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Minimum viable user-experience design in CRM-projects

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ABSTRACT:
The objective of this research is to bridge the gap between UX-design theory and its practical application within the context of CRM-software projects. This objective is achieved by building an artifact, which correlates with the capabilities of the case company (UX-maturity) to implement such actions. The research process of this thesis begins with a literature review. Literature review explores UX as a phenomenon, examines the practical processes commonly used in UX-design, and study the most common thought processes associated with it. Based on the literature review, UX-design and design thinking have been vastly studied, but associated to a lesser extent with a CRM-software solutions. As a differentiating factor to previous studies, this thesis focuses on the interplay between UX-design, consultants and CRM-projects. The goal is to increase the UX-design awareness, knowledge and practical application skills of case companies' consultants. To succeed, the goal of this thesis is to define a minimum viable level of UX-design suitable for the case company's consultants and represent it in a form of an artifact.

To create the artifact and assess the current UX-maturity level of the company, semi-structured interviews for six consultants with varying expertise were held and the results were analyzed with thematic analysis. According to those interviewed, in case company exist a lack of general understanding and practical know-how related to UX-design. Budget, time and insufficient amount of UX-design awareness were considered the most impeding factors in integration of UX-design to CRM projects. Posing a constraint is also the lack of a competence owner for UX-design and a lack of a structured processes related to it. Thematic analysis results also revealed that UX-design is most often done unconsciously and individually, instead of consciously and collectively. By creating a practical artifact, with specific context-tailored UX-design actions, the interviewees saw a potential in being able to grow their own UX-competence and deliver better solutions to customers. This also leads to strengthening the collaboration with external UX-designers. The artifact is aligned with the case company's current UX-maturity level to conduct UX-design actions.

For case company consultants, the artifact offers methods to enhance their UX-design awareness, competence and practices. For case company, artifact acts as an assessment of the overall UX-maturity within the company offering an improved understanding of the company's specific UX-challenges. The relevance and generalization of the created artifact vary based on the services organization offers, its organizational UX-maturity and strategic focus.

KEYWORDS: user-experience design, human-computer interaction, design thinking, customer relationship management, agile development

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TIIVISTELMÄ:
Tämän tutkimuksen tavoitteena on muodostaa yhteys UX-suunnittelun teorian ja sen käytännön soveltamisen välille CRM-ohjelmistoprojektien kontekstissa. Tavoite saavutetaan rakentamalla artefakti, joka vastaa sisällöltään tapaustutkimusyrityksen arvioidun käyttäjäkokemuksen suunnitteluvalmiustason (UX-maturiteetti) kanssa. Tutkielman teoriaosassa tarkastellaan käyttäjäkokemussuunnittelua ilmiönä, analysoidaan UX-suunnittelussa yleisesti käytettyjä prosesseja sekä tutkitaan siihen liittyviä yleisimpiä ajatusmalleja. Aikaisemmista tutkimuksista havaittiin, että UX-suunnittelua ja palvelumuotoilua on tutkittu laajasti, mutta vähäisesti CRM-ohjelmistoratkaisujen näkökulmasta. Aiemmista tutkimuksista poiketen tämä tutkielma keskittyy UX-suunnittelun, konsulttien ja CRM-projektien väliseen vuorovaikutukseen. Tutkielman ja sen pohjalta muodostettavan artefaktin tavoitteena on lisätä tapaustutkimusyrityksen konsulttien UX-suunnittelutietoisuutta ja -osaamista. Tavoitteena on, että tapaustutkimusyrityksen konsultit saisivat artefaktin kautta käytännön työkaluja UX-suunnittelun toteuttamiseen asiakasprojekteissa. Tavoitteen saavuttamiseksi tutkielmassa määritetään tapaustutkimusyrityksen konsulteille soveltuva UX-suunnittelun vähimmäistaso.

Tutkielman empiirisessä osuudessa toteutettiin puolistrukturoidut haastattelut kuudelle eri asiantuntemuksen omaavalle konsultille. Edelleen tulokset analysoitiin temaattisella analyysilla artefaktin luomiseksi ja yrityksen nykyisen UX-maturiteetin arvioimiseksi. Haastateltavien mukaan tapaustutkimusyrityksessä on yleinen ymmärryksen ja käytännön osaamisen puute UX-suunnitteluun liittyen. Budjetti, aika ja riittämätön UX-suunnittelutietoisuus koettiin merkittävimmiksi esteiksi UX-suunnittelun integroinnissa CRM-projekteihin. Rajoitteena tunnistettiin myös UX-suunnittelun kehitystä valvovan vastuuhenkilön puute, ja käyttäjäkokemussuunnitteluun liittyvien prosessien puuttuminen. Temaattisen analyysin tuloksista havaittiin myös, että UX-suunnittelua tehdään useimmiten tiedostamatta ja yksilöllisesti, ei tietoisesti ja kollektiivisesti. Tuloksiin pohjautuen tutkielman lopussa luotiin artefakti, joka sisältää kontekstisidonnaisia UX-suunnittelutoimia. Haastateltavat näkivät käytännöllisen artefaktin luomisella potentiaalia oman UX-osaamisensa kasvattamisessa ja käytettävyydeltään parempien ratkaisujen toimittamisessa asiakkaille. Artefaktin sisältö vaikuttaa myös yhteistyön vahvistumiseen ulkoisten UX-suunnittelijoiden kanssa. Artefakti on linjassa tapaustutkimusyrityksen nykyisen UX-kypsyystason kanssa UX-suunnittelutoimien suorittamisen varmentamiseksi.

Tapaustutkimusyrityksen konsulteille artefakti tarjoaa menetelmiä UX-suunnittelutietoisuuden, -osaamisen ja -käytäntöjen oppimiseen. Tapaustutkimusyritykselle artefakti toimii arviona yrityksen yleisestä UX-maturiteetista, tarjoten paremman käsityksen yrityksen UX-haasteista. Luodun artefaktin relevanssi ja yleistettävyys vaihtelevat organisaation tarjoamien palveluiden, organisaation UX-maturiteetin ja strategisten painopisteiden mukaan.

AVAINSANAT: käyttäjäkokemus, Ihmisen ja tietokoneen vuorovaikutus, muotoiluajattelu, asiakkuudenhallinta, ketterä kehitys

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Abbreviations

CRM	Customer Relationship Management
DT	Design thinking
HCI	Human-centered design
MVUX	Minimum viable user experience
SaaS	Software as a Service
UCD	User centered design
UI	User interface
UX	User experience

1 Introduction

For a digital product to be desirable, it's no longer sufficient to focus on the number of features it offers. The key is how well a single feature has been designed to solve a problem, and how that feature interacts with other features. One of the key aspects of a modern and successful digital product, is the user experience (UX) it offers (Buis et al., 2023, p. 1). The continuous development and rapid expansion of digital services has profoundly influenced the field of UX-design, further emphasizing its significance (Novák et al. 2023, p. 1). UX-design as a part of software projects is used to create value by better understanding the behaviors and tendencies of end-users. By using these insights as key attributes behind design decisions, the ever-increasing expectations of customers can be met, leading to more value provided to the client (Kuureen et al., 2019, p. 620).

In today's competitive business environment, Customer Relationship Management (CRM) -systems have a pivotal role in managing interactions with customers. These systems are designed to be used as a platform for daily digital operations, engaging with customers and running marketing and sales efforts. Customer Relationship Management -software's (CRMs) offer a set of capabilities, to which clients commonly buys in to. The purpose of acquiring a CRM-software is to develop current business processes to improve the profitability and effectiveness of company's operations. Starting point for a CRM-project is consulting a specific software vendor or consulting company specializing to that platform. Throughout the development lifecycle of a solution, consultants have a crucial role in the design and implementation of solutions delivered. Consultants bear significant responsibility of the success or failure of a CRM project. By understanding theoretical and practical use of user experience -design (UX), consultants can mitigate the risks of solutions being not what the client expects. This is why UX-design has remained one of the competitive advantages in the highly contested CRM-consulting market (Lawson-Body et al., 2017, pp. 762-763; Suoniemi et al., 2022, pp. 20-25).

As noted by Nisafani et al. (2020), poor UX-design results in user reluctance to engage with the system. Furthermore, reluctance to engage is linked to technology-induced stress, fatigue, and misuse (Hart & Sutcliffe, 2019). According to these previous research, UX-designers are seen as the creators of visually aesthetic user interfaces (UIs). This indicates that the value of UX-designer opinions during product development may be overlooked. As a result, organizations tend to adopt UX-design as a strategy to differentiate their products' visual appeal from those of their competitors (Buis et al., 2023, p. 1). Many organizations have adopted design thinking and UX-design in their processes. To fully comprehend what it takes to integrate these methodologies into company's operations, it is commonly found to be more demanding as expected (Mahamuni et al., 2022, p. 50). Further noting, that integrating UX-design practices in combination with design thinking into operations is a challenging endeavor, requiring significant modifications to existing workflows and the retraining of personnel. According to Mahamuni's (2022) findings, integration of UX and agile software design practices have been covered extensively, but most of the proposed processes and techniques are rarely executed in practice (Alhammad et al., 2022, p. 147). According to Ananjeva et al. (2020), the previous proposed solutions don't consider the common lack of UX knowledge among developers or organizations culture, team collaboration and communication issues. Developers of today value "rapidness, flexibility adaptability, lean-ness, and customer centricity" while UX-designers value "in-depth and up-front" activities. The goal is to understand the end-users, context of use and to ensure rigorous user evaluations (Ananjeva et al., 2020, p.3).

Implementation of a CRM solution is complex, time consuming and an expensive endeavor. Recipe for a successful implementation include hiring a team of information technology consultants, because often there isn't such expertise available in the implementing organization (Mukerjee et al., 2017, p. 117). Findings by Suoniemi et al. (2022, p. 26) highlight a repeating theme in failed CRM software implementations, which is an over-emphasis on the technological aspects of the solution. They further outline, that when CRM consultants are hired to implement CRM systems and when end-users

are involved, the investment is more likely to yield a positive return. Despite the importance of CRM-systems, they often fall short in providing the optimal user experience (Suoniemi et al., 2022, pp. 20-25). This gap between functionality and user satisfaction is where the significance of this research lies. Neglecting user needs is a major factor contributing to a low adoption rate of CRM systems (Ferreira et al., 2023, p. 2). According to Ferreira et al., (2023, p. 2), employing design thinking (DT) and service design methods ensures that end users are more inclined to adopt the customized solutions and that the systems more effectively meet customer needs.

1.1 Research objective

The primary objective of this research is to bridge the gap between UX-design theory and its practical application within the context of CRM-software projects. This objective is achieved by building an artifact, which correlates with the capabilities of the case company (UX-maturity) to implement such actions. The artifact's purpose is to represent a minimum viable level of UX-design for the case company's consultants to execute in their daily operations. The artifact should provide concrete, understandable and practically approachable UX-design actions. For case company consultants, the minimum level offers ways to enhance their awareness, competence and practices related to UX-design. For the case company, the minimum level acts as an assessment of the overall UX-maturity within the company and offers an improved understanding of the company's specific UX-challenges.

To create the artifact, following a scientific and structured approach is needed. The creation process of this thesis's artifact is based on the Design Science Research Methodology (DSRM) process model. DSRM -approach ensures that the artifact is not only grounded in established UX-design knowledge but also infused with empirical data collected through qualitative research methods. Another key component of this research is the assessment of case company's UX-maturity level. By evaluating the current UX-practices the company currently executes, the complexity of the actions in the artifact

can be aligned with the company's readiness to adopt them. The artifact development includes iterations, which allows feedback to be gathered directly from consultants to influence the form and contents of the artifact. Because of the selected approach, the artifacts relevance, usability, and effectiveness in addressing real-world UX challenges in customer CRM-projects can be ensured. By following the actions outlined in the artifact, consultants can deliver better user experience with their work towards clients on CRM-projects. By executing the UX-practices outlined in the artifact, consultants are expected to positively impact the utilization rate of a CRM-software solution. Increase in utilization rate leads to gathering more customer feedback. When that is addressed accordingly with empathy, greater customer satisfaction is achieved. The goal can thus be achieved, which is creation of more business opportunities. In conclusion, the main goal of the artifact is to enable case company's consultants to achieve the beforementioned scenario, in which consultant creates additional value to end-users with UX-design. This research seeks to answer the following two research questions:

RQ1: What is the minimum level of UX-Design appropriate for the case company?

RQ2: What should the minimum level include to have a positive impact on the user experience of CRM software solutions?

1.2 Scope of study

This study begins with a literature review, which delves into the theoretical side of UX-design by examining its facets. Emotional and affective dimensions of user interaction are also studied, with examination of the most common practical implementations and thought processes related to UX-design. Literature review acts as the theoretical foundation for artifact. CRM -software solutions being extremely essential to the case company's business context, system and user perspective are also examined. Case company's consultants and their perception are the target group of this study, as external UX-design professionals are out of scope. This is essential to ensure the

feasibility of the artifact and results, because external UX-designers have far greater levels of UX-design skills than CRM-consultants. Case company's consultants take part in this thesis during semi-structured interviews, and they've been selected from different backgrounds possessing varying amounts of consulting experience. UX-maturity assessment of the case company is conducted as part of the semi-structured interviews. UX-maturity assessment of client organizations is out of the scope in this study. Due to time constraints, summative evaluation of the artifacts effectiveness in creating better user-experience for client's end-users is also out of scope. While being ideal for the iterative nature of the artifact development, it would prolong the study by an unnecessary amount.

1.3 Thesis structure

The structure of this thesis follows the suggested publication schema of a Design Science Research Study (DSR). It begins with an introductory section, which defines the problem, motivates it and introduces the reader to key concepts of the study. Following introduction chapter as chapter two and three, is the literature review and its summary. Chapter four explains the research method and how it is implemented in the context of this study. Superseding the research method chapter five describes the artifact, which is followed by alpha and beta versions of it. After evaluation of the beta version, the final artifact is presented in the chapter six. The artifact represents the minimum viable level of UX-design, which is discussed in more detail on the final chapter number seven. The discussion chapter contains the interpretation and implications of the results, followed by a summary of contributions. Rounding out the thesis is the analysis of validity, reliability and limitations of this study, followed discussion of the possible future research avenues.

2 User experience design

On this chapter, user experience is examined from the perspectives proven relevant in previous studies. The main contributing factors to a minimum viable UX-design competence level are UX-design from phenomena and process perspectives, organizations UX-maturity and design thinking and its processes. While UX-design and design thinking have been extensively studied on their own contexts, there is very limited scientific evidence on the interplay between UX-design, consultants and CRM-software's end users.

2.1 User experience design as phenomena

Creation and development of UX-frameworks were heavily influenced by their utilization in both education and business fields (Bødker, 2006, pp. 1–3). Hassenzahl and Tractinsky (2006, p. 91) regard user experience as a "strange phenomenon", which is both readily adopted and critiqued repeatedly for being elusive and vague. The term "user experience" is often associated with usability, beauty, hedonic, affective or experiential aspects of technology use. Since there is not a definitive meaning to the term, user experience is often better described by utilizing models and frameworks. One of the most well-known models is three facets of UX by Hassenzahl and Tractinsky (2006). With defining the three facets, Hassenzahl and Tractinsky (2006, pp. 93) aim to answer how the overall quality or the goodness of an interactive product is formed. As an answer, they concluded that UX encompasses three contributing facets, none of which singularly capture the complete nature of UX. These facets are described on the Figure 1 below.

