UNIVERSITY OF TURKU
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Leveraging artificial intelligence in SaaS customer relationship management

A qualitative content analysis of customer stories from CRM system vendors

International Business
Master's thesis

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Student's statement regarding the use of Artificial Intelligence (AI) for preparing and/or writing this thesis:

☐ **I have not used any AI-based tools.**

☒ **I have used AI-based tools**. Their use is documented in the Appendix 4. The AI tools were used in a way that complies with academic integrity guidelines.

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Abstract

The increased competition resulting from globalisation has led to a need to respond to customer requirements more efficiently. SaaS companies are constantly competing with new market entrants, which has also increased the need for internationalisation. Cloud-based SaaS companies have access to a large amount of customer data, which can be utilised to enhance customer relationship management. The ability to leverage growing customer data significantly determines a company's capacity for effective customer relationship management. By integrating artificial intelligence applications into customer relationship management systems, SaaS companies have the opportunity to accelerate and personalise communication with customers, identify key customers, and optimise their own processes to prevent churn, increase revenue, and succeed in international competition. The potential of AI for SaaS companies is vast, but the variety of ways to utilise it has created a challenge for consistent implementation. At the same time, previous scientific research has become fragmented, focusing on different functionalities and effects of AI, leaving less attention to the differences across various industries in the potential utilisation of AI in customer relationship management.

This thesis examines the typical goals and challenges of customer relationship management in SaaS companies, as well as existing AI functionalities as solutions. The literature review consolidates common features related to modern customer relationship management, AI-enhanced functionalities, and key goals and challenges for customer relationship management in SaaS companies. The empirical part of the study was conducted as a qualitative content analysis using secondary, publicly available data. The data consisted of customer stories from seven different companies offering AI-enhanced customer relationship management systems, with SaaS companies as clients. A total of 42 different customer stories were collected, and through analysis, real-world examples of various customer relationship management goals, problems, and AI applications used as solutions were identified.

As a result of the study, a theoretical model was developed for the utilisation of AI applications in SaaS companies, including key customer relationship management goals, challenges, and corresponding AI functionalities. Customer relationship management in SaaS companies primarily aims at business growth, which can be achieved by focusing on smaller, more precisely defined operational and strategic objectives. The study indicates that multiple AI functionalities can enhance the realisation of these goals while simultaneously reducing the impact of challenges associated with them.

The thesis contributes to academic literature and particularly to the corporate management of SaaS companies. It enhances academic understanding of potential AI applications within the SaaS sector, providing benchmarks for other technologically advanced fields as well. Additionally, the research offers practical insights into how AI can be utilised comprehensively as part of a broader IT strategy. Future research is suggested to explore the effects of different AI functionalities through quantitative methods or qualitatively examine their impact on employees' or customers' experiences.

Keywords: artificial intelligence, AI, customer relationship management, CRM system, international customer relationship management, CRM.

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Tiivistelmä

Globalisaation myötä kasvanut kilpailu on johtanut tarpeeseen vastata asiakkaiden toiveisiin entistä tehokkaammin. SaaS-yhtiöt kamppailevat jatkuvasti markkinoille tulevien uusien kilpailijoiden kanssa, mikä on johtanut myös suurempaan kansainvälistymisen tarpeeseen. Pilvipalvelupohjaisilla SaaS-yhtiöillä on käytössään suuri määrä asiakasdataa, jonka avulla asiakkuudenhallintaa voidaan tehostaa. Kyky hyödyntää kasvavaa asiakasdataa määrittääkin suuresti yrityksen kykyä tehokkaaseen asiakkuuksien hallintaan. Integroimalla tekoälysovelluksia asiakkuudenhallintajärjestelmiin SaaS-yhtiöillä on mahdollisuus nopeuttaa ja personoida asiakkaiden kanssa käytävää yhteydenpitoa, tunnistaa tärkeimmät asiakkaat, sekä tehostaa omia prosessejaan poistuman estämiseksi, liikevaihdon kasvattamiseksi sekä kansainvälisessä kilpailussa pärjäämiseksi. Tekoälyn mahdollisuudet SaaS-yhtiöille ovat mittavat, mutta erilaisten hyödyntämisen keinojen määrä on luonut haasteen johdonmukaisen käyttöönoton aloittamiseksi. Samalla aiempi tieteellinen tutkimus on pirstaloitunut keskittyen erilaisiin tekoälyn toiminnallisuuksiin ja vaikutuksiin, jättäen vähemmälle huomiolle erilaisten toimialojen väliset eroavaisuudet tekoälyn mahdollisesta hyödyntämisestä asiakkuudenhallinnassa.

Tämä tutkielma tutkii SaaS-yhtiöiden asiakkuusjohtamisen tyypillisiä tavoitteita ja haasteita, sekä näihin ratkaisuna olemassa olevia tekoälytoimintoja. Kirjallisuuskatsauksessa kerätään yhteen tyypillisiä nykypäivän asiakkuusjohtamiseen liittyviä ominaisuuksia, tekoälytehostetun asiakkuusjohtamisen toiminnallisuuksia, sekä SaaS-yhtiöille keskeisiä asiakkuusjohtamisen tavoitteita ja haasteita. Tutkimuksen empiirinen osuus on toteutettu laadullisena sisällönanalyysinä, perustuen toissijaiseen ja julkiseen aineistoon. Aineistoina käytettiin tekoälytehostettuja asiakkuudenhallintajärjestelmiä tarjoavien seitsemän eri yhtiön asiakastarinoita, joissa asiakkaana on SaaS-yhtiö. Tutkimukseen on koottu yhteensä 42 eri asiakastarinaa, joita analysoimalla tunnistettiin tosimaailman esimerkkejä erilaisista asiakkuudenjohtamisen tavoitteista, ongelmista ja ratkaisuna käytetyistä tekoälysovelluksista.

Tutkimuksen tuloksena luotiin teoreettinen malli tekoälyn sovellusten hyödyntämiselle SaaS-yhtiöissä, johon sisällytettiin keskeisiä asiakkuudenhallinnan tavoitteita, haasteita, sekä näihin vastaavia tekoälytoiminnallisuuksia. SaaS-yhtiöiden asiakkuudenhallinta pyrkii pääasiassa liiketoiminnalliseen kasvuun, joka voidaan saavuttaa panostamalla pienempiin, tarkemmin määriteltäviin toiminnallisiin ja strategisiin tavoitteisiin. Tutkimuksen myötä voidaan todeta, että tekoälyn usealla erilaisella toiminnallisuudella voidaan tehostaa näiden tavoitteiden toteutumista, samalla vähentäen tavoitetta vastaavien haasteiden vaikutuksia.

Tutkielma tuo kontribuutiota akateemiselle kirjallisuudelle sekä erityisesti SaaS-yhtiöiden yritysjohdolle. Tutkimus lisää akateemista ymmärrystä tekoälyn mahdollisista sovelluksista SaaS-toimialalla, tarjoten vertailukohtia myös muille teknologisesti edistyneille aloille. Samalla tutkimus esittää käytännönläheisesti keinoja tekoälyn hyödyntämiselle kokonaisvaltaisella tasolla osana laajempaa IT-strategiaa. Jatkotutkimuksen suunnaksi ehdotetaan erilaisten tekoälytoimintojen vaikutusten tutkimista kvantitatiivisin menetelmin tai laadullisesti tutkimalla erilaisten toimintojen vaikutusta työntekijöiden tai asiakkaiden kokemuksiin.

Avainsanat: tekoäly, AI, asiakkuudenhallinta, SaaS, asiakkuudenhallintajärjestelmä, kansainvälinen asiakkuudenhallinta, CRM.

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1 Introduction

1.1 Customer relationship management – why it matters

With major disruptions in global markets due to globalisation, digitalisation, and the change in customer spending, companies face unprecedented pressure to offer value for their customers. With the rise of global markets and digital environments, the thresholds for market entry have lowered, leading to tighter global competition (Katsikeas et al. 2020, 405–406). Simultaneously, customers have greater opportunities for product comparison, leading to a higher demand for personalisation (Balicki et al. 2025). For companies to meet customer demands and succeed in a competitive environment, revisiting current customer relationship strategies and integrating new technologies, such as AI, into customer relationship management systems is crucial.

Customer relationship management (CRM) has been a major point of interest in academic literature since the 1990s, and has evolved from being merely a habit of forming relationships with customers to a tool to collect customer information and finally to being a multifaceted business strategy enhanced with technological solutions and powerful analytics (Al-Homery et al. 2023, 20; Chatterjee et al. 2022, 437; Payne & Frow 2005, 167). While CRM as a theme for academic literature has been abundant for a few decades, new studies continue to be published in increasing numbers (Meena & Sahu 2021, 151). However, the focus of these studies has shifted from CRM in the service sector to the implementation of CRM systems, their benefits, and challenges (Meena & Sahu 2021, 136).

Indeed, CRM has undergone a significant digital transformation, introducing a range of systems for structuring customer data, enhancing sales and marketing processes, and improving the customer experience. Despite this transformation, the purpose of CRM has barely changed (Pynadath et al. 2023, 3242); with CRM, companies aim to generate, develop, and maintain customer relationships to foster long-term customer value (Chatterjee et al. 2019, 145) and separate profitable customers from unprofitable ones to guide resources effectively (Jayachandran et al. 2005, 177). Through digitalisation, the ways CRM is implemented in organisations have evolved significantly, and developed CRM systems have become a must-have instead of a strategic decision.

Simultaneously with the digital transformation, major structural changes, such as globalisation, have disrupted the business framework. Globalisation has enabled the growth of global customer bases, introducing a set of challenges that directly affect customer relationships (Ramaseshan et al. 2006). Global markets cannot be addressed in a one-size-fits-all strategy, but rather CRM practices should be targeted for the particular market, depending on the level of market-specific variations (Katsikeas

et al. 2020; Ryals & Knox 2001). To perform successfully in international markets, companies must meet the needs of foreign customers by developing capabilities for international value creation, such as international CRM strategies (Tuominen et al. 2023). The increasing global competition has resulted in greater importance being placed on customer information and relationships, requiring companies to invest more in their customer relationship management. Despite the fact that globalisation has been a major phenomenon since the millennium, there has been relatively little scientific input on CRM systems and CRM strategy implementation in a cross-border context (Al-Shuridah 2025, 2; Rollins & Gabrielsson 2016, 4225).

The complexity of global markets and the constantly increasing competition have shifted the industrial-centric focus towards customers. Indeed, creating long-term and profitable customer relationships is crucial for organisations to succeed in today's business landscape (Latinovic & Chatterjee 2022). Simultaneously, the increased competition for customers has shifted the view of customer value. Today, CRM is not only about acquiring and maintaining customer relationships but also about proactively driving value from existing customers (Hochstein et al. 2023, 913). This change is not only affecting company processes but also requiring a shift in mindset to foster deeper customer orientation (Balicki et al. 2025). Integrating advanced analytics into customer databases can generate insights that enable deeper personalisation and proactive customer engagement, delivering superior customer care and increasing customer value throughout the customer lifetime (Latinovic & Chatterjee 2022). This solution is becoming increasingly available, as artificial intelligence – a breakthrough technology in data analytics – has become widely popular in recent years and is rapidly developing new capabilities to help companies manage their customer relations.

1.2 Artificial intelligence as a disruptive technology

In the era of digital transformation, sometimes described as the fourth industrial revolution, the capabilities for businesses, and thus, how a company can manage its growing customer base, are changing faster than ever. Disruptive technologies, such as artificial intelligence (AI), have been widely discussed in the media and have been a central topic of scientific research (Ledro et al. 2022, 48; Libai et al. 2020, 45). Disruptive technologies are increasingly shaping the everyday lives of people in modern societies; personal assistants and generative language models like OpenAI's ChatGPT and Microsoft's Copilot are changing the way we work, manage tasks, and learn. Meanwhile, for businesses, these technologies are changing the game and provide means for high-volume data processing, which provides results that can be converted to customer insights of unprecedented accuracy (Antonio 2018; Deb et al. 2018, 759; Gantz et al. 2017). For example, one

of the world's most used streaming services, Netflix, in 2017 reported an estimate of avoiding a churn of 1 billion USD annually by using an AI-enriched algorithm to provide personalised recommendations for its 100 million subscribers worldwide (Bughin et al. 2017, 20). In a globalised economy, the competition for customers requires companies to adapt and use this disruptive technology to enhance their operations and avoid losing their competitive position.

To effectively use these disruptive technologies relies on the company's ability to access data. By converting customer and market data, the company can make better decisions, automate complex processes, and take customer-oriented actions, such as offering discounts or creating personalised recommendations (Libai et al. 2020, 44–45). Today, AI is increasingly being implemented to utilise data and generate useful information to enhance processes and customer success (Marti et al. 2024, 439), and the change is rapid. For example, in a large international, cross-industry survey conducted by Harvard Business Review as early as 2018, the ability to use data analytics to enable personalisation was considered a critical technology by 90% of respondents (Harvard Business Review Analytic Services 2018). Indeed, the importance of data analytics has not gone unnoticed by CRM system providers, as many now offer integrated AI tools to help their customers get more out of their existing customer data.

Within the context of customer relationship management (CRM), AI can significantly enhance how companies can analyse customer data to predict customer behaviour, optimise processes, and create actionable insights (Chatterjee et al. 2022, 437–438; Marti et al. 2024, 439). While CRM itself plays a key role in how companies can optimise sales and marketing strategies by better understanding of customer needs through collected, categorised and visualised customer data (Del Vecchio et al. 2022, 1070), AI can automate real-time customer interactions, reducing the need for human interventions and thus eliminating the traditional limits of business, like time differences and language barriers (Chatterjee et al. 2019, 145). Although being a technology that has only recently become more widely popular, AI's effects for CRM have been widely discussed in previous research and are considered a powerful tool to improve CRM capabilities (Chatterjee et al. 2019, 145). The benefits of implementing AI in CRM are undeniable, and companies are increasingly leveraging this technology to gain a competitive edge. Failing to utilise this technology will inevitably result in a competitive gap and restrict the possibilities for organic growth.

With the vast application possibilities of AI, companies can support their CRM practices to foster a customer-centric culture through cost-efficient solutions, simultaneously creating a sustainable competitive edge. Due to a lack of skilled workers, poorly managed data, and unrealistic expectations,

the huge promises of AI in CRM are often unrealised, and AI implementations fail to produce desired benefits (Latinovic & Chatterjee 2022, 966; Ledro et al. 2023). However, with a clear strategic approach, companies can harness AI to develop efficient practices that meet the demands of a complex international customer base and build long-term customer relationships (Libai et al. 2020).

1.3 Purpose of the study

As discussed before, studies on CRM and international customer relationship management have been published for a longer period, whereas AI-CRM is a less-studied topic due to the novelty of the technology, with publications increasing rapidly (Meena & Sahu 2021, 138). However, despite the increased research focus on AI, there remains a gap in academic research on how this new technology is truly implemented in practical, industry-specific settings (Ledro et al. 2022; 2023). CRM itself is a multidisciplinary concept that spans different business departments, which has led research on AI-CRM implications to be siloed within certain departments (Ledro et al. 2022, 2). In addition, the existing literature has acknowledged that AI-CRM implementation is highly industry-specific and that developing a comprehensive, general model is difficult, thereby hindering its applicability across industries (Ledro et al. 2023, 9). Because of the disruptive nature of AI as an enhanced data analytics tool for deeper personalisation and improved customer care, exploring the contemporary ways AI is being implemented is crucial to understand the current state of implementation within a particular industry, facilitating knowledge for scholars and managers within this industry.

This study aims to explore the implementation of AI in CRM within the SaaS industry. *Customer relationship management* (CRM) in this study refers to the collection of departments, practices and related systems that support these practices, rather than company-specific processes. Thus, process-related differences are not examined, as they require more in-depth analysis of specific processes within a given company. A more detailed definition of CRM is given in the chapter 2.1. *Modern customer relationship management,* on the other hand, refers to the field of CRM in today's business environment, influenced by many macroeconomic factors. *CRM vendors*, respectively, are companies that offer CRM systems or services.

SaaS companies are high-tech companies that provide software-as-a-service solutions for businesses and individual consumers, often with a subscription-based model. SaaS refers to cloud-based software services, in which the product (software) is licensed to the customer via the internet (Mäkilä et al. 2010, 6–7). There were a couple of reasons for choosing this focus: the researcher's interest in the industry and industry-specific features that support the need for this type of research. These features indicate a high level of digital maturity in the business and strong employee motivation to adopt new

technologies, facilitating early adoption of technologies such as AI (Bughin et al. 2017, 7; Chen 2024, 1). Furthermore, the features of SaaS businesses provide an interesting perspective for AI-CRM research. Firstly, SaaS companies are often operating in a global environment from an early stage, which makes these businesses diverse in terms of the geographic location of their customer base (Efrat & Shoham 2013, 544). Secondly, the subscription-based SaaS business model offers an interesting perspective on how AI can enhance existing CRM practices. In addition, the researcher's own interest naturally affected the choice of research focus.

Given the importance of AI as a technology and the recognised research gap (Ledro et al. 2022, 2; 2023, 9), this study expands existing knowledge on AI-driven customer relationship management by examining the ways AI is being implemented in practical settings within the SaaS industry. Thus, combining the knowledge from existing CRM literature and the implications of AI-CRM to organisational capabilities, and finally bridging this knowledge to the SaaS business context, this study provides a more comprehensive picture of AI implementation as a tool to drive competitiveness and customer value. To purposefully explore the ways AI is being used in customer relationship management in SaaS businesses, this study aims to answer the following research question:

How can artificial intelligence contribute to customer relationship management in a SaaS business?

To answer this research question comprehensively, this study will draw on previous literature and empirical evidence to answer the following sub-questions:

SQ1: What are the key operational and strategic objectives of customer relationship management in SaaS businesses?

SQ2: What types of challenges typically hinder the achievement of customer relationship management objectives in SaaS businesses?

SQ3: How is artificial intelligence being applied in SaaS companies' customer relationship management to achieve these objectives and overcome these challenges?

The research questions provide a systematic approach to answering the main research question by first addressing the broader implications of AI as a data-analytics tool for CRM practices. To support the categorisation and understanding of findings, a conceptual model for AI use in CRM is presented. The literature review will also discuss the common features of modern CRM and the main features of the SaaS business model, which will help recognise the main goals and, conversely, challenges that modern companies face in their CRM practices. These findings will then be compared to

empirical evidence to recognise the most important points where AI as a data analytics tool within CRM can be implemented in practice.

This study follows a structure aimed at comprehensively discussing the research topic and providing an understanding of the practical implications without delving into technical details. After the introduction and presentation of the research questions, this study begins with the literature review. The literature review is structured in a funnel form, where the broadest concept is presented first, and this is followed by narrower concepts. First, the topic of customer relationship management is discussed by addressing the topic from a contemporary perspective, defined by globalisation and data abundance. Then, the literature review moves to discussing the implications of AI for CRM. Here, the discussion focuses on the previous theoretical understanding of different types of data analytics in CRM. In addition, a theoretical model for categorising AI functionalities is presented. Finally, previous literature on SaaS business models and the main features of SaaS provider CRM is collected to form the scope of the study, while also narrowing the broader topics down to a more practical level and presenting the literature review concepts in a conceptual model.

After the literature review, the study presents the chosen methodology to find answers to how AI is currently being implemented in SaaS companies in practice. The study will go through multiple SaaS industry customer stories (sometimes referred to on websites as *case studies*) published on CRM vendor websites, analysing the AI-CRM features and functionalities implemented, and assessing what type of objectives and challenges this technology commonly addresses. The previously developed conceptual model will be modified based on the findings to create a more comprehensive processual model that answers the research question. With the consensus derived from the existing literature and empirical findings, the study will contribute to prior academic research, provide related managerial implications, and present new, recognised suggestions for future research within the topic of AI-CRM. Next, the study will move on to the literature review, starting with introducing features of customer relationship management in modern days, which can be drastically affected by disruptive technologies like artificial intelligence.

2 Foundations of AI-enabled CRM in a SaaS context

2.1 Managing customer relationships in a global economy

By highlighting the key issues of this large body of previous literature, this chapter addresses the broadest concept of the study, customer relationship management (CRM), and sets out the key areas for addressing the research question. To understand which areas of customer relationship management are particularly important or applicable to AI-driven applications, it is first necessary to delve deeper into the topic of CRM as a business dimension.

2.1.1 Features of modern customer relationship management

Managing customer relationships has always been essential in determining business success. CRM aims to drive business success by maintaining customer engagement with existing customers and acquiring new customers through means of sales, marketing, and customer service (Payne & Frow 2005; Reinartz et al. 2004, 196). However, as businesses have stepped into the digital era, characterised by increased global competition and a rapidly changing business landscape, focus on customer relationship management has become even more important in corporate strategic decision-making (Ramaseshan et al. 2006, 195). As a result, customer relationship management has been one of the most discussed topics in the academic business literature since the new millennium, with research volume still increasing (Meena & Sahu 2021, 136).

