UNIVERSITY OF TURKU
Turku School of Economics

Digital customer experience management in big data-driven marketing

Master's thesis
in Marketing

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17.8.2023
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Subject: Marketing
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Number of pages: 98 pages + appendices 7 pages
Date: 17.8.2023

Digitalisation has shaped the nature of business operations, and the focus of competition has shifted towards distinct and holistic customer experiences through data analysis. The substantial amount of big data compiled today extends the organisational opportunities by thorough execution of customer experience management, as various customer experience insights can be garnered from big data to embellish organisations' extant strategies by expanding imperative data-driven operations and customer orientation.

The aspiration for the thesis was to resolve how digital customer experience management in big data-driven marketing is executed, and thus connectively how big data analytics are used in big data-driven marketing and how big data-driven marketing is used for digital customer experience management. The thesis answers the call for descriptive scientific research that provides theoretical and practical development combining customer experience management and big data-driven marketing as research objects.

The study was done as qualitative research. The theoretical framework worked as a process description divided into strategical planning and operational implementation by setting a direction and making choices to implement customer experience and comprehend the success of customer experience management to learn from it. The data were collected by conducting eight semi-structured thematic interviews with a purposeful sampling of professionals from considerable business management, marketing, and technology companies. Analysis was done with qualitative thematic analysis on NVivo.

According to the research findings, continual big data analytics and data-driven marketing are the underlying driving forces for customer experience management that require clearly defined objectives and actions that can be measured and monitored to gain the necessary insights with data analytics. The capabilities of customer experience management necessitate comprehensive processes at the strategic and operational level, technology through data manoeuvrability, intelligence, and interpretation, as well as people who bring a strong and supportive organisational culture by understanding the value of customer experience for business growth and that they are responsible for it within their allocated roles in the process. Further, implementing customer experience happens by piloting on a smaller scale before moving towards larger target groups and thereafter maybe even modelling the concept into continuous use. Comprehensive management must be done systematically, in a structured manner so that it can be adhered to and documented. Moreover, customer experience management requires constant learning to renew customer experience by continually developing, maintaining, and repeating operations.

The results of the study altogether support extant theory and research in many aspects. Still, this study provides a deeper practical look into the customer experience with the provided detailed process description. Significantly, customer experience management cannot be compromised since it is critical to the organisation's competitiveness in the 2020s to provide incredible and customised data-driven experiences whereby big data analytics and data-driven marketing play a crucial role when attracting, converting, and advocating customers.

Keywords: digital customer experience, digital customer experience management, big data, big data analytics, big data-driven marketing, qualitative research

Pro gradu -tutkielma

Oppiaine: Markkinointi
Tekijä: Jenni Sopola
Otsikko: Digitaalisen asiakaskokemuksen johtaminen big dataohjautuvassa markkinoinnissa
Ohjaajat: KTT Arja Lemmetyinen, KTT Jaana Tähtinen
Sivumäärä: 98 sivua + liitteet 7 sivua
Päivämäärä: 17.8.2023

Digitalisaatio on muokannut liiketoiminnan luonnetta kilpailun painopisteen siirtyessä kohti erottuvaa ja kokonaisvaltaista asiakaskokemusta data-analyysin myötä. Nykyään kerätyn big datan huomattava määrä laajentaa organisaatioiden mahdollisuuksia perusteelliseen asiakaskokemuksen johtamiseen, sillä big datasta voidaan kerätä erilaisia asiakaskokemusta koskevia oivalluksia, joilla voidaan täydentää organisaatioiden nykyisiä strategioita laajentamalla välttämättömiä dataan perustuvia toimintoja sekä asiakaslähtöisyyttä.

Opinnäytetyön tavoitteena oli selvittää, miten digitaalinen asiakaskokemuksen johtaminen big dataohjatussa markkinoinnissa toteutetaan ja siten yhdistettynä, kuinka big data-analytiikkaa käytetään big dataohjautuvassa markkinoinnissa sekä vastaavasti, kuinka big dataohjautuvaa markkinointia käytetään digitaalisen asiakaskokemuksen johtamiseen. Opinnäytetyö vastaakin tieteenalan kehotukseen kuvailevasta tieteellisestä tutkimuksesta, joka tarjoaa teoreettista ja käytännöllistä kehitystä yhdistäen asiakaskokemuksen johtamisen ja big dataohjautuvan markkinoinnin tutkimuskohteina.

Tutkimus tehtiin laadullisena tutkimuksena. Teoreettinen viitekehys toimi prosessikuvauksena, joka jakautui strategiseen suunnitteluun ja operatiiviseen toteutukseen asettamalla haluttu suunta ja tekemällä valintoja asiakaskokemuksen toteuttamiseksi ja ymmärtämiseksi. Aineisto kerättiin tekemällä kahdeksan puolistrukturoitua teemahaastattelua, joihin osallistui tarkoituksenmukaisesti valikoituja ammattilaisia liikkeenjohdon, markkinoinnin ja teknologian alan yrityksistä. Analyysi tehtiin kvalitatiivisella temaattisella analyysillä NVivossa.

Tutkimustulosten mukaan jatkuva big data-analytiikka ja dataohjautuva markkinointi ovat asiakaskokemuksen johtamisen kantavia tekijöitä, jotka edellyttävät selkeästi määriteltyjä, mitattavia ja seurattavia tavoitteita ja toimia, jotta tarvittavat näkemykset data-analytiikalla ovat saavutettavissa. Asiakaskokemuksen johtamisen valmiudet edellyttävät kattavia prosesseja strategisella ja operatiivisella tasolla, teknologiaa datan ohjattavuuden, älykkyyden ja tulkinnan kautta sekä ihmisiä, jotka tuovat vahvan ja tukevan organisaatiokulttuurin ymmärtämällä asiakaskokemuksen arvon liiketoiminnan kasvulle ja sen, että he ovat vastuussa kokemuksesta omissa rooleissaan prosessin aikana. Lisäksi asiakaskokemuksen toteuttaminen tapahtuu pilotoimalla pienemmässä mittakaavassa ennen kuin siirrytään suurempiin kohderyhmiin ja sen jälkeen ehkä jopa mallintamalla konsepti jatkuvaan käyttöön. Kokonaisvaltainen johtaminen on myös tehtävä järjestelmällisesti ja jäsennellysti, jotta sitä voidaan noudattaa ja dokumentoida jatkoa varten. Asiakaskokemuksen johtaminen edellyttääkin jatkuvaa oppimista asiakaskokemuksen uudistamiseksi kehittämällä, ylläpitämällä ja toistamalla toimintoja jatkuvasti.

Tutkimuksen tulokset tukevat kaiken kaikkiaan olemassa olevaa teoriaa ja tutkimusta monilta osin, mutta ennen kaikkea tämä tutkimus tarjoaa yksityiskohtaisella prosessikuvauksella syvemmän käytännön katsauksen asiakaskokemukseen. Asiakaskokemuksen johtamisessa ei voida tinkiä, sillä organisaation kilpailukyvyn kannalta 2020-luvulla on ratkaisevan tärkeää tarjota uskomattomia ja räätälöityjä dataohjautuvia kokemuksia, joissa big data-analytiikka ja dataohjautuva markkinointi ovat ratkaisevassa asemassa asiakkaiden houkuttelemisessa, käännyttämisessä ja kannattamisessa.

Avainsanat: digitaalinen asiakaskokemus, digitaalinen asiakaskokemuksen johtaminen, big data, big data-analytiikka, big dataohjautuva markkinointi, laadullinen tutkimus

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1 Introduction

1.1 The research topic

Customers strive to engage with organisations that ensure exceptional experiences (Lemon – Verhoef 2016), and nowadays organisations emphasise comprehensive customer experience as the most crucial means of competition as trades happen progressively digitally (Bolton et al. 2018; Saarijärvi – Puustinen 2020, 20–21; Batat 2022). Thus, in the 2020s market, the focus of competition has shifted towards competition between distinct customer experiences that develop a view of the customer through data analysis from various repositories (Petersen et al. 2014, 15; Sheng et al. 2017; Saarijärvi – Puustinen 2020, 13). Moreover, digitalisation has both broken and shaped the nature of business operations and individual interaction situations between customers and firms. Consumers are now knowingly and unknowingly interacting with hundreds of different organisations every day, and here lies the necessity for organisations to manage the experiences more comprehensively by uniting business functions internally and externally to deliver explicit customer experience. (Lemon – Verhoef 2016, 74; Homburg et al. 2017, 385–386; Zaki 2019; Becker – Jaakkola 2020; Saarijärvi – Puustinen 2020, 27–28.)

The interactions that have arisen through digitalisation and progressive competition are directing organisations' focus from products and services to holistic, customer-oriented management of customer experience (Pine – Gilmore 1998; 1999; Lemke et al. 2011; Chandler – Lusch 2015; Saarijärvi – Puustinen 2020, 51). Especially by concretising customer orientation, the organisation can anticipate the changing needs of customers, learn from them, and react to them by creating differentiated products and services that create superior value (Lemke et al. 2011, 846; Chandler – Lusch 2015; Saarijärvi – Puustinen 2020, 21). Furthermore, customer experience is a natural extension of customer orientation because the attention expands from the organisation's ability to create products and services that meet the customers' needs to how the customers and their needs are considered altogether (Lemon – Verhoef 2016; Saarijärvi – Puustinen 2020, 23). Thus, to design and provide remarkable experiences, organisations must fathom customer experiences at length as a stronger need has emerged to manage customer experiences so that they form a logical entirety (Lemon – Verhoef 2016; Homburg et al. 2017; Keyser et al. 2020; Saarijärvi – Puustinen 2020, 28).

As it is, customers leave digital remnants of themselves (i.e., data) while they engage with online services meant for communication, entertainment, shopping, and education. The remaining data accumulates over time through the multiplication of channels and mediums, resulting in miscellaneous big data that is analysed and executed into worthwhile insights through data-driven marketing showing how customers pass time, what they enjoy and perceive to be significant, and even their desires. (Arthur 2013, 43; Johnson et al. 2019.) Therefore, marketers can utilise data-driven marketing to customise and personalise their efforts for specific customers at an exact time by targeting that improves customer experience (Arthur 2013, 26; Johnson et al. 2019; Grandhi et al. 2021, 382). Consequently, the substantial amount of big data compiled and analysed today extends the organisational opportunities in customer experience management. Especially as various customer experience insights can be garnered from big data analytics to embellish organisations' extant strategies by expanding the strategic orientation on data-driven marketing and management operations (Ghasemaghaei – Calic 2019; Wilson 2019; Luca et al. 2020; Akter et al. 2021).

Furthermore, since present customers are perceptive, empowered, and excessively aware of how organisations collect information about them it would be crucial for organisations to show their customers that they understand them better today than yesterday (Kotler – Keller 2016, 42; Saarijärvi – Puustinen 2020, 95). Thus, customer experience management has become an object of interest in organisations and a key strategic objective regardless of industry (Lemon – Verhoef 2016; Saarijärvi – Puustinen 2020, 19–20). Industries are also increasingly endorsing the auspicious nature of being data-driven to achieve an advantage in marketing (Grandhi et al. 2021, 383). It has even been predicted that over 80 per cent of companies are presumed to compete by the customer experience they provide and their disposition of managing the experience as their primary or entire marketing strategy (Sorofman 2014; Deloitte 2017; Pemberton 2018). Thus, data-oriented research has become imperative in the competitive data-rich business world (Fosso Wamba et al. 2015; Akhtar et al. 2019; Rahman et al. 2020) by which academics and practitioners are trying to comprehend how to generate value for customers by using big data analytics to gain customer insights that lead to optimised, data-driven customer experience (Petersen et al. 2014, 9; Sivarajah et al. 2017; Grandhi et al. 2021, 383).

1.2 The research problem, purpose, and delimitations

The thesis notes that big data is among the most challenging issues in contemporary marketing research (Akter et al. 2021) and academic discussion and disciplines' publications about big data analytics have been increasing due to digitalisation (e.g., Sivarajah et al. 2017; Luca et al. 2020; Akter et al. 2021; Cappa et al. 2021). Still, interestingly, merely a few authors have specified how big data analytics impact customer experiences (e.g., Wedel – Kannan 2016; McColl-Kennedy et al. 2019; Holmlund et al. 2020; Keyser et al. 2020).

Therefore, for instance, Holmlund et al. (2020, 358) state how significant it would be to augment the existing discussion on customer experience and its involvement with big data analytics. Especially as although customer experience is not a new research topic, it is ever-evolving in theory (e.g., Lemon – Verhoef 2016; Homburg et al. 2017; Bolton et al. 2018; Becker – Jaakkola 2020) and empirical examination (e.g., McColl-Kennedy et al. 2019) while the discussion goes on. It has been specifically stated that the latest development of research and market evolution is that scholars are focusing on customer experience (e.g., Lemon – Verhoef 2016; Palmatier – Steinhoff 2019, 14; Saarijärvi – Puustinen 2020, 24). Thus, as a management and research objective, the development of competitive customer experience has progressively become more prominent (Wolny 2015, 83; Lemon – Verhoef 2016, 69; Jain et al. 2017, 657; Becker – Jaakkola 2020, 630; Saarijärvi – Puustinen 2020, 20–21), especially in the 2020s (Palmatier – Steinhoff 2019, 14, 16; Marketing Science Institute 2020; Saarijärvi – Puustinen 2020, 13; Marketing Science Institute 2022).

This thesis partakes in the debate as the relevance of marketing discipline has been contested (e.g., Webster – Lusch 2013; Clark et al. 2014; Hunt 2020). Hence, there is a need for valuable descriptive theoretical development in terms of digitalisation and big data integration as they provide a research gap to be contributed to in marketing (Key et al. 2020, 165). The thesis acknowledges the demand for more elaborate research on customer experience and big data-driven marketing as a combined research objective as future research priorities (e.g., Wolny 2015) since studies (e.g., Lemon – Verhoef 2016; Becker – Jaakkola 2020, 641; Grandhi et al. 2021) have surmised that there is a constant demand for data-driven marketing requiring more studies with its relation to customer experience management.

The thesis aims to resolve the research question (RQ1) of how digital customer experience management in big data-driven marketing is executed. The sub-questions are adequately refining the research question since as concepts they form a connection that the thesis strives to respond by:

- How big data analytics are used in big data-driven marketing (RSQ1).
- How big data-driven marketing is used for digital customer experience management (RSQ2).

For reasoning, this thesis recognises that the 2010s companies' strategies have been affected by data and digitalisation, and in recent years to an ever-increasing extent by customer experience (Saarijärvi – Puustinen 2020, 36; Batat 2022). Thus, since customer experience is within the core of managing organisations (Lemon – Verhoef 2016; Homburg et al. 2017; Saarijärvi – Puustinen 2020, 35), it should be processed systematically and thoroughly via the basis of research that gains insights from practitioners and professionals. Additionally, the thesis supports the notion of the demand for strategic marketing research given by Hunt (2018) and Key et al. (2020, 152) as the idea is to provide a theoretical framework in the form of a process description and thereafter an empirically derived practical model for strategic planning and operational implementation of customer experience management in big data-driven marketing instead of individual marketing anecdotes. By combining theory to practice, this thesis has a managerial research interest as it aims to create concrete managerial implications for organisations on how customer experiences can naturally be led in terms of big data-driven marketing by first planning how the two should be integrated and thereafter considering how to proceed when they are implemented.

Furthermore, this thesis contributes to contemporary, normative research by standing for the marketing management school (Sheth et al. 1988) as the focus is on the basics of marketing. This thesis could also stand for a more recent and relational perspective since theories revolving around the marketing discipline have generated new paradigms, such as service marketing and relationship marketing (Lagrosen – Svensson 2006, 375–379). However, while service marketing includes the creation of experiences (Lemon – Verhoef 2016, 72; Saarijärvi – Puustinen 2020, 59) and relationship marketing since customer experience is the newest addition to its evolution according to Palmatier and Steinhoff

(2019, 16), the focus of this thesis revolves around the management process, not the outcome of customer experience from the customer's perspective.

However, customer experience can be described as a wide-ranging phenomenon as it includes and applies existing research in diverse ways (Lemon – Verhoef 2016; Saarijärvi – Puustinen 2020, 56, 58). Thus, contemporary research classifies multiple perspectives into customer experience (e.g., Lemon – Verhoef 2016; Homburg et al. 2017; Bolton et al. 2018; Becker – Jaakkola 2020; Saarijärvi – Puustinen 2020). And within here lies the necessity to assemble limitations, as this thesis concentrates on the digital perspective of customer experience and its management as well as on big data analytics within data-driven marketing, it can be argued that the research realm would be within digital marketing as well as customer orientation, centricity, and focus. Especially as Bolton et al. (2018, 779–781) state that the digital realm of customer experiences emphasises prompt and effective market dynamics that require the skilful use of technology. Namely, Braverman (2015, 182) in addition to Lemon and Verhoef (2016, 75) as well as Saarijärvi and Puustinen (2020, 58) state also that customer orientation is a vital starting point for managing customer experience by expanding organisational, cross-sectional operations to increase the ability and competence of an organisation.

Moreover, as the outcome of the thesis is a process description of customer experience management, service design is another area of focus as well. Specifically, from the business-to-consumer (B-to-C, B2C) organisational perspective, on how to ideally manage digital customer experiences with big data-driven marketing. Therefore, the marketer's current activities are examined, and not the result from the customer's perspective. Moreover, the thesis provides normative implications for larger firms with digital services that produce a lot of customer experience data. However, it is also recognised that even when ideally the thesis could also aid small and medium-sized enterprises (SMEs) to redesign their way of doing customer experience management, they might not have enough data to work with. This does not, however, explicitly exclude SMEs as they might begin to proceed towards handling larger data masses to manage customer experiences better in the time of constant digitalisation. Moreover, the thesis cannot be limited to any specific industry, because the process description can be used by several industries if they have a digital basis in their operations as well as enough data and marketing know-how to proceed.

1.3 Underlying philosophical assumptions

To define the design, structure, and strategy of research, the researcher must understand the philosophy of science (i.e., ontology and epistemology) to decide the direction of the study (i.e., methodology and methods) (Grix 2002; Creswell 2013; Eriksson – Kovalainen 2016, 12). Understanding the importance of these aspects in research increases the quality of the reflexively described research. (Grix 2002, 176; Eriksson – Kovalainen 2016, 13).

1.3.1 Subjective ontology of the research

The main starting point of research is to determine the ontological position on how the nature of social reality is perceived by the researcher, for instance, what exists and what kind of causal relationships there are in the world between people and society (Grix 2002, 177; Merriam – Tisdell 2015, 8; Eriksson – Kovalainen 2016, 14; Saunders et al. 2019, 133). As this thesis pursues to create a profound understanding of how digital customer experience management in big data-driven marketing is executed, it can be said accordingly to Eriksson and Kovalainen (2016, 14) that the studied phenomenon is examined in a selected context, which requires a subjectivist ontological approach based on both collective and individual perceptions as well as experiences that can change over time and context. Further, the subjective conception of social reality is based on social and cognitive processes, such as social interactions that can change the perspective and comprehension of reality, which signifies that several interpreted realities can exist at the same time (Creswell 2013, 20; Eriksson – Kovalainen 2016, 15). Noted, the term *constructionism* can be used instead of subjectivism (Eriksson – Kovalainen 2016, 15; Saunders et al. 2019, 137), however, in this thesis the term subjectivism is preferable.

1.3.2 Subjective epistemology of the research

Ontological assumptions are logically followed by an epistemological position that considers the nature of knowledge, namely what kind of scientific information is created and available, in addition to how it is argued for, and what its communicative limitations are (Grix 2002, 177; Eriksson – Kovalainen 2016, 15; Saunders et al. 2019, 133). Ergo, how the scientific practices and processes of this research are formed. By reflecting on Eriksson and Kovalainen (2016, 15), it can be said that this research is based on subjective epistemology, because, regarding the view, the world cannot be interpreted without one's observations and interpretations, in which case social reality is formed through

individuals, and as Shaw (1999, 64) states, the researcher cannot stay out of the context of the studied phenomenon. To reflect, the assumption for subjectivity is based on the notion that the author perceives that there is no objective overall agreeable truth for organisations to manage customer experiences, as all organisations have different agendas and operations models, and in the end, the experience itself is subjective for each customer. Moreover, as Creswell (2013, 36) states, the reality of the research is an outcome of collaboration between the researcher and researched.

1.3.3 Interpretivism as the overall research paradigm

Based on the thesis' subjective ontological and epistemological assumptions, it can be further stated that the thesis represents an interpretive paradigm (or, as some may refer to it, a research philosophy, or a position) (Saunders et al. 2019, 141, 148). Essentially, the reality that this research aims to understand is socially constructed from various realities and interpretations of individual events (i.e., customer experience management for each organisation) that according to Eriksson and Kovalainen (2016, 20–21) and Saunders et al. (2019, 148) suggests that the research supports an interpretive paradigm. Moreover, by interpretivism, knowledge is sought about the processes whereby people perceive their world and, thus, the reality is viewed through people's thoughts and not separately from them (i.e., subjectivity) (Fisher 2010, 17; Myers 2013, 39). Thus, interpretive research aims to describe, understand, and interpret phenomena by various realities that are each context-bound (Carson et al. 2001, 15; Merriam – Tisdell 2015, 12; Saunders et al. 2019, 149), and thereafter to arrive at a better choice of action (Fisher et al. 2010, 58). Moreover, meanings are created from dialogic interpretations (i.e., ideas are developed through discussion such as an interview as a method, further discussed in Chapter 5.2).

1.3.4 The researcher's role regarding the philosophical assumptions

The role of the researcher is naturally to find information but also to create it (Merriam – Tisdell 2015, 8−9; Gehman et al. 2018, 295) by interacting with research subjects to interpret and understand the views of the research subjects within their social reality (Shaw 1999, 64). Hence, Carson et al. (2001, 18) note that an interpretive researcher is involved. Further, in the thesis' case, the author has a pre-understanding of the research due to the researcher's bachelor's thesis, which according to Carson et al. (2001, 22) makes the researcher's role involved as well. Also, Fisher (2010, 61) states that a holistic

understanding of the research subject requires involvement. Thus, the researcher is admittedly part of the knowledge-production process. Noted, in a practical view, the role of the researcher would be external as it is necessary to negotiate access to the organisations and their participants (Eriksson – Kovalainen 2016, 59; Saunders et al. 2019, 219), and in this thesis as there are no existing connections.

1.4 Core concepts of the research

Digital customer experience (CX) and its management (CXM)

As an entity, *digital customer experience* is a temporal, multidimensional, and subjective outcome from a set of interactions that the customer has with a company and its offering on digital interfaces (Schmitt 1999; Gentile et al. 2007; Verhoef et al. 2009; Rose et al. 2012, 309; Trevinal – Stenger 2015, 324; Lemon – Verhoef 2016). *Customer experience management*, on the other hand, as a strategy, aligns cultural mindsets toward CX to create a strategic direction and focuses the necessary firm capabilities to develop enhanced CX (Lemon – Verhoef 2016; Homburg et al. 2017; Jain et al. 2017; Saarijärvi – Puustinen 2020).