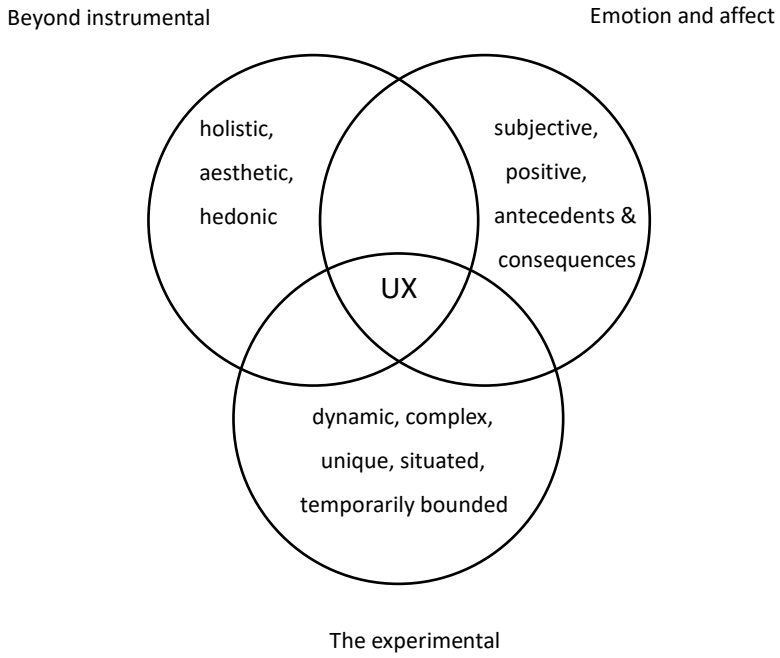

Figure 1. Facets of UX (Hassenzahl & Tractinsky, 2006, p. 95).

Beyond instrumental factors in UX divide into holistic, aesthetic and hedonic elements, extending the focus of HCI (Human Computer-Interaction) and UX-design beyond mere functional and task-oriented goals. Holistic element seeks to provide a fundamental understanding of user experience, integrating both pragmatic and non-pragmatic facets. Holistic approach emphasizes user interaction beyond utilization of technology to emotional, social and personal fulfillment. Aesthetic elements emphasize the fundamental human need for beauty as an intrinsic value, which is considered universally appealing. Hedonic elements focus on stimulation, identification, and evocation instead. These all are critical factors from personal growth, self-expression and memory preservation perspectives. By applying hedonic qualities into the design process, more meaningful experiences beyond their functional purposes can be built (Hassenzahl & Tractinsky, 2006, pp. 92–93). Affect and emotions guide humans' decision-making. When we consider the primary objective of HCI, which is to avoid frustration and dissatisfaction, UX expands this objective to encourage creating positive emotional outcomes from user interaction in the form of e.g. enjoyment and fun. These positive

emotions form a deeper connection between users and technology, making products more desirable and meaningful (Hassenzahl & Tractinsky, 2006, p. 93).

The experimental perspective in UX focuses on the situatedness and temporality aspects of technology use. Situatedness means the context in which technology is used, and temporality is the time-based nature of the use. An experience is a unique interaction between the user and the product, which is affected by factors such as users' internal state (e.g. mood, goals) and the context, which has a beginning and ending. All factors are connected and ultimately influence the final UX (Hassenzahl & Tractinsky, 2006, p. 94). The next chapter discusses UX-design as a process to establish understanding on how these "experiences" are developed in practice.

2.2 User experience design as a process

During recent years, UX-design has continued to be an important theme, particularly in the IT-industry, attracting significant attention. During the process, designers need to ideate, communicate, and evaluate the design before creating the final visual representation of the solution. Visual representation is then further refined by implementing the findings and observations to it. This is performed during the design process (Pandian et al. 2020). Usability, usefulness, and desirability are the three key perspectives of UX-design, forming part of the Honeycomb model originally developed by Morville (2004). According to Mansson et al. (2020, p. 2), the honeycomb is one of the most used frameworks in UX-design to-date. Below in the figure two is a representation of Karagianni's (2018) UX-Honeycomb model, which is an improved version of Morville's original model.

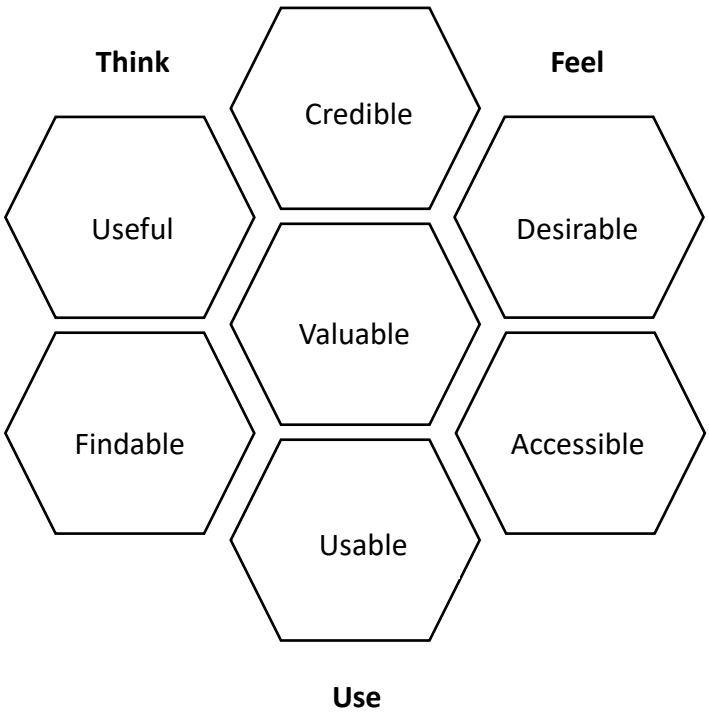

Figure 2. Upgraded UX-Honeycomb model (Karagianni, 2018).

The UX-Honeycomb -model contains seven attributes that are central to the work of a UX- designer. Verbs “think,” “feel,” and “use” describe how users interact with a product or service (Mansson et al., 2020, pp. 1–17). Although the honeycomb model provides a useful tool for practical UX-design tasks, Karagianni (2018) argues that the model offers a limited view of user experience due to the multidimensional nature of the concept, and the dynamic nature of design. The UX-maturity of a solution can be analyzed and discussed by evaluating the solution by comparing the solution towards those seven pre-defined attributes. Another way to perform it is to define and add custom attributes or exclude them from the model. Kim (2020, pp. 228-229) highlights the importance to redefine the model to better suit a software solution, such as business strategy, time and cost or domain characteristics. Further suggesting, that UX-analysis done with the Honeycomb-model is a great tool for visually verifying the overall satisfaction levels of different parts of UX. According to Kim (2020, pp. 229-230), one way to utilize the Honeycomb model in practice is to involve internal and external stakeholders within a project to carry out discussions based on the requirements placed in the UX-attributes

of the Honeycomb model. After the UX required for the software project is determined through discussions between internal and external stakeholders, review and alignment with the nature of the project and its limitations is required. The purpose of a review phase is to find UX requirements, which could be otherwise difficult to be fulfilled in the development phase of the project. Examination of UX-requirements is crucial for assuring, that the desired level of UX can be achieved with the time and cost imitations of the project (Kim, 2020, p. 230). Once the final requirements are agreed with external stakeholders, the project can continue to the next phase, which is the development stage.

Consequently, it is not enough to just think of UX-design as a stand-alone step in the agile product development process. A product's user experience (UX) should be considered early, often, and completely throughout the whole software development process and supporting organization to have long-lasting effects (Buis et. al., 2023, p. 2). When UX-design is considered thoroughly as a part of the software development process, smooth workflow between UX-designers and developers can be achieved. It’s also a key indicator for optimally meeting user needs (Buis et al., 2023, p. 2). If UX-design is disregarded as a part of software project, it may eventually cause the system, product, or service to fail and require re-development. To avoid such scenario, UX-design needs to be prioritized at the earliest stage of development possible (Kim, 2020, p. 228). Providing a positive UX for end users is crucial for agile product development organizations to grow, increase efficiency, and gain market share (Buis et al., 2023, p. 1). He further explains that clients are often unable to allocate resources, such as time, and access to user data to provide the optimal level of support. Buis et al. (2023, p.1) explain that misunderstanding and a lack of awareness from the client side are commonly the main factors to the inability to understand what UX-design as a process means. This has a direct effect on the unawareness about how to best implement UX-design in existing agile development contexts.

2.2.1 Five elements of UX

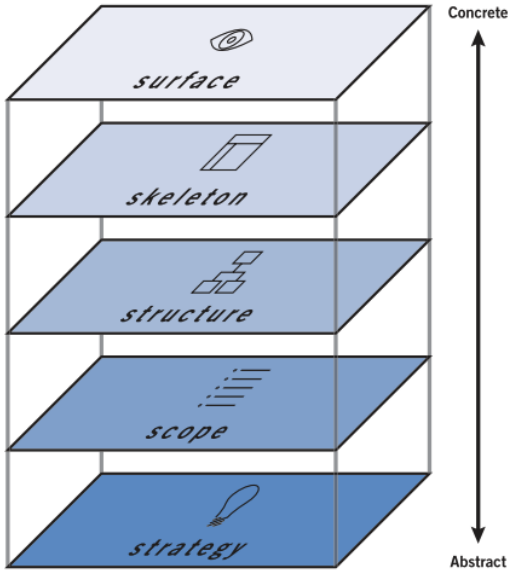

Figure 3. Five elements of user experience (Grant, 2010).

Figure three represents the “depth” of UX-design. It contains layers of separate planes, each stacked on top of each other to visualize a common process in UX-design projects (Grant, 2010, p. 24). The five elements describe the level of concreteness between the planes as such, that the issues dealt on the strategy plane are the most abstract. On the surface plane, the most concrete. The arrow next to the planes demonstrate the amount of detail required in decision making at each plane. Higher the plane, more finer levels of detail required. According to Grants (2010) diagram, each plane is dependent on the planes below, which means that if the choices made don’t align with the choices made on the lower plane, projects risk of going over budget. To understand what the planes mean in the user experience context, analysis of the five elements of UX is required.

The strategy plane is the foundational layer focusing on defining the product’s objective and understanding the needs of end-users by conducting research. Strategy plane’s purpose is also to ensure products alignment with business goals (e.g., informing a user of nearby charging station) with expectations (e.g., providing information about availability). Scope is considered as a determining plane for the product’s features and

content. Scope plane typically includes functional specifications (e.g., saving favorite stations) and requirements for content (e.g., images, maps and charger details). Structure plane organizes navigation and interaction of the product or service. This plane also involves interaction aspects of the design, such as defining user actions and system responses to them. Information architectural components are also present. As an example, the creation of a user flow to make content more accessible.

After the structure of the product or service has been defined, it's time to design UI-elements. These are most commonly e.g. buttons, links, text. These are all most common components included in the skeleton plane. Skeleton plane represents wireframing and it is a common practice to visualize these components. The main purpose of wireframing is to create an example arrangement of the elements to different pages and screens. The final plane represents the visual design of the product, which combines all the research into a concrete result. Colors, typography, and layouts are good examples of the final components to which the final refinements are done at this plane. The goal of the surface plane is to ensure a consistent and aesthetically pleasing experience while guiding the user towards the most important information (Grant, 2010, pp. 21-36).

Five elements of user experience (Grant, 2010) picture a standard UX-design process, which is done in a design phase of a project. Like with all process models, this model also has its own risks. Due to the "waterfall" nature of Grants five elements of UX -diagram, Despark team (2022) argue that strategy plane often needs revisiting after an initial development, which can easily cause delays and missed deadlines. On the scoping plane, it's easy to overload the scope with features, risking the solution being cluttered while decreasing the usability of the solution. On the structure plane, it's easy to organize information based on organizational input rather based on the user needs. When putting all the planning into practice on the skeleton plane, accessibility aspect is often forgotten or neglected. As the final plane's goal is to ensure visual consistency and aesthetically pleasing experience, visual flair is often prioritized over functional alignment, when both should be valued and balanced to create a solution with positive user experience.

Creation of the MVP to maximize the amount of user feedback, while maintaining good stakeholder communications is key for any successful UX-design project (Despark team, 2022). On the next chapter, a UX-design process model with increased flexibility is presented.

2.2.2 Lean-UX

Lightweight and iterative by its nature, Lean UX is a UX-design process that combines design thinking and agile methodologies into one process (Alhammad et al., 2022, p. 148). Adinegoro et al. (2023, p. 147) describe the purpose of design thinking to "understand users and their needs" and agile methodologies to use that understanding to create innovative solutions. Lean UX's strengths lie in the agile development environments and projects, which are common in software development industry (Ananjeva et al., 2020, p.1). Due to current UX-design and software development methods becoming more effective and robust development times become shorter. Lean-UX is claimed to be more intuitive and aligning better to agile development than other, more traditional approaches to UX-Design. The Lean UX-design process is outlined in the figure four below.

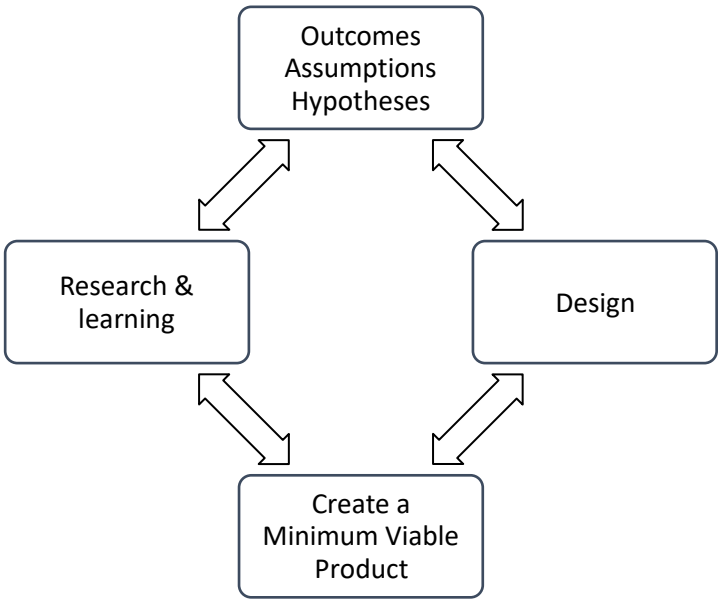

Figure 4. The Lean UX Process (reimagined from Gothelf & Seiden, 2021).

As seen above, Lean UX is divided into four main stages. Starting from the top and moving clockwise, the first step is creating problem statements to create assumptions. According to Gothelf and Seiden (2021), this phase the is requirement gathering phase of traditional UX processes. The idea Gothelf and Seiden (2021) introduces is to create a set of assumptions that can be used to create hypotheses. An assumption is a statement of something that perceived as true regarding the product or feature. The purpose of hypotheses is to test assumptions towards the product or feature. Once all the hypotheses have been formed, the next step is to design based on them to create an MVP (Minimum-Viable-Product) level solution. MVP is core concept of Lean UX, which is about building the most basic version of a solution quickly. The goal at this phase is to begin gathering feedback as quickly as possible by testing the MVP solution.