Customer relationship management (CRM) is a multidimensional concept which has been defined in the previous literature in many ways, depending on the perspective. At its core, CRM is a centralised *framework* for companies to manage their customer relations and maintain customer dialogue across several touchpoints, from customer acquisition through the entire customer lifetime (Al-Homery et al. 2023; Reinartz et al. 2004, 294), making it a core business process and a strategic tool (Hillebrand et al. 2011). Some other scholars support the holistic business approach by describing CRM as a combination of people, technology, and processes (Keramati et al. 2010, 1172; Sethi 2021, 424), which aims to manage customer relationships through the customer life cycle. On the other hand, according to a literature review of CRM definitions by Al-Homery et al. (2023, 30), the definition of CRM has shifted from being a framework to a comprehensive business and marketing *strategy*, which integrates different parts of organisational constructs and activities to maximise customer acquisition and retention efficiency. The strategic definition is supported by Del Vecchio et al. (2022), who see CRM as a strategy to build a customer-oriented culture, which represents a major shift in organisational focus from a previous transactional focus (Reinartz et al. 2004, 294). Through

continuous evolution and integration of new technologies and rising competition, CRM has become a key focus point for business strategies, aiming to effectively collect, store, and analyse customer data to create value for customers and shareholders through enhanced customer knowledge and creation of actionable insights (Beldi et al. 2010; Garrido-Moreno et al. 2015, 384; Nazarpouri et al. 2020, 2).

As discussed, CRM includes many different layers of business constructs, which makes it difficult to manage. CRM systems are designed to connect the people, processes, customers, and collaborating firms of an organisation, making a complex set of issues more manageable (Coltman et al. 2011). In recent years, this technological dimension has become increasingly prominent in the definitions; information technology (IT) systems and other technological solutions have changed the way companies leverage customer data to their advantage. The so-called ”CRM revolution” in the 1990s was largely due to advances in information technology and the implementation of CRM systems (Keramati et al. 2010, 1172), as companies were able to collect and use customer data more efficiently, introducing new ways to segment and measure customer profitability (Libai et al. 2020, 44). Since then, CRM systems have become a significant part of corporate system portfolios, and CRM system providers like Salesforce, HubSpot, and Zoho have been enjoying the rapid growth of the CRM system market. Companies have been investing increasingly in CRM systems, aiming to improve their ability to manage the different phases of the customer lifecycle (CLC), from acquisition to termination, increasing the value of the existing customer base (Coltman et al. 2011, 205).

Implementing CRM systems provides significant strategic benefits to companies and largely contributes to company performance. Previous literature has acknowledged the positive impacts of CRM system implementation towards enhanced sales and marketing performance, showing increasing revenue outcomes (Boulding et al. 2005; Coltman et al. 2011, 216). These systems enable companies to improve sales, prevent churn through effective customer retention measures, and streamline customer service operations (Coltman et al. 2011, 205). The quality of CRM systems has a direct effect on company performance by supporting these critical customer-focused processes (Suoniemi et al. 2022), enabling more effective responding to shifting customer desires, and reducing costs from inaccurate resource allocation (Beldi et al. 2010, 339).

CRM systems provide organisations with enhanced capabilities for information flow across business departments, making it easier to collect and use the customer data in different phases of CLC (Hillebrand et al. 2011). According to Reinartz et al. (2004, 295), the objectives of CRM vary depending on the stage of CLC, and different resources must be allocated accordingly. In the

beginning, CRM systems provide support for sales in acquiring new customers, and resources can be allocated depending on the determined probability of purchase (Reimer & Becker 2015, 151). In addition, CRM systems support sales to understand prospective customers better, which can result in an increased volume in sales (Richard et al. 2007, 941). New and existing customers can then be segmented by their value into different customer portfolios, enhancing understanding of relative customer value, as resources should be allocated towards the most valuable customers (Thakur & Workman 2016, 4095). Collecting data from high-segment customers to a CRM system enables companies to draw actionable customer insights that can be used for retention measures like product personalisation and timing churn-preventing actions (Ngai et al. 2009, 2594), or for value maximisation through repurchases, cross-selling or upselling (Reimer & Becker 2015, 153–154). By efficiently collecting and leveraging customer data to generate customer insights, enabled by a high-quality CRM system and a clear CRM strategy, a company is more likely to build longer, more valuable customer relationships, leading to a sustainable competitive advantage (Boulding et al. 2005, 157).

The importance of CRM has also been emphasised by increasing competition and, simultaneously, by a broader customer base resulting from globalisation. Being able to understand and serve customers across borders, while also keeping up with the rising competition, requires efficiency and a shift towards a more customer-focused mindset. Next, the impact of globalisation will be discussed.

2.1.2 Globalisation of customer relationship management

In today's global economy, companies are increasingly faced with competition from foreign rivals in their domestic markets. Strong multinational brands are expanding to new markets rapidly, and their large resources allow them to penetrate these different markets effectively. Simultaneously, rising levels of digitalisation, new ways for cross-border communication, and more efficient transportation have lowered the barriers for small and medium-sized companies (SMEs) to enter foreign markets (Katsikeas et al. 2020, 409). Thus, expanding operations and acquiring customers in foreign markets has become an important strategy for companies to keep pace with the rising competition. Expanding into new markets presents different market-specific challenges to a company than in its domestic market, and due to the rapidly intensifying competition, customer orientation increasingly defines a company's ability to succeed (Tuominen et al. 2023, 480). The internationalisation process requires companies to respond to changing customer demands across markets while simultaneously coping with increased complexity and competition (Katsikeas et al. 2020, 408). Moreover, a company

entering an international market must be able to adapt its CRM strategy to market preferences, cultural differences and the impact of formal and informal institutions (Rollins & Gabrielsson 2016, 4223).

The need for international expansion, while managing the complexities of international markets, has consequently increased the need for global CRM strategies. To realise successful outcomes, successful alignment of CRM practices with business strategy, culture, and other wider corporate constructs has become an important factor determining company performance in international contexts (Jaber & Simkin 2017, 1031). Moving to a global environment, companies need to revisit their strategies to keep their customer base and resources well-managed. Global CRM strategies facilitate tailoring their services and marketing efforts effectively through segmentation and customer portfolio management, which aims to ensure that the most profitable customers across markets are prioritised (Thakur & Workman 2016, 4095–4096). Through well-managed customer segmentation, companies can systematically take action in a complex customer environment to promote a more customer-oriented corporate culture. Customer orientation, supported by global CRM strategies, enables the correct level of localisation to be found. By tailoring products and services to specific markets and customer preferences, the company can improve international customer satisfaction (Tuominen et al. 2023, 480).

The impact of global CRM strategies has been researched, especially from the perspective of international marketing strategies. The challenge of international marketing is the different cultural factors across markets that influence how they respond to marketing communications. According to Vaidyanathan et al. (2013, 45), cultural differences largely shape how consumers respond to marketing communications, underscoring the importance of CRM practices. Thus, collecting customer and market information is critical for shaping international marketing strategies, as CRM can integrate varying market information, enabling better decision-making in adapting international marketing programs to foreign market preferences and a diverse international customer base (Katsikeas et al. 2020, 407–408).

Collecting and analysing varying market data is possible with an appropriate CRM system. These systems play a key role in international strategy shaping by improving information flow and access to market information. CRM systems are being used to facilitate personalised offerings for customers globally, enabling cost-effectiveness and supporting cross-border transactions (Katsikeas et al. 2020, 406). Furthermore, access to excess market information helps identify, engage, and serve customers across markets, regardless of geographic, economic, or cultural differences. Previous literature supports that successfully integrating collected information into decision-making processes can

provide companies with a competitive advantage in foreign markets (Navarro et al. 2010, 49) through enhanced ability for sensing opportunities, supporting activities that improve customer engagement and customer experience, and helping to introduce new products and services (Tuominen et al. 2023, 480–481).

2.1.3 Data-drivenness and data abundance

With the increased potential for data exploitation, companies have more opportunities to analyse data across markets and use it to define their CRM strategies (Boulding et al. 2005, 157; Hillebrand et al. 2011, 595). This central role of data has emerged simultaneously with the emergence of improved capabilities for data storage and sharing, creating an abundance of data. Hence, this section will discuss the impact of this data abundance, or better known as Big Data, on the use of CRM and how it can affect a company's competitiveness.

Today's customer relationship management focuses on customer and market intelligence, which enables a company to formulate strategies to improve, for example, sales and marketing processes. In a digitalised environment, customer and market data are widely available from different sources and in different formats. This vast and differing collection of data is referred to as Big Data, which, despite its already high volume, is growing exponentially (Gandomi & Haider 2015, 138). Big Data can originate and be derived from various data sources, from social media to scientific articles, and from sound files to videos. An organisation's ability to collect and use this data to its advantage is one of the greatest competitive advantages of the modern business world (Fernando et al. 2018, 4010). Analysing and utilising Big Data in strategic decision-making enables organisations to improve the effectiveness of different parts of business operations, thereby positively affecting companies' possibilities for successful international expansion (Del Vecchio et al. 2022, 1087; Thanatchaporn 2024, 115).

The role of Big Data in modern CRM strategies is growing in importance, and managing this vast amount of data is critical for keeping pace in the growing competition. Analysing Big Data can help companies in designing effective CRM strategies, aimed to enable personalisation and contribute to increasing brand reputation and loyalty by giving companies useful insights on segmentation, targeting, and positioning in domestic and cross-border markets (Del Vecchio et al. 2022, 1071; Katsikeas et al. 2020, 406). Implementing Big Data analytics (BDA) into CRM strategies allows organisations to respond to emerging changes in the international environment more efficiently, as real-time disruptions can be recognised and actions properly planned from the collected information (Gandomi & Haider 2015, 143–144; Thanatchaporn 2024, 115). With Big Data analytics, insights

can be collected in real-time by tracking and analysing various online traces, such as words written on social media, transactions, locations, and even behaviour (Hilbert 2016). In addition, leveraging BDA can allow companies to collect important insights on foreign markets, helping them design and utilise their strategies in a complex global environment without compromising their capabilities to retain commitment and competitiveness in local contexts (Bertello et al. 2021, 1038). According to a structured literature review of CRM and Big Data analytics by Del Vecchio et al. (2022), many organisations have already adopted BDA to enhance their CRM execution, improving their ability for accurate data-driven decisions. Furthermore, their research shows that previous literature has emphasised the potential of BDA to enhance company performance by supporting strategic decision-making and the implementation of sales and marketing strategies in local and cross-border contexts.

With modern CRM systems, organisations have been able to collect vast amounts of data on their current and potential customers, suppliers, and other stakeholders. However, the realisation of CRM system benefits for strategic decision-making largely depends on the data entered into the system and the company's ability to derive actionable, truthful insights from this data (Reimer & Becker 2015, 150). Without the capability to analyse and generate useful insights, having this vast amount of data is useless (Del Vecchio et al. 2022, 1070). Indeed, despite the wide availability of different CRM systems, finding and utilising relevant customer data from this huge data pool is a technological challenge for many companies (Del Vecchio et al. 2022, 1070; Reimer & Becker 2015, 150).

To overcome this problem, artificial intelligence (AI) has emerged as a transformative tool in CRM systems, enabling businesses to make large amounts of data available efficiently. By using technologies such as machine learning (ML) and natural language processing (NLP), AI can find patterns and generate actionable insights that might otherwise be difficult to extract from Big Data (Latinovic & Chatterjee 2022, 967). An organisation's ability to leverage AI in its CRM operations can deliver unprecedented capabilities in customer relationship management and significantly improve competitiveness in both domestic and international markets, reducing the need for human intervention in data analysis and even in customer service situations.

2.2 Implementing artificial intelligence in customer relationship management

Having discussed the concept of modern CRM, consisting of key features that businesses are concerned with when crafting their contemporary CRM strategies, the study now integrates these concepts with the concept of artificial intelligence. Firstly, the main features of artificial intelligence as a technology are presented to provide a broad understanding of what it does and how it can be utilised in CRM practices. Then, a more detailed view of functionalities is given to provide an

understanding of the variety of functionalities and how this technology can be adapted. Finally, an existing framework for integrating these different functionalities into the company CRM dimension is presented and discussed to provide a broad conceptualisation of AI-CRM use. Furthermore, this chapter will also discuss the challenges modern CRM faces to add perspective and depth to the literature review.

2.2.1 Introduction to AI-driven CRM

Artificial intelligence (AI) has significantly changed the business landscape in recent years, and its presence in both academic research and popular publications has been rapidly growing (Chen 2024, 3947; Ledro et al. 2023, 2). With digitalisation, businesses have access to a significant amount of data, which has exploded with the advent of more advanced cloud services and digitised market environments. Indeed, according to McKinsey Global Institute (2017), AI has the potential to become the next wave of digital disruption, and the ability for companies to harness this technology has become critical for organisations to compete. With Big Data, AI has been universally distinguished as a key driver for business productivity and success, relevant to all markets and industries worldwide (Gupta et al. 2020, 27). This technology has also received widespread consumer awareness across markets, as companies are increasingly leveraging AI-enhanced solutions visible to end customers, such as AI chatbots, image recognition, and product personalisation (Gantz et al. 2017).

Although the real potential of AI is widely debated, its definition does not differ much in the previous literature. As mentioned, AI is a tool utilising machine learning (ML), natural language processing (NLP) and large pools of data like Big Data, to process large amounts of data and make broadly analysed decisions, constantly learning from new data input from various sources (Chatterjee et al. 2019, 145; Latinovic & Chatterjee 2022, 968; Ledro et al. 2022, 48). As an integrated set of multiple technologies, AI can read and interpret not only large amounts of data but also diverse data, creating comprehensive answers and analyses that can be used to answer questions in real time and adapt its responses to different contexts (Gantz et al. 2017). AI is therefore defined as a technology enabling the machine to think, learn and imitate human behaviour intelligently, without the need for separate human intervention (Libai et al. 2020, 44; Marti et al. 2024, 439). With these functionalities, firms can leverage AI in various ways, ranging from creating insights and recommendations for strategic decision-making to real-time customer service applications to provide human-like service interaction at different customer touchpoints (Jiang et al. 2022, 2; Kushwaha et al. 2021, 208). AI offers significant opportunities to simplify processes, reduce costs, and increase efficiency in customer

relationship management, which is why it is seen as a powerful tool for improving CRM (Bughin et al. 2017; Ledro et al. 2022, 48).

By integrating AI with CRM platforms, companies can more effectively leverage data collected in CRM systems to generate deeper customer insights, automate processes, and predict customer behaviour with more accurate analytics (Chatterjee et al. 2019, 145; Ledro et al. 2022, 48). AI integrated CRM system (AI-CRM) is broadly defined as any CRM system that sufficiently adapts to the data inserted by utilising any AI applications (Libai et al. 2020, 45). These AI applications enrich CRM functionalities with insights derived from Big Data, which is seen as the cornerstone of analysis tools, such as AI-CRM (Del Vecchio et al. 2022, 1070). Utilising Big Data analytics with AI-CRM has emerged as a prominent strategy for organisations to gain a competitive advantage (Ledro et al. 2022, 48), with previous research suggesting a positive correlation between adopting AI-CRM and improved performance and financial results (Bughin et al. 2017; Chatterjee et al. 2019, 145).

AI-CRM provides organisations with several key benefits that contribute to increased performance. One of the most significant advantages is the ability to provide faster and more accurate data analysis, which allows companies to make meaningful and actionable insights from internal customer data pools and external Big Data (Latinovic & Chatterjee 2022, 967; Libai et al. 2020, 45). Improved data-analytics enable more accurate customer segmentation, making it possible to tailor strategies for different customer groups (Chatterjee et al. 2022, 438; Libai et al. 2020, 45). Furthermore, AI-CRM enhances automation of routine tasks, such as data entry to the CRM system, contacts and follow-ups via email or other integrated applications, or lead scoring, thereby improving operational efficiency (Darban et al. 2024, 542; Gupta et al. 2020, 28; Marti et al. 2024, 439).

AI-CRM also plays an important role in improving customer service, speeding up response times and enabling automated, real-time human interaction through intelligent chatbots and virtual assistants (Gupta et al. 2020, 35; Libai et al. 2020, 46). In addition, AI-CRM enables hyper-personalisation, in which customer communications, marketing tools, and the products or services offered can be tailored to the exact needs of a specific customer or customer group (Darban et al. 2024, 542; Kumar et al. 2021, 866). These functions enable more efficient sales by shortening sales cycles and considerably reducing the risk of customer churn, enabling rapid response and preventive action (Bughin et al. 2017; Rusthollkarhu et al. 2022, 250–252). AI-CRM also supports more efficient internal operations, creating a more straightforward integration between business functions and thus enabling collaboration and effective resource allocation, thereby increasing cost-efficiency (Latinovic &

Chatterjee 2022, 970; Rusthollkarhu et al. 2022, 250–251). Examples of CRM system vendors that offer AI applications are given in Appendix 1.

Having covered the broad level of CRM functionalities that AI can be integrated with, a more detailed overview of AI functionalities is discussed. While this study does not intend to discuss technical issues on a deep level, it is crucial to understand the technological nature of AI as a technology to understand in which types of situations it can ultimately be utilised.

2.2.2 Key functionalities of AI in CRM systems

The role of AI as a competitive enabler and its potential to improve the operations of customer-centric organisations is rapidly growing. As companies increasingly rely on their CRM systems to improve their CRM activities, such as customer service, sales, and marketing processes, AI implementations have created opportunities for organisations to get more value from their CRM systems (Chatterjee et al. 2019, 145). Given the multidimensional nature of CRM and the abundance of data, AI allows for multifaceted solutions for data analysis and CRM improvement through different functionalities. By creating better analytics from more data, making predictions about customer behaviour or customer groups, and automating routine processes, AI-CRM applications have become strategic assets rather than mere tools in the modern business environment across markets (Libai et al. 2020, 45).

According to a literature review by Lepenioti et al. (2020), data analytics are categorised in three main categories: descriptive, predictive, and prescriptive analytics. As a powerful tool for enhanced data analysis, AI can improve every category of analytics with different CRM related applications. When discussing the impact of AI on CRM, a fourth category, process automation, should be added (Latinovic & Chatterjee 2022). Different categories of data analytics aim to answer different questions, depending on whether they examine causes, consequences, or future expectations, while AI also provides tools for process automation through various technological solutions.

Descriptive analytics aims to answer questions i) What has happened? ii) Why did it happen? and iii) What is happening now? (Lepenioti et al. 2020, 57). Descriptive analytics uses historical data to recognise patterns and trends and create insights about customer behaviour. In the context of CRM, descriptive analytics provide foundational insights for strategic decision-making and reasoning for a certain type of customer engagement (Latinovic & Chatterjee 2022, 968). AI improves descriptive analytics by enabling more efficient collection, organisation and visualisation of data from large pools of data. Using technologies such as natural language processing and machine learning algorithms,

AI-CRM systems can generate meaningful analyses more rapidly from diverse structured and unstructured data sources, such as social media interactions, demographics, and customer feedback (Chatterjee et al. 2019, 146; Libai et al. 2020, 45). With AI-CRM, descriptive analytics are providing organisations with improved functionality, such as more accurate customer segmentation, better mapping of customer journeys, and higher profitability analysis for sales and marketing action performance (Kushnarevych 2024, 129; Ledro et al. 2023, 2).

Predictive analytics instead aims to answer questions i) What will happen? And ii) Why will it happen (in the future)? (Lepenioti et al. 2020, 57). By utilising collected historical data and real-time data, AI can give predictions on what is *likely* to happen next. Developing predictive analytics can be a powerful application for CRM systems, as AI can help anticipate customer behaviour, forecast outcomes of different decisions, and even make proactive decisions (Kushnarevych 2024, 130; Latinovic & Chatterjee 2022, 968). Through predictive analytics, AI can support company CRM actions in every step of the customer journey, from creating sales forecasts to customer lifetime value (CLV) predictions to predicting possible risk of churn (Libai et al. 2020, 46; Rusthollkarhu et al. 2022, 250–252). Indeed, the increasing computing power of AI has a disruptive capability in enhancing predictive analytics, which has been seen as one of the core functionalities that AI can drastically improve (Latinovic & Chatterjee 2022, 969).

