



**SAAS PRODUCT FIRST IMPRESSIONS AND ITS EFFECT ON CUSTOMER
ONBOARDING WITH FREEMIUM BUSINESS MODEL**

Lappeenranta–Lahti University of Technology LUT

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ABSTRACT

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SaaS product first impressions and its effect on customer onboarding with freemium business model

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This thesis studied the effects of user experience design focused on users' first impressions and its effect on customer conversion rate in SaaS product using a freemium business model. New user experience, customer onboarding, and attributes effecting customer conversion were studied via literature review to identify the key factors behind the topic. As literature of the topic was found scarce, a practical study was conducted to assess the effects of first impressions on desired software type. User experience design and a SaaS product artefact was studied to achieve this, and the study found out that changing the first impressions within the new user experience of a freemium SaaS product isn't enough to generate more customer conversion in the product.

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Tässä diplomityössä tarkasteltiin käyttäjäkokemuksen suunnittelua keskittyen ensivaikutelmiin ja tämän vaikutuksia freemium-liiketoimintamallilla operoivassa SaaS-tuotteessa tapahtuvaan käyttäjien sisäänajoon ja asiakaskonversioon. Työssä toteutettiin katsaus kirjallisuuteen tarkastellen uutta käyttäjäkokemusta, asiakkaan sisäänajoa, ja asiakaskonversioon vaikuttavia ominaisuuksia aiheen taustoittamiseksi. Rajallisesti saatavilla olevan tutkimusmateriaalin takia työssä suoritettiin käytännön tutkimus, jossa arvioitiin ensivaikutelman vaikutusta kyseiseen ohjelmistotyyppiin. Tätä varten tutkittiin käyttäjäkokemuksen suunnittelua ja SaaS-tuotteen artefaktia, ja tutkimuksessa havaittiin, että ensivaikutelman muuttaminen freemium SaaS-tuotteen uudessa käyttäjäkokemuksessa ei itsessään riitä lisäämään asiakkaiden konversiota tuotteeseen.

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SYMBOLS AND ABBREVIATIONS

Abbreviations

ASP	Application Service Provisioning
CMR	Customer Relationship Management
CX	Customer Experience
DSR	Design Science Research
NUX	New User Experience
OCE	Online Controlled Experience
UI	User Interface
UX	User Experience
VPN	Virtual Private Network
UX	User Experience

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1 Introduction

User's first experience of a website has a major impact on the impression they get from the website and can affect any later decisions regarding use of the site (Lindgaard et al., 2006; Tuch et al., 2012). As with human interactions, first-time interactions with websites can cause long-lasting impression bias of the website quality the same way it can cause us to judge person by briefly meeting them first time (Hirshleifer et al., 2020; Tuch et al., 2012).

Many software products have been making their way into cloud-based computing and subscription-based business models for a while now (Costello and Rimol, 2021). In contrast to the traditional on-premise distribution model of the software products that require client to install the product to their own environment, cloud offers the possibility to access and use cloud-based products on-demand over Internet from anywhere using servers that the product vendor is responsible for maintaining operable (Benlian and Hess, 2011). Naturally, hosting the service to all its clients comes with cost of operations to the vendor and requires continuous revenue for the operations to keep going. This, in addition to the ability to easily create economies of scale for their products, is one of the reasons SaaS (Software-as-a-Service) as a software distribution model has gained significant foothold on the field of software business (Benlian and Hess, 2011).

SaaS products have a plethora of business models that can be used to generate revenue to cover the operating costs and make profit for the company providing the service (Li and Kumar, 2022). As single-payment of a purchase is hardly a feasible form of monetization of the product with SaaS, many vendors have opted to various degrees of subscription-based business models, where customers pay a fee for the access to the product for a set period and after which the subscription fee must be paid again or the right to access the product is lost (Li and Kumar, 2022). One popular subscription model is so-called "freemium" business model, where basic functionality of the product is offered for free of charge, but paying for subscription grants users additional features, upgrades, or other incentives to encourage paying the subscription fee (Gu et al., 2018). While bringing more users to the product, free users of a freemium product are usually not profitable for the vendor, so getting these free users to convert to subscription plan is of great interest to the service providers (Kumar, 2014).

User's first contact with many SaaS products is at the registration phase, as majority of cloud-based services require an account to access their services regardless of their business model. According to study done in Birmingham, UK (Porter et al., 2012), the registration process of any digital service can have a significant impact on the user's lived experience of the service. The study states that cumbersome registration processes reduce service users. This, in turn, causes the reduction in number of users that would potentially be willing to pay for a subscription plan for the service in question. Therefore, studying the registration process in regards of first impressions is beneficial for a freemium-operated SaaS product.

1.1 Objectives and goals of the study

In this paper I investigate the first impressions of websites and its effect on cloud-based SaaS services, focusing on the causes and consequences of good and bad first impressions these websites can generate. Furthermore, I aim to study how these first impressions can affect SaaS product customers in their decision making to generate customer conversion in freemium business model setting.

As part of the study, I gather data from a live service SaaS product that operates with freemium business model. In this product, the base service itself is free to use but offers only limited capabilities. To gain access to the full product and all its functionalities, customers need to pay for subscription plan that is priced based on the number of enrolled devices.

This research aims to gather information on the user experience of the customers of a SaaS product and the first impressions of how they view the product based on the initial registration flow. The research aims to identify the key elements of what makes a good first impressions and gather information how this affects the customer view of the product. The study aims to draw parallels to company's existing user experience design and development processes and provide information how it can be used to improve the process. In addition, the objective is to generate information if changed user experience makes customers to be more willing to start a subscription of the offered product.

This master's thesis research is done in a form of design science research (DSR), due to the nature of the research objectives. Design science research has two objectives; to generate new knowledge, and to solve complex problems, create change, or develop improvements

to existing solutions with knowledge gained from the study (Baskerville et al., 2015). This makes design science research an optimal method to achieve this study's objectives, as the target is to both gather more information on first impressions' effect on SaaS products and improve an existing UI (user interface) to better said first impressions.

Research will focus on the study of the first impressions of a SaaS product and its relevance in the environment it is used in. Measuring the SaaS-product's customer behaviour within the changed user experience and its effects on onboarding rates will be done to gather new information on the importance of the first impressions.

