports and data to identify areas for improvement, such as minimizing personal interactions, automating processes, and increasing employee productivity using AI,

"Our thoughts are the surveys as I mentioned the feedback customer feedback which is received from surveys... and our own personal view from the reports and reports we analyse... we depend on AI to do that." (Head of digital banking acquisition, EBNK07).

The bank emphasizes understanding customer perceptions and feelings, considering small to large interactions, successful purchases, account funding, and overall relationship with customers,

"Customer experience is anything that affects the customers, the customers' perception, his feelings... regardless of if the customer made a successful purchase or he funded his account... it's this relationship with the customer and his perception of the bank's services and products." (Head of digital banking acquisition, EBNK07).

The bank aims to deploy strategic plans to improve customer satisfaction and be customer centric, focusing on understanding customer perceptions and aligning internal capacities accordingly.

"Customer experience management is how we understand this customer perception and how we deploy their strategic plans that enable us to be customer centric and to improve customer satisfaction." (Director of Customer Experience, EBNK01).

Artificial intelligence is utilized to understand customer needs and preferences, categorize customers into segments (e.g., university students, different age groups), and tailor campaigns and messaging accordingly.

"We use artificial intelligence mainly to customize the customer need... when I'm gonna send... someone aged differently, married single... I can send them campaigns related to their needs." (Head of digital banking acquisition, EBNK07).

Bank B aims to provide personalized experiences to customers by tailoring offers, campaigns, and messages based on customer profiles, needs, and behaviour. EBNK08 asserts that

"We make personas, personas... When I send them campaign messages, I send them something related to their needs... we do use artificial intelligence mainly to customize the customer need." (Loyalty & segmentation Product Owner, EBNK08).

Personalization efforts also extend to using AI to automate support, minimizing the need for personal interaction, and allowing customers to resolve issues independently through features like chatbots. The Head of digital banking acquisition, stating,

"We are working on something like a chatbot in order to minimize the customer needing someone to be present... most customers now want to solve their issues on the spot... we are also working on automating support." (Head of digital banking acquisition, EBNK07)

Bank B aims to be more customer-centric and aligned in that direction, focusing on customer experience management and understanding customer feedback and behaviour.

"More customer centric and it's better aligned to work in that direction... which is the customer understanding where is where we make sure that all customer Feedback of all customer behaviour is... understanding it and it's channelled internally to the related teams to take the right actions." (Director of Customer Experience, EBNK01)

Having a clear understanding and alignment throughout the company regarding the customer service and the desired customer experience.

"Like having a customer promise in place... aligning internally on that... having a clear understanding throughout the company and alignment on that." (Director of Customer Experience, EBNK01).

4.5.2.5 Theme 5: CX Data to Value Creation Process

The fifth theme explored in this study is CX Data to Value Creation Process, which encompasses the following categories: Customer Experience Data; Customer Insights; Actioning AI-Driven Customer Insights; and Unlocking Value from AI-Enabled Customer Insights. Appendix P provides an overview of these categories and the corresponding number of codes assigned to each. The analysis process involved examining the collection and utilization of customer experience data, the generation of customer intelligence, the application of AI-driven customer intelligence in decision-making, and the strategies for Unlocking Value from AI-Enabled Customer Insights. The number of codes identified for each category are as follows: Customer Experience Data (15 times); Customer Insights (23 times); Actioning AI-Driven Customer Insights (22 times); and Unlocking Value from AI-Enabled Customer Insights (12 times). To provide further evidence, Appendix P presents the findings extracted from the analysed documents, highlighting the frequency of occurrence within each category. This comprehensive analysis sheds light on the utilization of CX data and AI-driven customer intelligence in creating value for the organization.

In Bank B, the findings illuminate the transformative power of leveraging demographic, behavioural, transactional, and operational data, along with benchmarking studies, to drive comprehensive data collection from multiple sources. Through this process, the bank gains a holistic understanding of customer behaviour, which enables them to conduct thorough data modelling and analysis. The derived insights serve as actionable intelligence, empowering the bank to optimize business performance, streamline processes, and automate operations. This data-driven approach leads to an enhanced customer experience and tangible business value generation.

The bank recognizes the significance of targeted customer acquisition and proactive customer retention. To achieve this, they employ customer experience data, information, knowledge, and insights obtained through surveys, as stated by the Senior Associate of Customer Experience,

"We do lots of surveys regarding they did as a survey regarding exactly to know people, where do they stand in, in the customer experience,, We do surveys, we analyse the cause received from customers, and we gain insights from them and act accordingly." (Senior Associate | Customer Experience, EBNK02).

By analysing the feedback received, the bank identifies areas for improvement and acts upon these insights, thereby addressing customer concerns and enhancing the overall customer experience. These surveys help the bank understand customer awareness and the importance of customer experience, ensuring that customers grasp the concept,

Customer intelligence plays a pivotal role in the bank's strategy. Their objectives include increasing customer engagement and acquiring customers through digital channels, focusing on metrics such as the number of funded accounts and debit transactions. By measuring and analysing these metrics, the bank gauges the success of their efforts and drives continuous improvement. The insights obtained from customer feedback, surveys, and feedback analysis aid in understanding customer needs, preferences, and pain points, thus allowing the bank to refine their services and offerings, accordingly, as asserted by the Head of digital banking acquisition,

"One of our OKRs is to increase the number of acquired customers through the digital channels through the mobile app." (Head of digital banking acquisition, EBNK07),

And,

"We also have an OKR to increase the engagement with the customers and enhance the quality of acquired customers." (Head of digital banking acquisition, EBNK07).

To harness the full potential of AI-driven customer intelligence, the bank employs predictive models to anticipate customer behaviour and trends (EBNK06). This includes churn prediction models to determine the likelihood of customers switching to other banks or employees resigning (EBNK06). To ensure effective utilization of AI models, the bank emphasizes the importance of knowledge and skill development among their team members (EBNK05). By teaching Python and fostering a deep understanding of the purpose and enhancement of models, the bank ensures the team's ability to utilize AI tools effectively (EBNK05).

"We want to predict if this customer will stay on this bank or go to another bank. That's a churn prediction." (Data Scientist - Research & development, EBNK06),

Unlocking Value from AI-Enabled Customer Insights is a core objective for the bank. Through AI, the bank aims to offer personalized services and recommendations based on customer preferences, going beyond mere product sales. However, they also recognize the need to strike a balance between personalization and avoiding overwhelming customers (EBNK04). Understanding the limits and boundaries of customer comfort is crucial to ensure a positive and tailored experience.

"AI helps you predict that this customer at this age, at this salary income might want a credit card and to have a more personalized suggestion for them." (Research Manager, Customer Experience and Channel Performance, EBNK04),

And,

"You need to understand where it becomes too much for the customer." (Research Manager, Customer Experience and Channel Performance, EBNK04)

4.5.2.6 Theme 6: Harnessing AI Capabilities

Within the Harnessing AI Capabilities theme, this study investigates several categories: Objective of AI; Challenges of Utilizing AI; AI-Enabled Data to Intelligence Analytics; and AI-Enabled Intelligence to Actions Analytics. Appendix P provides an overview of these categories, accompanied by the number of codes assigned to each. The data analysis process involved assessing the objectives of AI implementation, the challenges faced in utilizing AI, the utilization of AI for data to intelligence analytics, and the application of AI for intelligence to actions analytics. The analysis yielded 19 occurrences for Objective of AI, 3 occurrences for AI-Enabled Data to Intelligence Analytics, and 14 occurrences for AI-Enabled Intelligence to Actions Analytics. To support these findings, Appendix P presents the evidence extracted from the analysed documents, highlighting the frequency of occurrence within each category. This comprehensive analysis offers valuable insights into harnessing AI capabilities for data analysis and generating actionable intelligence.

The interviewees' responses indicate a clear objective behind the implementation of AI in banking. They emphasize the use of AI to better understand customer behaviour, predict customer needs, and deliver personalized experiences. The Senior Associate of Customer Experience, for instance, highlights the goal of increasing customer loyalty and satisfaction through the provision of personalized services. This aligns with the Research Manager, Customer Experience and Channel Performance's assertion that AI can assist in predicting customer behaviour and proactively addressing their needs. The Senior Associate of Customer Experience, stating,

"We do that to increase the customer loyalty, loyalty and the customer satisfaction and to create like a more personalized experience to these customers." (Senior Associate | Customer Experience, EBNK02).

The interviewees' responses shed light on the objectives behind incorporating AI into banking practices. The Chief Research Officer, Customer Experience and Channel Performance defines AI as a means to extract hidden information from vast amounts of data and utilize it for actionable purposes, as stated by EBNK03,

"Artificial intelligence means... taking information that is hidden in millions of data and bringing it to the front for action." (Chief Research Officer, Customer Experience and Channel Performance, EBNK03)

This sentiment is echoed by EBNK04, who emphasizes the use of AI in better understanding customer behaviour and predicting their needs. These findings highlight the overarching goal of AI in banking, which is to leverage data-driven insights to anticipate customer preferences

and deliver personalized services, as stated by the Research Manager, Customer Experience and Channel Performance,

"I don't think that's the case. I think AI is actually something that should, will and will help you in better understanding the customer behaviour. But it becomes what you do with this behaviour later on."(Research Manager, Customer Experience and Channel Performance, EBNK04)

The successful integration of AI into banking operations relies on employee training and adoption. The Head of Data Science mentions the importance of having a team with the right mindset and skills to advise business users on alternative reporting formats. This finding highlights the need for comprehensive training programs to equip employees with the necessary AI-related skills and foster a culture of continuous learning and innovation. (EBNK05),

"As a team, we can understand their pain and advise data solutions... We need people who have this mindset to advise business users." (Head of Data Science, EBNK05).

The interviewees provide insights into the application of AI-enabled data analytics in the banking sector. The Director of Customer Experience and the Head of Data Science discuss the use of predictive analytics as a tool to analyse customer data and gain valuable insights. (EBNK01), stating,

"For example, in customer understanding, we do have simple things like predictive analytics, yes, maybe and any basic customer analysis." (Director of Customer Experience, EBNK01).

EBNK06 highlights sentiment analysis as a specific application of AI in social media data. These findings indicate that banks are leveraging AI technologies to analyse large volumes of data and extract meaningful intelligence for informed decision-making. The Data Scientist - Research & development, stating,

"We are working on like sentiment analysis... to solve customer problems on the spot with minimal need for an actual customer service representative." (Data Scientist - Research & development, EBNK06).

The interviewees provide further insights into the application of AI-enabled data analytics in the banking sector. EBNK01 mentions the utilization of predictive analytics and basic customer analysis for understanding customer behaviour. The Director of Customer Experience, stating,

"For example, in customer understanding, we do have simple things like predictive analytics and basic customer analysis." (Director of Customer Experience, EBNK01).

Furthermore, the interviewees shed light on the translation of AI-driven intelligence into actionable steps. EBNK04 emphasizes the importance of leveraging AI to predict customer behaviour and take proactive measures to address their needs effectively. EBNK06 discusses the implementation of AI in an interactive voice response (IVR) system, enabling faster and more efficient customer service. The Research Manager, Customer Experience and Channel Performance, stating,

"It becomes about reading the pattern, seeing the direction that customer experience is going through and being ahead of the game and ahead of the customer actually."
(Research Manager, Customer Experience and Channel Performance, EBNK04).

The interviewees also provide insights into the translation of AI-generated intelligence into actionable strategies. The Senior Associate of Customer Experience emphasizes the use of AI to deliver personalized experiences, increase customer loyalty, and enhance customer satisfaction. EBNK02, stating,

"We do that to increase customer loyalty, satisfaction, and to create a more personalized experience for these customers."(Senior Associate | Customer Experience, EBNK02,)

Regarding use cases within the banking industry, The Head of Data Science, mentions several examples, including customer 360, loan default prediction, next best offer, and fraud detection. She also mentions that part of her strategy is to create awareness among different business units about the capabilities of data analytics. The Head of Data Science, stating,

"There are so many top new news use cases. Umm customer 360 and loan default production. Next best offer. Have fraud detection. There are a lot,, now we are building data strategy. Yeah. And for the the first milestone within the district and basically to set to the different business units to understand the different data sources, they they use their reporting and analytics needs and how we can help them. And within those sessions, we give them an introduction on why we're doing that and what we are aiming to do." (Head of Data Science, EBNK05).

4.6 Chapter Summary and Within-case Key findings

This chapter offers an extensive analysis of the findings derived from within-case examination across four distinct cases, focusing on the identification of six prevalent themes. The central exploration revolves around the strategic employment of artificial intelligence (AI) to effectively operationalize customer insights, thereby managing and enhancing customer experience (CX). These findings can be summarized in relation to each individual case's distinctive context:

In the context of Case A (Teleco A), the thematic exploration underscores the significance of prioritizing customer-centric strategies. This approach is seen in the alignment of business goals with customer needs, advocating the importance of a well-defined and strategic customer experience strategy. Furthermore, this notion extends to managing the end-to-end customer journey, emphasizing seamless and personalized experiences that engender loyalty. Moreover, the theme of customer intelligence reveals the substantial role of data collection, analysis, and insights generation. Informed decision-making through robust customer intelligence is exemplified in Teleco A's reliance on digital channels to gather extensive customer data and understand behaviour. The significance of segmenting customers and employing insights for heightened customer satisfaction is also underscored. AI's integration for personalized customer experiences, predictive behaviour, and enhanced proactive management emerges as a cornerstone, despite challenges encountered in data aggregation and availability of experienced AI professionals.

For Case B (Teleco B), the exploration within the thematic realm of customer intelligence elucidates a distinctive approach, focused on capturing and analysing customer data to foster personalized experiences. Furthermore, the theme of harnessing AI capabilities delves into AI's role in promoting desired behaviours and operational excellence. It also underscores the challenges posed by customer frustrations with AI systems and a scarcity of technical resources. AI's deployment spans sentiment analysis, predictive campaigns, chatbot interaction, and improvement of interactive voice response systems.

Transitioning to the banking sector, Bank A's thematic alignment with agile customer experience portrays an agile framework fostering seamless customer experiences. Collaboration between business teams and AI experts drives customer-centric perspectives. Moreover, the bank's emphasis on innovation, market analysis, and value provision underscores its commitment to enhancing customer experiences. Harnessing AI capabilities is also manifested, as the case discusses AI's role in customer behaviour analysis, risk management, personalized offerings, and overall CX improvement.

In Bank B's context, harnessing AI capabilities takes centre stage. This case illuminates AI's pivotal role in understanding customer behaviour, predicting needs, and delivering personalized experiences. The implementation of AI is underscored through predictive analytics, sentiment analysis, and data mining to extract insights from extensive data sources. The primary aim is to enhance customer loyalty and satisfaction via personalized services and AI-enhanced IVR systems.

5 Cross-case Analysis and Findings

The following chapter undertakes a comprehensive cross-case analysis that builds upon the within-case analysis presented earlier. This analysis explores deeper into the dataset, examining the interactions and relationships between the individual cases to identify overarching themes and patterns. By employing a cross-case approach, a more holistic understanding of the role of AI in actioning customer insights to manage customer experience is achieved.

The conclusions drawn from the cross-case analysis serve as a foundation for the subsequent chapter, which focuses on the discussion of the findings. The discussion chapter aims to enhance the initial conceptual framework by incorporating the new insights gleaned from both the within-case and cross-case analyses. These new findings will inform the development of a novel model that captures the intricacies of leveraging AI to optimize customer experience. By combining the insights from the individual cases and the overarching themes identified in the cross-case analysis, the discussion chapter will provide a comprehensive framework that deepens the understanding of the role of AI in actioning customer insights to managing customer experience.

5.1 Cross-case Analysis

Building upon the previous chapter's analysis of individual cases, the following sections focuses on the cross-case analysis and findings. By comparing and contrasting the findings across the four cases, aiming to identify common patterns, relationships, and variations.

The within-case analysis provided valuable insights into the intricacies and nuances of each individual case. It allowed for a detailed exploration of the context, factors, and outcomes within each case. However, to obtain a broader perspective and draw more robust conclusions, it is necessary to conduct a cross-case analysis. This analysis involves examining the similarities and differences across the cases, thereby enabling the identification of overarching themes and trends.

In conducting the cross-case analysis, various methods and approaches are employed. Pattern matching is one commonly used method, which involves comparing the patterns of findings across cases to identify similarities and differences. By recognizing consistent patterns across the cases, researchers can establish connections and relationships that transcend individual instances.

Furthermore, cross-case analysis incorporates explanation building as an approach to develop plausible explanations for the observed patterns and relationships. By employing a narrative form of analysis, researchers can investigate deeper into the underlying mechanisms and factors that shape the outcomes across the cases. This process facilitates the generation of theoretical explanations and contributes to the development of robust conclusions.

Comparing and contrasting the findings across the cases is a crucial step in the cross-case analysis. It allows researchers to identify variations in contexts, conditions, and outcomes. By examining these variations, researchers can gain valuable insights into the complex interplay between different variables and understand how these factors influence the research questions. Furthermore, the identification of variations provides a nuanced understanding of the phenomenon under investigation and enhances the external validity of the study.

The cross-case analysis serves as a bridge between the individual cases and the broader research questions. It enables the identification of commonalities that transcend individual instances, providing a more comprehensive understanding of the phenomenon. By corroborating and validating the findings across multiple cases, the internal validity of the study is strengthened, enhancing the credibility and generalizability of the research outcomes.

Through cross-case analysis, patterns, themes, and relationships that emerge across the cases are identified and examined. These empirical findings help to validate or modify the initial conceptual model by providing real-world evidence that supports or contradicts its assumptions or propositions. The analysis may reveal additional variables, interconnections, or mechanisms that were not initially considered, expanding and enriching the conceptual model. Moreover, the cross-case analysis helps in contextualizing the conceptual model within the complexities of different cases. It highlights the variations, similarities, and differences observed across cases, shedding light on the contextual factors that influence the research topic. This contextual understanding obtained through the cross-case analysis allows for a more nuanced and comprehensive conceptual model that captures the multifaceted nature of the phenomenon under investigation. The cross-case analysis between the different cases adopted the approach recommended by Miles and Huberman (2014) called 'stacking comparable cases'. Each case was written up using a standard set of themes that cut across the cases allowing for systematic comparisons to be made and uniqueness to emerge as appropriate.

According to Tesch (1990), a cross-case comparison involves "decontextualization and recontextualization" of cases. The process begins by reviewing the evidence from the four individual cases, identifying significant statements and noting the differences between them (decontextualization). Then, by comparing the empirical findings with the existing literature and moving between the findings of individual cases, the cross-case analysis sheds new light on

the phenomenon of the role of AI in actioning customer insights (recontextualization). Khan & VanWynsberghe (2008) emphasize the importance of comparing across cases while referring to individual cases as necessary. Ayres et al. (2003: p. 875) describe this as "moving between across- and within-case comparisons." Therefore, the aim of this study is to conduct a cross-case analysis that retains contextual meaning from individual cases while providing necessary and possible contextual details.

To ensure a rigorous analysis, the study focuses on building the analysis around the six themes, namely, (1) Customer Experience Strategy, (2) Customer Journey Management, (3) Customer Intelligence Approach, (4) Agile way of operating, (5) CX Data to Value Creation Process, (6) Harnessing AI capabilities. This approach enables the study to identify key patterns and trends within each theme, and to compare these patterns and trends across the telecom and banking cases. As shown in Figure 5-1, A total of 24 key categories were identified across the six themes. The generation of categories in the research process has been facilitated through the utilization of the second cycle coding approach. Detailed elucidation of the second cycle coding methodology can be found in Section 3.4.3.4 (Second Cycle coding – Develop Category System), and a tabular representation of the theme system is provided in Appendix. For each theme, the cross-case analysis will take place first for the telecom cases (i.e., Case A and Case B) and then for the banking cases (i.e., Case C and Case D). This approach allows for a comprehensive comparison of the similarities and differences between the two industries. The cross-case analysis methodology facilitates the comparison of commonalities and differences in the events, activities, and processes over the cases. By conducting the analysis in this way, the study can ensure that each theme is examined in depth for both industries, allowing for a thorough understanding of the research questions at hand.

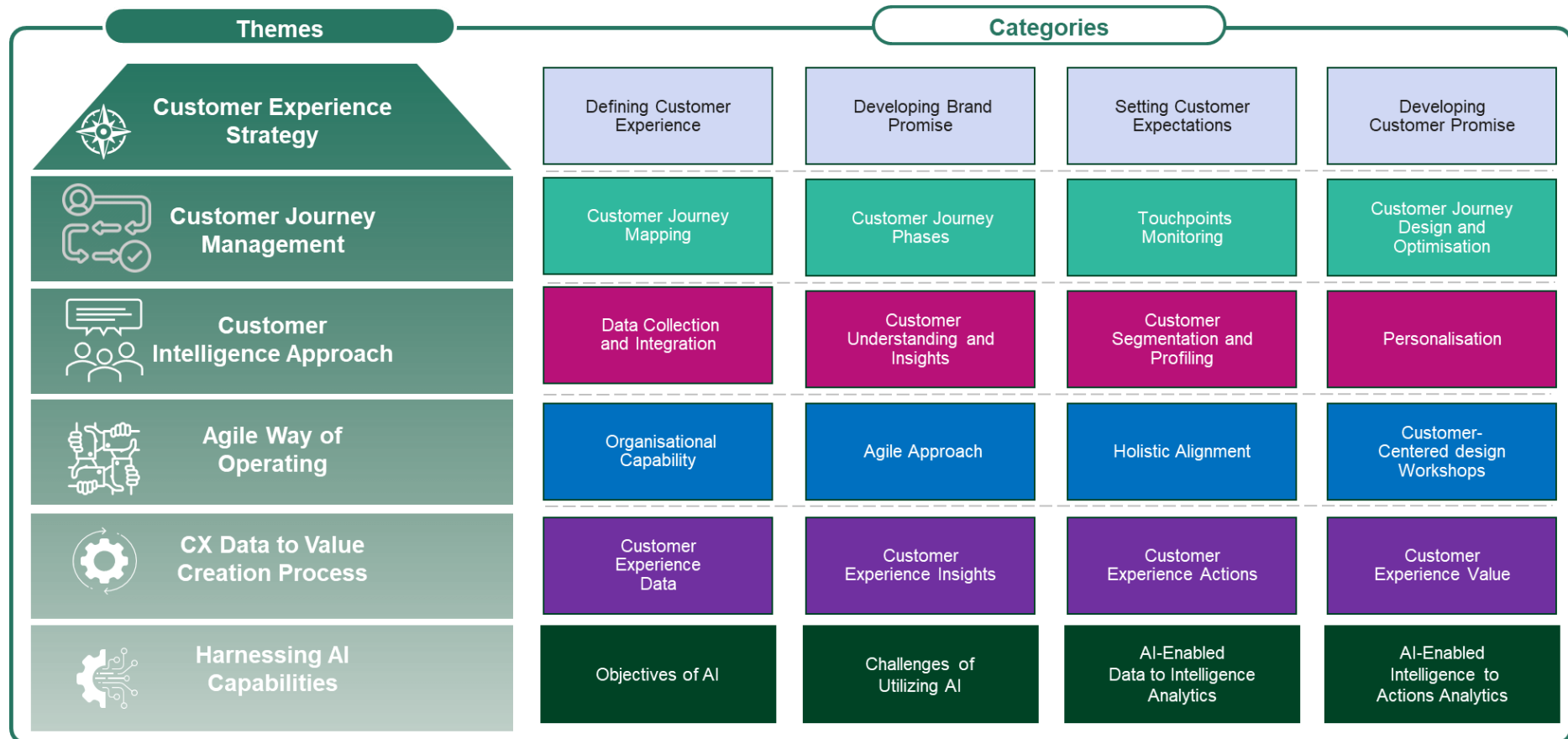


Figure 5-1 Key Categories Identified Across Six Themes

5.2 Theme 1: Customer Experience Strategy

The theme of customer experience strategy encompasses a diverse array of topics that span across the four case studies. The four categories, namely, defining customer experience, developing brand promise, setting customer expectations, and developing customer promise, are interwoven throughout the case studies, offering unique perspectives and shedding light on the intricate dynamics within the customer experience strategy. Through an examination of these case studies, we gain valuable insights into the multifaceted nature of customer experience strategy theme.

The cases emphasize the significance of customer experience and its integration within the organization. They discuss the alignment of brand promise with customer experiences, the role of customer experience in shaping customer expectations, and the integration of customer promise with company strategy. The findings reinforce the importance of adopting an outside-in perspective, assessing brand perception, delivering value for money, and continuously enhancing the customer journey, as shown in the cross-case comparison in Table 5-1, for further details and a detailed comparison, please refer to the cross-case analysis – customer experience strategy table in Appendix Q.

Table 5-1 – Cross-case analysis across cases - Theme 1

Category	Code	Teleco A	Teleco B	Bank A	Bank B
Defining Customer Experience	Defining CX	✓	✓	✓	✓
	Defining CXM	✓	✓	✓	✓
	CXM Adoption Challenges	✓	✓		✓
Developing Brand Promise	Brand Positioning	✓			
	Brand Equity	✓	✓		
Setting Customer Expectations	Setting Customer Expectations	✓	✓	✓	✓
	Value for Money	✓	✓	✓	✓
Developing Customer Promise	Setting Experience Ambition	✓	✓	✓	✓
	Crafting Customer Promise	✓		✓	✓

5.2.1 Telecom cases – Cross-case Analysis

The cross-case analysis reveals several similarities in customer experience strategy across the two cases. Both cases, Teleco A and Teleco B share a strong commitment to prioritizing customer experience. Teleco A focuses on aligning brand promise with delivery and managing expectations, while Teleco B adopts an outside-in perspective, emphasizing understanding customer perception and a governance role in customer experience. Both recognize customer experience's strategic significance in shaping brand positioning and organizational direction.

Teleco A employs a comprehensive end-to-end approach, while Teleco B emphasizes understanding customer perception and governance. Yet, both remain customer-centric, integrating customer experience into their DNA and strategy. These findings suggest varying approaches to customer experience strategy, aligning with unique organizational cultures and goals. Valuable insights arise for businesses seeking to enhance customer experience.

Teleco A highlights prioritizing customer experience as a core competency. It focuses on aligning brand promise with delivery, managing the customer journey, and exceeding expectations. Conversely, Teleco B explores the multidimensional nature of customer experience. It emphasizes understanding the customer's perspective across touchpoints, integrating customer experience into the strategy, and fostering a customer-centric mindset. Governance, strategic decision-making, voice of the customer, and enhancing the customer journey are key aspects discussed, impacting brand promise, customer expectations, and the overall journey.

Teleco A emphasizes aligning brand promise with brand delivery and brand awareness assessment, reflecting a focus on customer perception. It highlights the need for a dedicated CX department. Teleco B stresses defining customer experience from an outside-in perspective, the governance role, and strategic decision-making in setting customer expectations. Insights reveal the role of customer experience in shaping customer expectations and brand identity. Comparing Teleco A and Teleco B, both prioritize aligning brand promise with delivery, with Teleco A assessing brand perception and awareness, emphasizing the need for a dedicated CX department. Teleco B highlights the governance role and strategic aspects of setting customer expectations.

Differences in dedicated departments reflect maturity levels, with Teleco A at a nascent stage and Teleco B indicating higher maturity in customer experience integration. Teleco A emphasizes end-to-end customer interaction, recognizing it as vital and shifting core competencies. It focuses on understanding customer expectations and bridging the gap. In contrast, Teleco B defines customer experience from an outside-in perspective, highlighting the

emotional and physical layers and emphasizing governance akin to the audit department, balancing short-term revenues with sustainable experiences.

Teleco B also highlights strategic decision-making, targeting market positioning, brand perception, and customer experience. Teleco A prioritizes aligning the brand promise with delivery and managing touchpoints and perception. Teleco A underscores managing expectations, delivering value, and exceeding them to create positive experiences. Teleco B emphasizes setting expectations strategically, enhancing the journey, and capturing the voice of the customer.

Both cases recognize the significance of customer experience, with Teleco A emphasizing top-down and bottom-up integration and considering it part of its DNA. Teleco B aligns the promise with the mission, aiming to convert customers into advocates.

5.2.2 Banking cases – Cross-case Analysis

Both Bank A and Bank B prioritize customer experience by understanding perceptions, integrating it into strategies, and emphasizing customer-centricity. Bank A aligns brand promise with delivery, manages expectations, and focuses on the customer journey. Similarly, Bank B adopts a holistic approach, seeking to personalize experiences.

Both banks design products, understand customer journeys, use technology, and manage emotions to enhance experiences. They employ KPIs for measurement, focusing on customer satisfaction, process simplification, and digital channels.

Bank A integrates customer experience into its strategy through insights from various departments. In contrast, Bank B sees it as integral, driven by the board. Personalization is key for Bank A, while Bank B emphasizes understanding perceptions.

Bank A manages internal processes, emphasizing emotional connections. Bank B proactively acts on customer feedback but lacks personalization details. Disparities may stem from organizational culture and strategic priorities, evident in documents (DE04 and DC06).

In cross-case analysis, both banks prioritize understanding and improving customer experiences. Bank A focuses on alignment and critical paths, while Bank B seeks personalized experiences and customer loyalty.

In brand management, both align the promise with experiences. Bank A assesses perception and awareness. Bank B's specific approach is not detailed but implies a similar intent.

Comparing customer experience strategies, Bank A uses KPIs for measurement and emphasizes emotional connections. Bank B aims for personalized experiences and customer-centricity. Both seek to enhance satisfaction and culture.

5.3 Theme 2: Customer Journey Management

The theme of "Customer Journey Management" encompasses a dynamic and customer-centric approach to understanding and improving the experiences customers have with a product, service, or brand. This theme comprises four key categories that intricately cut across various case studies, offering a comprehensive understanding of the customer journey. The categories of Customer Journey Mapping, Customer Journey Phases, Touchpoints Monitoring, and Customer Journey Design and Optimization provide unique insights into the different stages and touchpoints of a customer's interaction with a business. By examining these case studies, we gain valuable perspectives on how organizations can effectively manage and enhance the customer journey, ensuring meaningful and satisfying experiences at every step. By analysing and comparing these cases, the study unravels the complexities of Customer Journey Management, as shown in the cross-case comparison in Table 5-2, for further details and a detailed comparison, please refer to the cross-case analysis – customer journey management table in Appendix R.

Table 5-2 Cross-case analysis across cases - Theme 2

Category	Code	Teleco A	Teleco B	Bank A	Bank B
Customer Journey Mapping	Customer Empathy	✓	✓	✓	
	Touchpoints	✓	✓	✓	✓
	Pain Point and Opportunities	✓	✓	✓	✓
Customer Journey Phases	Pre-Purchase Phase		✓		
	Purchase Phase	✓	✓		
	Post-Purchase Phase	✓	✓		✓
Touchpoints Monitoring	Touchpoint Identification	✓	✓	✓	✓
	Performance Evaluation	✓	✓	✓	✓
Customer Journey Design and Optimization	Redesign touchpoints	✓	✓	✓	✓
	Personalize the experience	✓			✓
	Streamline the Journey	✓		✓	

5.3.1 Telecom cases – Cross-case Analysis

In Teleco A, an internal workshop approach identifies customer journey pain points and emphasizes iterative design for seamless experiences. Customer journey mapping, considering demographics and lifestyle, aids differentiation.

Telecom B employs cross-functional collaboration and workshops to understand and design for customer emotions. Customer journey mapping involves multiple stakeholders. Agile methodologies and technology optimize the journey.

This cross-case analysis aims to deepen understanding of customer journey management approaches. Insights can benefit organizations in enhancing customer satisfaction and gaining a competitive edge.

For example, Teleco A identifies pain points across transactional, episodic, and continuous journeys. Teleco B delves into sub-journeys with stakeholder involvement. Bank A focuses on account opening processes, while Bank B assigns dedicated teams.

Regarding touchpoint monitoring, Teleco A optimizes interactions throughout the customer lifecycle. Teleco B tracks customer interactions and identifies pain points. Bank A measures touchpoint effectiveness and gathers feedback across channels. Bank B monitors touchpoints and gathers feedback through various communication channels.

In customer journey design, Teleco A uses mapping for differentiation. Teleco B employs agile methods, emotional metrics, and feedback for impactful journeys. Bank A focuses on seamlessness and data-driven decisions. Bank B emphasizes technology and continuous improvement with metrics and KPIs.

Differences in mapping, monitoring, and design stem from industry characteristics and customer needs. Telecoms prioritize differentiation, while banks emphasize seamlessness due to regulatory requirements.

Both Case A and Case B share the goal of delivering exceptional customer experiences through effective journey management. Their commitment underscores the importance of customer-centricity. Both Case A and Case B prioritize journey mapping, touchpoint monitoring, and design and optimization. Case A emphasizes differentiation, while Case B focuses on personalization and technology integration.

Case A's structured approach categorizes journeys and targets pain points. Case B explores emotions and feedback for continuous improvement. Both balance personalization with privacy.

While both prioritize journey mapping, Case A aims for the right experience at each transaction, while Case B delves deeper into emotions and feedback.

Both adopt iterative approaches, but Case A targets pain points for unique experiences, while Case B emphasizes personalization and technology.

Monitoring interactions is common, with Case A focusing on historical data analysis and campaign effectiveness, while Case B leverages technology and proactive improvements.

5.3.2 Banking cases – Cross-case Analysis

The two banking cases on customer journey mapping exhibit diverse approaches to enhancing the customer experience, emphasizing iterative design and seamlessness. While common objectives unite them, each case highlights distinct aspects, such as collaboration, emotional design, touchpoint optimization, and customer-centricity.

In Bank A, mapping touchpoints and experiences is central for a consistent and optimized journey. They measure effectiveness, gather feedback, and focus on seamlessness. Collaboration, customer-centricity, and data-driven decisions guide design, with metrics and KPIs tracking progress.

Bank B adopts a customer-centric approach, involving frontliners, surveys, and customer-centric design. They categorize journeys, monitor feedback, and break down journeys into sub-phases. Continuous improvement, agile approaches, cross-functional collaboration, and technology utilization are key. Metrics and KPIs measure success.

Bank A and Bank A aim to deliver exceptional experiences through effective journey management. Bank A emphasizes technology-driven seamlessness, while Bank B prioritizes customer-centricity and data-driven decisions.

Both recognize the critical role of journey management in enhancing the customer experience. They share similar approaches to journey mapping, emphasizing touchpoint optimization across channels. Bank A leverages advanced technologies for holistic understanding, focusing on automation and personalization. Bank B involves frontliners and surveys to understand both ideal and real experiences, segmenting journeys for continuous improvement. Both stress the importance of monitoring touchpoints and addressing pain points.

While both prioritize journey mapping, Bank A uses advanced technologies to identify critical points, while Bank B involves frontliners and surveys to understand ideal and real experiences. Bank A comprehensively maps touchpoints and experiences. They seek a holistic understanding, emphasizing seamless experiences and automation. Bank B categorizes journeys into types, optimizing each differently, with a strong focus on data-driven decisions and segmentation.

5.4 Theme 3: Agile Customer Experience – Agile way of operating

The theme of "Agile way of operating" revolves around a transformative approach that emphasizes flexibility, adaptability, and customer-centricity in the realm of customer experience. This theme comprises four key categories that intersect across multiple case studies, providing a comprehensive understanding of how organizations can adopt an agile way of operating to enhance customer experiences. The categories of Organizational Capability, Agile Approach, Holistic Alignment, and Customer-Centred Design Workshops form the foundation of this theme, each playing a vital role in achieving agility. Through the examination of these case studies, we gain valuable insights into how organizations can develop the necessary capabilities to embrace an agile mindset, implement agile methodologies, ensure alignment across departments and teams, and leverage customer-centred design workshops to co-create experiences that resonate with their customers. By exploring these categories, we uncover the transformative power of the Agile Customer Experience approach, as shown in the cross-case comparison in table 5-3, for further details and a detailed comparison, please refer to the cross-case analysis – agile customer experience table in Appendix S.

Table 5-3 Cross-case analysis across cases - Theme 3

Category	Code	Teleco A	Teleco B	Bank A	Bank B
Organisational Capability	CXM Function Position	✓	✓	✓	✓
	People Capability Building	✓			
	Organisational Learning	✓	✓	✓	✓
Agile Approach	Scrum	✓	✓	✓	✓
	Tribes & Squads				✓
	Product Owner	✓	✓	✓	✓
Holistic Alignment	Collaboration	✓	✓	✓	✓
	Cross-functional	✓	✓	✓	✓
Customer-Centred Design Workshops	Design Thinking	✓	✓		
	Fact Finding / Empathy	✓	✓		
	Design	✓	✓		✓
	Action planning	✓	✓		✓

5.4.1 Telecom cases – Cross-case Analysis

In Teleco A, organizational capability is paramount for enhancing the customer experience. Investment in robust organizational capabilities, a customer-centric culture, and cross-functional collaboration is essential. Data analytics capabilities support data-driven decisions and personalized experiences. Holistic alignment integrates customer-centric strategies across the organization, aligning key performance indicators (KPIs) and fostering leadership involvement.

Teleco B adopts an agile customer experience approach with key elements: organizational capability, agile methodology, holistic alignment, and customer-centred design workshops. They position customer experience as a governance role and establish agile teams, the "customer journey factory," using scrum methodology for alignment. Collaboration ensures legal compliance, regulatory approval, and operational alignment. Reusing AI components and customizing telecom-specific use cases are mentioned. Analysing the findings from the four cases reveals differences in organizational capability, agile methodologies, holistic alignment, and customer-centred design. Regarding Organizational Capability, Case A emphasizes building strong capabilities and fostering a customer-centric culture, while Case B forms specialized agile teams and adopts the Spotify model for structured optimization.

In terms of Agile Approach, both cases recognize the value of agility, but Case B specifies working in sprints and using scrum methodology for a more detailed and iterative approach. Both cases stress the importance of organizational capability and agility. Case A focuses on fostering a customer-centric culture and organization-wide collaboration, while Case B positions customer experience as a governance role, ensuring long-term objectives aren't sacrificed for short-term gains. Both cases advocate an agile mindset, but Case A adopts it organization-wide, while Case B establishes dedicated agile teams, employing the scrum approach for strategic alignment with customer journeys.

Regarding holistic alignment, both cases involve customers in workshops, but Case A emphasizes documenting customer journeys for KPI alignment, while Case B focuses on cross-departmental collaboration for regulatory compliance and operational alignment.

Both cases advocate giving customer experience a dedicated position within the organization. Case A emphasizes building capabilities and fostering a customer-centric culture, while Case B positions customer experience as a governance role and highlights collaboration with all departments.

Case A adopts an organization-wide agile approach, promoting agility across the entire organization. Case B creates specialized teams for agile customer experience, employing the scrum approach for alignment. Workshops are crucial in both cases, with Case A integrating customer-centric strategies into overall company strategy, while Case B forms the "customer journey factory" for cross-departmental collaboration and strategic alignment.

5.4.2 Banking cases – Cross-case Analysis

In Bank A, organizational capabilities, an agile approach, holistic alignment, and customer-centred design workshops are key drivers for enhancing the customer experience and achieving business growth. The bank highlights the significance of data science, AI, and machine learning for gaining insights and maintaining a competitive edge. Daily meetings and iterative, incremental methods within an agile framework are used. The adoption of the Spotify model underscores the importance of breaking down silos and optimizing processes through collaboration.

In Bank B, an agile organizational structure and cross-functional collaboration are central. The bank adheres to agile principles in project management, employing weekly sprints. Upskilling in agile methodologies is emphasized, and customer-centred design workshops aid in gathering insights, aligning strategies, and fostering ownership. The tribal structure and squad composition allow for specialization and focused development efforts.

Analysing the findings from the four cases reveals distinctions in organizational capability, agile methodologies, holistic alignment, and customer-centred design.

In terms of Organizational Capability, Bank A operates within an agile framework with daily meetings and iterative approaches, emphasizing the Spotify model for collaboration and process optimization. In contrast, Bank B employs an agile approach focusing on cross-functional teams and weekly sprints. They prioritize upskilling and individual and team capabilities and have a tribal structure for specialization.

Both Case C and Case D highlight the importance of organizational capabilities and agile practices for enhancing the customer experience. Case C emphasizes leveraging the bank's diverse organizational capabilities while Case D emphasizes cross-functional collaboration and cultivating an agile mindset. In terms of the agile approach, both cases adopt an agile framework but differ in their implementation. Case C utilizes the Spotify model with tribes, squads, and product owners, emphasizing process optimization and collaboration. Conversely, Case D tailors the agile framework to the corporate environment and focuses on understanding the business and generating product value. Regarding holistic alignment, both cases recognize the significance of aligning strategies and touchpoints for a seamless customer journey. Case C emphasizes aligning different business functions within tribes for coordination and integration. Case D conducts customer-centred design workshops to align teams and ensure customer-centric solutions. Both cases utilize customer-centred design workshops to gather insights and enhance the customer experience. Case C uses data science and AI to extract value from customer data, while Case D emphasizes distinct roles for product owners and Scrum masters in defining strategy and coaching the team.

Case C leverages organizational capabilities and employs the Spotify model within their agile approach. They prioritize holistic alignment through customer-centred design workshops and utilize data science and AI. Conversely, Case D emphasizes cross-functional collaboration and tailors the agile framework to the corporate environment. They align teams through customer-centred design workshops, with distinct roles for product owners and Scrum masters.

Case C focuses on leveraging their diverse organizational capabilities within the banking sector to cater to customer needs and drive business growth. They have multiple functions contributing to delivering a satisfying customer experience. In contrast, Case D emphasizes an agile organizational structure with cross-functional collaboration, following agile principles and weekly sprints, and prioritizes upskilling employees in agile methodologies and relevant skills.

Case C adopts an agile framework using the Spotify model, incorporating tribes, squads, and product owners. This enables process optimization and collaborative work with daily meetings and iterative approaches. Case D tailors an agile framework to suit the corporate environment, focusing on understanding the business and generating value from products. Their tribal structure allows for specialization, focused development efforts, and effective teamwork.

Case C emphasizes holistic alignment through customer-centred design workshops, aiming to align touchpoints with diverse customer needs and preferences for a seamless customer journey. On the other hand, Case D conducts customer-centred design workshops to align teams and define strategies, ensuring customer-centric solutions.

In Case C, customer-centred design workshops are pivotal for enhancing the customer experience and business growth. They leverage data science and AI for extracting value from customer data, enhancing sales, and improving the customer experience. A federated approach centralizes expertise and infrastructure while empowering business lines. Conversely, Case D conducts customer-centred design workshops to align teams and gather insights. Their product owner focuses on strategy and vision, while the Scrum master's role centres on coaching and removing blockers.

5.5 Theme 4: Customer Intelligence Approach

Customer Intelligence Approach theme investigates into a strategic framework that empowers businesses to gain deep insights into their customers, enabling personalized and targeted approaches to meet their needs. This theme encompasses four essential categories that intersect across a range of case studies, providing a comprehensive understanding of customer intelligence. The categories of Data Collection and Integration, Customer Understanding, Customer Segmentation and Profiling, and Personalization form the pillars of this approach, each contributing crucial elements to the overall customer

intelligence strategy. By exploring these case studies, we gain valuable perspectives on how organizations can effectively collect and integrate data, develop a profound understanding of their customers, segment and profile them for tailored experiences, and ultimately deliver personalized interactions and offerings. The examination of these categories uncovers the intricate dynamics of the Customer Intelligence Approach, as shown in the cross-case analysis comparison in Table 5-4. Also, as detailed out in the cross-case analysis – customer intelligence approach table in Appendix T.

Table 5-4 Cross-case analysis across cases - Theme 4

Category	Code	Teleco A	Teleco B	Bank A	Bank B
Data Collection and Integration	Customer Measurement/ Customer Research	✓	✓	✓	✓
	Voice of the Customer (VoC)	✓	✓	✓	✓
	Integrated Customer Intelligence	✓	✓	✓	✓
Customer Understanding	Understanding Customer Needs	✓	✓	✓	✓
	Understanding Customer Perceptions	✓	✓		✓
	Under Customer Behaviours	✓	✓	✓	✓
Customer Segmentation and Profiling	Customer Segmentation	✓	✓	✓	✓
	Customer Profiling	✓	✓	✓	
Personalisation	Product Personalisation	✓	✓	✓	✓
	Communication Personalisation	✓	✓	✓	✓
	Channel Personalisation	✓	✓	✓	✓

5.5.1 Telecom cases – Cross-case Analysis

Both Teleco A and Teleco B place a strong emphasis on customer measurement and research to gain insights into customer behaviour and assess satisfaction levels. They recognize the importance of leveraging digital channels, surveys, and market research for collecting data and understanding customer satisfaction and pain points. Both cases also stress the importance of benchmarking performance against competitors and having a holistic view of the market landscape.

In terms of data collection, both cases highlight the importance of collecting feedback directly from touchpoints and correlating it with data from various divisions to gain comprehensive insights into the customer journey. They emphasize the need to link and analyse different data sources to identify patterns, trends, and gaps in customer behaviour.

Furthermore, both cases emphasize aligning key performance indicators (KPIs) with customer satisfaction and conducting surveys at every touchpoint to continuously monitor customer satisfaction. They understand the value of measuring customer interactions and touchpoints to gain insights into customer behaviour and preferences.

Both cases also stress the importance of building data analytics capabilities within organizations and effectively leveraging data. They recognize the significance of predictive analytics, geolocation analytics, and business intelligence tools in gaining actionable insights. Additionally, both cases emphasize the importance of nurturing internal talent and expertise to stay competitive and avoid high turnover rates.

Lastly, both cases emphasize the significance of personalized experiences and targeted marketing strategies. They highlight the importance of understanding customer preferences, tracking customer interactions, and segmenting customers based on their behaviours and preferences. Both cases mention the use of behavioural models, touchpoint feedback, location data, and surveys to gain insights into customer behaviour and preferences.

While there may be some differences in the specific details and terminology used in each case, the key concepts and terms related to customer measurement and research, data collection and analysis, monitoring customer satisfaction, and personalization are present in both cases. Both cases emphasize the importance of leveraging data and insights to make informed decisions, enhance the customer experience, and drive business outcomes.

Teleco A emphasizes the value of surveys and market research as crucial tools for customer understanding, while Teleco B prioritizes leveraging digital channels for data collection and insights. In customer segmentation and profiling, Teleco A focuses on aligning KPIs with customer satisfaction, while Teleco B emphasizes measuring customer interactions and touchpoints to understand preferences.

Both Case A and Case B recognize the importance of a data-driven approach in understanding customer behaviour and preferences. They both emphasize the significance of customer-centricity and the need to use data-driven insights to enhance the customer journey and experience. In terms of data collection and integration, Case A focuses on collecting feedback from different touchpoints and integrating various data sources to generate comprehensive customer insights. On the other hand, Case B emphasizes the integration of operational insights and feedback from representative samples through various channels and touchpoints, using data warehousing and data science tools for analysis. Regarding customer understanding, Case A emphasizes the role of customer measurement and research, while Case B takes a technology-driven approach, utilizing tools like eye tracking, brain readers, and heat maps to gain deeper insights into customer behaviour and preferences. In customer segmentation and profiling, Case A segments customers based on financial benefits or customer lifetime value to understand their potential and behaviour. In contrast, Case B segments customers based on usage and attitudes, employing consumer-based segmentation and propensity modelling for targeted marketing strategies.

Regarding personalization, Case A customizes the app interface based on individual preferences for cross-selling purposes. Case B focuses on personalized interactions, AI-enabled IVR, and chatbot support to improve the customer experience. Both approaches have strengths in leveraging data-driven insights to understand customer behaviour and improve the customer experience. Case A's emphasis on customer-centricity and cross-selling strategies through app customization is complemented by Case B's focus on personalized interactions and AI-driven customer support.

Case A employs both quantitative and qualitative measurements with internal feedback loops and customer satisfaction surveys. They prioritize customer understanding through data-driven insights and segmentation based on financial benefits. Personalization is aimed at cross-selling purposes. On the other hand, Case B emphasizes integrating operational insights and feedback from diverse sources using advanced data warehousing and data science tools. They adopt a customer-centric approach to understand customer needs, segmenting based on usage and attitudes. Personalization is driven by AI-enabled IVR and chatbot support, enabling a personalized customer experience.

In Case A, a combination of quantitative and qualitative measurements, internal feedback loops, and customer satisfaction surveys are employed. Their emphasis is on collecting and correlating feedback from various touchpoints and data sources, enabling comprehensive customer insights. Case B, on the other hand, highlights the integration of operational insights and feedback from representative samples across diverse channels and touchpoints. They employ advanced data warehousing, data lakes, and data science tools to collect and analyse

customer behaviour data from various sources like billing, charging, calls, SMS, and internet usage.

Case A highlights the role of customer measurement and research in comprehending customer behaviour, satisfaction levels, and making informed decisions. They utilize data-driven insights to gain a deeper understanding of customer preferences and behaviour. In contrast, Case B adopts a customer-centric approach to gather and analyse customer data, aiming to understand their needs better and personalize the customer experience. They leverage technology-driven tools, such as eye tracking, brain readers, and heat maps, to identify areas for improvement and enhance the customer experience.

Case A segments customers based on financial benefits or customer lifetime value to gain insights into their potential and behaviour. They prioritize building capabilities and leveraging data in the telecom industry to stay competitive. Conversely, Case B segments customers based on usage and attitudes, aiming to understand their behaviour and preferences more effectively. They rely on consumer-based segmentation and propensity modelling to drive targeted marketing strategies. In Case A, the app interface is customized based on individual preferences primarily for cross-selling purposes. They utilize personalization and customization to tailor the customer experience and promote relevant offers.

5.5.2 Banking cases – Cross-case Analysis

Bank A emphasizes the importance of customer intelligence and actively collects customer feedback to improve business operations, sales, and customer experience. They follow a hub-and-spoke approach to AI and data analytics, with a centre of excellence and expertise in AI, machine learning, and data science. This centre provides tools, infrastructure, and knowledge to support other teams, adopting a two-way approach to extracting value from data through AI. Bank A also emphasizes the importance of understanding the business and generating value from products within an agile framework. They collect customer feedback through various channels and have plans to implement changes based on customer expectations. The bank focuses on innovation, benchmarking, and analysing the market to develop customer-centric products. They collaborate between business and AI teams to understand data from a customer-centric viewpoint. Although customer segmentation is not explicitly mentioned, Bank A's focus on understanding customer expectations suggests the use of customer segmentation strategies. The bank measures customer engagement and aims for a seamless customer experience across touchpoints, using AI and automation to personalize interactions. They have implemented an alternative approach to opening new accounts to enhance the customer experience.