Building insights from descriptive and predictive analytics, prescriptive analytics aims to answer questions i) What should I do? And ii) Why should I do it? (Lepenioti et al. 2020, 57). By doing so, prescriptive analytics aims to recommend the best possible actions, which businesses can then utilise to, for example, maximise customer value, prevent churn, or streamline operations (Latinovic & Chatterjee 2022; Marti et al. 2024, 440). AI-driven CRM systems are increasingly adopting prescriptive analytics, and many key functionalities have been greatly enhanced with AI tools. By utilising the vast pool of historical and real-time data, AI-CRM systems can run multiple simulated scenarios to determine the most suitable course of action, or even make automated decisions, thereby reducing the need for human intervention (Chatterjee et al. 2019, 145). Enhanced prescriptive analytics functionalities like offer recommendations and dynamic personalisation (or hyper-personalisation) (Gupta et al. 2020, 29; Ma et al. 2024), marketing campaign and sales process optimisation (Darban et al. 2024, 542; Kumar et al. 2021, 869; Rusthollkarhu et al. 2022, 241), and customer prioritisation (Chatterjee et al. 2019, 146) are changing the business landscape rapidly, as the competition for customers across markets has become more fierce in the globalised digital landscape.

Building on insights from descriptive and predictive analytics and creating actionable recommendations for managers, the improvement of prescriptive analytics can bring unprecedented competitive advantage to companies, as AI enables well-informed, real-time support for decision-making (Ledro et al. 2022, 49). Although AI-CRM can enhance companies' ability to utilise prescriptive analytics, it requires advanced AI tools that may still face implementation barriers. According to Latinovic & Chatterjee (2022), improving descriptive and predictive analytics is emphasised more than prescriptive analytics in modern organisations, although it is the development of prescriptive analytics that is likely to be most useful for ensuring competitiveness.

In addition to the three levels of analytics – descriptive, predictive, and prescriptive – AI-CRM also benefits greatly from AI's capability to facilitate or enhance existing process automation (Latinovic & Chatterjee 2022, 968). Where analytics provide insights and guidance for decision-making, process automation ensures operations remain efficient and consistent, and even enables scalability as data volume grows organically through new customers or existing data-collection tools, or inorganically through customer acquisitions and their data. In the CRM context, automation with AI-powered tools refers to the system's ability to perform routine tasks without manual human effort, significantly improving the success of process execution, sales efficiency and responsiveness at the customer interface (Chatterjee et al. 2019, 146).

Globalisation and digitalisation together have increased the customer base of companies enormously, which contributes to the importance of successful processes. International markets, in particular, have a high volume of customer data and tasks around the clock, making automation more important for routine tasks. By automating CRM processes, organisations can increase responsiveness and operational efficiency, thereby providing a better customer experience (Ledro et al. 2022). Data can be collected and inserted into systems automatically, reducing human errors and ensuring data clarity, simultaneously preventing the emergence of clustered data pools or data silos (Latinovic & Chatterjee 2022, 969). With automated data collection and sharing, information flows across firms are streamlined, fostering cross-department collaboration and consequently improving efficiency (Thanatchaporn 2024, 114). In customer service touchpoints, tools such as AI chatbots provide cost-effective customer service at any time, enabling automated customer interactions and ensuring service availability (Jiang et al. 2022; Ngai et al. 2021). Automation of feedback and other customer behaviour analysis enables real-time actions, such as personalised offer banners on websites or in emails, increasing sales and marketing efficiency (Libai et al. 2020; Rustholllkarhu et al. 2022).

Table 1. Categorisation of AI-CRM aims and applications

	Aims	Example AI applications
Descriptive Analytics	Recognising and understanding patterns, providing insights from historical data. Answers the questions: i) What has happened? ii) Why did it happen? iii) What is happening now?	Customer segmentation, customer journey mapping, profitability analysis of sales and marketing operations, customer sentiment analysis (Chatterjee et al. 2019; Ledro et al. 2022; Libai et al. 2020).
Predictive Analytics	Predicting most likely outcomes by analysing historical and real-time data. Answers the questions: i) What will happen? ii) Why will it happen (in the future)?	Customer retention through churn prediction, sales forecasting and lead scoring, CLV predictions (Latinovic & Chatterjee 2022; Libai et al. 2020; Rusthollkarhu et al. 2022).
Prescriptive Analytics	Recommending best actions, enabling personalisation. Answers the questions: i) What should I do? ii) Why should I do it?	Recommendations for decision-making, hyper-personalisation, customer prioritisation, sales process and marketing campaign optimisation (Chatterjee et al. 2019; Gantz et al. 2017; Ledro et al. 2022; Marti et al. 2024; Rusthollkarhu et al. 2022).
Process Automation	Ensuring operational efficiency by automating routine tasks, thus reducing the need for human intervention.	Data collection and sharing across departments, customer service chatbots, automation of sales and marketing actions like emails and real-time personalised offers (Gupta et al. 2020; Jiang et al. 2022; Latinovic & Chatterjee 2022; Libai et al. 2020; Rusthollkarhu et al. 2022; Thanatchaporn 2024).

Table 2 summarises the aims and given examples of applications of AI to CRM systems. AI has the potential to improve aspects of a company's business analytics while providing new tools to automate processes. By creating more accurate and comprehensive analytics, providing computational solutions to support decision-making, and streamlining processes, AI-CRM systems have the potential to significantly transform how a customer-focused business operates.

The next section examines how these key functionalities affect the company's CRM processes. These are explored through three key processes of CRM strategy: communication, coordination, and customisation (3 C's) (Latinovic & Chatterjee 2022), which aim to increase customer value, seen as the key goal of modern-day customer-centric CRM strategies. Together, these sections form a comprehensive view of AI's role in CRM processes and provide an extensive foundation for

understanding how software sector companies can utilise AI-CRM in their cross-border operations as a strategic advantage.

2.2.3 Artificial intelligence as a driver for enhanced customer value

From the more technical perspective adopted in the previous section, this section shifts the focus to AI's broader strategic role in CRM. Using AI applications is not merely a tool for data management and reducing the need for manual work but can also be a driver of customer centricity (Latinovic & Chatterjee 2022, 969) and, consequently, a sustainable source of strategic advantage (Gantz et al. 2017). Indeed, by adopting AI into their CRM systems, companies can deliver strategic value to customers and stakeholders. To conceptualise this shift from technical applications to strategic drivers, this study integrates the discussed technical categories – descriptive, predictive, and prescriptive analytics, and process automation – into a 3 C's model by Latinovic and Chatterjee (2022), providing a useful and simple model for understanding AI's role in CRM strategies from a process-oriented perspective. This model is used to illustrate the types of models that the existing literature has presented and to further examine different AI functionalities in CRM.

The 3 C's model examines how AI facilitates three key CRM processes to deliver customer value. These three processes (3 C's) are *communication*, *coordination*, and *customisation*, and with AI, the creation of customer value can shift from merely economic (cost efficiency, revenue) to increasingly relational (loyalty, satisfaction). By leveraging AI applications discussed in the previous chapter, companies can enhance their relational value creation, thereby generating greater economic value. The 3 C's model is shown in Figure 1 below.

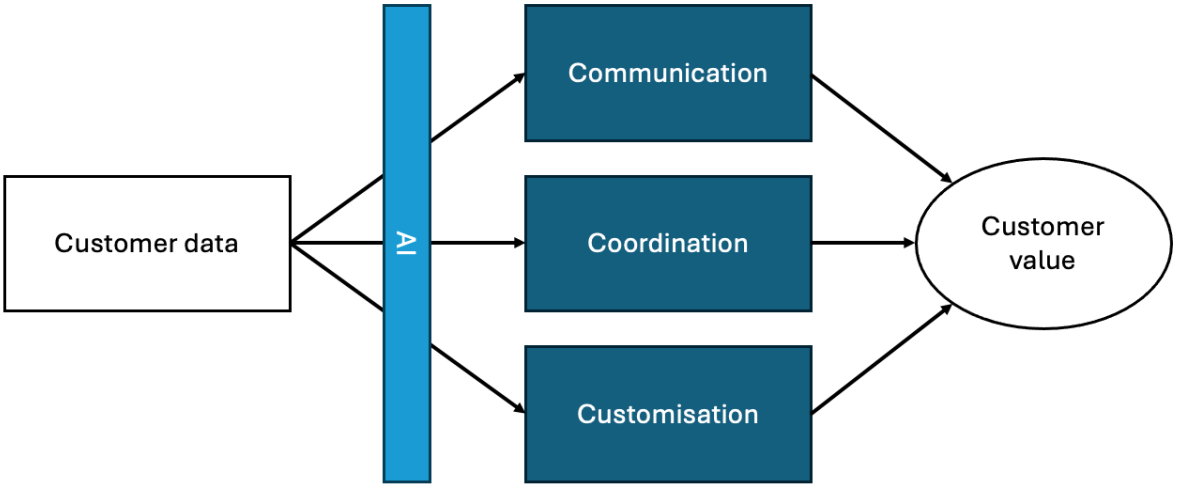

Figure 1. 3 C's model, adapted from Latinovic & Chatterjee (2022, 967)

The first of the three processes presented in Figure 1, communication, refers to companies' ability to communicate timely, accurate, and relevant information to customers and internally across departments (Latinovic & Chatterjee 2022). In the context of CRM, communication is not only about delivering messages; it also encompasses qualitative aspects that differentiate communication abilities, such as message personalisation and responsiveness in interactions. Descriptive analytics-enabled communication automation allows companies to optimise customer communications cost-effectively, improving customer loyalty and retention (Chatterjee et al. 2019, 146). Hence, with higher-quality communication, companies can build satisfied, longer-lasting customer relationships.

With AI, communication processes can be enhanced by enabling personalised and consistent customer interactions that happen in real-time across different customer touchpoints, and even with multiple languages (Biswas et al. 2024). AI-powered chatbots or virtual assistants, using natural language processing (NLP) and large language models (LLMs), can communicate with customers at any time, responding to customer inquiries in a human-like manner (Libai et al. 2020, 47; Selamat & Windasari 2021). Thus, AI allows for the facilitation of customer service by reducing response times and ensuring service consistency, particularly in an international context where different time zones may cause response delays. In addition, AI can also contribute to internal communication by enabling data accessibility and visibility across business departments. This enables sales, marketing, and customer service teams to view and collect real-time data from shared dashboards, thereby narrowing knowledge gaps across teams (Latinovic & Chatterjee 2022, 969; Thanatchaporn 2024, 114). Access to real-time, up-to-date data across departments ensures high-quality customer engagement while simultaneously reducing friction caused by non-shared and inaccurate knowledge (Chen 2024, 3968).

While AI enhances communication by, for example, providing consistency in customer service and ensuring intra-organisational knowledge is up to date across departments, AI can also enable improved intra- and inter-organisational coordination. Latinovic and Chatterjee (2022) define the coordination dimension as the capability of an organisation to align information with internal processes, departments, and systems, as well as with inter-organisational partners. AI-powered CRM systems enhance information synchronisation by offering integrated platforms where information flows across systems and sectors, enabling customer data, created insights, and action plans to be available for separate departments in real-time (Latinovic & Chatterjee 2022, 970). In AI-enhanced coordination, every level of analytics and automation provides applications for improvement. For example, lead routing with predictive analytics allows cross-departments to prioritise the same customers by creating a more efficient and integrated approach to customer acquisition (Gantz et al. 2017; Libai et al. 2020, 47–48).

Cross-department coordination, especially between cross-border departments, can contain heavy coordination tasks that are crucial for efficient operations. AI-CRM facilitates process automation, reducing the need for manual coordination, which can often be complex to execute. Data sharing, automated input, and the automation of other routine coordination tasks decrease the number of manually created mistakes and duplicate work, allowing teams to operate more efficiently even on complex projects (Chen 2024, 3968). Indeed, AI facilitating coordination not only enhance cross-department collaboration but also has significant positive effects on company-level operative and financial performance (Latinovic & Chatterjee 2022, 970; Thanatchaporn 2024, 114–115).

The third strategic process in the 3C’s model, customisation, refers to organisations' ability to customise their products and services and to interact with customers to match their specific requirements (Latinovic & Chatterjee 2022). As discussed in the previous chapter, AI-CRM applications use various data to interpret patterns and predict individual customer behaviour, ultimately providing personalised solutions in the form of recommendations to sales or marketing teams, or directly as an emailed offer to the customer (Gaidhani et al. 2025, 552). For example, prescriptive analytics can recommend highly personalised messages to be sent to certain customers based on their behaviour, engagement history or conversion possibility (Bughin et al. 2017; Lepenioti et al. 2020, 58). In a global context, AI-CRM can enable accurate customisation across borders, where customer preferences vary by culture, market, and industry. Due to the efficient sales and marketing methods streamlined by AI, this kind of customisation at scale can become a significant source of competitive advantage in the global business environment (Ma et al. 2024, 110–111).

With insights derived from different levels of business analytics, AI can enable customisation recommendations also at the product level. A tech service provider can tailor its product offerings based on customer data; for example, customer maturity levels or geographic details can be used to provide targeted support or tailor onboarding processes (Bughin et al. 2017; Latinovic & Chatterjee 2022, 970). Hence, combining AI-enhanced business analytics and automation, offers can be made not only as personalised but also context-aware. Table 2 summarises the different processes (C's) and gives examples of AI applications presented before in this chapter.

Table 2. Example AI applications for the 3 C's processes

	Description	Example processes	Enabled by
Communication	The ability to communicate timely and accurately both internally and externally.	- Chatbots for around the clock, human-like customer service - Multichannel messaging consistency - AI-generated content and timing	- Descriptive analytics - Process automation
Coordination	The ability to coordinate tasks and synchronise information across organisation to enable organisational efficiency.	- Automated cross-department data sharing - Cross-department CRM data views - Predictive lead routing - Automated workflow alignment	- Predictive analytics - Process automation
Customisation	The ability to accurately customise products, services, and interaction to match specific customer requirements.	- Hyper-personalisation of customer interactions and offers - Enhanced customer targeting - Context-aware service/product delivery	- Prescriptive analytics - Process automation

Together, the three C's – communication, coordination, and customisation – provide a process-oriented framework for implementing AI within organisations' CRM systems. According to Latinovic & Chatterjee (2022), implementing AI in pieces to answer certain problems is not itself enough to bring sustainable competitive advantage – instead, AI should be utilised as a strategic asset to enhance customer experience and operational efficiency. By following a strategic framework, AI can enable more seamless communication with customers and internally across departments, streamline coordination in a multilayered organisation, and provide customised solutions and interactions with customers. The 3 C's model stresses the shift from creating economic value towards relational value, which is critical for modern customer-centric organisations to create long-term profitable customer relationships.

Customer-centricity and the creation of relational value are emphasised in cross-border settings, where cultural and market differences and fierce global competition require companies to place special emphasis on their customers (Tuominen et al. 2023, 480). Embedding AI in CRM can provide a strategic advantage in cross-border markets, and integrating AI in a comprehensive fashion, for example, by following the 3 C's process framework, can enhance a company's possibilities to expand and to succeed in foreign markets.

2.2.4 Challenges of data-driven customer relationship management

As discussed previously, modern CRM is based largely on the amount of quality data collected, the insights that can be gained from that data, and the ability to turn those insights into actionable measures (Ledro et al. 2023, 7; Reimer & Becker 2015, 150). While the benefits of AI for advanced data-driven insights are widely discussed, it should also be recognised that implementing technologies for data analytics does not come without challenges. Especially in the context of CRM, when tools process customer data, there are practical and ethical issues to consider. Failing to satisfy customers that their data is protected and will remain private may lead to trust issues difficult to repair (Chatterjee et al. 2020, 2). This section deepens the discussion of AI implementation by addressing the related main challenges acknowledged in current academic literature.

The emergence of Big Data has transformed CRM by enabling data to be collected and utilised in vast quantities from multiple sources globally, making targeting and personalisation more efficient through BDA tools leveraging AI. However, collecting, storing and utilising this kind of customer data is not unproblematic from the company's perspective. Utilising data through BDA can lead to problems of compliance with data protection requirements and even misunderstandings about data ownership (Stone et al. 2017), which can cause juridical clashes. With compliance being a heavy constraint for data use, ultimately the risk lies in consumer trust – indeed, companies are even more greatly affected by changing consumer perceptions around data privacy, requiring constant monitoring of CRM strategies (Harvard Business Review Analytic Services 2018). Consequently, the contemporary data-driven culture and globalised business environment have created a need for new types of regulation and security measures to ensure that data is safe wherever it flows.

Data privacy and security are themes that have become and are still getting more significant in everyday business. With a deeper level of digitalisation, there come more advanced CRM systems, which can handle even larger quantities of data, causing a rapid growth in unintentional and intentional data breaches (Bakator et al. 2021). Data misuse, cyberattacks and data breaches have become prominent risks that may have a major economic impact on companies and an even more

significant impact on individuals. With data security measures, companies try to secure their databases from external and even internal threats, which can cause great damage to the company. Globally operating companies that transfer data across borders are particularly exposed to these risks, as a data breach in one country can erode customer trust worldwide (Olaniyan 2024). From a business perspective, making transparent measures towards protecting customer information has significant strategic value, as customers tend to put considerable weight on data security when choosing their service provider (Honeycutt et al. 2012, 35). Furthermore, even if the company does not operate in other countries, its data might still be exposed to cross-border risks. Usually, to reduce CRM and BDA implementation costs and make data storage more efficient, many companies use third-party cloud services. Many times, cloud storage is not physically located in the same country where the company operates, and the data is transferred to servers abroad. Transferring large amounts of data through cloud services creates an extended need for data security measures to ensure customer data protection (Bakator et al. 2021).

To support ethical and secure use of data, many jurisdictions have implemented their own regulatory frameworks for companies to guide ethical business and restrict harmful data collection and use. These frameworks are a critical constraint on how international companies can operate, and failing to comply with the regulations can lead to major consequences, such as fines [Meta's 1,3 billion € fine for a GDPR violation (Milmo & O'Carroll 2023)] and often substantial negative media attention, leading to a loss in customer trust. Probably the most famous and extensive frameworks, the EU's General Data Protection Regulation (GDPR), the California Privacy Rights Act (CPRA) in the United States, and the UK's Data Protection Act (DPA), concern small to large companies operating in these large economic jurisdictions. For example, the GDPR requires organisations to integrate privacy protection deep into their systems and operations (Taylor et al. 2024, 2). In an international context, companies have to comply with every regulatory framework they operate in; differences in definitions of sensitive data (Kuan Hon et al. 2011, 227), constraints for data transfers, and consent requirements (Stone et al. 2017) make data transferring processes complex, directly constraining the implementation of standardised CRM processes between jurisdictions.

Beyond operational and legal constraints, there is also a technical limitation forming challenges for implementing AI solutions in CRM. Global CRM requires technical capabilities to analyse and generate accurate, reliable insights from data that differ in format, language, and reliability (Holtrop et al. 2017). Integration of tools capable of accurate and efficient data collection and analysis that also comply with the requirements of differing regulatory environments is difficult and complex,

especially in an international context where data quality varies greatly. Consequently, this complexity not only makes integration of new technology expensive but also highly risky (Fernando et al. 2018).

In conclusion, the challenges of implementing AI in CRM are multidimensional. While more advanced data analytics requires stronger measures for data privacy and security, there are also technical issues that might hinder the adoption of new technologies. In addition, a cross-border environment also brings functional and operational challenges to CRM, as data is collected and processed in different forms, languages, and jurisdictions, making compliance matters more complex. Collecting and using data is heavily regulated, and companies are strictly required to comply with regulations in their area of operation regarding the data they collect, store, and use. In addition, companies face technical challenges when building international CRM systems, exposing them to both financial and operational risks. Together, these challenges form the strategic boundaries in which companies can operate in a modern data-driven business environment, providing safety to customers and at the same time creating the foundation for sustainable business in an international context.

2.3 Managing customer relationships in the SaaS ecosystem

This chapter collects academic literature on the fundamentals of Software-as-a-Service business models. As this study aims to collect information on how artificial intelligence is being implemented in SaaS company CRM actions, fundamentals are presented on a broader level without going deeper into technical details. Therefore, the literature reviewed focuses on SaaS business fundamentals, such as how revenue is generated, typical CRM features, and the tendency toward global scalability. Furthermore, this chapter will frame the research scope, highlighting the features that AI-CRM can impact.

2.3.1 Exploring characteristics of SaaS business

The software-as-a-service (SaaS) model has significantly changed the field of enterprise software, with major changes in how software is developed, distributed, and deployed. Central to the SaaS business model is accessibility, as software is being distributed (Kotan et al. 2025, 2; Ojala & Tyrväinen 2011, 43). Corporate clients can adopt SaaS software through subscription-based payments, encompassing not only the license to use the software but also maintenance, updates and security (Kotan et al. 2025, 2; Sun et al. 2022, 593). This distribution model eliminates the need for on-premises infrastructure, making software deployment easier, cheaper, and faster (Martins et al. 2019, 191). These features make software more accessible, especially for small and medium-sized companies, which previously faced greater barriers to adoption due to the high costs of IT

infrastructure. As a result, SaaS has equalised the opportunities for different companies to benefit from various technologies, such as CRM systems.