The research aims to answer the following research questions:

- RQ1: What are the key factors that affect customer conversion rate to paying customer in SaaS freemium business model?
- RQ2: How can we identify and measure how changes to SaaS product's first impressions affect customer onboarding and what are the metrics that we should pay attention to?
- RQ3: How does first impressions of SaaS product affect customer onboarding?

1.2 Scope

The thesis scope is limited to literature study of the topics of SaaS product, it's business models and user experience design, and themes around customer conversion. Thesis also includes data gathering from live SaaS product and study of the data. Developing the SaaS product to generate more data or further develop it based on the gathered data and findings the study makes is not in the scope of this study.

1.3 Structure of the study

This study consists of three parts, that are addressed in separate chapters. Each of these three chapters of the study aims to investigate a certain aspect of the overall topic of the paper and understand it's effect to the main topic.

First, the study discusses the terminology and key elements of the research paper and their role in the SaaS software space. This part also consists of a literature review of existing research on first impressions related to software services. Second part of the study focuses on customer experience and its improvement potential, discussing and assessing how to better first impressions of the product via improving customer experience and UX (user experience) design practises.

Third part of the study focuses on gathering and analysing data gathered from a live SaaS product, with aim to assess how different first impressions generate customer conversions and what data is important to develop the first impressions in a way that more conversions are achieved. The identity of the SaaS product and the company providing the service won't be mentioned by name.

After these main topics are discussed, the study gathers the information and forms a conclusion. The research finishes with a discussion and a conclusion of the thesis.

1.4 Utilizing DSR

Design science research focuses on people, and the outcome will be used to achieve interactions either between people, or between products and people (Enninga et al., 2013). Utilizing DSR generally follows a set of six activities: (1) identifying the problem and defining the research problem; (2) defining objectives to achieve solution; (3) designing and developing artefacts; (4) demonstration using the artefact to solve the beforementioned problem, (5) solution evaluation; and (6) communication of the problem, artefact, and its effects (Peffer et al., 2007).

In this thesis, this introduction chapter introduces the research problem and defines the objectives for the solution. Third activity of DSR is done via extensive literature review of the research topic in chapter 2 to establish it in existing knowledge and studying the design process of the desired artefact and development of the artefact in chapter 3. This is supported with an addition of interview to gain additional insights from practical side of the process. Demonstration is achieved by utilizing A/B testing with the developed artefact to study its effects in practice, and finally the discussion and conclusion chapters 5 and 6 are designed to communicate the findings to wider audience.

2 Literature review

This chapter discusses the theories and previous studies of the topics of this thesis. The purpose of this chapter is to establish different terminology this study uses and describe existing research on the topics of interest in this thesis. The goal is to establish solid base of existing knowledge on the subject and lay the groundwork for answering research questions later in the study.

2.1 First Impressions

Facial features and their perception have been studied and related to personality traits as early as 1700s (Willis and Todorov, 2006). By today's standards making causality between the person's personality and their facial features seems like nonsense, but empirical evidence shows that facial appearance is, even today, affecting social outcomes; attractive people get better social outcomes than unattractive people in almost every significant domain of life (Willis and Todorov, 2006).

How we humans come up with so-called "first impressions" of subjects or objects around us is researched in many different fields (Tuch et al., 2012). Reactions to beforementioned facial features fall under the umbrella of emotions research. Other researched topics of first impressions can be found in car design, architecture, websites, and software interfaces (Tuch et al., 2012). First impressions, in the scope of this study, refers to user's initial judgement of the product based on short very short-timed perception of it. Customers determine their first impression based on factors like visual complexity and context, and the judgements they form affect their trust and attractiveness towards the product (Tuch et al., 2012).

Based on psychological research, first received information tends to overshadow any information that is received later (Hirshleifer et al., 2020). This causes the first impressions to have long-lasting effect on person's future behaviour regarding the subject in question. This phenomenon is called as first impression bias, and it affects the person's decision making, assessing outcomes of related processes, and places undue weight on early experiences. If the early experience is exceptionally positive, the assessment of the future

will most likely be positive as well. Similarly, negative first impression tends to result in negative assessment (Hirshleifer et al., 2020).

With physical products, presentation of the product packaging is deemed to have an impact on product's brand perception and the quality of the article itself. Shabby cardboard box doesn't imply that anything of quality is packed inside, whether the product within would be from reputable vendor or not. In a recent study (Moreau, 2020) product packaging was studied with an experiment packaging a salad bowl in delivery box with varying quality. The study shows that packages with refined appearance introduces higher willingness-to-pay and more positive emotions in the recipient. While these findings are not strictly convertible to fully digital products, the study shows that first impression, when observing a product for the first time, significantly affects customers emotions and their attitude towards the product.

With digital products and services first impressions matter as well. Tuch et al. (2012) claims that first impression of the website is a crucial moment in the process of capturing the user's interest. Users will decide very quickly if they are going to stay at the website or continue searching based on so-called 'gut feeling' they receive from the very first moments they spend on the site. Based on a research done in 2006 (Lindgaard et al., 2006), first impression of a website is reliably formed within 50 milliseconds after user sees the website for the first time. The research conducted three individual studies on user perception of different websites and based on the results, the participants were able to reliably decide which site homepages they liked and which they didn't like in the timeframe of 50 milliseconds. The reliability of users was backed by comparing the 50ms perception result to users' judgement of the site after 500 milliseconds, and the initial 50ms perception of the site was highly correlating with the 500ms results.

First impressions are affected by multitude of factors in digital space. Aesthetics have been already studied on several occasions, especially on their effect on websites (Douneva et al., 2016; Jiang et al., 2016; Lindgaard et al., 2011) and it has been even speculated that users seem to prefer aesthetically pleasing website with low usability over better functioning one with less appealing visual appearance, and poorly designed websites might lead to rejection even when they provide high quality content (Douneva et al., 2016). These findings are, however, done from general websites perspective and cover sites like online shops, hotel websites, and corporation webpages, and little else (Tella, 2019). Aesthetics aside, first

impressions are affected by attributes like perceived quality, perceived usability, perceived interactivity, prototypicality, and user satisfaction (Tella, 2019).