The purpose of the research and learning stage is to gather and digest the feedback before the next iteration of the process, which is commonly a sprint in agile software development. With Lean-UX, the time spent in one iteration is significantly less compared to more robust approaches like design thinking or the process described in Grants “Five elements of user experience” (Interaction Design Foundation, 2021;

Adinegoro et al., 2023, pp. 148-150). As described by Larusdottir et al. (2017, p. 1), while both user experience and agile methods are iterative, the up-front activities of UX-design processes often clash with the desired speed of progress in agile development. These clashes can impose challenges for integrating UX-design with agile development. This scenario is seen to occur likely when building and establishing a common ground and understanding between UX-professionals and agile software developers (Larusdottir et al., 2017, p. 1).

2.3 User experience maturity model

Hiring external consultants or UX-designers is one of the most common ways to increase company's efforts towards structured and conscious execution of UX-design. Despite having the individuals and skills at company's disposal, creation of positive user experiences and increase in the overall competency is not guaranteed. This means achieving positive user experiences in projects is not just about the individual external UX-professionals talent, but more of a result of wide organizational effort and awareness. When aiming to improve the overall UX-competency of a company, defining the current UX-maturity level within the company is seen as the first step. If company's goal is the advance to the next level in the UX-maturity model, acknowledging and assessing the current state is key (Chapman & Plewes, 2014, p. 12).

To discover and define company's UX-maturity level and understand, and what steps it should take, Chapman and Plewes (2014, p. 14) suggest the figure five to be used as reference. It contains five different levels, with each of them representing unique requirements for the timing of, resource availability of, cultural and management acknowledgement level of UX-design. Chapman and Plewes (2014, p. 14) outline that that despite not meeting all the requirements, company can still have better and more profound UX-maturity level than level on the figure five suggests. The suggested model does not scale for all company sizes and industries, so it may not be fully applicable for all use cases and industries.

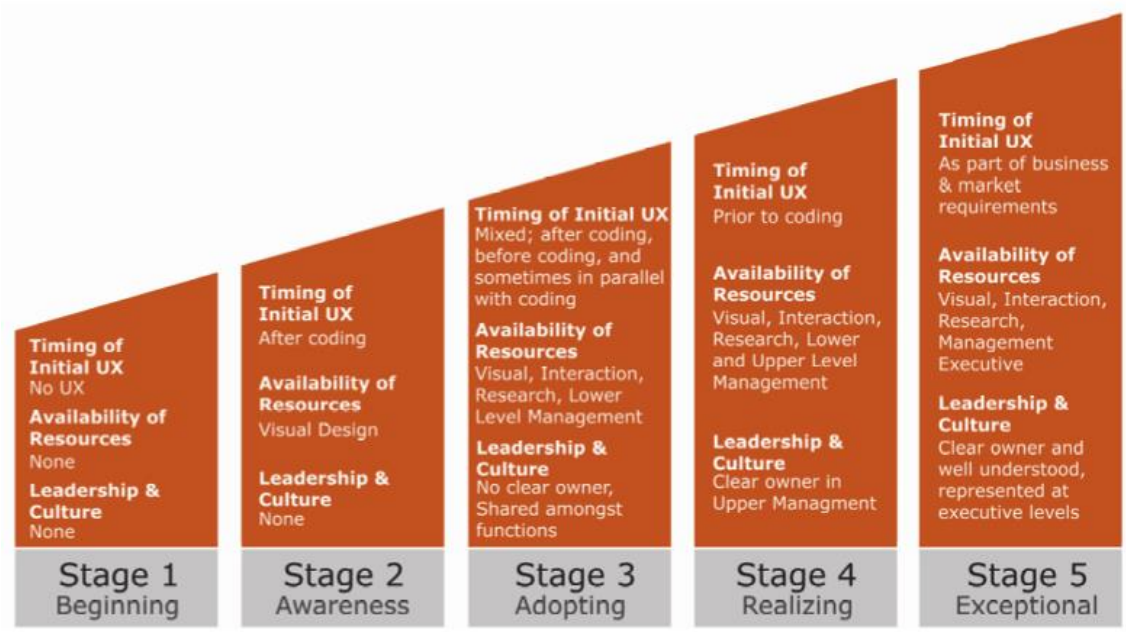

Figure 5. The stages of UX Maturity Model (Chapman & Plewes, 2014).

Figure five suggests a model to determine the UX-maturity level of an organization. The key is to use the model for better understanding of complex situations, decision making and insights (Chapman & Plewes, 2014, p. 15). They further outline, that the model's relevance is less about exactly which stage and organization is in, but more about providing the organization and their decision makers insights and ideas about what they need to do to consciously define themselves to a certain level. Pernice et al. (2021) declare that UX-maturity model is also important in identifying a company's overall strengths and weaknesses. They further state, that upholding and rewarding from what's done well and acknowledging and improve what's not are equally important in the bigger picture. Pernice et al. (2021) also states that one trying to rapidly advance e.g. from stage 1 to stage 4 in with one big initiative is not feasible. Instead, every company should spend some time in each of the levels to create an actual maturity and processes to proceed to the next level (Pernice et al., 2021). Information, tools and resources must be shared between teams to create the readiness and processes, because no single teams or individuals' skills constitute alone to the overall UX-maturity. In the end, it's the consistency among teams which enables the higher UX-maturity levels of an organization (Pernice et al., 2021). According to Chapman and Plewes (2014), developing and

improving the competence in UX-design is no different than any other competence, and is learned by acknowledging it and creating concrete actions and processes to do it.

2.4 Design thinking

Design thinking is often seen as a process, containing a a set of activities regarding various aspects of UX-design. Auernhammer et al. (2021, p. 624) three of the most common activities and methods are finding needs, brainstorming and prototyping within multidisciplinary teams. Auernhammer et.al (2021, p. 624) continue, that by practicing these activities it is possible to facilitate creativity and innovation, overcome biases and positively influence an organization's design culture. When trying to define design thinking, the focus should not be on determining the exact meaning of the term, but rather on how the concept of design thinking is applied in both theoretical and practical contexts (Tham, 2022, p. 261). In practical context, design thinking is viewed as methodology of integrating design into a company's operations, thereby supporting the company to achieve its strategic goals (Chouki et al., 2023, p. 429). In theory, design thinking is a far larger phenomenon that is commonly known. In the figure six below, all the foundational elements of design thinking are labeled and grouped as a cognitive, organizational and strategic approaches to design-driven innovation (Auernhammer et al., 2021, p.637).

Figure 6. Design qualities (Auernhammer et al., 2021).

As displayed above, design thinking contains different modes of thinking, attitudes, values, attributes, abilities, and practices that are the driving forces in creativity and overcoming barriers in innovating. Tham (2022, p. 269) argue human values, such as sensitivity and tolerance for ambiguity, challenge traditional quantitative management approaches to facilitate better cross-disciplinary interactions. Questioning of established norms, fostering constitutional motivation, and enablement of collaborative abilities across organizational and cultural boundaries are all emphasized in design thinking (Auernhammer et al., 2021, p.636). Ambidextrous thinking is also highlighted due to its role in solving complex problems by addressing human needs through imaginative and collaborative efforts. On the other hand, visual thinking aids in uncovering hidden relationships (Auernhammer et al., 2021, pp. 636-637). Key practices, such as prototyping, visualizations, and need-finding are vital in establishing flexible routines for

discovery and testing of innovative solutions. Based on Auernhammer et al. (2021) findings, overemphasis on following rigid methods can hinder creativity, which thrives in environments that praise psychological safety and freedom. The general purpose of design thinking is to create value through innovation, which fulfills the needs of humans, enables growth and delivers meaningful experiences.

2.5 Design thinking as a process

Design thinking is an iterative process, meaning that movement between different stages of the framework can occur flexibly, depending entirely on the demands of the situation. As stated by Baker et al. (2020, p. 307), the concept of design thinking is more popular than ever before, yet it is rarely examined critically in terms of the actual effectiveness and the potential impact of its processes. Empathy, user-centeredness, iteration, innovation, and problem-solving form the foundation of design thinking, upon which its various frameworks are built (Tham, 2022, p. 264). As emphasized by Ferreira et al. (2023, p. 4), conducting UX actions within projects is key to create additional value. While there may be differing opinions on the nature of design thinking and the process it ideally represents, Baker et al. (2020, p. 309) argue that the practical implementation of design thinking is fundamentally guided by five main characteristics. These key characteristics, according to Baker et al. (2020, p. 309), include user-centeredness (User Focus), problem identification (Problem Framing), visual representation (Visualization), iterative testing (Experimentation), and consideration of diverse perspectives (Diversity). Figure seven displays an example of the Stanford (2010) design thinking process, which is based on the five key features of design thinking as outlined by Baker et al. (2020, p. 309).

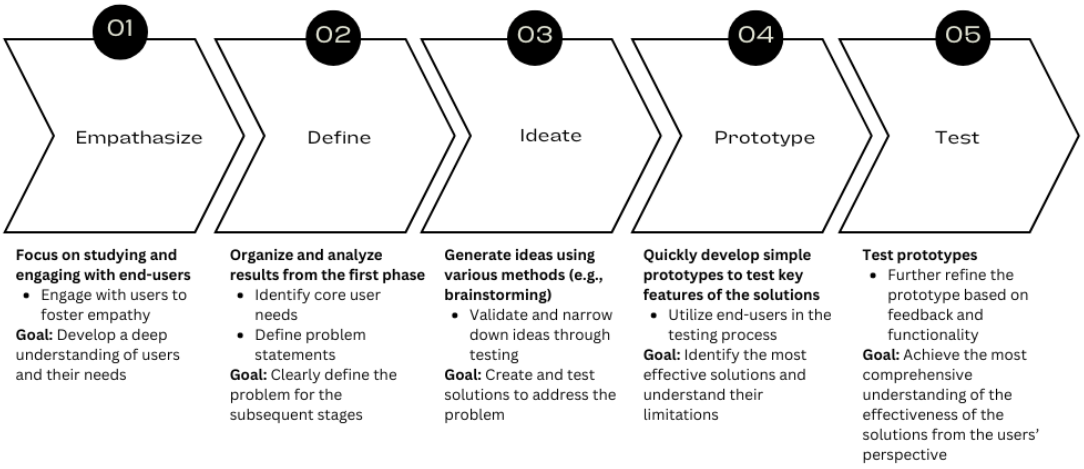

Figure 7. Design thinking stages (Dam & Yeo, 2020).

In Figure 7, the five phases of the iterative design thinking process are labeled by numbers followed by their descriptions beneath. The descriptions contain the most important actions of each and the goal of it. According to Dam and Yeo (2020), effective use of the design thinking process requires understanding of the user's daily life and becoming familiar with the perceived experiences environment. Understanding users' everyday lives and consideration of the environmental impacts are emphasized in the first phase of the design thinking process, which is empathy. Based on the model developed by Stanford University's Design Institute (2010), empathy means immersing oneself in the group being observed and being truly present in it. According to Tham (2022) asking "why"-questions at this stage is crucial for establishing deeper understanding of users' true needs. Documentation of all observations is essential when proceeding from the empathy phase to the define phase, and in establishing connections between them.

The define phase's purpose is to clarify, organize, and prioritize the insights gathered during the empathy phase. Define phase is regarded as one of the most critical parts of the entire process, because its results form the basis for the ideation phase. Those result have been seen to significantly influence the outcome of the entire process (Baker et al. (2020, pp. 309-312). For this reason, it's viewed as important to create well-defined

problem statements. More focused problem statements, as suggested by the model, often lead to higher-quality solution ideas during the ideation phase, as they have been thoroughly considered and defined in earlier stages (Baker et al., 2020, pp. 309). As a result, during the ideation phase UX-designers can focus specifically on solution generation, based on the problem statements. To create effective approaches to solve problem statements, observed user's needs and perspectives are combined in problem statements. In problem statements, considering the previous research and observations from the empathy phase is seen as highly beneficial. Tham (2022, p.263) outlines that these "problem statements" are often associated with user-stories, which can be utilized in e.g. journey mapping later in the process. When proceeding from the define to the ideation phase, design thinking model endorse using e.g. "How-Might-We" brainstorming methods to find supporting or explanatory topics for the problem statements, which can be used to generate ideas in the next ideation phase (Stanford University's Design Institute, 2010).

As highlighted by Stanford University's Design Institute (2010), the purpose of ideation phase is to create as concrete ideas as possible based on the defined problem statement, which can be transformed into prototypes for user testing. Creativity and imagination are also emphasized in this phase, as they aid in creation of innovative ideas. The model suggests generating ideas on a broad scale so that they can be prioritized for the prototype phase. This phase is guided by brainstorming-based methods, in which the key is to generate ideas together and build upon others' ideas. The model suggests to visualization and concretizing of the created ideas by creating mind maps. One of the main themes in this phase is separating idea generation from evaluation to ensure the true realization of creativity and imagination. During ideation phase, Stanford's design thinking model (2010) highlights the ideas generated during the stage should lead to creating prototypes based on them. Before moving to the prototype phase, the ideas must be evaluated and voted on based on defined criteria. According to the model, criteria can include selecting the most logical, appealing, or surprising idea. After the evaluation, the selected ideas are tested with prototypes.

According to the last stage of Stanford's design thinking model (2010), prototypes are used to communicate and discuss ideas as potential solutions to the problem. Prototyping should begin with creation of quick and simple models to prioritize gathering feedback from the end-users. By doing so, the feedback can be taken into consideration in the next prototype quickly, allowing the UX-designer to reach a desired solution quicker. This leads to quicker development of more refined prototypes. The iterative nature of design thinking is very visible in this phase, as feedback gathering, understanding, and implementation in an improved version of the original prototype are the most important tasks. Related to the highlighted iterative nature of last phase, the importance of "failing fast" is underlined. "Failing fast" is seen as a resource saving measure, leading to not wasting them on developing a solution that does not work. According to the model, UX-designer that is between the prototype and testing phases tends to move frequently between the two, as the stages are entirely dependent on each other to solve the problem.

According to Stanford University's Design Institute (2010) -model, the most important task during the testing phase is to collect feedback from the use of the product or solution in as realistic of a situation or environment as possible. The feedback is used to further develop the solution. The testing is conducted by the end-user, while a person from the product or service development team observes the situation. According to the model, it is critical that the observer does not actively guide the user in using the product or service but instead aims to understand the reasons for the user's actions by asking as many "why" questions as possible. Movement between the testing, prototyping and ideation phases are expected before the product or service is ready, because the purpose of design thinking is to gradually better the product after the initial stages. The quality of work conducted during the initial phases are seen as the main factors on how quickly the desired result is achieved.