In addition to the rising demand for software, the possibilities for software development have been increasing rapidly due to the improving capabilities of cloud computing. This has resulted in a major increase in software supply, and the competition between SaaS vendors has continuously tightened (Dash 2024, 904; Kotan et al. 2025, 2). However, unlike in more traditional forms of competition, SaaS vendors are not tied to the countries where they are born, as SaaS products are not subject to traditional export limitations, such as modes of transportation and distance. Customers can use SaaS products remotely at any time and from any location via the internet, eliminating distance restrictions and making the products portable (Sun et al. 2022, 593). This key feature allows SaaS vendors to quickly penetrate new markets, making them well-suited for cross-border operations. Indeed, many times SaaS vendors as technology-intensive companies are considered as early internationals in the international business literature, with a tendency to start operating in foreign markets early and having a born global mindset (Efrat & Shoham 2013, 544; Varma et al. 2016, 243).

Another key feature of SaaS products is the high level of standardisation. A SaaS product is typically based on a multitenant model, where a single version of a software is being used by multiple users (tenants) (Kang et al. 2011, 464). According to Boillat & Legner (2013, 47), multitenancy lowers costs when the same software can be distributed to many, but at the same time limits the level of customisation capabilities. Similarly, Sun et al. (2022, 594) note that the rigidity of SaaS products may cause inconvenience for customers. However, many SaaS companies have addressed this constraint by introducing ecosystems of software add-ons, such as Salesforce AppExchange or HubSpot Marketplace, which allow users to customise their existing product capabilities (Boillat & Legner 2013, 51). By allowing standardised software cores modified with modular add-ons, SaaS companies can provide standardised multitenant products to a wide customer base without limiting customer-level customisation capabilities. Consequently, modular add-ons have become a key feature of the SaaS business model, and a significant revenue source for vendors (Boillat & Legner 2013, 52).

Because a SaaS business operates in online environments, it is inherently very data-driven. This data-rich environment provides vendors with both possibilities and obligations that affect the business model, but also how tools for data analytics can be utilised. SaaS platforms continuously collect user data, such as usage, transaction, and interaction history, which can be used to produce analytics for CRM purposes (Kotan et al. 2025; Sanches et al. 2025). In addition to mere CRM purposes, SaaS

vendors leverage collected data to drive innovation and business development, build customer-centricity (Dash 2024, 905) and increase their renewal rates (Martins et al. 2019, 206). This significant amount of real-time data separates SaaS vendor business possibilities from traditional software, as the vendor's role is not limited to being a software provider, but opportunities also arise from the possibilities for continuous data-driven development and even the exchange of information. Therefore, the data-rich nature of SaaS businesses enables early and efficient adoption of novel data-analytic tools, such as AI, which can be pivotal for company CRM practices.

2.3.2 Factors shaping CRM in the SaaS business

The rising demand for software solutions and the emergence of new technologies, such as cloud computing, have created opportunities for new SaaS companies to enter the market. Consequently, the increased supply and the ability for SaaS companies to penetrate international markets early have given customers the ability to change their services promptly (Kotan et al. 2025, 2). To counter increasing global competition, software providers must implement a CRM strategy. Hence, to support understanding of how AI applications can contribute to SaaS customer relationship management, the key characteristics of CRM in SaaS business acknowledged by the academic literature are presented.

The SaaS business model has various typical characteristics that directly affect the design and implementation of CRM strategy and its monitoring. From previous on-premises software and hardware models, revenue models have shifted towards recurring subscriptions, and greater importance is being given to other sources of revenue, such as additional services (Boillat & Legner 2013, 50; Sun et al. 2022). The subscription-based business model and the importance of additional fees stress the need for continuous customer engagement. This is also supported by high competition – customers must be engaged constantly, and their satisfaction must be monitored to avoid losing recurring revenue streams that in the SaaS environment can have a significant impact on long-term growth (Kotan et al. 2025, 2). Because of the often-global revenue model that requires constant customer engagement, international CRM is deeply embedded in the SaaS business model.

Academic literature recognises that SaaS businesses benefit greatly from customer-centricity as a form of corporate culture (Dash 2024; Kotan et al. 2025; Srinivasa et al. 2020). The growing importance of add-ons and other additional fees leads to SaaS companies' requirement to provide new services through the entire customer journey (Boillat & Legner 2013, 49). As studied by Soltani et al. (2018, 244), customer-centric culture is an enabler of vendor CRM success, while Dash (2024, 912) shows that creating a customer-centric culture has a clear positive impact on SaaS company CRM success. Furthermore, Srinivasa et al. (2020, 765) discuss a major shift in the entire SaaS

acquisition process, as business users are now driving new software evaluation and adoption, previously managed by the organisation's CIO. Thus, SaaS companies must adjust their strategies to emphasise user experience and usability, focusing on customer-centric measures rather than merely technical features.

Central to SaaS vendors and their CRM strategies is monitoring key performance indicators (KPIs) that measure customer value and retention, like customer lifetime value (CLV), satisfaction metrics, and churn metrics. Literature on SaaS vendor CRM implementation especially highlights measuring customer retention, or conversely, measuring customer churn, as essential for maintaining and improving competitiveness (Kotan et al. 2025; Sanches et al. 2025). Indeed, according to Sanches et al. (2025, 130), in the SaaS sector, the costs of acquiring a new customer are many times higher than those of retaining an existing customer. To succeed in global competition, vendors need to retain customers efficiently, which again reinforces the need for efficient international CRM. Kotan et al. (2025, 2) stress the importance of CRM as a tool for monitoring customer churn even further by stating that the whole purpose of CRM in the SaaS sector is to manage, prevent and understand churn.

In summary, the SaaS business model is shaped by online access enabled by cloud computing, a subscription-based revenue model, the growing importance of additional fees, and the highly data-driven environment. For SaaS vendors, predicting and preventing churn is critical – acquiring new customers can be many times more expensive compared to retaining existing customers as subscribers. In addition, literature suggests that customer-centric focus is essential for SaaS vendors not only for retention purposes, but also for new sales – the evaluation and decision of software acquisition is now increasingly made by the business user, not the CIO or other executive (Srinivasa et al. 2020). Next, having covered the concepts of this study, the key insights from existing literature will be summarised and connected to provide a conceptual framework before moving on to the empirical part of the study.

2.3.3 Conceptual framing of AI-enabled CRM in SaaS companies

This literature review has reviewed existing research on three core concepts. Chapter 2.1. discusses customer relationship management (CRM), recognising the common characteristics and key objectives of modern CRM. Chapter 2.2 addresses artificial intelligence in customer relationship management (AI-CRM), highlighting different functionalities and capabilities of AI as a tool in CRM. Chapter 2.3 then connects SaaS businesses and CRM, discussing the business characteristics, typical challenges, and operational and strategic objectives of SaaS companies. AI applications in CRM can support achieving these key CRM operational and strategic objectives in a SaaS business, also

addressing some of the typical challenges recognised. The key objectives, typical challenges, and respective AI functionalities to support achieving these objectives are visualised in Table 3 below.

Table 3. SaaS company CRM objectives with respective challenges and supporting AI functionalities

SaaS CRM objective	Challenges affecting objective achievement	Applicable AI functionalities	Role of AI
Enablement of data-driven insights	- Data silos - IT-infrastructural limitations	- AI-driven data integration - AI-assisted customer segmentation	Enables automated or assisted data integration and analysis.
Effective resource allocation	- Inefficient processes - Insufficient employee resources	- AI-assisted decision-making - AI-driven workflows - AI-driven information flows	Automates workflows, streamlines resource coordination, supports decision-making.
Continuous and personalised customer engagement	- Limitations on scalability - Locational differences (language, time, culture) - Insufficient employee resources	- AI-assisted customer interaction - AI-driven personalisation	Enables AI-assisted customer interaction around the clock, supports data-based personalisation.
Enabling organisational scalability	- Operational burden when facing growth - Insufficient employee resources - Regulatory environment - Market pressures	All the above AI functionalities support organisational scalability.	Supports growth without investments to additional employee resources.

The role of data and data analysis has developed into a fundamental construct of CRM in general and especially in high-online presence businesses like SaaS companies. Indeed, modern CRM highlights the importance of data collection, storing, and analysing to produce insights and recommendations (Beldi et al. 2010; Garrido-Moreno et al. 2015, 384; Nazarpouri et al. 2020, 2). Moreover, the objectives of CRM differ depending on the stage of the customer lifecycle (Reinartz et al. 2004, 295). Hence, four key objectives of CRM were identified. Respectively, CRM in the SaaS business faces challenges that hinder possibilities to achieve these objectives and place constraints on the capabilities

of CRM. The study identified several typical challenges that SaaS companies face in their CRM operations. Reaching for different objectives is faced by different challenges, as listed in the table. Finally, seven types of AI functionalities that can support the achievement of key CRM objectives were identified.

To utilise data and enable data-driven decision-making, CRM has to be able to integrate data from multiple sources and of varying quality into any CRM systems used. Then, this data must be handled and analysed in a way that allows insights to be drawn. CRM systems provide capabilities to integrate and make an analysis of a vast amount of data, which can support functions in every stage of CLC. Due to the high online presence of SaaS companies, these platforms have access to significant amounts of customer data, which can be collected and used for CRM purposes (Kotan et al. 2025; Sanches et al. 2025). However, companies are required to comply with any regulation concerning data privacy and security, while also ensuring customer trust, which imposes strategic challenges for data utilisation. In addition, even when data is integrated and analysed sustainably and efficiently, data analysis can only help so far, as people and systems need to be able to make decisions and take action based on data analysis results. AI can help integrate and analyse varying data to provide accurate and real-time insights. AI applications in CRM can collect and integrate data into CRM systems, while further segmenting and analysing the data to provide descriptive, predictive, and prescriptive information.

Conducting efficient CRM actions requires the ability to coordinate resources meaningfully towards the most valuable customers. Lead and customer segmentation can provide means for efficient resource coordination, when resources can be allocated towards leads with a high probability of conversion and high-value existing customers (Thakur & Workman 2016). With inefficient resource allocation and CRM actions, companies might waste time on customers who do not deliver sufficient value, thereby constraining business growth. In addition, the literature emphasised workflow optimisation through the automation of recurring tasks, which brings operational benefits and increases efficiency (Chatterjee et al. 2019; Gupta et al. 2020). AI applications enable greater efficiency by automating internal information flows and recurring tasks, while also generating predictive insights that help management to allocate resources towards the most profitable customers and prevent customer churn.

Continuous and personalised customer engagement is perhaps the most significant objective of SaaS CRM. In the SaaS business, the ability to reduce customer churn has been recognised as a major competitive advantage and a source of growth (Kotan et al. 2025; Sanches et al. 2025, 130). The

business model stresses ensuring subscription renewal and, consequently, avoiding churn, and value creation through, for example, additional services and increased user volume. In addition, SaaS companies face constant market pressure. The highly competitive environment does not reward the lazy, so customers need to be constantly cared for by monitoring their satisfaction and providing reasons to stay engaged with the service or product. This competitive environment and constant emergence of new competitors place significant pressure on SaaS companies to ensure retention. While AI can enable efficient resource coordination and preventive action against customer churn, it also enables automated and assisted customer interactions through chatbots and the creation of insights to drive hyper-personalisation.

To be able to utilise data-driven CRM efficiently in the international and highly competitive environment, a key strategic objective of SaaS CRM is to be able to scale. SaaS businesses can expand rapidly into new locations thanks to cloud-based operations and online product delivery. Generating new leads and supporting customers is possible, in theory, regardless of time and place. Hence, to integrate and analyse data, use this data for resource allocation and data-driven decision-making, and provide continuous and personalised engagement, regardless of time and place, and even in increased customer volume, organisational scalability is a prerequisite for sustainable growth and keeping up with the increasing competition. AI can help automate processes and provide customer interaction through chatbots regardless of time and language, which drive capability for scaling the business globally while ensuring operational efficiency.

The literature review, therefore, suggests that AI can contribute to CRM through different types of functionality, depending on the desired outcome. It can be seen that some challenges affect multiple objectives, such as insufficient employee resources. Indeed, this is at the heart of AI's functional promise, as technology aims to enhance processes without increasing the need for human intervention and, thus, extra headcount (Chatterjee et al. 2019, 145; Libai et al. 2020, 44; Marti et al. 2024, 439). The next chapter introduces the empirical part of the study, which examines these literature review findings in an empirical setting, beginning with a discussion of the chosen research design.

3 Methodology

3.1 Research design

The empirical research for this study was conducted as a qualitative content analysis. Qualitative research methods are adopted because the study aims to interpret how AI applications are applied in SaaS customer success. Qualitative research methods are justified when researching a topic that does not yet have much prior insight (Ghauri & Grønhaug 2005, 202) or to provide in-depth knowledge in topics that have remained unclear in quantitative studies (Eriksson & Kovalainen 2008, 5). Furthermore, qualitative research is exploratory, which aligns with the defined research questions and allows for sensitivity and a critical perspective on the context. As discussed by Eriksson & Kovalainen (2008, 37), succeeding in qualitative research often depends on how the researcher has been able to frame the research problem into research questions. Framing the research questions is an iterative process that has also been applied in this study, first during the review of previous literature and again during the empirical stage. While the empirical part of the study was conducted as mostly deductive (concept-driven, meaning insights derived from the literature review), building the theoretical framework was executed as inductive (data-driven, meaning insights derived during the empirical research process) through a thorough literature review. As a part of the inductive process, the research questions were revised to match the recognised knowledge gaps.

According to Eriksson & Kovalainen (2008, 31), the qualitative research process is rarely linear, but instead it is often circular and iterative, where every part of the study, from formulating research questions to creation of research design and choosing the most suitable methods, is revised or corrected based on new insights received along the research process until completion. To structure the empirical research process, this study followed an iterative process by Schreier (2012, 6). Starting with defining the research question, this structure guided the whole empirical process, supporting clear, systematic analysis and research transparency. This process is represented in Figure 2.

Figure 2. Research process (Schreier 2012, 6)

As mentioned, the research process started with the formulation of research questions. First, the main research question was created based on the recognised research gap and to support the researcher's own line of interest. To answer the main research question, three sub-questions were formulated. Research material was selected through a thorough analysis and careful consideration of best practice, discussed more deeply in 3.2. The analysis phase included building a coding frame in multiple steps, using both deductive and inductive methods, while simultaneously eliminating irrelevant research material, and eventually coding the remaining data with the final coding frame. Analysis is discussed in more detail in 3.3. During the coding phase, research questions were revisited and revised when deemed applicable. Finally, the main analysis was conducted and the results discussed in Chapter 4.

As discussed before, the development of the research question is an iterative process, and the questions should be revisited and adjusted throughout the research process (Eriksson & Kovalainen 2008). Qualitative research is guided by the research questions, which determine the approach throughout the research process, and major changes to these questions can affect the process. However, the empirical stage was conducted based on the literature review and theoretical framework, so the research questions are not subject to major changes at this part of the research process.

The study uses a qualitative content analysis (QCA) as the analysis method, by analysing customer stories on CRM vendor websites. Due to the exploratory nature of the research problem and the novelty of the research topic, when quantifiable and recognised processes do not yet exist, qualitative

research methods are better suited to finding meaningful answers to the original research question than quantitative methods (Eriksson & Kovalainen 2008, 4–5). The research analyses publicly available SaaS vendor customer stories on CRM vendor websites, providing a global, industry-diverse view of how AI is implemented within the given scope. The customer stories used in this study are CRM vendor-initiated case studies (referred to many times on the websites as *customer stories*, rather than case studies) to, for example, show potential new customers how they have solved someone else's problem with the vendor's product. These stories, written by the CRM vendor from their perspective, provide a real-world, detailed example of how a CRM vendor has solved a customer's (in this case, a SaaS company) problem by utilising AI functionalities.

QCA was used to analyse many different stories and identify interesting similarities across cases. By doing this, the analysis systematically collected and compared different stories and solutions. Next, the following sections will show how the material was selected and collected, and then finally analysed for interpretation and findings.

3.2 Data collection

This study aims to understand how AI can be leveraged in SaaS customer relationship management. Many CRM vendors, as mentioned in the literature review, offer different types of AI functionalities that can be utilised to support CRM systems and processes. However, the possibilities for use are vast in number and quality, since companies operate in different economic and geographical areas and differ in size and other features. Therefore, to guarantee the variety of cases and implemented AI applications for CRM purposes within SaaS companies, data was collected from large CRM vendor customer stories, publicly available on vendor websites. Some of the websites referred to customer stories as case studies, but because most vendors used the term *customer story*, this term was chosen to be used in this study.

Hence, this study uses secondary, textual data as research material. The term secondary data refers to data that exists regardless of the researcher's actions or intentions (Eriksson & Kovalainen 2008, 77–78; Silverman 2001). While secondary data is easier to access than primary data (data created by the researcher), its interpretability is strongly context-dependent. In addition, as secondary data already exists, it might not necessarily answer the research questions. Customer stories on vendor websites are collected as textual materials. As the amount of visual material is generally low and varies between chosen vendors, whilst the amount of textual material is itself sufficient for conducting a quality analysis, visual material was neither reasonable nor necessary to include in the research data. Textual data is considered useful and relevant because of the idea of transparency (Eriksson &

Kovalainen 2008, 89). This means that the text is treated as useful for qualitative analysis as it represents the people and ideas it considers. Therefore, customer stories, as textual secondary material, can be seen as informative descriptions of AI implementation in CRM.

CRM vendors, like many other companies, publish customer stories, e.g. on their website or social media accounts to show how their solution has positively affected a customer's business or situation. Customer stories are usually structured in a fixed manner: first, the case company is briefly introduced. Then, a problem faced by the case company is discussed, followed by the solution that the company (in this case, CRM vendor) has provided. Finally, the results of this solution are presented by using quantitative measures or definitions of how a process has been streamlined. The stories are usually backed up with customer citations. As businesses use these stories to market their products, stories are usually high in numbers, which guarantees a wide dataset. In addition, due to the global presence of selected large CRM vendors, the customer companies are geographically diverse, giving the study a global approach. After conducting a careful comparison of possible different data collection methods, the data was chosen to be collected from large CRM vendor customer stories from vendor websites. This data collection approach has major benefits, e.g. publicly available data, and the ability to search and filter the customer stories to match the scope. In addition, the data can be seen as credible because of the second party involved, and their existence and headquarters location were confirmed by the researcher. As all the chosen CRM vendors are major players in their area, they are vitally dependent on credibility and corporate social responsibility to keep their competitive position.

The data selection process consists of two phases: selecting the CRM vendors and selecting the customer stories. First, CRM vendors were chosen. As this study aims to find ways that AI can contribute to SaaS company customer relationship management, it was not necessary to compare every major CRM vendor and their AI application offering, but to find a data sample that is both relevant and diverse for a meaningful contextualisation. Thus, the researcher did multiple internet searches on CRM vendors that offer AI applications and then chose the ones that were already familiar to the researcher in the CRM field. In order for a CRM vendor company to be included in the study, it had to meet certain criteria that the researcher deemed necessary. The criteria used were as follows, and in order to be selected, the vendor must apply to at least the first three criteria, the last one being optional:

1) The company runs AI applications that can be integrated into its offered CRM system.

2) The company has published customer stories or case studies on its website featuring a SaaS company as the customer.

3) The customer stories/case studies are published in English.

4) The customer stories/case studies are diverse in terms of customer location (>2 countries). Preferred for geographical diversification.

The criteria were created by the researcher based on the research questions and the literature review. The first two criteria were selected to ensure that the CRM vendor matches the research scope (AI-CRM and SaaS business). The third criterion was selected to ensure that the language of the data is the same as the study, which hinders the possibility of interpretative mistakes when key concepts are discussed in different languages. The fourth criterion aims to ensure data representativeness aligning with the international perspective, which was emphasised in the literature review. However, here the researcher used their own judgment, as the main purpose was only to ensure that the data had enough international representativeness.

This criterion was applied to CRM vendors that are globally recognised and have proven AI integration capabilities. The companies compared were Salesforce, Microsoft, SAP, Oracle, Pipedrive, Zoho, Zendesk, and HubSpot. The final selection was based on the criteria, with an emphasis on the number of relevant customer stories or case studies. After conducting the selection process, the remaining companies were Salesforce, Microsoft, Pipedrive, Zendesk, Zoho, Oracle, and HubSpot. Salesforce only provided relevant customer stories of companies that were from the same location, but as the largest CRM vendor by market share and with a strong emphasis on AI applications, the researcher decided to include the vendor for data collection. SAP was left out because of a lack of SaaS customer stories involving explanations of AI integrations.