In Case D, the bank conducts surveys and collects customer feedback through calls, reports, and interactions to gather insights and improve the customer experience. They analyse reports

and data to identify areas for improvement and leverage AI for this analysis. Bank B emphasizes understanding customer perceptions and feelings and aims to be customer-centric by deploying strategic plans aligned with customer expectations. They use personas and customer segmentation to personalize offers, campaigns, and products based on customer needs. Bank B also uses AI to understand customer needs and preferences, categorize customers into segments, and tailor campaigns and messaging accordingly. They prioritize automation and AI in support to minimize personal interaction and allow customers to resolve issues independently.

Case C and Case D highlight the importance of customer intelligence, customer feedback, understanding customer expectations, and personalization in improving customer experience. While Bank A focuses on innovation and benchmarking, Bank B emphasizes customer perceptions and strategic plans. Collaboration between business and AI teams is observed in Bank A, whereas Bank B relies on AI for data analysis.

While Bank A and Bank B differ in their approaches to data collection and integration, customer understanding, customer segmentation and profiling, and personalization, these differences reflect the unique strategies and priorities of each bank in enhancing customer experience and achieving their respective business objectives.

In Bank A, key performance indicators (KPIs) play a crucial role in measuring the effectiveness of customer experience initiatives, encompassing various aspects like acceptance ratio, turn-around time, and digital channel performance. The bank leverages data from multiple sources, conducts market research, and integrates diverse experiences to gain a comprehensive understanding of the customer journey. In contrast to Bank B where customer experience measurements are embedded in employee KPIs and incentives, with the Net Promoter Score (NPS) as a key pillar. The bank collects and analyses data from various sources, including behavioural models, touchpoint feedback, and location data, to gain valuable insights into customer behaviour and preferences. Moreover, active customer feedback through surveys, calls, reports, and interactions drives continuous improvements in customer experience.

In Bank A, customer measurement and research take centre stage in understanding customer behaviour, needs, and segmentation for effective marketing strategies. The bank utilizes customer insights to inform journey design and optimization, aiming to enhance overall customer experience. While, in Bank B, a robust customer measurement approach focuses on profiling and segmentation to deliver personalized experiences and targeted marketing strategies. The bank seeks to comprehend customer perceptions and feelings through various interactions, successful purchases, account funding, and overall customer relationships.

For Bank A, customer segmentation is based on financial benefits, payment behaviour, and international callers, driving targeted marketing strategies. The bank aligns its data analytics

capabilities with customer experience initiatives, ensuring effective segmentation. However, In Bank B, the use of AI plays a vital role in categorizing customers into segments, such as university students and different age groups. This enables the bank to tailor campaigns and messaging, accordingly, overcoming segmentation challenges through data analytics and creating accurate customer segments for targeted marketing strategies.

In Bank A, personalization is a priority as the bank customizes the customer experience based on individual preferences. Leveraging personalization engines driven by AI and big data analytics, they aim to enhance cross-selling opportunities and optimize customer interactions. In contrast, In Bank B, personalized experiences are achieved by tailoring offers, campaigns, and messages based on customer profiles, needs, and behaviour. The bank utilizes AI to automate support, ensuring minimal need for personal interaction through chatbots while maintaining a personalized touch.

5.6 Theme 5: CX Data to Value Creation Process

CX Data to Value Creation Process centres around the strategic utilization of customer experience data to drive value creation within the four cases. This theme encompasses four interconnected categories that span across various case studies, providing a comprehensive understanding of how businesses can harness the power of data to unlock actionable insights and generate value. The categories of Customer Experience Data, Information, Knowledge, and Insights, Customer Intelligence, Actioning AI-Driven customer insights, and Unlocking Value from AI-Enabled Customer Insights form the building blocks of this theme, each contributing essential components to the overall process of data-driven value creation. Through the examination of these case studies, we gain valuable insights into how organizations can collect, analyse, and transform customer experience data into meaningful information, knowledge, and actionable insights. Moreover, we explore the role of customer intelligence in understanding customer behaviours, preferences, and patterns, and how AI-driven approaches can enhance customer intelligence efforts. By unlocking the value of AI-enabled customer intelligence, organizations can make informed decisions, drive innovation, and deliver personalized experiences that create significant value for both customers and the business itself. This analysis demonstrates the commonalities and differences between Teleco A, Teleco B, Bank A and Bank B, as shown in the cross-case comparison in table 5-5, for further details and a detailed comparison, please refer to the cross-case analysis – CX data to value creation process table in Appendix U, in terms of leveraging customer data and insights to enhance the customer experience. While both cases emphasize the importance of digital channels, research methodologies, and customer behaviour analysis, they differ in their specific approaches and focus areas.

Table 5-5 Cross-case analysis across cases - Theme 5

Category	Code	Teleco A	Teleco B	Bank A	Bank B
Customer Experience Data	Solicited – Structured Data	✓	✓	✓	✓
	Solicited – Unstructured Data	✓	✓	✓	
	Unsolicited - Structured Data	✓		✓	✓
	Unsolicited – Unstructured Data	✓		✓	✓
Customer Insights	Attitudinal Insights	✓	✓	✓	✓
	Experiential Insights	✓	✓	✓	✓
	Behavioural Insights	✓	✓	✓	
	Market Insights	✓	✓	✓	✓
	Benchmarking Studies	✓	✓	✓	✓
Actioning AI-Driven customer insights	Customer Experience Design	✓	✓	✓	✓
	Channel and Journey Optimization	✓	✓	✓	✓
	Innovation and Product Development	✓	✓	✓	✓
	Processes streamlining, Improvement and Automation	✓	✓	✓	✓
	Optimizing Business Performance with Predictive Insights	✓	✓	✓	✓
Unlocking Value from AI-Enabled Customer Insights	CX Outcomes	✓	✓		
	Business Value Generation	✓	✓	✓	✓
	Targeted Customer Acquisition	✓	✓	✓	✓
	Proactive Customer Retention	✓	✓	✓	
	Customer Loyalty and Advocacy Enhancement	✓	✓	✓	✓
	Personalised Upsell and Cross-Sell	✓	✓		

5.6.1 Telecom cases – Cross-case Analysis

In the "Customer Experience Data and Insights" dimension, the four cases exhibit diverse approaches. Teleco A emphasizes comprehensive customer data collection from various channels, utilizing open-source systems. The aim is to gain insights into customer behaviour and preferences, ultimately enhancing the overall customer experience. Teleco B highlights the importance of multiple data sources, including transactional data and customer interactions, to gather customer experience data. Their focus is on analysing this data for actionable insights, driving targeted marketing campaigns, and improving overall customer satisfaction. Bank A collects customer experience data from various touchpoints like social media, online reviews, and surveys. They stress the importance of analysing this data to understand customer preferences and sentiment, enabling personalized experiences and enhancing customer satisfaction. Similarly, Bank B relies on customer feedback and sentiment analysis to gather customer experience data, with a strong emphasis on understanding customer emotions and pain points to enhance the overall customer experience. These approaches underscore the commitment of these organizations to collect and analyse customer experience data, with the ultimate goal of delivering personalized interactions, addressing pain points, and enhancing overall satisfaction.

Turning to the "Customer Intelligence" dimension, the four cases demonstrate distinct approaches. Teleco A uses customer data analysis and advanced analytics to understand customer behaviour and improve the customer experience, with churn modelling as a notable application. Teleco B focuses on leveraging customer intelligence to optimize operations, deliver exceptional customer experiences, and enhance overall satisfaction, using advanced analytics techniques like machine learning for churn prediction and personalized customer understanding. Bank A utilizes customer intelligence to design customer experiences that optimize channels, streamline processes, and drive innovation. Their strategies include targeted customer acquisition, proactive customer retention, and personalized offerings. In contrast, Bank B stresses the importance of customer intelligence in understanding customer needs and preferences. They employ customer segmentation and profiling to tailor marketing strategies, enhance product offerings, and deliver personalized experiences. These approaches highlight the organizations' dedication to using customer intelligence to better understand customer behavior, optimize operations, and deliver tailored experiences, ultimately enhancing overall customer satisfaction.

In the "Actioning AI-Driven Customer Insights" dimension, the four cases present varied approaches. Teleco A aims to automate processes and gain real-time insights into customer behaviour through business analytics and AI, with the goal of enhancing customer satisfaction

and driving business value. Teleco B discusses integrating AI technologies like Robotic Process Automation (RPA) and real-time campaign management systems triggered by AI. They use AI-driven customer intelligence to optimize internal processes, improve efficiency in handling customer interactions, and deliver targeted marketing campaigns. Bank A emphasizes using AI-driven customer intelligence to automate customer interactions, personalize recommendations, and deliver seamless experiences across channels. They highlight AI's role in real-time decision-making and enhancing customer engagement. In Bank B, AI and machine learning algorithms are leveraged to automate and optimize customer interactions, with a focus on using AI-driven customer intelligence to deliver personalized offers, improve customer support, and enhance the overall customer experience. These cases demonstrate the organizations' commitment to leveraging AI-driven customer intelligence for process optimization, personalized interactions, and delivering value-added experiences to their customers.

Finally, in the dimension of "Unlocking Value from AI-Enabled Customer Insights," the four cases showcase different approaches and objectives. Teleco A emphasizes the importance of unlocking value to drive top-line growth and profitability, with a specific focus on customer satisfaction and the use of advanced data science capabilities. Teleco B discusses unlocking value through targeted marketing campaigns, improved customer retention, and personalized experiences, with an emphasis on revenue growth and return on investment. Bank A highlights the use of AI-enabled customer intelligence to optimize business processes, improve operational efficiency, and drive innovation, with a specific focus on enhancing customer lifetime value and increasing market share. These cases collectively emphasize the significance of prioritizing the customer experience, leveraging customer data and intelligence, and employing advanced analytics techniques to derive actionable insights for better decision-making. While they differ in industry focus, data collection channels, application of AI-driven customer intelligence, and value unlocking objectives, they share a common commitment to enhancing customer satisfaction and loyalty by collecting and analysing data from various touchpoints to gain insights into customer behaviour, preferences, and sentiment.

5.6.2 Banking cases – Cross-case Analysis

In Bank B, interviews underscore the importance of unlocking value by understanding customer needs and preferences at a granular level, utilizing AI to create personalized experiences, drive customer loyalty, and generate long-term value. These cases illustrate the diverse ways in which organizations aim to unlock value from AI-enabled customer intelligence, with objectives ranging from financial growth to operational efficiency and customer-centric outcomes.

The four cases emphasize the importance of prioritizing the customer experience and leveraging customer data and intelligence to enhance satisfaction and loyalty. Each case recognizes the significance of collecting and analysing customer data from various touchpoints to gain insights into customer behaviour, preferences, and sentiment, and highlights the use of advanced analytics techniques to derive actionable insights and improve decision-making processes. However, they differ in terms of industry focus, data collection channels, application of AI-driven customer intelligence, and value unlocking objectives. Each case belongs to a distinct industry, leading to industry-specific challenges and data sources. The channels used for data collection vary, with emphasis placed on different touchpoints. For example, Teleco A emphasizes operational data, Teleco B emphasizes transactional data, Bank A emphasizes social media and online reviews, and Bank B emphasizes customer feedback. The application of AI-driven customer intelligence differs across the cases, focusing on real-time insights, internal process optimization, customer engagement, or personalized offers. Lastly, the value unlocking objectives vary, with an emphasis on top-line growth, revenue growth, operational efficiency, or customer loyalty. These differences reflect the unique contexts and priorities of each industry and organization in leveraging customer intelligence for business success. For example, Teleco A emphasizes top-line growth and profitability, Teleco B focuses on revenue growth and ROI, Bank A highlights operational efficiency and innovation, and Bank B emphasizes customer loyalty and long-term value generation.

Both Case C and Case D showcase the value of leveraging customer data, insights, and AI-driven customer intelligence to optimize business performance, enhance customer experiences, and achieve business objectives. They highlight the importance of data-driven decision-making and personalization to drive customer satisfaction and loyalty. Both Case C and Case D demonstrate the significance of utilizing customer data and insights to enhance the customer experience and generate tangible business value. They both conduct surveys to gather customer feedback and measure satisfaction levels, which helps them understand customer needs and areas for improvement.

Regarding customer insights, Case C focuses on correlating transactional data and analysing various KPIs to gain deeper insights into customer behaviour and evaluate their performance in customer experience. On the other hand, Case D emphasizes the use of predictive models, including churn prediction models, to anticipate customer behaviour and trends, and they measure specific metrics to gauge their success.

In terms of Actioning AI-Driven customer insights, Case C adopts AI algorithms like robotic process automation (RPA) to improve business operations and enhance the customer experience. In contrast, Case D fully harnesses the potential of AI-driven customer intelligence, utilizing AI models to make data-driven decisions and offer personalized services and

recommendations. Regarding Unlocking Value from AI-Enabled Customer Insights, both cases prioritize providing personalized offers and cross-selling opportunities based on customer preferences. They recognize the power of data and AI in predicting customer behaviour and improving customer experience. Furthermore, both cases acknowledge the importance of striking a balance between personalization and avoiding overwhelming customers.

Case C: In this case, the bank effectively utilizes various types of data, such as demographic, behavioural, transactional, and operational data. Benchmarking studies contribute to their comprehensive data collection and analysis from multiple sources. Additionally, customer feedback gathered through surveys aids in measuring satisfaction levels and identifying areas for improvement in their customer experience. Case D: Similarly, Case D leverages a range of data, including demographic, behavioural, transactional, and operational data, to ensure comprehensive data collection from diverse sources. Conducting surveys is also part of their strategy to gather valuable customer experience data, which helps them identify improvement areas and enhance overall customer experience.

Case C: In Case C, the bank correlates transactional data with information from card providers, networks, switches, and other systems. This correlation helps them gain deeper insights into customer behaviour. Additionally, they measure various KPIs, such as acceptance ratio, reject reasons, turnaround time, service time, and waiting time, to evaluate their performance in customer experience. Case D: In contrast, Case D prioritizes customer intelligence to understand customer needs, preferences, and pain points. They rely on metrics like the number of funded accounts and debit transactions to gauge success and drive continuous improvement. Moreover, they utilize predictive models, including churn prediction models, to anticipate customer behaviour and trends.

Case C: In this case, the bank adopts AI algorithms, such as robotic process automation (RPA), to improve business operations and customer experience. Personalized offers based on customer preferences are one of their key objectives, powered by AI-driven insights. Case D: On the other hand, Case D fully embraces AI-driven customer intelligence, utilizing AI models for data-driven decision-making, achieving objectives, and offering personalized services and recommendations based on customer preferences.

Case C: For Case C, unlocking value through AI-enabled customer intelligence involves providing personalized offers and cross-selling opportunities tailored to individual needs and preferences. The recognition of data and AI's predictive power is evident in their approach to predicting customer behaviour and enhancing customer experience. Case D: Similarly, Case D aims to unlock value from AI-enabled customer intelligence by offering personalized services and recommendations. They also acknowledge the importance of striking a balance between personalization and avoiding overwhelming customers with excessive data-driven insights.

5.7 Theme 6: Harnessing AI Capabilities

Harnessing AI Capabilities theme explores into the potential of AI in various disciplines, focusing on how organizations can effectively leverage AI to drive innovation, efficiency, and informed decision-making. This theme comprises four key categories that intersect across multiple case studies, providing a comprehensive understanding of harnessing AI capabilities. The categories of Objective of AI, Challenges of Utilizing AI, AI-Enabled Data to Intelligence Analytics, and AI-Enabled Insights to Actions Analytics lay the foundation for exploring the possibilities and implications of AI adoption. Through the examination of these case studies, we gain valuable insights into the objectives and goals of AI implementation, the challenges faced in effectively utilizing AI technologies, the process of transforming AI-enabled data into actionable intelligence, and the utilization of AI-driven insights to drive tangible actions and outcomes, as shown in the cross-case comparison in table 5-6. Please refer to Appendix V for Cross-case analysis table for the theme of Harnessing AI capabilities.

Table 5-6 Cross-case analysis across cases - Theme 6

Category	Code	Teleco A	Teleco B	Bank A	Bank B
Objective of AI	Personalised Customer Experiences	✓	✓	✓	✓
	Improved Customer Segmentation	✓	✓	✓	✓
	Enhanced Customer Service	✓	✓	✓	✓
	Automated Marketing Campaigns	✓	✓	✓	✓
	Enhanced Customer Feedback Analysis	✓	✓	✓	✓
Challenges of utilising AI	Data Quality	✓	✓	✓	
	Data Accuracy and availability	✓	✓		
	Lack of Skilled AI Talent	✓	✓		
	Text Analytics	✓	✓		✓
	Sentiment Analysis	✓	✓	✓	✓

AI-Enabled Data to Intelligence Analytics	Market Insights and Analysis	✓	✓	✓	✓
AI-Enabled Intelligence to Actions Analytics	Machine Learning	✓	✓	✓	✓
	Predictive Analytics	✓	✓	✓	✓
	Marketing Optimization	✓	✓		
	Neuroscience Analytics		✓	✓	
	Recommender System	✓	✓	✓	✓

5.7.1 Telecom cases – Cross-case Analysis

The findings from the two cases highlight the transformative potential of AI capabilities in reshaping customer interactions and personalizing experiences. Teleco A strategically utilizes AI technologies such as recommendation engines and machine learning models to bolster customer value management (CVM) and forecast customer complaints and behaviour. This approach underlines the significance of addressing challenges associated with data linkage and aggregation, as well as maintaining data quality standards. Furthermore, Teleco A underscores the complexities related to integrating AI and machine learning into existing operations, particularly concerning the management of vast data volumes.

Conversely, Teleco B concentrates on harnessing AI to influence customer behaviour and segmentation through micro-segmentation techniques. This approach prioritizes the seamless integration of AI capabilities within the CVM team and emphasizes the use of digital services for customer acquisition and retention. Teleco B extends its AI implementation to enhancing customer service, process optimization, and the delivery of personalized offers. Both cases share an acknowledgment of the need for quantifiable metrics to measure the success of AI initiatives, and they stress the importance of promoting AI and big data analytics within their respective organizations.

A detailed examination of the distinctions between the four cases enables a comprehensive understanding of the diverse roles that AI plays in each context. Firstly, the objectives for AI implementation differ across the cases, reflecting unique goals and priorities within each organizational setting. Teleco A directs its AI efforts toward enhancing CVM and customer experience, aiming to optimize operations, increase revenues, and provide personalized interactions. This emphasis underscores the organization's commitment to enhancing customer value and satisfaction. On the other hand, Teleco B adopts AI to elevate the customer experience through digitalization and AI technologies, seeking to drive customer behaviour,

facilitate upselling and cross-selling opportunities, enhance customer service, and achieve operational excellence. The focal point here is on leveraging AI to offer exceptional customer experiences and leveraging digital channels' potential.

The disparities in AI implementation objectives across the four cases may stem from the distinct customer experience strategies and customer intelligence approaches employed by each organization. For instance, Teleco A's strong emphasis on CVM aligns with its overarching strategy of prioritizing customer satisfaction and augmenting customer value. In contrast, Teleco B's AI objective aligns with its customer experience strategy, which revolves around harnessing technology to deliver remarkable and seamless customer experiences.

The challenges confronted by each case in utilizing AI provide valuable insights. Teleco A faces difficulties in linking and aggregating data from diverse sources, requiring effective data integration solutions. Additionally, balancing personalization and privacy concerns is challenging, particularly as devices become more personalized. The scarcity of experienced AI and data science professionals necessitates training to bridge the skills gap, often relying on fresh graduates. Teleco B, on the other hand, encounters potential customer frustration stemming from rigid AI systems with limited flexibility. The scarcity of technical resources skilled in AI implementation poses challenges in recruiting and retaining qualified professionals.

The dimension of AI-Enabled Data to Insights Analytics prominently figures in all four cases, emphasizing the importance of AI in extracting valuable insights from various data sources. In Teleco A, AI facilitates the transformation of data into intelligence using tools like text analytics, sentiment analysis, and market insights analytics. Surveys and market research serve as pivotal tools for comprehending customer satisfaction, with sentiment analysis evaluating public opinion. The integration of intelligence analytics into decision-making processes is paramount. Teleco B employs AI-Enabled Data to Insights Analytics to analyze sentiment derived from customer interactions in call centers. This analysis empowers the company to predict customer satisfaction levels and enact appropriate actions. AI is also leveraged in marketing activities to predict customer churn and execute strategies to retain customers, thereby enhancing the organization's intelligence analytics capabilities.

The variations in the utilization of AI-Enabled Data to Insights Analytics across the four cases can be attributed to factors such as technology readiness, AI-related skills, and the nature of the services provided. Teleco A and Bank A demonstrate a high level of readiness concerning technological infrastructure and capabilities. In contrast, Teleco B and Bank B may necessitate a more gradual AI adoption. Additionally, differences in AI-related skills affect the scope and depth of data analytics capabilities. The nature of services provided further contributes to disparities, with each case optimizing AI applications to suit industry-specific needs.

AI-Enabled Insights to Actions Analytics is prominently featured across the four cases, underlining the utilization of AI to translate intelligence insights into actionable outcomes. Teleco A employs AI insights to validate assumptions, resolve issues, introduce new products or communication strategies, target specific customer segments, and explore new engagement channels. Use cases such as churn prediction and predictive models in marketing exemplify AI's practical applications. Teleco B focuses on enhancing the customer experience by employing AI tools in call centre operations, real-time feedback analysis, and customer categorization to improve service quality. Notably, AI is used to capture real feedback and predict churners, enabling proactive measures to retain valuable customers. In Bank A, AI facilitates data analysis to monitor and mitigate risks inherent in banking operations, emphasizing efficiency and risk management. Bank B employs AI to predict customer behaviour and proactively address their needs, optimizing customer service through interactive voice response (IVR) systems. These differences stem from variations in customer journeys, customer expectations, and brand promises within each industry.

In summary, Teleco A and Teleco B highlight the importance of AI in enhancing customer experiences and improving operational efficiency within the telecommunications sector. They both prioritize customer satisfaction, engagement, and retention, facing shared challenges in data management and AI skill scarcity. These cases leverage AI-Enabled Data to Insights Analytics to gain insights from diverse data sources and AI-Enabled Insights to Actions Analytics to proactively enhance customer experiences.

AI-driven customer intelligence serves as a linchpin for enhancing customer experiences and shaping customer-centric strategies across diverse industry sectors. The comparative analysis between Case A and Case B reveals a shared commitment to leveraging AI for improving customer satisfaction, engagement, and retention. Each case, while having unique challenges and approaches, underscores the transformative potential of AI in the customer-centric paradigm. The distinctive strategies and objectives pursued by Case A and Case B are rooted in their respective customer experience strategies and the digital transformation of their industry sectors.

Teleco A prioritizes customer value management (CVM) and aims to optimize operations, increase revenues, and provide personalized interactions to enhance customer satisfaction. The organization embraces AI as a means to transform raw data into actionable intelligence, enabling data-driven decision-making and a competitive edge. In contrast, Telco B focuses on using AI to enhance the customer experience by leveraging digitalization and AI technologies. Their objective is to drive customer behaviour, capitalize on upselling and cross-selling opportunities, enhance customer service, and achieve operational excellence. The emphasis here is on harnessing AI to provide remarkable and seamless customer experiences while leveraging the potential of digital channels.

The distinctive objectives of AI implementation in these cases can be attributed to the specific customer experience strategies and customer intelligence approaches adopted by each organization. Teleco A places a strong emphasis on CVM and seeks to optimize operations, increase revenues, and provide personalized interactions to customers. This aligns with the organization's customer experience strategy, which revolves around prioritizing customer satisfaction and enhancing customer value. In contrast, Case B's focus on enhancing the customer experience through digitalization and AI technologies reflects a customer experience strategy centred around leveraging technology to deliver exceptional and seamless customer experiences.

Challenges encountered by these cases in utilizing AI shed light on the complexities and obstacles faced in the journey towards AI-driven customer intelligence. Teleco A grapples with challenges related to data linkage and aggregation, the balance between personalization and privacy, data quality, and a shortage of experienced AI and data science professionals. On the other hand, Teleco B faces potential customer frustration with inflexible AI systems, scarcity of technical resources skilled in AI, and the associated recruitment and retention challenges.

The dimension of AI-Enabled Data to Insights Analytics plays a pivotal role in both cases, highlighting the significance of AI in extracting valuable insights from diverse data sources. In Teleco A, AI is employed to transform data into intelligence through techniques such as text analytics, sentiment analysis, and market insights analytics. Surveys and market research serve as crucial tools for understanding customer satisfaction, while sentiment analysis evaluates public opinion. The integration of intelligence analytics into decision-making processes is emphasized. Similarly, Teleco B utilizes AI-Enabled Data to Insights Analytics to analyze sentiment derived from customer interactions in call centres. This analysis enables the prediction of customer satisfaction levels and informs appropriate actions. AI is also harnessed in marketing activities to predict customer churn and execute strategies to retain customers, enhancing the organization's intelligence analytics capabilities.

Differences in the utilization of AI-Enabled Data to Insights Analytics between the two cases can be attributed to factors such as technology readiness, AI-related skills, and the nature of the services provided. Teleco A and Teleco B demonstrate a varying level of readiness in terms of technological infrastructure and capabilities. While Teleco A has invested in acquiring or developing the necessary talent to effectively leverage AI for data analysis, Case B may require a more gradual adoption of AI-enabled analytics. Additionally, differences in AI-related skills influence the scope and depth of their data analytics capabilities. The nature of services provided further contributes to disparities, with each case optimizing AI applications to suit industry-specific needs.

AI-Enabled Insights to Actions Analytics takes centre stage in both cases, emphasizing AI's role in translating intelligence insights into actionable outcomes. In Case A, insights derived from

AI-enabled intelligence analytics lead to various actions, including validating assumptions, resolving issues, introducing new products or communication strategies, targeting specific customer segments, and exploring new engagement channels. Use cases such as churn prediction and predictive models in marketing exemplify the practical applications of AI. Additionally, AI-driven solutions like chatbots, voice-bots, and smart IVR systems are employed to enhance customer interactions and operational efficiency. In Case B, the organization focuses on enhancing the customer experience by utilizing AI tools in call centre operations, real-time feedback analysis, and customer categorization to improve service quality. Notably, AI is used to capture real feedback and predict churners, enabling proactive measures to retain valuable customers. Both cases showcase the transformative potential of AI-Enabled Insights to Actions Analytics in driving customer-centric strategies.

Both Teleco A and Teleco B highlight the pivotal role of AI-driven customer intelligence in reshaping customer experiences and informing customer-centric strategies. While they share commonalities in their commitment to customer satisfaction and engagement, each case offers a unique perspective shaped by its industry, customer experience strategy, and AI implementation challenges. These cases serve as valuable examples of how AI-driven customer intelligence can drive meaningful transformations in diverse organizational contexts.

5.7.2 Banking cases – Cross-case Analysis

In Bank A, the findings highlight the efficiency and convenience of the bank's account activation process, which allows customers to spend only 10 minutes at the Bank A instead of hours. This rapid and efficient process has led to higher customer satisfaction and increased revenues for the bank. Additionally, the bank utilizes artificial intelligence to analyse customer transactions and behaviour patterns, enabling the detection and prevention of potential fraud cases. This implementation of AI has significantly improved the security of customer accounts. In Bank B, the findings from the interviewees shed light on the objectives behind incorporating AI into banking practices, such as better understanding customer behaviour, predicting customer needs, and delivering personalized experiences. The interviewees recognize the potential benefits of AI but also acknowledge the challenges associated with its implementation. They highlight the importance of regulatory compliance and ethical considerations in AI adoption, ensuring data privacy, security, and transparency. The successful integration of AI into banking operations relies on employee training and adoption, with a focus on developing the right mindset and skills. The application of AI-enabled data analytics is discussed, including predictive analytics and sentiment analysis, as tools to analyse customer data and gain valuable insights.

In Bank A, AI is primarily employed in the banking sector for data analysis, insights generation, and predictive capabilities. The objective revolves around understanding customer behaviour,

improving overall performance, identifying business opportunities, and enhancing security for customer accounts. AI is viewed as a tool to derive valuable insights from data, enabling informed decision-making and risk mitigation. Finally, in Bank B, the objective of implementing AI in banking is centred on better understanding customer behaviour, predicting customer needs, delivering personalized experiences, and increasing customer loyalty and satisfaction. AI is seen as a means to extract hidden information from vast amounts of data and utilize it for actionable purposes. The focus is on utilizing AI-driven insights to enhance the customer journey and foster stronger customer relationships.

In Bank A, the objective of utilizing AI for data analysis, insights generation, and predictive capabilities aligns with the organization's customer experience strategy of understanding customer behaviour, improving overall performance, identifying business opportunities, and enhancing security for customer accounts. The focus on data-driven insights and informed decision-making is a key aspect of the customer intelligence approach employed by the bank. Similarly, Bank B's objective of better understanding customer behaviour, predicting customer needs, delivering personalized experiences, and fostering customer loyalty can be linked to its customer experience strategy. By utilizing AI-driven insights, the organization aims to create tailored experiences and build stronger customer relationships, reflecting a customer-centric approach.

In Bank B, the challenges identified are related to employee training and adoption of AI within banking operations. The organization acknowledges that comprehensive training programs are needed to equip employees with AI-related skills. This training aims to facilitate the integration of AI technologies and foster a culture of continuous learning and innovation within the organization. Overcoming these challenges is essential to fully leverage the potential of AI in banking operations.

The dimension of AI-Enabled Data to Insights Analytics is prevalent across the four cases, showcasing the significance of leveraging AI to extract valuable insights from various data sources. This analysis allows the company to predict customer satisfaction levels and take appropriate actions. Additionally, AI is employed in marketing activities to predict customer churners and implement strategies to retain customers, further enhancing the company's intelligence analytics capabilities. Shifting to Bank A, AI plays a pivotal role in data analysis within the banking sector. Banks utilize AI to analyse customer transactions and behaviour patterns, enabling them to detect potential fraud cases and enhance security for customer accounts. Advanced analytics and machine learning techniques are harnessed to monitor and mitigate risks inherent in banking operations, showcasing the power of AI-Enabled Data to Insights Analytics in the domain of risk management. In Bank B, the organization employs AI technologies to analyse large volumes of data and transform it into actionable intelligence. Predictive analytics and basic customer analysis are utilized to gain a comprehensive

understanding of customer behaviour. By leveraging AI-enabled data to intelligence analytics, the organization can make informed decisions based on valuable insights generated from data analysis.

The differences in the utilization of AI-Enabled Data to Insights Analytics across the four cases can be explained by considering factors such as technology readiness, skills for AI, and the nature of the services provided. Firstly, the differences can be attributed to the varying levels of technology readiness among the organizations. Bank A emphasize the integration of advanced analytics tools and machine learning techniques to transform data into intelligence. These organizations demonstrate a higher level of readiness in terms of technological infrastructure and capabilities, enabling them to effectively harness AI for data analysis and insights generation. In contrast, Bank B may have different levels of readiness, possibly requiring a more gradual adoption of AI-enabled analytics.

Secondly, the skills and expertise in AI within each organization play a significant role. Bank A highlight the importance of skilled professionals in data analytics and machine learning. These organizations may have invested in acquiring or developing the necessary talent to effectively leverage AI for data analysis. In comparison, Bank B may have varying degrees of proficiency in AI-related skills, which can influence the scope and depth of their data analytics capabilities. Furthermore, the nature of the services provided by each organization contributes to the differences observed. In the banking sector, Bank A utilizes AI to analyse customer transactions and behaviour patterns, with a specific focus on fraud detection and risk management. The nature of banking services necessitates a robust data analytics infrastructure to monitor and mitigate potential risks. Bank B adopts a broader approach to data analysis, employing AI technologies to analyse large volumes of data and gain a comprehensive understanding of customer behaviour. This reflects a customer-centric focus and the organization's commitment to leveraging data-driven insights for informed decision-making.

The dimension of AI-Enabled Insights to Actions Analytics is prominent across the four cases, showcasing the utilization of AI to translate intelligence insights into actionable outcomes. In Bank A, the bank adopts an evaluative approach to AI-Enabled Insights to Actions Analytics by utilizing control groups and comparing outcomes with model predictions. This evaluation method allows the organization to assess the impact of AI and machine learning initiatives. Additionally, machine learning algorithms are employed to identify bottlenecks in services and drive necessary system changes, ultimately enhancing the overall customer experience. In Bank B, the implementation of AI is aimed at predicting customer behaviour and proactively addressing their needs. AI is leveraged in interactive voice response (IVR) systems to facilitate faster and more efficient customer service. By leveraging AI-enabled intelligence to actions analytics, the organization can tailor their actions to anticipate and fulfil customer expectations effectively.

The differences in the utilization of AI-Enabled Insights to Actions Analytics across the four cases can be explained by considering factors such as customer journey and touchpoint differences, customer expectations, and brand promise. Firstly, the differences can be attributed to the unique characteristics of the customer journey and touchpoints within each industry. Shifting to the banking sector, Bank A adopts an evaluative approach to AI-enabled intelligence to actions analytics. The organization utilizes control groups and compares outcomes with model predictions, allowing them to assess the impact of AI and machine learning initiatives. This evaluation method helps Bank A make informed decisions and refine their actions based on the insights generated. Additionally, the bank employs machine learning algorithms to identify bottlenecks in services and drive necessary system changes, ultimately enhancing the overall customer experience. This reflects the banking industry's emphasis on efficiency, risk management, and continuous improvement. In Bank B, the implementation of AI focuses on predicting customer behaviour and proactively addressing their needs. The organization leverages AI-Enabled Insights to Actions Analytics in interactive voice response (IVR) systems, facilitating faster and more efficient customer service. By utilizing AI, Bank B can tailor their actions to anticipate and fulfil customer expectations effectively. This aligns with the banking industry's commitment to personalized experiences and customer-centricity.

Bank A and Bank B highlight the significant role of AI in understanding customer behaviour, improving performance, and delivering personalized experiences in the banking sector. They share common challenges related to employee training and skill development for successful AI integration. While Bank A focuses on building core competencies and an organizational structure, Bank A emphasizes the importance of a team with the right mindset and skills. In terms of AI-enabled data analytics, both cases emphasize the use of AI to analyse customer behaviour and extract valuable insights from data. Similarly, they both discuss the translation of AI-driven intelligence into actionable steps, with a focus on predicting customer behaviour and providing proactive solutions. However, Bank A additionally mentions offering personalized discounts and cross-selling opportunities based on customer behaviour, which is not explicitly mentioned in Bank A.

Bank A and Bank B demonstrate the significance of harnessing AI capabilities in the banking sector. While they share common themes, they differ in specific applications and approaches to leveraging AI for enhancing customer experiences and operational efficiency. AI continues to be a driving force in the banking industry, empowering organizations to better understand their customers, make informed decisions, and deliver personalized experiences that drive customer loyalty and satisfaction.

Bank A emphasizes leveraging AI to understand customer behaviour, improve overall organizational performance, identify business opportunities, and deliver personalized experiences. The organization focuses on analysing vast amounts of data to gain actionable

insights and make informed decisions. The objective is to enhance customer satisfaction and loyalty through targeted offers and proactive actions. On the other hand, Bank A places a specific emphasis on using AI to better understand customer behaviour, predict customer needs, and deliver personalized experiences. The organization aims to increase customer loyalty and satisfaction through tailored services. AI is considered a valuable tool for leveraging data-driven insights to anticipate customer preferences and enhance their overall banking experience.

Both Bank A and Bank B acknowledge challenges related to incorporating AI effectively into banking operations. Bank A highlights the importance of building core competencies and a suitable organizational structure to fully leverage AI capabilities. Collaboration between business and data teams is deemed essential to extract maximum value from AI, requiring comprehensive training programs to overcome employee skill gaps and foster a culture of continuous learning. In contrast, Bank B emphasizes successful integration through employee training and the adoption of AI technologies and practices. The organization emphasizes the significance of having a team with the right mindset and skills to advise business users on alternative reporting formats and overcome employee skill gaps effectively.

In Bank A, AI-enabled data analytics involves analysing customer transactions and behaviour patterns to detect and prevent fraud cases. The organization employs advanced analytics techniques, such as predictive analytics and clustering, to understand customer behaviour and provide personalized offerings. The focus is on utilizing data to gain valuable intelligence for informed decision-making and offering tailored experiences to customers. Similarly, Bank B utilizes AI-enabled data analytics, particularly predictive analytics, to analyse customer data and extract valuable insights. The organization aims to gain meaningful intelligence from vast volumes of data for informed decision-making and customer understanding.

Both Bank A and Bank B emphasize leveraging AI-driven intelligence to predict customer behaviour and take proactive measures in banking operations. Bank A mentions employing AI in interactive voice response (IVR) systems to enable faster and more efficient customer service. Additionally, AI is utilized to offer personalized discounts, services, and cross-selling opportunities based on customer behaviour. Bank B also emphasizes translating AI-driven intelligence into actionable steps by predicting customer behaviour and taking proactive measures to address their needs effectively. The organization implements AI in IVR systems to improve customer service and efficiency.

5.8 Chapter Summary and Cross-case Key Findings

In this chapter, a comprehensive cross-case analysis was conducted to build upon the insights gained from the earlier within-case analysis. The purpose of this analysis was to investigate deeper into the dataset and explore the interactions and relationships between the individual

cases, aiming to identify overarching themes and patterns related to the role of AI in actioning customer insights to manage customer experience. The conclusions drawn from the cross-case analysis laid the groundwork for the subsequent discussion chapter, where new insights from both the within-case and cross-case analyses would inform the development of a novel model for optimizing customer experience through AI integration.

The cross-case analysis encompassed various methods and approaches, including pattern matching and explanation building. By comparing and contrasting findings across the cases, researchers identified commonalities, variations, and relationships, providing valuable insights into the complex interplay between different variables and contextual factors.

This analysis served as a bridge between the individual cases and the broader research questions, strengthening the internal validity and enhancing the credibility and generalizability of the research outcomes. By validating or modifying the initial conceptual model based on empirical findings, the cross-case analysis contributed to a more nuanced and comprehensive understanding of leveraging AI to manage customer experience.

The cross-case analysis provides insights into strategic customer experience management in the telecom and banking sectors. It underscores the importance of aligning brand promises with actual service delivery, comprehending customer perceptions, and fostering a customer-centric organizational culture. These insights serve as valuable reference points for businesses seeking to enhance their customer experience strategies, leading to improved customer satisfaction and loyalty. Furthermore, this analysis bridges individual case studies with broader research questions, enriching the conceptual model and augmenting the understanding of leveraging AI to optimize customer experiences.

The cross-case analysis highlighted the importance of understanding customer needs, optimizing touchpoints, and iteratively improving the customer journey. It underscored the significance of technology-driven approaches, customer-centricity, and data-driven decision-making in achieving customer satisfaction and competitive advantage. The differences in the approaches and strategies stem from the distinct industries, customer bases, and unique goals and challenges faced by each organization. The findings from the cross-case analysis provided valuable insights for organizations seeking to improve their customer journey management strategies. By understanding the diverse approaches and practices adopted by these organizations, businesses can tailor their own customer journey management strategies to enhance customer satisfaction and gain a competitive edge in today's dynamic business landscape. The next chapter will build upon the insights gained from the within-case and cross-case analyses to develop a comprehensive framework that captures the complexities of customer journey management and leverages AI to optimize the customer experience effectively.

The cross-case analysis reveals distinct approaches and common themes in enhancing customer experience through agile customer journey management in the telecom and banking industries. The findings provide valuable insights for organizations seeking to improve their customer experience strategies, emphasizing the importance of organizational capabilities, agile methodologies, and holistic alignment to achieve customer-centricity and business success.

The cross-case analysis underscores the importance of customer intelligence and data-driven insights in enhancing customer experience. Both the telecom and banking sectors emphasize the significance of understanding customer behavior and preferences to drive personalized interactions and targeted marketing efforts. The strategies and tools used may vary between cases, reflecting the unique approaches of each organization, but the common theme is the recognition of customer-centricity as a key driver of success in the modern business landscape.

In terms of capabilities and analytics, both cases stress the need for organizations to build data analytics capabilities and leverage data effectively. They acknowledge the importance of predictive analytics, geolocation analytics, and business intelligence tools in gaining actionable insights. Both cases also recognize the importance of nurturing internal talent and expertise to stay competitive and avoid high turnover rates. Lastly, personalization is highlighted by both cases as a crucial aspect of their customer intelligence approach. They emphasize understanding customer preferences, tracking customer interactions, and segmenting customers based on their behaviors and preferences. Behavioral models, touchpoint feedback, location data, and surveys are mentioned as tools to gain insights into customer behavior and preferences.

The four cases in each industry prioritize the customer experience, leveraging customer data, insights, and AI-driven intelligence to improve satisfaction and loyalty. They differ in industry focus, data collection channels, AI application, and value unlocking objectives, reflecting their unique contexts and priorities. However, they all recognize the importance of data-driven decision-making, personalization, and leveraging AI technologies to deliver enhanced customer experiences and generate tangible business value.

The utilization of AI-Enabled Data to Insights Analytics is prevalent across the banking cases. Both banks employ AI to transform data into actionable intelligence, with a focus on understanding customer behaviour and gaining valuable insights from data analysis. The differences in utilization can be attributed to technology readiness, skills in AI, and the nature of the services provided by each organization.

6 Discussion and Conclusions

The objective of this chapter is to examine the previously presented findings pertaining to the research questions and the theoretical perspective outlined in the literature review. Through careful analysis and integration of the data, this chapter aims to propose theoretical insights derived from the research. These insights will serve as a basis for formulating conclusions and recommendations within the context of the newly developed framework. In this chapter, the study examines the results and engage in a comprehensive discussion of their implications.

The objective of this multiple case study-based research was to investigate the role of AI in actioning customer insights throughout the customer journey to manage customer experience (CXM) and how organizations assess the value of AI-derived customer insights. The study conducted an in-depth exploration of this contemporary phenomenon within its real-life context, employing a multiple embedded case study design. The study adopted a critical realist philosophical stance, which recognizes the existence of three disciplines: the empirical, the actual, and the real. By acknowledging the underlying mechanisms and structures that influence the observed empirical phenomena, the study aimed to uncover the depth of the role of AI in managing customer experience and the value assessment of AI-derived customer insights.

This chapter encompasses the presentation of the discourse and conclusions derived from the analysis put forth in Chapter 4, which entails the within-case analysis, as well as Chapter 5, encompassing the cross-case analysis. The chapter also addresses the pivotal research questions that serve as the core focus of this study, as restated again below:

- RQ1 – “What is the role of AI on the process of actioning customer insights throughout the CJ to understand and manage CX?”
- RQ2 - “How do organisations incorporate AI technologies into the customer insight to action process to understand and manage CX?”
- RQ3 - “How do organisations use AI-derived customer insights to understand and manage CX?”
- RQ4 – “How do organisations assess the value of actioning customer insights derived from AI?”

The objective of this chapter is to systematically proceed through the presented data, thereby extracting emergent themes resulting from the analysis of diverse methodological findings. This interpretation is substantiated by referencing relevant theoretical literature and prior research studies to support the arguments posited in this study.

The chapter is structured as follows: Firstly, a comprehensive conceptual framework is constructed. Secondly, it entails the examination and summary of the significant overarching themes, accompanied by an analysis of the relevant literature from the existing body of knowledge. Finally, a summary of the discussion is provided, synthesizing the principal issues and consolidating the findings of the study.

6.1 Building the Conceptual Framework

Theory elaboration in the case study approach refers to the process of refining, expanding, or extending existing theories or conceptual frameworks based on empirical findings obtained through the analysis of specific cases (Smith et al., 2017). Case studies serve as a lens for understanding the phenomenon under investigation and can challenge or go beyond initial theories as new insights and patterns emerge (Yin, 2018). The process of theory elaboration integrates empirical evidence from the case study to refine or modify existing theories, adding new dimensions, variables, or relationships based on observed patterns and findings (Eisenhardt, 1989). Through theory elaboration, case studies contribute to the advancement of knowledge by refining and validating theoretical concepts, enhancing their explanatory power and practical utility (Flyvbjerg, 2006). This iterative process of theory elaboration through case study research fosters the development and evolution of theory (Eisenhardt & Graebner, 2007). The theory elaboration model adopts an abductive logic, by which theoretical insights and empirical data are systematically combined (Dubois & Gadde, 2002; Gioia et al., 2013). The abductive logic employed in the theory elaboration model aligns with critical realism, as it allows for the discovery of new insights and the refinement of existing theories based on empirical evidence (Ketokivi & Choi, 2014). In this mode, theoretical insights and empirical data are given equal weight and are integrated in a way that enables the study to challenge and expand existing theories, as elaborated in the following section.

The study has yielded six themes identified through within-case and cross-case analysis. Delving into the interconnections and variations across cases, the research not only aims to build a model but also advances the theoretical understanding of the role of AI in actioning customer insights to manage customer experience throughout the customer journey.

The six themes that emerged from the qualitative case study will be restated and summarized as below, to prepare for the construction of the conceptual framework. These themes, identified through within-case and cross-case analysis, encapsulate the key patterns and insights gleaned from the data. By restating and summarizing these themes, the research aims to distil the essence of each theme, highlighting their interconnectedness and significance within the context of the study. This process will enable the synthesis of a concise and cohesive representation of the themes, laying the groundwork for the subsequent development of the conceptual framework. By consolidating and refining these themes, the study seeks to establish a solid foundation upon which the conceptual framework can be built, facilitating a comprehensive understanding of the phenomenon under investigation.

Based on the theory elaboration process, which involves integrating empirical data with theoretical insights from the existing body of knowledge, the next step is to develop a conceptual model. This model serves as a framework for organizing and structuring the theoretical concepts and relationships based on the refined and expanded theories derived from the case study approach.

In the context of developing a conceptual model, it is important to consider the work of Gioia et al. (2013) and Dubois and Gadde (2002), who discuss the systematic combination of theoretical insights and empirical data through an abductive logic. This approach allows for the integration of both theory and data in a way that challenges and expands existing theories, as discussed by Ketokivi and Choi (2014). According to Yin (2018), a conceptual model "is a visual and symbolic representation of the variables, constructs, or phenomena of interest, and the relationships among them." He suggests that researchers should develop their conceptual model based on a thorough analysis of their data and refine it through iterative testing and feedback. Also, Miles and Huberman (1994) emphasize the importance of using visual aids such as diagrams, flowcharts, or matrices to represent the conceptual model. They suggest that these aids can help researchers to communicate their ideas more clearly, and to identify potential gaps or inconsistencies in their reasoning. Furthermore, Creswell (2014) notes that the conceptual model should be developed in light of the research questions or hypotheses that the study is designed to address. He suggests that the model should be grounded in relevant theory and should be tested and refined through ongoing data collection and analysis.

The process of building a conceptual model or framework from case study-based research involves several key steps. Babbie (2016) highlights the importance of ensuring that the conceptual model is clear, concise, and easy to understand, making it accessible to readers who may not have the same level of expertise or background knowledge in the field. Therefore, the study considered the presentation and communication of the conceptual model to enhance its accessibility and comprehensibility.

Once the literature has been reviewed, researchers can identify gaps, inconsistencies, or unanswered questions in the existing theories or conceptual frameworks. These gaps serve as the basis for developing the initial conceptual framework (Eisenhardt, 1989). Therefore, an initial step is to develop an initial conceptual framework based on the existing literature, as already explained in section 3.1, and as depicted by Figure 6-1.

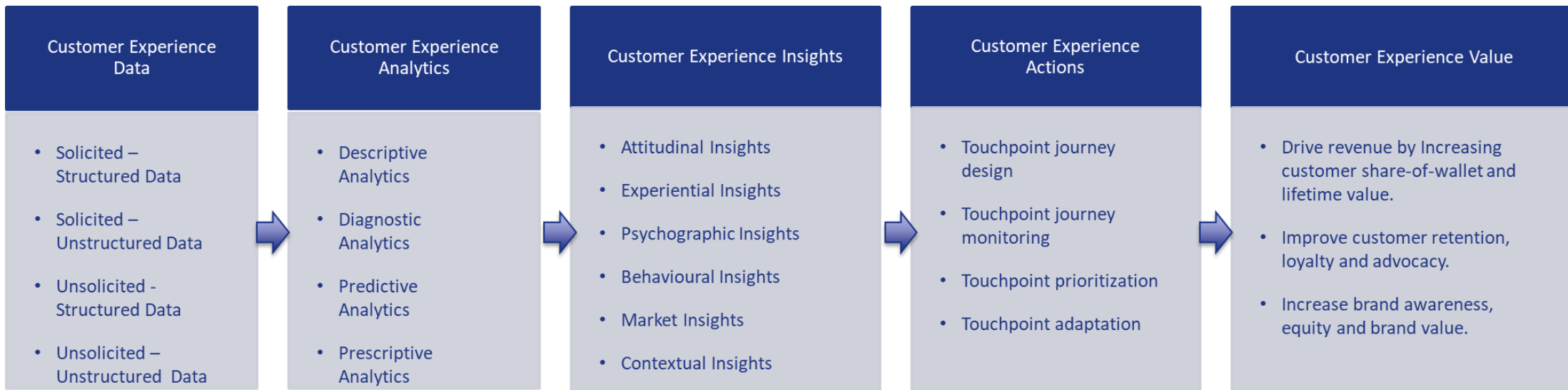


Figure 6-1 The Initial Conceptual Framework

Adopted from Literature (Holmlund et al., 2020; McColl-Kenned et al., 2019; De Bruyn et al., 2020; Smith et al., 2006)

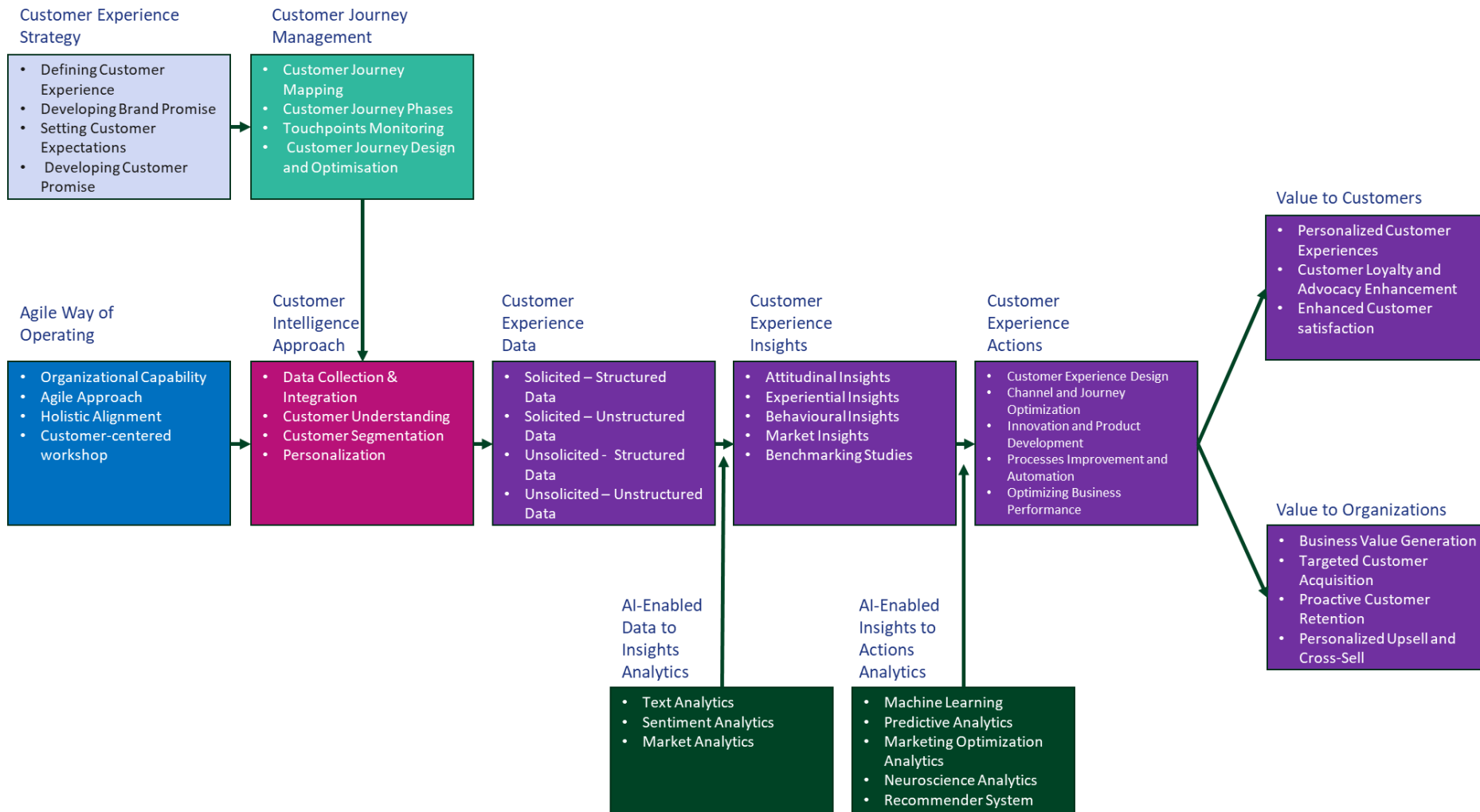


Figure 6-2 The Refined Conceptual Model – The CXBV Model

The development of a conceptual framework for the role of AI in leveraging customer insights across the customer journey to manage the customer experience is informed by the RBV and KBV (Barney, 1991; Grant, 1996; Rubera, Chandrasekaran & Ordanini, 2016; Day, 1994). Also, as outlined in section 2.2.2.1 of the literature review, customer insight is recognized as a strategic asset with VRIO characteristics that can generate a competitive advantage (Smith et al., 2006). Building upon the data to value cycle proposed by Smith et al. (2006) which provides a framework for leveraging these organisational assets and capabilities to create value. It involves collecting and analysing customer data, extracting insights, and translating them into actionable strategies and initiatives. The study further builds upon this understanding and expands upon the definition of customer insight, considering its value, rarity, imitability, and potential use in the context of the study. Hence, building upon the RBV and KBV, the conceptual model extends to the CXBV, emphasizing the significance of customer experience, customer insight, customer intelligence as a strategic resource for gaining competitive advantage.