3 Customer relationship management systems

As part of the literature review, CRM systems are also examined from the end-users and organizations perspective. To establish a connection between an UX-design artifact with its operational and organizational context. The goal of this chapter is to create a knowledge foundation to understand the practical nature of the artifact. According to Suoniemi et al. (2022, p.21), building a high-quality CRM-systems today is not always an easy task due to them hosting several specialized technological features, which means they won't work as intended straight out of the box. Suoniemi et al. (2022, p. 20) defined a high-quality CRM-systems as one that is dependable, does not suffer significant downtime and always provides users access to all customer data. Due to CRM-systems complexity and it's cross-functional nature, CRM-consultants have great deal of responsibility in implementing CRM-systems that match customer needs, are high-quality and usable (Suoniemi et al., 2022, p. 19)

3.1 Business perspective

CRM-system is a complex and sophisticated application that gathers customer data from all customer touchpoints, which are brought to a comprehensive 360-degree view of the customer. From the view, profiles of key customers can be identified and predictions of possible purchasing patterns made (Chen & Popovich, 2003, p. 676). By optimizing customer CRM interactions, companies can utilize the 360-degree view to learn from past interactions to optimize the future interactions (Chen & Popovich, 2003, p. 677). Furthermore, studies show that maintaining good customer relationships through CRM systems enhances a company's competitiveness in rapidly changing markets (Dananjoyo & Wibovo, 2024, p. 2). In essence, CRM-system is a critical source of competitive advantage for businesses today, although many of the processes are still deficient and inflexible (Zaby & Wilde, 2018, p. 289). The main purposes of using a CRM-system are to help companies understand their customers more profoundly, form stronger relationships with them and increase revenue and profitability of their products or

services (Georgiadis & Chau 2013; Choudhary et al., 2022). Most of the modern CRM-systems, like Salesforce used in the case company of this thesis, are SaaS-software applications, which means that the customer buying it doesn't have to worry about maintaining and updating it themselves (Lindholm, 2007). SaaS-software applications differ from traditional applications in a way that it allows delivery of an application over the internet instead of locally on machines. As customers are at the heart of every CRM-system, maintaining and improving the customer experience is an essential goal too. Choudhary et al. (2022, p. 1200) suggest that personalizing customer experiences with data is a highly effective way to improve the customer experience with a CRM system, as the nature of customer relationships varies significantly.

Musalem & Joshi (2009, p. 555) state that the driving factors behind an CRM-system investment are to obtain profitable customers, grow revenues from existing customers, and utilize retention efforts to minimize the "churn" of customers. CRM-applications link front-office operations (such as sales, marketing and customer service) and back-office (such as financial, operations, logistics and human resources) functions with customer touch points (Fickel, 1999). These touchpoints can be e.g. website, emails, sales activities, advertising etc. (Chen & Popovich, 2003, p. 672). According to Chen and Popovich (2003, p. 273) often the use case for CRM-systems is to create a technology solution that extends separate databases and automations tools to bridge the gap between sales and marketing. Schweigert (2000) states that some of the most common risks in CRM-projects are project failure, inadequate return on investment, unplanned project budget revisions, unhappy customers and loss of employee confidence. The most logical solution to prevent the beforementioned risks from realized is to build high-quality CRM-systems. For consultants to be able to match the ever-increasing customer needs in CRM-system context, we need to explore the CRM-system from user centered approach.

3.2 User perspective

According to Lindholm (2007), SaaS-software applications are very different compared to traditional software solutions. For example, the user interface of a CRM-application can change suddenly, which can be both a blessing and a curse. It can have a negative or a positive impact on the user experience of the solution, but most importantly it's a change the user hasn't prepared for (Lindholm, 2007).

Great user journeys and -experiences can be built when CRM projects are designed and executed well (Potts, 2010). From service providers perspective, it's key to ensure the planned changes are thoroughly planned. Processes are commonly designed with an expectation of users to align with organizational practices during completing a task, but Potts (2010) argue that processes should rather be designed to reflect how organizations can partake in the user journey. To succeed in this, organization needs to have a complete view of the user journey with its processes and sub-processes. Based on the field expert interviews (Sheth et al., 2024), creating a better user experience driven by empathy in CRM-systems means understanding the interplay between people, processes and software. Determining the pain and value points along the user journey and addressing them accordingly drives the user-centered approach in CRM-systems, which is based on processes (Sheth et al., 2024, p. 853). Understanding the journey user takes on during a process is key in driving the user-centered approach in CRM-process development and there are many service design tools to aid in that. One the more common ones, is called journey mapping. According to Sheth et al. (2024, p. 856), the purpose of journey mapping, in the context of user experience design, is to understand user's feelings at each point of the journey. Further quoting Sheth, when the feelings are understood, empathic approach can truly be adopted.

3.3 Summary of the literature review findings

In UX-design literature, particularly recurring topic was the misalignment between user-centered design and the reality of digital product development, especially apparent in complex software system development as CRM-systems represent. The goal of user-centered design (UCD) is to emphasize the importance of understanding user needs, iterative testing and creation of user-friendly designs. When assessing the way organizations operate in the field of CRM-software development, they often struggle to implement these principles consistently. The main challenges found during the literature review were insufficient prioritization of user feedback, lack of resources to conduct usability testing and while embedding empathy into design processes in practice. By not addressing these challenges, the likelihood of suboptimal user experiences increases. This is especially apparent in connected and multifaceted CRM-software solutions (Ferreira et al., 2023; Tham, 2022; Auernhammer et al., 2021).

One way to address the challenge of agile CRM-software development with UCD-principles in mind is to utilize an agile UX-framework. One of which is Lean-UX, and it aims to streamline the approach to UX-design. It integrates hypothesis-driven testing and creation of MVPs into agile software development workflows (Gothelf & Seiden, 2021). However, combining the two together reveals misalignment between UX-frameworks and agile software development methodologies (Larusdottir et al., 2017, p. 1). While agile software development is fast-paced and iterative, Lean UX-framework conflicts with it due to the more exploratory and reflective stages of it. This is more and more apparent during the early phases of Lean UX. Because of the misalignment, time spent on meaningful user research is often reduced and development efficiency is often prioritized over user satisfaction (Baker et al., 2020; Tham, 2022). This tension between the two can often occur on CRM-software projects, in which the complexity of user's interactions requires deeper, sustained user involvement in shaping the user experiences within agile environments (Baker et al., 2020; Tham, 2022). In addition, the actual application of UX-frameworks within CRM-software projects often fails to notice the need for complete understanding of users' experiences. This often then leads to a failure

in personalization of solutions due to the narrow scope of iteration in agile workflows (Baker et al., 2020).

Acknowledging the UX-design's possibilities comes from organizational maturity, which is ultimately a sum of individuals skills (Chapman & Plewes, 2014). The challenge in low organizational UX-maturity level is that it directly affects the quality of user experience design, and more broadly, service design practices in CRM-software projects. According to Chapman and Plewes (2014), many organizations lack the processes, resources and collaborative structures necessary to support user experience design efforts. As a result, user experience treated as an afterthought rather than a key part of development. Lack of maturity limits the capabilities to address users pain points, workflow optimization and effective innovation (Chouki et al., 2023; Sheth et al., 2024). Organizational culture and processes are found to have a huge impact in failure to encourage UX-design as a cross-disciplinary effort, which hinders the development of CRM-software solutions, which are truly aligned with the needs of the user and the customers business. This lack of alignment between UX practices and business objectives of the customer can lead to inefficient solutions that don't satisfy the end user and their organizational goals (Lindholm, 2007).

As outlined by Baker et al. (2020, p. 307), design thinking is often criticized for its inconsistent implementation as a part of software projects. Over reliance on rigid frameworks and failing to integrate design thinking into organizational workflows limit its potential. Based on the literature, psychological safety and creativity are keys to successful implementation of design thinking, which are often not given the attention they deserve (Auernhammer et al., 2021). While design thinking highlights empathy and discovering the true needs of users, guidance on how to systematically apply these principles in technical and process-driven CRM-software projects is limited (Auernhammer et al., 2021). Due to this, integrating design thinking practices to CRM-software projects can lead to superficial solutions that fail to address the true needs of a user. The literature suggests for more robust application of design thinking to

incorporate continuous feedback loops, allowing for more meaningful design iterations (Tham, 2022).

According to Sheth et al. (2024) and Chouki et al. (2023), CRM-systems often fail to fully address end-user needs, with over-emphasis on technical functionalities and organizational requirements. This approach can lead to inefficiencies in the processes within the solution, user frustration and in the end, to a project failure (Choudhary et al., 2022; Georgiadis & Chau, 2013). While CRM-solutions offer business advantages, such as centralized view on customer data improving decision making, user interfaces (UI's) often lack intuitive design, making end-users harder to navigate in the system. Lack of intuitive design combined with potential unexpected changes in SaaS-based CRM-platforms can disrupt user workflows, impacting user experience negatively (Lindholm, 2007).

To conclude, there are clear knowledge gaps in practices and methods to align the concept of UX-design with agile development processes, with which the case company operates in CRM-software projects. One of the key questions is how to balance the iterative nature of agile development process with exploratory phases of user research and design (Baker et al., 2020). Another key question is about bridging the gap between abstract elements of design thinking, such as empathy and need finding, with practical application of the elements in process-oriented CRM-software projects (Auernhammer et al., 2021).

4 Research method

This chapter explains the chosen research methodology and approach, its contents and how it is used in creation of the artifact. As research method, Design Science Research Process Model (DSRM) was followed to ensure rigorous development, refinement and evaluation of the artifact is against the objectives set for it.

4.1 Design Science Research

Design science research (DSR) has its roots in engineering and it focuses on creating and evaluating innovative artifacts, which are used to solve identified problems or expand current solutions. At its core it's a problem-solving process, which aims to produce rigorously built and evaluated artifacts to address practical challenges in an effective manner (Hevner et al., 2004, pp. 77-79). Due to the iterative nature of the process, artifact can be continuously developed and refined through evaluation and feedback. The main purpose of using DSR as a research method is bridging the gap between UX-design theory and its practical utilization in the form of an artifact. When observable and complex problems are addresses with DSR, tangible improvements in business or organizational performance can be achieved (Hevner et al., 2004, p. 77-78). In this thesis, Design Science Research (DSRM) method is used to create an artifact, which will address the lack of UX-design knowledge among the case company's consultants. DSRM -method combines theoretical research with practical application of the artifact, which makes it a justified and relevant approach to act as the artifact creation process.

4.2 DSRM Process Model

According to Peffers and others (2007, p. 49), at the heart of DSR lies a rigorous process in which artifacts are designed to solve observed problems, research contributions are made, design is evaluated, and results are communicated to relevant audience. Based

on the findings by Peffers et al. (2007, p. 50), both building and evaluating the artifact rigorously are equally important to ensure the goals for the artifact are achieved. On the field of design science research, the framework displayed as figure eight is widely used and commonly accepted to carry out design science research.

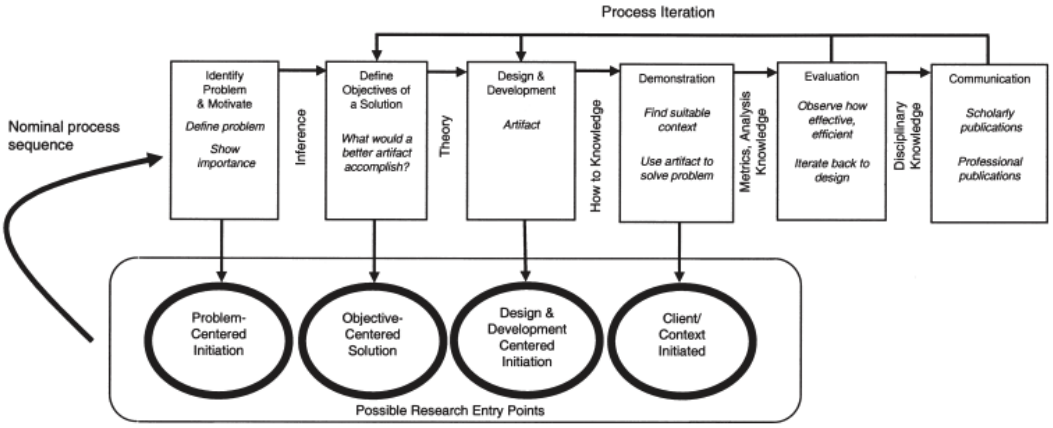

Figure 1. DSRM Process Model

Figure 8. DSRM Process Model (Peffers et al., 2007, p. 54).

In the first activity, which is about identifying the problem and motivation, the goal is to define the specific research problem and justify the value of a solution (Peffers et al., 2007, p. 52-55). During problem identification process, case company's consultants work was closely monitored and analyzed from the perspective of UX-design and user experience in general. To gain a better picture of the current situation, senior consultant, with a previous experience from UX-design in CRM-Projects and design activities in general was interviewed. Based on the initial interview, a brainstorming session was held and as the result of it, the need for creating and defining the minimum viable level of UX-design was identified. This was further confirmed by another case company's consultant, who has sufficient experience from UX/UI development to execute actions on their own. Through my own observations and those that have done UX-design actions in client projects before, it became evident that the company was lacking a base level of UX-practices and actions all consultants could follow and execute whenever possible on customer projects. Thus, definition of the UX-design minimum viable level, and discovery of what it is and what it should include, became the research problem of this thesis.

In said company, most of the consultants work in client-facing roles and deliver customer-facing CRM-software solutions, which means that understanding the basics of UX-design and learning how to execute actions described in the artifact will create both internal and external value. As is the case on this thesis, Identification of the problem and demonstrating its significance through motivation is commonly done on introduction and literature review -chapters of research (Gregor & Hevner, 2013, p. 350). This means that knowledge of the state of the problem and about the importance of it are needed as resources to execute this activity (Peffers et al., 2007, p. 55). Controversially, Peffers et al. (2007, p. 55) also state that "Identified problems do not necessarily translate directly into objectives for the artifact because the process of design is necessarily one of partial and incremental solutions". To proceed from problem identification to the next activity, it's important to keep the previous findings gathered during the first stage in mind when determining the performance options for a solution.

According to Peffers et al. (2007, p. 55), the goal of the second activity is to define the objectives for a solution. In practice, Peffers (2007, p.55) means inferring the objectives of a solution from the problem definition and knowledge of what is feasible. Based on the DSRM process model, the objectives are of quantitative or qualitative type. This thesis's artifact is type of qualitative, which means the describing how a new artifact is expected to support solutions to problem not hitherto addressed (Peffers et al., 2007, p. 55). The main objective of the artifact is to help consultants create CRM-solutions, with conscious efforts to enhance the user experience aspects of it. The secondary artifact objective is to increase the overall UX-design maturity within the company and begin scaling the UX-design efforts to more projects than before. To do this effectively, the artifact must not interfere with existing design practices, such as service blueprinting, customer journey mapping and design sprints. The artifacts' goal is to support pre-existing UX-design and design practices by introducing new UX-design actions. Literature review acts as a resource for defining the problem, since it requires knowledge of its state and acknowledgement of the current solutions addressing the problem (Gregor & Hevner, 2013, p. 349). Ensuring alignment between the artifact's objectives and

literature review findings confirms the feasibility. Artifacts final objectives were agreed in co-operation with case company before moving on to the artifact development. As stated by Gregor and Hevner (2013, p. 349), the artifact can be designed and developed after the core problem is identified, its relevance demonstrated, and the objectives of the artifact defined.

According to Peffers et al. (2007, p. 55) the third activity is about creating the artifact, which begins by defining its type. The type is typically one of the following: construct, model, method or instantiation. This activity consists of defining the desired functionality of the artifact, planning of the architecture beneath it and the artifact creation process. The resources required to complete this activity include interpreting the theory and using quantitative or qualitative tools in tandem with it to create a solution (Peffers et al., 2007, p. 55). In the context of this thesis, third activity involves interviewing consultants from the case company with a qualitative method, which was determined to be semi-structured qualitative interview. As an end-result of the interviews, case company's current UX-maturity level is also defined. This is because alignment between the contents of the proposed artifact and UX-maturity level is necessary to avoid the artifact not being feasible and superficial. According to Peffers et al. (2007, p. 55) after design and development of the artifact, demonstration activity follows.