Next, customer stories were selected for analysis. The customer story searches were done between the 2nd and the 13th of October 2025. On every vendor website, it was possible to filter customer stories by specific industry and/or product. The stories were filtered by industry using keywords such as “software”, “high tech”, or “SaaS”, depending on the available filter options. A few vendors also allowed filtering for AI products, which was used when applicable. This process produced 268 customer stories. Then, the researcher manually reviewed every customer story to eliminate any irrelevant stories. Because the available filters did not always return customer stories where the customer is a SaaS company, every non-SaaS-related story was eliminated. Then, the relevance of AI applications and use was reviewed. Some stories did not introduce an AI-leveraged CRM solution

but merely, rather unambiguously, mentioned one. The number of such cases increased the longer it had been since the customer story was published. Non-AI-related stories were eliminated immediately, and unambiguous stories were reviewed more carefully and included in the data if the researcher deemed them sufficient, using his own judgment. After this, from the initial 268 stories, 42 were included in the research data. The chosen customer stories by vendor are listed in Appendix 2.

When deciding which customer stories to include, the researcher used the following principle: if any AI feature was used and the purpose of the implementation or the results were presented, the customer story was included in the research. This way, all the different possible use cases were captured. The vendor webpages differed in functionality, affecting filtering and the ability to find relevant customer stories. With Zoho, AI features, except for their AI agent Zia, were not presented explicitly as a separate product with its own customer stories, which made it difficult to find relevant data. Hence, relevant stories had to be searched manually, resulting in a limited dataset. On the contrary, the data from Zendesk and HubSpot had to be limited to ensure equal sampling. Once the data had been collected, analysis was conducted, which will be discussed next.

3.3 Data analysis

This research used qualitative content analysis (QCA) as the research method. Content analysis is a form of data analysis that uses systematic, replicable methods to uncover patterns and hidden information in textual, visual, or audio data (Bijker et al. 2024). Again, QCA is a form of content analysis for qualitative data that analyses the chosen qualitative material to evaluate underlying information and interpret meaning in a systematic manner (Schreier 2012). To guide the analysis, an operationalisation table was created (see Appendix 3).

According to Schreier (2012, 4), QCA is strongly guided by the research questions, which provide the perspective from which the material is evaluated. QCA does not provide a holistic overview of the material, but instead offers a more direct approach to analysing qualitative material from the chosen perspective. Therefore, QCA is data-reductive, which is a major distinction from other qualitative research methods, which usually produce more data from the chosen data. In qualitative data analysis, the level of qualitative analysis and interpretation is often ambiguous (Nicmanis 2024, 2), and qualitative research often produces an extensive amount of data that is easily outside the defined research scope. According to Fife & Gossner (2024, 3), this type of deductive qualitative analysis is also particularly useful when an existing concept or concepts, and their relevance, need to

be studied from existing material. Thus, reducing data using QCA is considered the most appropriate method for this research.

Once the data had been selected, the coding frame for analysis was built. The analysis process begins with identifying the main categories and underlying sub-categories that work as the basis for the coding frame (Schreier 2012, 59–60). According to Schreier (2012, 63), a coding frame consists of main categories and subcategories, but the number of hierarchical levels is up to the researcher and usually tied to the research question. First, the main categories were derived from the themes that emerged in the literature review synthesis. Three main categories were created: 1) Operational and strategic objectives in CRM, 2) Challenges hindering CRM, and 3) AI functionalities in CRM. Then, the main categories were further divided into sub-categories both deductively (concept-driven) and inductively (data-driven), which is usual in QCA (Schreier 2012, 89). Sub-categories serve to specify concepts, aiming to deepen understanding within the main categories and thus highlight the most important aspects of the data (Schreier 2012, 60). The coding frame is presented in Figure 3.

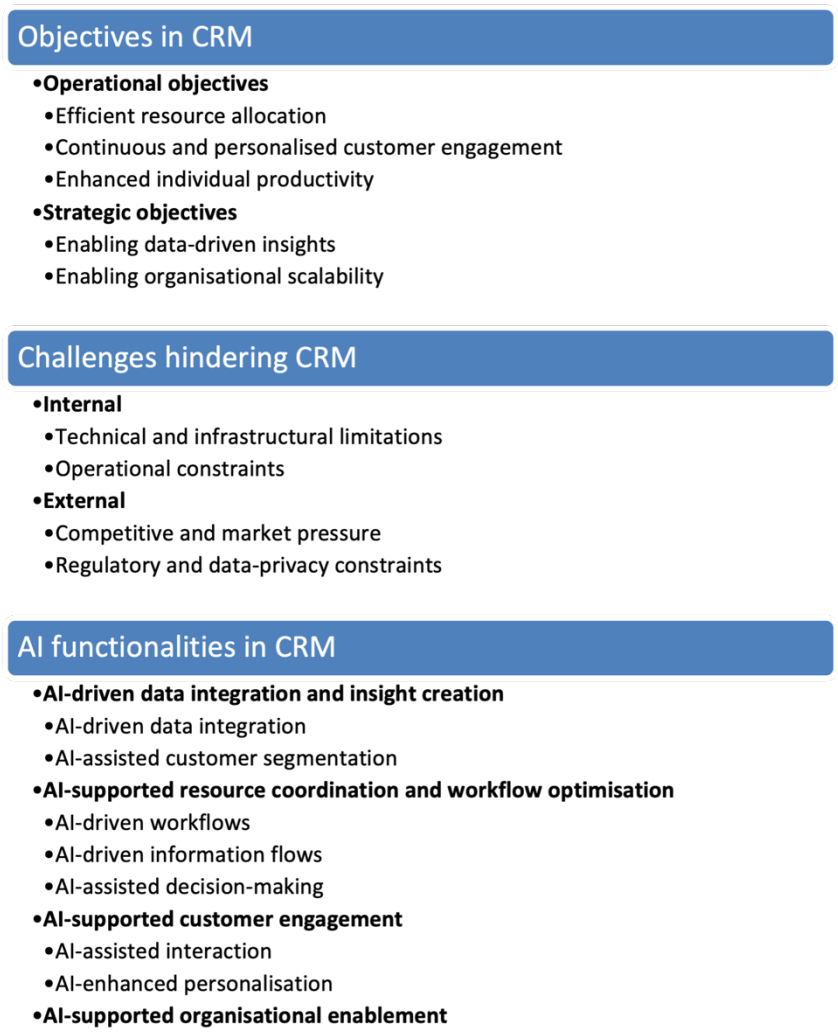

Figure 3. Coding frame

As presented in Figure 3, there are three main categories, which are all followed by several sub-categories. Here, the SaaS context was not explicitly mentioned, as the entire data set consisted of customer stories in which the customer is a SaaS company. The first main category reflects the operational and strategic objectives of CRM. Objectives were divided into two second-level sub-categories: the first includes operational objectives, and the second includes strategic objectives. These sub-categories were then further divided into two third-level sub-categories each. In the sub-category consisting of operational objectives, efficient resource allocation and continuous and personalised customer engagement were added. These represent objectives that enhance the SaaS company's operational capabilities, enabling more efficient CRM actions. The other second-level sub-category, strategic objectives, was divided into objectives to enable data-driven insights and organisational scalability. While operational objectives directly impact CRM actions in practice, strategic objectives enable CRM actions to be enhanced with data-driven solutions in the first place

and to be sustainably scaled with business growth or new market expansions. During the coding phase, a sub-category, *individual employee efficiency,* was added inductively under the operational objectives, as the theme emerged multiple times in the data and was thus deemed relevant to the analysis.

The second main category reflects the typical challenges and limitations identified in the literature review. The challenges were divided into two second-level sub-categories: internal and external. Internal challenges are those that originate from within the organisation, such as its systems or processes. This was further divided into technical and infrastructural limitations and operational constraints. Conversely, external challenges originate outside the organisation, such as the regulatory environment or market conditions. As discussed in the literature review, SaaS companies face increasing competition from new and existing competitors while also being affected by changing customer demands. Thus, to capture the emergence of these challenges from the research data, the first third-level sub-category is competitive and market pressure. In addition, collecting and using data, which is often a key driver of business development for SaaS companies, is heavily regulated and is increasingly subject to customer awareness. Thus, the other third-level sub-category is regulatory and data privacy concerns.

The third main category then captures the use of AI to address these challenges and reach the objectives. The main category was again divided into three sub-categories, reflecting the key functions identified in the literature review. The first second-level sub-category captures AI functions that enable data integration and data-driven insights; the second captures functions that enable effective resource coordination; and the third captures any AI functions that directly support or automate customer interactions. These were then divided into third-level sub-categories, respectively, to highlight different functionalities in more detail. Furthermore, during the first data review, a fourth second-level sub-category, *AI-supported organisational enablement*, was added inductively. This aims to capture any AI functions that support other organisational development, such as employee training or CRM strategy formulation.

From the beginning, the researcher had to keep in mind that the key requirements for a QCA coding frame had to be met: unidimensionality, mutual exclusiveness, exhaustiveness, and saturation (Schreier 2012, 71). Unidimensionality, the requirement that a single main category captures only one aspect of the data, was ensured by dividing the main category themes so that each main category reflected only one of the research sub-questions. Mutual exclusiveness, meaning that sub-categories mutually exclude each other, is supported by unidimensionality. When coding the material, units of

coding should be assigned to only one subcategory within a main category (Schreier 2012, 75). Exhaustiveness, which refers to the capability of the relevant material to be coded in at least one sub-category, ensures that the coding frame truly captures every relevant aspect of the material. To ensure exhaustiveness, the researcher combined deductive and inductive methods in developing the coding frame.

Once the coding frame was finalised, coding was conducted in NVivo. This software helped assign parts of the material directly to the built coding frame, which will help later when conducting the main analysis. Material was carefully revisited, and every relevant unit of code was assigned under a related sub-category. Assigning different units of coding to a given category was important for the study, as the recurrence of a topic itself provides insight into what is generally more common and, conversely, what is rarer. Hence, when presenting the findings, the number of recurrences in a topic is mentioned only to underline significance within the research data. However, the recurrence was not further analysed using quantitative measures, as the purpose of showing it was only to underline its importance. Next, the research trustworthiness will be evaluated.

3.4 Research evaluation

While conducting scientific research, the researcher must constantly evaluate the study so that it stays comprehensible, transparent, and complies with the scientific research guidelines. By doing this, the research stays trustworthy, which means that the reader can trust the study and understand how the choices made by the researcher during the process have affected the results. Throughout conducting this study, the researcher evaluated trustworthiness with the framework by Lincoln & Guba (1985), which divides the evaluation into four criteria: credibility, transferability, dependability, and confirmability.

The first criterion, *credibility*, relates to the researcher's familiarity with the research topic and thus ability to understand the data and research context, the sufficient use of data to merit the claims, and whether another researcher could provide the same results with the same dataset (Eriksson & Kovalainen 2008, 294). According to Lincoln & Guba (1985, 301), credibility can be achieved through prolonged engagement, persistent observation, and triangulation. Prolonged engagement and persistent observation were achieved through comprehensive investigation of the context and features of SaaS companies and their business models, and through participation in university courses and other courses related to artificial intelligence. In addition, the researcher was already familiar with CRM-related issues and different CRM systems through professional work experience, which was further supported by familiarity with academic articles. Triangulation was met by investigating

several types of data during the research process, including academic research, website-based use cases, and several forms of media content. Additionally, it must be noted that most of the academic literature and research data were written in a language other than the researcher's native language, which may lead to misinterpretation.

The second criterion, *transferability*, refers to the ability of research findings to be transferred into another context or at another time (Lincoln & Guba 1985, 316; Eriksson & Kovalainen 2008, 294). This research focused on SaaS related CRM and how AI features can be used in this context. As more or less any business operation is based on its ability to gain and retain customers, CRM operations can be seen as universal. Therefore, AI, or other technology, can be used for these operations, supporting transferability. When evaluating transferability, it must be acknowledged that SaaS businesses may differ operationally from other types of businesses, potentially affecting other possible forms of technology use. In addition, the low number of relevant customer stories relative to the total number of customer stories reviewed was due to the publishing date. With HubSpot, for example, most of the stories reviewed were published before 2020, when AI functionality was not yet mature enough for widespread use. As technology is rapidly evolving and increasingly adopted for various uses, it might hinder transferability, as the findings could already be outdated in a few years. However, while the results may expire within SaaS companies, the research can be transferred to businesses where technological adoption is slower, such as the raw materials industry or the welfare sector.

The third criterion, *dependability*, refers to the extent to which the researcher provides a transparent description of activities that have been done throughout the research process, demonstrating how actions or research design have affected the research results (Lincoln & Guba 1985, 317; Eriksson & Kovalainen 2008, 294). Hence, meeting dependability aims to ensure that the same results could be achieved if the research were conducted again. The research process and development of the coding frame have been demonstrated transparently in section 3.3. It is to be noted that qualitative content analysis is inevitably subject to the researcher's interpretations. Therefore, if done again by another researcher, the study might result in minor differences. However, as the research data (customer stories) were quite similarly structured between vendors, the same set of findings is most likely to be derived.

The fourth and final criterion, *confirmability*, refers to the idea that the findings of the research are firmly based on the existing literature and research data, ensuring that interpretations are not biased (Eriksson & Kovalainen 2008, 294). In qualitative research, avoiding biased interpretations is difficult

due to the ambiguous nature of interpretations, especially present in qualitative content analysis (Nicmanis 2024, 2). Confirmability can be ensured with systematic analysis, which was supported with carefully designed coding frame. Furthermore, almost the entire coding frame was concept-driven, which, in turn, reduces the risk of interpretative differences. The few data-driven concepts were added only when the concept occurred a predetermined number of times, thus avoiding changes to the coding frame based on biased assumptions. This study has consistently evaluated that the trustworthiness framework by Lincoln & Guba (1985) was met. Overall, the criteria were met sufficiently to ensure the trustworthiness of this study, while some areas for improvement in transferability and confirmability remain. Finally, it should be noted that the researcher does not have an extensive background in research, which inevitably affects the quality of the research.

The empirical data of this study consists of publicly available customer success stories, usually referred to as just *customer stories*, published on the official websites of CRM vendors. As the research data is openly accessible on the CRM vendor website and does not involve any private or restricted information, formal ethics approval and participant consent were not required (Orb et al. 2000, 96). In addition, as the data is solely secondary data, none of the vendor companies or customer companies were actively involved in data collection. Nevertheless, the data management plan of the University of Turku was followed insofar as it applied to the research data. Ethical considerations were taken into account in the interpretation and reporting, by stating which vendor and customer company were referred to. The study aims to represent the data accurately and respectfully by including enough context when any citations are presented. The customer stories were copied and pasted to separate Microsoft Word files and named with a reference to the customer company and the vendor. All data was stored securely in digital form on the researcher’s computer, and no personal or confidential information not publicly available was processed.

4 Empirical findings on AI-enabled CRM in SaaS companies

4.1 Reaching for strategic benefits through operational efficiency

From the content analysis, it was found that SaaS companies are often simultaneously seeking both operational and strategic benefits from their CRM development. More importantly, the analysis highlighted that many times, an objective was pursued as an interim objective while trying to reach other objectives. For example, more efficient resource allocation (operational objective) was pursued to enhance capabilities for organisational scalability (strategic objective), while enabling data-driven insights (strategic objective) was pursued to enable enhanced customer interactions (operational objective). However, enabling organisational scalability was highlighted as the main objective in the data, and can be seen as the ultimate objective which all the other objectives support. The objectives are guiding business development, and the process can be seen as circular. The relationship of the key operational and strategic objectives is visualised in Figure 4.

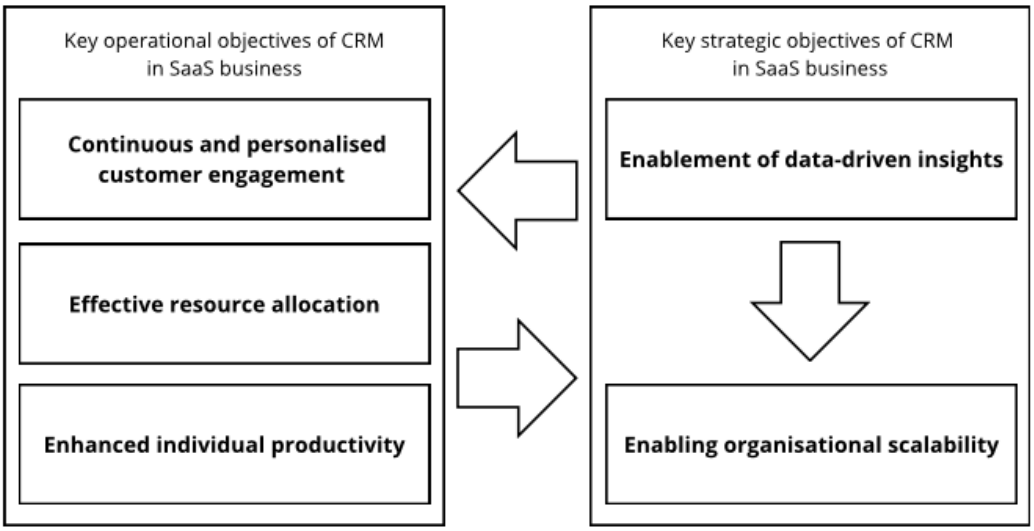

Figure 4. Relationship of SaaS customer relationship management objectives

As the customer stories were all structured in a similar way, where a challenge/objective was presented first, followed by the solution and results, the objectives were clearly discussed. While the case companies were all SaaS companies, the stories rarely highlighted any specific SaaS related objectives that were related to the SaaS business model specifically, but instead, many times, the objectives concerned topics that could emerge with other types of companies as well. However, the importance of data for CRM development was strongly emphasised, and it was clear that SaaS businesses are increasingly willing to utilise data-driven solutions to enhance their CRM operations.

4.1.1 Operational objectives

The findings suggest that SaaS companies' operational objectives vary in terms of the direction that the development aims to have an impact on. SaaS companies place effort on CRM development that aims to directly improve either customer experience, enhance coordination of resources and streamline processes, or boost individual employee performance - many times more than one at a time:

> *AvePoint sought to enhance productivity, streamline operations and improve customer support efficiency while maintaining the highest standards of security and governance.* – AvePoint (Microsoft).

> *CentralSquare recognized that an integrated solution could address [challenges] by streamlining workflows and using AI to boost productivity and improve customer experiences.* – CentralSquare (Salesforce).

Indeed, customer stories show that it is rare for CRM investments to be made with only one objective in mind. While employee productivity was mentioned in only 7 of 42 stories, efficient resource allocation was mentioned in 15 stories, and continuous and personalised customer interactions in 16. So, the objectives were more likely to concern either improving the customer experience or improving organisational efficiency.

In the study, continuous and personalised customer engagement refers to an organisation's aim to engage with customers responsively or proactively in a way that the interaction is personalised with regard to the customer's profile. This type of interaction can happen by replying to queries without significant delays, or by proactively engaging with the customer based on a recognised need for engagement, or through automated interaction. Personalisation does not only stand for providing personalised recommendations based on customer habits (as Netflix did already in 2017, see section 1.2), but it also means personalising the interaction based on the stage of the customer life cycle. This objective is the most visible for customers and directly impacts customer experience. Indeed, the objective to enhance customer experience with personalisation was presented in the data:

> *Giant Swarm's ultimate goal is to gain more clients and serve them better. They want to do this by creating a tailored buyer journey where the customer experience makes sense for each persona.* - Giant Swarm (HubSpot).

As discussed in the literature review, continuous and personalised customer engagement can have a direct positive impact on reducing customer churn, which again is seen as one of the most important ways to maximise growth in a SaaS business. Customer stories highlighted that SaaS companies aim to manage churn by enhancing capabilities for personalisation:

> *Being able to efficiently adapt our service to each individual client not only impacts the quality of our customer service on a daily basis, but ultimately, our churn rate and conversion rate.* - DashThis (Pipedrive).

> *In the end, what matters most is what the user thinks about their specific interaction with us. That's what's most important – and Zendesk helps us deliver experiences that keep our customers coming back.* - Fortnox (Zendesk).

As mentioned in the citation above, companies also aim to enhance their customer interaction quality. While technical solutions for automated hyper-personalised interactions exist, this is not always the solution that SaaS companies look for. Instead, the objective can be to enhance the human-to-human interaction quality through technology:

> *Our vision isn't to push everything down the AI route and remove the human element. Quite the opposite—we want to be more available to spend more time on one-on-one engagement.* - JobAdder (Zendesk).

Objectives concerning continuous and personalised customer engagement were discussed as the main objective by 15 out of 42 customer companies. This number can be seen as relatively low when the alleged positive impact on churn reduction is considered. However, the data suggest that not all efforts towards customer engagement were related to maximising churn reduction directly, but instead to directly improve the quality of interactions. The data revealed that this objective often goes together with the objective to enhance internal processes for more efficient allocation of resources, which enables better quality customer engagement.