Big data and its analytics (BDA)

Big data refers to enormous unstructured and structured clusters of data that can be either solicited or unsolicited which present transformational meanings and value for decision-making and real-time business operations if analysed, explored, and processed properly into insights (Wedel – Kannan 2016, 101; Sheng et al. 2017, 98; Wilson 2019, 4). To gain insights to support decisions and actions, organisations use descriptive, predictive, and prescriptive *big data analytics* (BDA) to understand customers in a big data-driven (BDD) manner (Sivarajah et al. 2017; Johnson et al. 2019; Holmlund et al. 2020).

Data-driven marketing (DDM)

A strategic process that strives for customer insights by utilising big data analytics and revolves around efficient content that drives customer responses, and thus optimises return on marketing investment (ROMI) by driving sales (Arthur 2013, 74, 88; Micheaux – Bosio 2019, 129; Grandhi et al. 2021, 382−384, 386).

1.5 The research structure

This thesis consists of seven main chapters. After the introduction, the second chapter exhibits a theoretical overview of customer experience from a marketer's perspective by displaying how customer experience can be perceived by diverse characteristics and how they are managed. Within the third chapter, the concept of big data analytics is presented by also explaining the impact they have on data-driven marketing. The fourth chapter concludes with a theoretical framework that combines the previous subject matters into a process description. The fifth chapter provides a deeper rationale for the research methodology and shows the chosen research methods and the sampling, as well as how the empirical data is to be analysed. The sixth chapter presents the results of the empirical research through analysis with the steps of the process description. The sixth chapter is followed by a conclusion in the seventh chapter where the answers to the research questions are discussed, and after providing both theoretical and managerial implications, as well as the contemplation of the goodness of the thesis, the conclusion focuses on future research directions.

2 Digital customer experience and its distinct bases

2.1 The miscellaneous aspects of CX

Notably, there is no common definition for customer experience (CX) (Lemon – Verhoef 2016; Chaney et al. 2018; Kranzbühler et al. 2018; Becker – Jaakkola 2020), however, by becoming familiar with the scientific research dealing with CX and its theoretical starting points, one can better understand its comprehensive nature, structure, and characteristics to manage it with suitable efforts (Saarijärvi – Puustinen 2020, 36). Due to this reasoning, this chapter aims to briefly find out what kind of theoretical perspectives there are on CX, and then, at the end of this subchapter, explain how CX is viewed for this thesis. Particularly, a few characteristic features of CX can be highlighted, such as its temporal nature by customer journey, the significance of touchpoints, and the multidimensional nature of the experiences (Lemon – Verhoef 2016; Saarijärvi – Puustinen 2020, 21, 54) which all provide the basis for the thesis' view of customer experience management for marketers.

2.1.1 The temporal nature of CX by a customer journey and touchpoints

CX is built over time, as the transaction between the customer and the organisation progresses, within the customer journey before, during, and after a purchase, in various experienced touchpoints, which refers to all direct or indirect interaction situations between the customer and the firm (Figure 1) (Verhoef et al. 2009; Patrício et al. 2011; Verhoef et al. 2015; Becker – Jaakkola 2020; Saarijärvi – Puustinen 2020, 54, 73). However, more commonly the discipline speaks of overall CX stages of pre-purchase, purchase, and post-purchase which can be seen in Figure 1 (e.g., Howard – Sheth 1969; Neslin et al. 2006; Puccinelli et al. 2009; Lemon – Verhoef 2016; Jain et al. 2017).

Figure 1. Customer journey with various touchpoints along the way

To explain Figure 1 in more detail, pre-purchase considers how the customer interacts with the organisation before a purchase transaction. The stage includes need recognition where the customer acknowledges a necessity or an objective, following the search for alternatives, and consideration between separate options. (Kotler – Keller 2016, 195; Lemon – Verhoef 2016, 76.) Commonly, the beginning of the purchase process can be modelled into a path-to-purchase model, also known as the attention-interest-desire-action (AIDA) model that shows how responses lead to a purchase decision (Strong 1925; Lavidge – Steiner 1961; Howard – Sheth 1969; Rogers 1983; Neslin et al. 2006; Verhoef et al. 2015). Moreover, the second stage of purchase is where the customer makes a choice for a product or a service, orders it, and pays for it (Lemon – Verhoef 2016, 76). During a purchase, there are various marketing activities for marketers to consider, such as the marketing mix (Kotler – Keller 2016) and the service environment (Berry et al. 2002). The final stage of post-purchase is after the actual purchase involving the usage and consumption of the purchase as well as post-purchase engagement that includes consumption experience (e.g., Holbrook – Hirschman 1982; Grace – O'Cass 2004), recovering from the service (e.g., Kelley – Davis 1994), possible returns (e.g., Wood 2001), or making a re-purchase (e.g., Bolton 1998) as well as word-of-mouth and alternative means of customer engagement (e.g., Doorn, van et al. 2010) in addition to customer loyalty (e.g., Court et al. 2009) (Lemon – Verhoef 2016, 76).

CX can be viewed as the customer journey that eventually takes place when the customer interacts with the company and participates in the purchase process across multiple touchpoints (Lemon – Verhoef 2016, 74), such as the company's product, customer service, brand, marketing communications, sales staff, and website as well as recommendations from friends and warnings on social media (Court et al. 2009; Baxendale et al. 2015; Haan et al. 2016; Saarijärvi – Puustinen 2020, 73). Thus, CX is not only about buying a product or a service and then consuming it but the attention is extended broadly to the entire customer journey which is why it should be noted, that the success of implementing the touchpoints can have a bigger impact on customer satisfaction than the product or service itself (Lemon – Verhoef 2016; Saarijärvi – Puustinen 2020, 54, 73). It can also be stated that touchpoints create the customer journey as they are central to the construction of the CX socially, physically, and digitally as CX is "formed through touchpoints (T) which are embedded in a broader context (C) and market by a set of qualities (Q) that, together, result in a value judgement by the customer"

(i.e., so-called TCQ nomenclature) (Keyser et al. 2020, 437). Likewise, Kranzbühler et al. (2018) indicate that the experience develops through the progressive evaluation of multiple touchpoints.

Moreover, through touchpoints, customers can be either in direct or indirect contact with a company, in addition to these contact points being individually and subjectively experienced (Meyer – Schwager 2007; Verhoef et al. 2009; Lemke et al. 2011). Usually, the act of buying a product or a service, the consumption of the purchase, and the service received during the shopping are direct touchpoints that customers themselves initiate in a servicescape. However, when customers interact with a company unintentionally, they are still confronted by indirect stimuli of the company's offering. CX is affected by implied touchpoints in advertising, reviews, and word-of-mouth that include complaints and recommendations. (Meyer – Schwager 2007, 118.) Similarly, Shaw et al. (2010, 3) determine that customers have both conscious and subconscious perceptions about organisations' performance when interacting with diverse organisations' touchpoints while getting their senses and emotions provoked.

Nevertheless, touchpoints can be divided by control into firm-controlled and non-firm-controlled (Keyser et al. 2020). Meaning that CX is formed by factors over which the retailer has control in addition to factors beyond the control of the retailer (Verhoef et al. 2009, 32). However, as the thesis focuses on the marketer's perspective, two crucial categories to consider are company and partner-owned touchpoints. Company-owned touchpoints are planned, managed, and controlled by the company, such as their marketing mix (e.g., product, price, placement, promotion) (Lemon – Verhoef 2016, 76−77; Saarijärvi – Puustinen 2020, 73). Likewise, partner-owned touchpoints are planned, managed, and controlled in cooperation with partner companies, such as marketing agencies, outsourced marketing communication services as well as distribution and logistics companies (Lemon – Verhoef 2016, 77; Saarijärvi – Puustinen 2020, 73). Other categories are customer-owned touchpoints, that the company or its partners cannot control, such as what other customers think and say about the company, as well as external and social touchpoints that include other customers, and peer-reviewing influences, such as third-party information sources (Lemon – Verhoef 2016, 78; Saarijärvi – Puustinen 2020, 74). To conclude, companies have various variables to consider when applying their customer journey to understand the experiences that they provide.

2.1.2 The multidimensionality of CX

Another traditional view is that the research literature emphasises the multidimensional nature of CX (Table 1) (Lemon – Verhoef 2016, 69; Homburg et al. 2017, 384; Becker – Jaakkola 2020, 638; Saarijärvi – Puustinen 2020, 78−80). Namely, CX does not only mean that the customers get what they need, but it also implies how they act and what kind of emotions are evoked during their customer journey (Saarijärvi – Puustinen 2020, 78). Thus, CX is referred to as a holistic phenomenon (Verhoef et al. 2009; Lemke et al. 2011; Lemon – Verhoef 2016; Jain et al. 2017).

Table 1. Overview of customer experience dimensions by Schmitt's (1999) initiative

Schmitt (1999)	Gentile et al. (2007)	Brakus et al. (2009)	Verhoef et al. (2009)	De Keyser et al. (2015)	Lemon - Verhoef (2016)	Bleier et al. (2019)	Becker - Jaakkola (2020)
Sensorial	x	x		x	x	Sensory appeal	x
Affective	Emotional	x	x	Emotional	Emotional	Entertainment	x
Cognitive	x	x	x	x	x	Informativeness	x
Physical	Pragmatic	Behavioural	x	x	Behavioural		x
Social	Relational		x	x	x	Social presence	x
	Lifestyle			*Spiritual*			

By Schmitt's (1999) initiative, experiences are mainly divided into those that can be sensed, felt, thought, acted on, and related to. Thus, it can be concluded that customers have sensorial, affective, cognitive, physical, and social responses to stimuli from the companies throughout the provided customer journey (e.g., Schmitt 1999; Brakus et al. 2009; Verhoef et al. 2009; Becker – Jaakkola 2020, 638). Research also uses interchangeable terms, such as *emotional* instead of affective and *behavioural* instead of physical along with the foregoing *cognitive*, *sensorial*, and *social* to describe experience dimensions (e.g., Gentile et al. 2007; Keyser et al. 2015; Lemon – Verhoef 2016, 70; Becker – Jaakkola 2020, 638). Table 1 describes how different studies categorise experiences, a tick in the box explains that the study sees the response similarly to Schmitt (1999) and a different term showcases distinctions. Regardless, the multidimensional nature of CX refers to how it is influenced by both reason and emotion as well as how customers experience the customer journey with all their senses.

In short, the cognitive dimension regards how consumers consciously and purposefully try to use goods and services that meet their objectives (Saarijärvi – Puustinen 2020, 78), in other words how they think (Schmitt 1999; Lemon – Verhoef 2016, 70). Moreover, the

interactions between the customer and the company result in diverse affective emotions that the customers feel (Schmitt 1999; Lemon – Verhoef 2016, 70), such as disappointment, frustration, anger, joy, or a feeling of indifference (Saarijärvi – Puustinen 2020, 79). The sensorial aspect includes the shopping and consumption environment as well as how the products or services feel, look, smell, sound, or taste (Schmitt 1999: Saarijärvi – Puustinen 2020, 79). Through the behavioural or physical dimension, CX affects customers' behaviour and their way of acting (Schmitt 1999), such as their satisfaction, loyalty, and referrals (Saarijärvi – Puustinen 2020, 54). The social dimension is impacted by both the staff and other customers (Saarijärvi – Puustinen 2020, 79) and how the customers relate to their surroundings (Schmitt 1999). In essence, the dimensions of the CX provide tools that can be used to manage customer experiences and identify opportunities for differentiation. The spectrum of dimensions helps to understand how CX can be built in different ways. (Saarijärvi – Puustinen 2020, 85.)

There are also deviating views on how the dimensions should be perceived. For instance, in their publication, Brakus et al. (2009, 53) do not identify the social dimension as part of the brand experience, even though they advocate for subjective and internal sensations, feelings, intellectual processes, and behavioural reactions related to the brand stimuli, such as how the brand is designed. Moreover, while De Keyser et al. (2015, 14) establish that the CX is generally similar to Schmitt's (1999) initiative, they include that customers' direct and indirect commerce also has a spiritual element. Despite how Gentile et al. (2007) state similarly to Schmitt (1999) that experimental dimensions include sensorial, emotional, and cognitive extents, Gentile et al. (2007) also have distinctly dissimilar perceptions by which customers' reactions are pragmatic, relational, and lifestyle oriented. The pragmatic dimension is essentially the behavioural or physical dimension as the practical act of doing creates experiences, and the relational perspective involves the social contexts in encounters, such as the social identity of a customer or their relationships. Lifestyle orientation, however, considers how experiences are biased because of customers' values and belief systems. (Gentile et al. 2007, 398.) Moreover, Gentile et al. (2007, 397−398) remark that interactions (i.e., touchpoints) between the customer and stimuli delivered by the company provoke reactions that form the overall CX. However, the intensiveness of the experience depends on how powerful the reaction has been to the stimulus (Gentile et al. 2007, 398). Even though the previous dimensions are functional from the digital perspective, Bleier et al. (2019, 99) regard in their study

that the online CX consists of four dimensions: informativeness, entertainment, sensory appeal, and social presence. While the informative dimension refers to cognitive CX and the entertainment dimension to affective responses, sensory appeal and social presence are the same as in the traditional CX.

As shown, there are several standpoints when it comes to CX. Notably, as this thesis concentrates on the digital realm of CX, it can be said by Rose et al. (2012, 309) as well as Trevinal and Stenger (2015, 324) that online customer experience is a holistic, psychological outcome of subjective responses towards e-commerce. Moreover, CX can be determined as a holistic and ever-changing collection of cognitive, emotional, social, behavioural, and sensory non-deliberate and spontaneous responses that customers subjectively feel through diverse stimuli with direct or indirect touchpoints during the customer journey, and thereafter evaluate consciously (Gentile et al. 2007; Meyer – Schwager 2007; Lemke et al. 2011; Keyser et al. 2015; Lemon – Verhoef 2016; Lipkin 2016; Jain et al. 2017; Becker – Jaakkola 2020, 637; Saarijärvi – Puustinen 2020, 55).

2.2 Customer experience management and its elements

The vista of marketing is evolving due to digitalisation that creates more demonstrative, empowered, and collective consumer markets. Substantially, there is an increasing demand for companies to design personalised customer experiences that remain consistent regardless of whether the channel is offline, online, or in mobile form (Lemon – Verhoef 2016; Homburg et al. 2017; Bolton et al. 2018, 777; Palmatier – Steinhoff 2019, 30, 33). Even more, in the digital age companies are striving to implicate and manage diverse channels within the customer journey and its multitudinous touchpoints to assemble optimised CX (Verhoef et al. 2015). Thus, the prominence of customer experience management (CXM) as a strategy to design experiences is increasing since solving these emergent issues has become essential for both scholars in the marketing discipline and practitioners in the consumer markets to create value for both the organisation and customers (Klaus 2014, 307; Homburg et al. 2017, 377). Yet, Becker and Jaakkola (2020, 641) remark that CXM requires more research for a more profound understanding. At that, what remains significant is how triumphantly companies manage CX because, as Berry et al. (2002, 88) have mentioned, interacting customers will perpetually have some sort of experience with the servicescape, whether affirmative, adverse, or indifferent.

At its core, CXM is an exclusive resource for companies if implemented properly (Lemon – Verhoef 2016; Homburg et al. 2017; Saarijärvi – Puustinen 2020). The implantation of the strategical approach entails that companies have cultural mindsets refining aligned CX by reviewing what kind of cognitive, sensorial, affective, behavioural, and social responses customers have throughout the customer journey and its touchpoints (Homburg et al. 2017, 387−388). In other words, successful CXM calls for an organisational structure to support it (Johnson et al. 2019, 173; Saarijärvi – Puustinen 2020, 190). Further, companies require strategic directions to design consistent, context-bound, and comprehensively connected touchpoints that form proficient experiences (Homburg et al. 2017, 388−390). Similarly, it is crucial to understand which touchpoints are relevant for the target audience (Saarijärvi – Puustinen 2020, 77). However, CXM also includes that companies are frequently capable to renew experiences by designing, prioritising, monitoring, and adapting the extant and potential touchpoints as well as the stimuli impacting experiences, thus making them more competitive (Homburg et al. 2017, 388, 391−392; Jain et al. 2017, 657; Becker – Jaakkola 2020, 641). Altogether, by applying these CXM functions, companies can achieve and sustain customer loyalty in the long term (Homburg et al. 2017, 398). Moreover, by investing in CXM, the company ensures that the customer journey and its touchpoints are strategically comprehensive which makes it more difficult to copy, and therefore a more sustainable source of competitive advantage than products and services (Saarijärvi – Puustinen 2020, 26).

According to Homburg et al. (2017, 396) as well as Saarijärvi and Puustinen (2020, 51, 190), companies need to embrace both the strategic and the operational nature of CXM where strategical planning should be followed by the operational implementation (Figure 2). Primarily, the practical implementation of CX entails that the organisation creates a definition for meaningful and competitive CX that they strive for by strategic planning (i.e., setting clear and systematic objectives). Strategic direction can be derived from the purpose of the company and its aspirations for the future as well as from its goals for growth and profitability. (Saarijärvi – Puustinen 2020, 40–44, 193.) In contrast, even though Becker and Jaakkola (2020, 641) state that companies cannot create customer experiences per se, they note that a company can define the intended CX and thereafter design and manage firm-controlled stimuli (i.e., touchpoints) that affect experiences (Becker – Jaakkola 2020, 638), which is similar to what Homburg et al. (2017) and Saarijärvi and Puustinen (2020) express. The objectives lead to the second stage of

strategic planning which involves making strategic choices which determine how the objectives can be consistently achieved within a certain target audience. The choices include the strategic perceived value by the customer and the value proposition, as well as the selection of competitive means, which in turn specify competitiveness and both competitive disadvantages and advantages. (Chandler – Lusch 2015; Homburg et al. 2017, 397; Saarijärvi – Puustinen 2020, 45−47).

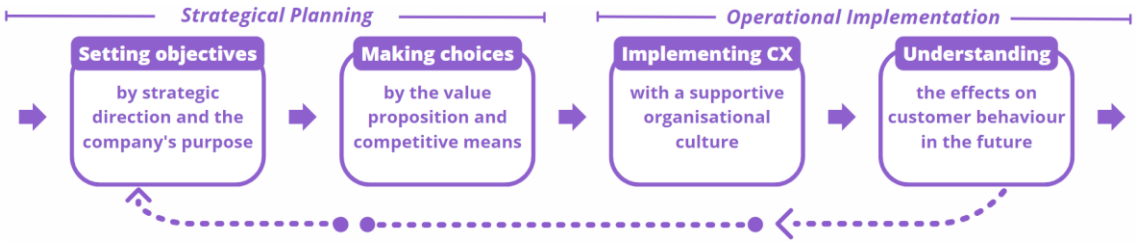

Figure 2. CXM strategically and operationally (modified from Saarijärvi – Puustinen 2020, 40−41)

CXM progresses from strategical planning to operational implementation which ensures that the planned strategy can be transferred into practice effectively and measurably. Moreover, the strategically defined CX must be suitable for operationalisation, because, without any objectives or understanding of how to manage the implementation, the planned CX cannot be developed. (Homburg et al. 2017, 396–398; Saarijärvi – Puustinen 2020, 37.) Essentially, as can be noted in Figure 2, operationalisation is an activity in which CX is implemented by integrating an organisational structure that supports CXM and is determined to execute the strategical plans in practice by managing the touchpoints and the whole customer journey (Homburg et al. 2017, 395; Saarijärvi – Puustinen 2020, 40−41, 48). Eminently, if any of these parts of the process are lacking, the management system built around the entire CX will falter. Yet, if efficient, the process describes how CX becomes strategic and unifying for the entire organisation (Saarijärvi – Puustinen 2020, 42).

Lastly, to measure the effectiveness of the process, it is necessary to understand the effects of CX on customer behaviour in the future as the measurement of causality (Lemon – Verhoef 2016, 71−72; Jain et al. 2017, 657; McColl-Kennedy et al. 2019; Saarijärvi – Puustinen 2020, 40−41, 49). Though it should be noted that the way organisations measure CX is different than if it were measured in research. At that, the strategic planning and operational implementation of CX are based on how organisations can optimise the experience regarding costs and expenses (i.e., company growth and profitability measures). Hence, CXM requires measurement, because, with the help of

metrics, information is obtained about the causalities behind the experience to support decision-making. The metrics set according to the strategy tell whether the causalities work as planned towards the desired direction. Moreover, the measurement of CX is often simplified with the help of a single metric or a figure, which is reported monthly as a part of the management team's work by the most important touchpoints in terms of customer satisfaction, customer loyalty, customer recommendation as well as organisations' growth and profitability, and connect the relevant metrics to these points. The set of metrics should also motivate staff by showing them the critical impact of their work on how satisfied customers become. In this case, CX metrics are also often tied to the organisation's incentive and reward system, which makes the matter more concrete for the employee. Regardless, the best metric or combination of metrics for systematic CX measurement has not yet been clearly defined in the research literature, since organisations have diverse operating models, and one metric does not work for all of them. (Mintz – Currim 2013; Lemon – Verhoef 2016, 88; Saarijärvi – Puustinen 2020, 229−233.)

The measurement of CX is in an especially interesting phase of management because due to digitalisation, organisations have even more tools for how, where, and when to measure CX, especially in real-time (Saarijärvi – Puustinen 2020, 253). Nevertheless, to remain competitive, CXM needs to keep up with the new ways of learning about customers to build even more detailed strategies that ensure CX is part of the organisation's agenda (Lemon – Verhoef 2016, 88; Saarijärvi – Puustinen 2020, 124). Today, a vital starting point for CXM is the effective collection and utilisation of data, which can be used to personalise the experiences (Saarijärvi – Puustinen 2020, 80). However, the quantity and quality of data have increased to such astonishing proportions that the data itself is not the problem anymore, but the ability to refine the so-called big data into meaningful information as a basis for decision-making and to change operations based on this information (Johnson et al. 2019, 163; Saarijärvi – Puustinen 2020, 131).

3 Big data analytics

3.1 The basis of big data analytics

In the digital age, customer relationships generate an enormous amount of profuse data (Palmatier – Steinhoff 2019, 34) as essentially, whenever a consumer is in contact with an organisation, namely using online services for communication, education, entertainment, or to shop, they leave traceable crumbs of data of themselves that organisations can utilise to make databases (Arthur 2013, 43; Kotler – Keller 2016, 662). Furthermore, each customer transaction, registered information, and cookie selection produce data in addition to each click on an offer, comment on a social media post, and log-in to a mobile app (Kotler – Keller 2016, 662; Palmatier – Steinhoff 2019, 34). Thus, previous purchases and customer demographics (e.g., age, gender, marital status etc.), psychographics (e.g., hobbies), and media graphics (i.e., favoured media) amongst additional insights offer the means for companies to sell their offering effectively by lead generation and qualification (Kotler – Keller 2016, 662).