Demonstration activity, like its name suggests, is meant to demonstrate how solving one or more instances of the problem could be done using the artifact (Peffers et al., 2007, p. 56). For this thesis's artifact, the demonstration phase acts the research entry point to the artifact development cycle. The context (CRM software projects) and the client (Case company consultants) have been pre-specified for this study, and they've been heavily involved in the earlier activities of the DSRM-process model. This steers the nature of the artifact to be a client-/context-initiated solution, because it is also based on observing a practical solution that worked (Peffers et al., 2007, p.56).

The fifth activity of the DRSM-process model is evaluation. This activity is based on observing and measuring the effectiveness of the artifact in related to its purpose in solving the defined problem. The measurement is done by comparing the objectives of a solution to actual observed results from the use of the artifact (Peffers et al., 2007, p. 56). The first evaluation of the artifact is conducted as a part of the qualitative interview process from the case company consultants as part of the demonstration activity. The feedback is then analyzed and depending on the results, the process can go into different directions. The first option is to go back to activity three to improve the effectiveness of the artifact or continue to activity six, which is communication.

The last activity is about communicating. The problem and its importance, nature of the artifact, its utility and novelty, the design and its effectiveness are key topics to considering when communicating about the research to relevant audiences such as practicing professionals. Due to the nature of the DSRM process model, the form of communication commonly is an empirical research publication that combines all the contents of the activities into a structured publication schema, as this research paper is (Peffers et al., 2007, p. 56). The result of this research and the artifact is communicated during case company's monthly meeting to all employees.

4.3 Qualitative interviews

As outlined by Myers and Newman, "the qualitative interview is the most common and one of the most important data gathering tools in qualitative research" (2007, p. 3). They further explain that qualitative interviews allow for exploration of underlying aspects of a phenomena and research problems. Where subject of study is complex and intricate, qualitative methodology is often used (Tong et al., 2007, p. 349). Because this thesis deals with a complex phenomenon in the form of UX-Design and CRM-software, qualitative interview is well suited for this subject. Being mindful of the specific issues related to the interview -research methodology is important, so the common challenges associated with the research method can be avoided (Kallio et al., 2016). These

challenges can be e.g. social interaction which, can leave room for human errors. Lack of trust, shortage of time and the artificial nature of the interview are found to be some of the most common scientific risks associated with the social interactions (Myers & Newman, 2007; Tong et al., 2007).

Building on the work of Myers and Newman (2007, pp. 3-5), a fundamental awareness of the challenges ire considered essential when conducting qualitative research. However, achieving results that are rigorous and free of errors requires more than mere awareness; it necessitates the strategic application of established frameworks and methodologies together with the chosen method (Tong et al., 2007). To mitigate potential challenges, Myers and Newman (2007, p. 11) have proposed a set of seven guidelines and a complementary dramaturgical model specifically tailored for qualitative interviews in the context of Information Systems (IS) research. Guideline, alongside the dramaturgical model, provide the framework supporting the interview process used in this thesis, ensuring a structured and robust approach for data collection and analysis.

Semi-structured interview themes and specific questions related to them were structured beforehand to ensure smooth interview process. Thus, the interview being of deductive type and creating a foundation for inductive thematic analysis. Themes and their goals are depicted in the table one below.

Table 1. Semi-structured interview themes and goals.

Theme	**Goal**
Organizations UX-maturity	Assess the current UX-maturity level of the case company. The artifact's contents must align with the readiness the case company has for artifact benefits to materialize
UX-design from consultant's perspective	Identify the current paint points and challenges hindering the utilization of UX-design in customer projects. Also define the positives, which could be further leverages with the help of the artifact

Contents of the artifact	Understand what consultants in the case company want the artifact to solve and gather actions to address those

In this dramaturgical model, interviewer's goal is to establish a relaxed atmosphere with qualities, such as empathy, playing an important part. The interviewee should feel at ease in his/hers answers. The interviewer should always keep their own personality and thoughts to a lesser prominence than the interviewee's personality and thoughts. The interviewers should act like a director, striving to encapsulate the interviewee's brilliance in their performance. To achieve this, the interviewer should clearly articulate the purpose of the interview without steering it to a specific personal agenda. To drive the openness in the interviewing situation, the interviewee should not feel fear or embarrassment when answering the questions. Especially, feel the possibility to of being taken advantage of (Myers & Newman, 2007, pp.12-14).

To ensure interview following the characteristics and practices explained in the previous chapter, invitation was sent to each of the possible interviewees prior. The invitation was sent individually to the chosen recipients on internal Slack channel to maximize the reach, as it is the messaging tool most (if not all) employees check daily. The invitation message also contained a friendly welcome message followed by the interview form, in which all the pre-requisites for a successful interview were explained. These pre-requisites also contained explanation of all the terms used in the interview to ensure the candidate understood the topics beforehand, aiding the candidate feeling at ease during the actual interview. The invitation message also asked their willingness to participate. For those that accepted the invitation, Google calendar -meet invitation was sent afterwards. Participants were chosen based on their current roles and expertise on the subject. To create a balance between interviewing potential early-adopters and laggards, participants from each end of the spectrum were chosen. It was also noted that it was completely ok to withdraw from participating at any time before or during the interview. The interview question form is attached as part of the study and is found from the Appendix 1 (Semi-structured interview form). The interview consisted of three pre-

determined main themes, which were Organization's UX-maturity, UX-Design as part of consultants work and the content of the artifact.

Before the live interview, the objectives of the interview were briefly explained again. As interviews were conducted remotely, it possessed challenges such as creating the desired relaxed atmosphere filled with empathy, but also possibilities due to being able to do it at the comfort of their own surroundings. Additionally, it allowed the possibility to conduct the interviews regardless of their location (Iacono et. al., 2016; Myers & Newman, 2007, pp. 1-26). The goal of the interviewer was also to discover additional aspects affecting the answers, such as their attitude towards the main themes, gestures and facial expressions, which otherwise could've been left unnoticed. This was achieved by requesting the interviewee to keep the web camera open throughout the interview. Interviewer also dressed properly to the occasion and familiarized with the interviewee's role and their background beforehand (Myers & Newman, p. 13-15). Each participant was interviewed during the meeting once, which lasted maximum of one hour. The meeting was recorded, as agreed with the participant beforehand, to be used as a source file for transcribing purposes as a part of thematic analysis, which is explained in more detail in section 4.3. The interview was conducted in a semi-structured manner, which enabled flexibility to gain expanded insights from topics of each interviewee's special interests (Gill et al., 2008, pp. 201-216). The diversity aspect was ensured by constructing the group of interviewees from different genders, age and levels of experience. In addition, diversity optimizes the triangulation of subjects (Myers & Newman, 2007, p. 17).

4.4 Participants background

Interviewees were chosen based on their varying technical backgrounds in CRM-consulting and amount of CRM-consulting experience. To ensure the overall results were not affected by a diversity aspect, half of the individuals were representing both genders.

Participants, the anonymized code presenting them, age and amount of experience can are detailed below in the table two.

Table 2. Participants and background details.

Code	Age (years)	Amount of CRM-consulting experience (years)
P1	30-35	1-2
P2	25-30	2-3
P3	30-35	3-4
P4	30-35	3-4
P5	35-40	4-5
P6	35-40	7

To ensure valid results, participants with more than half a year worth of experience were chosen, because during the first half of a year, CRM-consultants typically learn the basics of CRM-consulting. Basics of CRM-consulting don't typically involve conducting UX-design as a part of client CRM-software projects. Educational backgrounds of the participants consisted of various fields, which ensured it didn't become a factor steering affecting the overall results to one single direction.

4.5 Thematic analysis

According to Gregor et al. (2020, pp.1623-1624), thematic analysis is a foundational technique in qualitative analysis, which is known for its ability to convey essential research skills and its adaptability to various research contexts. While flexibility is often seen as an advantage, it also requires utilizing a structured approach to maintain thoroughness to avoid methodological obscurity. Utilizing a semi-structured interview format guided by key topics was used to ensure comprehensive coverage of key topics, while leaving room for in-depth discussion on emerging insights about certain topics (Gregor et al., 2020, pp.1623-1624). Commonly, thematic analyses are of an inductive or deductive type, from which the latter allows more influence from "pre-existing

theoretical knowledge to data" in theme creation, while in the former model themes emerge more purely from the gathered data (Fereday & Muir-Cochrane, 2006, pp. 80-82). Since semi-structured interview themes were pre-defined, resembling of its deductive nature, thematic analysis in this was chosen to be of inductive type.

The six phases of thematic analysis, as discussed by Braun and Clarke (2006, pp. 77–101), were systematically used to identify recurring themes, analyze them and test them against the initial interview drafts. Phases and their description are outlined in the table three below.

Table 3. Phases of thematic analysis (Braun & Clarke, 2006, pp.77-101).

Phase	**Description**
1. Familiarizing yourself with your data.	Transcribing data (if necessary), reading and re-reading the data and noting down initial ideas.
2. Generating initial codes	Coding interesting features of the data in a systematic fashion across the entire data set, collating data to each code.
3. Searching for themes	Collating codes into potential themes, gathering all data relevant to each potential theme.
4. Reviewing themes	Checking if the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic 'map' of the analysis.
5. Defining and naming themes	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme.
6. Producing the report	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.

Early drafts of the interview transcriptions were constructed after each of the sessions. As Braun and Clarke (2006, p. 87) explain, the interviewer should immerse themselves with the "depth and breadth of the content". They further described the approach vital to gaining a good understanding of the answers and essential for constructing a good starting point to further analysis of the material (Braun & Clarke, 2006, p. 87). While interviews were conducted and the preliminary notes and conclusions drafted, began

the first iterative element in the thematic analysis process. It required changing, creating new and deleting existing codes to create a more cohesive coding schema for creating themes. This idea relates to the recursive nature of the process, “where movement is back and forth as needed, throughout the phases” (Braun & Clarke, 2006, p.86). Early draft document consisted of the main interview topics, followed by the answer of each of the sub question beneath it. From the draft, early conclusions of the upcoming codes per each main topic were drafted. As these interviews were conducted in Finnish, automatic transcription tools were decided not to be used, due to their lack of accuracy in translation capabilities. Manual transcriptions served as a basis for generating initial codes. For organizing and, managing and analysis of interview transcripts, Google Drive was used to store files.

In the second stage of Braun and Clarke’s (2006, p. 87) phases of thematic analysis, drafts of the interview answers were redefined to create initial codes for each of answers. As stated by Braun and Clarke (2016, p. 89), coding was done manually and systematically through the whole data set, giving full and equal attention to each data item. This stage as a part of the coding process also included anonymization of each interviewee by using “Participant (number)” as the label of the interviewed person to which the answers relate. After that followed the creation of a conclusive document, in which all the initial codes were present. In the conclusive document, each answer from of each of the questions from a total of six interviews were used to generate a descriptive code. The main goal of this phase was to “code for as many potential themes/patterns as possible” to find as much interesting data points for the next phase as possible (Braun & Clarke ,2016, p. 89).

During “Searching for themes” phase of Braun and Clarke’s (2016, p. 89) -model, the conclusive document was used to generate a set of recurring themes per main interview theme. Before creating themes, the conclusive document was iterated to form groups of all the recurring initial codes into more descriptive set of codes. As a result of decreasing the initial number of codes, it was possible to create the first themes based on

recurrence. To validate the initial themes, they were compared against the entire data set created as a part of coding individual interviews (level2). After a few modifications and refinements, they were ultimately compared against the conclusive codes extracted from the interview specific codes, which represents comparing them against extracts from level 1. On this phase, most of the iteration and refinements took place to ensure the correlation between the coded extracts, sub and main themes. As a result of this analysis, table four was created to categorize and display the final main and subthemes.

Table 4. Main and sub-themes with corresponding chapters.

Main theme	**Sub-themes**	**Chapter**
Limited organizational support for UX-design	Limited strategic priority	5.4.1
	Lack of resource allocation for UX-design	5.4.2
UX-design knowledge and practical application gaps	Inconsistent and individual-dependent approach to UX-design	5.5.1
	Meaningful end-user involvement and testing	5.5.2
	UX-design possibilities as a Salesforce consultant	5.5.3
Valued UX-practices and collaboration	UX-design benefits	5.6.1
	Role of collaboration	5.6.2

During the thematic analysis, it became evident that there is a clear lack of support from the organization perspective towards UX-design. A distinctive lack of training and processes was identified too. These factors formed the first emerging main theme along

with the observable limited strategic priority the case company has on UX-design overall. When interviewing consultants about their own experiences regarding UX-design, inconsistency and individual-dependency of it emerged. This was often seen as the main, high-level factor leading to challenges in end-user involvement and testing, which are one of the key areas of CRM-projects to utilize UX-design in non-custom CRM-implementations. As Salesforce encourages the usage of standard components and out-of-the box features for CRM-implementations using their platform, it was seen as a clear operational constraint for the utilization of UX-design in customer CRM-projects. Value and future state main theme highlighted the importance of benefit recognition, having common processes and practices and collaboration with internal and external UX-design professionals. More in-detail results of the thematic analysis are presented in chapters 5.2-5.8.

5 Artifact description

The artifact created as a result of this thesis is a knowledge contribution in the form of a UX-design checklist for case company's consultants. The artifact allows case company's consultants to create better CRM-solutions for customers by emphasizing the user experience aspects during the development process (Gregor & Hevner, 2013, p. 337). Summary of the literature review, as highlighted on chapter 3.3, acts as the knowledge foundation for conducting semi-structured interviews. According to Gregor and Hevner (2013, pp. 342-345), key parts of describing the artifact are the type and level of the contribution. Furthermore, a more detailed description of the artifact, as stated by Gregor et al. (2020, p. 1622), should include its purpose, design principles, and the rationale behind its construction, grounded in descriptive and prescriptive knowledge from the field of UX-Design.

Explained by Gregor and Hevner (2013, p. 341), contribution type refers to the level of artifact abstraction and knowledge maturity. It describes the nature and significance the artifact aims to contribute to the existing knowledge within CRM-solution design. Based on Gregor and Hevner's (2013, p. 342) descriptions of design science research contribution types, the artifact constructed as the result of this thesis will fall in to the level two contribution type. It exceeds the level one contribution type, because the UX-checklist is more than just an instantiation. This means that the base level of UX-design will go beyond just a single, specific implementation of a CRM-solution. This also sets a requirement for the artifact, which is that it will provide a set of actions applicable for a wider range of CMR-solutions and customer scenarios and needs. Thus, suggesting a degree of abstraction and generalizability (Gregor & Hevner, 2013, p. 341). The artifact will also provide operational principles for creating better CRM-solutions, further aligning it with the level two contribution type. Level three would require the artifact to be more of a design theory, which would require the artifact to be further refined and researched to evolve it into a more comprehensive theory with testable propositions.