> *Agicap turned to Breeze embedded in Marketing Hub and Sales Hub to streamline their internal processes and deliver more personalized customer experiences. HubSpot's AI features helped Agicap automate routine tasks, allowing their team to focus on building stronger relationships with customers and delivering greater value through more impactful results.* - Agicap (HubSpot).

Efficient resource allocation was a second major recurring objective for SaaS companies. Previous literature discussed efficient resource allocation primarily through customer segmentation and prioritisation. Emphasis was on prioritising high-value customers throughout the customer life cycle from a sales and marketing perspective. Hence, the capability for segmenting customers and, in this way, allocating the resources was seen as a major objective. This was partially supported by the data, but instead of just focusing on the customers for value maximisation, companies also aim for efficient resource allocation from a customer service perspective. Indeed, most of the data concerned task or ticket routing towards a correct agent. For example, when a customer interaction is too challenging for an agent with a certain skill set, it is considered an objective to automatically route these interactions to a more capable employee.

> *Our goal is to automate ticket routing based on intent, ensuring cases are assigned to agents with the right skills… we plan to leverage it for automatic ticket assignments as AI accuracy improves.* – Starshipit (Zendesk).

> *Supervisors at CentralSquare are crucial in stepping in to support reps during challenging customer interactions.* – CentralSquare (Salesforce).

In addition, this does not only apply to challenging cases, but to easy, mundane tasks that can take valuable time from agents that could be used for tasks that require additional support. Efficient resource allocation, therefore, is not merely an organisational efficiency issue, but also a matter of employee motivation.

> *My team is full of educated individuals who want to use their minds for good and more complex situations… so the more we can carve out AI to focus on the easier stuff, it opens up capacity for my team to really lean into the complex situations.* – Benevity (Zendesk).

Overall, efficient resource allocation was seen as a major objective for the case company in 16 out of 42 customer stories. Half of these 16 highlighted streamlining processes to allocate the team's resources towards higher-value work as an objective, while almost the same amount concerned ticket routing to the right agent. The rest discussed internal coordination between sales and marketing as a main objective. These findings suggest that while the segmentation of customers for maximising sales and marketing results through enablement of accurately timed interactions and efficient internal coordination is important, this also applies to the customer service perspective much less discussed in the literature.

In addition, the data revealed that enhancing individual employee operational efficiency was also highlighted as an objective. Companies are looking to enhance employee performance by automating repetitive, mundane tasks that do not add value to their particular function. 7 out of 42 customer stories emphasised that automation of these tasks could save an employee a significant amount of time. The objective was to automate tasks like researching a new lead, writing an email, and proposal creation. Individual-level objectives were narrowly discussed in previous literature, perhaps because of the wide organisational differences between tasks.

> *It took each rep over an hour to research a new lead and 20 minutes to write a single outreach email. The company needed to free its reps from this manual work, allowing them to focus on selling.* – RealZips (Salesforce).

Findings on operational objectives have emphasised different objectives related to providing continuous and personalised customer engagement, allocating resources efficiently, and boosting employee performance. While enhancing operational efficiency was a recurring theme, data suggests that many SaaS companies aim to gain strategic benefits from CRM development efforts. These strategic objectives will be discussed next.

4.1.2 Strategic objectives

The findings support the literature review on the key strategic objectives that SaaS companies are targeting, ensuring data integration and data quality to enable data-driven insights, and enabling organisational scalability, which captures the actions the company is taking to ensure sustainable business growth and scalable processes. Strategic objectives were mentioned in 34 of the 42 customer stories, highlighting their importance in the SaaS business.

As discussed in the last section, operational and strategic objectives many times overlap and support each other. For example, some customer stories highlighted the need for data integration capabilities to enable prioritisation of higher-value customers:

> *As a long-time Director of Sales Operations, [he] knew that gathering the right data, and prioritizing accounts accordingly, was an integral part of executing an account-based approach.* – LinkSquares (Oracle).

> *Looking to identify high-value companies willing to invest in their contact center, Talkdesk needed to precisely define their Ideal Customer Profile (ICP) criteria and quickly prioritize the highest valued accounts.* – Talkdesk (Oracle).

These findings emphasise that SaaS companies are looking to deepen their understanding of customers with data-based solutions, which shows a strategic intent to base action on customer data rather than merely intuition. As noted in the literature review synthesis, data integration can enhance companies' ability to segment customers and enable a more customer-centric approach. Overall, the data revealed that enabling customer and lead segmentation with data-driven insights was an important goal for many SaaS companies. While many companies emphasised a sales perspective, where lead scoring and prioritisation were the main objectives, it was evident that companies needed to enhance their ability to recognise customer needs and take action efficiently throughout the whole customer life cycle.

> *[Senior Manager of Strategy and Business Ops.] recognized the company's dire need for a platform that could track each lead's journey from initial contact to happy customer*. – DotPe (Zoho).

> *The 360° view of the customer journey was one of Agicap's main objectives.* – Agicap (HubSpot).

In addition to data-driven customer understanding, the analysis also found recurring evidence on a strategic objective to support internal development efforts within the company. While being a recurring theme within the data, this has been barely discussed in previous literature, which mostly focused on sales and marketing actions. Harnessing data analytics to provide insights on sales process development and employee training was aimed at further improving operational capabilities efficiently.

> [Document360 searched for a CRM that had] *access to rich analytics in order to understand their sales processes and the relationship between customer behavior, sales and KPIs.* – Document360 (Pipedrive)

> *A primary objective of PRISM* [internal migration and optimisation project] *was to enhance stability, data availability, and accuracy because Vimeo's legacy tools made it difficult to track and report on the team's performance.* – Vimeo (Zendesk).

Hence, the customer stories serve a dual purpose: enabling data-driven insights. Gaining improved customer insights can be seen as an external purpose, while data-based development of CRM capabilities represents an internal purpose. Through integration of data, SaaS companies can gain improved capabilities for customer segmentation throughout the customer life cycle, further improving their personalisation capabilities and resource allocation towards higher-value customers.

They also gain strategic benefits from evidence-based insights for process development and employee training, facilitating continuous CRM development.

The other major strategic objective for SaaS companies was the enhanced ability for organisational scaling. This objective was directly emphasised by 20 out of 42 companies. In many cases, the company wanted to improve their capability for handling growing amounts of leads and customer queries, which was a result of rapid growth. Investing in better CRM systems and data-driven solutions was seen as a key enabler of growth, as many previous systems or processes were not able to handle the growing business requirements. This was especially the case when the customer company was a startup.

> *As a startup, Paiv also needed a system that could grow with them. "Scalability is everything… HubSpot streamlined the process. We've tripled our conversion rate, and we're not slowing down."* – Paiv (HubSpot).

> *In a startup environment, adaptability is paramount; plans made one night might require changes by the following morning, and the startup ecosystem demands systems that are highly responsive and capable of real-time customization. To meet these challenges, DotPe sought a new solution that could handle the dynamic and volatile nature of their operations.* – DotPe (Zoho).

Enabling scalability was not only seen as an objective to enforce operational capabilities, but also to prevent adding other costs, like additional employees. For SaaS companies, gaining operational benefits through technological solutions is often preferred to adding headcount, which can provide a strategic advantage in the very competitive market.

> *Service teams are being called upon more than ever to manage business changes in the fast-paced tech world and in periods of economic uncertainty. In response, [Global Customer Support Director] is focused on increasing team productivity without extra headcount and reducing ticket volume while maintaining excellent service*. – Bitly (Zendesk).

As discussed in the literature review, SaaS companies are often rapidly expanding into overseas markets. Hence, the ability to sustainably operate in many different countries and even continents is a key objective for many SaaS companies. Operating in different countries requires CRM to be able to respond to new market requirements, adapt to changing customer preferences, and even provide around-the-clock customer support. The complexity of global market operations may also hinder an

organisation's ability to scale its services, which underlines the objective for better systems to facilitate key CRM process implementation without limiting the possibility for growth.

> *With more than 1.5 million active monthly users, including key markets like Spain, Italy, Mexico, the United Kingdom, and several countries across Africa. Playtomic needed a solution to handle its rapid growth and the increasing demands placed on customer support.* – Playtomic (Zendesk).

The findings suggest that strategic objectives are strongly related to facilitating business operations and growth. The research data strongly supports that SaaS companies are driven to utilise data-driven solutions in their CRM to provide means for data-based sales and marketing actions while improving their understanding of customers in every stage of the customer life cycle. In addition to the strategic objectives identified in the literature review, SaaS companies tend to enable continuous development of their CRM capabilities through internal data analytics and KPIs. A more cohesive objective then is to enable efficiency while facing rapid growth. Overall, enabling organisational scalability was an ultimate objective for many SaaS companies, who aim to turn increasing amounts of integrated data into actionable insights. On the facing side of objectives, there are the challenges that SaaS companies have to consider. The next section presents the findings on the typical challenges SaaS companies face that limit their CRM operations and development.

4.2 Managing external pressures and internal inefficiencies

The content analysis supported the finding that SaaS companies are actively considering both internal and external challenges in their CRM actions. The findings are visualised in Figure 5.

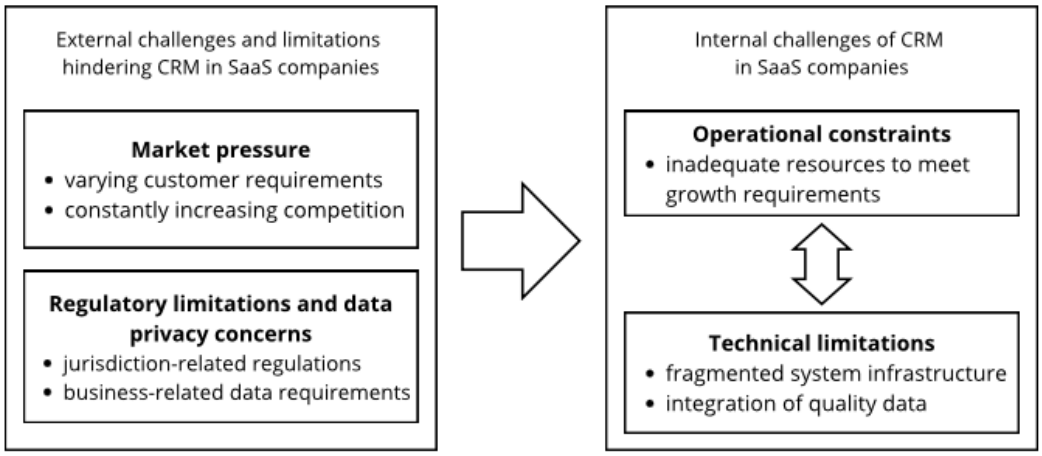

Figure 5. Challenges and limitations affecting CRM in SaaS companies

Overall, internal challenges are much more present in the customer stories. This was expected, as the objectives also mainly considered internal processes development and result optimisation, and the internal challenges hindering the achievement of these objectives can be directly addressed. External challenges, instead, are challenges that build the limits for business and are mostly faced by competitors as well. So, while internal challenges are mostly challenges that the case company was looking for a solution to, external challenges were something that, from the beginning, limited or shaped the solution possibilities. This section presents findings on the internal and external challenges SaaS companies tend to encounter in their CRM-related business activities.

4.2.1 Internal challenges

In the literature review, internal challenges were divided into technical and infrastructural limitations and operational constraints. The findings showed that SaaS companies face similar challenges with their CRM capabilities. Indeed, nearly all the case companies faced some internal challenge, which they sought to address with a solution provided by the CRM vendor. Technical and infrastructural limitations were a highly recurring theme: 23 out of 42 companies mentioned issues with their current systems, which were either not keeping up with the growth or causing coordination issues within different departments.

The most fundamental challenge for SaaS companies, or in fact any company willing to utilise advanced CRM capabilities or enable hyper-personalisation, is the complexity of customer profiling through data. CRM vendors are providing their own solutions, but ultimately, they might not all address the particular customer base of a certain company in a certain industry.

> *In the real customer service in the store, you can tell what each customer is looking for through conversation, expression, gesture, outfit, and ways of communication. Because the customer is right in front of you, you might just know by looking. However, this style of service achieved in the real world, suddenly becomes difficult once it is changed to digital.* – Plaid (Microsoft).

The capability to address this challenge is a profound technical limitation that hinders the effective utilisation of advanced CRM solutions. What remains unclear from the content analysis is the extent to which a particular system truly addresses this problem. As discussed in the literature review, providing deeper customer understanding is highly dependent on the quality of data the company can integrate and further analyse for accurate insights.

While the literature review suggested that SaaS companies face difficulties mainly with the integration of new systems, the data did not directly address this challenge. However, integrating new solutions into the current infrastructure was indirectly highlighted, as many companies are trying to address fragmented system infrastructure to consolidate their data and processes under a single system. Fragmented system infrastructure was found to be a highly recurring challenge. The challenge had arisen many times as the business grew. As the customer base gets wider and more complex due to different types of customers, the current systems are not comprehensive enough to enable effective management of these differentiated customer profiles.

> *Booxi's customer base spans both SMBs and enterprises, so the business decided to run separate CRMs for each sector. That decision led to data silos, duplicated effort, and increased costs.* – Booxi (HubSpot).

> *HealthJoy's original tech stack, a fragmented system with disconnected tools across CRM, engineering, and telephony, couldn't keep up with the demands of the growing business*. – HealthJoy (Zendesk).

Fragmented systems are causing problems for internal communication. While business grows, data gets siloed, and different teams do not have visibility into their CRM process. This causes many unwanted outcomes, such as disorganisation across teams, limited decision-making, and ineffective processes. In addition, these problems can be costly, as leads are poorly managed and headcount must be increased to handle the rising workload.

From an operational perspective, the findings suggest that many SaaS companies are struggling with inadequate resources. While avoiding additional costs, employees are facing higher workloads that hinder results. The same theme recurred in the research data: the number of tickets or other customer interactions was too large for an agent to handle. Managing customer relationships with quality was constraining operational performance while also hindering business growth.

> *Handling an increasing number of inquiries with limited resources was a major challenge for Starshipit. The customer support team was manually triaging tickets, responding to repetitive queries, and escalating urgent requests on a daily basis.* – Starshipit (Zendesk)

> *Account managers were added to DashThis's growing sales team to make sure leads and clients enjoyed the best possible experience with the brand. However, they needed a way to stay organized so that they could manage and manage lasting customer relationship.* – DashThis (Pipedrive)

In addition to managing existing customer relationships, sales teams also faced the problem. Managing growing, complex sales pipelines was found to be a constraining issue for many companies, especially due to the nature of lead management, which may be scattered both quantitatively and in terms of time, making it difficult to manage the overall situation.

> *As deals can progress over several months, Belkins' business development team are usually having to manage upwards of 500 deals at any given time.* – Belkins (Pipedrive)

The findings suggest that there is a notable interconnectedness between operational constraints and technical and infrastructural limitations. When SaaS companies grow, maintaining their current operations and service quality can face significant internal growing pains that require more efficient solutions and continuous development. Indeed, growth was seen as the main reason for these challenges. While business growth is often hoped for, the real challenge can be identified as enabling sustainable growth with a growth-facilitating system infrastructure and processes.

4.2.2 External challenges and limitations

In contrast to internal challenges, content analysis shows that external challenges and limitations are rarely discussed in the research data. Limitations regarding the regulatory environment and data privacy were only mentioned as something that the companies had to consider when making decisions on possible solutions. Regulatory frameworks like GDPR were mentioned a couple of times, especially when the customer company was specifically stated to mainly operate in Europe (Giant Swarm [HubSpot], Bitly [Zendesk]). Moreover, security concerns were discussed in customer stories where the customer's business is dealing with sensitive data, thus making security and trust a fundamental business requirement. For example, Datasite (Salesforce), a SaaS-based service to facilitate complex strategic initiatives like company acquisitions or organisational restructurings, highlighted the need to protect their customers' highly sensitive data and thus, only invest in solutions that could match their security requirements.

While SaaS companies all face jurisdictional limitations with data collection and utilisation, data security is prioritised differently based on the nature of the service. Therefore, the findings suggest that the regulatory environment creates a universal framework within the particular market, but the level of importance comes from the customer security requirements. As SaaS companies increasingly aim to utilise customer data in their internal decision-making and process development, sustainable data use requires greater attention to ensuring that data is protected and used ethically.

> *AvePoint sought to enhance productivity, streamline operations and improve customer support efficiency while maintaining the highest standards of security and governance.* – AvePoint (Microsoft).

Similarly, competitive and market-related challenges were indirectly mentioned, but still recurred as a theme in some of the customer stories. As discussed in the literature review, SaaS companies are facing increasing competition, requiring constant development and review processes to ensure that customer requirements are met. Again, the challenge is highly dependent on the nature of the business in which the SaaS company operates. Customer requirements are the foundational reason for competitive and market-related challenges. The most significantly highlighted customer requirement was to be able to receive support rapidly when requested. The challenge is especially present in international business, when operations in many locations require responsiveness at all times of the day. The same theme occurred in the sales context, as leads had to be given attention without delay to ensure higher conversion rates and competitiveness.

> *Pipedrive has also enabled the sales team to engage with new leads more quickly and accurately, which has proved critical in a competitive space where prospect attention spans are limited.* – Kovai.co (Pipedrive).

> *In a global organization like AvePoint, work always moves around the clock. With teams spread across time zones and responsibilities running deep, the pressure to stay responsive and productive can be overwhelming.* – AvePoint (Microsoft).

Although external challenges in this study's context were not discussed in the data too much, the content analysis was able to find recurring patterns that SaaS companies have to consider or face in their everyday operations. These challenges provide incentives for sustainable and ethical business, especially in a data-driven environment. Findings suggest that being able to address these challenges sufficiently can provide companies with a competitive edge, which was found to be recognised by many SaaS companies. When implemented effectively, AI-driven solutions can facilitate achieving these advantages while also providing means to achieve the objectives discussed earlier. Next, the study will present the findings on AI-driven solutions for leveraging CRM capabilities.

4.3 AI functionalities utilised in a SaaS company CRM

From the content analysis, it was evident that SaaS companies are developing their capabilities for enhanced CRM through various AI functionalities. The importance of AI for business improvement has been recognised, and SaaS companies are willing to harness data to gain advanced customer

insights and more efficient internal processes. Indeed, it seems that SaaS companies are often using AI as part of their strategic development processes, where many operational and strategic objectives are attempted to be reached using AI applications and integrations. The summary of findings on AI functionalities used in SaaS companies to enhance CRM capabilities and operations is visualised in Figure 6.

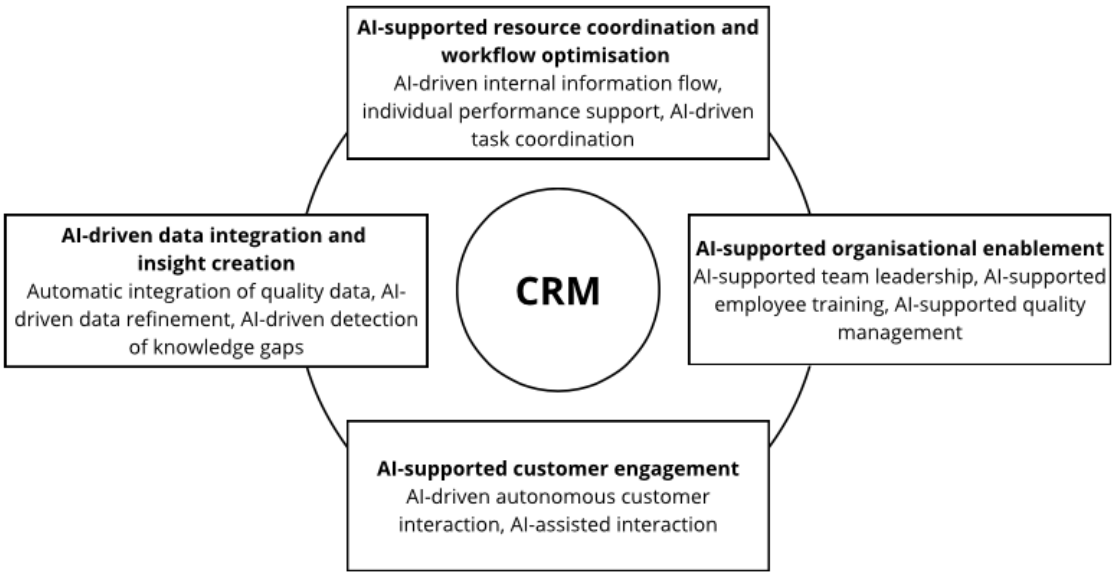

Figure 6. Key AI functionalities utilised in CRM by SaaS companies

The research data shows that most of the AI functions are acquired to enhance internal processes and operational efficiency. Common to all functions, their main purpose was to save time and increase the organisation's ability to provide quality customer engagement that scales effortlessly with business growth. In addition, it is notable that most of the customer stories discussed more than one AI-driven functionality. Therefore, none of the functionalities exclude one another, and SaaS companies are utilising AI in many different ways to enhance their CRM.