Website evaluation can be divided into three core constructs: aesthetics, content, and usability. When asked, out of these three constructs, users give highest importance in website design to content, followed by usability, and finally aesthetics (Thielsch et al., 2014). Compared to beforementioned studies showing high importance with aesthetics, it seems users are not aware of how they judge their first impressions of a website, at least initially (Douneva et al., 2016). Content of the website plays higher role after first sight of the site, when decisions like site recommendations or revisits are considered, and usability affects both first impressions and overall impressions significantly, but not as much as aesthetics (Thielsch et al., 2014).

In their research article on website design effects, Douneva et al. (2016) states that pre-use first impression phase describes the phase when user enters to the website first time and has not yet done anything on the site. The impression at this stage contains two categories: immediate first impressions, that are determined by human visual perception and its bottom-up processes and deliberate first impressions that are the result of top-down processes and their reflection on cognitive processes and reasoning. In the beginning, aesthetics has the most impact on both first impression categories, but when user spends time on the website and familiarizes themselves with it, relevancy of usability and content increase. This is called post-use overall impression phase and can no longer be considered as part of the first impression (Douneva et al., 2016).

2.2 Onboarding and Growth Hacking

User onboarding is commonly used in reference to software products and is often described as a value-focused goal that seeks to help new users to understand the value a product provides and convince them that the product is something the customer needs (K. Soong et al., 2018). The desired result of this is to get the customer to start using the offered product. New user onboarding is crucial for any web product, as it is likely the customer's first contact with the product and familiarizes the customer to the product and its value (K. Soong et al., 2018).

Onboarding is often discussed alongside the growth hacking mindset and seen as internal part of it. Growth hacking seems to lack universal definition, but the commonly agreed function brings marketing and product development together in hopes of customer acquisition, activation, retention and upsell (Conway and Hemphill, 2019). Growth hacking can be described as combination of creative marketing, data-analysis, and programming, but with focus being completely on growth (Bohnsack and Liesner, 2019). Growth hacking relies on lean philosophy of software development and rapid experimentation it provides.

2.3 Customer Conversion

The term customer conversion, also known as sales conversion, is used to describe the act of a customer to make a purchase decision of an offered product or service (Dave and Sondhi, 2011). These conversions of sales can be measured with conversion ratio value, also known as conversion rate. It is a percentage of customers that interacted with the vendor that also made a purchase decision. Interaction with vendor can be, for example, entering a physical store, opening an online store's website or trying a SAAS product's free subscription service (Dave and Sondhi, 2011).

Conversion rate is calculated by:

$$\text{Conversion rate} = \frac{\text{Number of sales transaction}}{\text{Number of customers that interacted with the vendor}} \times 100 \quad (1)$$

Customer conversion rate is a key performance indicator in e-commerce, as stated by Sumita and Zuo (2010). It indicates when customer makes a desirable e-commerce related action at a website, like making a purchase decision of a product or becoming a member of a subscription service. Typically customers tend to gather information about the service or product they are considering to buy from Internet, and customer conversion rates can be analysed by measuring how long the information gathering takes before purchase decision is made (Sumita and Zuo, 2010).

2.4 Friction and New User Experience

Friction, in user experience design, is used to refer anything in software that prevents user to accomplish the action they are trying to complete (Ellis and Brown, 2017). Friction can be any form of hinderance in the task flow, such as slow load times or pop-up ads showing up in the middle of the process. Often, however, the most critical friction point, at least from the customer conversion point of view, is in the new user experience (Ellis and Brown, 2017).

According to Ellis and Brown (2017), new user experience (NUX) should be treated as a separate project apart from the main product, as a one-time encounter with special experience crafted within it. This way user can be enticed to engage and appreciate the product and its offerings. Treating NUX as a separate product has its boons also in a technical level: by having NUX separated from the rest of the product it can be tested and adjusted freely without fear that any changes would be affecting the experience of current users.

Ellis and Brown (2017) also establish three accomplishments for a landing page: the page must “communicate relevance, show the value of the product, and provide a clear call to action”. Page should, in other words, show user what the user can do and achieve with the product to help them understand if it is suitable for their needs, convince them that using the product helps them achieve those need in a way that is advantageous for the user, and finally have a clear way to start using the product with compelling next steps to take.

In their book Ellis and Bronw (2017) states, however, that all friction is not necessarily bad with NUX. By hindering new users’ access to all the product’s functions and capabilities to not overwhelm them with all the available actions product offers, we can limit the new information user has to process to digestible chunks. This act of purposefully limiting user’s options to ease the NUX is called positive friction and it should help the user to understand the value of the product better.

2.5 Attributes of Customer Conversion

Identifying independent attributes affecting customer conversion is necessary to study and analyse different factors affecting customer conversion. As previous research about

attributes affecting customer conversion and first impressions in SaaS products in general seems to be lacking, I decided to draw information from other software related studies concerning the topic of customer conversion. Atulkar & Singh (2021) divides attributes affecting to customer conversion to psychological and technological attributes in their article regarding customer conversion with food ordering apps.

2.5.1 Perceived ease of use

Based on article by Davis (1989), perceived ease of use refers to the product or system usage to be of “ease”, meaning free from difficulty or from requiring great effort to use. Effort can be thought to be a finite resource and customer is willing to allocate only limited amount of effort to any given task. This will cause the customer to likely choose the product that seems most easy to use among product candidates when considering a purchase if all else is equal (Davis, 1989).

2.5.2 Perceived usefulness

Perceived usefulness can be defined as a degree to which customer believes the product would enhance their work performance (Davis, 1989). Highly useful product would significantly impact on customer’s behaviour on product-related tasks, for example increasing efficiency of completing a work-related task or providing noticeably more convenient access to desired resources.

2.5.3 Perceived incentives

Perceived incentives refer to the benefits of the product usage that make the adaptation of it attractive to the customer’s eyes. Usually incentives are monetary in nature, and can appear in a form of cashback rewards, discount coupons, promotional offers, loyalty points and offers of similar nature (Atulkar and Singh, 2021). While the form of incentives is dependant of the product they are promoting, the goal with incentives is to push potential customers to make the purchase decision regardless of how the incentives are implemented.

2.5.4 Perceived price

Price is a key element in business and product strategy in achieving financial and competitive success. SaaS transition has introduced new opportunities for software product pricing but have also introduced a challenge to both design and implement a good price point for their products, as existing studies provide conflicting recommendations on the matter. With SaaS-products, they state that it is common to have multiple different price points for the same product and different price points usually offer variety of fixed number of features and usage conditions, like transactions or number of items (Saltan and Smolander, 2021).