The RBV and KBV provide a theoretical foundation for understanding how capabilities contribute to sustained competitive advantage. According to the RBV, firm resources are a key determinant of competitive advantage. Barney (1991) argues that firm resources can be classified into three categories: physical, human, and organizational. In the context of customer experience strategy, the firm's resources include the knowledge and expertise of its employees, the technology infrastructure supporting customer interactions, and the organizational processes for delivering a seamless and personalized customer experience. According to the RBV, firm resources are a key determinant of competitive advantage. Barney (1991) argues that firm resources can be classified into three categories: physical, human, and organizational. In the context of customer experience strategy, the firm's resources include the knowledge and expertise of its employees, the technology infrastructure supporting customer interactions, and the organizational processes for delivering a seamless and personalized customer experience (Varadarajan, 2020; Jaber & Abbad, 2021).

The KBV complements the RBV by emphasizing the role of knowledge in creating and sustaining competitive advantage. Knowledge-based capabilities, such as customer intelligence approach and customer journey management, enable firms to gather and analyse customer data, understand their preferences and behaviours, and tailor their offerings accordingly. This knowledge-driven approach allows firms to create value for customers by providing personalized experiences and anticipating their needs. The KBV complements the RBV by emphasizing the role of knowledge in creating and sustaining competitive advantage. Knowledge-based capabilities, such as customer intelligence approach and customer journey management, enable firms to gather and analyse customer data, understand their preferences and behaviours, and tailor their offerings accordingly. This knowledge-driven approach allows

firms to create value for customers by providing personalized experiences and anticipating their needs (Varadarajan, 2020).

The conceptual framework builds on the RBV, knowledge-based view KBV, the data to value cycle proposed by Smith et al. (2006), and the strategic framework for CXM based on CX insights resulting from big data analytics (BDA) proposed by Holmlund et al., 2020, to develop the CXBV. The conceptual framework focuses on key capabilities that emerged from the case study research. These capabilities are customer experience strategy, customer journey management, customer intelligence approach, agile customer experience, CX data to value creation process, and harnessing AI capabilities. The research was grounded in strategy as practice as a theoretical lens, and the idea and motivation to carry out the study have emerged from this perspective.

The customer experience strategy capability involves curating and designing for needs across all moments of a journey, striking the right balance of meeting customer needs. The customer journey management capability involves mapping and optimizing the various touchpoints and interactions that customers have with a service organization. The customer intelligence approach capability involves gathering and analysing customer data to gain insights into their preferences, behaviours, and needs. The agile customer experience capability refers to the ability of organizations to quickly adapt and respond to changing customer needs and market dynamics. The CX data to value creation process involves leveraging customer data to create value for both customers and the organization. Finally, harnessing AI capabilities involves leveraging artificial intelligence technologies to enhance the customer experience. Harnessing AI capabilities is another important aspect in the context of customer experience. AI technologies can automate and enhance various customer experience processes, such as personalized recommendations, chatbots for customer support, and predictive analytics for anticipating customer behaviour. By leveraging AI, firms can further enhance their ability to deliver value to customers and gain a competitive edge.

The six themes that emerged from the case study research are the same capabilities that the conceptual model is built upon. These capabilities are customer experience strategy, customer journey management, customer intelligence approach, agile customer experience, CX data to value creation process, and harnessing AI capabilities. The research was grounded in strategy as practice as a theoretical lens, and the idea and motivation to carry out the study have emerged from this perspective. The customer experience strategy capability involves curating and designing for needs across all moments of a journey, striking the right balance of meeting customer needs. The customer journey management capability involves mapping and optimizing the various touchpoints and interactions that customers have with a service organization. The customer intelligence approach capability involves gathering and analysing

customer data to gain insights into their preferences, behaviours, and needs. The agile customer experience capability refers to the ability of organizations to quickly adapt and respond to changing customer needs and market dynamics. The CX data to value creation process involves leveraging customer data to create value for both customers and the organization. Finally, harnessing AI capabilities involves leveraging artificial intelligence technologies to enhance the customer experience. By integrating these capabilities and leveraging AI technologies, service organizations can gain a deeper understanding of their customers, deliver personalized experiences, optimize the customer journey, and create value throughout the customer lifecycle.

By integrating these capabilities and leveraging AI technologies, service organizations can gain a deeper understanding of their customers, deliver personalized experiences, optimize the customer journey, and create value throughout the customer lifecycle. AI can act as a powerful tool to analyse vast amounts of customer data, identify patterns, and enable organizations to take proactive actions to meet customer expectations and enhance their overall experience.

Figure 6-2 presents a conceptual framework delineating the relationships between customer experience strategy, customer journey management, customer intelligence approach, agile customer experience, CX data to value creation process, and harnessing AI capabilities, as depicted in Figure 6-2. By incorporating these themes, the CXBV promotes a holistic approach to prioritize customer experience strategy and leverage customer experience assets for sustainable advantage in the marketplace.

Additionally, a conceptual framework has been developed based on the tenets of the customer experience operating model, which can be defined as the set of core capabilities that shape an organization's approach to managing, optimizing customer experiences, and delivering exceptional customer experiences consistently across all touchpoints and throughout the customer journey.

- Customer Experience Strategy capability highlights the need for organizations to establish a well-defined and customer-centric strategy to deliver superior customer experiences. Organizations need to develop a well-defined and customer-centric strategy that outlines their vision, goals, and approach to delivering superior customer experiences (Gentile et al., 2013). Customer Experience Strategy is defined as a well-defined customer experience strategy sets the direction and goals for delivering exceptional experiences throughout the customer journey. It involves understanding customer needs, defining touchpoints, and aligning organizational resources to meet those needs. AI can support this capability by providing insights into customer preferences, behaviours, and sentiment analysis, enabling organizations to tailor their strategies accordingly.

- Customer Journey Management capability emphasizes the effective management of the end-to-end customer journey across various touchpoints and channels. Effectively managing the end-to-end customer journey across all touchpoints and channels is crucial for delivering seamless and personalized experiences (Verhoef et al., 2015). Customer journey management involves mapping and optimizing the various touchpoints and interactions that customers have with a service organization. It aims to create a seamless and personalized experience across channels and stages of the customer journey. AI can enhance this capability by analysing customer data, identifying pain points, and suggesting improvements to optimize the customer journey.
- Customer Intelligence capability underlines the importance of a robust customer intelligence approach for understanding customer needs and behaviours, which is a robust customer intelligence approach, encompassing data collection, analysis, and insights generation, is essential for understanding customer needs, preferences, and behaviours (Lemon & Verhoef, 2016). A customer intelligence approach involves gathering and analysing customer data to gain insights into their preferences, behaviours, and needs. It helps organizations understand their customers better and make data-driven decisions to improve the customer experience. AI can play a significant role in this capability by automating data analysis, identifying patterns, and providing real-time insights for personalized customer interactions.
- Agile Customer Experience – Agile Way of Operating capability advocates for adopting agile methodologies to enable organizations to respond and adapt to changing customer expectations. Adopting agile methodologies and processes enables organizations to quickly respond and adapt to changing customer expectations and market dynamics (Gharajedaghi, 2011). Agile customer experience refers to the ability of organizations to quickly adapt and respond to changing customer needs and market dynamics. It involves iterative development, continuous feedback, and rapid experimentation to deliver value to customers. AI can support this capability by providing real-time data analysis, enabling organizations to make agile decisions and personalize customer experiences on the fly.
- CX Data to Value Creation Process capability focuses on leveraging customer data to drive value creation and business outcomes. Effectively leveraging customer data and transforming it into actionable insights and value-creating initiatives is key to driving business outcomes and customer satisfaction (Smith et al., 2006; Rust et al., 2011; Holmlund et al., 2020). The CX data to value creation process involves leveraging customer data to create value for both customers and the organization. It includes activities such as data collection, analysis, interpretation, and translating insights into actionable strategies.

AI can enhance this capability by automating data processing, identifying hidden patterns, and generating actionable recommendations for improving the customer experience.

- **Harnessing of AI capabilities to enhance different aspects of the customer experience.**
Embracing AI technologies empowers organizations to automate and enhance various aspects of the customer experience, such as personalization, recommendation systems, and chatbots (Chen et al., 2018). Harnessing AI capabilities involves leveraging artificial intelligence technologies, such as machine learning, chatbots, and conversational user interfaces, to enhance the customer experience. AI can automate repetitive tasks, provide personalized recommendations, and enable real-time decision-making, thereby improving the overall customer experience. Harnessing AI capabilities is another important aspect in the context of customer experience. AI technologies can automate and enhance various customer experience processes, such as personalized recommendations, chatbots for customer support, and predictive analytics for anticipating customer behaviour. By leveraging AI, firms can further enhance their ability to deliver value to customers and gain a competitive edge.

This research's investigation of the Customer Experience-Based View (CXBV) model, grounded in the philosophical orientation of critical realism, sheds significant light on the underlying mechanisms involved in incorporating the six capabilities proposed in the CXBV model. According to the tenets of critical realism, there are three domains of reality: the empirical (observed events), the actual (events that occur) and the real (the mechanisms that generate events). Guided by these domains, an in-depth analysis of the functional mechanisms of the suggested conceptual framework, establishing a solid foundation for interpreting these capabilities at multiple levels.

At the level of the 'real', the mechanisms that trigger CXM dynamics are unveiled. The generative mechanisms include Customer Experience Strategy, Customer Journey Management, Agile Way of Operating, and the Customer Intelligence Approach. Here, establishing a well-defined customer-centric strategy, efficiently managing customer journey across touchpoints, incorporating agile methodologies and robust customer intelligence involving data collection, analysis, and insights generation—all play paramount roles. These generative mechanisms form the underlying structures that govern the dynamics of CXM, contributing to both the design and delivery of exceptional customer experiences.

In the domain of the actual, the events that occur encompass processes such as Customer Experience Data to Insights, AI-enabled insights to analytics, and AI-enabled insights to actions. These AI-facilitated workings translate the underpinning generative mechanisms into actual practices, enabling organizations to make strategic, data-backed decisions.

Finally, when it comes to the empirical, the observable events include Customer Experience actions, value delivered to customers, and value accrued by organisations. These are the tangible outcomes that are directly experienced and observed by customers and practitioners. These observable events emerge from the integration of AI capabilities, which empowers organizations to automate and enhance various aspects of CX, including personalised engagement, recommendation systems, and chatbots.

Guided by the principles of critical realism, the research seeks to extend the discourse beyond mere human-technology interfaces. It focuses on understanding and interpreting underlying conditions that indicate the expressions of these experiences. Along these lines, the developed knowledge can illuminate and address the complexities of the interaction between consumers and technology in business and marketing strategies. By encapsulating the empirical, actual and real domains, this critical realism-based representation provides holistic real-life contexts, providing valuable insights from specific industry settings like telecoms and banking. It thereby contributes to an enriched understanding of effective CX management in diverse, dynamic settings. The CXBV conceptual model developed in this study serves as foundational frameworks for drawing conclusive insights and facilitating in-depth discussions regarding the telecom and banking case studies. This model provides a comprehensive structure through which the study presents and discusses the key discussion points for telecom and banking cases.

6.2 Theme 1: Customer Experience Strategy – Key Discussion Points

Based on the four cases, 'Customer Experience Strategy' can be defined as “

Customer experience strategy is a purposeful and systematic approach that aligns an organization's brand positioning and equity with the goal of consistently exceeding customer expectations and creating exceptional customer experiences across all touchpoints and throughout the customer journey.”

This section focuses on key aspects of customer experience strategy, including defining customer experience, developing brand promise, setting customer expectations, and developing customer promise. By delving into these components, the study aims to shed light on how the different four cases craft and implement effective customer experience strategies to enhance customer satisfaction, loyalty, and overall business success. Drawing from empirical research and existing literature, this section provides insights into the capability of customer experience strategy.

CX is a multifaceted concept that encompasses the overall perception and evaluation of a customer's interactions with an organization, its products, and its services. There are several definitions that highlight different aspects of CX, emphasizing its significance in shaping customer satisfaction, loyalty, and organizational success. These definitions converge on several key points. Firstly, CX encompasses both functional and emotional dimensions, acknowledging that customers' experiences are influenced by various factors such as product/service quality, ease of use, convenience, personalization, and organization responsiveness. Secondly, CX spans the entire customer journey, from initial awareness and consideration to post-purchase evaluation, including all touchpoints and interactions. Moreover, customer expectations play a role in CX, representing the specific level of service or product quality that customers expect for when engaging with a company.

The link between customer experience and customer expectation is that the customer's experience will often be influenced by their expectations. If a customer has high expectations for a company or product and the actual experience meets or exceeds those expectations, they are likely to have a positive experience. On the other hand, if a customer's expectations are not met or are exceeded, they may have a negative experience. It's important for businesses to understand their customers' expectations and to strive to meet or exceed them in order to provide a positive customer experience. On the other hand, the link between customer experience and brand promise is that the brand promise sets the expectations that customers have for the company, and the customer experience is the actual level of service or product

quality that the customer receives. A brand promise is a statement that communicates the values and benefits that a company stands for, and what customers can expect from the company's products or services. It's essentially a commitment that the company makes to its customers, and it helps to establish the company's reputation and build customer trust. It's important for businesses to align their brand promise with the customer experience they deliver to build customer trust and loyalty. By consistently delivering a high-quality customer experience that meets or exceeds the expectations set by the brand promise, businesses can build a positive reputation and increase customer retention.

When crafting a customer experience strategy, it is essential for companies to consider the unique characteristics and requirements of their industry. This holds true for both telecommunications companies and banks, as they cater to different customer needs and operate in distinct regulatory environments. By considering specific factors, such as the nature of service, customer interaction channels, complexity of transactions, regulatory environment, product customization, customer relationships, and customer data usage, these organizations can tailor their approaches to meet customer expectations effectively.

1. **Nature of Service:** Telecommunications service providers primarily offer intangible services focused on connectivity and communication solutions. Banks, in contrast, provide both tangible and intangible services, including financial products and advisory services.
2. **Customer Interaction Channels:** Telecommunications providers rely heavily on digital channels, while banks maintain a strong presence through physical branches in addition to digital channels.
3. **Complexity of Transactions:** Banking transactions often involve higher complexity and require a deeper level of expertise and security due to financial regulations. Telecommunications providers prioritize simplifying processes like subscription management and troubleshooting.
4. **Regulatory Environment:** Banks operate within stricter regulatory frameworks compared to telecommunications providers, impacting their customer experience strategies and the level of personalization they can offer.
5. **Product Customization:** Telecommunications providers offer a wide range of customizable plans, while banks focus customization efforts more on financial products and investment options.
6. **Customer Relationships:** Banks foster long-term relationships with customers, offering personalized advice and comprehensive financial services. Telecommunications providers typically have shorter-term interactions based on service contracts and changing customer needs.

The findings in Case A align with the definition of customer experience as "the customer's subjective response to the holistic direct and indirect encounter with the firm," emphasizing the importance of an end-to-end process to encompass interactions from initial contact to post-purchase stages (Lemke, Clark, and Wilson, 2010). This supports the existing body of knowledge's emphasis on the holistic nature of customer experience. The research successfully replicates and validates previous findings, strengthening their reliability. In Case B, the findings align with the concept that customer experience is "comprised of cognitive, emotional, physical, sensorial, spiritual, and social elements" in customer interactions (De Keyser et al., 2015). This replication confirms the multi-dimensional nature of customer experience as highlighted in the literature.

The findings corroborate and provide additional evidence to support conclusions drawn in the existing literature. In Case A, the bank's customer experience management strategy aligns with the notion that firms cannot create customer experiences but can manage touchpoints that affect experiences (Becker et al., 2020). This corroboration strengthens the understanding of the importance of managing touchpoints to influence customer experiences.

This research builds upon existing knowledge by expanding the understanding of a particular phenomenon. In Case B, the bank's CXM strategy emphasizes customer-centric governance and decision-making. This extension complements the existing literature by highlighting the strategic approach of managing customer experiences to create value (Verohef et al., 2009). The findings partially confirm the existing literature, offering some support but also highlighting additional nuances or limitations. In Case A, the bank's emphasis on aligning the brand promise with brand delivery and assessing brand perception aligns partially with the concept of designing new metrics to bridge the gap between brand promise and operational KPIs (Gartner, 2022). The findings partially confirm the existing literature, offering some support but also highlighting additional nuances or limitations. In Case A, the bank's focus on managing customer expectations and delivering value for money aligns with the concept of customer satisfaction being achieved when the delivered service meets or exceeds customer expectations (Lee, Lanting, & Rojdamrongratana, 2017).

The findings partially confirm the existing literature, offering some support but also highlighting additional nuances or limitations. In Case A, the bank's emphasis on aligning the brand promise with actual brand delivery aligns partially with the concept that the failure to meet customer expectations can lead to negative consequences (Barari et al., 2020). The findings in Case C align with the concept of scoping customer ambition and investing in new experience-creating capabilities, such as digital channels, to create favourable customer experiences (Klaus, 2014). The bank emphasizes designing flexible and easy-to-understand products and services aligned with customer expectations.

6.3 Theme 2: Customer Journey Management – Key Discussion Points

Based on the four cases, ‘Customer Journey Management’ can be defined as “

‘Customer journey management is the strategic and operational activities undertaken by an organization to understand, design, and optimize the end-to-end experience of customers throughout their interactions with the company. It involves mapping customer touchpoints and stages, analysing behaviour and preferences, and implementing targeted strategies to enhance satisfaction, loyalty, and advocacy’

This section explores various facets of customer journey management, encompassing customer journey mapping, customer journey phases, touchpoints monitoring, and customer journey design and optimization. By analysing these elements, the study aims to provide a comprehensive understanding of how the four cases align their operations with the customer journey, identify pain points, and deliver seamless experiences throughout the customer lifecycle. Leveraging empirical findings and scholarly literature, this section presents insights into the capability of customer journey management.

Customer journey management involves identifying and analysing the various touchpoints and interactions that a customer has with an organization, from initial awareness to post-purchase evaluation, to understand the customer experience and identify opportunities to improve it. The competencies required for effective customer journey management include:

1. Customer journey mapping: The ability to identify and analyse the various touchpoints and interactions that a customer has with an organization, from initial awareness to post-purchase evaluation, to understand the customer experience and identify opportunities to improve it. This competency involves understanding the customer's perspective, identifying critical moments of truth, and mapping out the end-to-end customer experience.
2. Customer insights: Customer Insight: The ability to gather and analyse customer data, feedback, and behaviour to gain deep insights into customer needs, preferences, pain points, and expectations. This includes using tools such as customer surveys, data analytics, and social media monitoring to understand customer sentiment and identify areas for improvement.
3. Touchpoint Monitoring and Management: The skill to monitor and manage customer touchpoints throughout the customer journey to ensure consistency, effectiveness, and

alignment with desired outcomes. This competency involves actively tracking and evaluating touchpoints such as websites, mobile apps, social media platforms, call centres, and physical locations. It requires monitoring customer interactions, collecting feedback, measuring performance metrics, and taking proactive steps to address issues or opportunities for improvement. Touchpoint monitoring and management enables organizations to identify pain points, enhance engagement, and deliver a seamless customer experience across all channels.

4. **Customer Journey Design and Optimization:** The ability to design and optimize the customer journey by strategically mapping out touchpoints, interactions, and desired outcomes. This competency involves identifying key moments of customer engagement, designing intuitive and seamless experiences, and continuously refining the journey based on customer feedback and business goals. It requires a deep understanding of customer needs, effective communication, and the ability to align processes and resources to deliver a cohesive and memorable customer experience.

In the realm of customer journey management, understanding the various factors that shape the experience is crucial for both telecommunications providers and banks. By considering elements such as customer touchpoints, complexity of interactions, onboarding processes, personalization, and recommendations, cross-selling and upselling, as well as customer feedback and continuous improvement, these organizations can effectively manage and optimize the customer journey, such as below:

1. **Customer Touchpoints:** Telecommunications providers have multiple touchpoints throughout the customer journey, including initial subscription or purchase, activation, usage, billing, and customer support. They focus on streamlining the onboarding process, ensuring smooth service activation, and providing accessible self-service options. Banks also have multiple touchpoints, such as account opening, transactions, loan applications, investments, and customer support. They prioritize personalized assistance and guidance at each stage of the customer journey.
2. **Complexity of Interactions:** Telecommunications providers deal with various customer interactions related to account management, technical support, plan changes, and billing inquiries. While these interactions can be complex due to network issues or technical troubleshooting, they often aim for quick and efficient resolution to minimize customer effort. Banks handle more complex financial interactions, such as loan approvals, investment advice, credit assessments, and mortgage applications. These interactions involve deeper levels of scrutiny, documentation, and decision-making processes.
3. **Onboarding Process:** Telecommunications providers focus on a seamless onboarding process, aiming for quick service activation and providing easy-to-understand instructions for

setup and usage. They often leverage digital self-service tools and offer assistance through call centres or online chat. Banks also aim for a smooth onboarding process, but they may require more documentation and face-to-face interactions for account opening, especially for higher-value services or complex products like mortgages.

4. **Personalization and Recommendations:** Telecommunications providers analyse customer data to personalize service offerings, recommend suitable plans, and provide targeted promotions based on usage patterns. They often leverage machine learning algorithms and customer behaviour analysis. Banks use customer data to offer personalized financial advice, recommend investment products, and suggest relevant banking solutions. They may utilize advanced analytics and AI-powered tools to identify customer needs and present tailored recommendations.

5. **Cross-Selling and Upselling:** Telecommunications providers actively engage in cross-selling and upselling opportunities by promoting additional services, upgrades, or value-added features. They focus on enhancing the customer's overall experience and encouraging loyalty. Banks also engage in cross-selling and upselling, but their approach is often more relationship-driven, aiming to understand the customer's financial goals and offering relevant products like credit cards, investment portfolios, or insurance policies.

6. **Customer Feedback and Continuous Improvement:** Telecommunications providers actively collect customer feedback through surveys, support interactions, and social media monitoring. They use this feedback to improve service quality, identify pain points, and enhance the customer journey. Banks also prioritize customer feedback and conduct regular surveys to gauge satisfaction levels. They may have dedicated teams to analyse feedback, address customer concerns, and identify areas for process optimization and service enhancement.

Customer journey mapping is conceptualized as a goal-oriented and hierarchical process that focuses on understanding consumers' cognitive and behavioural processes toward higher-order goals (Becker et al., 2020). The empirical findings from the cases demonstrate alignment with this concept. For instance, Case A emphasizes differentiation through unique customer experiences and understanding customer needs and pain points, which aligns with recognizing the goal-oriented nature of the customer journey and understanding customers' goals and their journey toward achieving those goals.

The literature highlights the importance of organizations adopting a "touchpoint journey orientation" to manage or influence all touchpoints in the marketplace (Homburg et al., 2015). The empirical findings support this perspective as all the cases stress the need to monitor touchpoints across various channels to understand customer behaviour and improve the customer experience.

Recent works in the literature focus on how organizations should map, manage, and measure customer touchpoints during the customer lifecycle (Edelman & Singer, 2015; Klaus, 2014). This is aligned with the empirical findings, where all cases recognize the significance of mapping and measuring customer journeys, particularly focusing on the end-to-end customer experience and understanding real customer experiences.

Additionally, customer journey analysis (CJA) is highlighted in the literature as a means of modeling, mapping, analysing, and comparing individual customer journeys to identify service gaps and improve the customer experience (Halvorsrud, Kvale, & Følstad, 2016). The empirical findings reinforce this concept, as all cases emphasize the importance of leveraging technology and data analytics to gain insights into customer interactions and campaign effectiveness.

The literature defines the customer journey as consisting of three phases: pre-purchase, purchase, and post-purchase (Lemon & Verhoef, 2016). The empirical findings from the cases align with this concept as they all recognize the importance of customer journey mapping across these three phases.

The CX journey is commonly defined as ongoing CX across the phases of a service cycle (Følstad & Kvale, 2018). The empirical findings from the cases also support this perspective, as Case C emphasizes end-to-end customer journeys, encompassing all phases of the customer experience cycle.

The pre-purchase stage includes touchpoints related to customer behaviours such as awareness, need recognition, search, and consideration (Pieters, Baumgartner, & Allen, 1995). This aligns with the empirical findings in Case A, which recognizes transactional, episodic, and continuous/relationship journeys, including touchpoints related to customer awareness, need recognition, and search.

Similarly, the purchase stage involves touchpoints related to customer behaviours such as choice, ordering, and payment (Lemon & Verhoef, 2016). This aligns with the empirical findings in Case B and Case D, both of which acknowledge transactional, episodic, and continuous/relationship journeys, including touchpoints associated with customer choices, ordering, and payment.

The post-purchase stage encompasses interactions with the brand and touchpoints related to customer behaviours such as usage, consumption, satisfaction, referrals, and loyalty (Lemon & Verhoef, 2016). Case D emphasizes customer journey mapping and understanding the real experiences of customers, which aligns with the importance of designing positive post-purchase engagement phenomena and service recovery in this stage.

The literature emphasizes the importance of touchpoints as points of interaction between the customer and the brand/firm throughout the customer journey (Homburg et al., 2017; Lemon & Verhoef, 2016). The empirical findings align with this concept, as all the cases emphasize the need to monitor touchpoints across various channels to understand customer behaviour and improve the customer experience.

Touchpoint journey monitoring is crucial in coordinating and depicting touchpoint-specific performance indicators aligned with the firm's touchpoint journey orientation (McColl-Kennedy et al., 2019). This aligns with the empirical findings as all the cases stress the importance of monitoring touchpoints and leveraging technology and data analytics to gain insights into customer interactions and campaign effectiveness.

Customer journey mapping can enhance and manage customer experiences (CXM) by monitoring, designing, and managing touchpoints that influence CX (McColl-Kennedy et al., 2019). The empirical findings support this perspective as all the cases emphasize the importance of customer journey focus, mapping, and optimization to ensure a positive customer experience.

CXM requires organizations to use data from various touchpoints, including partner-owned, customer-owned, and external touchpoints in digital, physical, and social realms (Bolton, 2018). The empirical findings align with this idea as all the cases emphasize the importance of leveraging technology and monitoring touchpoints across different channels, such as branches, mobile apps, and online platforms.

Organizational focus on managing and influencing all touchpoints in the marketplace contributes to the design of customer experiences (Homburg et al., 2015). The empirical findings align with this concept as all the cases emphasize the importance of designing and optimizing the customer journey, considering both the product journey and the overall experience.

The iterative nature of customer journey design and optimization, supported by agile methodologies and continuous evaluation, leads to long-term customer loyalty (Homburg et al., 2015). This aligns with the empirical findings as Case B highlights the iterative approach to journey design and the importance of setting ambitious goals, evaluating, and refining the journey.

Effective customer journey design requires cross-functional collaboration and the dissemination of requirements across different capabilities (Homburg, 2015). The empirical findings align with this concept as Case A emphasizes the involvement of multiple departments in designing the journey, and Case D highlights the customer-centric approach and data-driven decision-making.

The integration of customer journey mapping with CX management enhances and manages customer experiences (McColl-Kennedy et al., 2019). The empirical findings support this perspective as all the cases emphasize the importance of customer journey focus, mapping, and optimization to ensure a positive customer experience.

Customer journey design goes beyond the journey as designed and controlled by the service provider, encompassing elements that influence CX far beyond the CJ (Kandampully et al., 2018). This aligns with the empirical findings as all the cases recognize the significance of personalization, managing customer emotions, and leveraging technology to enhance the overall experience.

Customer journey analysis and the identification of service gaps contribute to improving the customer experience (Halvorsrud et al., 2016). The empirical findings align with this concept as all the cases emphasize the importance of monitoring touchpoints, analysing historical performance, and leveraging customer feedback to optimize the journey.

6.4 Theme 3: Agile way of operating - – Key Discussion Points

Based on the four cases, 'Agile Way of Operating' can be defined as “

'Agile way of operating is the capability of an organization to leverage decentralized, cross-functional teams to quickly and collaboratively ideate, design, implement, and validate customer experiences and touchpoints throughout the customer journey, while leveraging customer intelligence to collect and analyse data on customer interactions, behaviours, and outcomes, organizations can identify areas for improvement and make data-driven decisions to optimize the customer journey.'

As organizations navigate an increasingly dynamic and evolving business environment, adopting an agile way of operating has become imperative. This section explores key aspects of agility in customer experience management, including organizational capability, agile approach, holistic alignment, and customer-centred design workshops. By investigating these elements, we aim to provide a comprehensive understanding of how organizations can embrace agility to quickly respond to changing customer needs and preferences. By integrating empirical findings with scholarly literature, this section presents insights into the capability Agile way of operating.

Agile customer experience is the capability of an organization to leverage decentralized, cross-functional teams to quickly and collaboratively ideate, design, implement, and validate customer experiences and touchpoints throughout the customer journey, the agile way of operating that is based on the agile project management approach. It involves using agile principles and techniques to plan, execute, and adapt customer experience efforts in a flexible and responsive way.

The goal of agile CX is to create a more responsive and adaptable approach to customer experience management that allows teams to be more effective in meeting the needs of their customers and achieving business goals.

In agile CX, teams typically work in short cycles, called "sprints," which allow them to quickly test and iterate on customer experience initiatives. This approach allows teams to be more responsive to change and to quickly adapt to new customer insights as they emerge.

For customer experience teams, the Agile framework can be used to help plan and execute customer experience activities in a more flexible and adaptable manner. This can involve breaking down larger customer experience activities into smaller, incremental tasks that can be completed quickly and iteratively. The Agile framework can also help customer experience

teams to regularly review and improve their processes and practices, and to be more responsive to changing customer needs and preferences.

For data analytics teams, the Agile framework can be used to help plan and execute data analytics projects in a more efficient and effective manner. This can involve breaking down larger projects into smaller, incremental tasks that can be completed quickly and iteratively. The Agile framework can also help data analytics teams to regularly review and improve their processes and practices, and to be more responsive to changing business needs and requirements.

Some of the key principles of agile CXM include:

1. Collaboration: Agile CXM teams work closely with stakeholders to ensure that customer experience efforts align with business goals and customer needs.
 2. Flexibility: Agile CXM teams are able to adapt and change course quickly in response to new information or changing circumstances.
 3. Continuous iteration: Agile CXM teams regularly review and adjust their efforts based on data and feedback.
 4. Focus on results: Agile CXM teams prioritize delivering measurable results over adhering to a strict plan or timeline.
- Cross-Functional Collaboration: Telecommunications providers adopt cross-functional teams that include representatives from various departments, such as product development, marketing, and customer support. These teams collaborate closely to deliver customer-centric solutions.
 - Cross-Functional Collaboration: Banks encourage cross-functional collaboration between different departments, such as retail banking, wealth management, and IT, to deliver seamless customer experiences. This collaboration ensures alignment and coordination across various touchpoints.
 - Agile Development Methodologies: Telecommunications providers often employ Agile development methodologies like Scrum to foster flexibility, transparency, and iterative development. They break down projects into smaller, manageable tasks and work in short sprints to deliver value quickly.
 - Agile Project Management: Banks often adopt Agile project management methodologies, such as Scrum, to foster iterative development, quick decision-making, and adaptability to changing market dynamics. They focus on delivering value incrementally and responding to customer needs rapidly.

- Continuous Improvement: Telecommunications providers embrace a culture of continuous improvement, where teams regularly reflect on their processes and seek opportunities for optimization. They prioritize learning and adapting to meet evolving customer expectations.

- Innovation and Collaboration: Agile banks actively seek opportunities for innovation through collaboration with fintech startups, technology partners, and internal innovation teams. They embrace new technologies, explore disruptive business models, and experiment with innovative solutions to enhance customer experiences.

The empirical findings reveal that organizational capability plays a crucial role in driving customer intelligence and enhancing the customer experience. This aligns with the concept of dynamic capabilities presented in the literature, where organizational capability building involves exploratory learning through sensing activities and explicit knowledge-intensive activities through seizing activities (Lopez-Cabarcos et al., 2020). By focusing on building strong organizational capabilities, companies can effectively collect and leverage customer insights to improve the overall customer experience.

Furthermore, the empirical study highlights the importance of positioning the customer experience department within the organization in a governance role to prioritize long-term objectives (Empirical Finding: Case B). This supports the positions identified in the literature for the customer experience department, whether as a standalone department reporting directly to senior management or being integrated within the operations function (Temkin, Kotler, Schonberger, Hayes, Hyken). Placing customer experience in a governance role helps prevent conflicts of interest and ensures a sustained focus on long-term customer-centric goals.

Additionally, the empirical research indicates that banks recognize the significance of leveraging organizational capabilities to deliver a satisfying customer experience (Empirical Finding: Case C). This finding is consistent with the concept of customer centricity in the literature, where organizations acquire, store, and retrieve customer-centric information and knowledge to enhance customer satisfaction and gain a competitive advantage (Lamberti, 2013) (Komejani and Mohaghegh, 2017) (Pereira et al., 2016). By utilizing their organizational capabilities effectively, banks can cater to customer needs across various functions, leading to improved customer satisfaction and a competitive edge.

Moreover, the empirical study emphasizes the benefits of implementing an agile structure with cross-functional collaboration for improving customer experience and employee upskilling (Empirical Finding: Case D). This finding aligns with the importance of feedback loops and organizational learning mentioned in the literature, which contribute to enhancing customer experience (Holmlund et al., 2020). By adopting agile principles and continuously collecting customer feedback, organizations can identify areas for improvement, make necessary

adjustments, and foster a culture of continuous improvement to provide better customer experiences and enhance employee skills.

The empirical study demonstrates that building strong organizational capabilities and fostering a customer-centric culture are crucial for adapting to industry changes (Empirical Finding: Case A). This aligns with the concept of dynamic capability theory in the literature, suggesting that firms should develop the capability to renew their competence and extract value from external forces (Gupta et al., 2020). By adopting an agile approach and changing the way work is executed, organizations can effectively respond to market changes and deliver projects in a timely manner.

Moreover, the empirical findings reveal that agile methodologies, such as the scrum approach, are being adopted in marketing functions to remove existing silos and promote cross-functional collaboration (Empirical Finding: Case B). This is in line with the recognition of IT firms' working methodologies entering marketing and the importance of Agile Marketing Capability, which involves continuous renewal, improvement, and innovation to provide higher customer value (Lemon and Verhoef, 2016) (Moi & Cabiddu, 2020). By aligning strategic direction with customer journeys and utilizing agile frameworks, organizations can enhance collaboration, efficiency, and responsiveness in their marketing efforts.

Additionally, the empirical research indicates that the banking sector emphasizes the agile approach, with teams working in scrums and following the Spotify model (Empirical Finding: Case C). This aligns with the literature's recognition of agility in managing uncertainty and quickly responding to customer-based opportunities for innovation and competitive action (Teece, Peteraf, & Leih, 2016) (Roberts & Grover, 2012) (Moi & Cabiddu, 2021). By conducting daily meetings, addressing challenges iteratively, and optimizing processes through tribes, squads, and product owners, banks can effectively navigate changing circumstances and deliver value to customers.

Furthermore, the empirical study findings reveal that organizations, including those in a corporate environment, recognize the value of an agile structure with cross-functional teams and iterative improvement (Empirical Finding: Case D). This finding corresponds to the definition of agility in the literature, as the firm's capability to manage uncertainty and redirect resources for higher-yield activities (Teece, Peteraf, & Leih, 2016). By emphasizing understanding the business, generating value, and leveraging specialized expertise within cross-functional teams, organizations can adapt to market dynamics and drive innovation.

The empirical study demonstrates that integrating customer-centric strategies into the overall company strategy is crucial for maximizing the long-term financial value of customers (Empirical Finding: Case A). This aligns with the concept of customer centricity in the literature, where

companies align products and services with the needs of valuable customers to enhance customer experiences and drive long-term financial success (Fader, 2012) (Lemon and Verhoef, 2016). By considering customer needs in the strategic planning process, organizations can strengthen customer relationships and achieve sustainable business growth.

Moreover, the empirical findings reveal that collaboration between departments and workshops is essential for holistic alignment, ensuring legal compliance, regulatory approval, and operational improvement (Empirical Finding: Case B). This observation aligns with the importance of cross-functional collaboration in the literature, emphasizing its role in managing customer experience (Jacobs & Moore, 2017) (Holmlund et al., 2020). By connecting different business functions, organizations can align touchpoints, address operational issues, and create a unified approach to improve customer journeys.

Additionally, the empirical research indicates that holistic alignment and customer-centred design workshops play a crucial role in ensuring a seamless customer journey across touchpoints and channels (Empirical Findings: Cases C and D). This aligns with the concept of cross-functional collaboration and co-creation in the literature, which facilitates communication between analysts and marketing managers to tailor models and algorithms to specific marketing problems (Wedel & Kannan, 2016) (Kandampully et al., 2018). By aligning strategies, teams, and vision through customer-centred workshops, organizations can enhance coordination, integration, and communication to deliver customer-centric experiences.

Furthermore, the empirical study findings reveal that decentralized organizations that facilitate cross-functional collaboration and transparent measurement schemes are effective in managing customer satisfaction (Empirical Finding: Case D). This observation highlights the importance of cross-functional collaboration in the literature for understanding and managing customer experience (Kandampully et al., 2018). By involving multiple stakeholders, creating transparent measurement schemes, and fostering collaboration, organizations can better understand the impact of each stakeholder's actions on the overall customer experience.

customer-centred design workshops play a significant role in understanding and optimizing the customer experience (Empirical Finding: Case A). This aligns with the concept of adopting a design thinking approach to CX work in the literature, which emphasizes the importance of uncovering deep customer insights and converting them into tangible business solutions (De Keyser et al., 2020). By involving customers in workshops and applying design thinking principles, organizations can create tailored and optimized experiences that address customer needs and drive innovation.

Moreover, the empirical findings reveal that iterative customer journey design and optimization using agile methodologies, ambitious goals, and continuous evaluation and refinement are

highlighted. This observation relates to the concept of design thinking approach in CX work, where an iterative process of reflecting on the customer journey and applying design thinking principles can lead to innovations that transform bad experiences into good ones (Klink et al., 2020). By following an iterative approach and aligning strategic direction with customer journeys through workshops, organizations can enhance the customer experience and drive innovation.

Additionally, the empirical research indicates that customer-centred design workshops are employed in the banking sector to gain insights into customer behaviour and preferences, leveraging data science and AI (Empirical Finding: Case C). This aligns with the importance of applying a design thinking approach and uncovering deep customer insights to develop innovative solutions in the literature (Bucolo and Matthews, 2011) (Witell et al., 2011) (Garrett and Wrigley, 2018) . By conducting workshops and leveraging data science and AI, organizations in the banking sector can extract value from customer data, enhance sales, and improve the customer experience.

Furthermore, the empirical study findings reveal that customer-centred design workshops help align teams, define strategies, and gather insights. This corresponds to the idea of design thinking approach and its reliance on customer insights to develop business solutions in the literature (Bucolo and Matthews, 2011) (Witell et al., 2011) (Garrett and Wrigley, 2018). By conducting workshops, organizations can align teams, define strategies based on customer insights, and gather valuable insights to inform decision-making and improve the customer experience.

In summary, the empirical study findings show various areas of alignment, partial alignment, disagreements, and knowledge gap identification with the relevant literature in each category. The research contributes to the existing body of knowledge by providing empirical evidence that supports and expands upon the concepts discussed in the literature while also identifying areas where further research is required to reconcile or clarify discrepancies. By combining empirical findings with existing knowledge, this study enhances our understanding of organizational capability, agile approaches, holistic alignment, and customer-centred design workshops in driving customer experience and organizational success.

6.5 Theme 4: Customer Intelligence Approach – Key Discussion Points

Based on the three cases, 'Customer Intelligence Approach' can be defined as “

'Customer intelligence is an encompassing term that entails the systematic and comprehensive collection, analysis, and interpretation of data and information about customers. It focuses on discerning their preferences, behaviours, and needs with the aim of acquiring profound insights. These insights are then strategically utilized in the context of insight-driven customer experience.'

In the era of data-driven decision-making, organizations need to adopt a customer intelligence approach to gain actionable insights and drive personalized experiences. This section explores into the components of a customer intelligence approach, including data collection and integration, customer understanding, customer segmentation and profiling, and personalization. By examining these elements, the study aims to elucidate the processes and methodologies that the four cases employ to effectively leverage customer data and transform it into meaningful intelligence. Drawing upon empirical research and existing literature, this section offers insights into the capability of customer intelligence approach.

Empirical evidence, gathered through interviews and document reviews, has extended the theory of the data-to-value cycle to include the crucial concept of customer intelligence. This addition stems from the recognition that customer insights alone do not fully encompass the wealth of information available to organizations. Customer intelligence goes beyond insights by encompassing a systematic collection, analysis, and interpretation of customer data from diverse sources to generate actionable intelligence. It involves a broader scope, analysing data at both the individual and aggregate levels to identify patterns, trends, and market opportunities. The purpose of customer intelligence is to derive actionable strategies and actions from insights that drive business outcomes, such as personalized marketing campaigns, targeted offers, and predictive modelling for future customer behaviour. To achieve these goals, customer intelligence adopts a proactive and strategic approach to data utilization, leveraging advanced analytics techniques, predictive modelling, and external data sources to anticipate future trends, predict customer behaviour, and uncover new market opportunities. The inclusion of customer intelligence in the data-to-value cycle enhances organizations' ability to understand and engage with customers, creating a more comprehensive and effective customer journey management process.

Customer intelligence plays a pivotal role in shaping the strategies and decisions of both telecommunications service providers and banks. This intelligence involves the systematic collection, analysis, and interpretation of customer data from various sources, leading to actionable insights that drive personalized experiences and targeted marketing efforts. Telecommunications providers gather data on usage patterns, network performance, and customer interactions, while banks collect extensive information encompassing transactional data, credit history, and customer demographics. Understanding customers' needs and preferences is key, and organizations employ various approaches to achieve this.

The first step in customer intelligence involves comprehensive data collection. Telecommunications providers acquire data from call logs, data usage records, customer feedback, and online behaviour, while banks gather information on transactions, account balances, and customer interactions. Once the data is collected, organizations focus on customer understanding. This includes listening to and analysing customer feedback obtained through surveys and social media, categorizing the feedback to identify trends, and ensuring relevant information reaches the appropriate teams. Valuable insights are also gained by soliciting feedback from frontliners who regularly interact with customers.

Measuring customer experiences is another vital aspect of customer intelligence. Organizations evaluate experiences at both the relationship and journey levels. This entails collecting and analysing data to improve various touchpoints along the customer journey. By acting on customer feedback and metrics, organizations strive to enhance their products, services, and customer satisfaction scores.

Data analysis and segmentation enable organizations to gain a deeper understanding of customer behaviours and preferences. Telecommunications providers analyse customer data to identify usage trends, improve network performance, and offer personalized services. They segment customers based on factors such as usage levels, device preferences, and demographics. Banks, on the other hand, employ advanced analytics, segmentation, and profiling techniques to understand financial behaviours, identify customer needs, and offer tailored financial products based on income, spending habits, and investment preferences.

Personalization and targeted marketing efforts are derived from customer intelligence. Telecommunications providers leverage these insights to personalize offerings, recommend suitable plans, and target specific customer segments with personalized promotions. Banks use customer intelligence to offer personalized financial advice, recommend suitable investment products, and provide targeted offers for credit cards, loans, or insurance.

Customer insights and feedback are invaluable components of customer intelligence. Telecommunications providers actively collect feedback to understand customer satisfaction,

identify pain points, and enhance their services. They utilize surveys, social media monitoring, and customer support interactions to gain insights. Similarly, banks employ customer intelligence to gain a deeper understanding of customer preferences, satisfaction levels, and areas for improvement. They conduct customer surveys, monitor social media sentiment, and establish feedback mechanisms to gather valuable insights.

Customer intelligence often lacks a formal role within the organization, even though firms expect managers to use customer information in their decision making (Verhoef and Lemon, 2013). The empirical findings from the cases support this concept, as they emphasize the significance of customer measurement, research, and ongoing surveys to gain insights into consumer behaviour, market trends, and customer satisfaction. This consistent alignment with the existing literature confirms and strengthens the importance of data-driven decision-making and leveraging data from various sources to enhance the customer journey. Having a data collection strategy in terms of what information is critical to the particular business is essential (Verhoef and Lemon, 2013). The empirical findings align with this concept, as all cases discuss the integration and analysis of data from multiple sources, considering the specific needs of the business.

In addition to revamping longstanding conceptualizations of what constitutes a service exchange, AI plays a significant role in extracting actionable insights (Bresnick, 2018; Robinson et al., 2020). Customer measurement and research are crucial for understanding customer behaviour, assessing satisfaction levels, and making informed decisions (Capgemini, 2017). The empirical findings align with these concepts, as all cases emphasize the role of customer measurement and research in gaining insights into consumer behaviour, market trends, and customer satisfaction. Additionally, the importance of customer measurement, profiling, and segmentation is highlighted for personalized experiences and targeted marketing strategies.

Acquiring profitable customers involves the acquisition and retention of the right prospective customers, who are most likely to be profitable (Schlegelmilch & Winer, 2021). The empirical findings align with this concept, as all cases discuss the segmentation of customers based on specific criteria to understand their potential and behaviour. Moreover, the cases highlight the use of big data and AI for customer profiling and identification of profitable customer segments, supporting the relevance of data-driven approaches in this context.

Cluster analysis is a suitable approach for customer segmentation and targeting (Verma et al., 2021). The empirical findings align with this concept, as the cases discuss the process of segmenting customers based on similarity or specific criteria. The strategic reading of data and insights can help personalize customers' experiences and activate the shop assistant for relevant up- and cross-selling opportunities (Mele & Russo-Spena, 2021). The empirical

findings align with this concept, as all cases discuss the utilization of personalization and customization techniques to tailor the customer experience and deliver relevant offers. Additionally, customers actively participate in service encounters, co-create value, and personalize their experiences along the customer journey (Bolton et al., 2014; McColl-Kennedy et al., 2015).

Customer journey mapping helps organizations understand the customer experience from the customer's perspective (Holmlund et al., 2020). The empirical findings align with this concept, as all cases discuss the importance of customer journey mapping to identify pain points and optimize touchpoints for enhanced customer experiences. Moreover, touchpoint optimization is crucial for delivering seamless and consistent customer experiences (Bolton et al., 2014).

Employee engagement significantly impacts customer satisfaction and loyalty (Kandampully et al., 2019). The empirical findings align with this concept, as all cases emphasize the role of employee engagement in delivering exceptional customer experiences and fostering a customer-centric culture. Furthermore, employee training and development play a vital role in enhancing employee skills and capabilities to deliver superior customer experiences (Holmlund et al., 2020). Overall, the empirical findings provide strong alignment with the existing body of knowledge and peer-reviewed papers. They confirm and support the importance of customer intelligence, data collection, customer understanding, customer segmentation, personalization, customer journey mapping, touchpoint optimization, and employee engagement in delivering exceptional customer experiences. Additionally, the research successfully replicates and validates previous findings, enhancing their reliability.

Partial alignment is observed in certain aspects, where the findings partially confirm the existing literature but also offer additional nuances and limitations. For instance, while customer intelligence and organizational capability play a significant role in understanding customer behaviour, the empirical findings also highlight certain limitations in the data collection process. Similarly, while agile methodologies prove effective for customer experience and employee upskilling, the findings also underline the importance of methodological differences and contextual factors. However, some areas show disagreement between the empirical findings and the existing literature. For example, while the literature emphasizes the significance of customer intelligence in achieving a strong competitive advantage, the empirical findings highlight that the organizational adoption of a customer-centric approach is equally crucial for success. Furthermore, the research study identifies knowledge gaps and areas that require further investigation or refinement. Specifically, it underscores the importance of developing a new data collection approach and data integration methods to track and organize ubiquitous data (Åkesson et al., 2014; Ponsignon et al., 2017), providing valuable insights for future research in this field.