When the amount of data starts to grow drastically, it accumulates across online interfaces, web properties, social media, and digital devices into big data which at its core reflects how consumers spend their time, what they are fond of and value, and even what they desire (Arthur 2013, 43; Sheng et al. 2017, 98). Thus, by using the gained data orthodoxly to enhance marketing efforts, the data also indicates customers' responses, and thus endeavours can be modified accordingly (Wedel – Kannan 2016, 97). Today, digital platforms are so advanced (Cenamor et al. 2019; Warner – Wäger 2019) that they support the generation, collection, and inspection of big data through its diverse features (e.g., transactional, communicative, participative, and transboundary features) (Xie et al. 2016, 1039−1041; Cappa et al. 2021). Therefore, as further described in Figure 3, companies should interpret how they can extract and refine data to ensure that it is applied most efficiently (Zaki 2019, 432).

Figure 3. The process of data-driven content derivation (modified from Wilson 2019, 5−6)

Wilson (2019, 2−4) outlines a five-step process on how to derive marketing content by being data-driven (Figure 3). The process starts by identifying the needs of the consumers,

such as the end-user's desires, and the overall sought-after outcome from the data to be collected. These objectives define what kind of data the company collects and from where (i.e., data discovery from touchpoints) in the following stage. Additionally, the second phase includes the assessment of the quality of collected raw data and its compatibility with the objectives stated in the beginning before the collected data can be labelled as usable. Thirdly, companies ought to process the raw data into expressive insights that can be used without delay, stored for continual usage, and distributed to the end-users. In the fourth phase, the data is managed to ensure that it remains in order and continues to meet the current and changing needs of the company (i.e., data is reliable as well as coherent and beneficial). Finally, the data is refined and crafted into a "product" that has recurring use in the company, for example, in building analytics and insights. (Wilson 2019, 2−4.) Likewise, Arthur (2013, 11) states that the data process relies on companies to first create a holistic view of the data they collect to analyse it for relevant insights, thereafter the company can then act on these insights by using the right processes and techniques.

Given the explosion of data and the need to remain competitive, many organisations are turning their attention to creating new business models that are effectively data-driven (Arthur 2013; Wilson 2019; Zaki 2019). Notably, over the last decade especially marketing has taken a part in the world of big data where the role of analytics is becoming progressively more prominent (Akter et al. 2021; Marketing Science Institute 2022, 5). Thus, it can be argued that big data and its analytics will remain a research priority even in the future (Wolny 2015, 83; Erevelles et al. 2016, 905), especially as Statistics Finland (2020) found that big data has been used by 22 per cent of companies when the percentage was 19 in 2018 (Statistics Finland 2018).

3.1.1 The diverse definition of big data

Big data can be defined as immense data masses that present transformational meanings as well as value for decision-making and real-time business operations if analysed, explored, and processed properly into insights (Sheng et al. 2017, 98; Wilson 2019, 4). Moreover, big data is inclusively versatile as it is composed of both unstructured and structured clusters of data from diversified solicited and unsolicited sources. To clarify, unstructured data can be text (e.g., documents), multimedia data (e.g., images, audio, videos), mobile data (e.g., application, geographical location), web data (e.g., content, usage, structure), and social media data (e.g., virtual interfaces). Structured data, on the

other hand, have been collected or organised by the company over time (e.g., databases, records, files). (Wedel – Kannan 2016, 101; Sheng et al. 2017, 98; Sivarajah et al. 2017; Holmlund et al. 2020; Sheng et al. 2021, 1170.)

Moreover, big data can be characterised by several distinctive "V's" that describe the vast growth of data development and distribution due to the evolution of the digital economy. Such "V's" commonly include volume, velocity, variety, and veracity, yet sometimes there are mentions of value, viscosity, variability, and virality. (Arthur 2013, 46–47; Dutta – Bose 2015, 293; Fosso Wamba et al. 2015, 235; Gandomi – Haider 2015, 138; Erevelles et al. 2016, 898; Wedel – Kannan 2016, 102; Sheng et al. 2017, 98; Sivarajah et al. 2017, 265; Johnson et al. 2019, 164; Wilson 2019, 6–7; Holmlund et al. 2020, 357; Cappa et al. 2021; Sheng et al. 2021.) While volume measures the scale of data from terabytes to zettabytes and beyond, velocity refers to how regularly and at what rate data should be streamed from sporadic images to continual real-time streams of data. Variety regards the manifold and inclusive nature of big data as it assembles from distinct access points, as veracity expresses how reliable and valid the data is. (Fosso Wamba et al. 2015, 236; Gandomi – Haider 2015, 138; Erevelles et al. 2016, 898; Wedel – Kannan 2016, 102; Fosso Wamba et al. 2017; Sivarajah et al. 2017, 269; Wilson 2019, 7.)

Further, big data can be defined by the value extracted from it (Fosso Wamba et al. 2015, 236; Sivarajah et al. 2017, 273; Cappa et al. 2021) which usually is high after some thorough analysis (Gandomi – Haider 2015, 139; Sheng et al. 2017, 98). According to Wang (2012), viscosity explores whether there are any inconveniences, such as resistance, in the data flow, which is vital as Sivarajah et al. (2017, 273) state that variability refers to how promptly and continuously the significance of data changes. Virality indicates how speedily data is dispersed in virtual networks (Wang 2012) which can also be called volatility whereas apps, web services, and social networks all contribute to the data flow (Kotler – Keller 2016, 92).

3.1.2 Big data analytics in organisations

By being both complex and encompassing, big data defies traditional analytical software appliances and databases (Tambe 2014, 1454; Erevelles et al. 2016, 898; Kotler – Keller 2016, 92; Sheng et al. 2017, 98; Wilson 2019, 4). However, as a proactive marketing resource, it reflects the ever-changing customer demand while delivering results across all devices and channels, and therefore, it can be used to develop relevant marketing

communications as well as make useful strategic and tactical decisions that might just lead to competitive advantage (Kotler – Keller 2016, 597; Johnson et al. 2019; Wilson 2019, 4−6). For instance, in their study, Akhtar et al. (2019) use the term big data-driven (BDD) actions that strive to enhance business performance. The usage of big data changes organisational cultures by influencing data-driven decision-making, reinforcing customer relationships, improving operation competence, and lowering managerial risk resulting in compelling marketing and management strategies that help to achieve competitiveness (Kiron – Bean 2013; Fosso Wamba et al. 2017; Sheng et al. 2017, 99; Chierici et al. 2019, 1913−1914; Akter et al. 2021, 936−937; Cappa et al. 2021; Sheng et al. 2021).

Consequently, big data analytics (BDA) analyse data extensively by using assorted technologies and statistical techniques to execute manageable outcomes through three types of analysis – descriptive (1), predictive (2), and prescriptive (3) – to obtain diverse insights about marketing performance, return on investment (ROI) and on marketing investment (ROMI) in addition to customer insights (Table 2) (LaValle et al. 2011, 26; Assunção et al. 2015, 4; Wedel – Kannan 2016, 98; Sivarajah et al. 2017, 266; Johnson et al. 2019, 163; Holmlund et al. 2020, 358; Sheng et al. 2021, 1166).

Table 2. The categorisation of big data analytics (BDA) (modified from Sivarajah et al. 2017, 265)

Descriptive analytics	Predictive analytics	Prescriptive analytics
*Information that helps to **understand** e.g., "What happened in the business?"*	*Insights that help to **anticipate** e.g., "What is likely to happen in the future?"*	*Decisions that help to **respond** "So what?" and "Now what?"*

Table 2 illustrates how by descriptive (1) analysis, companies can model their past behaviour and understand what is already happening and thus analyse the state of the company and its evolution through developments, patterns, and exceptions to create standard and ad hoc reports and even alerts (Joseph – Johnson 2013, 43; Bihani – Patil 2014, 96; Assunção et al. 2015, 4; Sivarajah et al. 2017, 266). Predictive (2) analytics can be applied to forecast and model future opportunities by reflecting on the past and analysing the ongoing situation (Joseph – Johnson 2013, 43; Waller – Fawcett 2013, 80; Bihani – Patil 2014, 96; Assunção et al. 2015, 4; Gandomi – Haider 2015; Sivarajah et al. 2017, 266; Sheng et al. 2021, 1166). Furthermore, prescriptive (3) analytics can be utilised to enhance services in addition to reducing costs by optimising business performance while reacting to organisational events through tests that determine the business actions by assessing the impact of objectives, limitations, and demands (Joseph

– Johnson 2013, 43; Bihani – Patil 2014, 96; Assunção et al. 2015, 4; Sivarajah et al. 2017, 266; Sheng et al. 2021, 1168.)

All these analytics are embedded into data processes to gain more knowledge on how to improve the extant performance by understanding what kind of data models to accept, reject, or improve (LaValle et al. 2011, 26). With a data-driven approach, organisations can improve the comprehension of their business function, such as sales potential and budget with its expenditures and revenue, as well as their forthcoming marketing possibilities (Johnson et al. 2019, 163). For instance, from a marketing standpoint, to strive for altering customer experiences by utilising BDA (Wedel – Kannan 2016; Sivarajah et al. 2017; McColl-Kennedy et al. 2019). By understanding BDA, one can next emerge into how BDAs are used in big data-driven marketing.

3.2 The significance of big data analytics in data-driven marketing

The continual change in consumer behaviour and market calls for apt changes in marketing practices and processes by BDA as both new opportunities and risks arise (Sheng et al. 2021, 1174). Notably, the role and extent of marketing within companies have had to adjust immensely over the decades as companies have encompassed the proliferation of digital technologies and platforms in addition to seizing the usage of data (Figure 4) (Shah – Murthi 2021).

As Figure 4 describes Shah and Murthi (2021, 772−773) explain that the marketing discipline has incorporated data-driven marketing (DDM) functions by moving from creative advertisement content to a more relevant customer-centric viewpoint that strives for comprehending customers' demands better by analysing data to sell the most convenient product to the exact customer at the adequate moment. Furthermore, the ever-growing enormous amount of data has both compelled and enabled marketers to focus on complex data-driven applications by extending the organisational capability to manage analytics (Wedel – Kannan 2016, 97; Shah – Murthi 2021, 773). Data-driven operations also increase the financial accountability of marketing, as the firm-level marketing performance can be showcased with data analytics (Rust et al. 2004; Shah – Murthi 2021, 773). Moreover, due to digital disruptions, the unprecedented revolution of transformational technologies has expanded the scope of marketing by contributing to enhanced operational efficiency that leads to superior marketing insights and inventive

approaches to engage customers (Shah – Shay 2019; Zaki 2019, 431; Shah – Murthi 2021, 774).

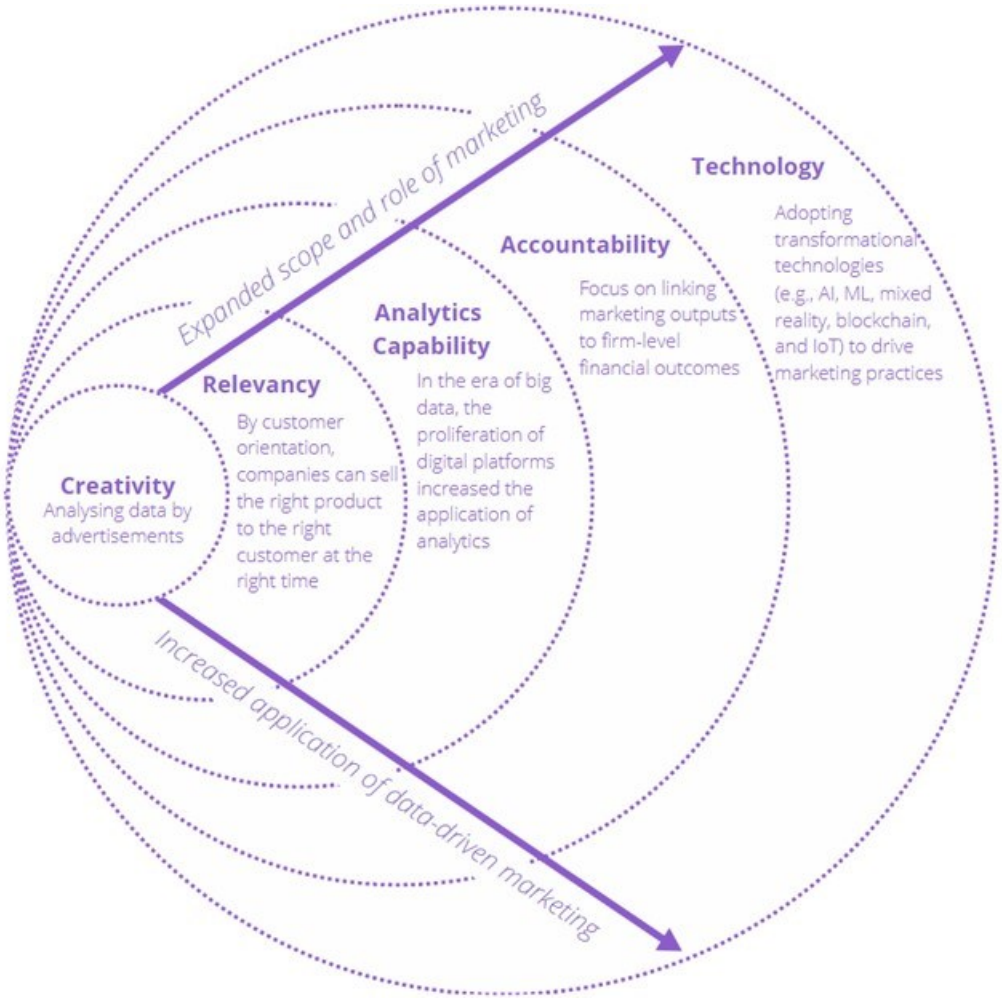

Figure 4. The extension of marketing with the progressive appliance of data-driven marketing (modified from Shah − Murthi 2021, 775)

Additionally, to date, the evolution of data-driven marketing is tightly connected to emerging technologies that have been implemented in companies as can be noted in Figure 4. Thus, the role and scope of marketing would not have widened into creative and relevant analytics that are accountable if it was not for the proliferation of digital solutions in addition to the significance of big data analytics. (Shah – Murthi 2021, 774.) At large, it can even be stated that as data-driven marketing strives for customer insights and revolves around efficient content that drives customer responses, it can be described as customer-centric since its functions are based on customer data (Arthur 2013, 74, 88; Micheaux – Bosio 2019, 129; Grandhi et al. 2021). By embracing change and data-driven

marketing, marketers can reach new customers, create exceptional value propositions for their customers, provide remarkable experiences, and even deepen both customer satisfaction and loyalty that result in competitiveness (Arthur 2013, 11; Chandler – Lusch 2015; Wedel – Kannan 2016, 97; Bolton et al. 2018; McColl-Kennedy et al. 2019; Zaki 2019; Shah – Murthi 2021; Sheth – Kellstadt 2021).

Throughout applying BDA to marketing functions, organisations require prowess as well as peripheral vision and resilient investing. Additionally, Johnson et al. (2019, 169–170) specify that as abilities, vigilant learning, probe and learn, and organisational redesign, are imperative when integrating BDA and marketing functions. Meaning that being attentive towards weak signals and studying them helps to guide smaller experiments to evaluate possible payoffs instead of diving into conclusions and making extensive decisions without making obligatory examinations beforehand. By analysis, as well as trial and error, organisations' cultures are also affected which means that the organisational structures must be redesigned at times to focus on BDA and to coordinate IT and marketing functions accordingly. Furthermore, the BDA implementation has a development process of five stages – sprouting, recognition, commitment, culture shift, and lastly data-driven marketing (Figure 5). (Johnson et al. 2019, 171–172.)

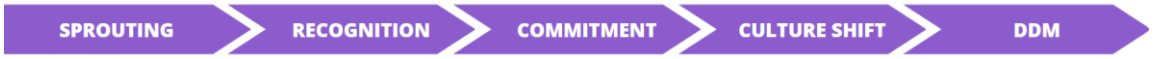

Figure 5. BDA implementation to marketing in five distinct stages (modified from Johnson et al. 2019, 171)

By starting to use analytics, organisations are sprouting, and this stage is followed by the recognition of the necessity of BDA investments for growth. By commitment, BDA is detected as an organisation-wide capability and therefore requires a culture shift to enhance BDA operations to go beyond descriptive analytics by hiring professionals and investing in technologies. These stages eventually lead to data-driven marketing, as can be noted in Figure 5 where organisations can use BDA to analyse multiple sources and operate in real-time to make decisions. (Johnson et al. 2019, 172–175.) What remains worth noting is that there are different levels of participation as the prosperity of DDM relies on organisations' commitment, such as the number of resources invested for DDM and the willingness to expedite these investments within the foreseeable future (Grandhi et al. 2021).

Consequently, managing big data remains prominent as it is a way to gather profitable insights about customers and to execute upon these insights that not only strengthen customer engagement but also improve marketing results. Data-driven marketing, on the other hand, defines to marketers what operations are accountable for and how their marketing efforts could be enhanced so that the decision-making would be optimised by the return on marketing investment (ROMI). By accountable analytical insights marketers can also provide the value of their work. (Rust et al. 2004; Arthur 2013, 11; Grandhi et al. 2021, 383.) This results in identifiable capability and significance that marketing has had some problems with (Kumar 2013, 330). Moreover, when decision-making is based on data-driven functions it can provide quicker and more thorough conclusions in addition to the effective usage of resources and even improved business outcomes, such as revenue. Data analytics in decision-making might also recognise emerging competitive advantages and new possibilities. (Arthur 2013, 11–12.) Hence, it can be said that BDA is used to support data-driven decision-making when information is collected for review to optimise and even predict business operations.

Overall, this chapter concludes what big data is, how companies can process it, and answers to the RSQ1 of how diversely big data analytics (BDA) are used in big data-driven marketing (BDDM). In the next chapter, the thesis explores how BDDM is used in CXM.

4 Customer experience management in big data-driven marketing

4.1 BDDM usage with CXM

Generally, CX can be perceived through its maturity. Petersen et al. (2014, 20−30) present a model that has three CXM phases: attract (1), convert (2), and advocate (3), and each of these phases is divided into stages that in the end lead to lifetime customers and added strategic value, while the customer relationship and experience matures (Figure 6).

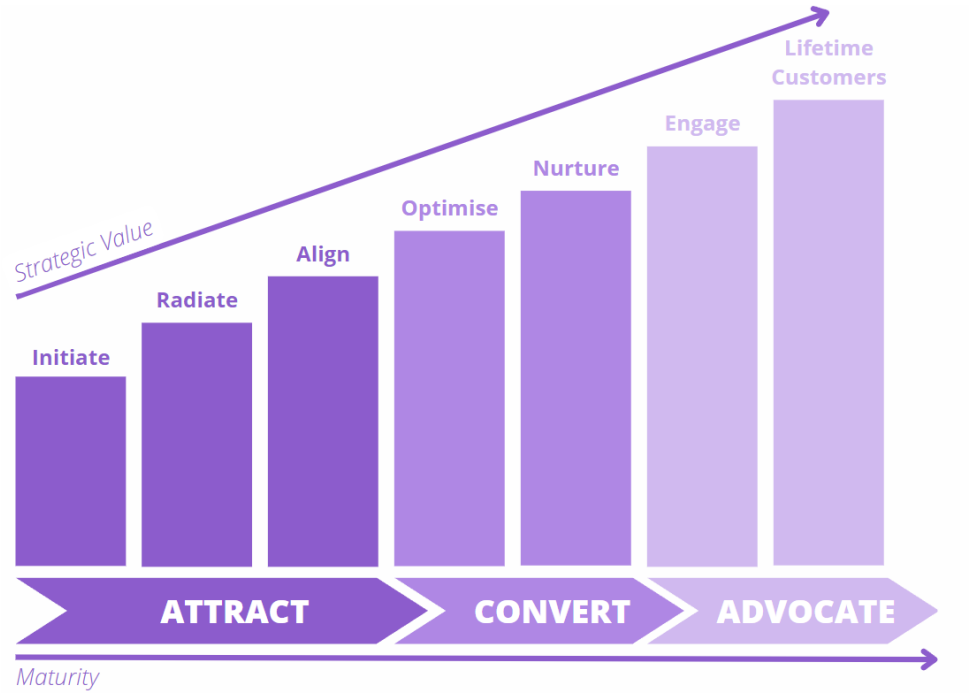

Figure 6. Customer experience maturity model (modified from Petersen et al. 2014, 21)

Figure 6 presents how the first phase of attracting consumers refers to initiating, radiating, and aligning the organisation's content with its objectives to distribute it to the targeted consumers (Petersen et al. 2014, 23−26). Converting consumers into customers refers to optimising and nurturing the relationships between the consumers and the organisation by using data analytics to gain actionable insights that can be executed through chosen touchpoints to enhance the CX (Petersen et al. 2016, 26−28). Lastly, advocating indicates that customers engage with the organisation and become lifetime customers. Advocating requires real-time data to predict and anticipate the needs of customers to optimise the delivery of a timely and relevant CX by aiming for customer lifetime value (CLV). (Petersen et al. 2014, 28−29.)

However, as noted in Chapter 3, the role of BDA is indisputable in business operations these days, and due to its impact, professionals should understand how to embrace its usage. Thus, organisations should also utilise analytics in strategic, managerial decision-making regarding enhancing CX to execute decisions adequately (Erevelles et al. 2016, 899; Holmlund et al. 2020, 357−358; Grandhi et al. 2021, 383; Sheng et al. 2021). Moreover, valuable customer insights for CXM can be attained through thorough data collection and transformation, such as data analysis and interpretation (Wedel – Kannan 2016; Holmlund et al. 2020, 356; Keyser et al. 2020).

Essentially, organisations have been endowed with innovative advanced technology, data sources, and analytical techniques to contemplate how to use BDDM in CXM to ensure consumer and marketing effectiveness (Bolton et al. 2018, 777; Holmlund et al. 2020; Marketing Science Institute 2020; 2022). More so, as a data-driven decision-making strategy improves businesses' operation efficiency, prompts stronger customer relationships, and lowers management risk, it also leads to competitive marketing strategies and functions that can be performed in real-time (Kiron – Bean 2013; Sheng et al. 2017).

Detailed, strategical CXM, however, requires data that customer journeys generate through multiple interfaces and channels as can be noted in Figure 7. Moreover, Figure 7 presents how CXM forms from CX data collection to CX big data analytics, and thereafter to CX insights that generate CX actions. In more detail, by capturing, storing, organising, and integrating CX data to CX analytics it can be interpreted, generated, and presented as CX insights and key measures that then guide managerial decisions to improve CX actions. Hence, Figure 7 provides an overall framework for how big data-driven marketing is used for CXM to improve CX with data intelligence.