Customers evaluate the pricing of the product, and the result of that evaluation contributes vastly to the purchasing decision of the product. With SaaS-products, this evaluation will consider the product's offerings in the realms of functionality, scalability, and availability, the customer's needs, as well as market competition. The perceived price in relation to this consideration is one of the main attributes affecting purchases.

2.5.5 Visual design

Sensory experiences influence people's thoughts and behaviours (Baek et al., 2018). These can be experienced via any possible sense, like visual or touch, and their effect on people is involuntary. Retail stores have been utilizing in-store experiences in their physical stores to bolster their consumer-brand connections ever since physical stores have been challenged with alternative transaction mediums, i.e., online shops. In physical retail setting it is necessary to understand the value of sensory marketing and how it affects customer's behaviour and perception of the store (Baek et al., 2018).

Unlike brick-and-mortar stores, online stores and services must rely solely on visual experience on their sensory marketing, as it is nigh-impossible to deliver stimuli to other senses via screen-only medium on which they operate on (Kahn, 2017). For this reason, the visual design of the online stores and websites carry a significant role in attracting customers.

2.5.6 Perceived information

Perceived information refers to the quality and quantity of available information in the provided services. Atulkar and Singh (2021) determine perceived information as “truthfulness, completeness, appearance and comprehensive information about products or services shared by the online retail players”. In SaaS environment, this can translate to quality, appearance, and availability of relevant information in the software service.

2.5.7 Customer relationship management

Customer relationship management (CRM) is essentially communication between vendor and customer (Peel, 2002). It is a layered concept, that includes all aspects of communication mediums between the vendor and customer, including customer support, marketing avenues, product information delivery and promotions. CRM is about understanding and managing exchange between supplier and customer. The exchange contains communication and monetary consideration between the parties. CRM plays an important part in strategies focusing churn-reduction and customer-retention (Peel, 2002).

2.6 Software-as-a-Service

Commercial software has been moving from local machines to cloud computing for a long while now, and increasingly more end-user software spendings are cloud-based (Costello and Rimol, 2021). On-demand software delivery service models have been developed already from 1990s and have been implemented in several different ways ever since (Benlian and Hess, 2011). On-demand software delivery model, labelled software-as-a-service, or SaaS for short, has been increasingly more popular delivery service model that relies on cloud-based computing (Benlian and Hess, 2011).

SaaS model has evolved from application service provisioning (ASP) service model. In late 1990s ASP emerged as on-demand software delivery method for on-premise commercial software deployment, that relied remotely managing and delivering application capabilities via the Internet. Technical limitations on Internet infrastructure at the time and economic shortcomings to software vendors hindered the ASP model’s progress. SaaS surfaced as an

advanced way to deliver software services without the shortcomings ASP introduced (Benlian and Hess, 2011).

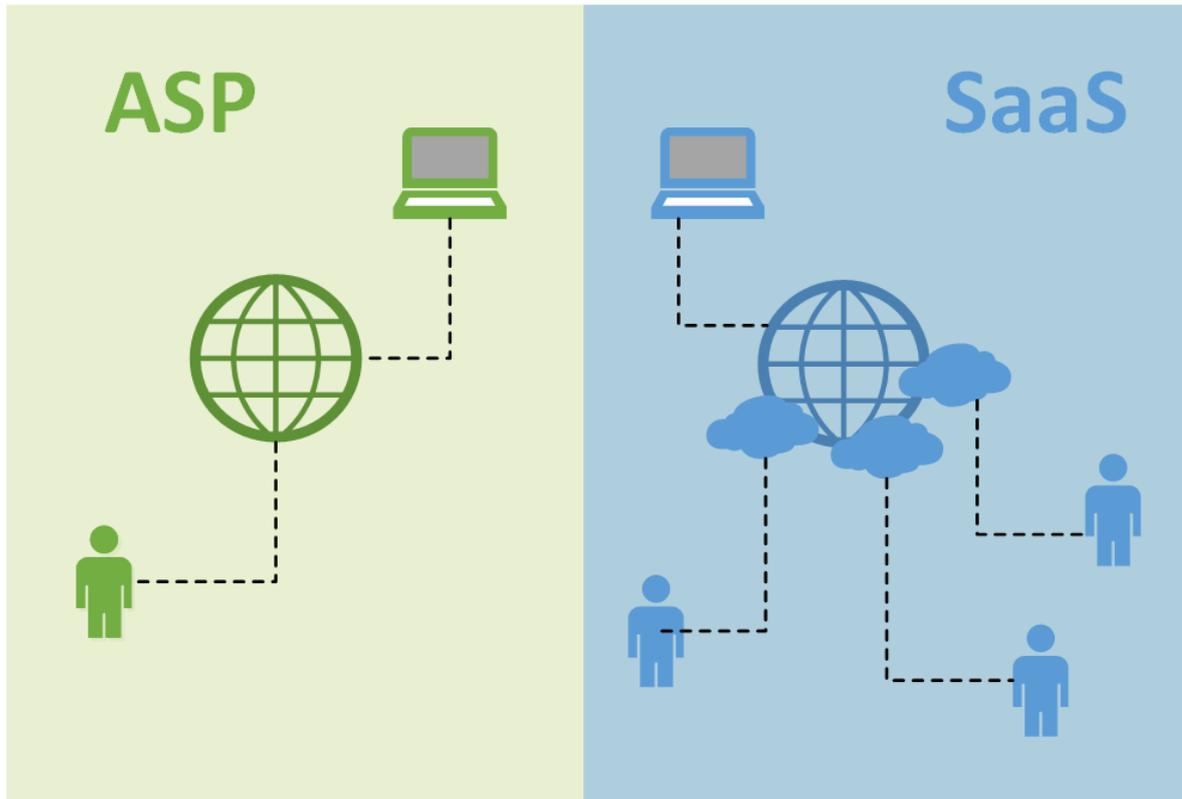


Figure 1. Difference between ASP and SaaS models. ASP is designed to deliver to single client at the time, whereas SaaS delivers the same product to multiple clients via cloud services.