4.3.1 AI-driven data integration and insight creation

AI-driven data integration and insight creation functions are utilised to integrate data in real-time from customer interactions, refine this data for structured analysis, and support the company's capabilities for continuous quality data integration. SaaS businesses have high capabilities for using data as their advantage due to the online environment. Therefore, using this data as their advantage has become a prominent enabler for gaining a competitive edge. The content analysis showed that many SaaS companies are struggling with managing this continuous data flow. Managing vast amounts of data and deriving actionable insights was found to depend heavily on the ability to

integrate high-quality data, which could then be further processed for decision-making. It was found that AI is used to assist with data integration and insight creation in three ways: AI-driven real-time data collection and integration for sales insights, AI-driven real-time customer segmentation, and AI-driven detection of knowledge gaps.

SaaS companies are using AI to integrate data in real-time from customer interactions. These functions are mainly emphasised in the data used for sales actions. For example, AI can help identify and integrate actions made by customers on company websites, such as clicks, downloads, or even time spent reading a certain article, which are then refined for the sales department to be used in customer outreach. The key functionality was seen to be the rapidness of knowledge flow. Real-time data integration enables prompt action-taking, which was seen as vital for ensuring sales success. Without the ability to integrate data in real-time, sales representatives are lacking the possible high-level view of their sales pipeline.

> *For example, the prospect signs up via the website, he/she performs a series of activities inside the application, a bunch of automation emails are sent, the prospect (trial user) performs some key events inside the application; all of these events are captured on Pipedrive so the salespeople know the exact state of the prospect.* – Kovai.co (Pipedrive).

The integration can happen automatically or following a command by the sales representative. A few cases reported using internal chatbots for customer research. In these cases, data is refined by AI to support sales in conducting more efficient and meaningful customer engagements. Findings also suggest that using AI-driven internal chatbots not only saves time but also improves the quality of customer interactions.

> *Breeze Copilot (formerly ChatSpot) empowers sales teams to conduct faster, more effective research and to uncover insights that would have previously taken hours to gather. Equipped with detailed, relevant information, sales reps approach every customer interaction with greater confidence that fosters deeper, more meaningful engagements.* – Agicap (HubSpot).

In addition, AI was used to recognise and fill the knowledge gaps on customer details and content that the customers directly engage with. This function serves a dual purpose: while AI identifies areas for improvement in the company website's content or customer information, it also enhances the company’s ability to integrate high-quality data. While this function was only discussed in the research data a few times, it was shown to be important for SaaS companies to boost their CRM capabilities. Companies use AI to systematically detect missing, outdated, or unclear information.

This function can therefore be seen as a quality assurance mechanism for CRM, continuously evaluating and improving the information foundations used both internally and by customers.

> *Finally, JobAdder uses AI to analyze gaps in its content, making it even easier for customers to obtain information from the AI assistant or the customer center articles. "This has been instrumental in refining our user journey and ensuring our content is more AI-ready and aligned with customer needs"*. – JobAdder (Zendesk).

In conclusion, AI is used by SaaS companies to collect, analyse, and refine customer information in real time. The ability to integrate quality data is growing in importance with the increase in data flow, where data varies in quality and structure. While this ability was emphasised in the literature review, the content analysis suggested that AI-functions driving data integration and insight creation capabilities are undermined, as they were discussed the least of all the AI-functions. However, as discussed before in 4.2.1, the research data did not directly address the challenge of integrating quality data, and therefore, customer stories relatively rarely discuss AI-driven data integration as a solution.

4.3.2 AI-supported resource coordination and workflow optimisation

AI-supported resource coordination and workflow optimisation is provided by AI-functionalities aimed to improve internal operational capabilities, like human resourcing and workflows. As recognised in SaaS company objectives and challenges, ensuring sustainable operational efficiency remains a key challenge for managers. The content analysis suggests that enhancing operational efficiency with AI is the most requested AI functionality from CRM vendors by SaaS companies, with the respective functionality mentioned in 26 of 42 customer stories. The majority of customer stories were discussing some form of AI function that was aimed at enhancing the workflows to save time and avoid challenges created by fragmented system infrastructures. These functions help in every stage of CRM, from qualifying and assigning leads and tasks automatically to sales representatives or other employees, to enhancing the operational efficiency of a single customer service representative.

The most discussed functionality in the research data was AI as a driver for internal workflow optimisation. This includes functions such as automating routine tasks, summarising information from customer interactions and internal communications to create task lists, and assisting with quote creation using accurate, real-time information. As workflows are very company-specific, AI functions were used in many different ways. However, it was notable that SaaS companies usually benefit from the same type of AI-driven solutions when the targeted development process is closer to the work

done by an individual employee. This finding was expected, as while internal processes vary in different companies due to varying organisational structures or industry, the tasks of employees involved in CRM operations tend to be mutually similar.

In general, it can be said that SaaS companies benefit from two types of workflow optimisation: enhanced information flow across departments and functions that drive individual employee performance. AI can help internal information flow by delivering data in real time to common CRM systems, ensuring that information gathered by one department is available across departments. While the benefits of enhanced cross-departmental information flow were evident, this was explicitly mentioned as an AI function in only 7 of 42 customer stories. This, therefore, implies that SaaS companies are either still manually reporting to other departments when needed or that many already have cross-departmental information visibility.

> *HealthJoy's agents rely on real-time AI transcription and summarization for voice conversations to stay focused and capture every detail accurately, creating consistent records accessible across teams.* – HealthJoy (Zendesk).

On the contrary, AI functions boosting individual employee performance were emphasised to a greater extent. In fact, 13 customer stories directly mentioned using AI-functionalities to enhance employee performance. The most common function was the AI-summarisation function, which automatically summarises the content of an email, customer inquiry, or internal message to assist with task prioritisation, creating to-do lists, understanding the problem in complex customer inquiries, and answering them.

> *Before, on Monday mornings, I was sipping my coffee while facing an avalanche of emails, meeting invitations, Teams messages and urgent tasks. Now, I generate quick summaries of my weekend backlog, so I can start my Mondays feeling informed and prepared.* - AvePoint (Microsoft).

> *Efficiency also means handling tickets strategically. By leveraging Intelligent Triage, a core feature of Zendesk AI, inquiries are automatically categorized and summarized, allowing agents to immediately understand ticket context without having to sift through long email conversations.* – Starshipit (Zendesk).

Another core functionality that AI was found to enhance was the coordination of leads and customer inquiries to agents, ensuring effectiveness in sales and customer service. As discussed in the literature review, AI helps coordinate resources towards the most profitable customers. This was supported by

findings from content analysis, which showed that the respective coordination capabilities were directly mentioned in 11 customer stories. This function was used in every stage of the customer lifecycle, from lead generation to customer service for existing customers. First, leads can be automatically directed to the most suitable team or individual sales representative, ensuring prompt and high-quality action-taking. Leads can be routed to different teams or agents based on predetermined characteristics. For example, AI can recognise more complex cases and automatically assign them to more senior employees or expert teams, who may have the right industry knowledge or experience in similar engagements, making them the most suitable to engage with the customer. The AI-functions used were also found to recognise the tone of inquiry, and further coordinate these to more senior employees.

> *Using the AI sentiment and confidence features, we can prioritize negative comments on tickets and assign them to more senior agents. So we've been able to respond 58 percent faster to frustrated users"* – Benevity (Zendesk).

> *Agentforce routes leads based on criteria established in the builder and setup experience, ensuring each lead is directed to the most suitable product or team.* – CentralSquare (Salesforce).

Overall, the content analysis suggests that AI features are used to optimise workflows and coordinate resources more than any other CRM-related function. Therefore, most AI-enabled development focuses on internal processes, aiming to prevent information silos and ensure prompt, high-quality customer engagement. Through automated triage, task coordination, summarisation capabilities, and seamless information flows across departments, companies aim to save time and reduce administrative burden. Notably, these functions are developing processes in the background and do not directly affect customer-facing CRM actions, but instead develop the fundamentals for more efficient CRM. Next, the findings on AI functions that directly support customer engagement and personalisation, and even engage with customers autonomously, are discussed.

4.3.3 AI-supported customer engagement

AI-supported customer engagement captures functionalities that autonomously interact with customers or help agents in their direct customer interactions. The content analysis revealed that customer-facing functionalities were also a popular form of AI use in CRM within SaaS companies, with 22 out of 42 customer stories mentioning these types of applications being used. These functions can be divided into two: functions enabling AI-assisted outward-facing interaction, such as chatbots

autonomously responding and handling customer interactions, and functions enabling AI-enhanced personalisation, which directly support human agents in interactions. These two categories were mentioned in the research data with roughly equal frequency, suggesting that both supportive and autonomous functions are seen as equally beneficial. Again, many times, both of these functions were used in parallel by the same case company. Personalisation capabilities were relatively rarely discussed and mostly were restricted towards assistance in writing personalised responses. However, a form of personalisation capability can also be included in chatbot features, with interactions personalised by analysing customer-specific requirements within the interaction.

The findings suggest that AI is used for autonomous customer interactions, mostly through chatbots or virtual agents, using large language models to answer customer inquiries. Chatbots are usually responding to inquiries that the company commonly face in customer support and that do not require human involvement. These types of inquiries depend on the business but commonly include questions about account details or password resets, typical product questions, or payments. To respond to inquiries, the chatbot uses the company's internal knowledge base, underscoring the need for a structured, comprehensive, and up-to-date database.

> *Not only does Agentforce surface accurate answers to frequently asked questions instantly, it understands and responds to a wide range of natural-language queries in multiple languages. This saves time for dealmakers on a deadline and ensures they don't have to spend time finding a particular way to frame questions for a rigid chatbot.* – Datasite (Salesforce).

> *Also, the AI agent leverages Zendesk large language models to answer specific questions based on data from Playtomic's internal knowledge bases. Currently, the AI agent is replying in nine languages to accommodate the company's growing global reach.* – Playtomic (Zendesk).

Notably, many companies mentioned a chatbot's ability to provide customer service in multiple languages and at any time of day. This finding highlights the requirements of SaaS companies operating in an international environment, including the need for customer support to be available around the clock. Most companies also emphasised the operational benefits this technology has brought to customer service, and the time savings were often reported to be many times. SaaS companies are able to free up time from their agents, who can then allocate this time towards more critical and complex inquiries that chatbots automatically assign to human agents.

The other type of AI-driven feature recognised during the content analysis was the supportive functions that do not autonomously engage with the customer but instead support human agents in their interactions. This feature mostly supported email and other message interactions by providing a virtual assistant for writing. The AI-driven feature analyses the customer's message and provides ready recommendations for a response. In addition to content suggestions, human agents can use the feature to edit their written messages to match the customer's tone, thereby improving the quality of customer communication.

> *Zendesk AI is at the core of this transformation, which provides real-time writing assistance. Agents can adjust response tone, expand messages, and structure replies to complex tickets effortlessly, making communication more seamless.* – Starshipit (Zendesk).

Interestingly, while the benefits of AI applications that either autonomously interact with customers or support human agents in their interactions were emphasised, these features were discussed in the customer stories of only two CRM providers, namely Zendesk and Salesforce. While this probably reflects more the CRM provider's product focus than the SaaS company's needs, it may also refer to CRM providers' ability to offer these types of outward-facing features. Instead, most of the AI features in the research data are used for internal purposes to boost the efficiency of human agents, rather than replacing them. Next, the final category of research findings presents findings on AI functions that enhance organisational enablement and managerial decision-making.

4.3.4 AI-supported organisational enablement

The former findings have presented AI features that support the development of internal CRM processes for greater efficiency and quality, and that directly help engage with customers. The content analysis also revealed that AI features are utilised in SaaS companies for managerial decision-making, quality control, and leadership purposes to further enhance CRM operations. These are broadly categorised as functions that enable organisational features and do not directly relate to process development or customer interactions but rather ensure that CRM stays sustainable and manageable. The findings strongly suggest that these features are merely complementary and were never presented as the sole purpose of AI deployment, yet they were still mentioned in 11 out of 42 customer stories. It can be seen that SaaS companies are enjoying the benefits of AI functions to also measure operations and recognise points for improvement, rather than applying AI for these purposes solely.

From the content analysis, three types of AI-supported organisational enablement were recognised: AI-supported team leadership, AI-supported employee coaching, and AI-driven quality management.

AI can support team leadership by providing real-time visibility into agent performance, uncovering trends, and helping improve internal team engagement. This feature provides ground for managerial decisions, facilitating better agent training. Some SaaS companies also mentioned using AI features directly to deliver more efficient, timely employee training and boost agent abilities. This was done, for example, by analysing individual performance in direct customer contact:

> *Netgain also uses Fathom's call analysis to score reps on technical sales skills such as discovery, solutioning, and objection handling as well as soft skills like communication and relationship building.* – Netgain (HubSpot).

In addition to enhancing leadership capabilities and improving employee training efficiency, AI can be directly utilised for quality management. AI tools can recognise flaws and areas for improvement by comparing interactions and results in real time to predetermined quality targets, and even violations of data security measures. Despite the clear advantage, quality assurance with AI was rarely discussed directly in the research data.

Notably, the use of AI as a tool was discussed and supported within teams by many SaaS companies. Managers measure agent engagement with AI tools to recognise training needs and support individual and team-level adoption, even rewarding the individuals with the best scores in AI use. This finding reinforces the idea that SaaS companies are often highly motivated to use new types of technologies. Indeed, the content analysis shows that SaaS companies are utilising multiple types of features to improve internal processes and individual performance, enhance customer engagement, and even enhance leadership capabilities.

4.4 From AI-enabled CRM objectives to organisational scalability

Based on the findings of the content analysis, the conceptual framework presented in the literature review in Table 3 was complemented and illustrated in a processual model in Figure 7 below.

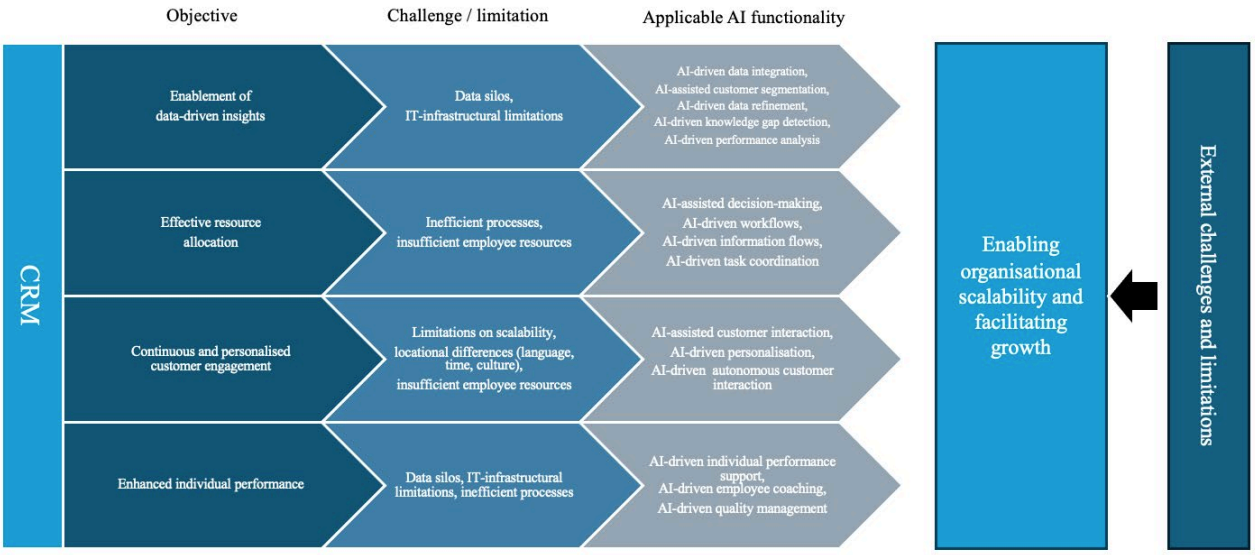

Figure 7. Processual model for achieving objectives with AI-CRM in SaaS businesses

The key objectives of CRM in the SaaS business were complemented by adding a fifth objective: *enhanced individual productivity*. The findings suggest that SaaS companies have five major objectives that guide operations and development initiatives, such as new technology adoption. Efficient resource allocation and continuous, personalised customer engagement were significantly more emphasised than other objectives, in line with the existing literature. One major finding was the data-driven addition of a fourth category of AI-CRM functionalities in CRM: *AI-supported organisational enablement*. This category consisted of AI functionalities that enabled a data-driven development of team leadership, employee training, and quality management, which support CRM operations. Apart from AI-driven performance analysis, these functionalities were recognised to benefit individual employee performance. These functionalities were mentioned in every fourth customer story, but they were never presented as the sole effort for development. Hence, the role of this AI-CRM functionality remains minimal, but it can still be seen as a valuable tool for SaaS companies seeking to maximise the operational effectiveness of their CRM.

The content analysis supported the literature review on challenges and limitations faced by SaaS company CRM. However, internal challenges, namely technical and infrastructure limitations, and operational constraints, were significantly more recurring themes than external constraints. The customer stories present case studies of a single customer, and most explore solutions to internal issues, which can also ease external pressure by improving the means of meeting market requirements. Overall, most external challenges and limitations are universal issues faced by all competitors and thus are not a popular target for development, especially in the context of CRM. What was notable, however, was that many CRM challenges, internal or external, were faced by SaaS

companies because of expansion or operational growth. This finding supports the need for SaaS companies to be aware of potential thresholds and prepare for them accordingly to achieve sustainable growth and a competitive edge. Indeed, it is important for SaaS companies to revisit their system infrastructure and adopt technologies, such as AI-powered capabilities, that can facilitate rapid growth and enable seamless, rapid response to rapidly evolving challenges.

The content analysis revealed many different types of functionalities where AI could be implemented. Firstly, the importance of integrating quality data was recognised as the foundation for improved insight, which, in turn, supports better operations. This was enabled by integrated AI features that automate real-time data collection and refine and distribute the data to shared systems, facilitating advanced insights across departments. Access to excess market data helps identify and engage customers, regardless of geographic, economic, or cultural differences, and can help gain a competitive advantage in foreign markets (Navarro et al. 2010, 49). Indeed, the model shows two AI functionalities that recur in the data: AI-driven data refinement to facilitate data structuring and avoid false information, and AI-driven knowledge gap detection, which supports the development of CRM-related content to meet varying customer information requirements.

Secondly, AI can support resource coordination and workflow optimisation by enhancing individual performance and automatically coordinating tasks, in addition to the functionalities mentioned in the literature review. This category was mentioned in most cases, highlighting the importance of developing internal operational effectiveness within CRM operations. Although AI's capabilities to facilitate internal workflow optimisation were not extensively discussed in the reviewed literature, the importance was still highlighted (Latinovic & Chatterjee 2022, 970; Rustholllkarhu et al. 2022, 250–251). According to research data, to drive workflow optimisation, SaaS companies are integrating AI capabilities that automate repetitive, time-consuming tasks, such as assisting with the creation of customer materials or summarising emails and internal messages to enable quick decision-making. In addition, resources are coordinated, and workflows are optimised through automated lead and task assignment, which automatically assigns them to the correct agents or teams. With improved data sharing, automated inputs, and automated routine tasks, AI not only saves time by simplifying processes and improving operational efficiency but also enables faster customer and lead responsiveness (Chen 2024, 3968; Gupta et al. 2020, 35; Libai et al. 2020, 46), which was highlighted as a major requirement for CRM success.

Thirdly, improving direct customer interaction was highlighted in multiple customer stories, further supporting the literature review. In the SaaS industry, the subscription-based business models and the

importance of additional services underscore the importance of continuous customer engagement to nurture existing revenue streams while creating additional value (Kotan et al. 2025, 2). The content analysis provided depth to understanding the most common AI functionalities enabling continuous and personalised customer engagement. Customer-facing LLM-based chatbots were mentioned multiple times, highlighting the need for automated customer interaction to provide support around the clock and in many different languages. Notably, only two major CRM vendors highlighted this functionality in their stories. While these automated tools are highly discussed in the existing literature and are in considerable demand from customers, their availability is rather limited. Furthermore, SaaS companies use AI to support customer agents' work during direct customer interactions, offering automated suggestions for responses or even tone refinement to improve quality.