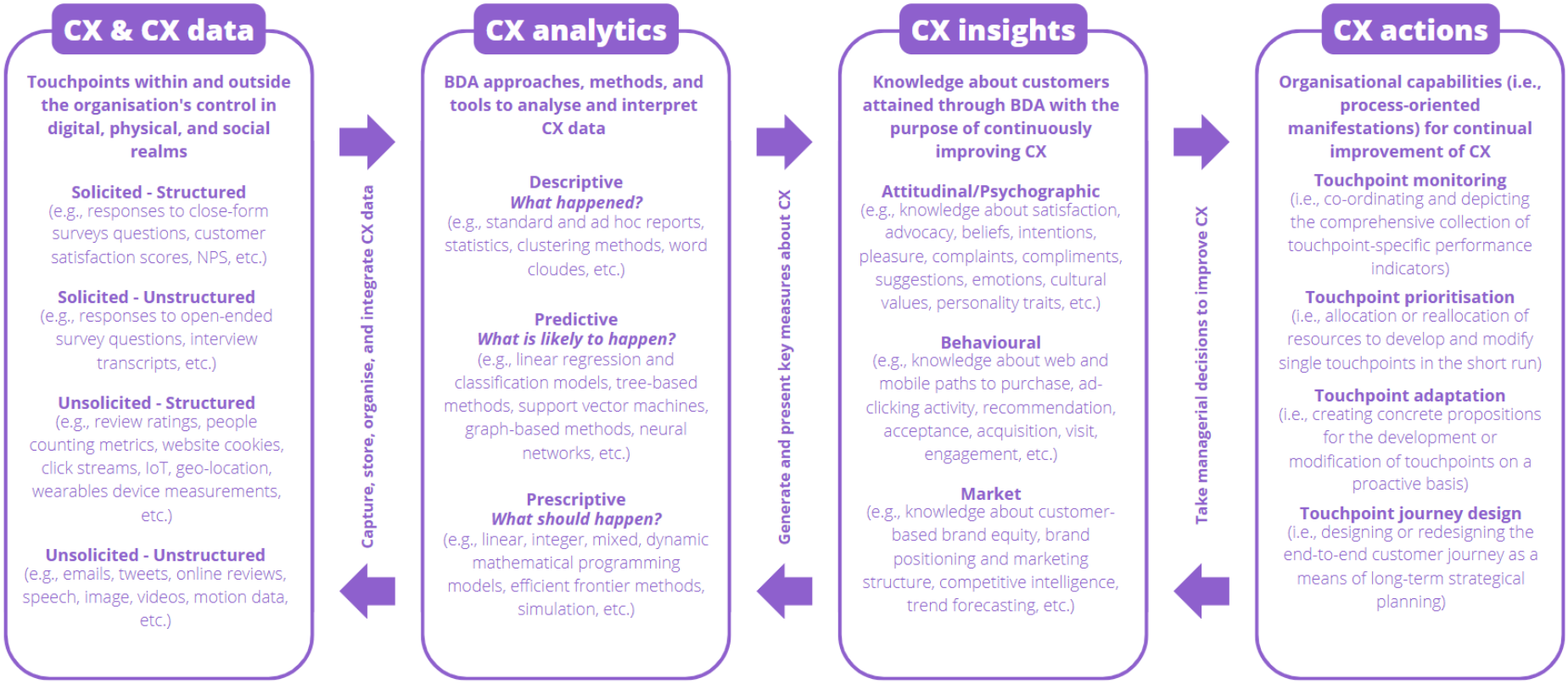

Figure 7. A strategical CXM framework as per CX insights derived from BDA (modified from Holmlund et al. 2020, 358)

To explain Figure 7 in more detail, each interaction (i.e., touchpoint) between a customer and an organisation produces CX data that ranges from structured countable numbers to unstructured hard-to-count multimedia formats as well as from actively collected solicited to unsolicited data that happens by customers' initiative (Zaki 2019; Holmlund et al. 2020, 360). The data dimensions can be divided into four distinct data types: solicited-structured, solicited-unstructured, unsolicited-structured, and unsolicited-unstructured (Holmlund et al. 2020). CX data that is collected practically is called solicited-structured as it is organised into statistics that can be developed and administered readily (e.g., CSAT, NPS). Nevertheless, as a complex entirety, CX cannot be analysed within a few numbers, and thus solicited-structured data is less exploitable in CXM. Solicited-unstructured data, on the other hand, offers versatile beneficial CX insights for CXM as it is collected by using open-ended questions and in-depth interviews. Customers also give organisations structured data of their own volition to compile (i.e., unsolicited-structured CX data) even if sometimes unobtrusively (e.g., IoT, website cookies, Google analytics). Lastly, the amount of unsolicited-unstructured CX data is excessive as it is generated by customers when they use text format (e.g., reviews, emails), speech (e.g., call centres), image formats (e.g., photos on social media), and in video formats (e.g., vlogs and short videos on social media). Yet, the former data type offers considerable potential for CXM, albeit with incremental costs as the data must be collected, stored, organised, and integrated for it to be useful and profitable (see Chapter 3.1). (Holmlund et al. 2020, 359.)

Moreover, the analysis of CX data and its interpretation into CX insights that can be used in managerial decision-making with CXM by BDA through descriptive, predictive, and prescriptive analytics (see Table 2, p. 30) (Assunção et al. 2015, 4; Wedel – Kannan 2016; Sivarajah et al. 2017; Holmlund et al. 2020). Thereafter, by generating and presenting key measures about CX, the attained CX insights can be divided into psychographic or attitudinal, behavioural, and market insights. Psychographic insights encompass customers' thoughts and feelings, while attitudinal insights reflect on the mindsets customers have towards an organisation's CX currently, previously, and in the future. Behavioural insights indicate how customers' actions and decision-making are affected by their experiences. Lastly, market insights relate to organisational performance within a marketplace, as these insights support CX evaluation and monitoring regarding competitiveness. (Holmlund et al. 2020, 360.)

With these insights, an organisation can make managerial decisions to enhance CX by continuously taking action with process-oriented organisational capabilities suited for CXM. Such CX actions include monitoring, prioritising, adapting, and designing the touchpoints within the customer journey. Figure 7 presents that the former three of these CX actions are used to control single touchpoints with operational short-term functions, whereas the latter manages the customer journey with strategic integrity in the long term. (Homburg et al. 2017; Holmlund et al. 2020, 361–362.)

Overall, to manage CX with big data-driven marketing, the theory showcases that managers must understand how to strategize, assess, and examine the best possible variables to decide to implement CX, and thereafter to learn from the process to constantly learn how to do better (Holmlund et al. 2020, 362–363). By understanding the basics of BDA to manage CX with data-driven marketing, organisations can monitor the performance of their customer journey and its existing touchpoints', and thereafter allocate resources according to their organisational capabilities. With an intent, this leads to proactive adaptation where the existing CX is enhanced by the means of CX insights, analytics, and data. (Homburg et al. 2017; Holmlund et al. 2020, 362.) The most vital thing is to understand that at the core of CXM, organisations aim to implement a seamless, dynamic, and integrated CX solution that can be executed by launching a pilot that is measured, deployed, scaled, monitored, and troubleshot before proceeding to the final version of CX. Further, managerial processes include a lot of learning, and for organisations to improve, it is essential to review and measure the impact of CX actions and insights on the business (e.g., revenue, service offerings, customer satisfaction, process optimisation, efficiency, and productivity) and share CX insights and train the organisation's employees to do better CX. (Holmlund et al. 2020, 363.)

4.2 The theoretical framework for CXM in BDDM

The aspiration for this thesis is to resolve the research question (RQ1) of how digital customer experience management in big data-driven marketing is executed. The sub-questions are adequately refining the research question as they strive to respond to how big data analytics are used in big data-driven marketing (RSQ1), and how big data-driven marketing is used for digital customer experience management (RSQ2). The theoretical framework for this thesis is summarised in Figure 8, and it is composed by integrating significant findings in the existing literature.

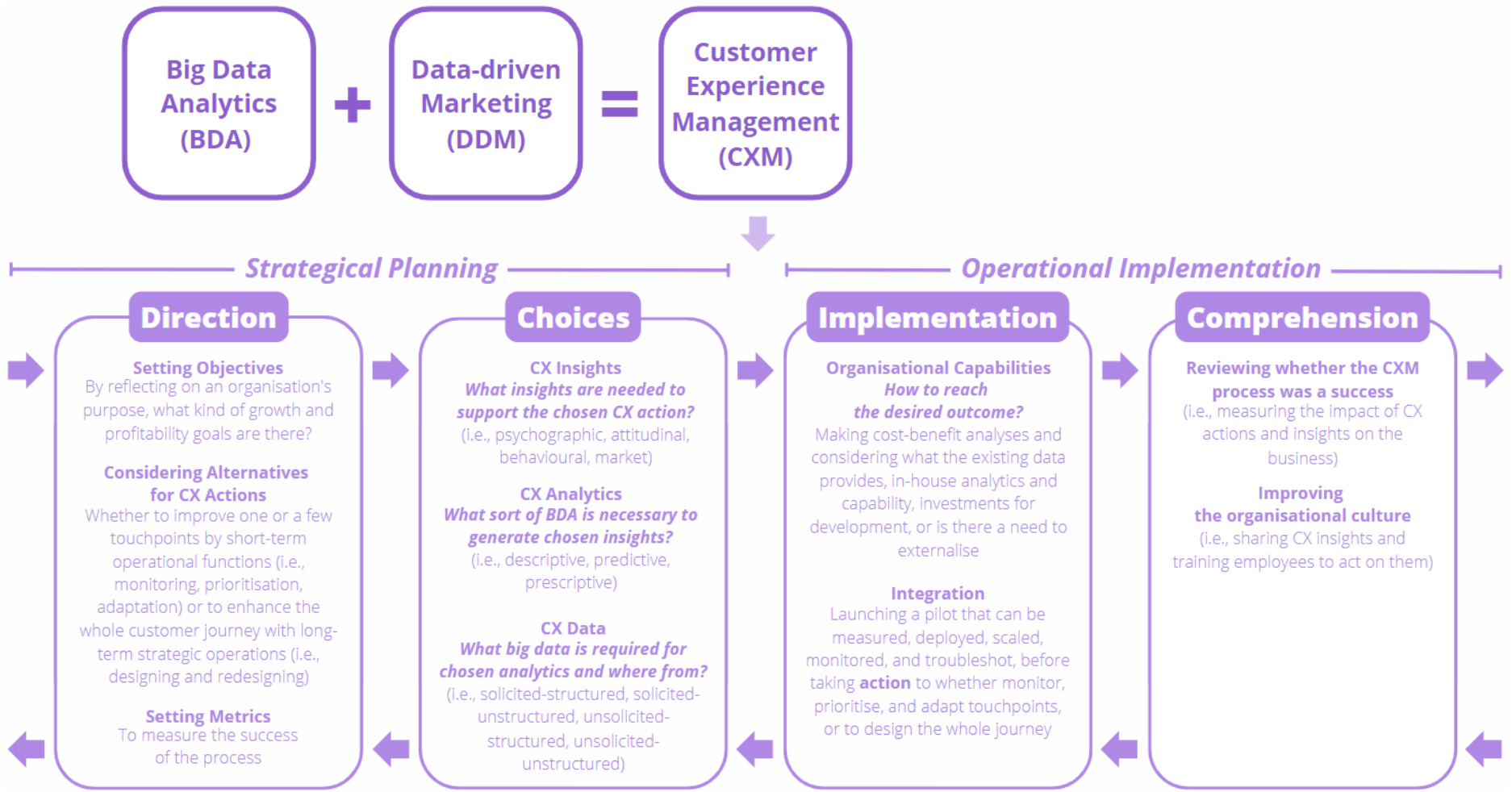

Figure 8. The theoretical framework for how CXM in BDDM is executed

Primarily, the framework in Figure 8 presents how customer experience management (CXM) develops through constant data-driven marketing (DDM) that is enabled by big data analytics (BDA). In other words, BDA and DDM must be working for continually effective CXM. Moreover, the strategical and operational levels of customer experience management were recognised within which there are four steps to proceed upon setting a strategic direction, making strategic choices, implementing the desired customer experience, and thereafter comprehending the whole process to learn from it. Figure 8 presents a vital process description for this research as it allows the reader to see how, according to the theory, the process should proceed and what is included in each phase.

The beginning of the theoretical framework (Figure 8) can be described as setting a direction for CXM with objectives, alternative CX actions, and metrics. Moreover, as the thesis includes the perspective of big data-driven marketing (BDDM), capturing, storing, organising, and integrating big data from diverse touchpoints to interpret it with analytics is crucial and therefore CXM involves CX insights and actions that are derived from CX data and analytics. As the process proceeds to the implementation of CX, the phase requires managerial decisions within CXM to improve CX for it to be seamless, dynamic, and flexible. Thus, the third phase aligns the organisational capabilities with CX and strives for the best CX action when executing the integration of the strategically planned and desired CX. The last phase of the process requires that the effects of CX, such as the challenges and consequences, on customer behaviour are understood and learned from. And thereby, the success of CXM is to be reviewed by measuring CX and the organisational culture is improved with cultural mindsets aligned with CX. Thus, Figure 8 offers a preliminary understanding by which big data analytics lead to information that supports data-driven marketing, and by which an organisation can ideally generate effective customer experience management to develop a potentially better customer experience.

Moreover, as the thesis produces a comprehensive process description of CXM, the focus is not on any particular step or strategic level. The ideal process from Figure 8 answers how CXM should be done in organisations, and as the following empirical part of the thesis will dive into an even deeper understanding of CXM, Figure 8 shows how the thesis approaches the research issue.

5 The research design

5.1 The research methodology

Grix (2002, 179) explains that the methodology of the research is logical conduction from the ontological and epistemological assumptions (see Chapter 1.3). Methodologies refer to how one becomes aware of the world in a more practical manner than with epistemological perceptions. While epistemology considers how knowledge about the world is formed, the methodology focuses on the same issue on a practical level. Namely, managing the research process and its design to describe how the research problem can be studied to provide knowledge about the problem (Eriksson – Kovalainen 2016, 14, 16−17). Essentially, this study intends to understand how digital customer experience management in big data-driven marketing is executed (RQ1), how big data analytics are used in big data-driven marketing (RSQ1), and how big data-driven marketing is used for digital customer experience management (RSQ2) to provide a process description.

5.1.1 The qualitative research approach

It can be argued that due to the interpretive nature of this thesis, the study is qualitative (e.g., Fisher 2010, 71; Saunders et al. 2019, 179). Mainly as qualitative research often involves an understanding of socially constructed reality (Hirsjärvi – Hurme 2010, 22) that involves subjective interpretations of the studied phenomenon (Saunders et al. 2019, 179) within a certain context (Myers 2013, 5). Qualitative research aspires to obtain a comprehensive realisation of the research problem by garnering data which ensures a meticulous description of the issue (Eskola – Suoranta 1998, 61; Carson et al. 2001, 68−69). Moreover, acquiring extensive knowledge relies on natural and real situations as well as the interaction between the researcher and the researched (Hirsjärvi – Hurme 2010, 23; Hirsjärvi et al. 2015, 164) as the approach apprehends the meanings people have created (Merriam – Tisdell 2015, 15). Qualitative research results in descriptions and explanations as well as interpretations that can be used to understand the phenomenon (Koskinen et al. 2005, 265). Moreover, elaborating on the research purpose, Hirsjärvi et al. (2015, 138−139) as well as Saunders et al. (2019, 186) state that studies aim to fulfil a purpose that can be either exploratory, descriptive, explanatory, or evaluative. Thus, as the aspiration for this thesis is to describe how big data analytics can be used in data-driven marketing to manage digital customer experiences, it can be stated that this study

is descriptive research that intends to gather insights. It can also be argued by Hirsjärvi et al. (2015, 138) that this thesis is descriptive research as it looks for new perspectives and central themes in customer experience management with big data-driven marketing.

5.1.2 The abductive research logic

Since this thesis does not go from theory to data or from data to theory but more so continually moving back and forth between the theory and the data, and not in linear progress that unequivocally follows steps after one another, it can be argued that the study uses abductive logic by the means of doing the research. Saunders et al. (2019, 153, 155) as well as Eriksson and Kovalainen (2016, 24) state abductive approach or abduction is a process where the researcher alternates from people's accounts and explanations to theoretical concepts which both create the basis for exploring and understanding the studied phenomenon to advance extant theory or even create innovative theories. Moreover, in abductive reasoning, the researcher has theoretical guiding ideas ready, which they try to verify with the help of their data (Hirsjärvi – Hurme 2010, 136). Hence, the interpretive paradigm advocates the idea that theoretical frameworks are used to explain what the research at hand has discovered (Fisher 2010, 61) and aims to generate theories and expand them within a selected context (Carson et al. 2001, 18, 69).

Theory-guided or theory-bound analysis, with theoretical connections in such a way that theory can serve as an aid, but the analysis is not based directly on theory. Previous knowledge, therefore, guides and helps the analysis. The influence of previous knowledge can thus be recognised from the analysis, but the meaning of previous knowledge is not theory-testing, but rather opening new avenues of thought. (Tuomi – Sarajärvi 2018, 109; Saunders et al. 2019, 155.) Therefore, the researcher usually reflects on how to relate produced knowledge to the one they already have (Eriksson – Kovalainen 2016, 13). Reflexivity in this thesis is merely subjective as stated in Chapter 1.3.

5.2 The data collection method

The research method consists of the ways and practices by which the empirical data is collected. That is, in other words, how to pursue and search for information or how to solve a practical problem in science. (Hirsjärvi et al. 2015, 183.) Qualitative research methods can be roughly divided into four main categories: interview techniques,

observation methods, reviewing documents, and various narrative, discourse, and discussion materials (Koskinen et al. 2005, 45).

5.2.1 The semi-structured thematic interviews

For this thesis, the chosen method of data collection is interviewing. Interviews as a data collection method allow the collection of data in depth, interactively, and above all, flexibly, considering the necessary situation-specific clarifications, corrections of misunderstandings, clarification of the wording of expressions, and dynamic dialogue with the informant (Tuomi – Sarajärvi 2018, 85). Therefore, as a nonexperimental study, interviews describe phenomena naturally via interaction and purposeful conversation (Patten – Newhart 2018, 13; Saunders et al. 2019, 434). Interviews are also typical for qualitative research (Koskinen et al. 2005, 157). Further, the data collection method supports the previously discussed epistemology since, as Hirsjärvi and Hurme (2010, 23) state, by interviewing knowledge on the research matter is created in a joint interaction with the researcher and the researched.

The interview process itself requires deciding on the type of interview (i.e., structured, semi-structured, unstructured), which in the context of this study is semi-structured, as Saunders et al. (2019, 180) note is preferable for qualitative research. A semi-structured interview is characterised by the fact that some aspects of the interview have been decided in advance, and even though not everything is set in stone, the process is goal-oriented (Hirsjärvi – Hurme 2010, 42, 47). For example, clarifying and deepening questions can be asked based on the answers of the interviewees and questions can be asked in a different order or wording if the interviewer perceives it to be necessary during the meeting (Hirsjärvi – Hurme 2010, 67; Tuomi – Sarajärvi 2018, 85). Moreover, if the interviewee has any needs for clarification, they can ask the interviewer (Gray 2018, 379). Even though consistency depends on the interviewer, the aim is to find meaningful answers for the research (Tuomi – Sarajärvi 2018, 88).

The format of the interview for the thesis is a thematic interview. Thematic interviews utilise key themes and related clarifying questions selected in advance (i.e., pre-designed), and they do not need to be presented in a precise form or order (Eskola – Suoranta 1998, 87; Eriksson – Kovalainen 2016, 94; Tuomi – Sarajärvi 2018, 85). To find relevant data for the study, the themes are based on theory and the theoretical framework of the research, i.e., what is already known about the phenomenon under study (Table 3).

Table 3. The derived interview themes from theoretical concepts

The purpose of the study		
To understand how digital customer experience management in big data-driven marketing is executed (RQ1)		
Research sub-questions	**Theoretical background from thesis' chapters**	**Interview themes**
How big data analytics are used in big data-driven marketing (RSQ1)	3. Big data analytics	- Big data - Big data analytics (BDA) - Data-driven marketing (DDM) - Big data-driven marketing (BDDM)
How big data-driven marketing is used for digital customer experience management (RSQ2)	2. Digital customer experience and its distinct bases 3. Big data analytics 4. Customer experience management in big data-driven marketing	- Customer experience (CX) - Customer experience management (CXM) - BDA - Big data-driven marketing (BDDM)

Table 3 describes the aim of the thesis with its research question, while the sub-questions of the thesis are divided and explained by the theoretical background and concepts. The overall purpose, sub-questions, and the reviewed theory led to distinct themes for the interview. The four themes that emerged from the theory are 1) customer experience and its management, 2) big data analytics, 3) big data-driven marketing, and inclusively 4) CXM in big data-driven marketing.

To get in-depth responses from the interviewees, pre-designed questions enable a somewhat systematic approach to the study (Table 4). The interview questions are formed by an idea to ask straightforward questions that encourage the interviewees to speak freely without leading them on. To describe this, Eriksson and Kovalainen (2016, 96) use the terms simple, neutral, and open-ended questions. Hence, the interviewer avoids asking leading questions and leaves their impressions and opinions unspoken (Hirsjärvi – Hurme 2010, 98; Creswell 2013, 58). Especially, in a thematic interview, the respondent can speak quite freely (Eskola – Suoranta 1998, 88) as the goal is to keep communication natural (Hirsjärvi – Hurme 2010, 97).

Table 4. The thematic interview questions

Operationalised themes combined with the summarised theory	Interview questions
Q1: Overall view of CXM in BDDM	What kind of process customer experience management (CXM) in big data-driven marketing is in your organisation? Who participates in the process, and who has the main responsibility for it? How does your organisation's culture support CXM, and how committed is your organisation to the process? You can draw a picture if you want.
Q2: Strategic direction for CXM	What kind of strategic goals your organisation has set for CXM in the long-term and short-term? What kind of actions do you have to achieve these goals, and how is their achievement monitored or measured?
Q3: Strategic choices about CX	What kind of strategic choices your organisation uses to support the determined direction for CXM? What kind of customer experience insights are you looking for (e.g., psychographic, attitudinal, behavioural, or market)? What kind of data analytics do you use to get these insights, and what kind of data does the analysis require?
Q4: The implementation of CX	How does your organisation go about implementing customer experience? What kind of resources are you using to integrate it? How do you proceed with the integration, e.g., do you use piloting?
Q5: CXM comprehension	What has your organisation learned about CXM (e.g., its consequences, challenges, success)?
Q6: In addition	Would you like to add something to the interview?

Moreover, Table 4 describes how the operationalised themes from Table 3 were combined with the theoretical framework in Chapter 4.2. Notably, the interview questions could have easily been just on what kind of big data analytics the interviewee's organisation use, how they apply BDA in marketing, how they do CXM, and how their CXM complies with BDDM. However, these questions seemed too superficial, and the concern was that there would not be enough in-depth information gained. So, to delve deeper into the matter in detail, it was deemed necessary to create an overall progressive view of the CXM in BDDM (i.e., Q1 Overall view of CXM in BDDM) which involves an opening question, follow-up questions, and supplementary questions to get a profound understanding of the CXM process. Thereafter, there are four main questions (Q2−Q5) that deepen the process step by step. And lastly, interviewees were given the chance to add anything they feel the interview did not cover. Additionally, as the thesis aims at a transparent research process, it should be mentioned that the interviews were conducted in the native language of the interviewees, i.e., in Finnish (Appendix 1).