As described by Gregor et al. (2020, pp. 1629-1632), establishment of specifications for design principles has its own challenges and issues, and addressing them is critical for creating a clear, comprehensive and actionable UX-checklist for consultants. Specification process starts from clearly defining the roles of actors involved in the design process. Implementor is the consultant using the artifact to design better CRM-solution for the user, who is the client benefitting from it. Enactors in this case are the CRM-platform technologies the solutions are built on top of, and internal project management processes. To address the challenges in designing IT-artifacts, decomposition is required. This means breaking down complex design principles into smaller components. This involves utilizing modular design of the artifact by organizing it distinctive sections each focusing on specific aspect of the CRM-software solution. As an example, this means the creation of sections such as “design phase”, “implementation phase” and “testing phase” followed by categorizing UX-design actions under them. When set in a hierarchy, this approach makes the guide more accessible and understandable for consultants without prior-expertise from UX-design (Gregor et al., 2020, pp. 1629-1632).

As the process involves human interaction, Gregor et al. (2020, p. 1631) propose empowering the consultants by making informed design decisions. This is achieved by defining the potential actions enabled by the artifact. To ensure the artifact’s flexibility and usability, it’s required to address the use of CRM-solutions in various ways depending on the context and user needs. It’s also important to communicate the artifact’s nature as guidance, not as prescription.

Design mechanism’s purpose is to define the means to achieve the desired outcome. In context of the artifact, this means gathering user data and analyzing it as a part of the CRM-project. In addition, this would mean utilizing the actions described in the artifact to better address user needs (Gregor et al., 2020, p. 1632). Achieving the desired outcome involves emphasizing the importance of justification (rationale) for the design principles described in the artifact. As part of the artifact, this involves reasoning the

included actions on literature review findings and insights formulated as the result of consultant interviews described in chapters 5.3-5.7. As stated by Gregor et al. (2020, p. 1632), the purpose of justification is to add credibility and validity to the artifact's content assuring consultants that the recommended UX-actions are based on sound principles and evidence. Based on the conceptual schema for design principles by Gregor et al. (2020, p. 1633) and prior analysis, the design principle schema for the artifact is described below in the table five.

Table 5. Components of the UX-design guide schema.

Structure	**Component**
Aim, implementer, and user	For case company consultants to design more usable CRM-solutions used by clients, enhancing the user-experience.
Context	Consulting engagements within CRM-projects that differ in industry, project type and client characteristics
Employ mechanism	1. Gather user data 2. Analyze user needs 3. Consider every UX-action from the checklist in the project 4. Act accordingly by the UX-actions descriptions in development of features 5. Test solutions 6. Iterate on solutions based on the user feedback
Involving enactors	(1) Salesforce as CRM-platform (Capabilities and limitations) (2) Clients (Feedback) (3) Project type (Resources)
Because of rationale	To remain competitive in CRM-software consulting market, consultants need to not only possess fundamental UX-design knowledge but also know how to execute UX-design in practice. This leads to better UX on CRM-solutions provided for clients, increasing the overall UX-maturity of the company and customer satisfaction.

5.1 Alpha version

The alpha version of the artifact represents a “light-weight intervention on a limited organizational context” (Sein et al., 2011, p. 42). Formed by a synthesis based on the literature review, alpha version focuses on contextual requirements UX-design sets for the artifact on case company’s operations. According to Chapman and Plewes (2014) model on UX-maturity, alignment with the case company’s overall UX-maturity is necessary, meaning the artifact is required to be used without extensive prior UX-expertise.

The literature review highlights the importance of consultants acknowledging user-centered principles, understanding UX-design and its five levels (Despark team, 2022) with basics of design thinking process (Stanford, 2010). This creates a set of pre-requisites the artifact must introduce to its end-users for using the artifacts other UX-actions. To be able to consciously work off by using the artifacts UX-actions as guiding factors, the literature review also suggests the artifact to promote utilizing UX-processes, such as Lean-UX (Gothelf & Seiden, 2021). This enables concrete UX-design work to be done when designing, implementing and iterating development items in CRM-projects. Acknowledging the UX-design challenges set by the CRM-platform is also key and knowing what level of UX-design practices can be done in each of the projects is also crucial for a successful implementation and staying in budget (Despark team, 2022; Chapman & Plewes, 2014). Prior research also outlined that user-centered and iterative development are critical for ensuring the usability of implemented CRM-features, increasing the adoption rate of the final system (Auernhammer et al., 2021; Ferreira et al., 2023). The nature of CRM-systems also poses another challenge, such as UI-changes and complex user workflows which require process-driven UX-design (Choudhary et al., 2022; Sheth et al., 2024). Consequently, the artifact is required to include methods for consultants to systematically analyze end-user challenges, promote the importance of journey mapping and utilization of user-personas (Tham, 2022; Auernhammer et al., 2021).

Prior research suggests implementing a structured UX-process to ensure its alignment with agile CRM-developments projects (Karagianni, 2018). The first phase would include a discovery component, in which user-feedback is gathered early in development to identify UX-goals of end-users. The first phase would also act as a research step, including stakeholder interviews and using UX evaluation frameworks such as the UX-honeycomb model (Karagianni, 2018). The goal of the second phase would be to define the UX-strategy for the CRM-project, taking into consideration the business needs of the customer. As a concrete action of the second phase is utilizing the Lean-UX principles. This would enable consultants to conduct hypothesis-driven testing during the project's lifecycle (Alhammad et al., 2022; Gothelf & Seiden, 2021). Following the second phase is the iterative implementation of the CRM-development items by addressing end-user challenges and creating MVPs (most viable products) to collect user feedback (Ferreira et al., 2023; Baker et al., 2020). To enable the implementation of the structured UX-design process, the literature review suggests assessing the UX-maturity level of the case company to assess the capabilities and readiness of the company to adopt such process.

With UX-maturity level assessed, the actions forming the UX-checklist can be created by tailoring the actions complexity suitable for that assessed UX-maturity level. This approach ensures that the UX-design actions in the list are aligned with the current capabilities of the company, enabling potential growth in UX-competence. This alignment is deemed critical, so that company-wide integration of the checklist could be achieved. Additionally, the checklist should provide guidance on when to use external UX-design resources, such as dedicated design teams, in complex CRM-implementations (Pernice et al., 2021; Chapman & Plewes, 2014). Overall, the alpha version represents a knowledge foundation of the contextual requirements set for the artifact and a suggestion of the artifacts form, guided by the literature review findings, forming a light intervention of the artifact in limited organizational setting. The goal is of the alpha version is to explore more systematic approaches to execute UX-design as part of the case company's operations. Ranging from the initial stages of the projects all the way to

last stages. The beta version of the artifact includes conducting semi-structured interviews, thematic analysis of the results and evaluation of the beta version.

5.2 Beta version

Beta version of this artifact presents an enhanced, more detailed version of the artifact. The goal of it is to evaluate the results of the alpha version and seek answers to what the artifact would contain and why. Beta version chapter contains the results of the thematic analysis from semi-structured interviews and explanation of the evaluation. As part of the semi-structured interviews, interviewees also assessed the current UX-maturity of the case company. As the purpose of the beta version is to create a more mature artifact and examine it in a wider organizational setting (Sein et al., 2011, p. 42), the main findings made during the alpha version served as the basis for the semi-structured interview conducted as part of the beta version. In the following chapters after 5.3, main themes consisting of groups of similar sub-themes are described before the actual sub-themes. Sub-themes are created based on the coding phase of thematic analysis of each different main topic of the interview are explained in detail. UX-maturity assessment is discussed in the next chapter.

5.3 UX-maturity

The first research question of this thesis asked to define an appropriate minimum level of UX-design for the case company. To seek an answer to this, interviewees were asked to grade the company's UX-maturity from one to five. In the scale, which was based on Chapman and Plewe's (2014) descriptions, the number one represented UX-design being a random thought and number five a widely adopted and supported process. Following the grading, interviewees reasoned their grades, from which the thematic analysis revealed some interesting views creating a comprehensive understanding of the current UX-Design maturity within the company. Understanding the current organizational

perception towards UX-design and the main contributing factors related to that, is vital for answering the second research question. The grades are displayed in the table six below.

Table 6. UX-maturity grades.

Code(P)	**Grade (1-5)**
P1	1
P2	2
P3	2
P4	3
P5	3
P6	3
Total: 6	Average: 2.33

As discussed in the alpha version chapter 5.1, literature review suggests assessing the UX-maturity level of the case company before attempting to develop it further (Pernice et al., 2021; Chapman & Plewes, 2014). Out of all the six interviewed, the average grade was 2.33. This means that the overall UX-maturity of the case company lands in the "awareness" stage in Chapman and Plewes (2014) UX-maturity model. They describe the UX-design maturity of organization in the awareness stage as one where "UX-design is a 'hot' topic of debate for at least some projects" and "there is inconsistent awareness and buy-in to making UX-design investments, such as training, beyond a few people" (Chapman & Plewes, 2014, p. 16). This grade was in line and further confirmed by the codes generated to form the sub-themes from the reasonings behind the grades, which are described in more details on the next chapter 5.4.

5.4 Limited organizational support for UX-design

As part of the first theme of the semi-structured interviews, interviewees were asked to reason their grades. This is essential to understand the nature of challenges or positives underlying the organizations position in “Awareness” stage. Results from thematic analysis allowed to understand underlying factors contributing to the awareness, which then allows to understand what contributes to an appropriate minimum level of UX-design from the case company’s perspective. The contributing factors are explained in more detailed in the following two chapters, which describe the sub-themes associated with the main theme.

5.4.1 Limited strategic priority

Main contributing factors, for the given grades to were lack of strategic priority given to UX-design. As a concrete example of this was that there really isn’t any training available for the topic, or anyone overseeing the development of the competence. This correlates directly with the awareness stage description of the UX-maturity model (Chapman & Plewes, 2014). UX-Design was found to be a topic of conversation, but it was deemed there wasn’t any concrete actions taken act upon those conversations. All interviewees described the strategic priority given to UX-design as “non-existent” and “lacking”. Number one and two quotes below highlight this.

> *(P5) “There is essentially no training offered related to this subject area.” (1)*
>
> *(P3) “No one really owns the UX-design competence; thus, it is not developed either.” (2)*

These two quotes, echoed by all interviewees, accurately describe what the case company’s stance towards UX-design is in on the strategy. It became clear that the UX-design competence is not driven from the leadership level at all. When asked about how UX-design is currently organized and considered in the case company’s processes,

Interviewees stated that it was deemed a phenomenon that is poorly considered and discussed only a little. Few also had not heard the term UX-design associated with CRM-projects at all, which means the term overall comes up infrequently. This leads to the conclusion, that there is an overall lack of UX-design knowledge and strategic priority. The analysis also displays that UX-design is utilized by a few individuals, which is in direct relation to the description “inconsistent awareness and buy-in” of Chapman and Plewe’s (2014) UX-maturity model. As an example of the way UX-design skills are perceived or supported organization-wide, is quote number three:

> *(P1) “It's certainly partly due to the nature of the company's consulting work, 'not intended to be a design house'.”*
> *(3)*

Quote three also describes a key trait to what is expected and valued from the consultants working in the case company. Two interviewees highlighted this and it bows to the assumption, that to do UX-design, one would need to be an experienced UX-designer. This was a recurring misconception, which in its own derives consultants on considering executing UX-design on their projects. As part of the thematic analysis, it became evident that the case company operates with business and technology first -mindset. This is deemed to be typical approach for CRM-consulting businesses offering solutions through SaaS-software platforms. However, as highlighted by Sheth et al. (2024, p. 853), understanding the journey user takes foes through during a process is key to foster user-centered way of working in CRM-development. Unawareness, lack of organization wide support and training were found to be the main factors contributing to this sub-theme. However, some participants were more optimistic than others about the UX-maturity. Level three was seen as realistic and achievable UX-maturity level for an organization working in CRM-consulting business.

5.4.2 Lack of resource allocation for UX-design

To emphasize having more user-centered approach in CRM-projects, analysis revealed the necessity of design work allocation in work estimates prior commencing with the project work itself. Consultants and/or sales personnel provide clients with work estimates based on their requirements for a CRM-solution, to which all interviewees agreed tighter collaboration and knowledge sharing about UX-design is needed. All interviewees agreed that resources and time spent on UX-design should be part of the time estimates like any other type of work, to reduce the amount of silent design work done for free towards clients. Lack of general awareness towards UX-design through all sizes of projects was seen as the key factor affecting the limited nature of organizational support for UX-design. This is confirmed by the two quotes below.

> *(P2) "Design is cut back so that 'if the solution works technically'."*
> *(4)*

> *(P3) "Budget often isn't sufficient to take UX aspects into account."*
> *(5)*

Budgetary factor was echoed by all interviewees to be the main factor for lack of UX-design execution in small number of projects. This leads to a situation, in which large amounts of projects UX-design is not considered at all or to very limited extent. Analysis revealed this to be a direct effect of not prioritizing UX-design.

5.5 UX-design knowledge and practical application gaps

To understand the elements of minimum level of appropriate UX-design from consultant's perspective, thematic analysis revealed spectrum of factors relating to how consultants perceive UX-Design on the organizational level and through their own work. Thematic analysis revealed that combining UX-design with development of SaaS-software platform (Salesforce) is seen as challenging. To define the appropriate minimum level of UX-design, understanding the consultant's perspective of the current

challenges is necessary. Brought up by previous research, examination of the common misalignment between user-centered design and reality of digital product development is key. Especially in complex customer environment, such as CRM's (Ferreira et al., 2023; Tham, 2022; Auernhammer et al., 2021). Results of consultant's perceptions of UX-design on practical level and in the working context of Salesforce are explained in the following chapters.

5.5.1 Inconsistent and individual-dependent approach to UX-design

Thematic analysis revealed that all consultants had the same perception of the way UX-design is currently mostly done on their projects. All interviewees agreed that if UX-design is done as part of the projects, it's commonly unconscious and inconsistent. Related to the lack of organizational support for UX-design, it was mentioned multiple times that UX-design is only done by few individuals. Inconsistency was deemed to be because of doing UX-design by gut feeling. This leads to most of the consultants doing UX-design in an unconscious and unorganized fashion. The following quote demonstrates this very well and was echoed similarly through almost every interviewee:

> *(P4) "Roughly everyone has some kind of understanding, probably unknowingly, of what user experience design means in customer projects."*
> *(6)*

The above relates to the current fundamental level of UX-design knowledge among consultants. It also relates to the commonly echoed factor of UX-design not being seen as a visible skill among the case company's consultants. It's not valued in the same way as technical configuration or coding skills are. This highlights how important it is to develop UX-design competence in case company's organizational setting from the top-down. If not, it leads to a current situation of UX-design being a very individual driven skill.

(P1) "UX-design is often done individually without awareness / unconsciously." (7)

(P3) "UX competence is highly personalized -> individual's responsibility, not a collective matter." (8)

Above quotes further support the thematic analysis findings about the most important reason why UX-design is currently individually driven and done mostly unconsciously. It's not yet an organized part of the case company's operations and the competence is not owned or driven by anyone. Also as stated by most of the interviewees, if UX-design is not a visible consultant skill in the first place, there will always be a gap in UX-design skill throughout the organization. The type of lacking UX-design skill, which was the most apparent in the analysis, was theoretical knowledge. Analysis highlighted that if consultants don't understand or learn the basics of UX-design, it creates a natural challenge in justifying the time or effort spent in using UX-design as a tool instead of something else. The analysis also highlighted the common lack of knowledge related to what UX-design methods to use in which part or kind of projects. Few interviewees mentioned that they've done design sprints and customer journey mapping on their projects, which supports the perception that there is some design knowledge among the consultants, but it can only be utilized very situationally and by very few.