In the SaaS model, the application has only a single instance of itself, that is hosted on the vendor's server. This means that each customer won't have their own instance of the software, nor can it be customized for them should they wish to do so. This also means that the application infrastructure is shared across all customers. These facts in turn cause the limit in which customer can customize their software service's functionality or data structure. Vendors of SaaS-products benefit from the model by having more control over future development of the product; clients of the service are forced to upgrade with the product updates, since the service is seldom backwards compatible and thus gets rid of client-specific investments that are necessity in many other delivery models. By nature of SaaS

architecture and its single instance for all clients -approach, vendors have the opportunity to create significant economies of scale due the lack of need for constantly increasing their data centre's capacity. This also might offer easier timer for the vendors regarding data security, system performance, service availability, and privacy, in addition of being probably more cost effective than, for instance, an ASP approach (Benlian and Hess, 2011).

2.7 Freemium

“The term ‘freemium’ is a combination of ‘free’ and ‘premium’ and refers to the strategy in which customers can get a basic version of a product or service for free and switch to a premium version with additional features by paying a price.” (Gu et al., 2018)

Freemium as a business model has gained popularity over the last decade, increasingly so (Gu et al., 2018). Freemium can be found on practically in every imaginable software business area, from cloud-hosted email and file services to video games and VPN (Virtual Private Network) services. Examples for these are many: Google's Gmail and Drive with possibility to expand the storage capacity of the service, premium time with added benefits in many online games that offer variety of bonuses and boost to the game progression, and VPN services that offer limited data transfers quotas for free and require subscription for unlimited usage, to name a few examples.

Freemium is generally implemented in software business via different tiers of subscription (Kumar, 2014). In the most basic configuration the service offers free, limited version of the product that aims to invite new users to the userbase i.e., generate traffic. To gain full access to the product, vendor offers a subscription plan that unlocks the access to full product. Variations to this can be, for example, trial period instead, or in addition to, of the free version, and different subscription tiers for the service. Trial versions can offer more functionality or level of access to the product than the free version but are generally time limited. The goal of this is to attract non-paying users to the subscribed service with paid subscription plans. Different tiers of paid subscription plans aim to cater the product to wider target audiences with different levels of requirements from the service and with different levels of willingness to pay for the service. Since significant portion of the software services embracing freemium as their business model are operating with SaaS as their service model,

this is perhaps the most obvious way to provide variation for their offered product's sales (Kumar, 2014).

3 Customer experience and UX design

In this chapter I'll discuss the definitions and practices of user experience and its design processes. I'll define a standard process based on literature and reflect the importance of each step of the process to customer conversion aspect of the study. As this thesis focuses on a specific real-world project regarding first impression redesign in a form of registration process overhaul, I've also interviewed the lead user UX designer responsible of the reworked registration process's user experience in order to understand how the project was executed from UX design perspective and what differences there was between theoretical design process and practical, real-world design process in a live software product. Interview was done in a format of recorded video conference, and the questions are attached as an appendix to this paper (Appendix 1). I'll refer the interviewee as UX designer #1 for the remaining of the thesis.

3.1 User experience

Designing an enjoyable user experience is an integral part of making a software product successful. As stated in previous chapter, UX is a key factor in making successful web design, but what exactly does UX mean? There is a plethora of both definitions and research done for UX in literature (Hamm, 2014; Kraft, 2012; Kuniavsky, 2010) and even International Organization of Standards (ISO) has its own definition for user experience in ISO 9241-11:2018 (ISO, 2018) that goes as follows: "user's perceptions and responses that result from the use and/or anticipated use of a system, product or service". Despite all this, the definitions are slightly varying from each other leaving no definite description for UX. This indicates that universally agreed precise definition for user experience is missing (Jääskeläinen, 2011; Kuniavsky, 2010). In the interest of this research, I'll use the ISO's description as a basis for the definition of user experience.

3.2 Customer experience

In modern global market, competing has become increasingly difficult and seemingly only the creation of long-lasting competitive advantages offers a way to survive in this environment (Gentile et al., 2007). A way to provide this advantage is to focus on the customer. Companies that have chosen to pursue this avenue and grown attention on the customer have found themselves focusing on CRM philosophies. As a result, the importance of continuous customer relations has birthed the concept of CX (customer experience) (Gentile et al., 2007).

Customer experience, like user experience, has no single definition. However, according to Suwelack et al. (2022), the definition of CX generally states that it is “the customer’s overall perception of the brand, including cognitive, emotional, physical, sensorial, spiritual, and social responses to interactions throughout the customer journey which brings about significant impact on business performance”. To add to this definition, Gentil et al. states that CX is an evolution of the customer relations concept of company–customer relations (Gentile et al., 2007).

Customer experiences differ from one another, but they all constitute three phases: anticipation, participation, and reflection. In the anticipation phase the customer develops a set of expectations for the product regarding its later use. In the participation phase the customer uses the product, and the experience is heavily influenced by the expectations the anticipation phase created. Since the participation can lead to disappointments, any unrealistic expectation to the product should be set to the product by the company to avoid disappointing customer experience. Last phase, reflection, is considered to be mainly cognitive. In this phase the users evaluate holistically their entire customer experience of the product and bases this opinion on factors like personal opinions, past encounters, interactions, and third-party opinions like reviews (Suwelack et al., 2022).

Each step of the beforementioned phases of CX is a collection of cumulated so-called micro-experiences, or interactional experiences. These pieces of perceived experiences put together creates a macro-experience, or a phase of CX (Duerden et al., 2015; Suwelack et al., 2022). As these macro-experiences greatly affect the later phases customer goes through, it is important for the companies to design strong micro-experiences in order to create positive

macro-experiences. These experiences are a significant factor in later decisions regarding purchases, revenue growth, customer satisfaction and loyalty (Suwelack et al., 2022).

3.3 Designing a UX

According to Hamm (2014), UX design revolves around philosophy following three core ideas; UX design is an act in which you are finding solutions to both visual and logical questions, the design process designates the order of the questions needing answering, and UX design techniques provide the means to answer these questions. In another words, “The UX process isn't just making a UI” (UX designer #1).

In this section, I will discuss the UX design process in terms of how it is portrayed in literature. I'm majorly going to follow the process as it's presented by Matthew J. Hamm in his book *Wireframing Essentials: An introduction to user experience design* (2014), as it portrays condense, yet informative approach to the required tasks and procedures that are required to successfully design a working UX. I'll also going to discuss how the process reflects to the target of this study: providing better first impression and generating customer conversion. As part of this, I'll include excerpts of the interview of lead UX designer of beforementioned project (UX designer #1) to further understand how the designing process was executed in the studied overhaul.