5.2.2 The purposeful sampling

To conduct interviews, the researcher must negotiate access to interact, converse, and correspond with the chosen organisations and their employees (Saunders et al. 2019, 234). As there is the possibility of online interviews (Eriksson – Kovalainen 2016, 84), internet-mediated access by email and video meetings can be negotiated (Saunders et al. 2019, 234). Moreover, interviews are prepared by planning the practical arrangements in advance, such as time, place, approximate duration, and equipment for the interview (Hirsjärvi – Hurme 2010, 73).

Hirsjärvi and Hurme (2010, 72), as well as Ghauri and Grønhaug (2002, 102), point out that by conducting preliminary interviews, the interview frame can be pre-tested, and the necessary changes can be made if it is found that the frame does not work during the test situation. To understand the research problem better and to gain first-hand insights on the research matter a meeting was held with an expert in the field in November of 2022 with whom the thesis' subject matter was discussed in detail to understand its functions better before moving on with the subject. And before the formal interviews began, the interview format was reviewed by the thesis' supervisor as well as another expert on the field on the 3rd of April. Worth mentioning is that the interviewee participating in the pre-interview was not used in official interviews.

It is typical for qualitative research to choose the target group according to the purpose (Hirsjärvi et al. 2015, 164) as then the interviewees have experience with the phenomenon under investigation or knowledge of the subject can be selected for the interview (Tuomi – Sarajärvi 2018, 86). In other words, the interviewees for this thesis were chosen by what Creswell (2013, 100) calls purposeful sampling. Saunders et al. (2019, 315), on the other hand, discuss non-probability (i.e., non-random) sampling, while Patten and Newhart (2018, 100) refer to judgmental sampling where the researcher chooses individuals that they consider to be a fruitful source for their study. Moreover, interviewees can be also referred to as participants or informants (Saunders et al. 2019, 180).

Potential interviewees and the organisations that they represent were searched by Googling different phrases and keywords (e.g., customer experience management by big data analytics in Finland). Initial contact with each possible organisation was made either by email, phone call, or a LinkedIn message to pinpoint who takes care of research issues, and by this contact, the research project was introduced with a short outline of the study that specified the intention of the research. In addition to email and LinkedIn contacting, the phone calls also led to specific email addresses whereby the interview form (Appendix 1), consent form (Appendix 2), and privacy notice (Appendix 3) were all sent as attachments.

For this thesis, experts were interviewed from Finnish organisations which were believed to hold necessary knowledge about CXM, BDA, and DDM. Selected organisations represent both those implementing CXM with BDDM in their business as well as those that consult other organisations on CXM with BDDM. Moreover, even though some of the interviewed organisations are in a commercial business-to-business (B-to-B, B2B) (i.e., the interaction happens between two companies), they still plan and execute projects for their clients in business-to-consumer (B-to-C, B2C) context as well and the interviews focused on those aspects as the end-user is still a consumer. However, the roles within the companies are very different depending on the size of the organisation, which is why there are interviewees from different areas of expertise. Overall, two of the interviewees represent large organisations and the remaining six are small and medium-sized enterprises (SMEs).

All in all, a total of eight interviews were arranged, as can be perceived from Table 5, and the collected research material presents almost eight hours and nearly 100 pages of

transcribed discussion. The pursuit for interviewees began on the 4th of April and ended on the 27th of April when enough participants were found among the overall 47 contacted organisations. Two potential participants had to be refused due to the researcher's time constraints. The interviews were conducted within a single research episode, where there was one interview per interviewee, and the round of interviews was only done once. The research episode for the interviews was during 13.4.2023−3.5.2023. Notably, while the individual interview is the usual way of interviewing, group interviews can also be used, the subgenre of which is the focus group interview, where the opinions of individual group members are explored (Hirsjärvi – Hurme 2010, 61; Saunders et al. 2019, 467, 470). Thus, one of the eight interviews was done with a group of two professionals (I-8) and the other seven were done with one interviewee.

Table 5. Summary of the interview sampling

Title	Organisation type	Job position	Date	Duration	Pages
I-1	Marketing technology company	Marketing Manager	13.4.2023	44:26	7
I-2	Software development and business management company	Growth Marketing Lead	14.4.2023	52:35	12
I-3	Marketing technology company	Head of Operations	19.4.2023	1:11:21	15
I-4	Marketing agency	Client Service Director	20.4.2023	55:23	9
I-5	Software and services company	Director of CX Business Development	25.4.2023	1:09:26	14
I-6	Data-driven technology and business consulting company	Digital Marketing Coordinator	28.4.2023	49:09	11
I-7	Business management consulting company on marketing and sales	CEO	28.4.2023	1:00:02	15
I-8	Data communications company	Customer Experience Manager & Head of Analytics	3.5.2023	58:35	13
N=8		**9**		**7:40:57**	**96**

Moreover, the interviews from Table 5 were conducted in online video meetings with a software called Zoom, and the meetings were recorded with the interviewees' permission with the software's integrated recording feature and additionally for assurance on a phone's application. Each interview was arranged by sending a Zoom invite to each interviewee ahead of time with an estimated timeframe of one hour that was largely held. Some of the interviews ran a little bit longer than one hour and some of the interviews did not go on for that long, but the estimation was reasonable.

5.2.3 The ethical and confidentiality consideration

To conduct research, one must understand what ethical and confidentiality matters there are to consider. Confidentiality refers to truthful intentions, such as that the interviewer must tell the interviewees honestly about the purpose of the interview as well as explain how they intend to process and store the collected materials as confidential (Koskinen et al. 2005, 285; Tiitula – Ruusuvuori 2005, 17). Especially since the interviewee must trust that their stories will be treated confidentially (Eskola – Suoranta 1998, 86: Hirsjärvi – Hurme 2010, 43). Therefore, a privacy notice was also written and sent to each interviewee (Appendix 3). It is also considered ethical to ask permission for conducting the research by interviewing and thereafter to record it (Eskola – Suoranta 1998, 52−53, 90; Eriksson – Kovalainen 2016, 72). And since voluntary participation requires informed consent (Eriksson – Kovalainen 2016, 71−72), either written or oral consent was obtained from interviewees for the interviews, as suggested by Tiitula and Ruusuvuori (2005, 18). A written description was sent in an e-mail with the contact request (Appendix 2), and the permission was confirmed in the interview situation itself.

To increase the trust between the interviewer and the interviewee, the interviewee should be allowed to contact the researcher afterwards and clarify what they have said if necessary (Koskinen et al. 2005, 285; Tiitula – Ruusuvuori 2005, 17). Koskinen et al. (2005, 295) also suggest that the interviewees be given the right to read the research transcriptions before publication so that they can remove things harmful to the company or themselves if they wish. Thus, the interviewees were asked for their permission to use the interviews once again before the publication of the thesis, just to be sure.

Moreover, the researcher should protect the anonymity of the interviewees when writing the research report. Which why the researcher should also consider issues related to the recognisability of persons (Tiitula – Ruusuvuori 2005, 17−18; Eriksson – Kovalainen 2016, 74), and thus, the names of the interviewees or other information that could be used for identification are not used (i.e., anonymity) and the interviews are referred to as their titles (e.g., the first interview is I-1). Neither are organisations' names or sizes mentioned. Yet, since the interviewees were contacted by email, there is a need to consider the Data Protection Act and GDPR (see Chapter 7.4) which is why with this thesis, the collected research material (i.e., recordings and transcriptions) is used only for this study and

thereafter destroyed once the thesis is completed. As a culmination for the thesis, a letter of thanks (Appendix 4) was also written to the participants to express gratitude.

5.3 The analysis method

With interviews, researchers are usually left with a huge pile of raw material that needs to be made sense of. This requires a repeated cycle of sorting, shifting, and writing to perceive what is significant. (Fisher 2010, 197.) Through data analysis, the research data can be clarified and produced into new information, i.e., by analysing the data it becomes more detailed and informative within its context (Eskola – Suoranta 1998, 138; Eriksson – Kovalainen 2016, 120). Notably, the data should be processed and analysed as soon as possible, as recommended by Hirsjärvi et al. (2015, 223).

Fisher (2010, 199) notes that by listening to the recordings, one can write a set of notes as transcriptions per each interview. Transcribing for this study was done from the entire collected material (i.e., the dialogue) as Hirsjärvi and Hurme (2010, 138), as well as Hirsjärvi et al. (2015, 222), mention in their guides. For each interview, the transcribing was done on the same day of the recording by using Microsoft Word's *Transcribe* function with its speaker references and timestamps. Thereafter, the document was reviewed carefully in detail to make sure that the transcription was identical to the recording. As noted in Table 5 (Chapter 5.2.2, p. 49) the overall amount of transcribed A4 pages was 96, and the transcriptions varied from seven to fifteen pages. Afterwards, time was reserved for decoding and going through transcriptions in April and May of 2023.

The analysis of the empirical data began by following Braun and Clarke's (2022) guide on reflexive thematic analysis (TA) as it is a common qualitative data analysis (QDA) method and supports both subjectivism and interpretivism in the research philosophy. Similarly, Fisher (2010, 200) states that the transcripts can be done to identify and highlight useful, major themes by skimming through the recordings. Thus, by focusing on thematic analysis, the occurrence of themes related to the research problem in the material can be compared (Eskola – Suoranta 1998, 161; Tuomi – Sarajärvi 2018, 105, 107). By identifying major themes, the researcher can understand the material in more depth as the thematic analysis method provides the means to reflect on possible syntheses as conclusions to the research problem (Hirsjärvi et al. 2015, 229). Thereafter, the thesis

strives to integrate the theory and the empiricism since Eskola and Suoranta (1998, 175–176), as well as Koskinen et al. (2005, 229), recommend doing so.

However, in detail, at first, by Braun and Clarke's (2022) instructions, the transcriptions were viewed to familiarise them. And since Eriksson and Kovalainen (2016, 120) recommend making mind maps to detect interpretations from the material, this study followed the idea. However, to produce a more systematic analysis, Eriksson and Kovalainen (2016, 120) state that coding is needed to identify and label themes. Therefore, this study used a qualitative data analysis software called NVivo to summarise and identify useful insights from each interview via themes (i.e., nodes).

Notably, these themes with NVivo were identified with theory-driven codes since abductive research logic allows theoretical thinking with data collection to support the empirical analysis. Thus, theme nodes in four main categories were called: (1) strategic direction for CXM, (2) strategic choices about CX, (3) implementation of CX, and (4) comprehension of CXM. Each of these categories was divided into subcategories with more nodes leading to 135 overall items at NVivo (an extract of the codebook in Appendix 5). By continuous browsing and analysis, these nodes were systematically reviewed by refining and defining them thoroughly since Braun and Clarke (2022) make it clear that interpreting patterns requires reflectivity that requires a lot of interpreting meanings when coding. After reordering and refining the nodes multiple times with analysis the number of items did not decrease, but the number of subcategories in terms of relevant connections improved considerably due to merging nodes with the same meanings with existing nodes and creating umbrella terms. Two to four most relevant subcategories remained in each main category, under which the findings describing them were combined either into their subcategories or independently.

The analysis is carried out with Finnish material due to interviews being in the native language, however, the material is coded with English terms which required the researcher to familiarise themselves with the material by translating the desired quotations from it as accurately as possible in the given context.

6 Findings on customer experience management in big data-driven marketing

6.1 Strategic direction for CXM

According to the findings, the strategic planning of CXM starts by setting a direction by using objectives, alternative CX actions, and metrics, and the following analysis is divided into subchapters according to these steps. The significance of the initial *strategic planning* was recurrent in the analysis as disciplined and comprehensive planning were identified as helpful when defining the essential functions for CXM. Moreover, planning also saves the adjustment time that easily comes into the process if the strategic foundation is not in order. Therefore, organisations should pay more attention to management and demand that the foundation is built carefully so that the implementation of CX is consistent with the strategy. By having a comprehensive idea of what to pursue and how big data thinking can be built around the foundation cost-effectively.

> "Strategy guides the planning process, and thereafter the work of implementing CX." (Client Service Director from a marketing agency, I-4)

> "CXM is influenced by multiple factors but the most crucial remain what, to whom, why, and how. -- Start building from the target groups, buying personas, and customer journeys." (Director of CX Business Development from a software and services company, I-5)

> "In data-driven business, whether it's marketing or sales, the biggest lesson is that the work done in the beginning pays off at the end." (CEO from a business management consulting company on marketing and sales, I-7)

Moreover, the analysis derived from the empirical data implies that *customer orientation* must be at the core of the business as the required initial situation of sorts for CXM to be successful. Especially as CXM is to satisfy customers, the business would be non-existent if not for the buying consumers.

> "Customer experience brings added value to business and under no circumstances should it or the customers be taken for granted." (Head of Operations from a marketing technology company, I-3)

> "Customer experience should be a part of the standard agenda of the modern management team because a company does not exist if there are no customers to do business with." (Director of CX Business Development from a software and services company, I-5)

6.1.1 Objectives for CXM

As a part of setting a strategic direction for CXM, the objectives should reflect the organisation's purpose. The analysis showcased that the strategic direction for CXM was driven by an organisation's objective for financial value through *growth*, *increased sales*, and the desire to *optimise the cash flow*. One could infer that by gaining these basic business objectives, a company could gain a competitive advantage in the market, however, would it be enough?

> "Customer experience is one of the strategic objectives for the upcoming years and by producing a good customer experience we can aim for growth faster than the market." (Customer Experience Manager from a data communications company, I-8)

Well, to answer the afore query, the analysis also indicated that CX is a way to create value both for the customer and the company. Hence, CXM is not just about gaining a financial edge, but also about customer satisfaction and loyalty in terms of *value creation* as the superior competitive advantage. Value creation, therefore, was an objective of the analysis.

> "Customer-centric thinking can be used to maximise the value of the customer base, instead of the number of sales." (Head of Analytics from a data communications company, I-8)

Moreover, CX was perceived as *a value proposition* of sorts since with the strategical planning of CXM, the value proposition is made to be fulfilled with value creation derived from big data analytics. Value creation was seen as essential as data helps to personalise marketing efforts. In more detail, *customer lifetime value* and its maximisation were parallel to customer-centric thinking, especially in the long term as the maximised value of the customer base adds to an even more customer-oriented business.

> "With the customer in focus, we can do even better work for the customer in an even more controlled manner by bringing added value to the customer" (Marketing Manager from a marketing technology company, I-1)

> "In practice, customer experience is our job, what we deliver. Alternatively, the work can be delivered without customer experience, but the experience defines our contribution margin. And that's where we can get the best-added value by making a better concept and making the experience worth paying for." (Head of Operations from a marketing technology company, I-3)

6.1.2 Alternative CX actions to achieve the objectives

However, by abduction-driven logic, the strategic direction also considers how the planned CXM objectives are to be achieved and monitored. In other words, how CX is continually improved. The findings advocated for the comprehensive view of CXM across the organisation in the long term by enhancing the whole customer journey instead of considering short-term operations, such as whether to improve one or a few touchpoints. Moreover, the findings revealed that strategical planning is incomplete without setting any concrete measures, functions, or milestones for developing the desired objectives.

A new finding and a recurrent goal-setting model was OKR (objectives and key results, OKRs) which means that *objectives are driven into key results* to guide and monitor operations. By having a vital, concrete, and clear focus objective in a specific target group, the organisation can build its position and create good CX for the target group with defined, measurable goals and track the outcome. Thus, the objective is successfully achieved with a planned and focused concept that is thereafter documented in detail by considering what kind of processes and systems manage the customer data in the different stages, how to enrich that data in the stages, and how to ensure the ability to meet the expectations of that customer. Documented operating models, such as OKR, provide the means to manage CX, which is helpful when dealing with data analytics.

> "OKR is a good tool for measuring what action to take." (Marketing Manager from a marketing technology company, I-1)

> "Objectives and key results enable us to have a work-in-progress type of workflow with projects as the development and progress is monitored in a way where we don't have to stick to the same numerical KPIs all the time." (CEO from a business management consulting company on marketing and sales, I-7)

An additional way of monitoring CXM is by *enterprise resource planning* (ERP) to collect, store, and interpret data from business activities and processes. The revelation gave another potential appliance for approaching CXM in terms of strategical planning by setting a direction for continuous monitoring.

> "The entire marketing process from start to finish – the entire customer journey – can be built as work, projects, and processes in ERP and we use it every day." (CEO from a business management consulting company on marketing and sales, I-7)

Moreover, another discovery was that CXM requires *systems to support the integration of CX* into a company's data-driven operations. Especially, by combining as much data as possible from different systems in one *customer 360 view* in one software, the data from marketing, sales, invoicing, and resourcing gets to interact and cumulate. Thereby, the data can be monitored and understood better, more cost-effectively, and promptly. Not many companies use a single system for managing and understanding CXs, which can make CXM more difficult and ineffective as alternatively, CXM consists of different systems, applications, and blocks that are then combined and monitored one by one.

> "My work has been made easier by the fact that there is one platform from which I can coordinate." (Marketing Manager from a marketing technology company, I-1)

> "Today, even when everything can be built into one view, the opportunity is still untapped in many organisations for the enormous amount of real-time data for the customer experience." (Director of CX Business Development from a software and services company, I-5)

To extend beyond theoretical contributions and to give some detailed practical insight on what sort of systems and software organisations might be using for CXM, *HubSpot* came up the most in the analysis, but also *Google Analytics*, *Salesforce*, and *Microsoft Dynamics 365* were found in addition to *Tableau* and *Lumoa*. As an example, why Hubspot was seen as a superior platform, is the following reasoning:

> "HubSpot includes a marketing, sales, and service hub that all provide real-time data [about customer experience] -- as an automation platform it has the purchases, personas, and purchase services with automatic paths built in there for those who approach via Google, social media, or directly to the website." (Director of CX Business Development from a software and services company, I-5)

6.1.3 Metrics for CXM

Measuring and setting metrics remains essential for the strategic direction of CXM since the success of CX must also be measured in addition to monitoring it. Findings showcased that the customer experience is mostly development with *net promoter score* (NPS) as the metric works for repeated, shorter-term, and smaller sample measurements as well as for long-term CX development (Figure 9).

> "NPS is slow to react and has a lot of randomness, meaning that you can't always decipher how an action affects customer satisfaction. Still, there's

> quite a strong correlation between NPS and turnover or profit development." (Head of Analytics from a data communications company, I-8)

According to the analysis, other prevailing ways of monitoring the CXM are clearly defined *key performance indicators* (KPIs) and *customer effort score* (CES) that help to understand what works and what does not. In addition, customers' *closer rate* (i.e., purchase event), *engagement*, and *measuring the maturity of CX* were found in the analysis as metrics. Furthermore, a repetitive finding was *customer feedback* that provides a view of the progress of CXM by just communicating and interacting with the customer to understand the process and what could have gone better. Such metrics can then be shared with the management and make organisational decisions about moving forward.

> "Precisely defined target levels of KPIs help to compress, condense, and improve efficiency." (Director of CX Business Development from a software and services company, I-5)

> "A measurement of ease, i.e., whether we made the customer's life easier -- such as a 'Was this helpful?' meter on a website -- the scale is same as in NPS, but the layout of the question is how effortless the transaction was -- rather [CES] than NPS because then if it was helpful, we will still find those who would recommend." (CEO from a business management consulting company on marketing and sales, I-7)

> "We can constantly see the situation of our NPS and CES measurements." (Customer Experience Manager from a data communications company, I-8)

To provide a practical realisation, an ideal planned operations cycle for CX monitoring can be outlined (Figure 9). There are various operation models, but the analysis showcased a constant endorsement for ceaseless, year-round insight monitoring, which can be seen as a continuous activity in the example year in Figure 9.

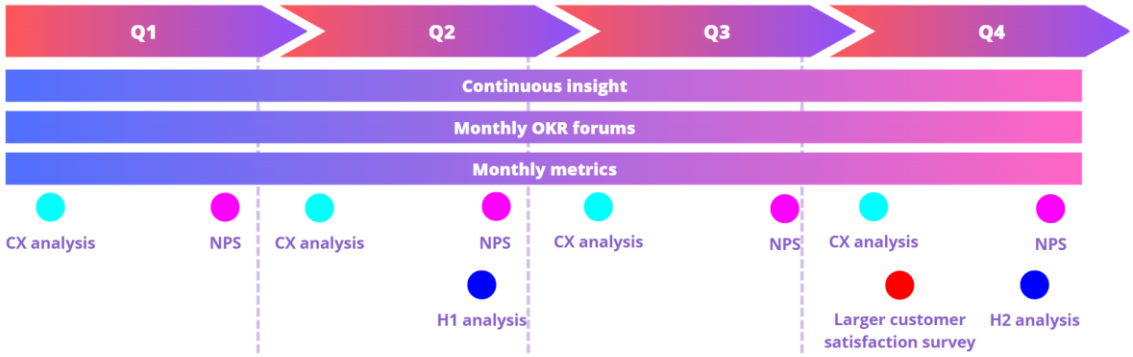

Figure 9. An example of a year of measuring CXM divided into quarters

In addition, as a proposal, customer satisfaction can be surveyed once a year while NPS and CX analysis can be done quarterly as described with little balls in Figure 9. Along with the other suggestion, monthly metrics wrap-up and OKR forums for idea generation could be useful which can be identified as continuous lines in Figure 9 as well. Moreover, quarterly comparison, as well as biannual analysis, could showcase the development of CX in the longer term, especially if the difference is compared in years since the changes in CXM might not show themselves immediately as the change takes time.

6.2 Strategic choices about CX

Considering strategic marketing as a part of management, the management must have a clear, comprehensive view of how to manage CX. Thus, the other section of strategical planning is to make strategic choices to support the afore-determined direction for CXM. Considering big data and data-driven marketing with CXM, the analysis perceived that *data manoeuvrability and intelligence can be built* into how to market, operate, and reach customers *as an entity*. This entity then aims for competitive advantage in CX, in terms of increasing sales, cost-effectiveness, use of time, reachability, and ultimately, data management. This perspective goes beyond the theory and showcases how practically and holistically data manoeuvrability should be thought of in organisations.