As discussed by Libai et al. (2020, 45) and Latinovic & Chatterjee (2022), AI-CRM applications have become important strategic assets for companies rather than mere operational tools across markets. Indeed, the findings support the fundamental objective of SaaS companies: to enable sustainable growth by facilitating scalability, which can be achieved by pursuing other objectives. By creating better analytics from more data, making predictions about customer behaviour, and identifying the risk of churn, CRM can enable achieving a significant strategic advantage that supports SaaS companies' customer retention and ultimately growth (Kotan et al. 2025, 2). Furthermore, the presented conceptual model supports the strategic character of modern CRM, as AI should not be implemented in pieces but rather utilised as a strategic asset to gain a competitive advantage (Latinovic & Chatterjee 2022).

Overall, the research data strongly support the literature review findings and provide empirical evidence on the functionalities currently in demand. As the technology is developing rapidly, some functionalities that were not directly recognised in the literature review could be detected in the research data, highlighting the fact that knowledge of customer demands is becoming obsolete quickly, and the development of new applications is constantly changing the CRM landscape. Customer stories published by CRM vendors provide an in-depth look at the current objectives and challenges SaaS companies are trying to solve, and where AI can act as a facilitator to enhance CRM operations.

5 Conclusions

5.1 Theoretical contributions

This study has collected existing research and provided empirical data to expand the understanding of how SaaS companies are utilising AI in their CRM, referred to in this study as AI-CRM. First, the common objectives and challenges of CRM for SaaS companies were identified to understand how AI can be leveraged to meet these objectives and overcome these challenges. Then, the different types of AI functionality were more thoroughly investigated. While the findings were quite similar to the existing academic literature, the empirical evidence provides important insights into the degree of emphasis placed on each AI functionality in practice. Previous literature on AI-CRM was recognised to narrowly distinguish different ways this technology contributes to industry-specific challenges (Ledro et al. 2022, 2; 2023, 9). This study contributes to the recognised research gap by examining SaaS-specific objectives and challenges in customer relationship management, and how AI-CRM supports achieving these objectives and overcoming these challenges.

The academic literature highlights SaaS companies' objective of achieving operational growth and scalability. To achieve this, SaaS companies are utilising data analytics for accurate insights, which is constructed by integration of quality data, and then refined for insights, enabling improved operational efficiency (Chatterjee et al. 2019, 152–153; Kotan et al. 2025; Libai et al. 2020; Sanches et al. 2025). Achieving these objectives is hindered by internal and external challenges, of which the first can be directly addressed by the company, while the second primarily affects the overall market environment. The content analysis supported this, as it was recognised that SaaS companies are not directly trying to solve external challenges through investments in AI functionality; instead, most problems to be solved were internal. While the existing literature discusses objectives at the company level, the findings also provide an objective for individual-level employee efficiency.

The study contributes to existing theory by providing a novel processual conceptual framework for AI functionalities. While the previous models, like the 3 C's model by Latinovic & Chatterjee (2022), mostly focus on either internal or customer-facing functionalities of AI-CRM on a broad level, this presented set of functionalities creates a more industry-focused framework, including both internal and customer-facing functionalities together by placing them in the context of industry-specific objectives and related challenges. The underlying idea is that implementing AI for CRM cannot be conceptualised solely in terms of its direct effects on customer-facing interactions or on internal process development; instead, it should be understood through the desired outcomes and the

corresponding obstacles, to create a strategic framework for development. Moreover, the content analysis revealed that internal AI functionalities are more emphasised in CRM vendor customer stories, highlighting their relevance to SaaS companies and simultaneously underscoring the need for a more comprehensive perspective. While internal AI functionalities seem to lay the groundwork for efficient data-driven CRM operations in the current business environment, the focus should always be on the customer value to ensure sustainable growth (Latinovic & Chatterjee 2022).

Overall, the study supports existing theories on the objectives of CRM in SaaS businesses and the AI functionalities used to achieve them. However, the study adds depth and understanding to the existing literature on which functionalities are utilised and why, by recognising which AI functionalities are most highlighted by CRM vendors in their customer stories as solutions to different problems. SaaS companies are leveraging internal AI capabilities most for enhanced CRM, while direct customer-facing capabilities, like chatbots and virtual agents, are the next most common. AI-CRM is primarily used to enable sustainable growth or to address operational challenges that arise after growth. In addition, the findings support the existing literature on AI-CRM's ability to enhance cross-border CRM capabilities by integrating AI-powered chatbots to interact with customers in many languages and around the clock, as emphasised by multiple CRM vendor SaaS customers.

5.2 Managerial implications

This study provides important insights for SaaS companies considering investing in their CRM systems and process development. The positive implications of AI in CRM for reaching operational and strategic objectives are evident, with research findings supporting the existing academic literature. Enablement of sustainable growth is supported with efforts facilitating the achievement of other recognised objectives, while hindered by challenges, of which internal challenges can be directly affected. As shown, AI can be utilised at multiple points in different ways, and many vendors support companies in tailoring their products to their needs. Hence, it is not a matter of availability but rather about recognising the sufficient points for AI integration and prioritising these development targets. To efficiently implement AI in CRM, the company must first recognise its objectives and the challenges that could hinder their achievement. First, the company needs to understand their strategic objectives. Operational objectives should then be objectives that enable these strategic objectives. After recognising what is to be achieved, assess current processes and identify challenges. Based on the findings and examples in this study, are there similar cases that could help address the recognised challenges? Finally, initiate AI implementation by selecting an applicable AI-CRM function and

service provider. Add AI features separately, not all at once, so problems can be identified and resolved before introducing new, potentially interrelated tools.

An important step before considering taking on AI initiatives for CRM process enhancement is to assess your database: what type of data can the company collect, what kind of data is important for the company, and where this data is located. Efforts to improve data utilisation through integrated AI functions can deliver significant benefits, but only when the foundation is strong and the objectives are clear. This also includes assessing the current system infrastructure. According to the content analysis, most SaaS companies face siloed data due to fragmented system infrastructure. Avoiding a fragmented system infrastructure should be considered from the early stages of business, as research shows this has become a strategic and operational limitation for many companies during growth. This finding suggests that having a clear IT-development strategy from early on can increase capabilities for sustainable growth and help avoid a large infrastructural reformation, which is often costly and difficult to implement. Furthermore, to efficiently utilise AI-CRM, SaaS companies must possess a solid data foundation. Hence, managers should initially ensure that databases are structured and accessible. While AI can help detect knowledge gaps, these gaps can be hard to recognise when system infrastructure is fragmented. Structured and accessible data ensures that AI functionality works properly and that insights can be trusted.

SaaS companies are implementing internal AI capabilities primarily to improve resource coordination and workflow optimisation. This finding provides important insights for SaaS company managers to remain competitive and for CRM vendor managers to assess their offerings. AI functionalities enhancing internal CRM capabilities were widely highlighted as time-saving and value-creating, directly improving operational effectiveness and cross-department coordination, and indirectly, but still significantly, enhancing the quality of direct customer interactions. Optimising workflows and automating customer interaction seem to enable cross-border operations, considering that customers seem to require the availability of support around the clock. Staying competitive in cross-border markets stresses the ability to meet these customer requirements while simultaneously facilitating efficient sales.

In general, using AI tools and integrated CRM functionalities can evidently enhance operational efficiency, help gain a competitive advantage, and enable sustainable growth. Conversely, this study highlights that SaaS companies are increasingly investing in AI functionalities, which will enable them to gain a competitive advantage if they do not keep up with the pace of change. Thus, this study encourages SaaS managers to explore opportunities to introduce AI functions to enhance their CRM.

This is not only beneficial for CRM results, but also for the employees already involved, who can enjoy time savings from automated repetitive tasks and focus on more valuable tasks, which are often also the most rewarding. In addition, this will support sales representatives in nurturing leads more efficiently and closing better deals. While beneficial for the company, this also boosts agent confidence and productivity. AI-CRM should not be seen as a secondary investment, but rather a development target to succeed in the increasingly fierce competitive business environment.

5.3 Limitations and recommendations for future research

It must be recognised that this study poses some important limitations. Firstly, the study used only secondary data, which was not directly created to answer the research questions but had to be interpreted by the researcher. Interpretation is inherently subject to bias, despite the researcher's efforts to ensure confirmability. In addition, the nature of the secondary research data used can be recognised as biased in the first place and must be assessed critically. Within the context of this research, customer stories represent the CRM vendor's perspective on how they have solved a SaaS customer's problem, and the narrative naturally supports vendor actions in their favour. As this research aims to understand how AI applications can contribute to CRM from the SaaS company (customer) perspective, rather than the CRM vendor (provider) perspective, the biased narratives typical of marketing materials (customer stories) are not expected to significantly influence the analysis. However, the customer stories are usually very short and lacking detail on how the implementation was done; thus, problems with the implementation are rarely mentioned. The stories are published selectively, showcasing only the positive outcomes, which introduces a systematic positive bias. Despite the limitations of customer stories as research data, the customer stories provide a direct insight into a real-world example, and the publications on large CRM vendor websites are often diverse in company size, location and different descriptions of implementation. In addition, the customer stories usually follow the same structure, making the studies sufficiently comparable.

While it can be recognised that AI can be an effective tool to improve CRM, this study only provides a review of the CRM-related objectives and challenges SaaS companies are trying to solve, and the findings cannot be directly generalised. Furthermore, the study is only focused on SaaS companies that have been included in the selected customer stories. These companies are often technologically advanced, providing means for the adoption of this type of technology. Hence, the findings may not be sufficient to generalise to smaller companies or to companies and industries with lower technological maturity. Finally, the concepts of this study are evolving rapidly, potentially leading to

expiration. CRM and AI-related terminology can expire quickly, causing ambiguity in the categorisation of these functionalities.

The study proposes several recommendations for future research. As the study uses only secondary data, its claims could be validated with primary data through interviews with SaaS companies, CRM vendors, or end users. This study does not address user experiences, which would provide a more nuanced understanding of how these functionalities are perceived by users or by customers. Understanding these experiences would be beneficial, since customer-centricity stresses understanding customer experiences, which AI functionalities, especially those directly involved in customer interaction, can directly impact. Furthermore, this study does not provide quantitative support for the outcomes, underscoring the need to understand which functionalities are most effective and, consequently, which should be prioritised. Measuring the performance of these different functionalities towards the achievement of objectives could be studied with quantitative methods.

This study focused solely on the SaaS industry and could be conducted with a different industry focus. More research is needed to understand whether the same patterns identified in this study can be generalised to other industries, especially beyond early adopters. Finally, as AI-CRM has been introduced by SaaS companies only relatively recently, conducting a longitudinal study on the effects of AI-CRM implementation is recommended. As discussed in this study, SaaS companies are many times early adopters of new technologies, providing a justified scope for longitudinal study. These long-term impacts of AI-CRM for operational efficiency could be transferred to other industries, which are adopting this technology later than companies in the SaaS industry. The topic of this study remains dynamic, and future research can be grounded in its findings to advance both academic knowledge and practical understanding of AI-driven functionalities in CRM.

6 Summary

The aim of this study was to explore how artificial intelligence can contribute to customer relationship management in a SaaS business. This was achieved by dividing the research topic into three research sub-questions, which together develop a comprehensive understanding towards the topic. The first and second sub-questions examined the objectives and challenges SaaS companies face in their CRM operations. Then, the third sub-question examined how SaaS companies are utilising AI to achieve these objectives and overcome these challenges. These questions were answered by reviewing existing literature and then further examining the findings with qualitative content analysis of customer stories published on multiple CRM vendor websites, focusing on those in which the customer was a SaaS company.

The literature review recognised that CRM is a multifaceted business concept, with systems and utilisation of data playing a significant role in successful operations. The increasing level of globalisation makes CRM even more complex than before, as customer bases are increasingly diversified and competition forces companies to change their focus towards a more customer-centric culture. The implications of AI for CRM were discussed, and different types of functionalities where AI can be utilised were identified. AI can act as a powerful tool to facilitate communication both internally and externally, ease internal coordination between departments, assist with the customisation of interactions and operations, and enhance workflows by automating processes. To further deepen the discussion, a review of possible challenges was conducted. The introduced topics were then integrated into the SaaS context by introducing different features that a SaaS business includes. Finally, the literature review was synthesised to create a theoretical model of the different types of objectives, challenges, and AI functionalities within the SaaS context.

The study then explored the built conceptual framework in a practical context to find any similarities and differences. Empirical data were gathered from CRM vendor websites, and qualitative content analysis was conducted of customer stories in which SaaS customers had utilised AI features for various CRM-related purposes. The findings suggested that SaaS companies aim to achieve both operational and strategic objectives, which are interrelated. While aiming for business growth through operational scalability, SaaS companies face external and internal challenges and limitations, of which internal challenges were mostly addressed with new technological solutions. The findings suggest that many SaaS companies face higher workloads as they grow, without the means to handle the operational burden. AI was primarily utilised for internal purposes, particularly to optimise workflows and coordinate tasks, addressing the challenge of increasing workflow volume without

radically expanding employee headcount. In addition, many SaaS companies are utilising AI applications for customer interaction, namely, to handle the growing workload without compromising responsiveness and service quality. Overall, this research expands existing knowledge on AI-CRM implementation with a SaaS industry focus. The study highlights the need for quality data, the importance of AI in CRM operation development, and provides a comprehensive perspective on how this technology should be seen as a cohesive solution for CRM development organisation-wide, rather than a tool for either internal or customer-facing operations.

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Appendices

Appendix 1. Flagship AI tools by CRM vendor

Vendor name	Flagship AI feature	Example CRM functions
Salesforce	Agentforce	Supports autonomous agents for sales, service, and marketing tasks, including lead qualification, customer support automation, workflow execution, and real-time decision support.
Microsoft	Copilot	Assists users with content generation, customer communication, data analysis, forecasting, and CRM task automation through natural language interaction.
SAP	Joule	Provides AI-driven insights, recommendations, and automation across CRM processes, like customer engagement, sales forecasting, and process optimisation.
Oracle	Oracle AI (embedded to Oracle CX)	Enables predictive analytics, customer insights, personalisation, and automation across CRM processes such as sales, marketing, and service operations.
HubSpot	Breeze	Automates content creation, lead management, customer communication, and reporting. Supports inbound marketing, sales productivity, and customer service efficiency.
Pipedrive	Pipedrive AI	Enhances sales productivity through deal prioritisation, activity recommendations, sales forecasting, and automated data entry.
Zendesk	Zendesk AI	Enables customer service automation through chatbots, ticket routing, response suggestions, sentiment analysis, and agent productivity tools.

Appendix 2. List of customer stories included in the content analysis

Salesforce

Datasite (US)	Salesforce. (n.d.-a). *Agentforce eases merger and acquisition deals for Datasite's customers.* Salesforce.Com. Retrieved October 2, 2025, from https://www.salesforce.com/customer-stories/datasite/
CentralSquare (US)	Salesforce. (n.d.-c). *CentralSquare will scale smarter and drive growth with Agentforce.* Salesforce.Com. Retrieved October 2, 2025, from https://www.salesforce.com/customer-stories/centralsquare-technologies/
Grammarly (US)	Salesforce. (n.d.-d). *Grammarly increases plan upgrades by 80% with sales and marketing AI.* Salesforce.Com. Retrieved October 2, 2025, from https://www.salesforce.com/customer-stories/grammarly-lead-scoring-ai/
RealZips (US)	Salesforce. (n.d.-e). *RealZips delivers personalized outreach 10x faster with AI.* Salesforce.Com. Retrieved October 2, 2025, from https://www.salesforce.com/customer-stories/realzips/
ezCater (US)	Salesforce. (n.d.-b). *Agentforce will transform ezCater's customer experience.* Salesforce.Com. Retrieved October 2, 2025, from https://www.salesforce.com/customer-stories/ezcater/
Wonolo (US)	Salesforce. (n.d.-f). *Wonolo agents decrease handle times 20% with AI-generated replies.* Salesforce.Com. Retrieved October 2, 2025, from https://www.salesforce.com/customer-stories/wonolo-decreases-handle-time-ai-replies/

Microsoft

PLAID (Japan)	Microsoft. (2025b, September 30). *PLAID aims to improve customer understanding and communication by interpreting data with Azure OpenAI Service*. Microsoft.Com. https://www.microsoft.com/en/customers/story/25318-plaid-azure-openai#section-block-body
AvePoint (US)	Microsoft. (2025a, May 27). *AvePoint enhances hiring, cutting production time up to 66% and more with Microsoft Copilot*. Microsoft.Com. https://www.microsoft.com/en/customers/story/23866-avepoint-microsoft-365-copilot

HubSpot

Agicap (France)	HubSpot. (n.d.-a). *Agicap Grows Monthly Recurring Revenue By 6X With HubSpot*. Hubspot.Com. Retrieved October 13, 2025, from https://www.hubspot.com/case-studies/agicap?hubs_content=www.hubspot.com/case-studies/directory/software-technology&hubs_content-cta=read-more HubSpot. (n.d.-b). *Agicap Saves 750 Hours a Week and Increases Deal Velocity by 20% with Breeze*. Hubspot.Com. Retrieved October 12, 2025, from https://www.hubspot.com/case-studies/agicap-1?hubs_content=www.hubspot.com/case-studies/directory/software-technology&hubs_content-cta=read-more

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Netgain (US) Hubspot.Com. Retrieved October 12, 2025, from https://www.hubspot.com/case-studies/netgain-solutions?hubs_content=www.hubspot.com/case-studies/directory/software-technology&hubs_content-cta=read-more

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Appendix 3. Operationalisation table

Research question	Sub-questions	Theoretical Background	Content Analysis Themes
How can artificial intelligence contribute to customer relationship management in a SaaS business?	*What are the key operational and strategic objectives of customer relationship management in SaaS businesses?*	Customer relationship management literature. International sales and marketing literature. AI-CRM literature. Business Analytics literature.	**Objectives and targets that relate to:** Data integration and refinement. Allocation of resources. Customer engagement. Growth and scalability.
	What types of challenges typically hinder the achievement of customer relationship management objectives in SaaS businesses?	Customer relationship management literature. SaaS business model. SaaS customer relationship management literature.	**Challenges and limitations that relate to:** Regulatory environment and data use. Market environment and competition. Systems and system infrastructure. Operational limitations.
	How is artificial intelligence being applied in SaaS companies' customer relationship management to achieve these objectives and overcome these challenges?	SaaS business model. SaaS customer relationship management literature. AI-CRM literature.	**AI functionalities related to:** Data integration, refinement, and utilisation. Resource coordination and workflows. Customer engagement and interaction.

Appendix 4. Explanation of the use of AI

The researcher used different AI tools during the research process. AI was used only for purposes like brainstorming ideas for research, structuring, finding and summarising literature, and language refinement. No text was produced with AI tools, and the researcher takes full accountability of text as his own product. Below, a detailed explanation and example prompts are given.

AI tools used: ChatGPT (versions 4o & 5), Keenious, ScopusAI, DeepL (free version), Grammarly Pro.

Stage 1: Ideation, Scoping, and Research Planning

Tools used: ChatGPT (versions 4o & 5)

Purpose of use: the researcher used AI tools for initial brainstorming of research ideas and scope. The brainstorming was based on researcher's own topics of interests. The researcher used AI for refining initial research questions to improve clarity on the topic.

Example prompts:

My goal is to conduct research about CRM systems in international organisations that would support my knowledge in CRM systems. So, the study could be, for example, about boosting cross-border sales, avoiding churn, or retention. Recommend ideas for research topics, that would align with this idea.

- **Refining:** *Give recommendations only on the international SaaS company customer retention perspective.*

Verification: any interesting AI-created topics were verified as academically interesting by reviewing existing literature to find suitable topics for research. The topic and the research questions were a result of iterative research process, where the research was revised once more relevant literature had been recognised. Refinement of research questions were also a product of considering supervisor's comments. Thus, AI was used only for ideation, not for producing final content.

Stage 2: Literature Review and Synthesis

Tools used: Keenious (UTU license), ScopusAI

Purpose of use: the researcher used AI for finding relevant literature. Most of the literature was still searched manually by going through databases accessed with UTU credentials. The tools used are

citing only databases that are approved by University of Turku. These tools were used to summarise the articles to easily identify relevant pieces of literature.

Example prompt: *"find academic literature on AI-CRM in SaaS context"* / *"find literature on Big Data and CRM"* / *"what does the existing academic literature say about CRM in international business operations"*.

Verification: any suggested literature that was seen relevant was reviewed by the researcher. Citations were derived through careful review. Citations were made appropriately following the university guidelines.

Stage 3: Composition, Editing, Revision

Tools used: DeepL (free version), Grammarly Pro

Purpose of use: AI was used to translate any wording or phrases that the researcher was unfamiliar with. The tools were only used for language support, not to create any text. Grammarly Pro was used to refine the text and grammar once all the text was written. This tool was used only to correct grammar mistakes and refine the text, and no additional text was added.

Verification: The whole text was proofread by the researcher after text editing to ensure conciseness and understandability.