5.5.2 Meaningful end-user involvement and testing

Although in vast amount of projects UX-design is not considered or considered very little due to varying reasons, it does not tell the whole truth about case company's customer projects. Thematic analysis's results confirmed that larger projects usually do include UX-design actions as part of them. Larger projects mean customer projects with broader scope, multiple consultants and multiple applications. Three of the interviewees with more consulting experience declared, that UX-design usually is considered when the end solution requires custom development, which allows the consultants more freedom in development processes. This freedom typically requires some level of UX-design as a

starting point to truly understand the end-user, their needs and pain-points and to get the solution “right”. One recurring challenge apparent in the analysis was that when UX-design is done, it’s done very superficially by following a gut feeling. The gut feeling was perceived to mean that “one merely guesses how the end-users perceive the solution from their standpoint”. This was seen result in bad or confusing user-experience.

> *(P3) “UX is considered very superficially when thinking about the end-users' use of the solution. It’s usually based on previous experiences and 'gut feeling'/'guesswork'.”*
> *(9)*

> *(P1)” Real understanding of the user is often lacking when designing solutions. / End-users “personas/capabilities” are not mapped when creating the solution.”*
> *(10)*

End-users were mentioned by every interviewee quite extensively in the context of an on-going CRM-project. Main thing results revealed was the challenges in end-user involvement as early as possible during the project development lifecycle. Prior to starting a project, sales personnel and/or consultants often discuss with decision maker from the client’s side. The concern that was echoed by all interviewees relates to the main contact person on the client side. Because the decision maker is usually not the main person using the solution, UX-aspects of the solution risk get set aside for too long due to the lack of actual end-user involvement in the early stages. This before-mentioned scenario was brought up and mentioned by all interviewees.

> *(P3)” The project is planned with a high-level contact person -> the actual end-users are met only during the demo/testing.”*
> *(11)*

Results also highlighted that when actual end-users are met during user testing, the testing itself tends to focus only process execution, not in the intuitiveness of the process. This process-oriented way of working was seen as the key factor on why the consultants feel end-user testing doesn’t always happen in the most meaningful way as possible. When user-testing focuses only in the examining the technical process completion, the

opportunity to create added value by affecting the user-experience was deemed missed. The reason for this, echoed by all interviewees, is the lack of budget or time reserved for testing. Lack of consultants UX-design knowledge was also seen as an evident reason for missing the opportunity to provide value with UX. The consultant mindset, which is heavily affected by the previously mentioned UX-design knowledge, was also deemed as a key contributing factor as highlighted in the example 12 below:

> *(P5) "When testing, solutions wouldn't just be fixed from a technical perspective, but by actually understanding the feedback as a whole."*
> *(12)*

5.5.3 UX-design possibilities as a Salesforce consultant

As expressed by every interviewee, when asked about the overall UX-maturity of the company, core business process within the case company is selling a solution and delivering it to client. Because these solutions are built on top Salesforce, it poses certain limitations and possibilities for UX-design. All affecting technical factors are not necessarily impeding by nature, because one of the goals of UX-design is to ensure a consistent and aesthetically pleasing experience while guiding the user towards the most important information (Grant, 2010, pp. 21-36). Because that consistency already exists and is maintained by the consultant operating by Salesforce's best practices, it was deemed to be a positive UX-design factor. This also supports UCD-attributes, such as repeatability and memorability, to occur in the design of the software. As a starting point for every consultant building CRM-software solutions, interviewees felt that it was best to learn the best practices of the technology. The best-practices themselves were echoed by everyone to hinder the possibilities for creativity and UX-design during a project and thus, posing a challenge for UX-design utilization.

> *(P1) "Solutions are made utilizing Salesforce standard components -> no room for creative user experience design."*
> *(13)*

> *(P4) "Salesforce as an out-of-the-box solution with its limitations reduces the inclusion of UX in most customer solutions / When using pre-designed components, there is no perceived need to implement UX-design."*
> *(14)*

Related to consultants work and UX-design, Salesforce's customizability was brought up the most. The recurring main concern was that it was perceived as a big limiting factor, to which the overall unawareness of the nature of UX-design actions, lack of knowledge and processes also affect. As mentioned by Baker et al. (2020, p. 309), visual presentation is only one out five key aspects in design thinking, which is one of the most common mindsets every consultant should understand when executing UX-design. Because the interviewees consisted of participants without deeper understanding of UX-design, the term was mixed up with UI-design and thought as meaning the same thing by few. Because of that, it's logical to think that the pre-built nature of CRM-solutions don't allow much for creative implementations, which was echoed by the participants.

It was also highlighted by few participants, that when considering doing "something" towards the usability of the overall solution, it's difficult to get started. It was also seen to take away critical development time from other tasks. To assist consultants in getting started faster on UX-design in their projects, categorizing UX-actions to different phases of projects was brought up. Although UX-design is commonly used in the design phase of the project (Baker et al., 2020, p. 309), it's not usually enough in modern agile projects such that the case company's consultants operate in. From the perspectives of feasibility, learnability and understandability relating UX-design actions to the steps in agile development process was highlighted.

> *(P2)" Instructions for using the tools is needed and a description of what kind of situation the process, tool or a framework would be suitable. "*
> *(15)*

5.6 Valued UX-practices and collaboration

The third main theme of the interview was aimed to identify the contributing factors for the “positive impact” in the minimum level of appropriate UX-design. The results of the thematic analysis of this main theme create the foundation and requirements for the artifact. Discussions during the third main theme of semi-structured interviews mainly revolved around the artifact, what the minimum level consists of in the case company’s organizational setting and how the overall UX-competence could be enhanced.

5.6.1 UX-design benefits

Thematic analysis revealed the value creation with UX-design as the first key insight related to creating a positive impact. It was deemed the essential starting point for creating solutions which are genuinely user-friendly. This was seen to increase the number of positive user-experiences created with CRM-solutions. Meaningfulness of use was seen as key contributing factor to a positive impact but currently hindered by the common technical solution mindset of consultants. Results also highlight the importance of providing a genuine opportunity for end-users to influence the CRM-solution during the development. This was seen to yield better client engagement, allowing communication about the UX-design benefits towards clients as well. This type of communication was deemed one of success factors for selling UX-design work and getting it to be included in work estimates. Interviewees echoed also with Potts (2010) point, that “Processes are commonly designed with an expectation of users to align with organizational practices during completing a task”. This was mentioned by all to be common recurrence, which further highlights the lack of mature UX-design practices and company’s process-oriented way of working. When end-users are offered an opportunity to influence the solutions created for them early enough, it decreases the resistance to change.

> *(P2) When a genuine opportunity is created to influence the usability of the solution, it engages the end-user in a completely different way. This increases the*

commitment of use, leading to reduced resistance to change." (16)

Because of the process-oriented mentality, creation of value through UX-design was seen as one of the main challenges, As CRM-software solutions are based on processes executed with it, interviewees agreed with Sheth et al. (2024, p.853) that the key to drive user-centered approach in CRM-software solutions is with UX-design. With UX-design in software projects, the increasing expectations of customers can also be better addressed (Kuureen et al. 2019, p. 620). Thematic analysis consultant's most important values created with UX-design being the increase in meaningful use and usage ratios, commitment and customer satisfaction. All those values were seen to lead to potentially increase in business revenue. One of the recurring types of added value mentioned was also the decrease in development iterations. Because of it, getting to a satisfactory solution quicker with less resources spent would be possible.

(P4) "Wouldn't need to modify solutions so many times to meet user needs/preferences if they were figured out beforehand." (17)

One of the most frequently stated value creators related to UX-design was saving time. This is due to the lack of time and monetary resources allocated to design work in CRM-projects. If the need or opportunity for UX-design is acknowledged late in the project development cycle, it is commonly cut out due to previous reasons.

(P5) "When starting the implementation work, time is saved, and the work is clearer when UX-design has been done before the actual implementation of the solution in the system." (18)

To justify and explain the benefits of the above way of working to customers was seen challenging, although there were mentions of positive outcomes too. These occurred when the outcome of the UX-design efforts materialized to a great solution and customers end-users gave positive feedback. The benefits of utilizing UX-design are

commonly seen only afterwards, which is a challenge mentioned by two experienced interviewees.

> *(P2)" When focusing on UX, the feedback has been positive, and even small things can have a big impact on the whole."*
> *(19)*

Thematic analysis also revealed the importance of gathering the positive outcomes for reference stories, which was deemed essential in acquiring customers/and or projects, which would include UX-design or design in general.

5.6.2 Role of collaboration

"Collaboration" and "External support" were the most used words, when interviewees expressed their views on how UX-design could be better utilized and supported on an organizational level. Usage of external UX-designers was seen as a strength, and one of the reasons why UX-design had been talked about more lately. Few participants stated that external UX-designers have been already utilized in projects, which have revolved around building custom solutions. External UX-design utilization was seen as an essential contributing factor in creation of positive user-experiences. Few participants also discussed about the challenges in collaboration. Through thematic analysis it was possible to determine them, lack of awareness when a designated UX-designer should be utilized and how these situations could be identified earlier in the development lifecycle being the most prevalent ones. This is highlighted by the examples 20 and 21 below:

> *(P4)" When talking about end-users' user experience, an external UX-designer has been utilized to help with this. Another matter is whether the client buys design work or not. A strength is the increased awareness of the possibility to utilize external UX-designers."*
> *(20)*

(P3) "Identifying these situations when external design resources should be done a lot earlier."
(21)

Simply by just having an external UX-designer as part of the project team was deemed not ideal, because they might not be aware of the capabilities and/or limitations of the platform. Interviewees also mentioned the platform knowledge of the dedicated UX-designer as a possible challenge, because they might not have worked with the exact CRM-platform before. This could lead to the designed solution be unrealistic or impossible to be implemented. Overall, utilizing a dedicated UX-designer was deemed as valuable, when taking into consideration the overall UX-design knowledge and skills among case company's consultants. This observation vouches more extensive use of external UX-designers in the future, considering the case company's purpose of not being a "design house".

5.7 Summary of the beta version

"Processes", "tools", "conscious", and "practices" were the most dominant themes contributing to all the sub-themes. The consensus among all interviewed, was that they're missing in the current UX-design efforts. This is also confirmed by the low UX-maturity level. This means that there is a lack of fundamental UX-design knowledge and awareness in the organization. Thematic analysis revealed that this was seen as essential for the artifact to aid in solving. Increase in fundamental knowledge and awareness affects practical UX-design utilization, which leads to more user-centric solutions delivered for case company's clients. It is a foundational step for improving the overall UX-competence in the company. Inconsistent and individual were the words used to describe current UX-efforts the most, which means the usability perspective of something is done with a gut feeling or not at all. It was seen as a key artifact requirement to affect the approach of UX-design from unconscious to conscious. It was described as essential to ensure consistent quality in the results of UX-actions across

projects and to move away from individuality. This means UX-design would be perceived as something systematic, non-superficial and approachable.

Common observation was also the challenges in meaningful end-user involvement and testing. The overall feeling among interviewees was that actual end-users are not involved in project early enough, thus missing an opportunity to affect the overall solution. Most of the engagement with actual end-users takes places too late in the development lifecycle, when most of aspects of the final CRM-solutions can't be changed without going over budget. Previous studies also highlight the importance of UX-design prioritization at the earliest stage of development possible (Kim, 2020, p. 228). Technicality of the testing was a recurring theme too, which often leads to not building genuinely user-friendly solutions. Artifact was seen vital to address this too, bettering the solution adoption rates and client satisfaction.

Related to adoption rates, interviewees found it hard to get started with UX-design in projects and how to justify it towards clients. Work estimates and project resourcing were found to be the main challenges, which are in the essence of consulting businesses The perceived limitations of the Salesforce contribute to this challenge. By providing concrete, easy to understand, implementable UX-actions with the artifact, consultants can begin integrating UX-design into their daily operations, affecting to the overall UX-maturity of the case company. The artifact was seen crucial to also categorize these actions by mapping them to different phases of projects as a guidance. This was seen to help in communicating the benefits of UX-design to clients, leading for more work-estimates including UX-design. Resources, external UX-design especially, was highlighted as valuable and important to utilize whenever possible. However, it was also highlighted that there is lack of clarity on when and how to collaborate with them. Considering their potential lack of platform-specific knowledge, it was seen vital for the artifact to provide guidance on the use of external UX-designers and how to utilize them effectively. This should enhance the collaboration in the most feasible way.

The general finding was the need to increase the UX-knowledge and awareness throughout the case company's consultants and find ways to execute UX-design as part of customer projects in more structured and conscious way. By promoting the benefits of, the value of UX-design could be better communicated towards more clients, which would lead to better allocation of UX-design. Increasing the organizations competence and UX-maturity is also the feasible use of external UX-designers. To avoid inefficient use, guidance about when and how to utilize them, should be also addressed by the artifact.

5.8 Evaluation

This chapter explains the formative evaluation of the artifact, which was conducted as part of the thematic interviews during the creation of the beta version of the artifact. This allowed the consultants to have a direct impact on the artifact before its final form. As described by Peffers et al. (2007), evaluation serves dual purposes: formative evaluation, which aims to improve artifact during its development lifecycle, and summative evaluation, which evaluates the overall impact and effectiveness of the final artifact.

While the main body of the interview data was subjected to thematic analysis as described in chapter 4.3, the analysis of the data gathered from the last theme was more direct. The suggestions were collated, and reasoning behind analyzed. Last question of the interview is example of deliberate formative evaluation, in which the consultants were asked what they perceive as the single most important challenge for the artifact to solve. The feedback gathered from this question directly affected the contents of the artifact. This approach was used as a method in gathering user-driven requirements to enhance artifact relevance and utility during development. This data collection approach ensured the artifact is developed with a strong emphasis on its practical context of its iusers. The insights from last theme of the interview were instrumental in transitioning the artifact from more theoretical, superficial UX-Design guide for consultants to a practical, concise and easy to understand UX-design checklist. The change in practicality

of the artifact reduces its design uncertainties and improves the artifacts alignment with the practical needs of its users.

The “why”-aspect of the third theme’s questions was particularly informative, because it encouraged participants to articulate the underlying reasons and problem, moving beyond simply suggesting a feature request. This enabled a deeper understanding of each interviewees pain points regarding UX-design and a cohesive understanding of the most important challenges to be formed, heavily affecting the artifacts content. Conducting the summative evaluation of the artifact was ruled as out-of-scope for this thesis, due to its requirements to be conducted when the artifact is used in practice. The utility and relevance of the artifact are core features of DSRM, formative evaluation with end-users being a key mechanism for achieving this. This ensured a practical and approachable artifact, which addresses the true needs of the artifacts end-users. The result of this evaluation directly shaped final artifacts outcome as the UX-design checklist.

6 Final artifact

The final artifact represents a proof-of-concept (POC) version of a minimum viable level of UX-Design of the case company. The minimum level in this context means the minimum amount of UX-design conducted/considered by every consultant during CRM-projects at the case company. Ultimately the final artifact answers to the second research question “what should the minimum level include to have a positive impact on the user experience of CRM-software solutions”.