> "We constantly look at the data so that it is used efficiently in marketing as it connects sales and marketing, making it transparent in both directions." (Marketing Manager from a marketing technology company, I-1)

> "When the [chosen] platform is properly nurtured, maintained, and taken care of, it starts to produce the kind of data that salespeople get excellent leads from, and the leads are already so warm that they move forward really quickly in the process and then again money is saved when no time passes." (Director of CX Business Development from a software and services company, I-5)

It was found that in CXM, the role of marketing is to provide and showcase the different phases of a customer's life through the customer journey with the help of data derived from diverse touchpoints at the customer interface to show the company's way of working. Moreover, the utilisation of data is connected to the relevance of marketing in the sense that data and data-driven marketing help connect marketing functions to the core of the business and improves the value of marketing people as the value of marketing can be shown correctly. Thus, customer journeys, sales pipelines, or funnels are a crucial part of CXM as they provide the data to make better CX. The thorough analysis emphasised that the different stages of customers' lives throughout their customerships

with the organisation are monitored daily by analysing data to find how everything works together and what touchpoints could be developed. In other words, a discovery was that customer centricity and consistency require developing comprehensive data-driven concepts, such as the customer journey with data manoeuvrability.

> “By understanding the big picture and monitoring the journey, such insights emerge that can be used in new customer acquisition. But also, the boxes drawn on the journey must be systematically studied, documented, and tested in practice.” (CEO from a business management consulting company on marketing and sales, I-7)

> ”Many organisations live in a world where marketing attracts customers, sales actually acquire them, and then someone else takes care of them, and marketing and sales have already run away a long time ago to do other new things, but we live separately from that reality, where marketing is along the whole journey. -- [Data] connects the pipeline from start to finish and then there are fewer adjustments and clashes -- It's quite a strategic thing that what data does marketing use to increase its value, as it must not be an independent value, but to make good results and in that way become part of the value-producing team and not the support team – it cannot be as though marketing only generates leads." (CEO from a business management consulting company on marketing and sales, I-7)

Furthermore, to focus on how a data-driven customer journey could be perceived, Figure 10 describes that there is the phase of building awareness and demand by positioning in the eyes of the customer with different data sources, and from the management perspective to gain leads and prospects. Then there is the consideration phase when trust is formed more closely with the customer, with both marketing and sales activities, and in that marketing can play a strong role as if it is the owner of the data. Thereafter, the journey moves towards making a contact and purchase. The overall journey loops as either the customer relationship ends, or the organisation repositions in the eyes of the customer and continues serving them. By breaking the journey apart, it might be easier to focus on certain parts and then apply know-how and the ability to improve them.

> “We think about the customer journey from the perspective of marketing and sales with a very basic model where at first the customer is a stranger and as they become interested, we commit to it. When we make a deal, the stranger becomes a customer. Thereafter the customer is served, and then, hopefully, they become a recommender.” (Head of Operations from a marketing technology company, I-3)

> “For us, the phases of the customer journey are consideration, purchase, delivery, and consumption. -- The entity [of our processes] is divided into

phases of the customer journey and it is viewed in a path-like manner." (Customer Experience Manager from a data communications company, I-8)

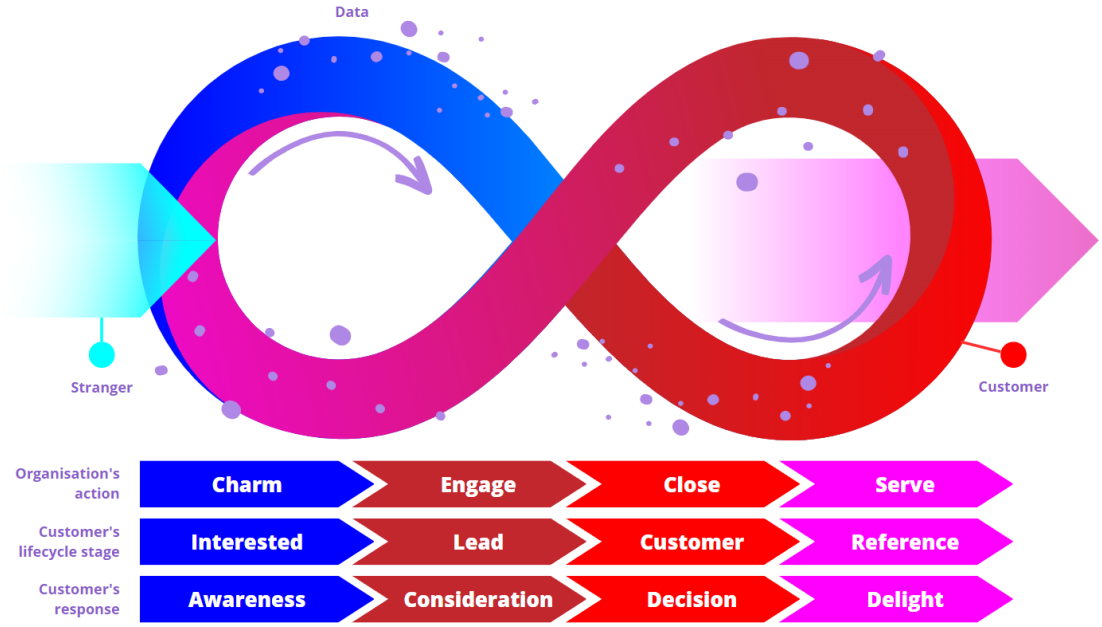

Figure 10. Analysis of a customer journey in a loop of CX phases

Figure 10 is derived from the empirical data and by thorough scrutiny it now captures the customer journey and how ideally the customer is held in *the loop of CX* by continuous engagement, upselling, and after-sales services that build trust. In the process, marketing is charming the customer to be interested in the offering, and thereafter the sales capture the lead and engage the customer into purchasing. However, in this context, it is worth mentioning that for companies and organisational operations, the continuous flow and trust building within the customer journey could be more in the realm of marketing communications. Overall, the whole journey requires a lot of management, especially as can be perceived from Figure 10, the data gets collected at each possible phase and touchpoint endlessly.

Data manoeuvrability and data-driven customer journey are the foundation for making strategic choices about CX, but at its core, strategic CX includes the viable insights to support the chosen strategic direction, thereafter analytics by which they can be gained, and at last, data that provides the analysis for the insights. The next three subchapters of the thesis concentrate on how CX insights, analytics, and data are there embedded into CXM.

6.2.1 CX insights

As CX insights support the wanted direction for CXM, the analysis concluded that CX insights for CXM can be roughly divided into *leads on targeting customers* and *developing business processes*. The main insights were to analyse the current state of business and CX, such as *attitudinal*, *behavioural*, and *psychographic* insights for *targeting* by understanding the current situation with the customer (such as their maturity) and their challenges.

> "The practical thing is that we find out whom we are going to do these things for because that is the common thread of the whole thing." (Director of CX Business Development from a software and services company, I-5)

Moreover, *market* insights as well as *trend* or *forecasting* analysis in addition to *competitor* insights could be identified for both targeting and developing business processes. However, various references to *lead generation* were recognised as insights as well for connecting with potential customers and then by their CX. On the other hand, gaining CX insights from *business processes* could mainly be applied to CX analysis from *cause-and-effect connections* on what works and what does not. With these insights, the strategic foundation is commonly built for the CX process, customer journey, and target groups.

> "[Data] is made into different forecast models and customer profiling models to improve the targeting of marketing or communication." (Head of Analytics from a data communications company, I-8)

6.2.2 CX analytics

In simple terms, CX analytics are used to generate CX insights in CXM. Three types of data analytics for generating CX insights were found in the analysis. Notably, the terminology had big differences as features for diverse data analytics had to be looked for by analysing the transcription in depth in addition to going back and forth on how each form of analytics was described in theory to identify the types of analytics. Overall, the use of *descriptive* big data analytics was identified as historical or backwards-looking data, everyday data, real-time data, and understanding the current state of business. One could even state after the analysis that descriptive data is the means to outline the whole foundation for a data-driven business to understand what has happened. Moreover, *predictive* analytics could be described to understand future events as proactively as

possible (e.g., trends). For example, by starting to use *next-best-action marketing* to identify what to do at a certain point with a customer to maximise the value of the customer base by adding to customer lifetime value and customer orientation. However, *prescriptive* data for responding with actions were conducted to be a bit too foreign and a challenging form of analytics as it was found that making future scenarios was not in the plans, not yet anyways.

> "Descriptive data describes the current state and the past very well, we can use it to make conclusions and act in a certain way with the customers. We can use predictive data at some level, if we put a lot of effort into, for example, the triggers generated by automation, so we will be able to predict something in a certain period of time. We cannot operate on prescriptive, where in a way the intelligence would tell us [what to do], but in the future, there might be such automation in technologies that the machine will learn things from our prospects, and it will make suggestions. It requires even more data in bulk to be able to run something like that." (CEO from a business management consulting company on marketing and sales, I-7)

6.2.3 CX data

In data-driven CXM, the strategical planning and making strategic choices culminate in CX data. By reviewing the empirical data, an alternating relationship with the data could be recognised as on which data the process of CXM is formed. Namely, since CXM is always built on the assets of a working model, meaning it is crucial to consider what data is available and relevant. Thus, the findings emphasised how data is derived and interpreted. Moreover, as data is produced endlessly from infinite sources, organisations are constantly balancing how to simplify data for decision-making. Especially, as data is in all the stages of the process of CXM including the planned customer journey, there cannot be any data silos in the organisation. Hence, in conclusion, data is a crucial part of developing operating models to become more data-driven and customer-oriented as well as connected.

> "[Organisations have to] balance with being able to produce quite a lot of data from anywhere as they then have to simplify it to make decisions." (CEO from a business management consulting company on marketing and sales, I-7)

> "The skill is to know how to go deeper under [the layers of] data to connect it, to see what is produced and where from, how much waste there is, and how it all correlates." (Director of CX Business Development from a software and services company, I-5)

The collection of customer and CX data were not discussed in great detail during the interviews as it was an underlying assumption of sorts, but the analysis could be still conducted as the empirical data recurrently, from time to time showcased where data is applied from. Thus, by interpreting, *data sources* varied from *business activity data* to data gained from *customer* and *digital research* to *open feedback* as communication. Data were also collected throughout the customer journey to monitor CX (Figure 10). Moreover, data were referred to both as structured and unstructured, as well as sudden at some points (i.e., solicited, unsolicited). However, overall, the data sources that the analysis discovered were *real-time scores on customer relationship management software*, *websites* and *online stores*, *IP addresses, social media data* (e.g., reachability and engagement metrics), *email addresses, text,* and *speech* as well *as the strategic metrics for monitoring the whole process*. Hence, typically for big data, several data sources were found in the analysis.

6.3 The implementation of CX

The first stage of operational implementation is to make the managerial decisions to improve CX with CXM by BDDM. By analysing the organisational capabilities, the organisation can understand the right CX solution for them and then start to integrate it. All in all, the strategically planned value proposition for CX is to be executed with the operational implementation. As the process proceeds, the current state of CX is described, and the hypotheses are outlined for identifying the root causes. Thereafter, the solutions for digital CX are defined for decision-making and implementation. In other words, from the idea to refinement in the strategic planning and then to operational implementation.

6.3.1 The organisational capabilities

A crucial part of implementation is to understand the organisational capability and the available resources to execute CXM in BDDM. Iterative themes in the analysis were *processes*, *technology*, and *people* as holistic data-driven CXM is the work of diverse professionals and experts working digitally (Figure 11). Moreover, the analysis also concluded that as resources *the amount of investment* and *time* were recurrent for CXM to uphold.

> "We also have a way of working for implementation [as resources] are an equilateral triangle where are people, technology, and processes." (CEO from a business management consulting company on marketing and sales, I-7)

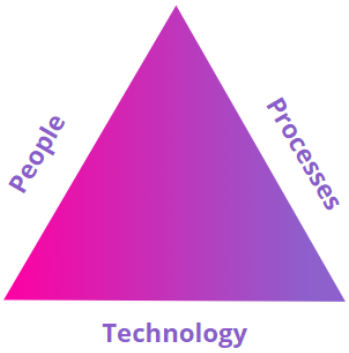

Figure 11. An equilateral triangle of people, technology, and processes as resources CXM

As a part of Figure 11 and in CXM, *processes* can be viewed from a few different perspectives. The analysis indicates that overall CXM is a process itself, whereas there are also the levels of strategical planning and operational implementation that create processes themselves. Moreover, the customer journey is another process that CXM necessitates. Then again also processes incorporate daily operations, such as learning, development, maintenance, communication and so on, that are viewed in the following Chapter 6.4.

Furthermore, *technology*, in terms of CXM, contains the CX insights, analytics, and data from Chapter 6.2 but also *systems* to operate on. For example, software platforms require expensive investments, have a life cycle, and require preparation for renewing integrations in addition to being vital for organising and monitoring data. Therefore, technology is an imperative resource and capability for a company's CXM with data-driven operations. One could argue that technology ties the manoeuvrability and intelligence together for CXM as data, analytics, insights, and systems are inseparable and they provide the overall picture of what should be done.

By assessing the empirical data, one could suggest that *people* are everything in CXM as they bring the mindsets for customer orientation and the expertise for data-driven management. Moreover, a supportive organisational culture for integrating CX requires people who have *allocated accurate roles* within their teams, so that the company has the right people to do the right things. Roughly roles can be divided at *the strategic level*, *operational level*, and *personnel level*. Thus, by thorough analysis, the strategical level includes the organisation's top management with officers and directors, such as the chief executive officers (CEOs), chief experience officers (CXOs), chief operating officers (COOs), chief financial officers (CFOs), marketing directors, as well as sales directors

for new and existing customers. Moreover, on the operational level, there are managers for marketing, sales, customer experience, customer relationships, projects, and analytics. And lastly, on the personnel level, there are the hands-on employees. All the levels aim to satisfy the customers by getting their money's worth. In other words, for comprehensive big data-driven CX each level must understand and work towards CX, during the whole customer journey, and throughout the customership.

> "Strategically CX is built from each organisation level [horizontally] as anyone can suggest improvements and objectives are built together." (Growth Marketing Lead from a software development and business management company, I-2)

> "As there are various touchpoints, a good customer experience requires multi-talented people who understand all these areas at the same on a strategic and operational level to see that the two are synchronised." (Client Service Director from a marketing agency, I-4)

Additionally, to analyse the *responsibilities* in CXM, it can be stated that the management and CEO are responsible for the overall CX. Merely, to understand what kind of processes are needed to achieve the best CX possible. However, by identifying the importance of people, it can be detected from the empirical data that CX is the responsibility of all the representatives of the organisation as everyone must do their part during the customer journey and the touchpoints at what they are representing.

> "The only person responsible for it [CX] is the CEO. It can't be anyone else, even though customer experience managers are hired more all the time and sometimes the responsibility is given to sales and marketing. - - Customer experience is by far the best way to achieve business goals. And who is ultimately responsible for the fulfilment of business goals other than the CEO? Moreover, the people responsible for customer experience are change and growth leaders who understand data and are aware of their responsibilities." (Director of CX Business Development from a software and services company, I-5)

> "Well, [as a CEO] legally I am responsible for customer experience. However, customer experience is such an integral part of the work we do that we all are responsible for it. We just have different roles." (CEO from a business management consulting company on marketing and sales, I-7)

6.3.2 The integration process of CX

The integration of CX refers to how strategical planning corresponds with the organisational capabilities, and how the organisation prefers to execute CXM. However, as nothing is ever certain or given in business and changes are to be expected, the actions

for integrating CX are usually piloted at least on some level before broader operating methods. The analysis shows that *continuous work* would be the equivalent of a pilot as having new ideas to create value for the customer base needs constant experimenting. Mainly because if the development of CXM starts by testing a concept on *a smaller scale* with a specific group of customers, it is easier to quickly understand how the planned key functions work with the desired concept (i.e., the customer journey). If the tested concept works, the budget and team working on the solution grow when the concept is applied to a larger customer base as the concept can be built into a process. However, even if piloting gives the organisation quick feedback, a discovery was that the constant culture of fast pilots might lead to missing out on concepts that might have worked in the longer term. Therefore, there must be a balance between working in the long term and doing the experiments. For instance, monthly changes might not be necessary, as it takes a while before the change can be seen, so changes could be done four times a year or only twice a year.

> "We are trying to solve it [CX] in one way or another and [then] to communicate it to the customers that this is how we've solved it, that we've listened to you - - piloting is a good word in the sense that we have very few people [in our organisation] to even expect that we will plan something and then just make it happen perfectly. Instead, we go try something and then we change direction if it doesn't work." (Growth Marketing Lead from a software development and business management company, I-2)

> "You plan and hem and haw and then the end gets disregarded… Instead, you should go and test it [the solution] that if there is an idea, it will be out next week. But then again, you must continue that test for quite a long time before you can know if it was good or not. Try, test, redo, learn." (Head of Operations from a marketing technology company, I-3)

However, if the strategic planning and operative implementation are coherently in order, and the process can be deemed to be working in the long-term, the obtained results can also be *modelled*, such as into *a proof of concept*, *a best practice* or *templates* that can be used repeatedly for diverse customers within the customer base if the main features and objectives are the same between the two target groups. Naturally, the concept must be adapted to fit entirely, but as the concept is known in advance, there is a fairly high degree of certainty that it works, leads to good results, and helps to start the process more quickly. Likewise, implementation requires that the processes are *systematically* done, in a *structured manner*, so that they can be *adhered to*, and thereafter also *documented*. Thus, modelling gets easier and leads to *cost efficiency*.

> "It's important to do things in a structured way so they can be adhered to and documented. And if they are, then new team members can get involved and understand the operating model better." (Digital Marketing Coordinator from a data-driven technology and business consulting company, I-6)

6.4 CXM comprehension

Lastly, as a part of the operational implementation there is the phase of learning and understanding the effects of CX, if there were any challenges, and as for consequences, what stood out. The analysis of the empirical data provided in-depth insights into understanding CXM by constant learning by developing, maintaining, and repeating operations, such as the customer journey, endlessly to become more data-driven and customer-centric.

> "[There are] a lot of different functions and sub-areas in between, so the development of the flow of the journey must be improved all the time so that the journey is continuous throughout." (Growth Marketing Lead from a software development and business management company, I-2)

6.4.1 Reviewing the success of the process

To review whether the process behind the CXM was a success, the impact of CX actions and insights on the business are to be measured. However, in the empirical findings, CXM was seen as so continuous that the measuring and monitoring of CX can even be described as self-evident as CXM requires *continuous learning* in the ever-changing world of technology, data, and digitalisation. And if the organisation fails to measure their input on CXM, how can they know if they are doing better CX? Thus, a recurrent finding was that the participants emphasised how much learning they have had to do and how they still need to continuously learn to improve CXM in their organisation.

> "The world has changed so much that nowadays marketing measures are carried out in a very short period, and we still do not know today what will happen in a month. It could be said to be very volatile in many ways." (Client Service Director from a marketing agency, I-4)

> "By studying our current operating models, we can try to develop them more data-driven." (Head of Analytics from a data communications company, I-8)

A recurrent notion for understanding CXM better was *the development and enhancement of operations* that strive for even more data-driven business by identifying the functionality of the services (i.e., CX) from the data. One aspect of efficient CXM was how straightforward and flowing CX is (i.e., the customer journey) also developing that

fluency requires constant work. Further, to see results from all activities, it requires *continuous maintenance* and *repetition* of the activities, and CXM is a very continuous activity.

> "Customer experience methods must be consistent with the company's strategy." (Director of CX Business Development from a software and services company, I-5)

> "There is a lot of background work where we improve the systems and capabilities, make sure that the data is in order, and develop the real-time capability of the data flow. Enabling the most up-to-date service experience and fast service experience -- but you must be careful that the data is used responsibly." (Head of Analytics from a data communications company, I-8)

> "When research and analytics tell us how things are, we have fewer challenges, but when we rely more on anecdotal information, then there are significantly more challenges to determine what is the right way to do and what is wrong. - - Knowledge management is the essence of business." (Client Service Director from a marketing agency, I-4)

6.4.2 The improvement of the organisational culture

Another part of comprehending CXM is to understand how the organisational culture supports the process and how is it improved. The findings showcase that the continuous improvement of a supportive organisational culture is crucial as the whole organisation should be *trained to act on CX*. Part of the training and improvement is *open* and *transparent communication* within the organisation that enhances cooperation. *Teamwork* keeps the company free of silos and prevents "marketing and sales bubbles" as well as people from "curling up too much in their conditions" (I-2) or "burying themselves in chambers" (I-7). CXM can be described as *a chain of people holding hands* in diverse roles to present the idea of teamwork and responsibilities. To enhance the consistent way of doing CXM, collective organisational workshops were found to be insightful. Also, *team and individual rewards* with bonuses were a recurrent theme in the analysis. Considering organisational culture further, it is apparent that the organisations aim for being *the best workplace*. To indicate this, they strive for the ideology of "good generates good continually, so the better customer experience is, the better it is constantly" (I-2). Thus, in detail, the wholesomeness generates from the fact that by being a good workplace for people where the personnel feel benevolent, the employees also feel good in customer encounters, which in turn produces a good customer experience and visibility for the organisation.

> "We put a lot of that money into making people [personnel] happy and producing satisfied customers." (Growth Marketing Lead from a software development and business management company, I-2)

> "Of course, people have to work together, but that's the more difficult part." (CEO from a business management consulting company on marketing and sales, I-7)

Moreover, the analysis shows that *CX needs to be managed* by leadership and objectives that are monitored for everyone in the organisation to understand how *valuable* CX is in terms of the business' growth. Therefore*, the projected image of CX* from the organisation must be consistent, meaning that the organisation has to talk with the same terminology and understand how valuable their actions are when interacting internally and externally so that there is no contradiction. And for a more detailed description of why CX should be valued, enhanced, strategically well-planned, and operationally proficiently implemented, the following quote in the form of a metaphor summarises it:

> "Customer experience and its management are miscellaneous and affected by so many things. Customer experience can be viewed as a glass ball, and in business, there are a lot of other balls in the air all the time, and it does not hurt in principle if sometimes a ball falls – as long as it is not the glass ball of customer experience." (Head of Operations from a marketing technology company, I-3)

6.5 Empirically derived practical process description of CXM in BDDM

In Chapter 4.2 the theoretical framework of CXM in BDDM was presented (Figure 8, p. 40), and thereby a more normative and practical process description (Figure 12) can be summarised through the overall analysis of the empirical data. Figure 12 is composed by integrating significant empirical findings abductively with the theoretical framework. Such findings were divided into the strategical and operational levels of customer experience management with the four steps to proceed upon setting a strategic direction, making strategic choices, implementing the customer experience, and thereafter comprehending the whole process to learn from it.