Customer Intelligence

Data Collection: Telecommunications service providers collect customer experience data through various channels, including customer surveys, call centre interactions, social media listening, and app usage analytics. They gather data on customer satisfaction, service quality, network performance, and usage patterns. Banks collect customer experience data through channels such as customer feedback surveys, branch interactions, call centre records, and online banking platforms. They focus on aspects like customer satisfaction, transactional experiences, and the quality of financial advice provided.

Data Analysis and Insights: Telecommunications providers analyse customer experience data to gain insights into service quality, identify pain points, and understand customer preferences. They use data analytics techniques to uncover patterns and trends in customer feedback and usage data, helping them improve network performance and refine service offerings. Banks analyse customer experience data to gain insights into the quality of customer interactions, identify areas for improvement, and understand customer preferences for personalized financial products and services. They leverage data analysis to enhance customer satisfaction and tailor their offerings accordingly.

Using AI for customer journey analytics can help organizations understand the customer experience at each stage of the journey, identify any pain points or challenges that customers are experiencing, and identify opportunities to improve the customer journey. For example, an organization may use AI to analyse customer data to identify patterns and trends in customer behaviour, such as which products or services customers are interested in, when and how they are making purchases, and how they are interacting with the organization's customer service channels.

AI can be used to analyse customer interactions and behaviours to identify patterns and trends in the customer journey. This can help organizations understand how customers are engaging with their brand and identify areas where the customer experience can be improved

There are several types of customer experience insights that can be derived using AI techniques:

Customer sentiment analysis: AI can be used to analyse customer feedback and determine the overall sentiment of the customer towards the organization and its products or services. This can help organizations understand how customers feel about their brand and identify areas for improvement.

Customer journey mapping: AI can be used to analyse customer interactions and behaviours to identify patterns and trends in the customer journey. This can help organizations understand

the customer experience at different touchpoints and identify opportunities to improve the customer journey.

By using AI to analyse customer data and interactions, organizations can gain valuable insights into the customer experience and identify opportunities to improve the customer journey.

Customer journey mapping is a process of identifying and analysing the various touchpoints and interactions that a customer has with an organization, from initial awareness to post-purchase evaluation. By understanding the customer journey, organizations can identify opportunities to improve the customer experience and create more seamless and personalized experiences for their customers.

Customer segmentation: AI can be used to analyse customer data to identify distinct groups of customers based on shared characteristics and behaviours. This can help organizations tailor their marketing and customer experience strategies to better meet the needs of specific customer segments.

Predictive analytics: AI can be used to analyse customer data to identify trends and patterns that can be used to predict future customer behaviours. This can help organizations anticipate customer needs and proactively address potential issues.

Chatbots and virtual assistants: AI can be used to develop chatbots and virtual assistants that can handle customer inquiries and requests, providing personalized and efficient customer service.

6.6 Theme 5: CX Data to Value Creation Process – Key Discussion Points

Based on the three cases, 'Data to Value Creation Process' can be defined as “

'The CX Data to Value Creation Process refers to the systematic and strategic approach of collecting, analysing, and leveraging customer experience data to generate actionable insights and create value for the organization. This includes transforming raw data into meaningful information, developing customer intelligence to gain a comprehensive understanding of customer needs and preferences, utilizing AI-driven techniques to extract valuable insights, and applying these insights to drive business decisions and enhance the overall customer experience. The process aims to unlock the full potential of customer data by turning it into tangible outcomes that benefit the organization and its customers.'

The abundance of customer experience data presents organizations with both challenges and opportunities. This section focuses on the process of transforming customer experience data into value creation, examining the stages of customer experience data, information, knowledge, and insights. Additionally, it explores the concepts of customer intelligence, Actioning AI-Driven customer insights, and Unlocking Value from AI-Enabled Customer Insights. By exploring these concepts, this section aims to provide a comprehensive understanding of how organizations can extract meaningful insights from customer data and translate them into actions that drive value and improve customer experiences. Drawing from empirical research and scholarly literature, this section offers insights into the capability of the CX data to value creation process.

Customer Experience Data

CX data is a multidimensional construct that focuses on a customer's cognitive, emotional, and behavioural responses to a firm's offerings (Lemon & Verhoef, 2016). CX data is essential for firms to understand their customers' needs and preferences and to improve their products and services. In this discussion chapter, we will define CX data and its attributes and types. We will also compare CX data between two industries, telecom and banking, and discuss the differences.

CX data is a collection of information that reflects a customer's interactions with a firm's products and services (Lemon & Verhoef, 2016). It includes both objective and subjective data, such as purchase history, customer feedback, and social media activity (Lemon & Verhoef, 2016). CX data is multidimensional and can be broken down into cognitive, emotional, and behavioural components (Lemon & Verhoef, 2016).

There are three patterns of CX data collection: persistent, periodic, and pulsed (Meyer & Schwager, 2007). Persistent data collection involves continuous monitoring of customer interactions with a firm's products and services. Periodic data collection involves collecting data at regular intervals, such as monthly or quarterly. Pulsed data collection involves collecting data at specific times, such as after a customer has made a purchase or interacted with customer service ((Meyer & Schwager, 2007; Verhoef et al., 2015).

Also, CX data can be categorized into four types based on the combination of two dimensions: solicited/unsolicited and structured/unstructured. Solicited-structured data provides valuable insights into specific aspects of the customer experience and can be easily analysed and compared. Solicited-unstructured data allows customers to express their opinions and provide detailed feedback, but it requires more effort to analyse and extract meaningful insights. Unsolicited-structured data provides valuable insights into customer behaviour and preferences, allowing firms to personalize their offerings and improve the customer experience. Unsolicited-unstructured data captures spontaneous and authentic customer opinions and experiences, but it requires advanced techniques, such as natural language processing, to analyse and derive insights.

CX data is crucial for both the telecom and banking industries. In the telecom industry, CX data can help firms understand customer preferences for services such as mobile data plans and internet connectivity. Telecom firms can use CX data to improve network quality and customer service, which can lead to increased customer loyalty and retention. In the banking industry, CX data can help firms understand customer preferences for banking products and services, such as credit cards and loans. Banks can use CX data to improve customer service and tailor their products and services to meet customer needs. CX data can also help banks identify potential fraud and security risks and take appropriate measures to mitigate them

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In the banking industry, CX data can help firms understand customer preferences for banking products and services, such as credit cards and loans (Lemon & Verhoef, 2016). Banks can use CX data to improve customer service and tailor their products and services to meet customer needs (Lemon & Verhoef, 2016). CX data can also help banks identify potential fraud and security risks and take appropriate measures to mitigate them (Lemon & Verhoef, 2016).

While both industries rely on CX data, there are some differences in how they collect and use it. For example, telecom firms may collect more persistent data than banks, as they need to monitor network quality and customer service on an ongoing basis (Verhoef et al., 2015). Banks may collect more periodic data, such as customer feedback surveys, to understand customer satisfaction levels and identify areas for improvement (Verhoef et al., 2015).

Another difference is in the types of CX data collected. Telecom firms may collect more behavioural data, such as call logs and network usage data, while banks may collect more cognitive and emotional data, such as customer feedback on product features and customer service interactions (Lemon & Verhoef, 2016).

CX data is a multidimensional construct that reflects a customer's interactions with a firm's products and services. There are three patterns of CX data collection: persistent, periodic, and pulsed. CX data is crucial for both the telecom and banking industries, but there are some differences in how they collect and use it. Telecom firms may collect more persistent and behavioural data, while banks may collect more periodic and cognitive/emotional data. By understanding these differences, firms can tailor their CX data collection and analysis strategies to meet their specific industry needs.

Customer Insights

Customer insights are insights about customers and their needs, preferences, and behaviours that are derived from data analysis. There are several different types of customer insights, including:

1. Demographic insights: These insights relate to the characteristics of customers, such as age, gender, income, and location.
2. Behavioural insights: These insights relate to how customers interact with the organization and its products or services, such as purchase history, browsing behaviour, and response to marketing campaigns.
3. Attitudinal insights: These insights relate to the attitudes and opinions of customers, such as their level of satisfaction, brand loyalty, and preferences.
4. Needs and wants insights: These insights relate to the specific needs and wants of customers, such as their pain points, desired outcomes, and unmet needs.
1. Market trends insights: These insights relate to broader trends and patterns in the market, such as changes in customer behaviour or preferences, or shifts in the competitive landscape.
2. Journey insights: These insights relate to the various touchpoints and interactions that customers have with the organization, such as browsing the website, interacting with customer service, or using a product.

3. Pain points insights: These insights relate to the challenges and frustrations that customers encounter during their interactions with the organization. Identifying and addressing these pain points can help to improve the customer experience.
4. Satisfaction insights: These insights relate to the overall level of satisfaction that customers have with the organization and its products or services. This can be measured through customer surveys or other methods.
5. Preferences insights: These insights relate to the specific preferences and needs of customers, such as their preferred communication channels or desired features in a product.
6. Emotional insights: These insights relate to the emotional responses of customers during their interactions with the organization, such as feelings of frustration, satisfaction, or loyalty.

Customer Experience Actions

Actionable Improvements: Telecommunications providers take action based on customer experience data by addressing identified pain points, optimizing network performance, and refining service offerings. They prioritize customer-centric initiatives, such as upgrading infrastructure, enhancing self-service options, and implementing customer feedback-driven improvements. Banks use customer experience data to drive actionable improvements in their services and operations. They may introduce process enhancements, training programs for staff, or technological advancements to streamline customer interactions and enhance the overall experience.

Personalization and Tailored Offerings: Telecommunications providers leverage customer experience data to personalize their offerings, recommend suitable plans, and target promotions based on customer preferences and usage patterns. They focus on enhancing the overall customer experience by tailoring service packages and providing relevant add-ons. Banks utilize customer experience data to personalize their financial offerings, such as recommending specific investment products, providing customized loan options, or tailoring insurance packages to meet customer needs. They aim to provide a personalized and tailored experience to each customer based on their financial goals and preferences.

Monitoring and Continuous Improvement: Telecommunications providers continuously monitor customer experience data to track performance, identify emerging trends, and proactively address potential issues. They conduct regular audits, measure key performance indicators, and benchmark their services against industry standards. Banks also monitor customer experience data to assess their performance, identify areas for improvement, and align their services with changing customer expectations. They conduct regular assessments,

track customer satisfaction metrics, and implement continuous improvement initiatives to enhance the customer experience.

Customer Experience Value

There are many different actions that businesses can take to improve the CX. Some examples include:

1. Listening to and responding to customer feedback: This can help businesses identify areas where they are providing a positive experience for their customers and areas where they may need to improve.
2. Providing a seamless and consistent customer experience across all touchpoints: This includes ensuring that the customer experience is consistent across channels such as the company's website, social media, and in-store interactions.
3. Improving the speed and efficiency of customer service: This can include streamlining processes, investing in technology to automate tasks, and training customer service staff to be more effective.
4. Offering personalized and customized experiences: This can involve using customer data and insights to tailor the experience to individual customers or offering options for customization.
5. Providing clear and helpful communication: This includes providing clear information about products and services, as well as easy-to-use interfaces and helpful customer support.
6. Fostering customer engagement: This can involve creating a loyalty program, hosting events, or providing opportunities for customers to interact with each other and with the company.
7. Creating a positive and memorable brand experience: This includes creating a strong brand identity and consistently delivering on the brand's promises to customers.

The research found that digital channels play a crucial role in collecting customer data and bridging the gap between offline and online experiences (Empirical Finding: Case A) (Swayne, 2015). This aligns with the idea that consumers generate structured transactional data and unstructured behavioural data, providing opportunities for firms to analyse and understand customer behaviour (Swayne, 2015). By studying customer behaviour through comprehensive data collection across channels, organizations can improve engagement, satisfaction, and alignment with customer expectations.

The research also discovered that customer data and insights are essential for understanding customer behaviour and preferences (Empirical Finding: Case B) (McDowell, 2019; Campbell et al., 2019). This resonates with the concept of extensive behavioural data monitoring, enabling

firms to identify unconscious signals and personalize experiences (Keiningham et al., 2020). By analysing various data sources and leveraging customer data, organizations can drive business decisions, provide personalized experiences, and enhance their understanding of customers.

Additionally, the study highlights the importance of effective utilization of demographic, behavioural, transactional, and operational data to gain comprehensive insights (Empirical Finding: Case C) (Zeng & Glaister, 2018). This aligns with the notion of integrating survey data with transaction, channel, and operational data at both the aggregate and individual levels (Bolton, Lemon, and Bramlett, 2006; Bolton, Lemon, and Verhoef, 2008; Gijzenberg, Van Heerde, and Verhoef, 2015). By leveraging diverse data sources, organizations can derive actionable intelligence, optimize channels, streamline processes, and drive innovation to enhance the customer experience.

The study also emphasizes the significance of drawing together different types of data to gain a full context of every customer interaction (Empirical Finding: Case D) (Zeng & Glaister, 2018). This relates to the relevance of demographic, behavioural, transactional, and operational data for a holistic understanding of customer behaviour (Zeng & Glaister, 2018). By integrating various data sources, organizations can analyse customer feedback, gain insights, and address areas for improvement, leading to an enhanced customer experience and tangible business value.

Furthermore, the study highlights that mining transactional data to identify cross-selling opportunities, as exemplified by Amazon, can enhance customer experience, loyalty, and revenue (Empirical Finding: Case D) (Delen & Zolbanin, 2018). This aligns with the concept of using transactional data to identify items frequently appearing together in customers' shopping carts (Delen & Zolbanin, 2018). By leveraging transactional data and applying data mining techniques, organizations can optimize their offerings and improve the customer experience.

The study reveals that effective customer intelligence requires analysing collected data, implementing advanced analytics capabilities, and utilizing open-source systems (Empirical Finding: Case A) (Batra, 2019). This aligns with the notion of utilizing customer data mining tools to transform complex customer data into actionable intelligence (Batra, 2019). By leveraging advanced analytics capabilities and open-source systems, organizations can extract valuable insights from customer data, enabling better understanding and engagement with customers.

Furthermore, the authors found that registering every customer event and establishing correlations are emphasized as important aspects of customer intelligence (Empirical Finding: Case A) (Buhalis & Volcheck, 2020). This resonates with the idea that comprehensive data

modelling techniques allow marketers to observe interactions and predict consumer behaviour trends (Buhalis & Volcheck, 2020). By capturing and analysing customer events and correlating them with data models, organizations can gain deeper insights into customer behaviour and preferences.

Moreover, the study highlights churn modelling as a successful application of customer intelligence that helps retain customers and measure project success in the telecom industry (Empirical Finding: Case A) (Markey, 2020). This aligns with the concept of customer intelligence driving stable growth through accelerating customer value (Markey, 2020). By employing churn modelling and other customer intelligence techniques, organizations can proactively address customer churn, measure performance, and drive continuous improvement.

The authors also emphasize the relevance of relying on various data sources for customer intelligence, providing a comprehensive understanding of customer behaviour and preferences (Empirical Finding: Case B) (Dam et al., 2021). This relates to the idea that customer intelligence involves integrating, analysing, and interpreting diverse customer data sources (Dam et al., 2021). By leveraging data from business intelligence teams, data warehouses, analytical tools, and other sources, organizations can obtain a holistic view of customers and enhance their understanding of their needs and preferences.

Additionally, the study highlights the bank's correlation of transactional data with information from various systems to gain deeper insights into customer behaviour (Empirical Finding: Case C) (Noreen et al., 2023). This aligns with the importance of building the right data models and leveraging available data (Noreen et al., 2023). By integrating and analysing transactional data with data from card providers, networks, switches, and other systems, organizations can uncover hidden reasons behind customer feedback, identify improvement areas, and refine their services accordingly.

The research also discusses the bank's use of various KPIs to measure and evaluate their performance in customer experience (Empirical Finding: Case C) (Noreen et al., 2023). This aligns with the notion of customer intelligence assisting in product and service evolution based on knowledge of customers (Noreen et al., 2023). By measuring metrics such as acceptance ratio, turnaround time, and waiting time, organizations can gauge their performance, identify areas for improvement, and drive innovation to enhance the customer experience.

The study reveals that Actioning AI-Driven customer insights involves leveraging AI technologies and data analytics to improve customer satisfaction, anticipate needs, and optimize business processes (Empirical Finding: Case A) (Kitsios & Kamariotou, 2021). This aligns with the benefits of utilizing AI to create value across various organizational components, such as process automation and obtaining knowledge from data (Kitsios & Kamariotou, 2021).

By harnessing AI-driven customer intelligence, organizations can enhance customer interactions, address issues proactively, and make data-driven decisions to achieve their objectives.

Furthermore, the authors found that AI-driven customer intelligence is utilized for driving marketing campaigns and actions through digital channels (Empirical Finding: Case B) (Harwood and Garry, 2015; Landers, 2014; Bolton et al., 2018). This relates to the concept of gamification, where adding game-like elements can lead to customer learning, engagement, and improved experiences (Harwood and Garry, 2015; Landers, 2014; Bolton et al., 2018). By leveraging AI and technologies like natural language processing, organizations can analyse customer behaviour and complaints, make improved decisions, enhance customer interactions through chatbots, and provide personalized support.

Moreover, the study highlights the bank's leverage of a centralized system connected to payment service providers to gain a holistic view of customer behaviour (Empirical Finding: Case C) (D'Arco et al., 2019). This aligns with the use of Big Data to support product development and obtain information on target markets' preferences (D'Arco et al., 2019). By analysing customer patterns, preferences, and purchase history, the bank can offer relevant discounts, cross-sell products, and optimize services based on individual needs and preferences.

The researchers also found that the bank harnesses the full potential of AI-driven customer intelligence by employing predictive models to anticipate behaviour and trends (Empirical Finding: Case D) (Sarkar and De Bruyn (2019). This resonates with the study on customer churn prediction using advanced data analysis techniques and artificial neural networks (Sarkar and De Bruyn, 2019). By utilizing predictive models and focusing on knowledge and skill development, the bank can proactively identify customer churn, make informed decisions, and enhance their understanding of customer behaviour.

Additionally, the study highlights the adoption of AI algorithms, such as robotic process automation (RPA), being studied to improve business operations and customer experience (Empirical Finding: Case C) (D'Arco et al., 2019). This aligns with the benefits of AI in process automation and developing and launching new products and services (D'Arco et al., 2019). By integrating RPA and other AI algorithms, the bank can optimize internal processes, automate tasks, and improve efficiency in handling customer interactions.

The authors also emphasize the CXM approach's focus on the design of the brand experience and continuous innovation (Empirical Finding: Case C) (Jaziri, 2019). This relates to the concept that experiential data analysis leads to continuous innovation and the design of enhanced brand

experiences (Jaziri, 2019). By analysing experiential data, organizations can drive continuous improvement, innovation, and the design of exceptional brand experiences.

The study reveals that Unlocking Value from AI-Enabled Customer Insights focuses on improving customer experience and happiness to drive top-line growth and profitability (Empirical Finding: Case A) (Mach-Król & Hadasik, 2021). This aligns with the idea that insights from big data, if properly utilized, contribute to value generation, innovation, and competitive advantage (Mach-Król & Hadasik, 2021). By leveraging AI-enabled customer intelligence, organizations can enhance customer satisfaction, increase revenues, and foster customer loyalty.

Moreover, the authors found that AI-driven customer intelligence enables predictive analytics, targeted marketing campaigns, and personalized customer understanding (Empirical Finding: Case B) (Capgemini, 2018). This relates to the concept that good AI-enabled experiences encourage positive word-of-mouth and act as advocates for companies (Capgemini, 2018). By utilizing text mining and automated sentiment analysis, organizations can measure customer satisfaction, loyalty, and commitment, which ultimately contribute to long-term customer-brand relationships.

Furthermore, the study emphasizes the relevance of deriving actionable intelligence from customer data (Empirical Finding: Case C) (Hooley et al, 2017). This aligns with the use of advanced marketing intelligence to enhance market research capabilities, segmentation, targeting, and reducing churn rate (Hooley et al, 2017). By analysing customer feedback, preferences, and pain points, organizations can identify areas for improvement, develop new features or services, and maximize Customer Lifetime Value (LTV).

The authors also highlight the bank's aim to offer personalized services and recommendations based on customer preferences while considering the limits and boundaries of customer comfort (Empirical Finding: Case D) (McCullough et al., 2019). This resonates with the customer experience framework that considers emotions, cognitive responses, and touchpoints in the purchase decision journey (McCullough et al., 2019). By understanding customer perspectives, organizations can strike a balance between personalization and avoiding overwhelming customers, thereby delivering tailored and positive experiences.

Additionally, the study highlights that customer satisfaction is the main purpose of organizations, leading to high revenues and customer loyalty (Empirical Finding: Case A) (Brun et al., 2017; Lemon and Verhoef, 2016; Silva et al., 2021). This aligns with the relationship between customer experience and trust, loyalty, positive word-of-mouth, and long-term customer-brand relationships (Brun et al., 2017; Lemon and Verhoef, 2016; Silva et al., 2021).

6.7 Theme 6: Harnessing AI Capabilities – Key Discussion Points

Based on the three cases, ‘Harnessing AI Capabilities can be defined as “

Harnessing AI Capabilities refers to strategically leveraging AI technologies and techniques to enhance organizational processes, decision-making, and customer experiences. It involves utilizing AI algorithms, machine learning, natural language processing, and automation to analyse vast amounts of data, extract insights, and enable intelligent decision support systems. This encompasses two key sub-components: AI-Enabled Data to Intelligence Analytics, which focuses on transforming raw data into valuable intelligence using AI techniques, and AI-Enabled Intelligence to Actions Analytics, which involves translating intelligence into actionable outcomes through the application of AI technologies.’

This section explores into various aspects of harnessing AI capabilities, including the objectives of AI, challenges of utilizing AI, AI-enabled data-to-intelligence analytics, and AI-enabled intelligence-to-actions analytics. By examining these aspects, this section aims to provide a comprehensive understanding of how organizations can leverage AI technologies to analyse vast amounts of customer data, generate actionable insights, and automate decision-making processes. Drawing upon empirical findings and existing literature, this section offers valuable insights into the capability of harnessing capabilities.

In the telecom case study, the key discussion points revolve around the role AI in addressing customer needs, streamlining operations, and enhancing customer experience. The analysis highlights the importance of personalized interactions, proactive service offerings, and efficient problem resolution in the telecom industry. Furthermore, the implications of AI-powered chatbots, predictive analytics, and sentiment analysis in fostering customer engagement and loyalty are explored. Within the banking case study, the key discussion points centre around leveraging AI to optimize customer experience, mitigate risks, and improve operational efficiency. The analysis underscores the significance of AI applications such as fraud detection, personalized recommendations, and process automation in the banking sector. Additionally, the implications of data privacy, ethical considerations, and trust-building initiatives are examined in the context of AI adoption.

Throughout the within-case and cross-case analysis, empirical evidence has shed light on the distinct roles that AI plays in the data-to-value cycle (Smith, Wilson and Clark, 2006). The role of AI encompasses two main roles, namely, data-to-insights analytics and insights-to-action analytics. By leveraging advanced algorithms and techniques, AI plays a dual role in unravelling hidden patterns within the data and translating derived insights into actionable strategies. This empirical evidence emphasizes the importance of AI in maximizing the value derived from data

and emphasizes its potential to drive tangible business outcomes. Understanding these roles is essential for organizations seeking to harness the full potential of their data and optimize their decision-making processes.

Data-to-Insights Analytics: Unveiling the Hidden Patterns

In the data-to-insights analytics phase, AI and analytics play a crucial role in unraveling the hidden patterns and extracting meaningful insights from vast and complex datasets. By leveraging advanced algorithms, machine learning, and statistical techniques, AI can identify correlations, trends, and anomalies within the data that might otherwise go unnoticed. Analytics processes such as data mining, and exploratory analysis enable organizations to transform raw data into actionable insights. This stage is characterized by discovering valuable information that has the potential to guide decision-making and strategic planning.

Insights-to-Action Analytics: Enabling Informed Decision-Making

Once insights have been derived, the role of AI and analytics in the insights-to-action analytics phase is to facilitate informed decision-making. This stage involves translating the obtained insights into actionable strategies and initiatives. AI and analytics tools aid in understanding the implications of the insights and assessing their feasibility and potential impact on business operations. Through techniques like predictive analytics, machine learning, and recommendation systems, organizations can evaluate various courses of action and make data-driven decisions that maximize desired outcomes. The goal is to bridge the gap between insights and action, empowering organizations to act swiftly and effectively based on the derived insights.

The key distinction between data-to-insights analytics and insights-to-action analytics lies in their focus and objective. Data-to-insights analytics primarily deals with transforming raw data into meaningful insights, employing AI and analytics techniques to uncover patterns, relationships, and trends. The emphasis is on discovering knowledge and understanding the underlying patterns within the data. On the other hand, insights-to-action analytics focuses on translating those insights into actionable strategies, enabling organizations to make informed decisions. This phase leverages AI and analytics to assess the potential outcomes of different actions, considering various scenarios and optimizing decisions. While data-to-insights analytics uncovers valuable information, insights-to-action analytics drives tangible results by translating those insights into concrete actions that positively impact business outcomes, as shown in Table 6-7.

Table 6-1 Comparison between Data-to-insights analytics and Insights-to-Actions Analytics

Category	Data-to-Insights Analytics	Insights-to-Actions Analytics
Purpose	To identify patterns, relationships in data, and extract meaningful insights from raw data	To translate insights into actionable strategies and recommendations
Methods	<ul style="list-style-type: none"> • Text mining • Topic Modelling • Sentiment analysis • Segmentation and clustering 	<ul style="list-style-type: none"> • Machine Learning • Predictive modeling • NLP • Neuroscience Analytics • Recommender systems
Methodology	Employs statistical and machine learning techniques to analyse large datasets	Involves using natural language processing, and other advanced analytics tools to turn insights into practical steps
Output	Used in various fields to gain insights into customer behaviour, market trends, and patient outcomes	Used to optimize processes, improve performance, and make strategic decisions

AI Applications for acting on Customer Insights

AI offers numerous applications for acting on customer insights, providing organizations with valuable opportunities to enhance customer experiences. In both the telecommunications and banking sectors, AI is leveraged to transform customer data into actionable strategies. This paragraph explores the distinct ways AI is applied in these industries. In the telecommunications sector, AI enables personalized customer support, targeted marketing campaigns, and recommendation engines. Additionally, it empowers providers with advanced data analytics, voice recognition and biometrics, as well as process automation. Conversely, in the banking sector, AI-driven chatbots, personalization and recommendation engines, data analytics, voice recognition and biometrics, as well as process automation, play a significant role. Understanding these specific applications is crucial for organizations aiming to leverage AI effectively and harness its potential to enhance customer engagement and optimize operational efficiency.

1. **Customer Support and Assistance:** Telecommunications service providers leverage AI capabilities, such as chatbots and virtual assistants, to provide automated customer support and assistance. These AI-powered systems can handle common customer queries, provide self-service options, and offer real-time solutions. Banks also utilize AI-powered chatbots and virtual assistants to provide customer support, answer frequently asked questions, and guide customers through basic banking processes. They may also employ NLP capabilities to enhance the conversational experience.
2. **Personalization and Recommendation Engines:** Telecommunications providers use AI algorithms to personalize their service offerings and make recommendations to customers. They analyse customer data, usage patterns, and preferences to suggest suitable plans, add-ons, and promotions. AI helps them deliver targeted and personalized marketing campaigns. Banks leverage AI capabilities to provide personalized financial recommendations and tailored product offerings. AI algorithms analyse customer data, financial behaviour, and goals to recommend suitable investment options, credit cards, or loan solutions.
3. **Process Automation:** Telecommunications providers utilize AI capabilities to automate various processes, such as billing, network optimization, and service provisioning. AI algorithms automate repetitive tasks, reduce manual intervention, and enhance operational efficiency. Banks harness AI for process automation as well. They automate account opening processes, loan approvals, and back-office operations, leading to faster turnaround times and improved efficiency.

The objective of AI in Case A is to enhance customer value management (CVM) and improve customer experience through personalized interactions and optimized operations (Empirical Finding: Case A) (Shahid and Li, 2019; Huang & Rust, 2018; Rust, 2020). This aligns with the applications of AI, such as advanced data analytics, enhanced decision-making, and process automation, which contribute to revenue generation and improved customer engagement.

Case B focuses on leveraging AI and segmentation techniques to drive customer behaviour, improve customer service, and enhance overall customer experience (Empirical Finding: Case B) (O'Boyle, 2018). This relates to the potential of ML in marketing campaigns based on personalization, dynamic pricing, and churn prediction, contributing to revenue generation and improved customer engagement.

Case D highlights that AI can reveal insights to help employees make informed decisions impacting CX, from refining their overarching CX strategy to providing real-time responses to customer inquiries and improving customer interaction through AI-powered solutions like chatbots and robots (Empirical Finding: Case D) (IBM, 2018). This aligns with the idea that AI

can be integrated into customer-facing experiences or devices and automate behind-the-scenes processes, driving improvements in customer experience.

Case A highlights challenges in utilizing AI, including linking and aggregating data from various sources, balancing personalization and privacy concerns, ensuring data quality and granularity, and scarcity of experienced professionals in AI and data science (Empirical Finding: Case A) (Gupta et al., 2016; Manyika et al., 2011; Leeflang, Verhoef, Dahlström, & Freundt, 2014). These challenges align with the concept that firms need to effectively deploy technology and talent to capture, store, and analyse data for generating valuable insights. Additionally, there is a shortage of analytical talent, which further compounds the challenge. Privacy and regulatory concerns related to data collection and usage also pose challenges in the AI implementation.

In Case B, the challenges of utilizing AI include potential frustration with inflexible AI systems and scarcity of technical resources, such as data scientists and AI engineers (Empirical Finding: Case B). This corresponds to the concept that a scarcity of AI skills can slow down progress even with moderate AI implementation. Overcoming skill gaps and resource scarcity is crucial for successful AI integration.

Case C emphasizes the challenges of utilizing AI in banking, including building core competencies, establishing a suitable organizational structure, ensuring data quality, and fostering collaboration between business and data teams (Empirical Finding: Case C) (Campbell et al., 2019; Kim et al., 2019). These challenges align with the need for firms to be aware of the challenges of privacy, regulation, and data quality in developing an AI foundation. Overcoming skill gaps and fostering a culture of continuous learning and innovation through comprehensive training programs is also crucial (Empirical Finding: Case C).

In Case D, the successful integration of AI into banking operations relies on employee training, adoption, and overcoming skill gaps (Empirical Finding: Case D) (Singh et al., 2018). This is in line with the concept that combining moderately important business and marketing transcription skills with AI capabilities can significantly increase output. Comprehensive training programs are necessary to equip employees with the necessary AI-related skills and foster a culture of continuous learning and innovation (Empirical Finding: Case C, D).

Case A focuses on utilizing AI-enabled data analytics to extract valuable insights, understand customer satisfaction and preferences, and monitor customer satisfaction through surveys and research (Empirical Finding: Case A) (Puntoni et al., 2020). These practices align with the concept of using sentiment analysis and text analytics to listen empathetically and at scale to consumers' experiences and expectations. Additionally, text mining and other emerging technologies, such as NLP and clustering, offer better ways to measure and manage customer experience.

In Case B, AI-enabled data analytics techniques are applied to predict customer satisfaction levels, analyse customer feedback, redesign user interfaces, and detect customer emotions (Empirical Finding: Case B) (Sumathi & Sheela, 2017; Ma & Sun, 2020). These practices correspond to the concept of using sentiment analysis, predictive analytics, and eye-tracking tools to gauge customer expectations, categorize feedback efficiently, and improve customer satisfaction. Furthermore, the use of AI in understanding customer behaviour and taking appropriate actions aligns with the goal of extracting meaningful intelligence from data for informed decision-making.

Case C highlights the application of AI-enabled data analytics in the banking sector for fraud detection, understanding customer behaviour, and providing personalized experiences (Empirical Finding: Case C) (Kim et al., 2021). These practices align with the concept of utilizing advanced analytics techniques, such as predictive analytics and clustering, to detect fraud cases, understand customer behaviour, and tailor personalized offerings. Additionally, the use of machine learning algorithms and data analysis for improved customer experience corresponds to the goal of utilizing data for valuable intelligence and informed decision-making.

In Case D, AI-enabled data analytics is used in the banking sector for predictive analytics and gaining insights into customer behaviour (Empirical Finding: Case D) (Verhulst et al., 2019). This aligns with the concept of applying predictive analytics and customer analysis to understand customer behaviour and make informed decisions. The use of sentiment analysis in social media data further demonstrates the application of AI in understanding customer sentiment.

Case A focuses on utilizing AI-enabled intelligence to drive actionable insights, fix issues, introduce new strategies, and adapt to market dynamics (Empirical Finding: Case A) (Keiningham et al., 2020; De Keyser et al., 2020). This aligns with the concept of linking data about customer experience qualities to evaluative judgments, such as customer satisfaction scores, to assess the relative importance of CX qualities and identify areas for improvement. Additionally, the use of AI-driven solutions like chatbots and voice-bots to improve customer interactions corresponds to the concept of chatbots embedded with AI extracting customer experience through narrative conversations.

In Case B, AI is utilized to gather real feedback, predict customer churn, retain customers, and personalize campaigns based on individual preferences (Empirical Finding: Case B) (Sidaoui et al., 2020; Newman, 2018). These practices align with the concept of employing AI-powered next-best-action solutions to predict customer needs and offer relevant actions and promotions, leading to improved wallet share and loyalty. Furthermore, the use of chatbots and AI-enabled

IVR systems to enhance customer service and provide personalized experiences corresponds to the concept of leveraging AI for narrative conversations and dynamic customer interactions.

Case C highlights the translation of AI-driven intelligence into actionable steps in the banking sector, such as predicting customer behaviour, providing proactive solutions, and offering personalized discounts (Empirical Finding: Case C) (Lieb, 2014). These practices align with the concept of utilizing AI to portray consumer preferences and employing recommender systems to tailor offerings based on customer behaviour. Additionally, the focus on utilizing AI-generated intelligence for customer satisfaction, loyalty, and retention corresponds to the concept of using AI-powered next-best-action solutions to improve wallet share and loyalty.

In Case D, the translation of AI-driven intelligence into actionable steps in the banking sector is emphasized, particularly in predicting customer behaviour and providing proactive solutions (Empirical Finding: Case D) (Li and Kannan, 2014; Kumar et al., 2019). These practices align with the concept of using AI to understand why, how, and when customers use products and services and employing customer journey analytics to attribute touchpoints to purchases. The use of AI to deliver personalized experiences and increase customer loyalty corresponds to the concept of employing predictive analytics for retention offers and intelligent call routing services.

6.8 Chapter Summary

This study has unveiled new knowledge, showcasing the transformative potential of AI-enabled customer intelligence in revolutionizing business practices and elevating customer experiences. The research has uncovered keyways to effectively action AI-driven insights, significantly enhancing customer satisfaction, loyalty, and overall business performance.

The conceptual framework, derived from in-depth case study research, centres around six key capabilities that profoundly impact customer experience (CX) and business outcomes. These capabilities include Customer Experience Strategy, Customer Journey Management, Customer Intelligence Approach, Agile Customer Experience, CX Data to Value Creation Process, and Harnessing AI Capabilities. Grounded in the lens of strategy as practice, this framework highlights the significance of holistic CX management and AI integration. Customer Experience Strategy involves aligning offerings with customer needs, while Customer Journey Management optimizes interactions. The Customer Intelligence Approach utilizes data to uncover insights, and Agile CX ensures swift adaptation. The CX Data to Value Creation Process leverages data for value, and Harnessing AI maximizes AI's potential. The framework illustrates the interplay of these capabilities, serving as a cornerstone for telecom and banking case studies. Through this model, the study presents and dissects key focal points in these industries, offering a comprehensive structure for insightful discussions.

The discussion revolves around AI's role in addressing customer needs, streamlining operations, and enhancing customer experience in telecom and banking sectors. AI applications, such as chatbots, recommendation engines, and process automation, are highlighted. The empirical evidence emphasizes AI's dual role in data-to-insights analytics and insights-to-action analytics, unveiling hidden patterns and enabling informed decision-making.

Data-to-insights analytics involve leveraging AI to extract meaningful insights from complex datasets through algorithms and techniques like data mining and exploratory analysis. Insights-to-action analytics involve translating insights into actionable strategies, aided by predictive analytics and recommendation systems. The focus shifts from discovering patterns in data to optimizing decisions based on insights.

AI applications in customer insights include personalized support, recommendation engines, and process automation in telecom, and chatbots, personalization, and fraud detection in banking. Each case study's objectives, challenges, and outcomes are examined. Challenges include skill shortages, privacy concerns, and resource scarcity, while AI-enabled data analytics are used to understand customer behaviour, predict satisfaction, and drive actionable insights in both sectors. The key distinctions between data-to-insights analytics and insights-to-action analytics are outlined, showcasing their respective purposes, methods, and outputs.

7 Contributions, Research Evaluation and Future Research

This chapter presents a comprehensive evaluation of the research conducted, highlighting its contributions, limitations, and potential avenues for future exploration. In Section 7.1, the researcher outlines the significant contributions made by this research to the field, emphasizing the novel insights, advancements, and practical implications derived from the findings. Also, It serves as a conclusion to the thesis, offering a synthesis of the knowledge gained and emphasizing its relevance in the broader context of the research area.

Furthermore, Section 7.2 addresses the limitations of the research, acknowledging the boundaries and potential biases that might have influenced the outcomes.

In Section 7.3, a rigorous research evaluation is presented, examining the methodology, data analysis, and overall validity of the study. This evaluation aims to provide a critical assessment of the research process, highlighting its strengths and areas for improvement. Section 7.4 proposes suggestions for future research endeavours, identifying unexplored avenues, unresolved questions, and potential extensions of the current study. These suggestions are intended to inspire further scholarly investigations and foster continued growth in the field. Finally, In Section 7.5, the researcher offers a reflective analysis, providing personal insights and observations gained throughout the course of the study.

7.1 Contribution of the research

The study presents the contributions of this research, which have been achieved through a rigorous investigation into the role of AI in actioning customer insights throughout the customer journey to manage customer experience within organizations. The identified contributions seek to enhance the theoretical understanding, empirical knowledge, and practical implications of utilizing AI for CX management in service organizations. By addressing gaps in the existing literature and offering novel insights, this study makes contributions that advance the field of business and management research. Through the pursuit of these contributions, this research endeavours to advance the understanding and practice of managing customer experience by integrating the potential of artificial intelligence. Moreover, the insights and findings presented in this thesis aim to stimulate further research in the domain of AI-driven customer experience management, fostering continuous progress and innovation in the field.

This study makes contributions in the following areas:

7.1.1 Theoretical contribution:

The research provides a significant theoretical contribution by extending existing knowledge on the integration of AI into the customer insight process for CX management. Building upon critical realism, the study acknowledges the complex and dynamic nature of the customer journey and the role of AI in generating valuable insights (Edelman & Abraham, 2022).

The primary theoretical contribution of this research is the development of the CXBV which represents an extension and refinement of the RBV and KBV theories within the context of the role AI in actioning customer insights to manage customer experience. The conceptual framework developed, the CXBV, expand theoretical understanding of the strategic implications of AI-enabled customer insights for organizations seeking sustainable competitive advantage (Holmlund et al., 2020). This framework provides a comprehensive structure for evaluating the impact of AI on CX management, emphasizing the significance of customer experience, customer insight, and customer intelligence as strategic resources (Edelman & Abraham, 2022; McColl-Kenned et al., 2019; De Bruyn et al., 2020; Smith et al., 2006). This contribution is multi-faceted and encompasses several essential dimensions.

First and foremost, the CXBV framework introduces the concept of Customer Experience Strategy as a fundamental pillar. It highlights the imperative role of a well-defined, customer-centric strategy in shaping an organization's ability to consistently deliver exceptional customer experiences. Second, the framework emphasizes Customer Journey Management as a core element, highlighting the necessity of effectively overseeing the entire customer journey across diverse touchpoints and channels to ensure seamless and personalized experiences.

Furthermore, the research introduces the Customer Intelligence Approach as a crucial capability within the CXBV framework, emphasizing the significance of robust customer intelligence practices, including data collection, analysis, and insights generation, in gaining a comprehensive understanding of customer needs, preferences, and behaviours. Additionally, the study underscores the importance of an Agile Way of Operating, demonstrating that organizations that adopt agile methodologies and processes are better equipped to respond swiftly to evolving customer expectations and market dynamics.

Another notable contribution of the CXBV framework lies in its explanation of the CX Data to Value Creation Process, which highlights the transformative power of leveraging customer data to generate actionable insights and initiate value-creating endeavours, thereby driving both business outcomes and customer satisfaction. Lastly, the framework advocates for the strategic Harnessing of AI Capabilities, illustrating how the integration of artificial intelligence technologies empowers organizations to automate and enhance various facets of the customer experience, including personalization, recommendation systems, and chatbots.

As well as the above main contribution to knowledge made by this study there are also a number of other findings which have also made a contribution. These are summarised as follows:

Contribution 1: This research addresses the research gaps in the domain of AI in actioning customer insights for CX management, as stated in section 2.11. While existing literature has explored aspects of AI and CX independently, this study provides a comprehensive framework that integrates AI into the data to value process within the broader CXM context, offering scholars a consolidated approach to harnessing AI to manage customer experiences. This research extends existing knowledge by presenting the CXBV framework, an innovative conceptual model that builds upon the RBV and KBV. By incorporating six pivotal capabilities for successful CX management, including customer experience strategy, customer journey management, customer intelligence approach, agile way of operating, CX data-to-value creation process, and harnessing AI capabilities, this framework provides a holistic and comprehensive perspective. This theoretical advancement contributes to the understanding of how AI can be strategically leveraged to transform customer insights into valuable actions that drive enhanced customer experiences. Also, this framework addresses critical gaps in the existing literature by integrating AI and customer insights into a cohesive structure that guides organizations in their pursuit of improved customer experiences. This contribution further aids in refining definitions, introducing new constructs, and establishing theoretical linkages, thus providing a valuable resource for both academia and practitioners seeking to optimize their CX management strategies.

Contribution 2: The study investigates into the implementation of agile methodologies to enhance customer experiences, emphasizing the importance of organizational capabilities, agile methodologies, and holistic alignment. To date, the existing body of knowledge has primarily examined CXM and agile methodologies as separate entities, without investigating into their synergistic potential. The distinctive contribution of this study lies in its comprehensive investigation into how a customer intelligence approach coupled with agile strategies enhances the CX Data to Value process and amplifies the efficacy of harnessing AI capabilities in customer experience management within organisations.

Contribution 3: The existing body of knowledge primarily acknowledges the existence of a singular category, CX analytics, that bridges the gap between CX data and CX insights. This research introduces a distinction between two discernible entities: AI-enabled Data to Insights Analytics and AI-enabled Insights to Action Analytics. This differentiation not only expands our comprehension of the CXM domain but also paves the way for empirical examination by scholars. Also, these classifications distinctly clarify the multifaceted roles that AI assumes in the transformation of data into actionable strategies, from personalized experiences to channel optimization, innovation to predictive actionable insights.

Contribution 4: The findings of this research confirm existing knowledge regarding the role of customer intelligence. The study highlights the significance of robust customer intelligence approaches, encompassing data collection, analysis, and insights generation, in informing strategic decision-making and fostering meaningful customer interactions. This contribution extends and reaffirms established principles by offering valuable guidance on data collection, segmentation, and personalization strategies, providing organizations with the tools to deepen their understanding of customers and enhance relationships through personalized experiences. Furthermore, the research sheds new light on the boundless potential of AI-enabled customer intelligence across customer experience outcomes. It aligns harmoniously with prior research by emphasizing how businesses can generate enduring value through AI-powered insights, manifesting as improved customer satisfaction, heightened loyalty, and amplified revenue growth. The study further builds upon existing knowledge by elucidating the outcomes of leveraging AI, including targeted customer acquisition, proactive customer retention strategies, and personalized upsell and cross-sell initiatives.

Contribution 5: The study has identified two distinct categories of AI analytics based on the phases in the data-to-value cycle: AI-Enabled Data to Insights Analytics and AI-Enabled Intelligence to Actions Analytics. These categories signify the diverse roles that AI plays in transforming raw data into meaningful insights and subsequently converting those insights into actionable strategies.

7.1.2 Empirical Contribution:

To provide concrete insights into the use of AI in managing customer experience, this study conducted interviews and surveys with service organizations in Jordan. The generated empirical data offers valuable information on the current state of AI adoption, the benefits and challenges associated with its usage, and the impact of AI on customer experience. By rigorously examining the practical implications of AI implementation, this research contributes to the empirical understanding of its role in CX management within the context of service organizations.

- Through interviews with service organizations in Jordan, this study aims to generate new empirical data on the use of AI in managing customer experience. It aims to provide insights into the current state of AI adoption, the benefits, and challenges of using AI, and the impact of AI on customer experience.
- This study aims to generate new empirical data on the use of AI in managing customer experience in service organizations in Jordan. By conducting interviews and surveys with service organizations in Jordan, this study aims to provide insights into the current state of AI adoption, the benefits, and challenges of using AI, and the impact of AI on customer experience.

7.1.3 Practitioner Contribution:

This research contributes significantly to practitioners and managers in the domain of customer experience management, with a particular focus on the telecommunications and banking industries. By delving into the integration of artificial intelligence (AI) into the customer insight process and its practical applications, this study offers actionable insights and recommendations for real-world implementation.

One notable contribution lies in the investigation of the diverse mechanisms for leveraging AI-generated customer insights along the customer journey. This exploration encompasses insights derived from AI and machine learning analytics, which can be instrumental in enhancing the understanding of customer behaviours, preferences, and needs. Armed with these AI-enabled insights, organizations are better equipped to proactively improve the overall customer experience at various touchpoints within the customer journey.

Moreover, this research provides practical guidance tailored to service organizations, particularly those in Jordan, on how to effectively harness AI for customer experience management. The identification of best practices and success factors for AI adoption serves as a roadmap for practitioners, aiding them in the design and implementation of successful customer experience management strategies. This guidance facilitates the alignment of AI implementations with overarching customer experience strategies, enabling the seamless delivery of personalized experiences to customers.

Furthermore, the study highlights the significant value of AI-enabled customer intelligence in driving various customer experience outcomes. Practitioners can leverage AI insights to enhance customer satisfaction, loyalty, and revenue growth. AI empowers targeted customer acquisition, proactive customer retention strategies, personalized experiences, and optimized business performance through predictive insights. By embracing AI technologies, organizations can unlock substantial value and gain a distinct competitive advantage in the market.

In essence, this research bridges the gap between academia and industry by offering insights that cater to the needs of both researchers and practitioners. Scholars in the fields of customer experience management and AI applications in marketing can build upon these findings to advance theoretical frameworks and refine existing theories. Meanwhile, practitioners are equipped with practical implications that guide the effective implementation of AI-enabled customer experience management strategies within their respective service organizations. This collective contribution enriches the discourse surrounding customer experience management, empowering professionals to navigate the evolving landscape of AI-driven customer-centric strategies.

A detailed contributions for practice distilled from this thesis can be summarized as follows:

Contribution 1: This research contribution of this research seeks to address a challenge faced by customer insights and analytics professionals; the gap between deriving insights and translating them into meaningful business actions. Despite significant advancements in customer analytics, a substantial number of professionals struggle to ensure that insights lead to tangible outcomes. This research aims to investigate this gap by exploring the factors contributing to the breakdown between insights generation and action implementation. By examining the case studies, this contribution will identify strategies employed by leading organizations to successfully bridge this divide. This research will provide a comprehensive framework that enables organizations to effectively turn insights into impactful actions, fostering better decision-making and business outcomes.

Contribution 2: The research findings offer practical insights for service organizations in the banking and telecommunications sectors. It highlights the significance of AI-generated customer insights and demonstrates how organizations can leverage these insights to optimize CXM strategies, enhance customer loyalty, and drive business outcomes. It highlights the significance of aligning brand promises with actual service delivery, understanding customer perceptions, fostering customer-centric cultures, and addressing industry-specific challenges. The insights from both industries serve as valuable references for organizations within their respective sectors, offering tailored strategies to enhance customer experiences and drive industry-specific outcomes.

Contribution 3: By bridging the perspectives of researchers and practitioners, this research enriches the practical implementation of AI-enabled CXM strategies. Through the CXBV framework and the insights generated from the study, practitioners gain a deeper insight into the complexities of integrating AI in CXM, while practitioners receive guidance on effectively utilizing AI to enhance customer experiences and drive business outcomes. This dual contribution advances the discourse in both academia and practice, fostering a more comprehensive understanding of the dynamic landscape of AI-enabled CXM. The study offers practical guidance on how businesses can effectively leverage AI-enabled customer insights to optimize customer experiences. By harnessing AI insights for customer experience design, channel and journey optimization, innovation and product development, processes streamlining and automation, and predictive insights for performance optimization, organizations can enhance their operational efficiency and customer relationships. These practical strategies empower organizations to leverage AI as a transformative tool for optimizing various aspects of their operations and enhancing customer experiences.

Contribution 4: The research has highlighted the significance of including customer intelligence in the data-to-value cycle between customer insights and customer actions. This intermediary role emphasizes the importance of understanding and interpreting customer insights before implementing them as CX management initiatives.

Contribution 5: The study has explored into the ways businesses can effectively harness AI customer intelligence. Through customer experience design, organizations can deliver unparalleled personalized experiences, aligning offerings with individual preferences and needs. Channel and journey optimization enable businesses to create seamless interactions across various touchpoints, fostering customer engagement and conversion rates. By integrating AI insights into innovation and product development, companies can identify untapped opportunities and develop novel offerings tailored to customer demands. Processes streamlining, improvement, and automation empower organizations to optimize operations, boost efficiency, and free up resources for value-adding initiatives. Furthermore, optimizing business performance with predictive insights enables proactive decision-making, aligning strategies with future trends and customer expectations.

Contribution 6: The study has revealed the immense value unlocked by AI-enabled customer intelligence across various customer experience outcomes. Businesses can generate sustainable value by improving customer satisfaction, loyalty, and revenue growth through AI-powered insights. Targeted customer acquisition becomes more precise as AI identifies high-value prospects, optimizing marketing efforts and investments. Proactive customer retention strategies are empowered by AI, predicting and addressing churn risks before they materialize. The personalization potential of AI drives customer loyalty and advocacy, contributing to positive brand reputation and increased word-of-mouth referrals.