As the case company doesn’t require extensive UX-design capabilities from its consultants, it was deemed not feasible to construct a tailored or structured UX-process as the result of the artifact. Consultants work in varying projects with multiple different possibilities and levels to execute UX-design, so it was seen more feasible for the artifact to include a set of actions tailored to different situations and stages of projects. This lowers the barrier to also act upon the minimum level, because the final artifact is more practical than a separate, more detailed process. The artifact is a UX-checklist, which is as approachable and easy to understand as any other e.g. project management checklist or tool. The actions are tailored to aid in developing more usable features instead of executing a comprehensive UX-design process in all the customer projects. This is also due to the much varying degree of customers, project timeframes and budgets. Below is a breakdown of the actions in the UX-design checklist:

Table 7. Artifact.

Action 1	**Have I included UX-design and/or design work in work estimates?**
What?	Allocate and budget for UX-design activities in the project scope and work estimates
Why?	Ensures time and money are dedicated to UX-work, preventing it from being cut. This also fosters client communication about the benefits and justifies the UX-work
When?	During pre-sales or at the project planning at the latest.
Action 2	**Do I need an external UX-designer?**

What?	Leverage external expertise to create even better user-experiences for clients. Share project insights and brainstorm together, they are here for us as we are here for them!
Why?	Enhances the overall UX-quality and competence by supporting projects, which are particularly of type of complex or custom.
When?	During project planning or at the latest before a design sprint or design related development phase begins
Action 3	**Have I created user-stories with user-personas?**
What?	User-stories without an intent are like cars without tires. Deep understanding of the end-users' true needs, goals and behavior is key for creating positive user-experiences.
Why?	Ensures solutions are built for the end-users, not just for someone executing a process. Lessens guesswork and making assumptions. Improves the relevance and usability of features. Reduces bias to diversify the solution.
When?	When breaking down the scope for the first time into smaller, more manageable portions. Also, whenever there is a need for new development or fixes.
Action 4	**Do I need to use a specific tool for UX-design?**
What?	Foundational training on the most common tools is a must for developing the UX-competence. Figma is a market leader in wireframing and prototyping.
Why?	Addresses the general lack of UX-design and practical knowledge. Equips consultants with the skills to execute concrete UX-actions.
When?	Recurring and as part of foundational UX-training for consultants. Or on-demand when a project requires.
Action 5	**Do I need to utilize a UX-design process?**
What?	Established UX-methodologies like design thinking and Lean UX are essential to understand. They link the theory to practice
Why?	Addresses the lack of UX-design processes. Helps in moving from inconsistent, unconscious to conscious and structured UX-design practices. Helps understand what methods to use and when.
When?	As part of the project lifecycle from early design phase to final production testing. Very situational. Continuous assessment of the need is key and brainstorming with an external UX-designers is advised.
Action 6	**Have I thought about testing and end-user involvement thoroughly?**
What?	A standardized template enables consultants to prepare for and conduct structured interviews with end-users.

Why?	Promotes end-user involvement as early as possible in the development lifecycle. Allows for meaningful testing with less focus on technical aspects of the solutions, and more in intuitiveness and ease-of use.
When?	During design phase or in end-user testing at the latest. Efforts should be made to involve end-users as early as possible to reduce the amount of testing iterations.
Action 7	**Have I considered UX-possibilities in Salesforce?**
What?	Specific UX-improving actions within Salesforce include removing all the unnecessary things from user interfaces, conditional record pages and more.
Why?	Affects the challenge of overlooking UX-design because of Salesforce's best-practices. Enhances the overall usability of the developed solution and increases user commitment. Also encourages a shift in mindset from providing only a technical solution that "works".
When?	Trough design, configuration/development and any customization phase of a project. Particularly when creating page layouts, screen flows, user workflows and anything user interaction related.

7 Discussion

The discussion part of this thesis explains the interpretation of and implication of results, summary of scientific contributions and discusses the validity and reliability of the research. Chapter 7.1 and its sub-chapters focus on the research objective and highlights the key findings and how they relate to the research questions. Chapter 7.2 discusses the contributions made with this design science research study, followed by the chapter 7.3 discussing the validity, reliability and limitation aspects of the study. Chapter 7.4 rounds out the thesis by examining possible future research entry points based on this thesis.

7.1 Interpretation and implication of results

The goal of this thesis was to create an artifact, which would serve as the minimum viable level of UX-Design for case company's consultant. The main consensus with the artifact is that the more the minimum level is followed, better the user-experience perceived from the solutions created as a deliverable in CRM-projects. The goal of the thesis was divided into the two following research questions:

RQ1: What is the minimum level of UX-Design appropriate for the case company?

RQ2: What should the minimum level include to have a positive impact on the user experience of CRM software solutions?

The artifact of this thesis was able to demonstrate the appropriate and achievable actions every consultant could take to improve the user-experiences of the deliverable solutions. The artifact highlights a compelling set of practical steps to achieve the goals set for it. The following two chapters discuss the results regarding the research questions outlined above.

7.1.1 Appropriate minimum level of UX-design

The first research question examined the specific minimum level of an appropriate UX-Design, tailored to the case company's current UX-maturity and competence. As this was researched in a unique organizational setting, the previous research mainly highlighted the ingredients of UX-design and processes to execute it in agile environments. These research findings did not relate them to use in practical CRM-solution development, which differs by nature from the standard, more customized software development. Given that the artifacts target user group is consultants without extensive coding experience, this research with its artifact offers an approachable and practical way to increase the UX-design utilization in the company. Although consultants carry a significant responsibility of the success and failure of a CRM-project and UX being a key indicator to the success of it, it was a surprising find how little UX-design was being overall supported by the case company (Suoniemi et al., 2022, pp. 20-25; Lawson-Body et al., 2017, pp. 762-763). To gain a deeper understanding of the realistic starting point the company now encompasses, the average given UX-maturity grade (2.33) was expected, given the circumstances and case company's strategy.

Despite the lack of strategic support and learning, it was intriguing to find out that that there were many positive experiences from projects, in which UX-design had been conducted to some extent. These positive experiences occurred mainly in heavily customized solutions, which was also expected given the interviewees answers of the common context of projects UX-design done before. Positive experiences echoed well with previous research, as determining the pain and value points along the user journey and addressing them accordingly drives the user-centered approach in CRM-systems, which is based on processes (Sheth et al., 2024, p. 853). The more out-of-the box the customer journey is, more it can be influenced, while endorsing the best practices of Salesforce. Interviewees with more previous experience tended to take a wider project managers perspective, while others with less experience tended to view UX-Design from more detailed perspective. In CRM-consulting business, this is common due to more experienced consultants needed in positions with broader areas of responsibilities. For

the artifact to serve both ends of the experience spectrum, the artifact consists of both kind of actions, feature specific and more broader project managerial actions.

7.1.2 Contents of the minimum level to achieve positive impact

The second research question was aimed to identify the actions that correlate with positive outcomes from before, while discovering new UX-enhancing actions to support the old ones. During the research it became quickly evident, that most of the UX-design in the case company is done unconsciously and individually, relating to the low UX-maturity. The intriguing aspect of this was that in previous research it's seen to introduce bias to design decisions, which wasn't discussed at all during the interviews, but what is essential to understand and stated by Auernhammer et al. (2021). Some of the interviewees had previous experience from design thinking, which highlights the importance to overcome biases and diversify the solutions. To foster the positivity of the outcome of UX-Design, these factors are essential to consider. One of the biggest goals of the minimum level is to create a foundation to move from subconscious to conscious UX-design.

For the minimum level to foster a positive impact, interviewees had a chance to impact to the contents of the artifact directly. This was done mainly through reflection of previous experiences and creativity enabled by the interviews. The main concern from previous research hindering the creation of the positive impact was the solution delivery party's inability to deliver usable solutions for their clients, whose purpose is enabling their customers to solve their specific problems or need (Georgiadis & Chau 2013; Choudhary et al., 2022). To ensure the beforementioned scenario would not happen, the content of the minimum level should adhere of being easily approachable, highly practical and consider the case company's abilities to execute upon it. Creating a lasting positive is not achieved by just a few individuals using the UX-design checklist. This is the reason UX-checklist contents scale to several different stages during projects lifecycle. As the business context of the case company has shown, external UX-design resources are

available so the artifact can also be used to take the most advantage of them. By introducing UX-aspects to vital project management tasks like resourcing, allocation and time estimates, the chance of positive impact created with UX is increased.

7.2 Summary of contributions

In the previous chapter, the contributions were discussed regarding the related research question. The main contribution of this thesis was the creation of a formally validated UX-checklist, which was designed to act as a minimum viable level of UX-design done in CRM-customer projects. For case company consultants, this offers ways to enhance their awareness, competence and practices related to UX-design. For case company, this acts as an assessment of the overall UX-maturity within the company and offers an improved understanding of the company's specific UX-challenges.

Relevant previous academic research had focused mainly on CRM-systems and projects, consulting and UX-design as separate fields of study. Examples of how organizations UX-design competence could be enhanced in a low UX-maturity environment were highlighted in limited scope, which offered a great opportunity for this thesis to also address this research gap. This research responds to the lack of practical example by developing and evaluating a specific, actionable artifact, which is grounded in DSRM. The minimum viable level of UX-design defined as a part of this thesis echoes with the concept of Minimum Viable User experience (MVUX) as proposed by Hokkanen et al. (2016). MVUX addresses the needs of a start-ups, its core principle being delivering essential UX value efficiently with limited resources. The UX-checklist developed as an artifact of this thesis aims to provide "good enough" foundation for UX-design in CRM-projects conducted by case company's consultants. Furthermore, this study injects empirical insights into the specific, hindering or enhancing, organizational and individual factors that affect UX-design adoption. This also enables to develop the general UX-design knowledge within the case company beyond existing theoretical models (Chapman & Plewes, 2014).

Furthermore, this research contributes to the concept of a minimum viable user experience by adapting and operationalizing it within low UX-maturity organizations. This research also created insights into the specific challenges and success factors for UX-adoption in CRM-consulting business context. It also acts as an example of how DSRM-research model can be used to create a practical, context-specific guidance type of artifact. DSRM-research approach also directly countered the unconscious nature of UX-design present in the organizations operational setting by allowing the creation of a structured checklist.

7.3 Validity, reliability and limitations

The purpose of this chapter is to discuss the validity and reliability of this research by explaining the measures undertaken throughout the thesis process. These measures demonstrate the design of the study, execution of it, findings and the developed artifact. DSRM and qualitative research methods were used as methods to establish rigor. DSRM emphasizes the creation of innovative and purposeful artifacts and necessitates their design and evaluation, ensuring practical utility and relevance to an identified problem (Peffers et al., 2007). Together with DSRM, qualitative research method in the form of semi-structured interview and thematic analysis was utilized, which rely on establishing the trustworthiness of findings. In this research, the validity of the artifact relies on the qualitative data gathered from the output of thematic analysis, from which the artifact received its requirement and refinements.

As thematic analysis was done throughout the interview process, the variability of codes could be observed for the repetitiveness to draw early conclusions. This enabled generalization of codes, rather than only drawing conclusions from those that were specific for each dataset (Saaranen-Kauppinen, 2006). This phenomenon, according to Guest, indicates that the research successfully reached sufficient data saturation and consistency. This is seen as essential factor when analyzing the validity of qualitative

research utilizing semi-structured interviews for data gathering purposes, as it steers the researcher to determine when conducting additional interviews is less likely to yield new information (Guest et al., 2006, p. 74).

For this research, the main limitation comes from the nature of the artifact. Acting as a Proof of Concept (POC), its practical impact on enhancing the client's end-user's user-experience hasn't been validated in practice. This means it hasn't been empirically measured and its effectiveness analyzed. This also means that the checklist hasn't been tested with its intended audience, case company's consultants. While it has been constructed and validated through the feedback gathered from its evaluation, its practical application in CRM-projects and the positive impact it aims to deliver can't be confirmed at this stage. The scope, a single case company, also hinders the general relevance of the artifact to other companies. The benefit of this approach being depth and contextual richness, the overall relevancy of this artifact is for the case company in question. Exclusion of professional UX-designers, while deliberately focusing only on CRM-consultants, may have hindered some of the value the artifact could've otherwise offered. Time constraints of a thesis is also an important factor, because it excludes the possibility to test and evaluate the artifact in a live CRM-project.

These limitations influence the interpretation of the study's results. As an example, the true "positive" impact of the UX-checklist relies solely on the positive validation of selected few interviewees. Rather than being proven with measurable quantitative KPI's received from client projects, its usefulness and relevance to case company's consultants on a larger scale can be argued. However, steps such as the provision of detailed company context and participant characteristics (Chapter 4.2), were used to mitigate the impact. Participant characteristics can be used to by other practitioners to judge the generalization of the findings. Although the artifact is a PoC, it was formally evaluated with target audience (consultants). This enhances its practical relevance and usability, which is a primary goal of DSRM (Peffers et al., 2007).

7.4 Future research

The absence of the artifacts empirical testing in a live CRM-project scenario for impact, and the proof-of-concept nature of the artifact suggests subsequent research endeavors. Most intriguing future research starting for the artifact is transitioning the artifact to Proof of Value (PoV) form. This would be done by utilizing the checklist in an actual CRM-project conducted by the case company consultants. To evaluate the artifact rigorously, feedback would need to be gathered and analyzed from the consultants using the artifact, but also from the clients using the solutions created as a result. Based on the results, the artifact would need to be iterated to be further developed. Most beneficial to the artifact would be the continuous development of it, by the case company, to track if the artifact would affect the CRM-solutions adoption rates and customer satisfaction positively. When done for an extended period, broader empirical validation of the artifact could be achieved. It would also introduce the possibility validate it across multiple CRM-consultant companies to test its generalizability, but furthermore in different project scenarios in the case company.

As indicated by the interviewees also, future research avenues could also include validating the artifact with external UX-professionals to enhance its content and effectiveness. The artifact could act as a starting point for deeper collaboration with external UX-design professionals, which was also one of the main desires thematic analysis results suggested. To form a better joint-operation in projects utilizing external UX-design resources and consultants, the artifact could also act as tool for onboarding external UX-design resources into projects led by the case company consultants.

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Appendices

Appendix 1. Semi-structured interview form

1. Theme: Organization's UX Maturity

- Describe how user experience design is currently considered/organized in the company's operations.
- What grade would you give for the current level of UX maturity on a scale of 1-5?
- What factors, in your opinion, most influence the grade you gave? Can you think of any specific strengths or weaknesses that you would like to highlight?

2. Theme: UX Design as Part of a Consultant's Work

- What kind of challenges do you identify in integrating UX design into CRM client projects?
- What kind of successes or positive experiences has the utilization of UX design brought to client projects?
- How would you describe the ideal situation where UX design is fully integrated into a consultant's work? What concrete changes, compared to the current state, would this require?

3. Theme: Content of the Artifact

- What aspects would you like a baseline UX design (or a minimum UX design deliverable) to include to be as useful as possible for your specific needs? Why are these aspects important from your perspective?
- How would the aspects you mentioned help you create more user-friendly solutions in your projects?

- If you could choose one thing that the artifact would solve, what would it be? How would this single thing impact your work, and the value customers receive?