UX design process is generally divided into four stages, that are mostly performed in a set order, but still overlap somewhat during the transition period from previous stage to the next one. These stages are research, information architecture, visual design, and delivery. Although the design process can vary from this general definition based on project requirements and team working with it, this is generally how UX design processes should be executed (Hamm, 2014).

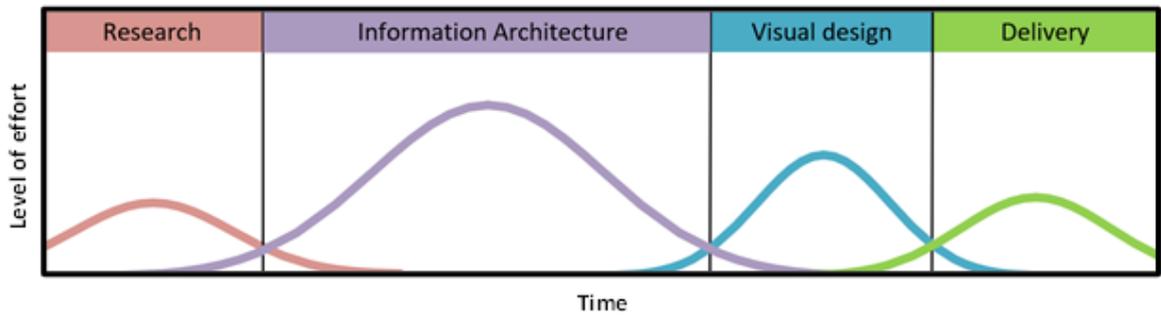


Figure 2. User experience design process in regards of time and required effort, fashioned after design by Hamm (2014) as stated in *Wireframing Essentials: An introduction to user experience design*.

3.3.1 Research

Before the designing of the UX itself should start, there is several key pieces of information that needs to be figured out in order to have a solid starting point for designing. The purpose of the research is to gather this information and lay the foundations for the designing itself. Research should answer questions like ‘Who will the users be?’, ‘What the user wishes to accomplish?’, ‘What are the goals of the software provider?’, ‘What technology is being used?’, and ‘What makes this better than competition?’. Also, if designing process is targeted to re-designing of existing product or service, research is likely to be beneficial on topics such as existing complexities of current solution and addition of new features that may be advantageous to include in the new design. Research can be executed in various ways and research techniques as long as the required information can be acquired. Common practises include user surveys, stakeholder interviews, and competitive analysis, among others (Hamm, 2014).

As the company was overhauling the new user experience in a form of product registration process, the project relied heavily on the requirements of the company had set to it. According to UX designer #1, the main requirements for the overhaul were set by business intelligence side and mainly targeted to reduce unfinished registrations from potential new users. Secondly, they stated that the registration was not representing the rest of the product visually, so it potentially gave new user a bad first impression on the overall product (Appendix 1).

In terms of registration and NUX rework, ease of onboarding plays a big role in UX design planning. While the service provider wants to bring as much new customers to the product as they can, the users are wondering the benefits of signing up for the product. Currently supported technologies from the technical side limit the possibilities of the rework meanwhile current technical complexities are likely wanted to be get rid of.

3.3.2 Information architecture

This step aims to map out a comprehensive diagram of actions user is expected to perform within the designed piece of software. Output of this step should include the following: high-level map of the application, map of each screen or page with all required tasks, defined content to support each mapped task, vetting and testing the designs, refining the designs, and documenting the patterns of the user experience. Tools to achieve these targets are flowchart development, wireframing, and usability testing (Hamm, 2014).

According to the interview (Appendix 1) the registration project was mainly set to use the same set of collected information during the registration than the existing registration used. Main factors affecting the initial wireframed design were the pace the data was requested from the customer in order to reduce friction of the NUX, improve the perceived ease of use of the product, and reduce some technical limitations present in the old registration process.

3.3.3 Visual design in UX

At the end of information architecture step, wireframe designs of the target applications should be created and agreed upon. Visual design step aims to transform those wireframe designs to proper mock-ups, targeting to create perfect representation of the final product pixel-by-pixel. This means that all graphical elements should be present within the mock-ups at the end of this stage (Hamm, 2014).

Some companies tend to divide the UX design process in half, charging information architects to create the design up to the wireframes, and handing the work over to graphical designers to finish the UX (Hamm, 2014). This approach may be desired from company's point of view due many reasons, prominent one being a set of requirements set for the final product in terms of technical factors. Agreeing how much freedom the graphical designer

has over the wireframes is then an important matter to agree upon, so some alternate visual solutions may be explored if the designer so chooses.

As stated in chapter 2, the visual aspect of website design greatly influences both the first impression user forms of the service and the customer conversion later on to attract customers to buy the product. As mentioned, visual uplift was one of the main reasons for the NUX rework to the product as well.

In the interview (Appendix 1), the UX designer #1 stated that the company gave them free reign regarding the visual design of the registration. As they were also in charge of the initial designs of the structure of the registration flow, there were not any conflicts of interests getting in the way of visual design. UX designer #1 although pointed out that this was their first project, they were in charge of UX design in this degree, having prior professional career in more research- and data-driven projects, so this caused its own challenges to create the designs (Appendix 1).

3.3.4 Delivery

According to Hamm (2014) this final step is the most challenging, despite the fact that the time consumption of the stage is far less than some of the earlier steps. Designer has far greater control over the items on the design in Photoshop than the developer that has to implement it to a web browser. Even though technologies like CSS3 and HTML5 offer great control over the website layout, at least compared to older technologies, they still fall short of the pixel-perfect re-creation of the designed UX.

The implementation of functioning artefact that perfectly resembles the designs more often than not falls short of the target, even when there has been plenty of people pitching in with opinions and agreeing with design decisions regarding content and appearance, among other things. It doesn't help that usually there tends to develop a communication wall between design and development, due to project involvement at different stages and seeing the project in completely different light to one another. To minimize this discord, development team can be involved in the design process earlier on. This greatly benefits the whole process as the developers can pitch in with technical knowledge regarding the designs, so they can contribute with, for example, decisions of technologies used with the project and how the

choice affects the outcome, like limitations of the technology and options using it provides. Down the line, having developers taking part in design reviews is recommended, as this helps the developers understand certain design decisions and point out critical parts of user interface that shouldn't be altered (Hamm, 2014).