7.2 Limitation of the research study

The research study has several limitations that should be acknowledged. Firstly, the chosen case study approach, while suitable for exploring the role of AI in actioning customer insights throughout the customer journey, is limited in terms of generalizability. The findings may be context-specific and may not be fully applicable to other organizational settings or industries or geographic locations. Therefore, caution should be exercised when extrapolating the results to a broader population.

Secondly, the selection of service organizations as the sample may introduce bias and limit the diversity of perspectives. While purposeful sampling was employed to ensure relevance and accessibility, the findings may not capture the full range of experiences and practices related to AI-enabled customer insights. It is important to recognize that different industries and

organizations may have unique characteristics and challenges in implementing AI in their CXM strategies.

Additionally, the reliance on self-reported data from interviews and document reviews introduces the potential for subjectivity and recall bias. Despite efforts to ensure rigor and reliability in data collection, there may be variations in the interpretation and reporting of information. Furthermore, the use of qualitative data analysis software (QDA) for analysis introduces the possibility of the researcher's biases and assumptions influencing the interpretation of the data.

Furthermore, the use of qualitative data analysis software (QDA) for analysis introduces the possibility of the researcher's biases and assumptions influencing the interpretation of the data. However, it could be argued that using software can effectively mitigate this concern, as it follows predefined algorithms and analytical processes, reducing the potential impact of researcher bias and enhancing the objectivity of the analysis.

The use of qualitative data analysis software (QDA) for analysis introduces the possibility of the researcher's biases and assumptions influencing the interpretation of the data. While software can help eliminate potential researcher bias, it is important to recognize that the researcher's biases can still influence the interpretation of the data. To try to maintain objectivity and avoid bias with qualitative data analysis, multiple people can be used to code the data. Additionally, establishing rigor in qualitative research is important to ensure the validity and reliability of the findings.

Furthermore, the research study focuses primarily on the assessment of AI-generated customer insights and their value in managing customer experience. Other factors, such as organizational culture, resources, and external market conditions, may also impact the successful implementation and effectiveness of AI in CXM. These factors were not extensively explored in this study, and their influence on the research findings should be considered.

Finally, as with any research study, time and resource constraints may have limited the scope and depth of the investigation. The study's findings represent a snapshot of the current state of AI in actioning customer insights throughout the customer journey and may not capture the evolving nature of this field. Future research endeavours could build upon this study by exploring additional dimensions and incorporating longitudinal data to gain a more comprehensive understanding.

Despite these limitations, the research study contributes valuable insights into the role of AI in CXM and highlights the importance of assessing the value of AI-generated customer insights. The findings provide practical implications for organizations aiming to leverage AI technologies to enhance their customer experience strategies and improve customer loyalty.

7.3 Research evaluation

In evaluating the qualitative research conducted using a case study approach, several key aspects can be assessed, including credibility, research integrity and quality, transferability of the research findings, and considerations of privacy, confidentiality, and anonymity. Following the quality criteria explained in section 3.3.6, this section critically evaluates these aspects. This research demonstrates strong credibility through data triangulation. The research integrity and quality were upheld through adherence to research ethics, rigorous data collection and analysis processes, and the use of established qualitative research methodologies. The transferability of the research findings was enhanced by providing a detailed description of the research methodology and contextualizing the findings within specific organizational settings. Lastly, privacy, confidentiality, and anonymity considerations were carefully addressed to protect the rights and identities of the research participants. These evaluation aspects collectively contribute to the robustness and trustworthiness of the research findings, as follows:

1. Credibility:

Credibility refers to the trustworthiness and believability of the research findings. In this study, credibility was established through various means. Firstly, the use of multiple data collection techniques, such as semi-structured interviews and document reviews, ensured data triangulation and enhanced the credibility of the findings (Creswell, 2013). Additionally, the use of a qualitative data analysis software ensured transparency and traceability of the analysis process, enhancing the credibility of the interpretations and conclusions drawn from the data (Guest et al., 2012).

2. Research Integrity and Quality:

Research integrity and quality encompass the ethical considerations, rigor, and thoroughness of the research process. In this study, adherence to research ethics was of paramount importance. The researcher obtained informed consent from the participants and ensured that their privacy, confidentiality, and anonymity were protected throughout the research process, as shown in Appendix D. All data, including interview recordings and transcriptions, were securely stored and accessible only to the research team, thereby maintaining confidentiality (Silverman, 2013). To ensure research quality, the study followed a well-defined research design, employing a rigorous multiple case study approach. The use of purposeful sampling and data saturation contributed to the richness and depth of the data collected, enhancing the quality of the research (Patton, 2015).

3. Transferability of the Research Findings:

Transferability refers to the extent to which the research findings can be applicable and relevant to other contexts or settings (Lincoln & Guba, 1985). In this qualitative case study research, efforts were made to ensure the transferability of the research findings, additional measures were taken. The research findings were presented with rich and detailed descriptions of the research context, case organizations, and data collection procedures. This level of detail allows readers to assess the transferability of the findings to their own contexts and settings (Yin, 2014). Clear descriptions of the research methodology, including the rationale for selecting case organizations, the sampling strategy, and the data analysis techniques used, were provided. This transparency enables readers to evaluate the transferability of the research findings to similar contexts (Lincoln & Guba, 1985).

4. Privacy, Confidentiality, and Anonymity:

Privacy, confidentiality, and anonymity considerations are crucial in qualitative research, particularly when dealing with sensitive information. In this study, strict measures were implemented to protect the privacy and confidentiality of the research participants. Pseudonyms were assigned to the case organizations and individuals to ensure anonymity. Additionally, all personal identifiers were removed from the interview transcripts and other documents, further safeguarding the confidentiality of the participants (Creswell, 2013). These practices align with established ethical guidelines and protect the rights and well-being of the participants involved in the research. To protect the privacy, confidentiality, and anonymity of the participants, stringent measures were implemented. Informed consent was obtained from all participants prior to data collection. They were provided with detailed information about the research, its purpose, and their rights as participants, ensuring their voluntary participation in the study (Creswell, 2013). All identifying information was removed from the transcripts, documents, and any published material to ensure anonymity. Pseudonyms were used to further protect participant identities. Additionally, strict protocols were followed to securely store and handle all data, maintaining the confidentiality of the participants (Silverman, 2013).

By undertaking these measures, the research demonstrates credibility, upholds research integrity and quality, promotes the transferability of the findings, and protects the privacy, confidentiality, and anonymity of the participants. These practices ensure the reliability and validity of the research findings and contribute to the overall quality and trustworthiness of the study.

7.4 Suggestion for future research

Several suggestions for future research can be proposed. Firstly, further investigation is needed to explore the practical implementation and effectiveness of the conceptual framework developed in this study, namely the CXBV and the Customer Experience Operating Model. Empirical studies can be conducted to test the applicability of these frameworks across different industries and organizational contexts to validate their effectiveness in managing customer experiences and achieving competitive advantage.

Secondly, additional research could focus on examining the specific capabilities within the CXBV and Customer Experience Operating Model. Each capability identified, such as customer experience strategy, customer journey management, customer intelligence approach, agile customer experience, CX data to value creation process, and harnessing AI capabilities, can be studied in depth to understand the individual impact and interplay between these capabilities. This can provide insights into how organizations can enhance their customer experience management practices and develop strategies that leverage AI-driven customer insights effectively.

Moreover, future studies can investigate the challenges and barriers organizations may encounter when implementing AI technologies in customer experience management. This could involve exploring issues related to data privacy, ethical considerations, and organizational readiness for AI adoption. Understanding these challenges can help guide organizations in overcoming barriers and developing strategies to maximize the value and impact of AI-generated customer insights.

Furthermore, longitudinal studies can be conducted to observe the long-term effects of AI-enabled customer insights on organizational performance and customer loyalty. This can provide valuable insights into the sustainability and durability of the competitive advantage gained through the effective utilization of AI technologies in customer experience management.

Additionally, comparative studies across different industries and sectors can be conducted to identify industry-specific variations in implementing AI-driven customer insights. Understanding the contextual factors that influence the adoption and success of AI technologies can enhance our understanding of the role of AI in managing customer experiences in diverse organizational settings.

Also, this research was undertaken in Jordan, and it could be argued that comparative studies across other geographical regions could be undertaken to provide a broader understanding of the topic. Cross-cultural comparative research can be challenging, and there are several issues to consider, such as sampling and study purpose, sample boundaries, theoretical context,

concept development, and analogous comparisons. Comparisons can be carried out on various levels, including regional, national, or wider geographical boundaries based on specific subjects or areas of interest. Cross-regional studies involve the comparison of analytical units across different regions. Comparative case studies are undertaken over time and emphasize comparison within and across contexts. When selecting countries for comparative research, it is essential to maximize diversity along relevant dimensions. To ensure the validity and reliability of cross-country comparisons, generic quality criteria can be used to assess the quality of health systems and policies.

By addressing these avenues for future research, scholars and practitioners can further advance our understanding of the role of AI in managing customer experiences and unlock the full potential of AI technologies in delivering exceptional customer experiences.

For future research, an essential and promising direction is to empirically test the developed conceptual framework, which explores the pivotal role of AI in harnessing customer insights throughout the customer journey to effectively manage the overall customer experience. This conceptual framework draws its theoretical foundation from two established perspectives, namely the RBV and KBV. To validate the practical implications and robustness of the proposed model, a comprehensive empirical investigation should be undertaken, employing rigorous quantitative methods. This empirical testing would involve gathering and analysing data from diverse industries and sectors, assessing the impact of AI implementation on customer experience metrics, and investigating the extent to which the RBV and KBV principles align with the observed outcomes. Such empirical validation would not only strengthen the theoretical underpinnings of the model but also provide valuable insights for businesses seeking to leverage AI-driven customer insights to enhance their customer journey management strategies and optimize overall customer experiences.

In order to advance the conceptual framework and validate its practical implications, future research should focus on empirically testing the CXBV framework. This empirical investigation is crucial to explore the potential of AI technologies, including machine learning and natural language processing, in analysing customer sentiment and feedback at scale and speed, surpassing human capabilities. The research should aim to comprehensively understand AI and its operationalization for CXM.

By integrating the six key capabilities of the CXBV framework, organizations can effectively manage customer experiences throughout the customer journey. Firstly, a well-defined and customer-centric Customer Experience Strategy should be developed to deliver superior customer experiences. Secondly, effective Customer Journey Management is essential for delivering seamless and personalized experiences across all touchpoints and channels. Thirdly,

adopting an Agile Way of Operating enables organizations to respond and adapt quickly to changing customer expectations and market dynamics.

Additionally, a robust Customer Intelligence Approach encompassing data collection, analysis, and insights generation is critical for understanding customer needs, preferences, and behaviours. The CX Data to Value Creation Process plays a vital role in leveraging customer data and transforming it into actionable insights and value-creating initiatives to drive business outcomes and customer satisfaction. Finally, harnessing AI capabilities empowers organizations to automate and enhance various aspects of the customer experience, such as personalization, recommendation systems, and chatbots.

The empirical testing of the CXBV framework would involve gathering and analysing data from various industries and sectors, assessing the impact of AI implementation on customer experience metrics, and understanding how the six key capabilities interact and influence overall customer experiences. This empirical validation will not only strengthen the theoretical underpinnings of the model but also provide practical insights for businesses seeking to embrace AI-driven customer insights and optimize their customer journey management strategies for sustainable competitiveness and continuous improvement of customer experiences.

A potential avenue for future research involves the empirical evaluation of the Customer Experience-Based View (CXBV) model from the perspective of customers. With organizations already utilizing AI-generated customer insights, robust surveys exploring customer experiences and impressions could provide instrumental understanding of the CXBV model's efficacy. Such study would highlight the impact of AI application on customer satisfaction, loyalty, and experiences. This would underscore the CXBV framework's effectiveness while informing refinements to optimize alignment with evolving customer needs and industry developments. Furthermore, investigating businesses' techniques to enhance customer experience provides a broader picture of their efforts. Areas of interest could include practices such as the active solicitation and utilization of customer feedback and the delivery of seamless experiences across touchpoints. Efficiency and speed of customer services, including the process streamlining, technology investment, and staff training, merit consideration. Offering personalized experiences through the use of customer data, along with clear, effective communication about products, services, and user interfaces could yield valuable insights. Moreover, investigating the fostering of customer engagement, creation of loyalty programs, and opportunities for customer interaction further contributes to the comprehensive understanding of CXM. Finally, examining businesses' strategies for creating memorable brand experiences would offer an expanded picture of the organizational commitment towards CX.

7.5 Researcher's reflection

Throughout my DBA journey, I have experienced significant learning and growth on both personal and academic levels. The rigorous research process has allowed me to investigate deep into my chosen research area and develop a comprehensive understanding of the complexities within the field. The DBA journey has also been a transformative process in terms of my identity and becoming as a researcher. As I engaged in deep intellectual inquiry, my understanding of the business and management domain has evolved, and I have developed a more refined research identity. I have come to appreciate the interdisciplinary nature of the field and its connections to other disciplines. This realization has broadened my perspective, encouraging me to incorporate diverse theoretical frameworks and methodologies into my research approach. Moreover, throughout this intellectual journey, the tension between being a practitioner and an academic has been a recurring theme. The challenge of balancing practical experience with rigorous academic inquiry has been an enriching and thought-provoking aspect of the research process. Scholars such as Bartunek & Rynes (2014) has extensively explored this tension, highlighting the potential conflicts and opportunities that arise when bridging the gap between academia and real-world practice. Reflecting on this tension, it becomes evident that the researcher's own experiences as a business design and transformation professional have informed the research approach and provided valuable insights into the practical implications of the study's findings.

Additionally, theories of personal identity have played a significant role in shaping the researcher's perspective throughout the thesis. Scholars such as Empson (2013) and Bourner et al. (2001) have emphasized the importance of personal identity formation and its influence on individuals' behaviours and choices. The researcher's own career trajectory and job changes have been influenced by a strong desire to contribute to the field of customer experience management and transformation. These experiences have not only shaped the researcher's personal identity but have also contributed to a deeper understanding of the challenges and opportunities associated with implementing customer-centric strategies in organizations. Drawing on personal experiences, it is noteworthy that the researcher's career journey has provided valuable insights into the practical aspects of designing and implementing customer experience strategies. Working as a business design, transformation, and consulting professional at Ernst & Young, the researcher has developed expertise in strategic planning for customer experience design, organizational agility, and customer-centricity. This practical experience has been instrumental in informing the research and bridging the practitioner-academic divide. Furthermore, the researcher's previous roles at Umniah and Huawei have

contributed to a comprehensive understanding of customer experience management and the use of machine learning and AI in enhancing customer journeys. Leading the enhancement of Umniah's customer experience management and heading the consulting team at Huawei Middle East regional office, I have gained practical insights into transforming businesses into customer-centric organizations and leveraging analytical tools for CX programs.

Collaboration and mentorship have played pivotal roles in shaping my research and personal development. Engaging in collaborative endeavours with fellow researchers has provided me with diverse perspectives and novel insights into my research area. Collaborative discussions and brainstorming sessions have helped refine my research ideas, challenge my assumptions, and broaden the scope of my work. Additionally, the guidance and mentorship from my supervisor have been invaluable. Their expertise, constructive feedback, and solid support have pushed me to strive for excellence and encouraged me to explore new avenues of inquiry. Their mentorship has not only enhanced my research skills but also instilled in me a sense of confidence and resilience, enabling me to overcome obstacles and persevere in the face of challenges.

Appendix A – Five-stage framework for conducting a scoping review

The scoping review followed Arksey and O'Malley's (2005) framework, involving five stages: (1) identifying the research question, (2) identifying relevant studies, (3) selecting studies, (4) charting the data, and (5) collating, summarizing, and reporting the results. Novak's methodology for concept mapping (Novak et al., 2004) was utilized to identify key concepts and themes, group them into categories, and visually represent the interconnections through a network diagram.

This section describes the process used to identify and select relevant studies for inclusion in the scoping review. The approach undertaken for scoping the literature followed Arksey and O'Malley's (2005) framework for scoping review and Novak's methodology for concept mapping (Novak et al., 2004). To identify relevant studies, a comprehensive search was conducted using a range of electronic databases, including, EBSCO, Proquest, Emerald, Science Direct and JSTOR, as show in Table 1. The search terms included keywords related to the research question and scope of the review, as show in Table 2. The search was limited to studies published in English between 2010 and 2023.

The studies identified through the search were screened for relevance and quality using inclusion and exclusion criteria. Inclusion criteria were based on the research question and scope of the review, while exclusion criteria were used to exclude studies that did not meet the quality standards required for inclusion in the review. Key information was extracted from the selected studies, such as study design, research methods, and key findings.

Arksey and O'Malley (2005) describe a five-stage framework for conducting a scoping review (Figure 1: identifying research questions; identifying relevant studies; study selection; charting the data; and collating, summarising, and reporting results). To identify the key concepts and themes, Novak's methodology for concept mapping (Novak et al., 2004) was used. This involved identifying the key concepts from the selected studies, grouping the concepts into categories, and creating a visual map or network diagram that showed how the different categories were interconnected, as show in Figure 2 and Section 2.2.

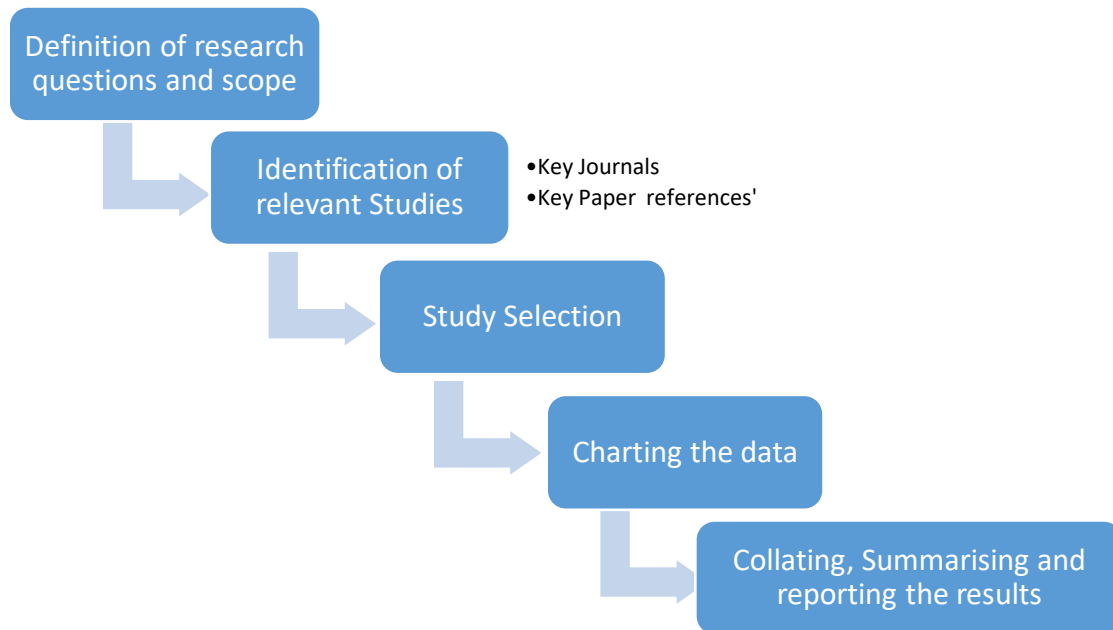


Figure 1 Stages of the scoping literature

A review question was identified: 'What is the role of artificial intelligence in actioning customer insight to manage customer experience throughout the customer Journey within Service Organizations'. Relevant databases (Table 1) were searched for peer-reviewed literature published using free text key words that are applicable to the review question at hand. The author searched for titles, abstracts and keywords that featured some combination of the search words of the main concepts (Table 2).

Table 1 Electronic Databases Searched for Scoping Review

Database
ProQuest
Business Source Complete (EBSCO)
Emerald
Science Direct
JSTOR

Table 2 Keywords for Electronic Database Search

Key Words
Customer Experience Management
Manage Customer Experience
Customer Experience
Customer Insight
Customer Journey
Artificial Intelligence

There were three levels of review using inclusion/exclusion criteria as shown in Table 2-3.

Table 3 Inclusion/Exclusion Criteria for Scoping Review Papers

Inclusion Criteria:
Published in English.
Peer-reviewed articles.
Level 1 of review: Published between 2010 to 2023.
Level 2 of review: Academic journal from Quartile 1 journals in the Scientific Journal Ranking (SJR).
Level 3 of review: Academic journal rankings from CABS (Chartered Association of Business Schools) with AJG 2021 rating of 4*, 4 and 3.
Exclusion Criteria:
Published in language other than English.
Published before 2010.
Academic journal below Quartile 1 journals in the Scientific Journal Ranking (SJR).
Academic journal rankings with AJG 2021 rating below 3.

Appendix C gives a summary of recent papers on customer experience, customer journey, customer experience management, customer insight, and artificial intelligence domain, respectively.

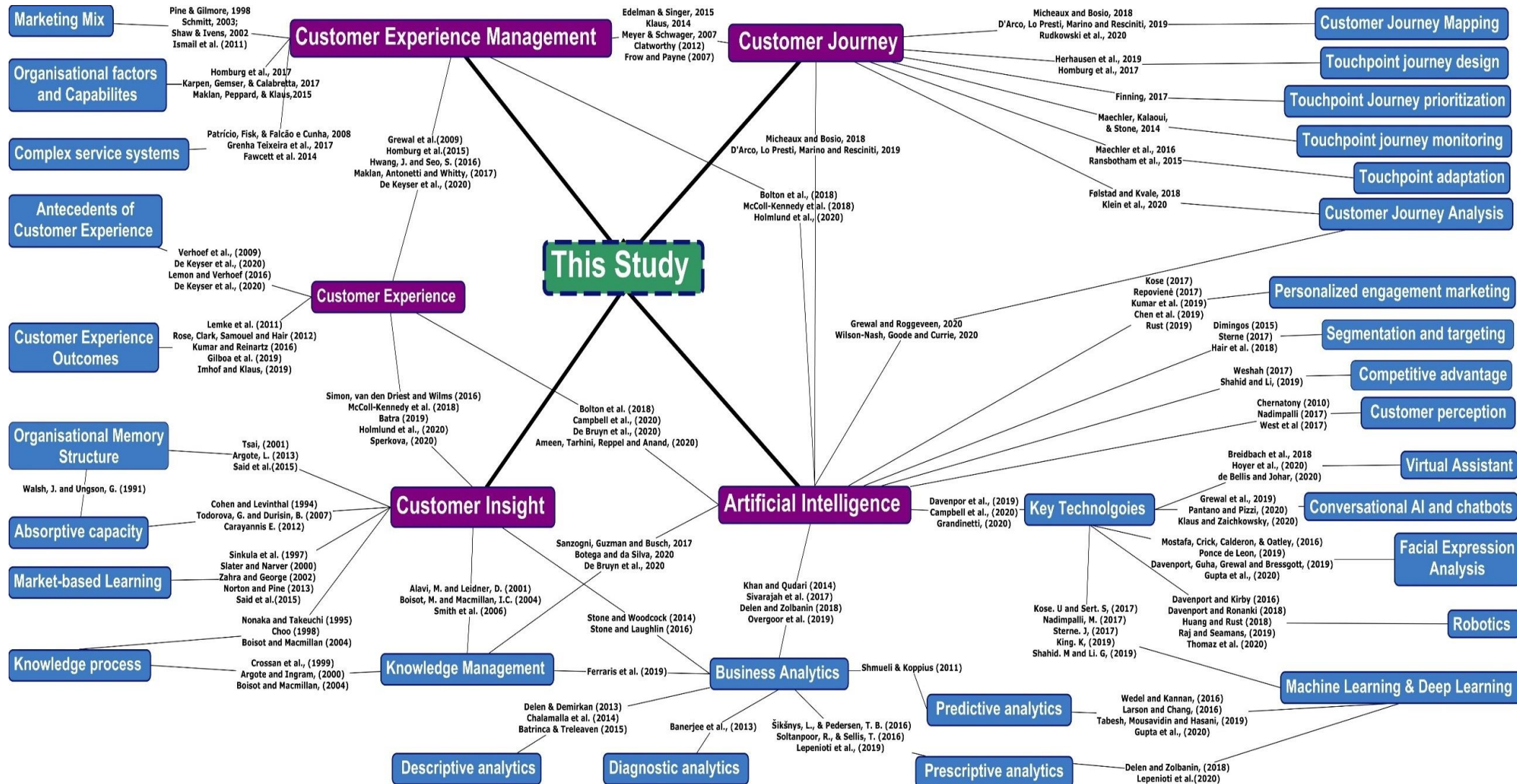


Figure 2 Map of the Interdisciplinary literature – CXM, Customer Insight, and AI

Appendix B – A multidisciplinary Systematic Literature Review

This section describes the process used to identify and select relevant studies for inclusion in the literature review. The methodology used in this review was based on the approach proposed by Tranfield, Denyer, and Smart (2003) for developing evidence-informed management knowledge by means of systematic review, combined with mapping review to identify key concepts and themes in the research area and map out relationships between different studies and research groups.

To identify relevant studies, a comprehensive search was conducted using a range of electronic databases, including Emerald, Science Direct, JSTOR, ProQuest, Business Source Complete (EBSCO), Google Scholar, Scopus, and Web of Science, as well as reference lists and other sources. The search terms included keywords related to the research question and scope of the review, as show in Table 3 The search was limited to studies published in English between 2010 and 2023.

The studies identified through the search were screened for relevance and quality using inclusion and exclusion criteria. Inclusion criteria were based on the research question and scope of the review, while exclusion criteria were used to exclude studies that did not meet the quality standards required for inclusion in the review. Key information was extracted from the selected studies, such as study design, research methods, and key findings.

The conceptual framework was then used to map out relationships between different studies and research groups, creating a visual map or network diagram that showed how the different concepts and themes were interconnected, as shown in Figure 2. The use of mapping review to identify key concepts and themes and map out relationships between different studies and research groups was also informed by the work of other researchers in the field, such as Grant and Booth (2009) and Levac, Colquhoun, and O'Brien (2010). Overall, the literature search was conducted in a comprehensive and rigorous manner, with the aim of identifying and selecting the most relevant and high-quality studies for inclusion in the review. The use of a systematic and transparent methodology, combined with mapping review, enabled the identification of key concepts and themes in the research area, and provided a clear and visual representation of the relationships between different studies and research groups.

Table3 illustrates the combinations of keywords and the limitations performed in the Web of science database. The combinations were determined to capture the articles about the use of Artificial intelligence and machine learning in customer experience, customer journey, customer

experience management, customer (consumer) insights areas at the topic level (i.e., title, abstract, and keywords). The results were screened for academic articles published in English and removed duplicated and published in the fields of business and management (xx articles). Then applied a journal quality classification in Quartile 1 journals in the Scientific Journal Ranking (SJR). The study screened the titles, abstracts, and keywords for the mention of at least one of the following terms: artificial intelligence, journey, touchpoint(s), or experience management.

Table 3 Combination of keywords in the Web of Science database

Searches	Combination of keywords and limitations
First Combination	Topic= (“Artificial Intelligence”) AND Topic= (“Customer experience”)) AND (DOCUMENT TYPES ==(ARTICLE)
Second Combination	Topic= (“Artificial Intelligence”) AND Topic= (“Customer experience management”)) AND (DOCUMENT TYPES ==(ARTICLE)
Third Combination	Topic= (“Artificial Intelligence”) AND Topic= (“Customer journey”)) AND (DOCUMENT TYPES ==(ARTICLE)
Fourth Combination	Topic= (“Artificial Intelligence”) AND Topic= (“Customer insight(s)”)) AND (DOCUMENT TYPES ==(ARTICLE)
Fifth Combination	Topic= (“Machine learning”) AND Topic= (“Customer experience”)) AND (DOCUMENT TYPES ==(ARTICLE)
Sixth Combination	Topic= (“Machine learning”) AND Topic= (“Customer experience management”)) AND (DOCUMENT TYPES ==(ARTICLE)
Seventh Combination	Topic= (“Machine learning”) AND Topic= (“Customer journey”)) AND (DOCUMENT TYPES ==(ARTICLE)
Eighth Combination	Topic= (“Machine learning”) AND Topic= (“Customer insight(s)”)) AND (DOCUMENT TYPES ==(ARTICLE)

Appendix C gives a summary of recent papers on customer experience, customer journey, customer experience management, customer insight, and artificial intelligence domain, respectively.

Appendix C – Summary of recent papers on the customer experience, customer experience management, customer Journey, customer Insight, and Artificial Intelligence

Domain	Author	Title	Journal	Topic/ Methodology	Research findings
Customer Experience Literature	De Keyser et al. (2021)	Moving the Customer Experience Field	Journal of Service Research	<p>The topic of this paper is CX research and the methodology used is a systematic literature review. The authors analyse and synthesize existing CX literature to develop a clear and concise nomenclature for CX, as well as identify research gaps and methodological challenges in the field. They also provide recommendations for future research and discuss the managerial opportunities and value of the CX nomenclature.</p>	<p>The paper develops a clear and concise nomenclature for CX, consisting of three building blocks: touchpoints, context, and qualities (TCQ). This nomenclature provides a framework for understanding and studying CX.</p> <p>The majority of CX research focuses on individual customers in business-to-consumer (B2C) settings. There is a need for more research to consider how CX differs in business-to-business (B2B) environments and to what extent the TCQ nomenclature is applicable to B2B settings.</p>

					<p>The paper identifies several future research opportunities in the field of CX. These include understanding the impact of new technologies (such as AI and robotics) on CX, exploring the trade-offs between personalization and privacy considerations, and studying the effects of major environmental changes (such as the COVID-19 pandemic) on CX.</p> <p>The paper highlights the need for more research on CX in non-Western cultures and the impact of cultural differences on CX. Understanding how different cultures appreciate various components of CX is important for developing a global understanding of CX.</p>
	Becker and Jaakkola	Customer experience:	Journal of the Academy of	The article analyses the concept of customer experience and provides a	The authors identified two distinct research traditions within the

	(2020)	fundamental premises and implications for research	Marketing Science	framework for future research in the field. The authors conducted a systematic literature review to identify and group relevant articles on customer experience. They then classified the articles into different literature fields based on the stimuli studied, the customer experience context, and the key references used to define customer experience. The authors also analysed the nature of customer experience phenomena and the metatheoretical assumptions in the literature fields.	literature fields: customer experience as responses to managerial stimuli and customer experience as responses to consumption processes. They developed an integrated view of customer experience by comparing and situating the literature fields in a theoretical map. The article provides fundamental premises of customer experience and their research implications for scholars in the field.
	Mahr, Stead, and Odekerken-schroder (2019)	Making sense of customer service experiences	Journal of Services Marketing	The paper uses a systematic text mining and machine learning approach to analyse a large set of articles on customer service experiences (CSE) in order to identify concepts and focal dimensions. The approach extracts word occurrences and applies a Bayesian algorithm to predict emerging concepts and their relationships.	The paper identifies important pathways to advance services research and CSE research in particular. It highlights the importance of the sensory dimension in CSE and suggests that the role of the senses is key for value-creation processes in the servicescape. The paper also reveals a lack of research attention

				on CSE's fundamental definitional dimensions and presents key avenues for future research, such as creating a more in-depth understanding of underlying dimensions in complex service systems and broadening the perspective toward emerging research topics.
Kranzbu"bler et al. (2018)	The Multilevel Nature of Customer Experience Research	International Journal of Management Reviews	he paper discusses the development of customer experience as a concept and proposes a framework for analysing static and dynamic customer experiences from both organizational and consumer perspectives. The authors conducted a systematic literature review using the Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) Protocol. They identified keywords related to customer experience and searched for articles containing these keywords in their title or abstract. They also	The authors found that research on customer experience from the organizational perspective mainly focuses on designing interactions with customers and underlying internal processes to maximize organizational targets. This research is often prescriptive in nature and includes insights gained through case studies and survey research. On the other hand, research from the consumer perspective mainly assesses the impact of factors beyond firm control on customer experience. There is little overlap

				<p>included articles with synonymous search terms in their title or keywords. The authors categorized the articles based on their perspective (organizational vs. consumer) and reviewed them to establish a clearer understanding of the customer experience construct.</p>	<p>between the topics researched from the two perspectives. The authors propose a framework that considers single firm-customer touchpoints and the entire customer journey as focal to static and dynamic customer experience research. However, both perspectives fail to agree on a clear conceptualization of what constitutes a customer journey.</p>
Customer Experience Literature	Jain, Aagja, and Bagdare (2017)	Customer experience and research agenda a review	Journal of Service Theory and Practice	<p>The paper reviews the literature on customer experience to develop a better understanding of the concept and propose a research agenda.</p> <p>Methodology: The study is based on a thorough review of literature related to customer experience. The relevant literature was identified, classified, summarized, examined, and synthesized to develop a meaningful understanding of the relevant work on customer experience.</p>	<p>The review describes the relevance of experiential perspective, service experience, and customer experience to attract, delight, and retain customers. Customer experience is regarded as a holistic interactive process, facilitated through cognitive and emotional clues, moderated by customer and contextual characteristics, resulting in unique and pleasurable/unpleasurable memories. The study provides a deeper understanding of the concept</p>

					and research issues for customer experience. It also provides insights into the emergence, development, management, and measurement of customer experience-related issues for future research. The study contributes to the understanding of customer experience and research agenda based on a thorough review of literature spanning 25 years.
	Lemon and Verhoef (2016)	Understanding Customer Experience Throughout the Customer Journey	Journal of Marketing	The paper examines existing definitions and conceptualizations of customer experience, provides a historical perspective on the roots of customer experience within marketing, and explores what is currently known about customer experience, customer journeys, and customer experience management. It also identifies critical areas for future research on this topic.	The paper highlights the increasing number and complexity of customer touch points and the belief that creating strong, positive experiences within the customer journey can improve performance and customer outcomes. It also suggests that customer experience is related to prior research streams within marketing, such as customer satisfaction, service quality, relationship marketing, customer relationship management, customer

					<p>centricity, and customer engagement.</p> <p>The paper emphasizes the multidimensional nature of customer experience, focusing on a customer's cognitive, emotional, behavioural, sensorial, and social responses to a firm's offerings throughout the entire purchase journey. It also discusses the importance of identifying critical touch points throughout the customer journey that have the most significant influence on key customer outcomes.</p> <p>Additionally, the paper addresses the limited empirical work directly related to customer experience and the customer journey, highlighting the need for further research to strengthen the overall</p>
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					conceptualization of customer experience and the customer journey. It also suggests exploring the linkages and moderators between customer experience and other marketing constructs, such as service quality, commitment, and customer engagement.
De Keyser et al. (2015)	A Framework for Understanding and Managing the Customer Experience	Marketing Science Institute Working Paper Series	The paper develops an integrative framework for understanding and managing the customer experience by drawing insights from marketing, philosophy, psychology, and sociology. The authors employ a three-step analytical procedure to define and describe the nature of customer experience and its relationship with customer value and engagement.	<ol style="list-style-type: none">1. CX is defined as the cognitive, emotional, physical, sensorial, and social elements that mark the customer's direct or indirect interaction with a market actor(s).2. CX is multidimensional in nature and is influenced by various factors.3. CX is embedded within a multi-layered system that continuously impacts the way customers experience their interactions with firms.4. CX is a vital element in shaping customer value reflections and engagement behaviours.5. CX should be managed with a focus on the individual customer and their integration of products and services within their daily lives.	

					<div>6. CX programs should take a service ecosystem perspective, considering the multiple parties involved in creating the customer experience.</div> <div>7. CX should be viewed as a long-term, dynamic process that encompasses all touchpoints of the customer-firm relationship.</div> <div>8. Accurate measurement of CX requires a multi-method approach, rather than relying on a single measure such as satisfaction or NPS.</div> <div>9. The framework provides a specific mindset for top-level management to design, execute, and monitor holistic CX strategies.</div>
Rose, Hair, and Clark (2011)	Online Customer Experience: A Review of the Business-to-Consumer Online Purchase Context	International Journal of Management Reviews	<div>Review of the literature on online customer experience in the context of business-to-consumer online purchases</div> <div>Methodology: Systematic review of the literature using a mix of academics and practitioners as the research team. Search terms were used to identify relevant peer-</div>	The paper identifies the likely drivers of online customer experience (OCE) in three areas: website quality, perceived ease-of-use (PEOU), and perceived usefulness (PU). The literature review provides insights into the dimensions of website quality and the factors that contribute to effective website performance. The paper also	

				<p>reviewed journal articles from international sources. Content analysis was done manually, and a data extraction form was used to summarize critical data. A framework was created to analyse the literature.</p>	<p>highlights the importance of understanding the emotional and cognitive state of customers during and after the online purchase process. Managerial implications include the need for e-marketers to focus on both functional performance and the experiential state of customers. The research proposed in the paper aims to develop effective measurement scales for identifying relevant inputs and outputs of an effective OCE for retail websites.</p>
	<p>Lemke, Clark, & Wilson, (2011)</p>	<p>Customer experience quality: an exploration in business and consumer contexts using repertory grid technique</p>	<p>Journal of the Academy of Marketing Science</p>	<p>Topic: Exploring the concept of customer experience quality and its impact on customer relationship outcomes using the repertory grid technique in both business-to-business and business-to-consumer contexts.</p> <p>Methodology: The researchers used the repertory grid technique to gather</p>	<p>The researchers derived a model for customer experience quality and compared their findings in B2B and B2C contexts.</p> <p>They found that customers can articulate the constructs by which they assess customer experience quality.</p>

				<p>data from a convenience sample of 40 respondents, split evenly between B2B and B2C. The interviews were conducted face-to-face and ranged from 40 to 90 minutes each.</p>	<p>The study identified key constructs in both B2B and B2C contexts.</p> <p>The researchers found that customer experience quality is contextual.</p> <p>The study discussed implications for practitioners and suggested research directions.</p>
Domain	Author	Title	Journal	Topic/ Methodology	Research findings
Customer Journey Literature	Y. Tueanrat et al. (2021)	Going on a journey: A review of the customer journey literature	Journal of Business Research	<p>The paper is a research report analysing the customer journey literature and identifying underlying themes, gaps, and trends in the field. The methodology used for the review is a systematic review, specifically a structured review focusing on widely used methods, theories, and constructs. The review question was formulated using the SPICE framework, and inclusion and exclusion criteria were set. The initial search keywords were "journey" and</p>	<p>The paper discusses five themes of the customer journey in detail. The analysis found that the customer journey literature predominantly employed qualitative methodologies, reflecting the early stage of research in the domain. The paper also highlights that many studies of the customer journey are still in the early developmental stage and require empirical testing and further validation.</p> <p>The paper identified five major themes in the customer journey</p>

				<p>"touchpoint," but some key papers were excluded due to the lack of a universal definition and cross-disciplinary perspectives of the term. After removing duplicates, the search yielded a total of 401 studies. The abstract of each study was extracted for review. The final set of retrieved papers comprised 147 documents. The analysis covered approximately twenty years of research on the customer journey, up until May 2020.</p>	<p>literature: service satisfaction, failure and recovery, customer response, co-creation, and channels. These themes reflect the research trends in customer journey studies.</p> <p>The analysis revealed that the dominant classes of the customer journey literature were service satisfaction and failure and recovery, with 48 and 36 studies respectively. Co-creation and customer response were also well-studied themes, with 25 and 23 papers respectively. Technological disruption was found to be a less explored and relatively emerging theme, with 17 articles focused on it.</p> <p>In terms of the contexts studied in the customer journey articles, the most frequently studied industries were tourism, financial services and insurance, electronics, events and entertainment, and clothing and apparel. The most frequently studied countries were the United States, the United Kingdom, Italy, Germany, and Sweden.</p> <p>The paper also suggests areas for future research in the customer journey field. It recommends exploring the use of social media platforms and mobile applications as rich data sources for various inputs and concurrent experiences. It also emphasizes the need for new data collection approaches and data integration methods to track and</p>
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					<p>organize ubiquitous data. Additionally, the paper encourages researchers to test the relevance and validity of existing models and measurements in the new service environment and to explore the customer journey in other niche service environments such as the sharing economy and subscription-based industries.</p>
	<p>Siebert , Simões , Lindridge, and Gopaldas (2020)</p>	<p>Customer Experience Journeys: Loyalty Loops Versus Involvement Spirals</p>	<p>The Journal of Marketing</p>	<p>The topic of the paper is customer experience management and the different models of customer experience journeys, specifically loyalty loops and involvement spirals. The authors discuss the long-term evolution of customer experience journeys across multiple service cycles and propose two models: the smooth journey model (loyalty loop) and the sticky journey model (involvement spiral).</p> <p>The methodology used in the paper includes conceptualization and</p>	<p>The research findings of the paper challenge the dominance of the smooth journey model and propose the sticky journey model as an alternate approach. The authors argue that while predictable experiences in loyalty loops offer convenience and satisfaction, they may risk losing customer attention. On the other hand, involvement spirals with unpredictable experiences keep customers excited and engaged, but may also risk fostering addictions. The paper provides insights on how firms can select the appropriate model, when to encourage purchases, and how to sustain customer journeys in multiservice systems.</p> <p>Please note that the specific research findings and details may vary throughout the paper, so it would be best to refer to the full text for a comprehensive understanding.</p>

				empirical development of the sticky journey model. The authors provide examples of different service categories that are suitable for each model and offer recommendations for firms on how to encourage purchases and sustain customer journeys.	
	Hamilton, Ferraro and Mukhopadhyay (2021)	Traveling with Companions: The Social Customer Journey	Journal of Marketing	<p>Topic: The role of social others in influencing the customer's decision-making process</p> <p>Methodology: The paper reviews the literature on the social customer journey and offers a research agenda for the marketing discipline.</p>	<p>Research Findings:</p> <p>The paper highlights the importance of social influences on the customer journey and how they can affect decision-making.</p> <p>It discusses the concept of the social customer journey and the different stages involved, such as familiarity, initial consideration set, information search, attractiveness recognition, understanding, decision, purchase, and post-purchase stages.</p> <p>The paper emphasizes the need to consider the social distance between the focal consumer and their traveling companions in understanding the impact of social influences.</p> <p>It suggests that the social nature of the customer journey has the</p>

					<p>potential to influence and improve people's lives in many ways.</p> <p>The paper also raises questions for future research, such as how credibility, trustworthiness, and likability are established for social media influencers, and how consumers evaluate the usefulness or truthfulness of other consumers' experiences or opinions.</p>
Lemon and Verhoef (2016)	Understanding Customer Experience Throughout the Customer Journey	Journal of Marketing: AMA/MSI	of	<p>Topic: Customer experience and the customer journey</p> <p>Methodology: The paper examines existing definitions and conceptualizations of customer experience, provides a historical perspective on the roots of customer experience within marketing, and explores what is currently known about customer experience, customer journeys, and customer experience management. It also identifies critical areas for future research on this topic.</p>	<p>The paper highlights the increasing number and complexity of customer touch points and the belief that creating strong, positive experiences within the customer journey can improve performance and customer outcomes. It also suggests that customer experience is related to prior research streams within marketing, such as customer satisfaction, service quality, relationship marketing, customer relationship management, customer centricity, and customer engagement.</p>

				<p>The paper emphasizes the multidimensional nature of customer experience, focusing on a customer's cognitive, emotional, behavioural, sensorial, and social responses to a firm's offerings throughout the entire purchase journey. It also discusses the importance of identifying critical touch points throughout the customer journey that have the most significant influence on key customer outcomes.</p> <p>Additionally, the paper addresses the limited empirical work directly related to customer experience and the customer journey, highlighting the need for further research to strengthen the overall conceptualization of customer experience and the customer journey. It also suggests exploring</p>
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					<p>the linkages and moderators between customer experience and other marketing constructs, such as service quality, commitment, and customer engagement.</p> <p>Overall, the paper provides a comprehensive overview of customer experience and its evolution within marketing, while also identifying gaps in understanding and suggesting a research agenda for future studies.</p>
	Becker, Jaakkola, & Halinen, (2021).	Toward a goal-oriented view of customer journey	Journal of Service Management	<p>Topic: Customer experience research and goal-oriented view of customer journeys</p> <p>Methodology: Phenomenological research methodology, interpretive tradition, self-regulation model of behaviour</p>	<p>Research findings:</p> <p>The study proposes a goal-oriented and hierarchical view of customer journeys that highlights how customer journeys toward lower-order goals involving market, organizational, and social actors are embedded into broader consumer journeys toward higher-order goals.</p>

					<p>The study identifies iterative cognitive and behavioural processes that relate to how consumers set goals and seek to change or maintain the experienced situation in relation to their goals during the journey.</p> <p>The study demonstrates how positive and negative customer experiences spur behaviours toward the higher-order consumer goal.</p> <p>The study highlights the importance of looking at the consumers' higher-order goals to obtain a more holistic understanding of the customer journey.</p> <p>The study suggests that companies and organizations should extend their view beyond the immediate goals of their customers to identify relevant touchpoints and other</p>
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					customer journeys that affect the customer experience.
Domain	Author	Title	Journal	Topic/ Methodology	Research findings
Customer Experience Management Literature	Imhof and Klaus (2019)	The dawn of traditional CX metrics? Examining	International Journal of Market Research	This paper examines the effectiveness of different measures (i.e. Customer satisfaction, CX quality (EXQ), and	1.Relative metrics (e.g., wallet allocation rule (WAR)) are superior to absolute measurements (e.g., CSAT) when predicting share-of-wallet.

		satisfaction, EXQ, and WAR		the wallet allocation rule (WAR) in explaining (and predicting) consumer behaviour. The study attempts in closing the gap in understanding the relationship between CX and share of wallet.	2. There is a quantifiable link between customer experience and share-of-wallet. 3. Satisfaction has a weak correlation with share-of-wallet.
	Kandampully, Zhang and Jaakkola (2018)	Customer experience management in hospitality.	International Journal of Contemporary Hospitality Management	A systematic review of CEM literature and combined it with commentaries “reflections of experts” from a selection of hospitality scholars and hotel general managers. A thematic content analysis was used to identify and categorize themes.	This paper provides a comprehensive overview of the key elements of CEM, and a framework for managing customer experience in the hospitality industry by emphasizing the need for collaboration among marketing, operations and human resources.
	Johye Hwang and Soobin Seo (2016)	A critical review of research on customer experience management	International Journal of Contemporary Hospitality Management	This paper aims to provide a critical review of the extant literature on Customer Experience Management (CEM) and offers a foundation for advancing future CEM research in the H&T industry.	Acknowledging the importance of excellent CEM in the contemporary H&T industry. H&T companies need to take a holistically integrated approach to creating a memorable experience in which multidimensional value can be delivered through multiple, sequential stages of experience.