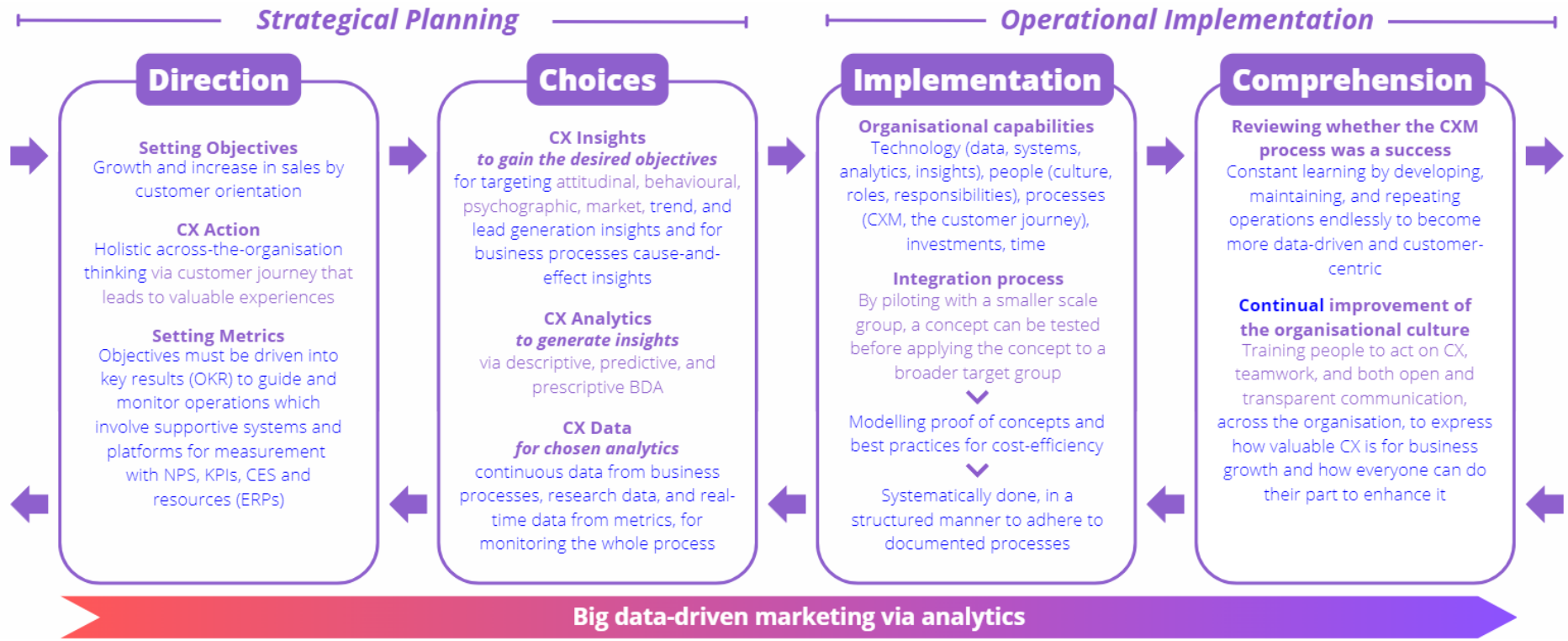

Figure 12. Empirically derived process description for digital CXM in BDDM

As the phases of the CXM process remain the same for the analysis to be coherent, the empirically derived description delves deeper to provide a profound understanding of how CXM can and should be viewed practically. What remains crucial for the thesis, is that the process derived from the analysis shows an insider perspective on organisational CXM in practice. All in all, the results obtained through the analysis mainly support the results of previous research, as the ideology remains the same throughout the process. The discoveries that the thesis made exclusively present a hands-on process description with more elaborate revelations. The findings that showcase differences between the theoretical framework and the empirically derived process description are emphasised in the blue font from the rest of the purple text in Figure 12.

For starters, the analysis of the empirical data supports the notion for where big data analytics must be a constant underlying function for ongoing data-driven marketing for customer experience management to be effective. And thus, the constant big data-driven marketing (BDDM) is described as a repeating arrow at the bottom of Figure 12. In the theoretical framework (Figure 8) this was a theoretical proposal for the realisation of CXM, but the empirical analysis concretises the meaning of the theoretical reflection, and thus BDDM was integrated as an inseparable result into the process description.

6.5.1 Strategic direction for CXM

The findings confirmed the researcher's view that the process description of CXM in BDDM requires the strategic planning aspect because the analysis from the empirical data emphasised the importance of profound strategic planning before proceeding to operational implementation. According to the findings, the starting point of CXM is the careful and thorough planning of CX and CXM that begins by making concrete functions for measuring development. Such concrete functions are to compose objectives that reflect the organisation's mission, consider alternative courses of action, and thereby arrange suitable metrics for monitoring. While the empirical analysis does relate to growth and profitability, the findings showcase that the focus of CXM is on customer orientation as the strategic substance for enhancing CX.

The findings also led to the understanding that CX actions can be divided into alternatives of whether to improve one or a few touchpoints or enhance the whole customer journey. However, all in all, CXM should strive for more comprehensive thinking by monitoring and developing the whole customer journey to be consistent. Naturally, if a part (i.e.,

touchpoint) already works, it is not touched, but the idea is to holistically view the whole entirety. Thus, the planning of CX and CXM was accentuated by making real, concrete functions for measuring the development of the process. In other words, the success of CXM necessitates a variety of procedures to monitor and measure the process, such as driving objectives into key results (OKR), gauging the performance (KPIs), using supportive systems for the management of data (software) and resources (ERPs), as well as metrics (e.g., NPS, CES) to understand how customers are feeling towards the company.

6.5.2 Strategic choices about CX

Moving forward to select how to support the chosen direction, it was detected through the analysis that one supportive action for CX was to capture, store, organise, and integrate big data from diverse touchpoints to interpret data with analytics. However, keeping in mind that the CXM adheres to customer orientation, consistency requires developing concepts, such as the entirety of the customer journey with data manoeuvrability and intelligence. With data-driven operations, CXM can strive for enhanced CX as the company can understand CX better with insights, analytics, and data.

It was discovered that CX insights supporting the chosen CX action are to gain the desired objectives. Thus, to grow and increase sales in a customer-oriented manner, the valuable experience for the customer must be created by targeting (e.g., with attitudinal, behavioural, psychographic, market, trend, and lead generation insights) and improving business processes (e.g., with cause-and-effect insights). To generate such insights, especially descriptive and predictive CX analytics are used, and prescriptive is possible in the future if machine learning and artificial intelligence would provide the means for its automation. However, CX data for the analysis requires balancing the endless flow of data by recognising what is relevant for the means of CXM, such as monitoring the customer journey in terms of CX. The balance is formed from data that is gathered and thereafter refined from business processes and research as well as on real-time metrics. Moreover, with insights produced from customer data, reports, and analytics for decision-making that support the projects to improve CX in more detail or depth, recommendations can be made about the actions to make that CX better. With deeper insight, it can be ensured that all actions and activities on CX are consistent and comprehensive, especially in terms of customer orientation.

6.5.3 The implementation of CX

Operational implementation remains an intriguing part of CXM in BDDM as there are many ways to go about it. However, altogether, managerial decisions must be made to improve the apt flow of continuous and customer-centric CX. In other words, the aim is to implement a seamless, dynamic, and flexible CX solution and concept that was previously strategically planned. Hence, it is vital and even imperative to monitor the whole customer journey by adapting and prioritising touchpoints if needed with the help of determined organisational capabilities and resources. Such capabilities and resources were discovered to be technology (including data, analytics, insights, and integrated systems), people with allocated roles aligned for enhancing CX, comprehensive processes (i.e., CXM during strategical planning, operational implementation as well as through the customer journey), ongoing investments, and time for monitoring the success of CXM.

When integrating CX, organisations appear to prefer piloting before taking action. Mainly as the pilots can be done for a smaller scale of target groups before expanding the tested concept to a broader audience. Further, a useful find in terms of cost efficiency was that effective processes can be modelled into proof of concepts, best practices, and re-useable templates if the process is systematically done in a structured manner from the start so that it can be adhered to and documented. Thereby, CXM in BDDM becomes a more practical and approachable function for the company as there is a clear, comprehensive definition for the desired CX.

6.5.4 CXM comprehension

The findings debate that the process of CXM in BDDM must be understood for perceiving the consequences and challenges, and to learn from them to do better. Hence, reviewing whether the CXM process was a success in terms of measuring the impact of CX actions and insights is crucial for the business. Especially, as it was found that constant learning by developing, maintaining, and repeating operations endlessly is fundamental for becoming more big data-driven and customer-centric with CXM. In other words, CXM requires constant monitoring for the company to learn from their operations.

Consequently, it is undeniable that CX must be managed with tangible and documented efforts to enhance it, and this includes training people to act on CX through both open and transparent communication. Furthermore, the analysis on the improvement of the

organisational culture emphasised teamwork, in addition to the previous training and communication across the organisation, to express how valuable CX is for business growth and how everyone can do their part to improve it.

Overall, the abductive findings create a profound and practical process description for the thesis. Thereby, the thesis upholds its normative stance as the discoveries provide multiple sensible ideas and pragmatic advice for companies. One could state that the overall process description of CXM both at the strategical and operational levels included supplies a comprehensive view for those who aspire to understand how to manage customer experiences in big data-driven marketing.

7 Conclusions

7.1 Summary

The aspiration for this thesis was to resolve the research question (RQ1) of how digital customer experience management in big data-driven marketing is executed. The objective was to form an abductively and empirically grounded justified process description of digital customer experience management (CXM) in big data-driven marketing (BDDM) from an organisation's perspective, and this was achieved in Figure 12 (Chapter 6.5, p. 70). In conclusion, digital CXM was deemed as a holistic entity by the customer journey and its touchpoints, as well as data manoeuvrability and intelligence, as customer experience (CX) was executed with the help of relevant big data, analytics, and insights that then in big data-driven marketing (BDDM) guide managers to decide on the best course of action. Moreover, the process description of the thesis showcases CXM in BDDM must be strategically planned at first by setting a strategic direction and making strategic choices to ease the operational implementation that includes implementing the digital customer experience and thereafter comprehending the whole process to learn from it.

The sub-questions adequately refined the research questions since as concepts they formed a coherent connection that the thesis responded by how big data analytics are used in big data-driven marketing (RSQ1) and thereby how big data-driven marketing is used for digital customer experience management (RSQ2). It was discovered that big data requires analytics to function as an integrated source of insights, and thus in data-driven marketing big data expands operational efficiency in managerial decision-making, leading to superior insights and inventive approaches to engage customers and gain marketing results. Consequently, big data-driven marketing (BDDM) adds to the proficiency of digital CXM as CX can be strategically planned with the usage of big data analytics (BDA) and insights that generate concrete measures for monitoring the operational implementation of digital CXM.

The empirical part of the thesis was affected by underlying subjectivist philosophical assumptions on the ontology and epistemology of the research and interpretivism as the overall research paradigm. Therefore, the thesis was executed as qualitative research with an abductive research logic throughout the work. Moreover, the data collection was done

by conducting eight semi-structured thematic interviews with diverse professionals in the field of BDA and marketing as well as CXM. Thereafter, the empirical data were analysed with qualitative thematic analysis on NVivo and then inferred to the context of the thesis. In other words, the results were abductively presented with the empirically derived process description. Thus, the thesis provides a pragmatic perspective for CXM in BDDM as research that adds to the profound understanding that the marketing discipline (e.g., Becker – Jaakkola 2020; Holmlund et al. 2020; Key et al. 2020) is calling out for.

7.2 Theoretical contribution

The thesis provides an essential stride of progress toward enhancing the theory on customer experience management to as how digital customer experience management in big data-driven marketing is executed (RQ1). Altogether, the thesis presents a substantial outline for customer experience management (CXM) in big data-driven marketing (BDDM) as an abductively derived process description to answer these research questions. The extant research has not combined these two as interdependent research objectives, and thus this thesis endorses the BDDM connection to CXM as the market change towards customer orientation and data-driven innovation has created the conditions for exceeding customer experience (CX).

Especially the thesis recognised that the scope of marketing has expanded due to the vast amount of data and by the enhanced operational data-driven efficiency that leads to superior marketing insights and inventive approaches to engage customers even more effectively by anticipating their changing needs, learning from them, and reacting to them promptly by creating a differentiated experience that provides exceptional value for the customers. Thus, big data analytics (BDAs) and BDDM were discovered to be at the core of expanding organisations' data-driven operations as effective CXM requires big data collection and utilisation from multiple touchpoints within the customer journey in terms of processing and refining data for it to be relevant and up to date for BDA analysis to provide the necessary customer and CX insights. Therefore, the thesis endorses the notion of other studies (e.g., Verhoef et al. 2009; Lemon – Verhoef 2016; Homburg et al. 2017; Kranzbühler et al. 2018; Grandhi et al. 2020; Holmlund et al. 2020; Keyser et al. 2020) that it has become vital for organisations to comprehensively understand the multidimensional CX through its temporal nature by the entire customer journey and its multiple touchpoints to be able to manage it by strategical planning and operational

implementation. However, the particular connection between CXM and BDDM was a significant discovery, because as companies are now aiming for data-driven business to improve their competitiveness, the importance of managing valuable data-driven CX also increases. And even though the extant theory (e.g., Sheng et al. 2017; Johnson et al. 2019; Grandhi et al. 2021) has recognised nuances of how data-driven marketing helps to manage CXs, only Holmlund et al. (2020) has discussed the relevancy between data utilisation and CXM.

Through the thesis, it was evident that CXM requires effective and continual BDA and DDM as its driving forces. Thereby, the execution of digital and thus big data-driven CXM in the thesis was approached with an abductively done empirical process description (Figure 12, p. 70) which showcases that CXM requires the strategical level of planning in addition to the operational level of implementation as operational implementation cannot proceed without a proper, strategic plan with a clear vision of the desired CX and how it can be achieved. Likewise, the previous research also notes the levels of CXM (e.g., Homburg et al. 2017; Holmlund et al. 2020; Saarijärvi – Puustinen 2020), and thus the thesis affirms previous research. Moreover, the process description was divided into four main stages: (1) setting a strategic direction, (2) making strategic choices, (3) implementing CX, and (4) comprehending the success of the CXM to learn from it. These stages were also identifiable and recurrent in previous research (e.g., Homburg et al. 2017; Holmlund et al. 2020; Saarijärvi – Puustinen 2020) whereby planning a consistent strategic direction by assessing and examining alternatives to decide upon the best way to implement CX was iterative to then be able to continually renew the experiences.

However, the thesis' process description refines the extant research by recognising that setting a consistent strategic direction that complies with the organisation's objectives demands comprehensive across-the-organisation thinking via the customer journey to provide metrics that then guide and monitor the data-driven operations. One could even state that big data-driven CXM would be ineffectual without using the customer journey as a guide or blueprint to understand customers and the data that they leave behind especially as the data shows how to respond to them in terms of attraction, converting, and advocating when creating exceptional value for the customers. Especially in the second stage, the thesis notes that the entirety of the customer journey can be reflected in data manoeuvrability and intelligence. In more detail, making strategic choices to gain

CX insights about business operations as well as insights for lead generation by targeting customers to provide exceptional value for customers requires descriptive, predictive, and prescriptive BDAs to generate insights from the continuous data flow that then guide managerial decision-making.

Moreover, thirdly it was identified and affirmed that implementing continuous big data-driven CX requires ongoing investments and time (e.g., Johnson et al. 2019; Grandhi et al. 2021) However, the thesis also found three additional imperative organisational capabilities technology (including data, analytics, and integrated systems for CXM), people with allocated roles, and documented processes that can be adhered to and even modelled if proven to work. And lastly, to comprehend and review the success of CXM involves constant and vigilant learning as the ability to renew as also Homburg et al. (2017) recognised. However, the thesis discovered that continuous learning happens by developing, maintaining, and repeating operations to become more data-driven and customer-oriented. Moreover, to keep doing better, the inextricable connection of CXM to the management of the entire organisation system and customer orientation cannot be dismissed as by organisational redesign and culture shift, the organisation's cultural mindsets must be aligned for understanding, working, and doing their part towards CX. The supportive organisational culture was also apparent in the previous research (e.g., Homburg et al. 2017; Holmlund et al. 2020: Saarijärvi et al. 2020). Although, the thesis found that the culture obliges training people to act on CX by open and transparent communication that is specifically encouraged by cooperation to keep the CX consistent throughout the organisation.

The thesis tackles vital cornerstones for digital and big data-driven CXM and makes it apparent that there is still a lot to learn about big data utilisation for marketing scholars as well as practitioners. Data-driven processes are ever-growing, and the vast amount of data will keep increasing, so why not examine, develop, and thus also manage such CX that takes the organisation to the next level?

7.3 Managerial implications

The core ideology of digital and data-driven customer experience management (CXM) is to create excellent customer experience (CX) with data manoeuvrability and intelligence and thereby earn satisfied and engaged customers who recommend the organisation further. So, how about instead of CX being easily left as a remote and unstructured part

of the management and development of the organisation, it is assimilated into the organisation's way of doing customer-oriented business and data-driven marketing? Especially as customer orientation can be identified as an iterative and critical core objective for doing business in the 2020s, and nowadays data-driven innovations hold a lot of untapped potential for enhancing marketing and management strategies. Thus, in the digitalised world, one could argue that CXM necessitates data-driven marketing (DDM) derived from big data analytics (BDAs) to be complete. In other words, big data-driven marketing (BDDM) as a way of doing business should be combined with CXM.

These managerial implications aim to provide suggestions to aid thinking in practice, even though the truth remains that theoretic models can be imperfect representations of complex matters. Therefore, as a reminder, the thesis aims to develop knowledge and skills on big data-driven CXM that might potentially help current managers to develop their organisational strategies and operations. Particularly as CXM, especially in BDDM, can understandably be seen as painful as there are various constantly moving variables, the thesis hopes that CXM becomes less troublesome for management to strategically plan and thereafter operationally execute. Thus, the thesis provides a process description that describes how digital customer experience management in big data-driven marketing (BDDM) is executed (RQ1) by strategical planning and operational implementation. The thesis describes the process description of data-driven CXM by dividing it into strategical planning and operational implementation by (1) setting a strategic direction, (2) making strategic choices, and thereafter (3) operationally implementing customer experience and (4) comprehending the success of CXM and thereby learning from it.

Strategical planning of data-driven CXM requires that a direction has been set for the desired outcome. Naturally, the process starts by stating what the organisation's objectives are, which usually are tied to the idea of growth and increased sales. However, with CX, the necessary objective is also to strive for customer orientation. Thus, another starting point of digital CXM is to understand that CX is a multidimensional ever-changing collection of subjective responses customers temporally feel and evaluate through the customer journey and its touchpoints. The customer journey creates a blueprint of data crumbs for the organisation to gather and process to understand how their customers feel, think, and act towards their offering. Furthermore, by deepening CX understanding with data, the utilisation of information in CXM augments new opportunities within the customer journey, and thus monitoring the experience becomes

continual and more interactive. By understanding their customers through the customer journey, the organisation can plan actions to improve CX at certain touchpoints or even throughout the journey. However, to be able to manage CX comprehensively, the organisation should also set metrics for measuring and monitoring the success of CXM, such as driving objectives into key results (OKR) and planning resources (i.e., ERPs) with the help of KPIs, NPS, and CES. Noted, determining a direction or an aspiration might seem distant due to the practical nature of implementing CX, but that is exactly why the object must be clear as providing regularly recurring, high-quality experiences is not possible without a plan. Especially, considering the ever-tightening competitive market and the growing significance of customer encounters, achieving a competitive advantage without well-planned practical measures is considerably more difficult.

In strategical planning making strategic choices includes comprehending what kind of CX insights should be sought to gain the desired objectives from the first stage. The thesis divided these insights into those for targeting customers and lead generation as well as for improving business processes by understanding cause-and-effect with data. One could even state that organisations are required to gain insights from data manoeuvrability and intelligence to understand how CXM can be used as a competitive advantage in ongoing markets. Thus, data manoeuvrability and intelligence should be enforced and implemented within an organisation, especially as to generate these CX insights, big data analytics (BDAs), such as descriptive, predictive, and prescriptive analytics, are required to discern what to accept, reject, or improve. BDAs ensure effective CX data collection and utilisation from continuous and multiple customer journey touchpoints in terms of processing and refining data for it to be relevant and up to date for analysis, management, and data-driven marketing whereby the data can be acted on through managerial decision-making. Especially the thesis understood that BDDM provides measurability for CXM and gives marketing accountability as well as relevancy since the performance can be showcased with BDA (e.g., Rust et al. 2004; Arthur 2013; Grandhi et al. 2021; Shah – Murthi 2021). This results in identifiable capability and significance that the marketing discipline has had some problems with (e.g., Kumar 2013; Weber – Lusch 2013; Clark et al. 2014; Hunt 2020; Key et al. 2020).

Thereafter, moving to operational implementation, the planned CX can be implemented with strategically valued managerial decision-making competency. Implementation requires recognising the organisational capabilities for approaching CXM, and the thesis

concluded that while CXM requires prowess and resilience for investing in customer-oriented big data-driven strategic marketing and naturally also time, the three most valued resources were technology (including data, analytics, and integrated systems), processes (i.e., management itself, the customer journey as well as monitoring, adapting, prioritising touchpoints), and people who have cultural mindsets to refine the aligned CX and dedicated roles. With these capabilities, the integration of CX by piloting, succeeding, and modelling the proof of concepts can be done systematically, in a structured manner so that it can be adhered to and documented. With deliberate documentation, the organisation has a living template (i.e., knowledgebase as a 360 view of the customers), that can be adjusted over time. By starting to document early on, the process and architecture of CXM become more transparent and easier by enhancing daily routines across the organisation. One could say that it is all about optimising the best possible CX offering through customer orientation and big data-driven marketing in terms of the customer journey and its touchpoints to attract, convert, and advocate customers to become lifetime customers by value creation that aids the customers as well as the firm.

Lastly, the sought-after process should be comprehended by reviewing whether CXM was a success. However, admittedly the thesis shows that CXM in BDDM is far from humdrum, nonrecurring, or even sporadic work, as the process was described as continuous work that demands constant and vigilant learning for the ability to renew it efficiently. Hence, data-driven CXM requires a lot of developing, maintaining, and repeating operations to review it. As it is, CXM requires continual improvement of the organisational culture by organisational redesign and culture shifts that create a shared purpose within the organisation. This then hopefully leads to a customer-oriented supportive organisational culture that understands how valuable CX is for business growth. Moreover, for fluency, there cannot be silos within the organisation, nor marketing and sales bubbles, and not only top-down management approaches as people at the bottom can have exceptional insights for improving CX. The organisational culture should naturally, therefore, be open and transparent, and encourage communication and cooperation to keep CX consistent throughout the organisation. Although, one could also wager that a cultural shift towards valuing CX might be necessary to implement gradually so that unlearning old habits and internalising new ones take place in a controlled manner. Thus, people should be trained to act on CX to express the value of it and how everyone can do their part to enhance it.

Overall, this thesis also benefits managerial practice as, according to the findings, a comprehensive strategy permeates the entire organisation and the only way to lead CX is for management to truly commit to it. Consequently, it is crucial to understand CX and its effects on business since every organisation produces CXs – whether intentionally or unintentionally. Hence, it can be even suggested that in the 2020s CXM is a mandatory function for organisations wanting to offer genuine value to their customers through experiences.