In the interview, UX designer #1 stated that the development team was included in the registration project very early in terms of the designing process. Practically development started as fast as the mock-ups were ready, and this made the design process feel somewhat rushed. They also implied that this caused some back and forth with design and development in order to create a satisfactory result including some finetuning that was required to be done to achieve the look and feel that was planned. Some technical limitations yet prevented implementing the designs fully to the product, so the artefact wasn't as close to the design as they'd like to (Appendix 1).

4 Gathering data from a real-world application

This chapter focuses on gathering and analysing real-world data from existing SaaS product in order to find out if improved first impression generates more customer conversion. The product in question is an established player in their field of operations and operates with freemium business model.

4.1 Business problem

For the product to have more customer conversion after successful registration to the product, the company offering the service decided to overhaul the registration process. As stated in the chapter 2.1, first impressions matter with users and bettering the initial experience could potentially yield more users to pay for the product i.e., higher customer conversion.

4.2 Designing an artefact

In order to find out if the registration experience truly affects the conversion rate, the company decided to overhaul their registration process and gather user data from the product's users, targeting to generate usable data on the effects of changes in registration flow. The new design was agreed to follow the best UX practices and provide better customer experience than the old registration flow, improving the user's impression of the product.

Following design science research process (Brocke et al., 2020), the product environment and existing knowledge of the product and onboarding was studied and from that groundwork the initial requirements was set for the new NUX. Several design and development iterations were conducted with evaluation process monitoring the progress until satisfactory artefact was created.

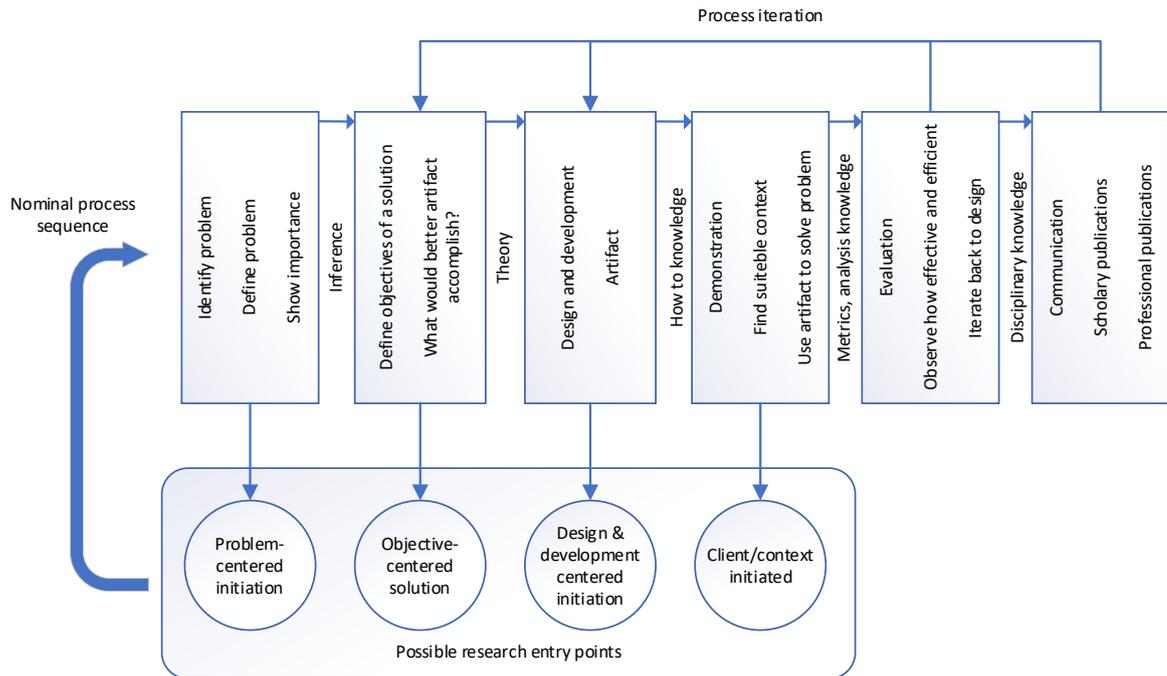


Figure 3. Design science research process model according to Brocke et al. (2020).

The final design was mocked up and developed according to the agreed specifications. In the new design, major importance was set to visual design and perceived ease of use of the product, as these are the most relevant aspects of the NUX before any features of the actual product can affect the end user experience. Non-visible technical improvements were also conducted with the new design.

4.3 Data gathering

Finished artefact was decided to put through a period of A/B testing, a form of online controlled experience (OCE) (Fabijan et al., 2018). Running A/B testing as a controlled experiment can generate scientific data and the results can be trustworthy (Kohavi and Longbotham, 2016; Fabijan et al., 2018). The testing period was 42 days in total, and it took place in the summer of 2022. It produced a set of data that can be analysed for closer observation of customer behaviour.

In the A/B testing, the company monitored customer behaviour within the registration. The testing was set up to have the old registration as a control, and the overhauled registration

with new UX as a treatment. New visitors to the product were directed to these registration paths based on randomization in where website randomly showed one of these two options to the user on even odds.