	Lemon, K. N., & Verhoef, P. C. (2016)	Understanding Customer Experience Throughout the Customer Journey.	Journal of Marketing	<p>This paper aims to develop an understanding of CX and customer journey.</p> <p>The authors examine existing definitions and conceptualisation of customer experience, customer journeys, and customer experience management. They also provide a historical perspective of the roots of customer experience within marketing.</p>	<p>The field of customer experience management is a relatively new “greenfield” area for future research.</p> <p>The authors proposed an integrated view of customer experience throughout the customer journey.</p>
Customer Experience Management Literature	De Keyser, Arne, Katherine N. Lemon, Timothy Keiningham, and Philipp Klaus (2015)	A Framework for Understanding and Managing the Customer Experience	Marketing Science Institute. Working Paper No.15-121. Cambridge, MA.	<p>This report attempts to develop an integrative framework for understanding and managing CX. The study employs a three-stage analytical cyclical model to describe the interrelationship between customer experience, engagement, value, and goal pursuit.</p>	<p>This paper discusses the fundamental properties that are embedded in every CX. The paper, also identifies four managerial guidelines, i.e. taking a customer jobs to be done perspective, considering the service ecosystem beyond the dyadic customer-firm relationship, focusing on the dynamic nature of CX, and using multiple methodologies to measure CX, that can</p>

					enable organisations to better manage and execute holistic CX strategies.
	Homburg, Jozić and Kuehnl, (2015)	Customer experience management: toward implementing an evolving marketing concept.	Journal of the Academy of Marketing Science.	This study applies a discovery oriented, grounded theory procedure that involved the iterative collection and analysis of field data (Insights from 52 managers engaging in CEM) and supplementary literature to develop a theory.	This study develops a marketing management concept as a higher-order resource of cultural mind-sets toward CXs, strategic directions for designing CXs, and firm capabilities for continually renewing CXs.
Customer Experience Management Literature	Palmer, A. (2010)	Customer experience management: a critical review of an emerging idea.	Journal of Services Marketing.	This paper aims to propose a model which integrates interpersonal relationship, service quality, and brands. A critical review of literature is undertaken for brands, relationships, quality, emotions and perceptions.	The paper suggests three key constructs – involvement, emotions and interpersonal relationships – that either parallel or contribute to CX.
	Verhoef, P., Lemon, K., Parasuraman,	Customer Experience Creation:	Journal of Retailing	This paper aims to provide an overview of the extant literature on CX and propose a conceptual	Customer experience management differs from customer relationship management by focusing on the current

	A., Roggeveen, A., Tsiros, M. and Schlesinger, L. (2009)	Determinants, Dynamics and Management Strategies.		model of the determinants of customer experience. The paper also approached CEM from a strategic perspective by focusing on issues such as how and to what extent an experience-based business can create growth.	experience of the customer, rather than the recorded history of the customer. Customer-experience based strategies can create growth.
Customer Experience Management Literature	Puccinelli, N., Goodstein, R., Grewal, D., Price, R., Raghubir, P. and Stewart, D. (2009).	Customer Experience Management in Retailing: Understanding the Buying Process.	Journal of Retailing	This paper examines CX from a consumer behaviour perspective, and connect behavioural aspects– “goals, schema, information processing, memory, involvement, attitudes, atmospherics, consumer attributions, and choices” – with CEM strategies.	The authors suggest ways in which retailers can leverage their understanding of consumer behaviour to shape and influence customer experiences.
Domain	Author	Title	Journal	Topic/ Methodology	Research findings
Customer Insight Literature	Holmlund et al., (2020)	Customer experience management in the age of big data analytics: A	Journal of Business Research	Topic/Methodology: The paper provides a strategic framework for CXM based on customer insights resulting from big data analytics (BDA). The authors conducted a literature review and proposed a conceptual framework for CXM using	Research findings: The paper highlights the potential of using BDA for CXM and provides a comprehensive framework for managers to leverage customer insights from BDA. The authors suggest that BDA can be used for

		strategic framework		BDA. They also provided a step-by-step guide for managers to implement the framework and suggested opportunities for future research in this area.	predictive and prescriptive analytics to improve CX. However, they also caution that BDA is not a substitute for insight and needs to be mastered to be valuable. The authors argue that research in this area is still in its infancy and more studies are needed to cover different types of touchpoints, data, and analytics. They also suggest that organisations in different maturity stages when it comes to BDA-driven CXM have different opportunities and challenges.
	Smith, B., Wilson, H., & Clark, M. (2007)	Creating and using customer insight: 12 Rules of best practice	Journal of Medical Marketing	Topic: The paper discusses the importance of customer insight in the pharmaceutical and related industries, and how firms can create and use customer insight to gain a competitive advantage. The authors provide 12 rules of best practice for creating and using customer insight. Methodology: The paper is a review of existing literature on customer insight,	Research findings: The paper highlights the changing nature of competition in the pharmaceutical industry, where strategic marketing skills are becoming as important as research and development. The authors argue that customer insight is a valuable resource for firms seeking to create and capture value, and provide 12 rules of best practice

				organizational learning, knowledge management, customer behaviour, and strategy making. The authors draw on this literature to provide insights and recommendations for creating and using customer insight.	for creating and using customer insight. The paper emphasizes the importance of using customer insight to guide changes to the marketing program, including the 7Ps (product, price, promotion, place, process, people, and physical evidence).
	Sperkova, (2020)	Integration of textual VoC into a CX data model for business intelligence use in B2C	Journal of Retailing and Consumer Services	Topic: The paper proposes a multidimensional CX data model for integrated storage of all customers' data from structured and textual sources. The model is designed to bridge the gap between the collection of Voice of Customer (VoC) data and its integration into business intelligence for small and medium B2C enterprises. The research is driven by the design science methodology and the design of metrics for CX measurement is based on customer sentiment, customer emotions, and personality traits extracted from textual VoC by text analytics methods.	Research findings: The proposed CX data model offers a self-contained expandable data mart affordable to implement in small and medium B2C enterprises. Companies can now manage customer relationships and future performance more automatically and effectively thanks to integrated information mined from texts, combined with other data from internal systems and shared across the company in unified reporting. The unified storage ensures the accuracy and reliability of the following measurement with minimal manual effort. The paper identifies

				<p>Methodology: The research is driven by the design science methodology. The solution design follows the preliminary research in CX and VoC. Definition of CX measurement is based on a literature review, which puts existing constructs and metrics into mutual relationships and previous research. Necessary metrics and indicators to be followed by companies were detected in order to measure complex CX. Design of metrics for CX measurement is based on customer sentiment, customer emotions and personality traits extracted from textual VoC by text analytics methods.</p>	<p>many barriers to achieving the full potential of VoC analysis within CX, which can be overcome with the CX data model.</p>
McColl-Kennedy et al. (2019)	Gaining Customer Experience Insights That Matter	journal of Service Research	<p>Topic: Customer experience management in business-to-business settings Methodology: The authors provide a conceptual framework that integrates prior research in CX and demonstrate the usefulness of a text</p>	<p>Research findings: The authors offer a novel CX conceptual framework that integrates prior CX research to better understand, manage, and improve CXs.</p>	

				<p>mining model that combines qualitative and quantitative data. They used a six-step process that included a business understanding phase and a data understanding phase</p>	<p>They demonstrate the usefulness of a longitudinal CX analytic based on the conceptual framework that combines quantitative and qualitative measures.</p> <p>They provide a step-by-step guide for implementing the text mining approach in practice, showing that CX analytics that apply big data techniques to the CX can offer significant insights that matter.</p> <p>The authors highlight six key insights practitioners need in order to manage their customers' journey.</p>
	Said et al. (2015)	How organisations generate and use customer insight	Journal of Marketing Management	<p>Topic: The paper explores how managers generate and use customer insight in marketing decisions. It investigates the importance of value alignment and monitoring across the insight demand chain of external providers and internal stakeholders. The study also clarifies and enriches the</p>	<p>Research findings:</p> <p>The importance of value alignment and monitoring across the insight demand chain of external providers and internal stakeholders.</p> <p>The study clarifies and enriches the understanding of the conduct of</p>

				<p>understanding of the conduct of insight generation, to complement the extensive literature about the insight generation process. Methodology: The study uses a multiple case study approach with multiple informants from each of four organisations in diverse sectors. The case study method is adopted using an abductive strategy with the aim of understanding insight generation through managers' language, meaning and accounts in the context of everyday activities. The study generates provisional theory through content analysis and exploratory approaches</p>	<p>insight generation, to complement the extensive literature about the insight generation process.</p> <p>The study provides a basis for assessing the effectiveness of insight processes by both practitioners and scholars.</p>
	Garrett and Wrigley (2019)	Navigating market opportunity: traditional market research and deep customer insight methods	Journal of Business Research	<p>Topic/Methodology: The paper explores the use of a design process of inquiry that incorporates both deep customer insight (DCI) and traditional market research (TMR) in an ill-defined, complex current market opportunity to generate new business opportunities for firm-based</p>	<p>Research findings: The findings revealed that TMR and DCI methodologies developed both contradictory and complementary research outcomes. These outcomes saw the rise of newly generated novel business model concepts for market entry</p>

				<p>innovation. The research is conducted within a multi-national insurance agency looking at the shift in mobility in Australia. Data were collected across seven distinct research phases, all of which used TMR and DCI techniques for joint comparison. The paper proposes a design process for developing future-looking, DCI methodologies.</p>	<p>opportunity from the case study firm. The theoretical outcome of this study is the design thinking DCI framework providing guidance on appropriate implementation of research methods to respond to complex market opportunity. DCI methods used in conjunction with TMR can provide early stage market opportunity assessment for firms seeking to innovate from a customer perspective</p>
Domain	Author	Title	Journal	Topic/ Methodology	Research findings
Artificial Intelligence Literature	S. Verma, R. Sharma, S. Deb et al. (2021)	Artificial intelligence in marketing: Systematic review and future research direction	International Journal of Information Management Data Insights	<p>Topic: AI in Marketing Methodology: The paper used Rowley and Slack's (2004) guidelines for conducting the literature review. The literature review used a five-stage process to identify research themes and future research directions. Comprehensive review protocols were used to achieve this.</p>	<p>Research Findings: The paper offers a comprehensive review of AI in marketing using bibliometric, conceptual, and intellectual network analysis of extant literature published between 1982 and 2020. The study identified the scientific actors' performance like most relevant authors and most relevant sources. Furthermore, co-citation and co-</p>

					<p>occurrence analysis offered the conceptual and intellectual network. Data clustering using the Louvain algorithm helped identify research sub-themes and future research directions to expand AI in marketing. The paper aims to fill the research gap through a systematic review of literature on AI in the marketing research domain.</p>
	Jarek & Mazurek, (2020)	Marketing and Artificial Intelligence	Journal of Management and Marketing Review	<p>Topic/Methodology: The paper aims to research the application of AI in marketing and its implications for marketing practitioners. The authors conducted research on secondary data with AI examples used for marketing purposes. They analysed the gathered examples to understand the areas of AI used in marketing and the implications of AI for marketing managers.</p>	<p>Research Findings: The analysis of gathered examples shows that AI is widely introduced into the marketing field, though the applications are at the operational level. The uncertainty of the outcome of AI implementation may affect the caution in putting these innovations into practice as well. Gathered examples proved that AI influences all aspects of marketing mix impacting both consumer value delivery as well as the marketing organization and management. The paper delivers implications for</p>

					business, especially ideas about implementing AI into marketing, designing innovations, and the ideas on how to incorporate new skills into the marketing team required by the new technology.
	Liye Ma and Baohong Sun (2020)	Machine learning and AI in marketing – Connecting computing power to human insights	International Journal of Research in Marketing	Topic/Methodology: The paper discusses the use of machine learning methods in marketing research and provides a unified conceptual framework and a multi-faceted research agenda. The authors review common machine learning tasks and methods, compare them with traditional statistical and econometric methods used in marketing research, and discuss the advantages and limitations of machine learning methods. They also review the AI-driven industry trends and practices and the academic marketing literature that uses machine learning methods. The authors propose a	Research findings: The paper highlights the potential of machine learning methods in marketing research and proposes a research agenda to leverage these methods for better insights and decision-making. The authors argue that machine learning methods can process large-scale and unstructured data, have flexible model structures that yield strong predictive performance, and can be used for various marketing tasks such as customer segmentation, targeting, and personalization. However, these methods may lack model transparency and interpretability, which can be a challenge for

				number of research priorities, including extending machine learning methods and using them as core components in marketing research, using the methods to extract insights from large-scale unstructured, tracking, and network data, using them in transparent fashions for descriptive, causal, and prescriptive analyses, using them to map out customer purchase journeys and develop decision-support capabilities, and connecting the methods to human insights and marketing theories.	marketers who need to understand the underlying logic of the models. The authors suggest that future research should focus on developing more transparent and interpretable machine learning methods and integrating them with human insights and marketing theories.
	De Bruyn et al. (2020)	Artificial Intelligence and Marketing: Pitfalls and Opportunities	Journal of Interactive Marketing	Topic: The paper discusses the pitfalls and opportunities of AI in marketing through the lenses of knowledge creation and knowledge transfer. It covers recent advances in deep neural networks, their underlying methodologies, and learning paradigms. The paper also discusses the technological pitfalls	Research findings: The paper highlights the potential of AI in marketing, but also warns of the pitfalls and dangers that marketing managers need to be aware of when implementing AI in their organizations. The paper predicts that AI will fall short of its promises in many marketing domains if we do not

				<p>and dangers marketing managers need to be aware of when implementing AI in their organizations, including the concepts of badly defined objective functions, unsafe or unrealistic learning environments, biased AI, explainable AI, and controllable AI. The paper predicts that AI will fall short of its promises in many marketing domains if we do not solve the challenges of tacit knowledge transfer between AI models and marketing organizations. Methodology: The paper is a literature review that synthesizes and analyses existing research on AI in marketing.</p>	<p>solve the challenges of tacit knowledge transfer between AI models and marketing organizations.</p>
	<p>D'Arco, Lo Presti, Marino & Resciniti (2019)</p>	<p>Embracing AI and Big Data in customer journey mapping: from literature review to</p>	<p>Innovative Marketing</p>	<p>Topic: The paper explores the relationship between Big Data, AI, and customer journey mapping in the context of marketing. The authors aim to develop a theoretical framework focused on the strategic</p>	<p>Research findings: The paper proposes a Big Data and AI framework to explore and manage the customer journey, illustrating how the combined use of Big Data and AI analytics tools can offer effective</p>

		a theoretical framework”		<p>use of Big Data and AI across the customer journey mapping. Methodology: The authors conducted a systematic literature review to explore the impact of Big Data and AI on marketing practices. They then developed a theoretical framework for the strategic use of Big Data and AI across the customer journey mapping.</p>	<p>support to decision-making systems and reduce the risk of bad marketing decisions. The authors suggest ten main areas of application of Big Data and AI technologies concerning the customer journey mapping, each supporting a specific task. These tasks include customer profiling, promotion strategy, client acquisition, ad targeting, demand forecasting, pricing strategy, purchase history, predictive analytics, monitor consumer sentiments, and customer relationship management (CRM) activities.</p>
	Campbell et al. (2019)	From data to action: How marketers can leverage AI	Business Horizons	<p>Topic: Marketing and AI Methodology: The paper consolidates the growing body of knowledge about AI in marketing. It explains how AI can enhance the marketing function across nine stages of the marketing planning process. It also provides examples of</p>	<p>Research Findings:</p> <p>AI affords companies a host of ways to better understand, predict, and engage customers.</p> <p>AI's adoption is increasing year-on-year and in varied contexts within marketing.</p>

				current applications of AI in marketing	<p>Early adopters of AI will likely be those organizations with a strong digital base and a higher propensity to invest in AI.</p> <p>AI laggards may provide a customer experience that suffers, though customers who want to resist AI or prioritize privacy may find laggard firms attractive.</p> <p>The paper provides guidelines for what it takes to succeed in an AI-first business environment and provides thoughts for the potential growth of AI within the marketing discipline.</p>
	Davenport et al. (2019)	How artificial intelligence will change the future of marketing	Journal Of the Academy Of Marketing Science	Topic: The paper proposes a multidimensional framework for understanding the impact of AI on marketing strategies and customer behaviours. It also suggests a research agenda that addresses important policy questions relating to privacy, bias, and ethics. Finally, the authors suggest that AI will be	Research findings: The paper proposes a framework for understanding the impact of AI on marketing strategies and customer behaviours, and suggests a research agenda that addresses important policy questions relating to privacy, bias, and ethics. The authors also suggest that AI will be more effective

				<p>more effective if it augments human managers rather than replacing them.</p> <p>Methodology: The paper is based on a review of literature across marketing, psychology, sociology, computer science, and robotics, as well as extensive interactions with practitioners.</p>	<p>if it augments human managers rather than replacing them.</p>
	Jarek and Mazurek (2019)	Marketing and Artificial Intelligence	<i>Central European Business Review</i>	<p>Topic: The paper explores the implementation of AI in the field of marketing and its implications for marketing practitioners.</p> <p>Methodology: The authors conducted secondary data research to gather examples of AI application in marketing from various marketing portals such as marketingweek.com, adweek.com, and warc.com. The collected examples were analysed to assess the scope of AI application within the marketing mix and to answer the research questions</p>	<p>research findings:</p> <p>AI is widely introduced into the marketing field, though the applications are at the operational level.</p> <p>AI influences all aspects of marketing mix impacting both consumer value delivery as well as the marketing organization and management.</p> <p>The uncertainty of the outcome of AI implementation may affect the</p>

					<p>caution in putting these innovations into practice.</p> <p>The paper delivers implications for business, especially ideas about implementing AI into marketing, designing innovations, and the ideas on how to incorporate new skills into the marketing team required by the new technology.</p>
	<p>Ameen, Tarhini, Reppel, Anand, and Holloway (2021)</p>	<p>Customer experiences in the age of artificial intelligence</p>	<p><i>Computers in Human Behaviour</i></p>	<p>Topic/Methodology: The paper analyses how the integration of AI in shopping can lead to an improved AI-enabled customer experience. The authors propose a theoretical model drawing on the trust-commitment theory and service quality model. An online survey was distributed to customers who have used an AI-enabled service offered. A total of 434 responses were analysed using partial least squares-structural equation modeling</p>	<p>Research Findings: The study reveals the mediating effects of trust and perceived sacrifice and the direct effect of relationship commitment on AI-enabled customer experience. The findings indicate the significant role of trust and perceived sacrifice as factors mediating the effects of perceived convenience, personalization, and AI-enabled service quality. The study has practical implications for retailers deploying AI in services offered to their customers.</p>

Appendix D – Information and Consent Email for Remote Interviews

Email subject heading: *The Role of Artificial Intelligence in Actioning Customer Insight to manage Customer Experience throughout the Customer Journey – Professional doctorate case study participation*

Dear (Case Study),

I am carrying out a research project on exploring the role of artificial intelligence on the process of actioning customer insights to understand and manage customer experience in order to understand the mechanisms of incorporating AI into the customer insight process along the customer journey to manage customer experience and explore the different ways organisations assess the value of actioning customer insights derived from AI within service organisations.

The research forms part of my DBA academic qualification at Henley Business School at the University of Reading.

Part of the research involves interviewing people who are involved with activities related to customer experience management, generating and actioning customer insights for this reason, I would like to invite you to take part.

If you agree, you will be asked to participate in a *telephone/video* interview of about 60 minutes.

During the interview I will ask you questions on

1. How do you define customer experience and customer experience management at your organisation?
2. How do you incorporate customer experience strategy into the overall company strategy?
3. What types of customer experience insights are you generating for the purpose of understanding and managing CX?
4. What actioning of customer experience insight takes place and for what CX value?
5. How does Artificial Intelligence analytics improve your customer management activities?

Your participation is entirely voluntary. You can choose not to answer any particular questions and you are free to withdraw from the study at any time.

With your permission, I would like to *record the interview/take notes* for later analysis. The data will be kept securely and either destroyed after the completion of the project or retained securely

for inclusion in publications directly related to this research subject to participants consent to do so.

At every stage your identity will remain confidential. Your name and identifying information will not be included in the final report.

The identity of your organisation will not be included in the final report. A copy of the completed *project* will be available on request.

The project has been subject to ethical review in accordance with the procedures specified by the University of Reading Research Ethics Committee and has been given a favourable ethical opinion for conduct. If you have any further questions about the project, please feel free to contact me by email.

If you agree to take part, I would be grateful for an email to confirm that you are aged 18 years or over and willing to participate on the basis of the arrangements described in this email as they relate to the nature of the project and your participation.

Name of participant:

Signed:

Date:

Contact details of Researcher:

Name of researcher: Abed Kasaji

Contact number: +962788002409

Contact email: A.Kasaji@student.henley.ac.uk

University Address:

Henley Business School – Greenlands -Henley-on-Thames, Oxfordshire, RG9 3AU -United Kingdom

Office: +44 (0) 1491 418775/418760

Switchboard: +44 (0) 1491 571454

henley.ac.uk

Appendix E – Interview Guide

Area	Interview Questions
Introductory	University, researcher's identity, scope of project
Personal context	<p>Could you tell me a little bit about yourself and your particular function at your organization?</p> <ul style="list-style-type: none"> i. Job title ii. Description of job role iii. Functional area/reports to...
Customer experience management and customer journey	How do you define customer experience and customer experience management at your organisation?
	How do you incorporate customer experience strategy into the overall company strategy ?
	Do you map customer Journeys as part of your customer experience management activity ? Give examples
	What are the organisation's touch-points and channels with customers?
Customer Experience insights generation and users	<p>What types of customer experience insights are you [company name] generating for the purpose of understanding and managing CX ?</p> <ul style="list-style-type: none"> a. Operational (please give examples) b. Strategic (please give examples) c. Other?
	What actioning of customer experience insight takes place and for what CX value?
	What is it about the organisational and departmental context that helps or hinders the process of actioning customer insight?
	Which are the key departments and individuals in this organization that use customer experience insight?
	How are these people organized? [Ask participant to share organisation structure chart if possible]

Artificial Intelligence Incorporation	Do you use Artificial Intelligence technology across company's operations?
	Does the company work on building core competences and skills in the field of artificial intelligence?
	Through your daily operations, do Artificial Intelligence analytics improve key CX activities
	How does Artificial Intelligence analytics improve customer management?
	How do customer insights resulting from AI improve your customer experience initiatives ?
	<ul style="list-style-type: none"> a. market research capabilities? b. Customer acquisition? c. customer churn analysis and customer retention? d. cross-sell, up-sell tactical offering? e. communication with customers through digital channels? f. customer complaint handling? How? others?
Assessing the value of AI in actioning customer insights	What metrics are you using to measure the success of your customer experience initiatives?
	How do you assess the value generated from actioning the customer insights throughout the customer journey ?
	how do you measure whether people are actioning customer insight?
	What feedback do the people responsible for actioning the insight give to the people generating it?
Finishing off and access to documents	Do you feel that this discussion has provided you with a clear picture of the project at hand ?
	Considering the nature of this project, whom can you suggest from each department that will benefit this research within your organization?
	[Role? Contact details? When can an introduction happen?]
	Departmental informants email address and phone number

Appendix F – Initial Coding Scheme from Literature

Code	Code Description	Source
Mismatches in business relationships	Suppliers and customers have differing views on the nature of the relationship (transactional or relational), resulting in poor customer experiences or lack of profitability for the supplier.	Witell et al., <i>Characterizing customer experience management in business markets</i> (2020)
Siloed customer experiences	Individual and collective actors in the customer organization have varying views on the value of an offering, depending on their function and job level.	
Mismatches across the customer journey	Individual and collective actors within the customer organization have varying experiences, depending on the stage of the customer journey.	
Lack of touchpoint control	A supplier has limited ability to ensure the desired behaviour of customers and third parties because, as principal entities, other organizations can determine or influence what actors will do. The supplier uses a third-party partner as provider to customers, or the customer controls the touchpoint.	
Touchpoint adaptation	The capability of continually interpreting and enriching touchpoint-specific performance indicators	<ul style="list-style-type: none"> • Holmlund, et al., Customer experience management in the

	with in-depth customer research for creating and disseminating propositions of incrementally and radically new touchpoint(s) journeys	<p>age of big data analytics: A strategic framework. (2020)</p> <ul style="list-style-type: none"> Homburg, Christian, Danjil Jozić, and Christina Kuehnl (2015), "Customer Experience Management: Toward Implementing an Evolving Marketing Concept," Journal of the Academy of Marketing Science.
Touchpoint journey monitoring	The capability of coordinating and depicting the comprehensive collection of touchpoint-specific performance indicators in accordance with the firm's touchpoint journey orientation	
Touchpoint prioritization	The capability of directing the constant implementation and modification of touchpoints and, thus, the continuous (re)allocation of monetary, technical, and human resources by drawing on a data-driven prioritization scheme for a given planning period	
Touchpoint journey design	The capability of planning potential touchpoint journeys as a means for business planning and modeling and disseminating requirements across functionally oriented capabilities such as product development, sales, and communications	
Connectivity of touchpoints	The direction to functionally integrate multiple touchpoints across online and offline environments for seamless transitions between one and another	

Context sensitivity of touchpoints	The direction to establish touchpoints that address and optimize the customers' situational contexts and their touchpoints' specific features for value-adding perceptions along customers' touchpoint journeys	
Consistency of touchpoints	The direction to define and stick with all major corporate identity elements across multiple touchpoints for assuring similar loyalty-enhancing experiential responses along customers' touchpoint journeys	
Thematic cohesion of touchpoints	The direction to extend core touchpoints along a brand theme that promises customers to realize a certain lifestyle or activity with the help of multiple touchpoints	
Alliance orientation	The mindset that proneness toward alliances for aligning different touchpoints in a person's related environment contributes to loyalty-enhancing experiential responses	
Touchpoint journey orientation	The mindset that touchpoint journeys across prepurchase, purchase, and post-purchase situations should be the main object of market-facing decision making across the firm	

Experiential response orientation	The mindset that eliciting cognitive, sensorial, affective, relational, and behavioural customer responses at touchpoints are equally important for enhancing customer loyalty	Homburg, Christian, Danjil Jozić, and Christina Kuehnl (2015), "Customer Experience Management: Toward Implementing an Evolving Marketing Concept," Journal of the Academy of Marketing Science.
Customer, situational, and sociocultural contingencies	Customer experience is subjective and context-specific, because responses to offering-related stimuli and their evaluative outcomes depend on customer, situational, and sociocultural contingencies.	Becker, L. and Jaakkola, E., 2020. Customer experience: fundamental premises and implications for research. Journal of the Academy of Marketing Science, 48(4), pp.630-648.
Evaluative outcomes of customer experience	Customer experience comprises customers' nondeliberate, spontaneous responses and reactions to offering-related stimuli along the customer journey.	
Responses to Customer experience stimuli	<ul style="list-style-type: none"> - Customer experience stimuli reside within and outside firm-controlled touchpoints and can be viewed from multiple levels of aggregation. -Customer experience stimuli and their interconnections affect customer experience in a dynamic manner 	

Offering-related stimuli	<p>- Customer experience stimuli reside within and outside firm-controlled touchpoints and can be viewed from multiple levels of aggregation.</p> <p>-Customer experience stimuli and their interconnections affect customer experience in a dynamic manner.</p>	
Role of the firm	<p>Firms cannot create the customer experience, but they can monitor, design, and manage a range of stimuli that affect such experiences.</p>	
Environmental Context	<p>“at the environmental level, multiple factors such as weather, temperature, time of day, and traffic conditions can enhance or undermine CX” (De Keyser et al. 2015)</p> <p>“for example, external environments can act as influential drivers of the customer experience (e.g., poor weather diminishing the value of an outdoor sport event; political event influencing the value of purchase or consumption of a product or service” (Lemon and Verhoef 2016)</p>	<p>De Keyser, A., Verleye, K., Lemon, K., Keiningham, T. and Klaus, P., 2020. Moving the Customer Experience Field Forward: Introducing the Touchpoints, Context, Qualities (TCQ) Nomenclature.</p>
Market Context	<p>"potential situational moderators ... include ... competitive intensity" (Verhoef et al. 2009)</p> <p>“value constellation experience is cocreated through the interactions between the customer and all service</p>	

	<p>organizations that enable a given customer activity” (Patricio et al. 2011)</p> <p>“customers continuously judge the value of future service experiences, both with the firm and with the firm’s competitors” (Jaakkola et al. 2015)”</p>	
Social Context	<p>“collective service experiences” (Caru and Cova 2003)</p> <p>“relational component: a component of the Customer Experience that involves the person and, beyond, his/her social context, his/her relationship with other people” (Gentile et al. 2007)</p> <p>“customer experience ... depend on sociocultural contingencies” (Becker and Jaakkola 2020)</p>	
Individual Context	<p>““consumers imbue a product with a subjective meaning that supplements the concrete attributes it possesses” (Hirschman and Holbrook 1982)</p> <p>“a strictly personal reaction ... comes from the affirmation of the system of values and the beliefs of the person often through the adoption of a lifestyle and behaviours” (Gentile et al. 2007)</p> <p>“an actor’s subjective response to or interpretation of the elements of the service” (Jaakkola et al. 2015)”</p>	

Customer Journey Stage	<p>Prepurchase “at any time before, during and after a purchase” (Hellén and Gummerus 2013)</p> <p>purchase “during the entire customer journey” (McColl-Kennedy et al. 2015)</p> <p>Post purchase “the organization’s offerings over time, including pre- and postconsumption” (Bolton et al. 2018)</p>	
Firm controlled Touchpoint	<p>“tangible and intangible aspects of a retail store design” (Puccinelli et al. 2009) “through face-to-face, electronic and other channels” (Bolton et al. 2014)</p> <p>“myriad touch points in multiple channels and media” (Lemon and Verhoef 2016)</p>	
Phases in the Customer Journey	<p>Prepurchase.</p> <p>Purchase.</p> <p>Postpurchase</p>	
Touch Points in the Customer Journey	<p>Brand-owned touch points</p> <p>Partner-owned touch points</p> <p>Customer-owned touch points</p> <p>Social touch points</p>	
Optimised complaint management	"Efficiency of socialbot response "	

	<p>"Convenience of socialbot customer service "</p> <p>"Interaction with other touchpoints"</p> <p>"Changing relationships between customers and the firm"</p> <p>"Importance of innovation on brand perceptions"</p>	
Company- controlled information sharing	<p>Instant information gathering from the socialbot</p> <p>Consistency of socialbot throughout the customer journey</p> <p>Socialbots creating ease of purchase</p>	
Personalisation through data mining	<p>Socialbot personalisation humanising the firm</p> <p>Insincere socialbot personalisation</p>	<p>Wilson-Nash, C., Goode, A. and Currie, A., 2020. Introducing the socialbot: a novel touchpoint along the young adult customer journey.</p>
Marketing functions and AI potential	<p>Analysing the current situation: Involves understanding macroenvironmental factors that can affect the organization, its marketing, and its stakeholders</p> <p>"Understanding markets and customers: Entails gathering knowledge of microenvironmental factors that specifically affect the firm, including market-share trends, product/category demand, and customer characteristics: needs, wants, behaviours, attitudes, brand loyalties, and purchasing patterns"</p>	<p>Campbell, C., Sands, S., Ferraro, C., Tsao, H. and Mavrommatis, A., 2020. From data to action: How marketers can leverage AI..</p>

	<p>Segmenting, targeting, and positioning: Involves developing an understanding of customer segments and assisting with targeting and positioning decisions</p> <p>"Planning direction, objectives, and marketing support: Entails developing longer-term goals and associated short-term objectives to support larger strategies"</p> <p>Developing product strategy: Involves creation of the suite of products sold by a firm</p> <p>Developing pricing strategy: Revolves around determining pricing strategies to maximize sales</p> <p>Developing channels and logistics strategy: Involves determining logistics, distribution, and product stocking decisions</p> <p>Developing marketing communication and influence strategy: Focuses on serving customers the right promotion at the right time</p> <p>Planning metrics and implementation control: Involves identifying performance metrics, monitoring them, and then taking any needed corrective actions</p>	
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Brand experience	<p>The extent to which consumers perceive multiple brand-owned touchpoints as designed in a thematically cohesive, consistent, and context-sensitive way. Subjective, internal consumer responses (sensations, feelings, and cognitions) and behavioural responses evoked by brand-related stimuli [such as colors, shapes, typefaces, background design elements, slogans, mascots, and brand characters] that are part of a brand's design and identity, packaging, communication, and environments [stores, events]</p>	<p>Kuehnl, C., Jozic, D. and Homburg, C., 2019. Effective customer journey design: consumers' conception, measurement, and consequences.</p>
Customer experience	<p>Customer's cognitive, emotional, behavioural, sensorial, and social responses to a firm's offerings during the customer's entire purchase journey</p>	
Sticky journeys	<p>Sticky journeys are exciting journeys that customers yearn to continue. This article reports that sticky journeys begin with quick spins, develop into involvement spirals, and terminate with service usage fluctuations.</p> <p>Quick spins are extemporaneous service trials, just for fun, without any long-term consumption intentions.</p>	<p>Siebert, A., Gopaldas, A., Lindridge, A. and Simões, C., 2020. Customer Experience Journeys: Loyalty Loops Versus Involvement Spirals. .</p>

	<p>Involvement spirals are cyclical patterns of unpredictable customer experiences that increase customers' experiential involvement over time.</p> <p>Service usage fluctuations are termination trajectories wherein customers withdraw from a service, then return, sometimes more than once.</p>	
Consumer addiction	<p>Consumer addiction is the compulsive repetition of pleasurable consumption behaviours (e.g., drinking, gambling, shopping) despite negative consequences (Sussman, Lisha, and Griffiths 2011). The term "addiction" is also popularly used to refer to compelling but nonpathological behaviours (e.g., "I'm addicted to that show!").</p>	
Consumer desire	<p>Consumer desire is "a powerful cyclic emotion that is both discomforting and pleasurable" (Belk, Ger, and Askegaard 2003, p. 326). Unlike a need or want, a desire is "for something fantastic...to drag us out of our ordinary habits...into the chaos and unpredictability...of our own deeper nature" (Kozinets, Patterson, and Ashman 2017, p. 674).</p>	

Customer engagement	<p>Customer engagement is “the mechanics of a customer’s value addition to the firm, either through direct or/and indirect contribution” (Pansari and Kumar 2017, p. 295). Customer engagement typically includes purchase, referral, influence, and knowledge-sharing behaviours (Kumar and Pansari 2016, p. 500).</p>	
Customer involvement	<p>Customer involvement is “a person’s perceived relevance of the object based on inherent needs, values, and interests” (Zaichkowsky 1985, p. 342). Experiential involvement denotes a person’s interest in the cognitive, emotional, sensorial, behavioural, and relational dimensions of a service experience.</p>	
Customer loyalty	<p>Customer loyalty is “a deeply held commitment” (Oliver 1999, p. 34) toward a brand that results in repatronage of the brand over time, despite opportunities to switch brands. The attitudinal and behavioural components of customer loyalty are not always in sync.</p>	
Extraordinary experiences	<p>Extraordinary experiences are “intense, positive, [and] intrinsically enjoyable experiences” (Arnould and Price 1993, p. 25). In contrast to ordinary experiences, they are “uncommon, infrequent, and go beyond the realm of everyday life” (Bhattacharjee and Mogilner 2014, p. 2).</p>	

Capability to analyse customer experience	Capability to analyse the organization to understand the break points/reasons for dissatisfaction on current customer journeys	Jacob, F., Pez, V. and Volle, P., 2021. Principles, methods, contributions, and limitations of design science research in marketing: Illustrative application to customer journey management
Capability to prioritize customer journeys	Capability to prioritize certain journey developments according to financial, technical, or human constraints and expected benefits	
Capability to deploy the new customer journey(s)	Capability to manage the implementation of new journeys in the company by defining the processes to be developed	
Capability to control customer journeys	Capability to manage and monitor the progress of customer journeys, as well as to take note of critical incidents	
Horizontal dissemination capability	Capability to engage other functional departments and service providers in a common transformation to deploy the new customer journey	
Vertical dissemination capability	Capability to present, in a very concise and simple way, the complexity of the customer journeys to managers	
Capability for graphic design of the customer experience	Ability to define, from a target customer experience, new journeys by integrating both the company viewpoint and the customer viewpoint, and to visually map them step by step to make them a tool for strategic sharing and positioning (via films, drawings, diagrams, etc.)	

Customer data	Customer data is the recording of transactions or interactions with customers, quantitatively or qualitatively, explicitly or implicitly	Smith, B., Wilson, H. and Clark, M. (2006). Creating and using customer insight: 12 rules of best practice.
Customer information	Customer information is data which has been organised into patterns	
Customer knowledge	Customer knowledge is information which has been placed into the context of the relevant situation	
Customer insight	Customer insight is knowledge about customers which meets the criteria of an organisational strength; that is, it is valuable, rare, difficult to imitate and which the organisation is aligned to make use of	
Marketing actions	Marketing actions are changes to the core, extended or augmented product or service which impact significantly on the customer	
Customer value	Customer value is the degree to which the customers' preference for a product or service is changed by marketing actions	Jaziri, <i>The advent of Customer Experiential Knowledge Management</i>
customer experiential knowledge CEK- Process Competence	Acquisition Capture	

	Treatment Transfer Integration	<i>Approach (CEKM): The Integration of Offline & Online Experiential Knowledge (2019)</i>
customer experiential knowledge CEK- Infrastructure Competence	Supportive IT systems Supportive organisational structure Senior manages merit involvement Customer friendly culture Employee Reward & Evaluation systems Marketing IT interface	
CX and CX data	Touchpoints within and outside the organisation's control in the digital, physical and social realms	Holmlund, et al., Customer experience management in the age of big data analytics: A strategic framework (2020)
Solicited – Structured	(e.g., responses to close- form surveys questions: customer satisfaction scores, NPS, etc.)	
Solicited – Unstructured	(e.g., responses to open- ended survey questions, interview transcripts, etc.	
Unsolicited – Structured	(e.g., review ratings, people counting metrics, website cookies, click streams, IoT, geo-location, wearables device measurements, etc.	

Unsolicited - Unstructured	(e.g., emails, tweets, online reviews, speech, image, videos, motion data, etc.)	
CX Analytics	Big Data Analytics (BDA) approaches, methods, and tools to analyse and interpret CX data	
Descriptive Analytics What happened?	(e.g., standard and ad hoc reports, descriptive statistics, clustering methods, word clouds, etc.)	
Inquisitive BDA Why things happened?	(e.g., analytical drill downs, root cause analysis, experimental designs, ANOVA, etc.)	
Predictive Analytics What is likely to happen?	(e.g., linear regression and classification models, tree-based methods, support vector machines, graph-based methods, neural networks, etc.)	
Prescriptive Analytics What should happen?	e.g., linear, integer, mixed, dynamic mathematical programming models, efficient frontier methods, simulation, etc.)	
CX Insights	Knowledge about customers attained through BDA with the purpose of continuously improving CX	
Attitudinal/Psychographic Insights	(e.g., knowledge about satisfaction, advocacy, effort, beliefs, intentions, pleasure, delight, complains,	

	compliments, suggestions, emotions, sentiments, cultural values, personality traits, etc.	
Behavioural Insights	(e.g., knowledge about web and mobile app paths to purchase, ad-clicking activity, recommendation acceptance, acquisition, visit, engagement, etc.)	
Market Insights	e.g., knowledge about customer-based brand equity, brand positioning and marketing structure, competitive intelligence, trend forecasting, etc.)	
CX Actions	Organisational capabilities (i.e., process-oriented manifestations) for continual improvement of CX	
Touchpoint monitoring	(i.e., co-ordinating and depicting the comprehensive collection of touchpoint-specific performance indicators)	
Touchpoint prioritisation	(i.e., allocation or reallocation of resources to develop and modify single touchpoints in the short run)	
Touchpoint adaptation	(i.e., creating concrete propositions for the development or modification of touchpoints on a proactive basis)	
Touchpoint journey design	(i.e., designing or redesigning the end-to-end customer journey as a means of long-term, strategic planning)	

Big Data Analytics Capability	Big Data Analytics Capability (BDAC) is defined as the ability of the firm to capture and analyse data toward the generation of insights, by effectively deploying its data, technology, and talent through firm-wide processes, roles and structures	Mikalef et al., <i>Exploring the relationship between Big Data Analytics capability and competitive performance: The mediating roles of dynamic and operational capabilities</i> (2020)
Dynamic Capabilities	Dynamic capabilities are defined as the capacity of the firm to (a) sense and shape opportunities and threats, (b) seize opportunities, and (c) maintain competitiveness through enhancing, combining, protecting, and, when necessary, reconfiguring the business enterprise's intangible and tangible assets	
Marketing Capabilities	Marketing capabilities are defined as the ability of the firm to serve certain customers based on the collective knowledge, skills, and resources related to market needs.	
Technological Capabilities	Technological capabilities are those competencies that are required from the firm to convert inputs into outputs	
Competitive Performance	Competitive performance is defined as the degree to which a firm attains its objectives in relation to its main competitors	

Appendix G – Initial Coding Scheme from Interview Guide

Area	Interview Questions	Codes
Customer experience management and customer journey	How do you define customer experience and customer experience management at your organisation?	Customer experience definition, Customer experience management, CX: Overall experience, CEM: Process of managing customer interactions.
	Do you map customer Journeys as part of your customer experience management activity? Give examples of your role in that CJ workshop	Customer journey mapping, Role in customer journey workshop, Mapping CJ: Onboarding, CJ: Purchase process, Facilitator, Participant, Documentation
Customer Experience insights generation and users	What types of customer experience insights are you generating for the purpose of understanding customers behaviour? a. Operational (please give examples) b. Strategic (please give examples) c. Other?	Operational insights, Strategic insights
	What actioning of customer insight takes place and for what value?	Actioning customer insights
	What is it about the organisational and departmental context that helps or hinders the process of actioning customer insight?	Organizational and departmental context, Cross-department collaboration, Lack of resources

Artificial Intelligence Incorporation	Do you use Artificial Intelligence technology across company's operations?	Artificial intelligence technology usage
	Does the company work on building core competences and skills in the field of artificial intelligence?	Building core competences and skills in AI
	Through your daily operations, do Artificial Intelligence and analytics improve your customer understanding?	AI and analytics impact on customer understanding
	<p>How do customer insights resulting from AI improve your customer experience initiatives?</p> <p>a. market research capabilities?</p> <p>b. Customer acquisition?</p> <p>c. customer churn analysis and customer retention?</p> <p>d. cross-sell, up-sell tactical offering?</p> <p>e. communication with customers through digital channels?</p> <p>f. customer complaint handling? How?</p> <p>g. others?</p>	Market research capabilities, Customer acquisition, Customer churn analysis and retention, Cross-sell and up-sell offerings, Communication with customers through digital channels, Customer complaint handling, Other impacts
Assessing the value of AI in actioning	What metrics are you using to measure the success of your customer experience and understanding initiatives?	Metrics for measuring customer experience success, NPS (Net Promoter Score), Customer Satisfaction Score (CSAT)

customer insights	How do you assess the value generated from actioning the customer insights throughout the customer journey?	Value generated from actioning customer insights, Improved Conversion Rate, Increased Customer Retention
	how do you measure whether people are actioning customer insight?	Measuring actioning of customer insights, Tracking implementation of recommendations, Employee feedback
	What feedback do the people responsible for actioning the insight give to the people generating it?	Feedback from people responsible for actioning insights, Actionability of insights, Additional data required

Appendix H – First Cycle Coding

Code	Code Description	Sub-Code	Sub-Code Description	Tele-A	Tele-B	Bank A	Bank -B
Understanding CX	The extent to which an organization clearly articulates and understands the concept of CX and its implications for business strategies and operations	Online and offline experiences	The extent to which an organization delivers consistent and seamless customer experiences across both digital (online) and physical (offline) channels or touchpoints				
		Two layers of experiences (conscious and subconscious experience)	The extent to which an organization recognizes and addresses both the conscious and subconscious aspects of the customer experience, considering both rational and emotional elements				
Defining CXM	The extent to which an organization defines and establishes a framework for CXM, including the processes, methodologies, and tools used to manage and improve the customer experience	Leadership involvement and alignment	The extent to which leaders within an organization actively participate in and align themselves with the goals, strategies, and initiatives related to customer experience				
		Build CX culture	The extent to which an organization fosters a culture that values and prioritizes customer experience, with shared beliefs, behaviours, and practices				

		Outside in approach	The extent to which an organization adopts an outside-in perspective, focusing on understanding and meeting customer needs and expectations, rather than solely relying on internal assumptions or perspectives				
CX adoption Challenges	The challenges and barriers faced by organizations when adopting and implementing CX practices, strategies, and initiatives	Difficulty in embracing CX change management	The extent to which an organization faces challenges or resistance when implementing changes related to customer experience, such as shifting processes, behaviours, or organizational structures				
		Core behavioural competencies	The fundamental skills, abilities, and behaviours required by employees within an organization to effectively manage and deliver outstanding customer experiences				
		CX scope is wide and holistic	The extent to which an organization recognizes that the scope of customer experience encompasses multiple dimensions, touchpoints, and interactions, requiring a holistic and comprehensive approach				

Brand Equity	The extent to which a brand's value and reputation contribute to customer perceptions, loyalty, and overall business success						
Brand Positioning	The extent to which a brand is strategically positioned in the market to differentiate itself from competitors and attract the target audience						
Exceeding Customer Expectations	The extent to which an organization effectively communicates and manages customer expectations regarding its products, services, and overall experience						
Value of Money	The extent to which customers perceive the value they receive in exchange for the price they pay, considering factors such as quality, features, and benefits						
Setting Experience Ambition	The extent to which an organization sets ambitious goals and aspirations for the customer experience it aims to deliver						
Craft Customer Promise	The extent to which an organization formulates a clear and compelling promise to customers regarding the experience they can expect						

Customer Persona and Profiling	The extent to which an organization creates detailed profiles or representations of its target customers, considering their characteristics, behaviours, needs, and preferences						
Touchpoints	The extent to which an organization identifies and manages the various points of interaction between the customer and the brand throughout the customer journey						
Pain points and Opportunities	The extent to which an organization identifies and addresses customer pain points, as well as identifies opportunities for improvement and innovation						
Pre-purchase Phase	The extent to which an organization understands and manages the customer experience before the purchase decision is made, including activities such as research, evaluation, and consideration	The acquisition Phase	The phase within the customer journey that involves attracting and acquiring new customers to the organization's products or services				
Purchase Phase	The extent to which an organization focuses on optimizing the customer experience during the actual purchase transaction or conversion process						

Post-purchase Phase	The extent to which an organization supports and engages with customers after the purchase, fostering satisfaction, loyalty, and potential repeat business	Cross-sell & upsell Phase	The phase within the customer journey that focuses on offering additional or upgraded products or services to existing customers, aiming to increase their purchase value and loyalty				
Touchpoint Identification	The extent to which an organization identifies and maps out the specific touchpoints or interactions that occur between the customer and the brand						
Performance Evaluation	The extent to which an organization measures and assesses its performance in delivering the desired customer experience and achieving CX goals						
Redesign touchpoints	The extent to which an organization modifies or improves specific touchpoints to enhance the customer experience						
Personalize the experience	The extent to which an organization tailors and customizes the experience to meet individual customer preferences, needs, and expectations						
Streamline the journey	The extent to which an organization simplifies and						

	optimizes the customer journey by removing friction, barriers, and unnecessary steps						
Customer Measurement / Research	The extent to which an organization conducts systematic measurements and research to gather insights about customers' perceptions, preferences, behaviours, and satisfaction levels	Data Collection	The process of gathering relevant and meaningful data, which can include various sources such as customer feedback, transactional data, or market research				
Voice of the Customer (VoC)	The extent to which an organization captures and integrates customer feedback, opinions, and suggestions to understand their needs, expectations, and overall experience	Customer feedback	Information provided by customers regarding their experiences, opinions, and satisfaction levels through various channels such as surveys, reviews, or direct communication				
		Word of Mouth	The spread of information, opinions, or recommendations about a brand, product, or service from one person to another through informal communication				
		Qualitative Research	Research methods that emphasize in-depth exploration and understanding of customers' experiences, perceptions, and motivations through techniques such as				

			interviews, focus groups, or observation				
		Transactional data	Data related to specific customer transactions, such as purchases, interactions, or engagement with the organization's products or services				
		Timing of soliciting feedback	The strategic selection of the appropriate time or moments to seek customer feedback, ensuring it aligns with key touchpoints or stages within the customer journey				
Integrated Customer Intelligence	The extent to which an organization combines and synthesizes data and insights from various sources to develop a holistic understanding of customers, their behaviours, preferences, and needs	Data Analysis	The process of examining and interpreting collected data to uncover patterns, trends, insights, or relationships that can inform decision-making and drive improvements				
		Insights-driven capabilities	The organization's ability to leverage data and insights effectively, incorporating them into decision-making processes and operations to drive customer-centric strategies and actions				
		Insights-driven decision making	The practice of using data-driven insights and analysis to inform and guide decision-making				

			processes across the organization, emphasizing evidence-based and customer-focused approaches				
		Build agile, cross-functional team	The establishment of collaborative and adaptable teams that include members from various departments or functional areas, enabling quick decision-making, experimentation, and iterative improvements				
		Agile cycle of experimentation and learning	The iterative process of conducting experiments, gathering data, analysing results, and applying learnings to make informed adjustments and improvements in a fast-paced and adaptable manner				
		Linking VoC with Operational data	The practice of integrating Voice of the Customer (VoC) data with operational data or metrics to gain a comprehensive view of the customer experience and identify areas for improvement				
Understanding Customer Needs	The extent to which an organization comprehends and identifies the specific	Product research	The systematic investigation of customers' needs, preferences, and				

	requirements, desires, and expectations of its customers in relation to its products, services, or experiences		market trends to guide the development, improvement, or innovation of products or services				
		Influencing factors	The various internal or external factors that shape or impact customer attitudes, behaviours, choices, or perceptions, such as social influence, personal values, or situational context				
Understanding Customer Perceptions	The extent to which an organization gains insights into how customers perceive its brand, products, services, and overall customer experience	Relationship Attitudes	The attitudes or perceptions that customers develop towards a brand or organization based on their overall relationship and interactions over time				
		Experience Expectations	The expectations that customers have regarding the quality, relevance, and value they anticipate from their interactions and experiences with a brand or organization				
		Interaction Perceptions	The subjective interpretations and evaluations that customers form regarding specific interactions or touchpoints with a brand, assessing factors such as ease, friendliness, or efficiency				

		Journey Perceptions	The overall perceptions and evaluations customers form about their entire journey or series of interactions with a brand, considering the sequence, continuity, and coherence of touchpoints				
Understanding Customer Behaviours	The extent to which an organization studies and interprets customers' actions, interactions, and behavioural patterns to uncover insights and improve the customer experience	Choice Preferences	The preferences and criteria customers use to make decisions and choices among available options, weighing factors such as price, quality, convenience, or brand reputation				
		Behavioural insights	The understanding and interpretation of customers' behaviours, actions, and decision-making processes to gain insights into their motivations, needs, and preferences				
Customer Segmentation	The extent to which an organization divides its customer base into distinct groups based on shared characteristics, behaviours, needs, or preferences						
Customer Profiling	The extent to which an organization develops detailed profiles or representations of its customers, encompassing						

	information such as demographics, psychographics, behaviours, and preferences						
Product Personalisation	The extent to which an organization tailors or customizes its products to meet the specific needs, preferences, or desires of individual customers						
Communication Personalisation	The extent to which an organization customizes its communication strategies and messages to align with individual customer preferences and needs						
Channel Personalisation	The extent to which an organization tailors its channel or platform offerings to match customers' preferences and habits for interacting or engaging with the brand						
CXM Function position	The extent to which an organization defines and positions its CXM function within the organizational structure and hierarchy	Separate department	The establishment of a dedicated department or unit within the organization that is solely responsible for managing and overseeing customer experience strategies, initiatives, and operations				
		CEO Role and objective	The involvement and commitment of the Chief Executive Officer (CEO) in				

			championing and driving customer experience as a strategic priority throughout the organization				
		The split between Marketing and CX	The division or separation of responsibilities, resources, or priorities between marketing functions and customer experience management within the organization				
		Governance role	The role of establishing and enforcing policies, guidelines, and frameworks to ensure consistent and effective management of customer experience across the organization				
		Centralized vs. decentralized AI Team Structure	The organizational structure and arrangement of teams responsible for AI initiatives, considering whether they are centralized, with a single team overseeing AI efforts, or decentralized, with AI responsibilities distributed among various teams				
People Capability Building	The extent to which an organization invests in developing and enhancing the skills, competencies, and						

	knowledge of its employees to effectively manage and improve customer experience						
Organizational Learning	The extent to which an organization encourages and facilitates continuous learning and knowledge-sharing related to customer experience practices and insights						
Scrum	The extent to which an organization adopts and implements the Scrum framework, a project management methodology commonly used in agile software development						
Tribes & Squads	The extent to which an organization adopts a Tribes & Squads organizational structure, characterized by autonomous teams (squads) working within larger groups (tribes) to promote collaboration and innovation						
Product owner	The extent to which an organization assigns a dedicated Product Owner role responsible for managing and prioritizing the development and improvement of a specific product or service						
Collaboration	The extent to which individuals and teams within						

	an organization work together, share knowledge, and cooperate to achieve common goals, particularly related to customer experience management						
Cross-Functional	The extent to which individuals from different departments or functional areas within an organization collaborate and work together to address customer experience challenges or opportunities						
Design Thinking - Phase one - Fact finding	The extent to which an organization engages in the initial phase of the Design Thinking process, which involves gathering insights, understanding user needs, and conducting research to inform subsequent design decisions						
Design Thinking - Phase two - Design	The extent to which an organization engages in the second phase of the Design Thinking process, which involves generating and exploring ideas, prototyping, and developing potential solutions based on user needs and insights						
Design Thinking -	The extent to which an organization engages in the						

Phase three - actioning and action plan	third phase of the Design Thinking process, which involves implementing and executing the identified solutions, as well as creating action plans for their implementation						
Solicited – Structured Data	The data that an organization intentionally collects or requests from specific sources in a structured format. Structured data is organized and formatted in a way that makes it easily searchable, analysable, and machine-readable.						
Solicited – Unstructured Data	The data is collected intentionally by the organization, but unlike structured data, it lacks a predefined format or organization. Unstructured data is typically more flexible in nature, allowing users to provide information in free-text form or other unformatted ways.						
Unsolicited – Structured Data	The data that an organization receives without specifically requesting it but is already in a structured format. It might come from external sources or systems that automatically generate and transmit data to the organization.						