7.4 The quality of the research and its limitations

At its core, theses are all about the problem-solving process in which a suitable solution is chosen and thereafter credibly justified. To endorse the scientific nature of this research, its quality and trustworthiness must be reviewed to add transparency, just as Eriksson and Kovalainen (2016, 303) state that is crucial. However, since this study relies on subjectivist ontology and epistemology, the thesis is evaluated by *dependability*, *credibility, transferability*, and *confirmability* instead of traditional reliability, validity, and generalisability (Eriksson – Kovalainen 2016, 308). Likewise, there are eight criteria to mark the "goodness" of a qualitative study. These criteria include a valuable topic, affluent rigour, rectitude, plausibility, resonance, substantial contribution, morality, and expressive consistency, which are quite self-explanatory. (Tracy 2010; Cassell et al. 2018.) By these criteria, it can be argued that this thesis answers all of these as discussed in Chapter 1.2 and throughout the work.

Dependability refers to logically documented and traceable research that reinforces its trustworthiness (Eriksson – Kovalainen 2016, 308). To review the dependability of this thesis, it can be stated that the research process has been carried out in a logical, circular sequence, section by section, making changes to previous sections if needed. Additionally, a research diary was kept for writing down reasoning and surplus thoughts, and the notebook was meticulously browsed during the thesis. The dependability of this research relies on the abductive research logic (see Chapter 5.1.2) since with abduction the progressive process has been thorough and well thought-out. In more detail, for instance, in the theoretical background (Chapters 2 to 4), the references have been meticulously checked before, during, and after writing about them. Additionally, for relevance, different databases, such as *UTU Volter, Google Scholar, EBSCO, ProQuest*, and *Emerald* were used with diverse keywords. Hence, the research has been conducted

by writing with orthodox citing without plagiarising or deception, by also double-checking the thesis for plagiarism with *Turnitin*. The theory was also checked for predatory listings and cleared from them by using a database called *Cabells' Predatory Reports* and a website by the name of *Predatory Reports*. Additionally, the empirical data from the interviews and other research notes were carefully handled by considering confidentiality and protecting the research participants (see Chapter 5.2.3) when transcribing and analysing them since the research complies with the University of Turku data protection requirements (UTU Guides – Data security). The data were separated into clearly named files in chronological order, making it easy to review them throughout the research process. Moreover, the research process itself is explained in fine detail in Chapter 5, and this thesis has been conducted by following *The Finnish National Board on Research Integrity* criteria (see TENK's RCR Guidelines) as the University of Turku endorses these principles of research ethics (UTU Research ethics). Thus, by Saunders et al. (2019, 253) explanation of rules to guide a researcher's conduct, it can be concluded that this thesis holds a deontological view by which rules are to be followed.

Moreover, it can be stated by considering Eriksson and Kovalainen (2016, 68−76) as well as Saunders et al. (2019, 257−259) that this thesis is conducted with fairness and respect as the interviewees are protected by privacy and voluntary participation in addition to informed consent and ensured confidentiality and compliance of data maintenance, such as understanding the *General Data Protection Regulation EU2016/679*, GDPR. The data analysis and reporting of the findings are also done responsibly and with professional integrity. There also is no occurrence of harm to the participants or the researcher. Thus, this thesis acts in beneficence.

Credibility reflects the researcher's familiarity with the topic and the adequacy of the data to draw conclusions and findings alongside the existing theory. Thus, by considering, whether another research that uses the same data, could come relatively close to or agree with the researcher's interpretations, credibility can be assessed. (Eriksson – Kovalainen 2016, 308.) By dependability, one could also argue for the credibility of the thesis since the number of used recent, confirmed, and peer-reviewed references in addition to the number of in-depth interviews stand for this thesis' credibility which is strengthened by the previous knowledge of the research matter via the researcher's bachelor's thesis. Moreover, the study offers the most relevant and practical approach towards customer experience management in big data-driven marketing by using the most applicable parts

of the collected data through a thorough analysis to make sure that everything is relevant to the purpose.

Transferability, on the other hand, alludes to the similarity of the study to other studies in the discipline (i.e., a connection between the results and the theoretical background) (Eriksson – Kovalainen 2016, 308). The transferability of the thesis has been sought by comparing the results with extant theories to find commonalities with previous research and the theoretical background created from it. One could argue that the research subject was a bit ahead of its time in Finland since the country mostly has SME organisations, and there is the possibility that this might have affected the thesis' idea of big data as bigger organisations can gain and manage that much data. Yet, certain supportive similarities between this and previous studies have been identified, and it can be argued that the chosen methodology complies with each other, and the interviewees are well-grounded and argued for (see Chapter 5.2.2).

Confirmability refers to the idea to combine the research interpretations and results with the existing theoretical background in an easily understood manner (Eriksson – Kovalainen 2016, 308). The confirmability of the thesis has been achieved by clear, purist wording and research structure. Additionally, arguments and conclusions used to confirm interpretations were drawn upon the existing research and theoretical background. Hence, the entirety of the thesis is both clear and relevant for the marketing discipline, organisations participating in customer experience management in big data-driven marketing, and those who are curious about the subject. Moreover, by choosing to write the thesis in English, the study becomes more international and the accessibility increases. Thus, hopefully, the thesis is beneficial for international students, organisations, and managers as well, instead of just Finnish. The thesis has also been checked for accessibility that the *Web Accessibility Directive* of the EU requires (UTU Guides – Accessibility).

In qualitative research, Kohli and Haenlein (2021) also suggest that the usability and potential of research can be estimated with awareness, opportunity, and motivation. Hence, the researcher should be aware of significant marketing issues, and thus both the conceptual and methodological ability to address these marketing issues to make thoughtful trade-offs between research significance and methodological rigour. Furthermore, the researcher should also have both intrinsic and extrinsic motivations to

address the marketing issues. (Kohli – Haenlein 2021.) To examine this further, firstly, the thesis has argued for the reasoning for conducting the research thoroughly by providing a theoretical discussion about the underlying and current issues that combine CXM and BDDM as research objectives. Moreover, the research purpose has been fulfilled by addressing the issue diversely with complementing theory and methodology. And lastly, the motivation for conducting the research was vigorously upheld to increase one's marketing major expertise on CX and DDM as well as management and organisation as a minor to interpret strategic marketing and customer experience management. The confidence in one's work was enhanced through spectacular guidance and by having conversations with experts and potential interviewees, as even the ones who declined to participate emphasised that they would like to know the results of the thesis as the subject matter was seen as significant. Consequently, various interviewees have asked for a copy of the thesis as they are impatient to read the work to see how their peers' ideas as well.

Moreover, to review the limitations of the thesis in more detail, one could state that the research aim is broad as the thesis contemplates both the strategical and operative levels of CXM, thus the research could have been narrowed to either one of these. Yet, theses are about making compromises and even if it might have been more beneficial to forgo the process description of this thesis with strategical planning and operational implementation in four stages, for one's insular state of mind, strategical planning and operational implementation are inseparable. Thus, the decision was made to create the theoretical framework as it is as the researcher committed to understanding the whole process of CXM and that objective included both levels of CXM. And who knows, with a more limited framework, there might not even be a process to follow through as a result. The so-called risk of myopia (e.g., Key et al. 2020; Kohli – Haenlein 2021) when it comes to the relevance and accuracy of the research has been avoided with this thesis by working persistently and purposefully.

Likewise, one could ponder in hindsight about the thesis' overall quality if the theoretical framework was too leading for the operationalised interview themes by which also the analysis was done. A question rose for if some aspects of the questions were seen as too self-evident, such as data sources and the role of marketing, as sometimes the discussion during the interviews required asking for clarifications. Moreover, one could mind if Googling for potential interviewees was the best course of action, as Finder might have

provided more prominent search results than the gained search engine page results with Google's search engine optimisation. Though, still the final number of interviewees within the purposeful sampling exceeded expectations and the gained empirical data were encompassing.

Notably, as the qualitative researcher assesses their research, the evaluation is not objective (Eskola – Suoranta 1998) and it might be hard to completely eradicate the researcher's impartiality (Tuomi – Sarajärvi 2018). Thus, with qualitative research, it is essential to understand that since the results and conclusions are solely formed from the researcher's perspective, other researchers could draw partially different conclusions on the same topic with the same data. Naturally, this corresponds with the underlying subjective and interpretive scientific philosophy of the thesis. Although, in the thesis, an effort has been made to avoid partiality by critically reflecting on both the theory and data collection. Therefore, the results are not solely based on the researcher's interpretations but also confirmed by the abductive assessment of extant research. Moreover, as the researcher does not have extensive experience in conducting studies, one would also understand the natural limitation to the scope and depth of discussion. Yet, the thesis shows significant familiarity with the subject matter as the number of referenced studies is large. Thus, the thesis can be proudly presented as it has been a continuous learning process, in terms of the subject matter, as well as the researcher's work.

7.5 Suggestions for further research

In this thesis, a theoretically justified process for managing customer experience in big data-driven marketing was produced through four diverse process steps divided into phases of strategical planning and operational implementation. The thesis conducted interviews with practitioners and professionals in the field to gain practical insight into the matter. However, the suggestions for further research might focus on what needs to be studied in more detail and what could have been studied differently. Thus, one could argue that the thesis provides a preliminary layout for a possible dissertation.

For further research, it would be intriguing to immerse oneself in a qualitative study that can be explored with a case study. For instance, one could study how organisational cultures support big data-driven marketing in Finland in future, especially as organisational culture was seen as an imperative part of CXM. Similarly, customer experience management for value creation in big data-driven marketing could be studied

in more detail as it remains crucial that the signals transmitted from customers are taken into account in real-time with business strategies to effectively consider the modern customer journey. Further, as big data is usually processed and analysed with machine learning (ML) and artificial intelligence (AI) to create even more effective and measurable marketing functions to enhance CX even better, it might be fascinating to inspect the positive and negative impacts big data analytics have on customer experience management, in the sense of cyber security, responsible usage of data, and marketing resilience. Especially as responsibility is another vital research objective for the upcoming years. Moreover, a comparative case study about a large Finnish organisation in contrast to an international organisation might be fruitful, as then diverse ideologies can be analysed in-depth and something useful can most certainly be found. Company case studies could be strengthened by interviewing a data analyst and marketing specialist within the same organisation. Also, as customer experience management towards new customers and existing customers varies, qualitative focus group interviews with marketing, customer experience, and data specialists could be vital to gain more in-depth opinions on the practice for customer acquisition and thereafter engaging them. Also, different data documents as a secondary source could be useful, but that would require connections. Such sources, however, could be conducted into quantitative research about CXM that compares data from an organisation's analytics and marketing and their strategical touchpoints along the digital customer journey to create new theories to experiment qualitatively on.

To reason these ideas for further research, one could emphasise that there was a common endorsement among the interviewees to share their ways of operating, and since they happily discussed their views despite their busy schedules, it can be suggested that the experts want to share their knowledge with students as well as other organisations. Thus, if there is motivation for doctoral studies that include a huge amount of international networking, there could be a possibility for more comprehensive and global research on the subject matter.

As it is, the subject matter of customer experience management and big data-driven marketing has a lot of diverse research pathways to offer for those who seek to satisfy their thirst for knowledge. Thus, the thesis encourages and calls for more in-depth research about customer experience management and big data-driven marketing as combined research objects.

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Appendices

Appendix 1 Semi-structured thematic interview form (in Finnish)

Puolistrukturoitu haastattelurunko

Asiakaskokemuksen johtaminen big dataohjautuvassa markkinoinnissa

Teemoina: asiakaskokemus ja sen johtaminen; big data analytiikka; big dataohjautunut markkinointi; sekä big dataohjautuva markkinointi asiakaskokemusten johtamisessa

(1) YLEINEN PROSESSIKUVAUS

Millainen prosessi asiakaskokemuksen johtaminen big dataohjautuvassa markkinoinnissa on organisaatiossanne? Ketkä prosessiin osallistuvat, ja kenellä siitä on päävastuu? Miten organisaationne kulttuuri tukee tätä asiakaslähtöistä prosessia, ja kuinka sitoutuneita olette prosessiin? Voitte halutessanne piirtää kuvan.

(2) STRATEGISEN SUUNNAN MÄÄRITTELY

Millaisia strategisia tavoitteita organisaatiossanne on asetettu asiakaskokemuksen johtamiselle pitkällä ja lyhyellä aikavälillä? Millaisia toimenpiteitä teillä on tavoitteiden saavuttamiseksi, ja miten niiden saavuttamista seurataan tai mitataan? Voitteko antaa esimerkkejä?

(3) STRATEGISTEN VALINTOJEN TEKEMINEN

Millaisilla strategisilla valinnoilla tuette asiakaskokemuksen johtamiselle määritettyä suuntaa? Millaisia asiakaskokemusoivalluksia haette (esim. psykografisia, asenteellisia, käyttäytymisestä tai markkinoista)? Millaista data-analytiikkaa hyödynnätte oivalluksien saamiseksi, ja millaista dataa analysointi puolestaan vaatii? Onko teillä antaa esimerkkejä?

(4) IMPLEMENTOINTI

Miten asiakaskokemusta lähdetään toteuttamaan organisaatiossanne? Millaisia resursseja hyödynnätte sen integroinnissa? Miten etenette integroinnissa, hyödynnättekö esimerkiksi pilotointia?

(5) PROSESSIN YMMÄRTÄMISESTÄ

Mitä olette oppineet asiakaskokemuksen johtamisesta (esim. seurauksista, haasteista, onnistumisesta)?

(6)

Haluaisitteko vielä lisätä jotain?

Appendix 2 Consent form for interviewees (in Finnish)

Suostumus tutkimukseen

Asiakaskokemuksen johtaminen big dataohjautuvassa markkinoinnissa

Tämä on kutsu osallistua tutkimushaastatteluun, minkä vuoksi toivomme Teidän lukevan alla olevan kuvauksen ja antavan suostumuksenne haastatteluihin.

Tutkimuksen nimi: Digital customer experience management in big data-driven marketing (suom. Digitaalisen asiakaskokemuksen johtaminen big dataohjautuvan markkinoinnin avulla)

Tutkimuksen tekijä: Jenni Sopola (Turun yliopisto, Turun kauppakorkeakoulu, Porin yksikkö)

Taustaa tutkimukselle: Asiakaskokemuksen rooli markkinoinnin tieteenalalla on kasvanut 2020-luvulla digitalisaation tuottaman big datan ja sen analytiikan myötä, eikä dataohjautuvan markkinoinnin osuutta voida väheksyä. Pro gradussa tutkitaan, miten digitaalisen asiakaskokemuksen johtaminen big dataohjautuvassa markkinoinnissa toteutetaan, miten big data-analytiikkaa käytetään big dataohjautuvassa markkinoinnissa, sekä miten big dataohjautuvaa markkinointia käytetään digitaalisen asiakaskokemuksen johtamisessa.

Pyyntö osallistua tutkimukseen: Jotta voin selvittää käytännön tasolla, miten asiakaskokemusta johdetaan, haastattelen asiakaskokemusten ja datankäsittelyn asiantuntijoita. Organisaationne valikoitui siksi, että koen Teidän yritystoimintanne näkemyksen muodostavan ideaalista ja vankkaa käytännön tietoa tutkimukseni teoreettisen prosessikuvauksen tueksi. Toivon siis Teidän osallistuvan tutkimukseeni. Osallistuminen on täysin vapaaehtoista, ja siitä on mahdollisuus vetäytyä missä vaiheessa haastattelua tahansa. Tutkimuksen tuloksia hyödynnetään ainoastaan tässä pro gradussa.

Aineiston hankintamenetelmät ja sen hallinta: Kahdenkeskiset haastattelut ovat pituudeltaan noin 60 minuuttia. Haastattelut voidaan Zoomin välityksellä verkossa. Haastattelut äänitetään suostumuksellanne. Aineiston käsittelyssä noudatamme Suomen Akatemian eettisiä sääntöjä ja aineisto on luottamuksellista. Haastatteluaineiston litteroinnissa käytämme koodeja, joten yksittäiset henkilöt eivät ole tunnistettavissa eikä aineisto ole yksilöitävissä. Litteroinnin jälkeen äänitykset hävitetään. Litteroinnin koodiavain on vain graduntekijällä. Haastatteluaineisto tallennetaan vain graduntekijän käytössä olevalle, Turun yliopiston suljetulle verkkolevylle. Tutkielman valmistuttua ei-yksilöitävissä oleva, litteroitu haastatteluaineisto ja koodiavain hävitetään. Tutkimuksen henkilötietojen käsittely perustuu yleiseen etuun, jolloin tutkittavilla ei ole niiden poisto-oikeutta.

Lisätietoja hankkeesta:

Jenni Sopola (graduntekijä), sähköpostiosoite

Jaana Tähtinen (ohjaaja), jaana.tahtinen@utu.fi

Lisätietoja Turun yliopiston tietosuojasta: tietosuoja@utu.fi

Minua on pyydetty osallistumaan tutkimukseen. Olen perehtynyt edellä olevaan selvitykseen ja saanut riittävästi tietoa tutkimuksesta ja sen yhteydessä suoritettavasta tietojen keräämisestä, käsittelystä ja tallentamisesta. Tutkimuksen sisältö on kerrottu minulle myös suullisesti ja olen saanut riittävän vastauksen kaikkiin tutkimusta koskeviin kysymyksiini. Selvityksen antoi Jenni Sopola. Minulla on ollut riittävästi aikaa harkita tutkimukseen osallistumista.

Ymmärrän, että tähän haastatteluun osallistuminen on vapaaehtoista. Minulla on oikeus milloin tahansa ja syytä ilmoittamatta keskeyttää haastatteluun osallistuminen.

Allekirjoituksellani vahvistan, että osallistun tässä asiakirjassa kuvattuun tutkimukseen ja suostun haastateltavaksi.

Allekirjoitus ja päiväys

Nimen selvennys

Suostumus vastaanotettu

Suostumuksen vastaanottajan allekirjoitus ja päiväys

Nimen selvennys

Asiakirjasta on tehty kaksi identtistä kappaletta, toinen tutkijan arkistoon ja toinen haastateltavalle.

Appendix 3 Privacy notice (in Finnish)

Tietosuojailmoitus

EU:n yleisen tietosuoja-asetuksen (GDPR) 13 ja 14 artiklan mukaisesti

1. Rekisterin nimi	Expert interviews on customer experience management in big data-driven marketing
2. Rekisterinpitäjä	Jenni Sopola, puhelinnumero, sähköposti Turun yliopisto, Turun kauppakorkeakoulu, Porin yksikkö, PL 170 (Pohjoisranta 11 A), 28101 Pori
3. Vastuuhenkilön yhteystiedot	Jenni Sopola, puhelinnumero, sähköposti
4. Tietosuojavastaavan yhteystiedot	Jenni Sopola
5. Henkilötietojen käsittelyn tarkoitukset ja käsittelyn oikeusperuste	Tutkimuksessa kerätään haastatteluita, joissa kysytään asiantuntijoiden näkemyksiä asiakaskokemuksen johtamiseen big dataohjautuvassa markkinoinnissa. Sähköpostiosoitteita käytetään haastattelukutsun lähettämiseen. Haastatteluissa kerätään tietoa asiantuntijoiden näkemyksistä asiakaskokemusten johtamiseen, big data-analytiikkaan, dataohjautuvaan markkinointiin ja näiden kolmen osa-alueen myötävaikutuksesta asiakaskokemusten johtamisessa. Henkilötietojen EU:n yleisen tietosuoja-asetuksen 6 artiklan mukaisena käsittelyperusteena on ☒ käsittely on tarpeen tieteellistä tutkimusta varten (yleinen etu 6 art. 1 a-kohta) ☐ rekisteröity on antanut suostumuksensa henkilötietojen käsittelyyn (suostumus 6 art. 1 e-kohta) ☐muu mikä _____
6. Käsiteltävät henkilötietoryhmät	Rekisteriin talletetaan rekisteröidystä seuraavia tietoja: sähköpostiosoite, tehtävänimike, näkemyksiä asiakaskokemuksen johtamisesta big dataohjautuvan markkinoinnin avulla.
7. Henkilötietojen vastaanottajat ja vastaanottajaryhmät	Tietoja ei siirretä eikä luovuteta tutkimusryhmän ulkopuolelle.
8. Tiedot ja tietojen siirrosta kolmansiin maihin	Henkilötietoja ei luovuteta EU:n tai Euroopan talousalueen ulkopuolelle.
9. Henkilötietojen säilyttämisaika	Haastattelunauhoitteista kirjoitetaan tekstitiedostot ja nauhoitteet tuhotaan. Samalla tutkimusaineistosta poistetaan suorat tunnistetiedot. Tietoja säilytetään enintään 1.8.2028 asti, jonka jälkeen aineisto hävitetään tietoturvallisesti.

10. Rekisteröidyt oikeudet	Rekisteröidyllä on oikeus pyytää pääsy häntä itseään koskeviin henkilötietoihin sekä oikeus pyytää tietojensa oikaisemista tai poistamista taikka käsittelyn rajoittamista tai vastustaa niiden käsittelyä. Oikeutta henkilötietojen poistamiseen ei sovelleta tieteellisessä tai historiallisessa tutkimustarkoituksessa silloin, kun poisto-oikeus todennäköisesti estää käsittelyn tai vaikeuttaa sitä suuresti. Poisto-oikeuden toteuttamista arvioidaan tapauskohtaisesti. Rekisteröidyllä on oikeus tehdä valitus valvontaviranomaiselle.
11. Tiedot siitä, mistä henkilötiedot on saatu	Haastattelukutsujen lähettämiseksi pyydetään sähköpostiosoitteita tai viestin välitysmahdollisuutta yliopistoilta. Muut tiedot kerätään suoraan haastattelututkimukseen osallistuvilta.
12. Tiedot automaattisen päätöksenteon ml. profiloinnin olemassaolosta	Tietoja ei käytetä automaattiseen päätöksentekoon tai profiloinnin tekemiseen.

Appendix 4 A letter of thanks for the interviewees (in Finnish)

Kiitos osallistumisesta!

Asiakaskokemuksen johtaminen big dataohjautuvassa markkinoinnissa

Arvoisa haastateltava,

kiitos osallistumisesta pro gradu -tutkielmaani. Sain käytännönläheistä ja syvällistä materiaalia työhöni ja uskonkin työstäni olevan hyötyä niin markkinoinnin tieteenalalle kuin myös toimialalle ja liikkeenjohdolle. Tapaamisestamme jäi innostunut olo, ja oli hienoa kuulla toiminnastanne.

Osallistumisenne merkitsi paljon, kiitos.

Ystävällisin terveisin,

Jenni Sopola

Appendix 5 NVivo codebook extract as an example

Node name
Strategic direction for CXM
Significance of planning
Customer orientation
Objectives for CXM
Growth
Increased sales
Value creation
Value proposition
Customer lifetime value (CLV)
Alternative CX actions to achieve the objectives
OKR
ERP
Systems to support the integration of CX
Customer view in 360
Example platforms
Metrics for CXM
NPS
KPI
CES
Closer rate
Engagement
Maturity of CX
Customer feedback
Monitoring CX
Ceaseless insights
Monthly actions
Quarterly actions
Comparing H1 and H2
Once a year survey