Unsolicited – Unstructured Data	Refers to information that an organization receives without requesting it and does not have a predefined structure. This kind of data can come from various sources, such as user-generated content, comments on websites, or random emails. Organizations may not have any control over the format or content of this data.						
Demographic data	The extent to which an organization collects, and analyses data related to the demographic characteristics of its customers, such as age, gender, income, or location						
Behavioural data	The extent to which an organization collects, and analyses data related to customers' behaviours, actions, interactions, and patterns, often gathered through customer interactions or digital tracking						
Transactional data	The extent to which an organization collects, and analyses data related to customers' transactions, purchases, or interactions with the organization's products or services						

Operational Data	The extent to which an organization collects, and analyses data related to its operational processes and performance, which can impact the overall customer experience						
Attitudinal Insights	Information and data related to people's attitudes, opinions, beliefs, and perceptions. This type of insight helps organizations understand how individuals feel about certain products, services, brands, or specific issues.						
Experiential Insights	The data and knowledge derived from individuals' experiences with products, services, or interactions with an organization. It involves understanding the customer journey, identifying pain points, and recognizing moments of delight or frustration during interactions with the brand.						
Behavioural Insights	The data and knowledge that focuses on understanding the actions, behaviours, and patterns of individuals or groups. This type of insight allows organizations to grasp how people interact with						

	products or services, make purchasing decisions, or engage with specific content.						
Market Insights	The extent to which an organization understand the market landscape, including trends, opportunities, and challenges. Organizations use market insights to evaluate market potential, identify competitors, and uncover customer needs and preferences.						
Benchmarking Studies	The extent to which an organization conducts studies and comparisons to assess its performance, practices, or customer experience against industry standards or competitors						
Data Collection from Various sources	The extent to which an organization gathers data from multiple channels, systems, or sources to obtain a comprehensive view of customers and their experiences						
Data Modelling and Analysis	The extent to which an organization applies statistical or analytical techniques to process, model, and derive insights from the collected data						

Derive Actionable intelligence	The extent to which an organization transforms data and insights into actionable recommendations or strategies that can drive improvements in the customer experience						
Customer Experience Design	The extent to which an organization proactively designs and shapes the customer experience by considering and incorporating customer insights, needs, and preferences	Experience Design	The deliberate and intentional process of shaping and creating the desired customer experiences by considering and designing every touchpoint and interaction throughout the customer journey				
		Customer Value Management (CVM)	The strategic approach of managing and maximizing the value that customers bring to the organization, aiming to enhance their experiences, loyalty, and long-term profitability				
		Marketing automation tool	Software platforms used to automate marketing tasks, processes, and campaigns, enabling personalized and targeted communications based on customer data and behaviours				
		Next best action	The recommended or optimal action or intervention that an				

			organization can take at a specific touchpoint or interaction with a customer, considering their needs, preferences, and context				
Channel and Journey Optimization	The extent to which an organization optimizes its channels and customer journeys to enhance the overall customer experience, ensuring consistency, efficiency, and effectiveness	Customer Interaction Management	The systematic and coordinated management of all customer interactions across various channels and touchpoints, ensuring consistency, efficiency, and effectiveness				
		Journey mapping and persona development	The process of creating visual representations and narratives of the customer journey, highlighting key touchpoints, emotions, needs, and personas to gain insights and inform experience design				
		Touchpoint Design	The intentional and strategic design of individual touchpoints within the customer journey, ensuring they align with customer expectations, needs, and business objectives				
		Touchpoint Design - Channel	The design and optimization of specific channels or platforms through which customers interact with the				

			organization, aiming to provide seamless and positive experiences				
		Touchpoint Design - Revamp Digital channels	The process of redesigning and enhancing digital channels, such as websites, mobile apps, or social media platforms, to improve usability, engagement, and overall customer experience				
		Personalization	The customization and tailoring of experiences, messages, or offerings to individual customers based on their unique preferences, behaviours, and characteristics				
		segmentation micro-segmentation	The practice of dividing the customer base into smaller, more specific segments or micro-segments based on shared characteristics, behaviours, or needs, allowing for more targeted and personalized strategies				
		Categorisation	The process of organizing or grouping customers, products, or data into distinct categories or classifications based on				

			common attributes or characteristics				
		Chatbot	A computer program or AI-powered virtual assistant that simulates human conversation and interacts with customers to provide information, answer questions, or assist with specific tasks				
		Gamification	The application of game elements, mechanics, or techniques in non-game contexts, such as customer experiences, to enhance engagement, motivation, and enjoyment				
Innovation and Product Development	The extent to which an organization fosters and implements new ideas, concepts, and solutions to develop innovative products or enhance existing offerings	Design thinking approaches	The methodologies, mindsets, and problem-solving approaches that prioritize human-centred design, empathy, creativity, and iterative prototyping to address complex challenges, including customer experience design				
		Product development	The process of conceiving, creating, and refining new or existing products or services to meet customer needs, solve problems, or deliver value				

		Continuous Innovation	The ongoing and iterative process of introducing new ideas, concepts, or improvements within the organization to enhance customer experiences, products, processes, or strategies				
Processes streamlining, Improvement and Automation	The extent to which an organization optimizes and enhances its operational processes by streamlining, improving efficiency, and implementing automation to drive better customer experiences	Business process reengineering	The radical redesign and rethinking of existing business processes, systems, or structures to achieve dramatic improvements in performance, efficiency, and customer experience				
		Robotic Process Automation	The use of software robots or bots to automate repetitive and rule-based tasks or processes, reducing manual efforts, errors, and enhancing operational efficiency				
		Automation	The use of technology and software systems to automate tasks, operations, or interactions within the organization, enhancing speed, accuracy, and consistency				
Optimizing Business Performance	The extent to which an organization leverages predictive insights and analytics to optimize its	Predict future customer behaviour	The ability to forecast or anticipate customers' future behaviours, needs, or preferences based on				

with Predictive Insights	business performance, make informed decisions, and anticipate customer needs and behaviours		historical data, patterns, or predictive models				
		Distributing customer insights support in decision making	The practice of disseminating customer insights, data, and analysis across the organization, enabling informed decision-making at various levels and functions				
		Proactive action taking	The practice of taking proactive measures and initiatives to address customer needs, expectations, or issues before they escalate, focusing on prevention rather than reactive responses				
		Predication for sales lead	The ability to predict or identify potential sales leads or prospects based on customer data, behaviours, or patterns, facilitating targeted marketing and sales efforts				
		Complaints prediction	The ability to forecast or predict potential customer complaints or issues based on data, patterns, or historical trends, allowing organizations to take preventive actions				

		Customer complaints prediction	The ability to anticipate or forecast customer complaints based on data, patterns, or predictive models, enabling organizations to proactively address issues and improve the customer experience				
		Churn prediction model	The use of data analysis and predictive modelling techniques to identify customers who are at risk of churning or discontinuing their relationship with the organization, allowing proactive retention efforts				
		Closed-loop feedback	The practice of closing the feedback loop with customers by actively acknowledging and responding to their feedback, ensuring they feel heard, valued, and satisfied				
		Risk management	The process of identifying, assessing, and mitigating risks that may impact the customer experience, business operations, or organizational objectives				
CX outcomes	The extent to which an organization achieves the						

	desired outcomes and results related to customer experience, such as increased customer satisfaction, loyalty, advocacy, and improved business performance						
Business Value Generation	The extent to which an organization generates tangible value, such as revenue growth, cost savings, or market share, as a result of its customer experience efforts and strategies	Alignment with Business Goals	The extent to which customer experience strategies, initiatives, and actions are aligned with the overall business goals and objectives of the organization				
		Positively impact your bottom-line	The ability of customer experience efforts to generate positive financial outcomes and contribute to the organization's profitability and success				
		Drive revenue by Increasing customer share-of-wallet and LTV	The practice of increasing customer spending and lifetime value by cross-selling, upselling, and maximizing their overall share of wallet within the organization				
		Sales revenue and profitability	The financial metrics and analysis related to sales revenue generation and the overall profitability of the organization				
		Value to Business	The benefits, advantages, or returns that customer				

			experience initiatives or strategies bring to the organization, such as increased revenue, reduced costs, or enhanced competitive advantage				
Targeted Customer Acquisition	The extent to which an organization focuses on acquiring new customers through targeted marketing, advertising, and sales efforts to expand its customer base	Optimize customer acquisition while boost customer re-purchase.	The goal of optimizing the process of acquiring new customers while also encouraging repeat purchases and fostering customer loyalty				
		Customer acquisition	The process of attracting and acquiring new customers to the organization's products, services, or brand				
		Customer retention	The efforts and strategies employed to retain existing customers, ensuring they continue to engage, purchase, and remain loyal to the organization				
		Customer satisfaction	The measure of customer contentment, happiness, or fulfilment with the overall experience, products, or services provided by the organization				
		Customer value	The perceived worth or benefit that a customer derives from the products, services, or experiences				

			provided by the organization				
Proactive Customer Retention	The extent to which an organization takes proactive measures to retain existing customers by providing exceptional experiences, addressing their needs, and building long-term relationships						
Customer Loyalty and Advocacy Enhancement	The extent to which an organization strives to enhance customer loyalty and advocacy by fostering strong emotional connections, exceeding customer expectations, and encouraging positive word-of-mouth	Customer engagement	The extent to which customers interact, connect, or actively participate with the organization, its products, or services, demonstrating their interest and involvement				
		Increase customer loyalty	The goal of fostering strong emotional connections, trust, and allegiance with customers, encouraging their long-term commitment and repeat business				
		Improve customer advocacy	The efforts to encourage and amplify positive word-of-mouth, referrals, or recommendations from satisfied customers, increasing their advocacy and support for the organization				

		Increase brand awareness, equity and brand value	The aim of enhancing the visibility, recognition, perception, and overall value of the organization's brand among its target audience and in the market				
Personalised Upsell and Cross-Sell	The extent to which an organization tailors and recommends personalized upsell and cross-sell offers to customers based on their preferences, behaviours, and past interactions						
Value of Customer Journeys mapping and analytics	The extent to which an organization recognizes the importance of mapping and analysing customer journeys to understand pain points, identify improvement areas, and deliver enhanced experiences						
Performance Evaluation and Measurement	The extent to which an organization evaluates and measures its performance in various aspects of customer experience to track progress, identify areas for improvement, and assess the impact of strategies	Measure the success of these initiatives	The practice of evaluating and assessing the effectiveness, impact, and outcomes of customer experience initiatives, using standard business and financial metrics and analysis				
		Standard business and financial metrics and analysis	The use of established metrics and analysis techniques, such as revenue growth, profitability, return on				

			investment (ROI), or customer lifetime value (CLV), to evaluate the performance and impact of customer experience initiatives				
Personalized Customer Experiences	The extent to which an organization provides customized and individualized experiences to customers based on their unique needs, preferences, and behaviours						
Improved Customer Segmentation	The extent to which an organization enhances its customer segmentation strategies by identifying more accurate and relevant segments based on demographics, behaviours, or psychographics						
Enhanced Customer Service	The extent to which an organization improves its customer service processes, interactions, and responsiveness to provide exceptional support and assistance to customers						
Automated Marketing Campaigns	The extent to which an organization automates its marketing campaigns using technology and data-driven approaches to deliver						

	targeted, timely, and relevant messages to customers						
Enhanced Customer Feedback Analysis	The extent to which an organization improves its analysis and interpretation of customer feedback to extract actionable insights and drive improvements in the customer experience						
Data Quality	The extent to which an organization ensures the accuracy, completeness, and reliability of its data, thereby increasing its trustworthiness and usefulness for decision-making and analysis						
Data Accuracy and availability	The extent to which an organization ensures that its data is accurate, up-to-date, and readily available for analysis, reporting, and decision-making purposes						
Lack of Skilled AI Talent	The extent to which an organization faces challenges or limitations in accessing and utilizing skilled talent with expertise in AI for developing and implementing AI-driven solutions						
Text Analysis	The extent to which an organization analyses textual data, such as customer feedback, reviews, or social media posts, to gain insights	Topic Modelling	The process of analysing and identifying the main topics or themes within a large body of textual data, such as customer				

	into sentiment, opinions, or trends related to the customer experience		feedback, reviews, or social media posts				
		text analytics	The application of techniques and algorithms to analyse and extract insights from textual data, enabling organizations to understand sentiments, opinions, or themes expressed by customers				
Sentiment Analysis	The extent to which an organization uses natural language processing techniques to analyse and understand the sentiment, emotions, or attitudes expressed in customer feedback or textual data						
Market Insights and Analysis	The extent to which an organization gathers and analyses market data, trends, and competitive intelligence to gain a deeper understanding of the market dynamics and customer preferences	Market Insights	The knowledge, understanding, and actionable information gained from analysing market data, trends, customer behaviours, or competitor activities to inform strategic decision-making				
Machine Learning	The extent to which an organization utilizes machine learning algorithms and techniques to automatically identify patterns, trends, or predictions from data,	Clustering model	A statistical technique used to group or cluster similar data points or customers based on shared characteristics or patterns, enabling				

	enabling more accurate decision-making and personalized experiences		segmentation and targeted strategies				
		Predictive Marketing	The application of predictive analytics and modelling techniques to anticipate customer behaviours, preferences, or responses, enabling organizations to proactively tailor marketing strategies and messages				
		Artificial Intelligence	The field of computer science focused on creating intelligent machines or systems that can perform tasks that typically require human intelligence, such as natural language processing, machine learning, or computer vision				
		Modelling	The process of creating mathematical or statistical models that represent real-world phenomena, enabling organizations to simulate, predict, or understand complex systems or behaviours				
		Driver Analysis	The statistical analysis of data to identify and understand the key drivers or factors that influence				

			customer behaviours, preferences, or satisfaction				
		Cluster Analysis	The statistical technique used to group or cluster data points or customers based on similarities or patterns, enabling the identification of distinct segments or profiles				
		Predictive Analytics	The use of statistical modelling and data analysis techniques to forecast future outcomes, behaviours, or trends based on historical data, enabling proactive decision-making and interventions				
		Classification	The process of assigning data or customers into predefined categories or classes based on specific criteria or features, enabling organizations to make predictions or informed decisions				
		Descriptive analytics	The analysis and interpretation of historical data to gain insights into past customer behaviours, trends, or patterns, providing a basis for understanding and				

			reporting on past performance				
		Perspective analytics	The application of analytics techniques to gain insights into customer perspectives, opinions, or sentiments, enabling organizations to understand and respond to customer needs and preferences				
		Diagnostic analytics	The analysis of data to identify the underlying causes or factors that contribute to specific customer outcomes or behaviours, providing insights into the reasons behind observed patterns or trends				
		supervised Machine learning	A machine learning technique that involves training a model using labelled or classified data to make predictions or classifications based on new, unseen data				
		Unsupervised machine learning	A machine learning technique that involves training a model using unlabelled data to identify patterns, relationships, or groupings without prior knowledge or labels				

Predictive Analytics	The extent to which an organization applies statistical modelling and data analysis techniques to forecast future outcomes, behaviours, or trends, allowing proactive decision-making and personalized interventions						
Marketing Optimization	The extent to which an organization optimizes its marketing strategies, campaigns, and activities by leveraging data, insights, and analytics to enhance targeting, messaging, and return on investment	A/B testing / Assumption validation	The process of conducting controlled experiments by comparing two or more versions of a marketing or user experience element to determine which performs better or meets specific objectives				
		Contextual Marketing	The practice of delivering personalized and relevant marketing messages or content to customers based on their specific context, such as location, device, or behaviour				
Neuroscience Analytics	The extent to which an organization applies principles and techniques from neuroscience to analyse customer responses, emotions, and cognitive processes, informing the design and optimization of the customer experience	Prescriptive Analytics	The use of advanced analytics techniques to provide recommendations or prescriptions for optimal actions or interventions based on data, models, and business constraints				
		Brain reader	Technology or devices that can measure and interpret brain activity to gain				

			insights into customers' cognitive processes, emotions, or reactions during their interactions or experiences				
		Eye tracking tool	Technology or devices that track and measure eye movements and gaze patterns to understand visual attention, perception, and engagement with marketing materials or user interfaces				
Recommender System	The extent to which an organization utilizes algorithms and data-driven techniques to recommend personalized products, services, or content to customers based on their preferences, behaviours, or past interactions						

Appendix I – Mapping First Cycle Codes to Second Cycle Codes

Category	Category Description	Code	Sub-Code
Defining Customer Experience and CXM	The process of establishing clear and comprehensive definitions of customer experience and CXM within an organization, outlining the principles, goals, and strategies to deliver exceptional customer experiences	Understanding CX	Online and offline experiences
			Two layers of experiences (conscious and subconscious experience)
		Defining CXM	Leadership involvement and alignment
			Build CX culture
			Outside in approach
		CX adoption Challenges	Difficulty in embracing CX change management
			core behavioural competencies
			CX scope is wide and holistic
Developing Brand Promise	The process of formulating and articulating a compelling and differentiated brand promise that sets expectations for the overall experience customers can expect when engaging with the brand	Brand Equity	
		Brand Positioning	
Setting Customer Expectations	The act of establishing clear and realistic expectations with customers regarding the quality, features, benefits, or outcomes they can anticipate from their interactions or experiences with the organization	Exceeding Customer Expectations	
		Value of Money	

Developing Customer Promise	The process of defining and designing the specific commitments, values, or attributes that the organization promises to deliver consistently to customers throughout their journey	Setting Experience Ambition	
		Craft Customer Promise	
Customer Journey Mapping	The visual representation and documentation of the end-to-end customer journey, capturing each stage, touchpoint, and interaction to gain insights into the customer experience and identify areas for improvement	Customer Persona and Profiling	
		Touchpoints	
		Pain points and Opportunities	
Customer Journey phases	The distinct stages or phases that customers go through during their journey with the organization, such as awareness, consideration, purchase, onboarding, usage, and loyalty	Pre-purchase Phase	the acquisition Phase
		Purchase Phase	
		Post-purchase Phase	Cross-sell & upsell Phase
Touchpoints Monitoring	The ongoing tracking, measurement, and analysis of customer interactions and touchpoints across various channels and stages of the customer journey to understand performance and identify areas for enhancement	Touchpoint Identification	
		Performance Evaluation	
Customer Journey design and optimisation	The iterative process of designing and refining the customer journey to create seamless, engaging, and	Redesign touchpoints	
		Personalize the experience	
		Streamline the journey	

	value-added experiences for customers while aligning with business objectives and customer needs		
Data Collection and Integration	The systematic collection, consolidation, and integration of customer data from various sources and touchpoints to create a unified and holistic view of the customer and enable data-driven decision-making	Customer Measurement / Research	Data Collection
		Voice of the Customer (VoC)	Customer feedback
			Word of Mouth
			Qualitative Research for depth
			Transactional data
			Timing of soliciting feedback
		Integrated Customer Intelligence	Data Analysis
			Insights-driven capabilities
			Insights-driven decision making
			Build agile, cross-functional team
			Agile cycle of experimentation and learning
			Linking VoC with Operational data
Customer Understanding	The comprehensive and deep understanding of customers, their needs, preferences, behaviours, motivations, and pain points to inform the development of customer-centric strategies and initiatives.	Understanding Customer Needs	Product research
			influencing factors
		Understanding Customer Perceptions	Relationship Attitudes
			Experience Expectations
			Interaction Perceptions
			Journey Perceptions

		Understanding Customer Behaviours	Choice Preferences
			Behavioural insights
Customer Segmentation and Profiling	The process of dividing the customer base into distinct segments or groups based on shared characteristics, behaviours, or needs, and creating detailed profiles to tailor marketing and experience strategies	Customer Segmentation	
		Customer Profiling	
Personalisation	The practice of delivering customized, relevant, and tailored experiences, messages, or offerings to individual customers based on their unique preferences, behaviours, past interactions, or demographic information	Product Personalisation	
		Communication Personalisation	
		Channel Personalisation	
Organizational Capability	The collective skills, competencies, resources, and culture within an organization that enable the effective execution of customer experience strategies, initiatives, and operational processes	CXM Function position	Separate department
			CEO Role and objective
			The split between Marketing and CX
			Governance role
			Centralized vs. decentralized AI Team Structure
		People Capability Building	
Agile approach	A flexible and iterative approach to project	Organizational Learning	
		Scrum	
		Tribes & Squads	

	management and problem-solving that emphasizes adaptability, collaboration, continuous learning, and responsiveness to changing customer needs and market dynamics	Product owner	
Holistic Alignment	The alignment of all aspects of the organization, including people, processes, technology, and culture, with the goal of delivering consistent and exceptional customer experiences across all touchpoints and departments	Collaboration	
		Cross-Functional	
Customer-Centred Design Workshops	Collaborative workshops or sessions involving cross-functional teams and customers to ideate, co-create, and design customer experiences, products, or services that meet their specific needs and expectations	Design Thinking - Phase one - Fact finding	
		Design Thinking - Phase two - Design	
		Design Thinking - Phase three - actioning and action plan	
Customer Experience Data, Information and Knowledge	The collection, analysis, and utilization of customer data to generate meaningful insights and knowledge that can be translated into actionable strategies, decisions, and improvements	Demographic data	
		Behavioural data	
		Transactional data	
		Operational Data	
		Benchmarking Studies	
Customer Intelligence	The process of gathering, analysing, and interpreting	Data Collection from Various sources	

	customer data, insights, and feedback to gain a deep understanding of customer behaviours, preferences, and motivations, informing decision-making and strategy development	Data Modelling and Analysis	
		Derive Actionable intelligence	
Actioning AI-Driven customer insights	The process of applying AI algorithms, techniques, or models to customer intelligence data to uncover patterns, trends, predictions, or recommendations that can be translated into actionable business initiatives or interventions	Customer Experience Design	Experience Design
			Customer Value Management (CVM)
			marketing automation tool
			next best action
		Channel and Journey Optimization	Customer Interaction Management
			Journey mapping and persona development
			Touchpoint Design
			Touchpoint Design - Channel
			Touchpoint Design - Revamp Digital channels
			Personalization
			segmentation micro-segmentation
			Categorisation
			Chatbot
			gamification
		Innovation and Product Development	Design thinking approaches
			Product development

			Continuous Innovation
		Processes streamlining, Improvement and Automation	Business process reengineering
			Robotic Process Automation
			Automation
		Optimizing Business Performance with Predictive Insights	Predict future customer behaviour
			Distributing customer insights support in decision making
			Proactive action taking
			Predication for sales lead
			Complaints prediction
			Customer complaints prediction
			churn prediction model
			Closed-loop feedback
			risk management
Unlocking Value from AI-Enabled Customer Insights	The process of extracting maximum value and benefit from AI-enabled customer intelligence by leveraging the insights, predictions, or recommendations generated to drive business outcomes, improve customer experiences, or optimize operations	CX outcomes	
		Business Value Generation	Alignment with Business Goals
			Positively impact your bottom-line
			Drive revenue by Increasing customer share-of-wallet and LTV
			Sales revenue and profitability
			Value to Business

		Targeted Customer Acquisition	Optimize customer acquisition while boost customer re-purchase.
			Customer acquisition
			Customer retention
			Customer satisfaction
			Customer value
			Value to Customer
		Proactive Customer Retention	
		Customer Loyalty and Advocacy Enhancement	Customer engagement
			Increase customer loyalty
			Improve customer advocacy
			Increase brand awareness, equity and brand value
		Personalised Upsell and Cross-Sell	
		Value of Customer Journeys mapping and analytics	
		Performance Evaluation and Measurement	Measure the success of these initiatives
		Performance Evaluation and Measurement	Standard business and financial metrics and analysis
Objective of AI	The purpose or goal of implementing AI within an organization, which can include automating tasks, improving decision-making,	Personalized Customer Experiences	
		Improved Customer Segmentation	
		Enhanced Customer Service	

	enhancing personalization, or creating innovative solutions	Automated Marketing Campaigns	
		Enhanced Customer Feedback Analysis	
Challenges of utilising AI	The barriers, limitations, or obstacles that organizations may face when implementing or utilizing AI, such as lack of expertise, data quality issues, ethical considerations, or integration complexities	Data Quality	
		Data Accuracy and availability	
		Lack of Skilled AI Talent	
AI-Enabled Data to Intelligence Analytics	The application of AI algorithms and techniques to process and analyse large volumes of data, transforming raw data into actionable intelligence, insights, or predictions	Text Analysis	Topic Modelling
			text analytics
		Sentiment Analysis	
		Market Insights and Analysis	Market Insights
AI-Enabled Intelligence to Actions Analytics	The process of using AI-generated intelligence or insights to drive proactive actions, interventions, or recommendations that improve customer experiences, optimize operations, or enhance decision-making	Machine Learning	clustering model
			Predictive Marketing
			Artificial Intelligence
			Modelling
			Driver Analysis
			Cluster Analysis
			Predictive Analytics
			Classification
			Descriptive analytics
			perspective analytics
			diagnostic analytics

			supervised Machine learning
			Unsupervised machine learning
		Predictive Analytics	
		Marketing Optimization	A/B testing / Assumption validation
			Contextual Marketing
			Augmented Marketing
		Neuroscience Analytics	Prescriptive Analytics
			Brain reader
			Eye tracking tool
		Recommender System	

Appendix J– Mapping of Themes from First Cycle Coding to Second Cycle Coding

Theme	Category	Code	Sub-Code
Customer Experience Strategy	Defining Customer Experience and CXM	Understanding CX	Online and offline experiences
			Two layers of experiences (conscious and subconscious experience)
		Defining CXM	Leadership involvement and alignment
			Build CX culture
			Outside in approach
		CX adoption Challenges	Difficulty in embracing CX change management
			core behavioural competencies
			CX scope is wide and holistic
	Developing Brand Promise	Brand Equity	
		Brand Positioning	
	Setting Customer Expectations	Setting Customer Expectations	
		Value of Money	
Customer Journey Management	Customer Journey Mapping	Exceeding Customer Expectations	
		Craft Customer Promise	
		Customer Persona and Profiling	
		Touchpoints	
		Pain points and Opportunities	

	Customer Journey phases	Pre-purchase Phase	the acquisition Phase
		Purchase Phase	
		Post-purchase Phase	Cross-sell & upsell Phase
	Touchpoints Monitoring	Touchpoint Identification	
		Performance Evaluation	
	Customer Journey design and optimisation	Redesign touchpoints	
		Personalize the experience	
		Streamline the journey	
Customer Intelligence Approach	Data Collection and Integration	Customer Measurement / Research	Data Collection
		Voice of the Customer (VoC)	Customer feedback
			Word of Mouth
			Qualitative Research for depth
			Transactional data
			Timing of soliciting feedback
		Integrated Customer Intelligence	Data Analysis
			Insights-driven capabilities
			Insights-driven decision making
			Build agile, cross-functional team
			Agile cycle of experimentation and learning
			Linking VoC with Operational data
	Customer Understanding		Product research

		Understanding Customer Needs	influencing factors
		Understanding Customer Perceptions	Relationship Attitudes
			Experience Expectations
			Interaction Perceptions
			Journey Perceptions
		Understanding Customer Behaviours	Choice Preferences
			Behavioural insights
	Customer Segmentation and Profiling	Customer Segmentation	
		Customer Profiling	
	Personalisation	Product Personalisation	
		Communication Personalisation	
		Channel Personalisation	
Agile Way of Operating	Organizational Capability	CXM Function position	Separate department
			CEO Role and objective
			The split between Marketing and CX
			Governance role
			Centralized vs. decentralized AI Team Structure
		People Capability Building	
		Organizational Learning	
	Agile approach	Scrum	
		Tribes & Squads	

		Product owner	
	Holistic Alignment	Collaboration	
		Cross-Functional	
	Customer-Centred Design Workshops	Design Thinking - Phase one - Fact finding	
		Design Thinking - Phase two - Design	
		Design Thinking - Phase three - actioning and action plan	
CX Data to Value Creation Process	Customer Experience Data, Information and Knowledge	Demographic data	
		Behavioural data	
		Transactional data	
		Operational Data	
		Benchmarking Studies	
	Customer Insights	Data Collection from Various sources	
		Data Modelling and Analysis	
		Derive Actionable intelligence	
	Actioning AI-Driven customer Insights	Customer Experience Design	Experience Design
			Customer Value Management (CVM)
			marketing automation tool
			next best action

		Channel and Journey Optimization	Customer Interaction Management
			Journey mapping and persona development
			Touchpoint Design
			Touchpoint Design - Channel
			Touchpoint Design - Revamp Digital channels
			Personalization
			segmentation micro-segmentation
			Categorisation
			Chatbot
			gamification
		Innovation and Product Development	Design thinking approaches
			Product development
			Continuous Innovation
		Processes streamlining, Improvement and Automation	Business process reengineering
			Robotic Process Automation
			Automation
		Optimizing Business Performance with Predictive Insights	Predict future customer behaviour
			Distributing customer insights support in decision making
			Proactive action taking

			Predication for sales lead
			Complaints prediction
			Customer complaints prediction
			churn prediction model
			Closed-loop feedback
			risk management
	Unlocking Value from AI-Enabled Customer Insights	CX outcomes	
		Business Value Generation	Alignment with Business Goals
			Positively impact your bottom-line
			Drive revenue by Increasing customer share-of-wallet and LTV
			Sales revenue and profitability
			Value to Business
		Targeted Customer Acquisition	Optimize customer acquisition while boost customer re-purchase.
			Customer acquisition
			Customer retention
			Customer satisfaction
			Customer value
			Value to Customer
		Proactive Customer Retention	
			Customer engagement

		Customer Loyalty and Advocacy Enhancement	Increase customer loyalty
			Improve customer advocacy
			Increase brand awareness, equity and brand value
		Personalised Upsell and Cross-Sell	
		Value of Customer Journeys mapping and analytics	
		Performance Evaluation and Measurement	Measure the success of these initiatives
		Performance Evaluation and Measurement	Standard business and financial metrics and analysis
Harnessing AI Capabilities	Objective of AI	Personalized Customer Experiences	
		Improved Customer Segmentation	
		Enhanced Customer Service	
		Automated Marketing Campaigns	
		Enhanced Customer Feedback Analysis	
	Challenges of utilising AI	Data Quality	
		Data Accuracy and availability	
		Lack of Skilled AI Talent	
	AI-Enabled Data to Intelligence Analytics	Text Analysis	Topic Modelling
			text analytics
		Sentiment Analysis	

		Market Insights and Analysis	Market Insights
	AI-Enabled Intelligence to Actions Analytics	Machine Learning	clustering model
			Predictive Marketing
			Artificial Intelligence
			Modelling
			Driver Analysis
			Cluster Analysis
			Predictive Analytics
			Classification
			Descriptive analytics
			perspective analytics
			diagnostic analytics
			supervised Machine learning
			Unsupervised machine learning
		Predictive Analytics	
		Marketing Optimization	A/B testing / Assumption validation
			Contextual Marketing
			Augmented Marketing
		Neuroscience Analytics	Prescriptive Analytics
			Brain reader
			Eye tracking tool
		Recommender System	

Appendix K – Mapping of Themes to Research Questions

Themes	Research Questions (s)
Customer Experience Strategy	Research Question 1: “What is the role of AI on the process of actioning customer insights throughout the CJ to understand and manage CX?”
Customer Journey Management	Research Question 2: “How do organisations incorporate AI technologies into the customer insight to action process to understand and manage CX?” & Research Question 3: “How do organisations use AI-derived customer insights to understand and manage CX?”
Customer Intelligence Approach	Research Question 2: “How do organisations incorporate AI technologies into the customer insight to action process to understand and manage CX?”
Agile way of Operating	Research Question 2: “How do organisations incorporate AI technologies into the customer insight to action process to understand and manage CX?”
CX Data to Value Creation Process	Research Question 2: “How do organisations incorporate AI technologies into the customer insight to action process to understand and manage CX?”
Harnessing AI capabilities	Research Question 3: “How do organisations use AI-derived customer insights to understand and manage CX?” Research Question 4: “How do organisations assess the value of actioning customer insights derived from AI?”

Appendix L – Intercoder Reliability Table

The MAXQDA Intercoder Agreement function was used to compare the external coder's code with the researcher's code

Intercoader agreement: segments					Intercoader agreement: codes				
Coder 1: 202 Coded Segments Coder 2: 224 Coded Segments 426 Coded Segments									
Code	Coder 1	Coder 2	Agree		Code	Agreements	Disagreements	Total	Percent
Customer Experience Strategy > Defining Customer E...	✓	✓	✓		Harnessing AI Capabilities > Objective of AI > I...	8	3	11	72.73
Customer Experience Strategy > Defining Customer E...	✓	✓	✓		Customer Experience Strategy > Defining Custo...	0	2	2	0.00
Customer Experience Strategy > Defining Customer E...	□	✓	□		Customer Intelligence Approach > Customer U...	2	2	4	50.00
Customer Intelligence Approach > Data Collection an...	□	✓	□		Harnessing AI Capabilities > Challenges of usin...	6	2	8	75.00
Customer Experience Strategy > Defining Customer E...	✓	□	□		Harnessing AI Capabilities > AI-Enabled Intellige...	12	2	14	85.71
Customer Experience Strategy > Defining Customer E...	✓	✓	✓		Harnessing AI Capabilities > AI-Enabled Intellige...	10	2	12	83.33
Customer Experience Strategy > Defining Customer E...	✓	✓	✓		Customer Experience Strategy > Defining Custo...	0	1	1	0.00
Customer Intelligence Approach > Personalisation > ...	✓	✓	✓		Customer Experience Strategy > Defining Custo...	2	1	3	66.67
Customer Intelligence Approach > Personalisation > ...	✓	✓	✓		Customer Experience Strategy > Setting Custo...	6	1	7	85.71
CX Data to Value Creation Process > Actioning AI-Driv...	✓	✓	✓		Customer Journey Management > Customer J...	2	1	3	66.67
CX Data to Value Creation Process > Actioning AI-Driv...	✓	✓	✓		Customer Intelligence Approach > Data Collect...	0	1	1	0.00
Agile Way of Operating > Holistic Alignment > Cross-F...	□	✓	□		Customer Intelligence Approach > Data Collect...	4	1	5	80.00
Customer Intelligence Approach > Customer Underst...	□	✓	□		Customer Intelligence Approach > Customer U...	8	1	9	88.89
CX Data to Value Creation Process > Actioning AI-Driv...	✓	✓	✓		Customer Intelligence Approach > Customer S...	12	1	13	92.31
CX Data to Value Creation Process > Actioning AI-Driv...	✓	✓	✓		Customer Intelligence Approach > Personalisati...	0	1	1	0.00
CX Data to Value Creation Process > Actioning AI-Driv...	✓	✓	✓		Agile Way of Operating > Organizational Capabil...	8	1	9	88.89
CX Data to Value Creation Process > Actioning AI-Driv...	✓	✓	✓		Agile Way of Operating > Organizational Capabil...	0	1	1	0.00
Customer Experience Strategy > Developing Brand Pr...	✓	✓	✓		Agile Way of Operating > Holistic Alignment > ...	10	1	11	90.91
Customer Experience Strategy > Developing Brand Pr...	✓	✓	✓		Harnessing AI Capabilities > Objective of AI > E...	4	1	5	80.00
Customer Experience Strategy > Defining Customer E...	✓	✓	✓		Harnessing AI Capabilities > Challenges of usin...	2	1	3	66.67
Customer Experience Strategy > Defining Customer E...	✓	✓	✓		Harnessing AI Capabilities > Challenges of usin...	2	1	3	66.67
Customer Experience Strategy > Defining Customer E...	✓	□	□		Harnessing AI Capabilities > AI-Enabled Intellige...	2	1	3	66.67
Customer Experience Strategy > Defining Customer E...	✓	✓	✓		Harnessing AI Capabilities > AI-Enabled Intellige...	12	1	13	92.31
Customer Experience Strategy > Defining Customer E...	✓	✓	✓		Harnessing AI Capabilities > AI-Enabled Intellige...	2	1	3	66.67
CX Data to Value Creation Process > Unlocking Value fr...	✓	✓	✓		Harnessing AI Capabilities > AI-Enabled Intellige...	12	1	13	92.31
CX Data to Value Creation Process > Unlocking Value fr...	✓	✓	✓		Customer Experience Strategy > Defining Custo...	16	0	16	100.00
Customer Experience Strategy > Defining Customer E...	✓	✓	✓		Customer Experience Strategy > Developing Br...	2	0	2	100.00
Customer Experience Strategy > Defining Customer E...	✓	✓	✓		Customer Experience Strategy > Developing Cu...	2	0	2	100.00
					Customer Journey Management > Customer J...	2	0	2	100.00

Appendix M - Findings from Interviews & Documents – Case A

Findings from Interviews – Theme 1: Customer Experience Strategy

Code	Frequency of Codes Occurrence	Category	Total Frequency of codes
Understanding CX	5	Defining Customer Experience and CXM	17
Defining CXM	11		
CXM Adoption Challenges	1		
Brand Positioning	2	Developing Brand Promise	2
Brand Equity	0		
Exceeding Customer Expectations	1	Setting Customer Expectations	5
Value for Money	4		
Setting Experience Ambition	3	Developing Customer Promise	4
Crafting Customer Promise	1		

Findings from Documents – Theme 1: Customer Experience Strategy

Category	Frequency of Occurrence	Reference Document
Defining Customer Experience	4	Net Promoter Score (NPS) Framework
Developing Brand Promise	2	Brand Health Tracking
Setting Customer Expectations	3	Customer Journey Maps
Developing Customer Promise	6	Customer Journey Maps, Customers Satisfaction Report

Findings from Interviews – Theme 2: Customer Journey Management

Code	Frequency of Occurrence	Category	Total Frequency of codes
Customer Empathy	3	Customer Journey Mapping	11
Touchpoints	3		
Pain Point and Opportunities	5		
Pre-Purchase Phase	0	Customer Journey Phases	5
Purchase Phase	4		
Post-Purchase Phase	1		
Touchpoint Identification	6	Touchpoints Monitoring	11
Performance Evaluation	5		
Redesign touchpoints	4	Customer Journey Design and Optimisation	6
Personalise the experience	1		
Streamline the Journey	1		

Findings from Documents – Theme 2: Customer Journey Management

Category	Frequency of Occurrence	Reference Document
Customer Journey Mapping	3	Customer Journey Maps
Customer Journey Phases	7	Customer Journey Maps, Agile Use case Development
Touchpoints Monitoring	4	Customer Journey Maps
Customer Journey Design and Optimisation	1	Customer Journey Maps

Findings from Interviews – Theme 3: Agile Way of Operating

Code	Frequency of Occurrence	Category	Total Frequency of codes
CXM Function Position	7	Organisational Capability	13
People Capability Building	4		
Organisational Learning	2		
Scrum	5	Agile Approach	8
Tribes & Squads	0		
Product Owner	3		
Collaboration	2	Holistic Alignment	12
Cross-functional	10		
Design Thinking	2	Customer-Centred Design Workshops	4
Fact Finding / Empathy	1		
Design	1		
Action planning	2		

Findings from Documents – Theme 3: Agile Way of Operating

Category	Frequency of Occurrence	Reference Document
Organisational Capability	0	
Agile Approach	4	Agile Use case Development
Holistic Alignment	2	Agile Use case Development
Customer-Centred Design Workshops	5	Agile Use case Development

Findings from Interviews – Theme 4: Customer Intelligence Approach

Code	Frequency of Occurrence	Category	Total Frequency of codes
Customer Measurement/ Customer Research	9	Data Collection and Integration	22
Voice of the Customer (VoC)	7		
Integrated Customer Intelligence	6		
Understanding Customer Needs	6	Customer Understanding	14
Understanding Customer Perceptions	2		
Under Customer Behaviours	6		
Customer Segmentation	7	Customer Segmentation and Profiling	9
Customer Profiling	2		
Product Personalisation	7	Personalisation	10
Communication Personalisation	1		
Channel Personalisation	2		

Findings from Documents – Theme 4: Customer Intelligence Approach

Category	Frequency of Occurrence	Reference Document
Data Collection and Integration	2	Agile Use case Development
Customer Understanding	6	Broadband Post Campaign Evaluation
Customer Segmentation and Profiling	8	Customer Value Management Strategy
Personalisation	9	Customer Value Management Strategy

Findings from Interviews – Theme 5: CX Data to Value Creation Process

Code	Frequency of Occurrence	Category	Total Frequency of codes
Solicited – Structured Data	4	Customer Experience Data	12
Solicited – Unstructured Data	2		
Unsolicited - Structured Data	4		
Unsolicited – Unstructured Data	2		
Attitudinal Insights	9	Customer Insights	26
Experiential Insights	9		
Behavioural Insights	2		
Market Insights	4		
Benchmarking Studies	2		
Customer Experience Design	3	Actioning AI-Driven customer insights	18
Channel and Journey Optimization	3		
Innovation and Product Development	2		
Processes streamlining, Improvement and Automation	3		
Optimizing Business Performance with Predictive Insights	7		

CX Outcomes	3	Unlocking Value from AI-Enabled Customer Insights	16
Business Value Generation	1		
Targeted Customer Acquisition	2		
Proactive Customer Retention	2		
Customer Loyalty and Advocacy Enhancement	3		
Personalised Upsell and Cross-Sell	5		

Findings from Documents – Theme 5: CX Data to Value Creation Process

Category	Frequency of Occurrence	Reference Document
Customer Experience Data	5	Net Promoter Score Report, Customers Satisfaction Report
Customer Insights	0	
Actioning AI-Driven customer insights	4	Agile Use case Development
Unlocking Value from AI-Enabled Customer Insights	0	

Findings from Interviews – Theme 6: Harnessing AI Capabilities

Code	Frequency of Occurrence	Category	Total Frequency of codes
Personalised Customer Experiences	2	Objective of AI	28
Improved Customer Segmentation	7		
Enhanced Customer Service	4		
Automated Marketing Campaigns	10		
Enhanced Customer Feedback Analysis	5		
Data Quality	2	Challenges of utilising AI	5
Data Accuracy and availability	2		
Lack of Skilled AI Talent	1		
Text Analytics	2	AI-Enabled Data to Intelligence Analytics	9
Sentiment Analysis	1		
Market Insights and Analysis	6		
Machine Learning	9	AI-Enabled Intelligence to Actions Analytics	22
Predictive Analytics	8		
Marketing Optimization	3		
Neuroscience Analytics	0		
Recommender System	2		

Findings from Documents – Theme 6: Harnessing AI Capabilities

Category	Frequency of Occurrence	Reference Document
Objective of AI	3	Agile Use case Development
Challenges of utilising AI	0	
AI-Enabled Data to Intelligence Analytics	4	Agile Use case Development
AI-Enabled Intelligence to Actions Analytics	8	Agile Use case Development

Appendix N - Findings from Interviews & Documents – Case B

Findings from Interviews – Theme 1: Customer Experience Strategy

Code	Frequency of Codes Occurrence	Category	Total Frequency of codes
Understanding CX	4	Defining Customer Experience and CXM	15
Defining CXM	10		
CXM Adoption Challenges	1		
Brand Positioning	0	Developing Brand Promise	1
Brand Equity	1		
Exceeding Customer Expectations	2	Setting Customer Expectations	7
Value for Money	5		
Setting Experience Ambition	2	Developing Customer Promise	2
Crafting Customer Promise	0		

Findings from Documents – Theme 1: Customer Experience Strategy

Category	Frequency of Occurrence	Reference Document
Defining Customer Experience	4	Customer Experience Framework
Developing Brand Promise	0	
Setting Customer Expectations	2	Customer Experience Framework
Developing Customer Promise	0	

Findings from Interviews – Theme 2: Customer Journey Management

Code	Frequency of Occurrence	Category	Total Frequency of codes
Customer Empathy	2	Customer Journey Mapping	12
Touchpoints	2		
Pain Point and Opportunities	8		
Pre-Purchase Phase	1	Customer Journey Phases	4
Purchase Phase	2		
Post-Purchase Phase	1		
Touchpoint Identification	10	Touchpoints Monitoring	14
Performance Evaluation	4		
Redesign touchpoints	5	Customer Journey Design and Optimisation	5
Personalise the experience	0		
Streamline the Journey	0		

Findings from Documents – Theme 2: Customer Journey Management

Category	Frequency of Occurrence	Reference Document
Customer Journey Mapping	8	Customer Journey presentation
Customer Journey Phases	9	Customer Journey presentation
Touchpoints Monitoring	7	Customer Journey presentation
Customer Journey Design and Optimisation	2	Customer Journey presentation

Findings from Interviews – Theme 3: Agile Way of Operating

Code	Frequency of Occurrence	Category	Total Frequency of codes
CXM Function Position	6	Organisational Capability	7
People Capability Building	0		
Organisational Learning	1		
Scrum	3	Agile Approach	7
Tribes & Squads	0		
Product Owner	4		
Collaboration	2	Holistic Alignment	11
Cross-functional	9		
Design Thinking	2	Customer-Centred Design Workshops	10
Fact Finding / Empathy	2		
Design	2		
Action planning	4		

Findings from Documents – Theme 3: Agile Way of Operating

Category	Frequency of Occurrence	Reference Document
Organisational Capability	6	Governance Framework
Agile Approach	8	Governance Framework
Holistic Alignment	9	Governance Framework
Customer-Centred Design Workshops	0	

Findings from Interviews – Theme 4: Customer Intelligence Approach

Code	Frequency of Occurrence	Category	Total Frequency of codes
Customer Measurement/ Customer Research	9	Data Collection and Integration	21
Voice of the Customer (VoC)	7		
Integrated Customer Intelligence	5		
Understanding Customer Needs	9	Customer Understanding	21
Understanding Customer Perceptions	4		
Under Customer Behaviours	8		
Customer Segmentation	8	Customer Segmentation and Profiling	10
Customer Profiling	2		
Product Personalisation	9	Personalisation	15
Communication Personalisation	3		
Channel Personalisation	3		

Findings from Documents – Theme 4: Customer Intelligence Approach

Category	Frequency of Occurrence	Reference Document
Data Collection and Integration	0	
Customer Understanding	4	Artificial Intelligence Agile/scrum backlog
Customer Segmentation and Profiling	7	Artificial Intelligence Agile/scrum backlog
Personalisation	8	Artificial Intelligence Agile/scrum backlog

Findings from Interviews – Theme 5: CX Data to Value Creation Process

Code	Frequency of Occurrence	Category	Total Frequency of codes
Solicited – Structured Data	6	Customer Experience Data	8
Solicited – Unstructured Data	2		
Unsolicited - Structured Data	0		
Unsolicited – Unstructured Data	0		
Attitudinal Insights	9	Customer Insights	26
Experiential Insights	9		
Behavioural Insights	2		
Market Insights	4		
Benchmarking Studies	2		
Customer Experience Design	4	Actioning AI-Driven customer insights	18
Channel and Journey Optimization	4		
Innovation and Product Development	2		
Processes streamlining, Improvement and Automation	2		
Optimizing Business Performance with Predictive Insights	6		

CX Outcomes	3	Unlocking Value from AI-Enabled Customer Insights	19
Business Value Generation	2		
Targeted Customer Acquisition	5		
Proactive Customer Retention	3		
Customer Loyalty and Advocacy Enhancement	3		
Personalised Upsell and Cross-Sell	3		

Findings from Documents – Theme 5: CX Data to Value Creation Process

Category	Frequency of Occurrence	Reference Document
Customer Experience Data	4	Artificial Intelligence Agile/scrum backlog
Customer Insights	0	
Actioning AI-Driven customer insights	8	Artificial Intelligence Agile/scrum backlog
Unlocking Value from AI-Enabled Customer Insights	0	

Findings from Interviews – Theme 6: Harnessing AI Capabilities

Code	Frequency of Occurrence	Category	Total Frequency of codes
Personalised Customer Experiences	3	Objective of AI	33
Improved Customer Segmentation	8		
Enhanced Customer Service	5		
Automated Marketing Campaigns	8		
Enhanced Customer Feedback Analysis	9		
Data Quality	2	Challenges of utilising AI	5
Data Accuracy and availability	2		
Lack of Skilled AI Talent	1		
Text Analytics	3	AI-Enabled Data to Intelligence Analytics	9
Sentiment Analysis	2		
Market Insights and Analysis	4		
Machine Learning	8	AI-Enabled Intelligence to Actions Analytics	24
Predictive Analytics	8		
Marketing Optimization	2		
Neuroscience Analytics	1		
Recommender System	5		

Findings from Documents – Theme 6: Harnessing AI Capabilities

Category	Frequency of Occurrence	Reference Document
Objective of AI	0	
Challenges of utilising AI	0	
AI-Enabled Data to Intelligence Analytics	4	Artificial Intelligence Agile/scrum backlog
AI-Enabled Intelligence to Actions Analytics	4	Artificial Intelligence Agile/scrum backlog

Appendix O - Findings from Interviews & Documents – Case C

Findings from Interviews – Theme 1: Customer Experience Strategy

Code	Frequency of Codes Occurrence	Category	Total Frequency of codes
Understanding CX	2	Defining Customer Experience and CXM	13
Defining CXM	11		
CXM Adoption Challenges	0		
Brand Positioning	0	Developing Brand Promise	0
Brand Equity	0		
Exceeding Customer Expectations	1	Setting Customer Expectations	4
Value for Money	3		
Setting Experience Ambition	3	Developing Customer Promise	4
Crafting Customer Promise	1		

Findings from Documents – Theme 1: Customer Experience Strategy

Category	Frequency of Occurrence	Reference Document
Defining Customer Experience	1	Annual Report 2022
Developing Brand Promise	0	
Setting Customer Expectations	0	
Developing Customer Promise	0	

Findings from Interviews – Theme 2: Customer Journey Management

Code	Frequency of Occurrence	Category	Total Frequency of codes
Customer Empathy	1	Customer Journey Mapping	9
Touchpoints	3		
Pain Point and Opportunities	6		
Pre-Purchase Phase	0	Customer Journey Phases	0
Purchase Phase	0		
Post-Purchase Phase	0		
Touchpoint Identification	4	Touchpoints Monitoring	8
Performance Evaluation	4		
Redesign touchpoints	5	Customer Journey Design and Optimisation	6
Personalise the experience	0		
Streamline the Journey	1		

Findings from Documents – Theme 2: Customer Journey Management

Category	Frequency of Occurrence	Reference Document
Customer Journey Mapping	7	Customer Journey Mapping Fact Sheet
Customer Journey Phases	0	
Touchpoints Monitoring	3	Customer Journey Mapping Fact Sheet
Customer Journey Design and Optimisation	1	Customer Journey Mapping Fact Sheet

Findings from Interviews – Theme 3: Agile Way of Operating

Code	Frequency of Occurrence	Category	Total Frequency of codes
CXM Function Position	2	Organisational Capability	5
People Capability Building	0		
Organisational Learning	3		
Scrum	7	Agile Approach	9
Tribes & Squads	0		
Product Owner	2		
Collaboration	1	Holistic Alignment	9
Cross-functional	8		
Design Thinking	0	Customer-Centred Design Workshops	0
Fact Finding / Empathy	0		
Design	0		
Action planning	0		

Findings from Documents – Theme 3: Agile Way of Operating

Category	Frequency of Occurrence	Reference Document
Organisational Capability	0	
Agile Approach	0	
Holistic Alignment	0	
Customer-Centred Design Workshops	0	

Findings from Interviews – Theme 4: Customer Intelligence Approach

Code	Frequency of Occurrence	Category	Total Frequency of codes
Customer Measurement/ Customer Research	3	Data Collection and Integration	14
Voice of the Customer (VoC)	7		
Integrated Customer Intelligence	4		
Understanding Customer Needs	6	Customer Understanding	11
Understanding Customer Perceptions	0		
Under Customer Behaviours	5		
Customer Segmentation	7	Customer Segmentation and Profiling	8
Customer Profiling	1		
Product Personalisation	9	Personalisation	11
Communication Personalisation	1		
Channel Personalisation	1		

Findings from Documents – Theme 4: Customer Intelligence Approach

Category	Frequency of Occurrence	Reference Document
Data Collection and Integration	0	
Customer Understanding	0	
Customer Segmentation and Profiling	0	
Personalisation	0	

Findings from Interviews – Theme 5: CX Data to Value Creation Process

Code	Frequency of Occurrence	Category	Total Frequency of codes
Solicited – Structured Data	6	Customer Experience Data	10
Solicited – Unstructured Data	1		
Unsolicited - Structured Data	2		
Unsolicited – Unstructured Data	1		
Attitudinal Insights	8	Customer Insights	18
Experiential Insights	6		
Behavioural Insights	1		
Market Insights	2		
Benchmarking Studies	1		
Customer Experience Design	2	Actioning AI-Driven customer insights	17
Channel and Journey Optimization	6		
Innovation and Product Development	3		
Processes streamlining, Improvement and Automation	1		
Optimizing Business Performance with Predictive Insights	5		

CX Outcomes	0	Unlocking Value from AI-Enabled Customer Insights	10
Business Value Generation	5		
Targeted Customer Acquisition	2		
Proactive Customer Retention	1		
Customer Loyalty and Advocacy Enhancement	2		
Personalised Upsell and Cross-Sell	0		

Findings from Documents – Theme 5: CX Data to Value Creation Process

Category	Frequency of Occurrence	Reference Document
Customer Experience Data	4	Report on the Customer Experience of Mobile Wallets
Customer Insights	0	
Actioning AI-Driven customer insights	8	Artificial Intelligence Solution presentation
Unlocking Value from AI-Enabled Customer Insights	0	

Findings from Interviews – Theme 6: Harnessing AI Capabilities

Code	Frequency of Occurrence	Category	Total Frequency of codes
Personalised Customer Experiences	2	Objective of AI	12
Improved Customer Segmentation	7		
Enhanced Customer Service	8		
Automated Marketing Campaigns	2		
Enhanced Customer Feedback Analysis	4		
Data Quality	2	Challenges of utilising AI	2
Data Accuracy and availability	0		
Lack of Skilled AI Talent	0		
Text Analytics	0	AI-Enabled Data to Intelligence Analytics	3
Sentiment Analysis	1		
Market Insights and Analysis	2		
Machine Learning	4	AI-Enabled Intelligence to Actions Analytics	15
Predictive Analytics	5		
Marketing Optimization	0		
Neuroscience Analytics	1		
Recommender System	5		

Findings from Documents – Theme 6: Harnessing AI Capabilities

Category	Frequency of Occurrence	Reference Document
Objective of AI	0	
Challenges of utilising AI	0	
AI-Enabled Data to Intelligence Analytics	9	Artificial Intelligence Solution presentation
AI-Enabled Intelligence to Actions Analytics	8	Artificial Intelligence Solution presentation

Appendix P - Findings from Interviews & Documents – Case D

Findings from Interviews – Theme 1: Customer Experience Strategy

Code	Frequency of Codes Occurrence	Category	Total Frequency of codes
Understanding CX	4	Defining Customer Experience and CXM	12
Defining CXM	7		
CXM Adoption Challenges	1		
Brand Positioning	0	Developing Brand Promise	0
Brand Equity	0		
Exceeding Customer Expectations	1	Setting Customer Expectations	3
Value for Money	2		
Setting Experience Ambition	6	Developing Customer Promise	7
Crafting Customer Promise	1		

Findings from Documents – Theme 1: Customer Experience Strategy

Category	Frequency of Occurrence	Reference Document
Defining Customer Experience	6	Customer Experience Framework, The Forces of Customer Experience
Developing Brand Promise	0	
Setting Customer Expectations	4	The Forces of Customer Experience
Developing Customer Promise	7	The Forces of Customer Experience

Findings from Interviews – Theme 2: Customer Journey Management

Code	Frequency of Occurrence	Category	Total Frequency of codes
Customer Empathy	0	Customer Journey Mapping	10
Touchpoints	2		
Pain Point and Opportunities	8		
Pre-Purchase Phase	0	Customer Journey Phases	0
Purchase Phase	0		
Post-Purchase Phase	0		
Touchpoint Identification	7	Touchpoints Monitoring	10
Performance Evaluation	3		
Redesign touchpoints	3	Customer Journey Design and Optimisation	4
Personalise the experience	1		
Streamline the Journey	0		

Findings from Documents – Theme 2: Customer Journey Management

Category	Frequency of Occurrence	Reference Document
Customer Journey Mapping	0	
Customer Journey Phases	0	
Touchpoints Monitoring	0	
Customer Journey Design and Optimisation	0	

Findings from Interviews – Theme 3: Agile Way of Operating

Code	Frequency of Occurrence	Category	Total Frequency of codes
CXM Function Position	2	Organisational Capability	4
People Capability Building	0		
Organisational Learning	2		
Scrum	3	Agile Approach	12
Tribes & Squads	5		
Product Owner	4		
Collaboration	2	Holistic Alignment	10
Cross-functional	8		
Design Thinking	0	Customer-Centred Design Workshops	0
Fact Finding / Empathy	0		
Design	0		
Action planning	0		

Findings from Documents – Theme 3: Agile Way of Operating

Category	Frequency of Occurrence	Reference Document
Organisational Capability	0	
Agile Approach	0	
Holistic Alignment	0	
Customer-Centred Design Workshops	0	

Findings from Interviews – Theme 4: Customer Intelligence Approach

Code	Frequency of Occurrence	Category	Total Frequency of codes
Customer Measurement/ Customer Research	6	Data Collection and Integration	13
Voice of the Customer (VoC)	5		
Integrated Customer Intelligence	2		
Understanding Customer Needs	4	Customer Understanding	15
Understanding Customer Perceptions	4		
Under Customer Behaviours	7		
Customer Segmentation	4	Customer Segmentation and Profiling	4
Customer Profiling	0		
Product Personalisation	7	Personalisation	12
Communication Personalisation	3		
Channel Personalisation	2		

Findings from Documents – Theme 4: Customer Intelligence Approach

Category	Frequency of Occurrence	Reference Document
Data Collection and Integration	0	
Customer Understanding	0	
Customer Segmentation and Profiling	0	
Personalisation	0	

Findings from Interviews – Theme 5: CX Data to Value Creation Process

Code	Frequency of Occurrence	Category	Total Frequency of codes
Solicited – Structured Data	5	Customer Experience Data	8
Solicited – Unstructured Data	0		
Unsolicited - Structured Data	2		
Unsolicited – Unstructured Data	1		
Attitudinal Insights	8	Customer Insights	16
Experiential Insights	5		
Behavioural Insights	0		
Market Insights	2		
Benchmarking Studies	1		
Customer Experience Design	1	Actioning AI-Driven customer insights	14
Channel and Journey Optimization	5		
Innovation and Product Development	1		
Processes streamlining, Improvement and Automation	4		
Optimizing Business Performance with Predictive Insights	3		

CX Outcomes	0	Unlocking Value from AI-Enabled Customer Insights	12
Business Value Generation	5		
Targeted Customer Acquisition	3		
Proactive Customer Retention	0		
Customer Loyalty and Advocacy Enhancement	4		
Personalised Upsell and Cross-Sell	0		

Findings from Documents – Theme 5: CX Data to Value Creation Process

Category	Frequency of Occurrence	Reference Document
Customer Experience Data	7	Customer Experience Framework
Customer Insights	7	Customer Experience Framework
Actioning AI-Driven customer insights	8	Customer Experience Framework
Unlocking Value from AI-Enabled Customer Insights	0	

Findings from Interviews – Theme 6: Harnessing AI Capabilities

Code	Frequency of Occurrence	Category	Total Frequency of codes
Personalised Customer Experiences	3	Objective of AI	19
Improved Customer Segmentation	4		
Enhanced Customer Service	2		
Automated Marketing Campaigns	2		
Enhanced Customer Feedback Analysis	8		
Data Quality	0	Challenges of utilising AI	0
Data Accuracy and availability	0		
Lack of Skilled AI Talent	0		
Text Analytics	1	AI-Enabled Data to Intelligence Analytics	3
Sentiment Analysis	1		
Market Insights and Analysis	1		
Machine Learning	5	AI-Enabled Intelligence to Actions Analytics	14
Predictive Analytics	5		
Marketing Optimization	0		
Neuroscience Analytics	0		
Recommender System	4		

Findings from Documents – Theme 6: Harnessing AI Capabilities

Category	Frequency of Occurrence	Reference Document
Objective of AI	0	
Challenges of utilising AI	0	
AI-Enabled Data to Intelligence Analytics	0	
AI-Enabled Intelligence to Actions Analytics	0	

Appendix Q – Cross-case Analysis - Customer Experience Strategy

Key Areas of Comparison	Case A	Case B	Case C	Case D
Defining Customer Experience	Case A, Shifted core competencies to prioritize customer experience. Emphasized handling inquiries, requests, and complaints professionally. Defined customer experience as end-to-end process. Highlighted customer experience from initial interaction to post-purchase stages	Case B, Defined customer experience from outside-in perspective. Stressed understanding customer perception across touchpoints. Discussed emotional and physical layers of experience. Emphasized customer experience beyond individual interactions	Case C integrates customer experience into its overall strategy, with a focus on designing flexible and easy-to-understand products and services aligned with customer expectations.	Case D considers customer experience as a core component of its strategic approach, aiming to establish a customer-centric culture throughout the organization.
Integration with Company Strategy	Case A , Harnessing loyalty and customer experience with company's North Star. Need for top-down and	Case B, Defined customer experience beyond individual interactions. Emphasized	Case c, aims to deliver a superior customer experience, going beyond customer satisfaction and	Case D, strives to deliver personalized experiences, enhance customer satisfaction, and create a more

	<p>bottom-up integration of customer promise.</p> <p>Customer experience as mindset permeating entire organization.</p> <p>Customer experience as DNA and pillar in company's strategy</p>	<p>governance role and sustainability.</p> <p>Importance of customer-centricity and simplicity. Strategic decision-making and periodic evaluations.</p> <p>Focus on customer journey mapping and management support</p>	<p>focusing on operations, turn-around times, and process simplicity.</p>	<p>customer-centric organization.</p>
Maturity Level in CX			<p>Case C, demonstrates maturity in customer experience practices, using a framework with six disciplines to make the bank more customer-centric.</p>	<p>Case D, recognizes varying maturity levels in customer experience across organizations and understands the need to continuously adapt to industry trends.</p>
Developing Brand Promise	<p>Case A , Aligned brand promise with actual brand delivery.</p> <p>Importance of designated department for brand and customer</p>	<p>Case B, Discussed governance role of customer experience.</p> <p>Emphasized customer-centricity and simplicity across departments.</p>		

	touchpoints. Focus on assessing brand perception and creating awareness. Ongoing management of customer loyalty and experience	Strategic decision-making for customer experience level. Capturing voice of customer and conducting evaluations		
Setting Customer Expectations	Case A , - Managing customer expectations and delivering value for money. Emphasized exceeding customer expectations for positive experience. Bridging gap between customer expectations and business deliverables. Higher expectations linked to willingness to invest more	Case B, - Discussed determining customer experience level based on target market. Integrated customer experience into overall strategy. Importance of capturing voice of customer and evaluating experience. Enhancing customer journey and transforming customers into advocates	Case C, Bank A places significant importance on managing customer expectations and emotions, aiming to create positive emotional connections while achieving business targets. Bank A emphasizes the importance of understanding customer expectations and needs. They have plans to implement changes based on customer expectations, but	Case D, Bank B focuses on understanding customer expectations and perceptions to deliver personalized experiences and improve customer satisfaction. Bank B aims to understand customer perceptions and feelings, considering interactions, successful purchases, account funding, and overall relationship with customers. They aim to

			acknowledge that technology implementation takes time.	deploy strategic plans to improve customer satisfaction and be customer-centric.
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Appendix R – Cross-case Analysis - Customer Journey Management

Key Areas of Comparison	Case A	Case B	Case C	Case D
Customer Journey Mapping Approach	Case A , Internal workshops involving multiple departments	Case B, Cross-functional collaboration and workshops with a focus on customer emotions	Case C, Mapping customer touchpoints and experiences across various channels	Case D, Focus on customer journey mapping, involving frontliners, surveys, and customer-centric design
Types of Customer Journeys	Case A , Transactional, episodic, and continuous/relationship journeys	Case B, Episodic and holistic journeys	Case C, End-to-end customer journeys	Case D, Transactional, episodic, and continuous/relationship journeys
Design and Optimization	Case A , Iterative design process, focus on pain points and areas of improvement	Case B, Design for emotional impact, leveraging customer feedback, storytelling	Case C, Designing seamless experiences, optimizing touchpoints, identifying improvement areas	Case D, Continuous testing, feedback gathering, periodic customer surveys, focus on continuous improvement
Customer Journey Mapping	Case A , Emphasizes differentiation through unique customer	Case B, Highlights the importance of understanding the	Case C, Reinforces the significance of customer journey mapping,	Case D, Reinforces the importance of customer journey mapping to

	experiences and understanding customer needs and pain points.	customer journey from end to end, involving multiple stakeholders and identifying pain points.	understanding critical paths, and developing solutions using advanced technologies.	understand the critical path in managing account opening processes and enhance the overall customer experience.
Monitoring Touchpoints	Case A , Emphasizes the need to monitor customer behaviour and touchpoints across various channels and analyse historical performance and campaign effectiveness.	Case B, Highlights the importance of tracking customer interactions across different touchpoints, leveraging technology and data analytics to gain insights, and taking proactive measures to address customer needs.	Case C, Stresses the importance of monitoring touchpoints, ensuring seamlessness across all channels, and leveraging technology to improve the customer experience.	Case D, Emphasizes monitoring touchpoints throughout the customer journey, including branches, mobile apps, online platforms, and managing customer emotions during the journey.
Designing and Optimizing Customer Journey	Case A , Highlights the importance of considering both the product journey and the overall experience, tailoring the journey to customer preferences and needs,	Case B, Emphasizes the iterative nature of customer journey design and optimization, using agile methodologies, setting ambitious goals, and continuously	Case C, Focuses on setting ambitious goals, leveraging customer feedback and operational data, using automation and personalization, and ensuring a seamless	Case D, Highlights a customer-centric approach, data-driven decision-making, and optimizing processes based on customer

	and involving cross-functional collaboration.	evaluating and refining the journey.	customer experience through cross-channel agility and flexibility.	insights and segmentation.
Personalization	Case A , Balancing personalization and privacy boundaries, avoiding invasiveness, and respecting customer preferences.	Case B, Focusing on personalized experiences while respecting customer privacy boundaries.	Case C, Emphasizing the importance of managing customer emotions, ensuring satisfaction, and leveraging technology to enhance the experience without sacrificing privacy.	
Customer Journey Focus			Case C, Bank A identifies and addresses customer journey milestones to ensure a positive customer experience.	Case D, Bank B emphasizes customer journey mapping, understanding both the ideal experience envisioned by management and the real experiences of customers.

Appendix S – Cross-case Analysis - Customer Intelligence Approach

Key Areas of Comparison	Case A	Case B	Case C	Case D
Measurement and Feedback	Case A , Quantitative and qualitative measurement, internal feedback loop, customer satisfaction surveys	Case B, Emotional metrics and tracking, customer feedback through interviews and surveys	Case C, Measurement of touchpoint effectiveness, customer feedback through various channels. Bank A uses key performance indicators (KPIs) to measure the effectiveness of customer experience initiatives, covering aspects such as acceptance ratio, turn-around time, and digital channel performance.	Case D, Measurement at relationship, journey, and touchpoint levels, automated ticketing systems for feedback management. Bank B embeds customer experience measurements in employee KPIs and incentives, including the Net Promoter Score (NPS) as a key pillar. They also collaborate with software companies for immediate customer feedback collection.

Customer measurement and research	Case A , Emphasizes the role of customer measurement and research in understanding customer behaviour, assessing satisfaction levels, and making informed decisions.	Case B, Discusses the importance of customer measurement and research for gaining insights into consumer behaviour, market trends, and customer satisfaction.	Case C, Highlights the significance of customer measurement and research in understanding customer behaviour, needs, and segmenting customers for effective marketing strategies.	Case D, Emphasizes the importance of customer measurement, profiling, and segmentation for personalized experiences and targeted marketing strategies.
Customer-centric Approach and Data-driven Insights	Case A , Highlighting the importance of customer-centricity, understanding customer behaviour, and using data-driven insights to enhance the customer journey.	Case B, Emphasizing customer-centricity, data-driven decision-making, and optimizing processes based on customer data and transactions.	Case C, Stresses the customer-centric approach, data-driven decision-making, and using customer insights to inform journey design and optimization.	Case D, Describes the shift in banks' perception of customer data, optimizing processes, and gathering customer insights through various channels for journey design and optimization.
Data-driven approach	Case A , Enables businesses to make informed decisions based on behavioural and usage data.	Case B, Helps organizations make data-driven decisions and align KPIs with customer satisfaction.	Case C, Supports the development of intelligent business strategies through data analysis and behavioural insights.	Case D, Facilitates personalized experiences and targeted marketing strategies through data analysis

				and customer segmentation.
Ongoing surveys and market research	Case A , Importance of ongoing surveys and market research to assess customer satisfaction and identify pain points.	Case B, Emphasizes the use of ongoing surveys and market research to stay updated on market trends and consumer behaviour.	Case C, Highlights the practice of conducting surveys and market research to understand customer sentiments, preferences, and industry trends.	Case D, Discusses the importance of surveys, market research, and data collection for understanding customer behaviour and preferences.
Integration and analysis of data sources	Case A , Correlating feedback from different touchpoints and analysing various data sources to generate comprehensive insights about the customer journey.	Case B, Integrating and analysing data from various sources to gain a comprehensive understanding of the customer journey.	Case C, Leveraging data from multiple sources, conducting market research, and integrating different experiences to understand the customer journey.	Case D, Collecting and analysing data from various sources, such as behavioural models, touchpoint feedback, and location data, to gain insights into customer behaviour and preferences.
Personalization and customization	Case A , Customizing the app interface based on individual preferences for cross-selling purposes.	Case B, Using personalization and customization to tailor the customer experience	Case C, Customizing the customer experience based on individual preferences and leveraging	Case D, Emphasizes the importance of customization, measuring interactions, and personalizing the

		and promote relevant offers.	personalization engines to enhance cross-selling. Bank A aims to personalize customer interactions and deliver tailored experiences. They utilize AI and big data analytics to take decisions based on customer data.	customer experience based on preferences and behaviour. Bank B uses AI to understand customer needs and preferences, categorize customers into segments, and tailor campaigns and messaging accordingly. They also use AI to automate support and minimize the need for personal interaction.
Customer segmentation	Case A , Segmenting customers based on financial benefits or customer lifetime value to understand their potential and behaviour.	Case B, Segmenting customers based on usage and attitudes to better understand their behaviour and preferences.	Case C, Segmenting customers based on financial benefits, payment behaviour, and international callers to drive targeted marketing strategies.	Case D, Discusses the process of data collection, aggregation, and analysis to understand customer segments and personalize experiences.
Leveraging data analytics	Case A , Emphasizes the need to build	Case B, Highlights the role of geolocation	Case C, Aligning data analytics capabilities with	Case D, Using data analytics to solve

	capabilities and leverage data in the telecom industry to stay competitive.	analytics and predictive analytics in telecom for customer-centric use cases.	customer experience initiatives and the importance of developing internal talent.	segmentation challenges, create accurate customer segments, and drive targeted marketing strategies.
Customer Intelligence			Case C, recognizes the importance of customer intelligence in improving their business operations, sales, and customer experience. They actively collect customer feedback and strive for seamless experiences across all touchpoints.	T Case D, he bank conducts surveys and collects customer feedback through calls, reports, and interactions to gather insights and improve customer experience.

Appendix T – Cross-case Analysis – Agile Customer Experience

Key Areas of Comparison	Case A	Case B	Case C	Case D
Organizational Capability	<p>Case A , Emphasizes the importance of organizational capability in driving customer intelligence and enhancing the customer experience. Building strong organizational capabilities is crucial for driving customer intelligence and enhancing the customer experience. This requires a dedicated function collaborating with all departments to change the way of working and processes (UTELE11). A separate function reporting to the CEO is created to emphasize the</p>	<p>Case B, Customer experience should have a governance role within the organization.</p> <p>Positioning customer experience within the organization in a governance role, similar to the audit department reporting to the board or CEO, is crucial. This ensures long-term objectives are not sacrificed for short-term revenue gains and avoids conflicts of interest (ZTELE03).</p>	<p>Case C, Banks focus on leveraging organizational capabilities to deliver a satisfying customer experience.</p> <p>Organizational capability is crucial in delivering a satisfying customer experience in the banking sector. Banks need to serve multiple functions, including retail banking, corporate banking, risk management, compliance management, and financial departments, to cater to customer needs and drive</p>	<p>Case D, implements an agile structure with cross-functional collaboration. Teams work with various departments internally, reporting to the chief of CX & HR (EBNK01). The organization follows agile principles, including weekly sprints, analysis, design, testing, and continuous improvement (EBNK01). The organization focuses on upskilling employees, providing training in agile methodologies</p>

	importance of customer experience and guide the organization in managing it effectively (UTELE02).		business growth (CBNK07).	and relevant skills (EBNK10).
Agile Approach	<p>Case A , Organizations must invest in building strong organizational capabilities and foster a customer-centric culture. The agile approach is essential for adapting to industry changes quickly. It is not limited to a single department but extends throughout the organization, changing the way work is executed (UTELE11). Adopting an agile mindset enables timely delivery of projects and allows teams to work in sprints, following agile methodologies (UTELE05).</p>	<p>Case B, Teams from the different departments form the "customer journey factory" and follow the scrum approach to align strategic direction with customer journeys. To implement agile customer experience, organizations establish teams known as the "customer journey factory" with champions assigned to each sub-journey. The scrum approach is adopted to align strategic direction, assign tasks, and ensure efficient collaboration</p>	<p>Case C, The bank follows an agile framework, conducts daily meetings, and addresses challenges iteratively and incrementally. The agile approach is emphasized in banking operations, with teams working in scrums and following Agile methodology. Daily meetings are conducted to track progress and identify bottlenecks. The bank has adopted the Spotify model, using tribes, squads, and product owners to optimize processes and work collaboratively</p>	<p>Case D, follows an agile framework with modifications to suit the corporate environment. They emphasize the importance of understanding the business and generating value from the products. The organization adopts an agile structure with cross-functional teams, weekly sprints, and iterative improvement (EBNK01). The tribal structure allows for specialized expertise, focused development efforts, and effective teamwork (EBNK07).</p>

		among team members (ZTELE01).	(CBNK02, CBNK09, CBNK10).	
Holistic Alignment	Case A , Integration of customer-centric strategies into the overall company strategy.	<p>Case B, Collaboration between departments and workshops to ensure regulatory compliance and operational alignment.</p> <p>Holistic alignment involves collaboration between departments and workshops to ensure legal compliance, regulatory approval, and address operational issues. Collaboration connects the dots and creates a unified approach to improve customer journeys (ZTELE08, ZTELE07).</p>	Case C, Aligning strategies holistically and conducting customer-centred design workshops. Holistic alignment is crucial in ensuring a seamless customer journey across touchpoints and channels. Different business functions need to be aligned within tribes to coordinate, integrate, and communicate effectively. The bank aims to align touchpoints to the diverse needs and preferences of customers (CBNK02).	Case D, Customer-centred design workshops are conducted to align teams, define strategies, and gather insights (EBNK09). The organization aims to align squads with the vision and roadmap through these workshops (EBNK09).
Customer-Centred Design Workshops	Case A , Workshops play a significant role in	Case B, Customer journeys are created,	Case C, Conducting customer-centred design	Case D, Customer-centred design

	<p>understanding and optimizing the customer experience. Involving customers in the design process through workshops is crucial for creating tailored and optimized experiences. Clear and documented customer journeys are essential for aligning KPIs and objectives (UTELE07). Workshops provide insights, best practices, and methodologies to enhance customer-centred design practices (UTELE09).</p>	<p>and workshops attended to gain insights and incorporate external expertise.</p> <p>Emphasizes the iterative nature of customer journey design and optimization, using agile methodologies, setting ambitious goals, and continuously evaluating and refining the journey.</p> <p>Teams from the different departments form the "customer journey factory" and follow the scrum approach to align strategic direction with customer journeys.</p>	<p>workshops to enhance the customer experience and drive business growth. Customer-centred design workshops are employed in the banking sector to gain insights into customer behaviour and preferences. Data science and AI are used to extract value from customer data and enhance sales and customer experience. The adoption of a federated approach centralizes expertise and infrastructure while empowering business lines (CBNK02).</p>	<p>workshops help align teams, define strategies, and gather insights (EBNK09). The product owner is responsible for strategy and vision, while the Scrum master focuses on coaching and removing blockers (EBNK09).</p>
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Appendix U – Cross-case Analysis – CX Data to Value Creation Process

Key Areas of Comparison	Case A	Case B	Case C	Case D
Customer Experience Data, Information, Knowledge, and Insights	Case A , Digital channels play a crucial role in collecting customer data and bridging the gap between offline and online experiences. The advantage of digital channels lies in their ability to collect vast amounts of data with customer consent (UTELE01). Studying customer behaviour and understanding the customer journey are key to improving engagement and satisfaction (UTELE05). Comprehensive data	Case B, Customer data and insights are crucial for understanding customer behaviour and preferences. Analysing various data sources such as transactional data, customer interactions, and behaviour patterns provides valuable insights for driving business decisions and improving the customer experience. Companies leverage customer data to enhance their understanding and	Case C, The interviews highlight that effective utilization of demographic, behavioural, transactional, and operational data, along with benchmarking studies, enables the bank to collect, model, and analyse data from various sources. This helps in deriving actionable intelligence and designing customer experiences that optimize channels, streamline processes, and drive innovation. The bank conducts	In case D, leveraging demographic, behavioural, transactional, and operational data, along with benchmarking studies, enables the bank to drive comprehensive data collection from multiple sources. This holistic understanding of customer behaviour enables thorough data modeling and analysis, resulting in actionable intelligence that optimizes business performance, streamlines processes,

	collection across all customer interaction channels is essential for identifying areas of improvement and aligning strategies with customer expectations (UTELE08).	provide personalized experiences.	surveys to gather customer feedback and uses this information to understand satisfaction levels and areas for improvement.	and automates operations. This approach enhances the customer experience and generates tangible business value. Surveys are conducted to gather customer experience data, information, knowledge, and insights. The bank analyses customer feedback, gains insights, and acts accordingly to address areas for improvement.
Customer Intelligence	Case A , Effective customer intelligence requires analysing collected data, implementing advanced analytics capabilities, and utilizing open-source systems	Case B, Organizations rely on various data sources for customer intelligence, including data from business intelligence teams, data warehouses, analytical tools, digital platforms,	Case C, The bank correlates transactional data with information from card providers, networks, switches, and other systems to gain deeper insights into customer behaviour. By analysing these data	Case D, The bank recognizes the significance of targeted customer acquisition and proactive customer retention. They employ customer experience data, information, knowledge, and insights

	<p>(UTELE10). The interviewees emphasized the importance of registering every customer event and establishing correlations to better understand and engage with customers (UTELE08). Churn modeling is a successful application of customer intelligence in the telecom industry, helping retain customers and measure project success (UTELE01).</p>	<p>market feedback, customer care, and sales teams. These data sources provide a comprehensive understanding of customer behaviour and preferences.</p>	<p>sources, they can uncover hidden reasons behind customer feedback and identify areas for improvement. The bank also uses various KPIs to measure and evaluate their performance in customer experience, such as acceptance ratio, reject reasons, turnaround time, service time, and waiting time.</p>	<p>obtained through surveys. By analysing feedback and conducting surveys, the bank identifies areas for improvement, addresses customer concerns, and enhances the overall customer experience. Customer intelligence plays a pivotal role in the bank's strategy, allowing them to understand customer needs, preferences, and pain points and refine their services and offerings accordingly. Metrics such as the number of funded accounts and debit transactions are measured and analysed to gauge success and drive continuous improvement.</p>
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<p>Actioning AI-Driven customer insights</p>	<p>Case A , Actioning AI-Driven customer insights involves leveraging AI technologies and data analytics to improve customer satisfaction, anticipate customer needs, and optimize business processes. Customer interactions should be minimized, and issues should be proactively addressed (UTEL01). Machine learning plays a significant role in customer intelligence, enabling advanced data science capabilities (UTEL08).</p>	<p>Case B, AI-driven customer intelligence is utilized for driving marketing campaigns and actions through digital channels. It helps analyse customer behaviour and experience data to push the best actions through marketing campaigns or digital channels. AI and technologies like natural language processing are used to analyse customer complaints and behaviour, leading to improved decision-making. AI-driven chatbots continuously learn and improve, enhancing customer interactions and providing personalized</p>	<p>Case C, The bank leverages a centralized system connected to all payment service providers to gain a holistic view of customer behaviour in terms of financial transactions. They analyse clustering, customer segments, and transaction patterns to provide insights to participants and banks for managing liquidity, understanding customer behaviour, and optimizing services. The bank also understands the power of data and AI in predicting customer behaviour and providing personalized offers. They analyse customer patterns, preferences, and purchase history to</p>	<p>Case D, The bank harnesses the full potential of AI-driven customer intelligence by employing predictive models to anticipate customer behaviour and trends. Churn prediction models are utilized to determine the likelihood of customers switching to other banks. The bank emphasizes knowledge and skill development among team members, teaching Python and fostering a deep understanding of the purpose and enhancement of models. Effective utilization of AI models enables the bank to make data-driven decisions and achieve their objectives.</p>
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		<p>support. Robotic Process Automation (RPA) and AI integration optimize internal processes and automate tasks, improving efficiency in handling customer interactions.</p> <p>Gamification and interactive training programs leverage AI-driven customer intelligence to enhance employee understanding of customer needs.</p>	<p>offer relevant discounts and cross-sell products based on individual needs and preferences.</p> <p>The adoption of AI algorithms, such as robotic process automation (RPA), is being studied to improve business operations and customer experience.</p>	
<p>Unlocking Value from AI-Enabled Customer Insights</p>	<p>Case A , The focus is on driving top-line growth and profitability by improving customer experience and happiness (UTEL01). Increasing shareholder</p>	<p>Case B, AI-driven customer intelligence enables predictive analytics, targeted marketing campaigns, and personalized customer understanding.</p>	<p>Case C, Deriving actionable intelligence from customer data is a key aspect discussed in the interviews. The bank conducts surveys,</p>	<p>Case D, Unlocking Value from AI-Enabled Customer Insights is a core objective for the bank. They aim to offer personalized services</p>

	<p>value through satisfied customers is a key goal (UTEL01). Customer satisfaction is the main purpose of organizations, leading to high revenues and customer loyalty (UTEL02). Churn reduction is a crucial metric, and the use of control groups and historical campaign analysis helps improve churn rates (UTEL07).</p>	<p>It helps predict churners, retain customers, and implement next best action strategies. Real-time campaign management systems triggered by AI-driven customer intelligence enhance marketing automation and deliver targeted offers in real-time. By Actioning AI-Driven customer insights, businesses can optimize the customer journey, provide personalized experiences, resolve issues proactively, and improve overall customer satisfaction.</p>	<p>mystery shopping, and random checks to gather customer feedback and measure satisfaction levels. They analyse this data to uncover valuable information about customer preferences, expectations, and pain points. This analysis enables them to identify areas for improvement, develop new features or services, and make data-driven decisions. The interviews also emphasize the need for a seamless customer journey across all touchpoints and the ability to measure performance and customer experience.</p>	<p>and recommendations based on customer preferences, going beyond mere product sales. However, they also recognize the need to strike a balance between personalization and avoiding overwhelming customers. Understanding the limits and boundaries of customer comfort is crucial to ensure a positive and tailored experience.</p>
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Appendix V – Cross-case Analysis – Harnessing AI Capabilities

Key Areas of Comparison	Case A	Case B	Case C	Case D
Objective of AI	<p>Case A , - Enhancing customer value management (CVM) and improving customer experience through personalized interactions and optimized operations.</p> <p>- Optimizing marketing efforts, churn management, and exploring upselling and cross-selling opportunities.</p> <p>- Transforming raw data into actionable intelligence to make</p>	<p>Case B, - Improve customer behaviour and segmentation through micro-segmentation analysis</p> <p>- Enhance customer service and operational excellence by analysing call center operations and improving customer care</p> <p>- Improve overall customer experience through digitalization and AI technologies</p> <p>- Leverage AI and segmentation techniques to drive</p>	<p>Case C, The objective of AI in banking is to understand customer behaviour, improve performance, identify potential business opportunities, and offer personalized experiences. AI enables banks to analyse data, provide insights, and make predictions. It helps in detecting and preventing fraud cases, enhancing security for customer accounts, and monitoring and mitigating risks. The focus is on leveraging data to extract</p>	<p>Case D, The objective behind implementing AI in banking, as indicated by the interviewees, is to better understand customer behaviour, predict customer needs, and deliver personalized experiences. The focus is on increasing customer loyalty and satisfaction through the provision of personalized services. AI is seen as a tool to leverage data-driven insights and anticipate customer preferences. It can assist in</p>

	<p>informed decisions and gain a competitive edge.</p> <ul style="list-style-type: none"> - Enhancing customer satisfaction and loyalty through targeted offers and proactive actions. - Improving customer interactions, automating processes, and enhancing operational efficiency through AI-powered channels. 	<p>customer behaviour and promote upselling and cross-selling opportunities</p>	<p>actionable insights and streamline processes. The integration of AI into various functions and processes is aimed at harnessing its potential and improving overall organizational effectiveness.</p>	<p>predicting customer behaviour and proactively addressing their needs. The overarching goal of AI in banking is to utilize vast amounts of data to extract hidden information and utilize it for actionable purposes.</p>
Challenges of utilising AI	<p>Case A , - Linking and aggregating data from various sources.</p> <ul style="list-style-type: none"> - Balancing personalization and privacy concerns. - Ensuring data quality and granularity. 	<p>Case B, - Potential frustration with inflexible AI systems</p> <ul style="list-style-type: none"> - Scarcity of technical resources (data scientists, AI engineers) 	<p>Case C, The challenges of utilizing AI in banking include building core competencies and a suitable organizational structure to effectively incorporate AI. It requires a dedicated team with advanced analytics and machine learning expertise.</p>	<p>Case D, The successful integration of AI into banking operations relies on employee training and adoption. The interviewees emphasize the importance of having a team with the right mindset and skills to advise business users</p>

	- Scarcity of experienced professionals in AI and data science.		Ensuring data quality is crucial for the effectiveness of risk management efforts. Collaboration between business and data teams is essential to extract value from AI and machine learning capabilities. Comprehensive training programs are necessary to overcome employee skill gaps and foster a culture of continuous learning and innovation.	on alternative reporting formats. This highlights the need for comprehensive training programs to equip employees with the necessary AI-related skills and foster a culture of continuous learning and innovation. Adopting AI technologies and practices in the banking sector requires overcoming challenges related to employee skill gaps and ensuring that employees are well-prepared to leverage AI tools effectively.
AI-Enabled Data to Intelligence Analytics	Case A , - Extracting valuable insights through text analytics, sentiment	Case B, - Sentiment analysis to predict customer satisfaction	Case C, AI-enabled data analytics in banking involve	Case D, AI-enabled data analytics in the banking sector involve

	<p>analysis, and market insights analytics.</p> <ul style="list-style-type: none"> - Utilizing surveys, sentiment analysis, and social media listening to understand customer satisfaction and preferences. - Conducting surveys and relying on internal and external research to monitor and evaluate customer satisfaction. 	<p>levels during call center interactions</p> <ul style="list-style-type: none"> - Analyse customer feedback and categorize efficiently for improved customer satisfaction and reduced call center costs - Use AI to predict customer satisfaction and take appropriate actions such as personalized assistance or targeted campaigns and offers - Utilize eye-tracking tools to observe customer interactions and redesign user interfaces for better intuitiveness 	<p>analysing customer transactions and behaviour patterns to detect and prevent fraud cases. Advanced analytics techniques, such as predictive analytics and clustering, are employed to understand customer behaviour and tailor personalized offerings. Machine learning algorithms are used to extract insights from data and identify bottlenecks in services, leading to system changes and improved customer experience. The focus is on utilizing data to gain valuable intelligence for informed decision-making and</p>	<p>the use of predictive analytics as a tool to analyse customer data and gain valuable insights. This includes applying predictive analytics and basic customer analysis for understanding customer behaviour. The aim is to extract meaningful intelligence from large volumes of data and utilize it for informed decision-making. The interviewees highlight the application of AI in customer understanding and mention examples such as predictive analytics and basic customer analysis to gain insights into customer behaviour.</p>
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		<ul style="list-style-type: none"> - Use brain reader technology to detect customer emotions and levels of effort during interactions and identify pain points for improvement 	providing personalized experiences to customers.	The use of sentiment analysis in social media data is also mentioned as a specific application of AI in the banking sector.
AI-Enabled Intelligence to Actions Analytics	<ul style="list-style-type: none"> - Case A , Deriving insights to validate assumptions, fix issues, introduce new products/strategies, target customer segments, and adapt to market dynamics. - Churn prediction and marketing optimization using predictive models. - Use cases in consumer analytics and insights, such as churn management, segmentation, 	<ul style="list-style-type: none"> - Case B, Utilize AI to gather real feedback, predict churners, and retain customers - Create personalized campaigns and offers based on individual customer preferences - Employ chatbots with AI capabilities to improve customer service and reduce response times - Enhance IVR systems with AI capabilities to 	Case C, AI-driven intelligence is translated into actionable steps in banking by leveraging AI to predict customer behaviour and provide proactive solutions. The use of AI in interactive voice response (IVR) systems enables faster and more efficient customer service. AI is also used to offer personalized discounts, services, and cross-selling opportunities	Case D, The interviewees shed light on the translation of AI-driven intelligence into actionable steps in the banking sector. Leveraging AI to predict customer behaviour is emphasized, and proactive measures are seen as essential for addressing customer needs effectively. The implementation of AI in an interactive voice response (IVR) system

	<p>propensity to upsell, and geolocation analytics.</p> <ul style="list-style-type: none"> - AI-driven solutions like chatbots, voice-bots, and smart IVR systems improving customer interactions and operational efficiency. - Measuring success through metrics like churn reduction, bad debt management, and upselling effectiveness. 	<p>provide dynamic and personalized experiences based on customer history and interactions</p>	<p>based on customer behaviour. Evaluating the impact of AI and machine learning initiatives involves comparing outcomes with model predictions using control groups. The goal is to utilize AI-generated intelligence for customer satisfaction, loyalty, and retention, ultimately improving business performance and sales.</p>	<p>is mentioned as a specific example that enables faster and more efficient customer service. By reading patterns and anticipating customer experience, banks aim to be ahead of the game and provide proactive solutions to customer issues. Additionally, the interviewees highlight the use of AI to deliver personalized experiences, increase customer loyalty, and enhance customer satisfaction. The goal is to translate AI-generated intelligence into actionable strategies that cater to</p>
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				<p>individual customer preferences and needs. Use cases within the banking industry include customer 360, loan default prediction, next best offer, and fraud detection. Creating awareness among different business units about the capabilities of data analytics is also mentioned as part of the strategy to effectively utilize AI-enabled intelligence in decision-making processes.</p>
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Appendix W – Data Sources Used

Data sources used for Case A

The data sources used for Case A encompasses interviews and documents. Below table presents the interviews conducted, totalling 11 in number, with various key personnel involved in the organization's customer experience and digital transformation.

The interviewees included the Director of Customer Experience & Digital Transformation, Chief Marketing Officer, Consumer Marketing Director, Customer Insights and Analytics Manager, Broadband Product Manager, Customer Engagement & Loyalty Manager, Strategic and Business Planning Manager, AI and Data Analytics Manager, Customer care - Contact Center Senior Manager, Director of Digital Transformation & Information Technology, and Organizational Learning & Development Manager. Each interview lasted approximately 60 minutes, providing in-depth insights into the subject matter. See reference in section 3.4.4 in the research design chapter, for a more comprehensive outline of the process of conducting, storing, transcribing the interviews.

To add to the triangulation of data, documentation table, on the other hand, represents the documents collected for triangulation purposes. These documents serve to complement and validate the information obtained through interviews. The collected documents include the Net Promoter Score (NPS) Framework, Brand Health Tracking, Broadband Post Campaign Evaluation, Net Promoter Score Report, Customer Satisfaction Report, Agile Use Case Development, Customer Value Management Strategy, and Customer Journey Maps. By examining the interviews and documents within this context, a comprehensive understanding of the organization's approach to customer experience management is attained. The utilization of both primary data from interviews and secondary data from documents enhances the depth and richness of the analysis, allowing for a robust examination of the research topic.

Interviews

Participants Details – Case A

Function	Role	Gender	Participant Code
CXM	Director of Customer Experience & Digital Transformation	Male	UTELE01
Consumer Marketing	Chief Marketing Officer	Male	UTELE02
	Consumer Marketing Director	Male	UTELE03
	Customer Insights and Analytics Manager	Male	UTELE04
	Broadband Product Manager	Male	UTELE05
	Customer Engagement & Loyalty Manager	Male	UTELE06
	Strategic and Business Planning Manager	Female	UTELE07
AI & Data Science	AI and Data Analytics manager	Male	UTELE08
Contact Center	Customer care - Contact Center Senior Manager	Male	UTELE09
Technology and Operations	Director of Digital transformation & Information Technology	Male	UTELE10
Human Resources	Organisational learning & Development Manager	Female	UTELE11

Documents

Document Details - Case A

Document	Document Code	Type	Description
Net Promoter Score (NPS) Framework	DU01	Internal Framework	This document outlines the methodology and framework employed by the company to measure customer satisfaction and loyalty through the Net Promoter Score system.
Brand Health Tracking	DU02	Market Research Agency Report	This document focuses on monitoring and assessing the overall health and perception of the company's brand in the market, including key performance indicators related to brand awareness and reputation.
Broadband Post Campaign Evaluation	DU03	Market Research Agency Report	This document presents an evaluation and analysis of the effectiveness of a specific broadband marketing campaign after its implementation, aiming to gauge its impact on customer acquisition and retention.
Net Promoter Score Report	DU04	Market Research Agency Report	The NPS report provides a comprehensive overview of customer feedback and scores obtained through the Net Promoter Score system, which helps the company gauge customer loyalty and identify areas for improvement.
Customers Satisfaction Report	DU05	Market Research Agency Report	This report delves into the levels of customer satisfaction across various products or services offered by the company, shedding light on the aspects that influence customer contentment.
Agile Use case Development	DU06	Internal Framework	This document details the company's approach to agile use case development, which involves iterative and collaborative development methods to create efficient and customer-centric products or services.
Customer Value Management Strategy	DU07	Internal Framework	This document outlines the company's strategy for managing and enhancing customer value, focusing on maintaining long-term customer relationships and maximizing customer lifetime value.
Customer Journey Maps	DU08	Internal Framework	These maps visually depict the various stages and touchpoints of the customer journey, allowing the company to better understand customer experiences and identify potential pain points or areas of improvement.

Data sources used for Case B

The data used in this case was obtained from primary and secondary sources. Primary data collection involved conducting interviews with key stakeholders from the selected organizations. Below participants details table provides details of the interviews conducted, including the interviewees' roles, departments, and dates of the interviews. Secondary data was gathered through an extensive review of relevant documents and reports. Below documentation table presents the details of the documents analysed, including the titles, type, and document description. The combination of these data sources enables a comprehensive analysis of the research and provides a robust foundation for the findings presented in subsequent chapters.

Interviews

Participants Details – Case B

Function	Role	Gender	Participant Code
Customer Experience Office	Head of CXM "Customer Experience Management"	Female	ZTELE01
	Customer Experience and Digitisation Manager	Female	ZTELE02
Group Customer Experience department	Group Director of Customer Experience	Male	ZTELE03
Business Analytics and data science Office	Artificial Intelligence Project manager	Male	ZTELE04
	Artificial Intelligence Team lead	Male	ZTELE05
External AI Vendor	AI and Data Director	Male	ZTELE06
Customer Care	Manager of contact centre / channel management	Male	ZTELE07
Marketing	Product development Manager	Male	ZTELE08
	CVM (customer value management) Manager	Male	ZTELE09
	Director of Digital Services	Male	ZTELE10

Documents

Document Details – Case B

Document	Document Code	Type	Description
Annual Report 2022	DZ01	Public Report	A comprehensive document providing an overview of an organization's performance, financial results, and future plans for the year 2022, essential for stakeholders and the public.
Governance Framework	DZ02	Internal Framework	A set of principles and guidelines that aligns cross-functional efforts to deliver customer experiences initiatives. It ensures consistency, accountability, and customer-centricity, leading to increased satisfaction and business success.
Customer Experience Framework	DZ03	Internal Framework	Case B's strategic approach to design, manage, and improve customer interactions, aiming to enhance satisfaction and loyalty across various touchpoints.
Customer Journey presentation	DZ04	Internal Report	Visual representation illustrating stages and interactions customers experience with a company's offerings, aiding in understanding and improving the overall customer experience.
Artificial Intelligence Agile/scrum backlog	DZ05	Internal Report	Prioritized list of tasks for an AI project following agile and Scrum methodologies, ensuring efficient development and deployment of AI solutions.

Data sources used for Case C

This section presents the range of data sources utilized. Primary data collection involved conducting in-depth interviews with key personnel from the case study organizations. Below participants details table offers a comprehensive overview of the interviews, including the interviewees' designations, departments, and the dates on which the interviews were conducted. Additionally, secondary data was obtained through an extensive review of relevant documents and reports, contributing to a deeper understanding of the research context. Below documentation table presents the details of the documents examined, including their titles, type, and document's description. The combination of primary and secondary data sources strengthens the validity and reliability of the findings, ensuring a robust analysis of the research.

Interviews

Participants Details – Case C

Function	Role	Gender	Participant Code
CXM	Ex-Director of Innovation & Customer Experience	Male	CBNK01
	Director of Customer Experience	Female	CBNK02
	Customer Experience Transformation Manager	Female	CBNK03
Artificial Intelligence	External expert - AI and Data	Female	CBNK04
	Chief Data Officer	Male	CBNK05
Business Analysis	Head of Business Analysis & Business Process Reengineering	Male	CBNK06
Digital Products Department	Business Development Manager - Digital Channels	Female	CBNK07
	Customer Lifecycle Management Lead	Male	CBNK08
	Online Banking channels & Digital Innovation manager	Female	CBNK09
	Innovation and digital banking - Product Owner	Female	CBNK10

Documents

Document Details – Case C

Document	Document Code	Type	Description
Annual Report 2022	DC01	Public Report	Comprehensive overview of the organization's performance, financial results, and future plans for 2022.
Corporate Presentation – 2022	DC02	Presentation	Slide deck providing key insights into the company's strategies, achievements, and goals for the year 2022.
Outlook of Digital Transformation of Financial Institutions in Jordan	DC03	Public Report	Report outlining the expected trends and opportunities related to digital transformation in Jordan's financial institutions.
Report on the Customer Experience of Mobile Wallets	DC04	Public Report	Study presenting findings on customer experience with mobile wallets, exploring strengths and areas for improvement.
Customer Journey Mapping Fact Sheet	DC05	Internal Document	Concise document outlining the process and benefits of customer journey mapping for the organization.
CX Maturity Framework Fact Sheet	DC06	Internal Document	Succinct fact sheet detailing the CX Maturity Framework and its application for measuring customer experience maturity.
A Market Study on the Adoption of Digital Financial Services	DC07	Public Report	Research report investigating the adoption trends and challenges of digital financial services in a specific market.
Artificial Intelligence Solution presentation	DC08	Presentation	Presentation showcasing an AI solution, highlighting its capabilities and potential business impact.

Data sources used for Case D

This study drew upon a rich variety of data sources. Primary data collection involved conducting structured interviews with key stakeholders from the selected case study organizations. A detailed description of the interviewees is presented, using participant codes to ensure anonymity. The table includes information such as gender, role, and department, providing valuable context for the research, as shown in below participants details table. Additionally, five documents were gathered from both the company's website and the interviewees themselves, contributing to the richness and depth of the research, below documentation table provides an overview of the collected documents, including their names, types, and brief descriptions, allowing for easy reference, and understanding of their relevance to the study. The combination of primary and secondary data sources facilitates a comprehensive analysis of the research themes and strengthens the reliability of the findings presented in subsequent chapters.

Interviews

Participants Details - Case D

Function	Role	Gender	Participant Code
CXM	Director of Customer Experience	Female	EBNK01
	Senior Associate Customer Experience	Female	EBNK02
Market research and consulting – External	Chief Research Officer, Customer Experience and Channel Performance	Male	EBNK03
	Research Manager, Customer Experience and Channel Performance	Female	EBNK04
Data Science	Head of Data Science	Female	EBNK05
	Data Scientist - Research & development	Male	EBNK06
Commercial	Head of digital banking acquisition	Female	EBNK07
	Loyalty & segmentation Product Owner	Female	EBNK08
Human Capital	Director of Enterprise Agile Transformation	Male	EBNK09
	Director of learning and development	Female	EBNK10

Documents

Document Details -Case D

Document	Document Code	Type	Description
Bank Annual Report 2022	DE01	Public Report	Comprehensive report providing an overview of the bank's performance, financial results, and plans for 2022.
Digital Banking Report	DE02	Public Report	Report analysing the bank's digital banking initiatives, performance, and trends in the financial industry.
Customer Experience Framework	DE03	Internal Document	Framework detailing the bank's strategic approach to deliver and enhance customer experiences across all touchpoints.
The Forces of Customer Experience	DE04	Public Report	Study exploring the influential factors shaping customer experiences and their impact on the bank's strategies.
Bridging the brand experience gap	DE05	Public Report	Publication addressing strategies to bridge the gap between the bank's brand promises and customer experiences.

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