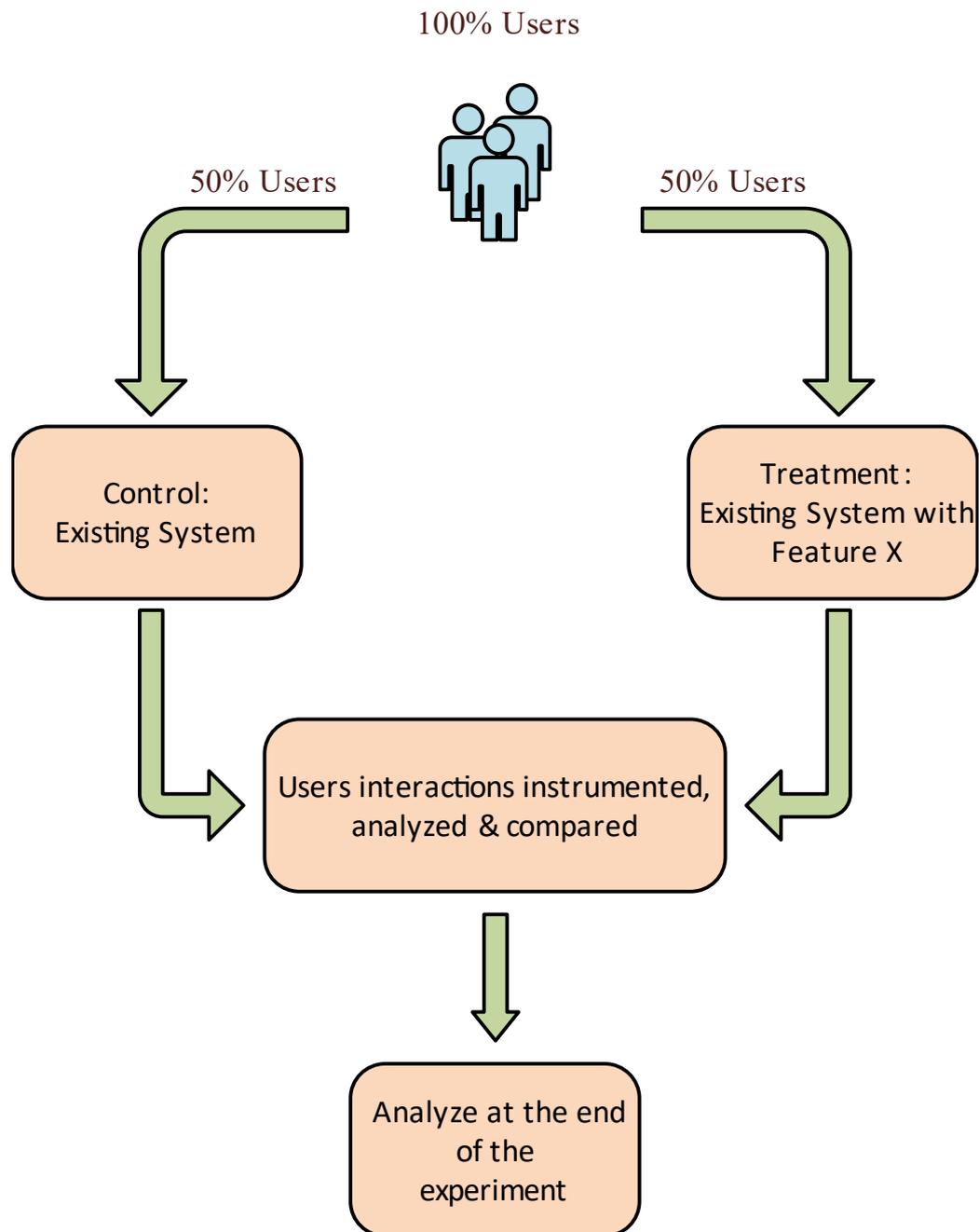


Figure 4. High-level structure of A/B testing (Kohavi and Longbotham, 2016).

4.4 Results

Here I present the results of the A/B testing. The exact numbers of the that was gathered in the testing phase are not publicly available due the company's privacy policies, so the results are presented in relative manner via charts and percentual values only.

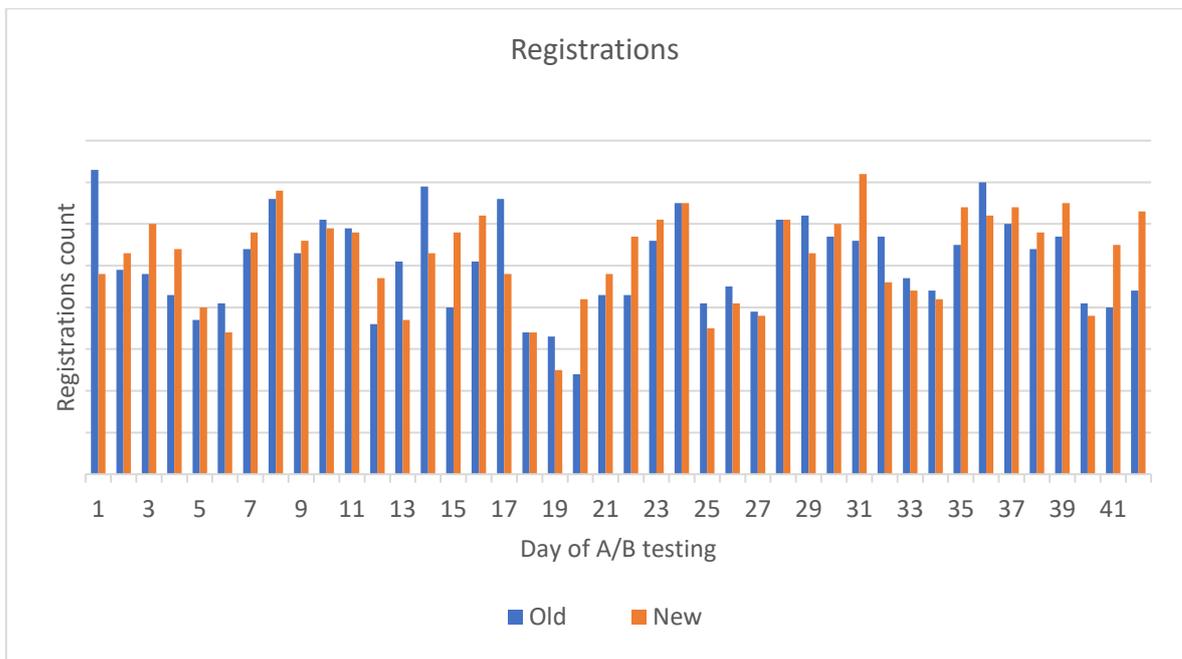


Figure 5. Chart of successful registrations happening per day of A/B testing in the SaaS product. 'Old' in blue shows the control group of the old registration of the product, while the 'New' in orange shows the treatment group's registration rate.

During the A/B testing, successful registrations were recorded in a manner that customer behaviour can be compared between the old registration and the new alternative. In Figure 1, successful registrations are shown over the timespan of the A/B testing period. Registrations are divided into two charts based on the assignation between the control group and the treatment group.

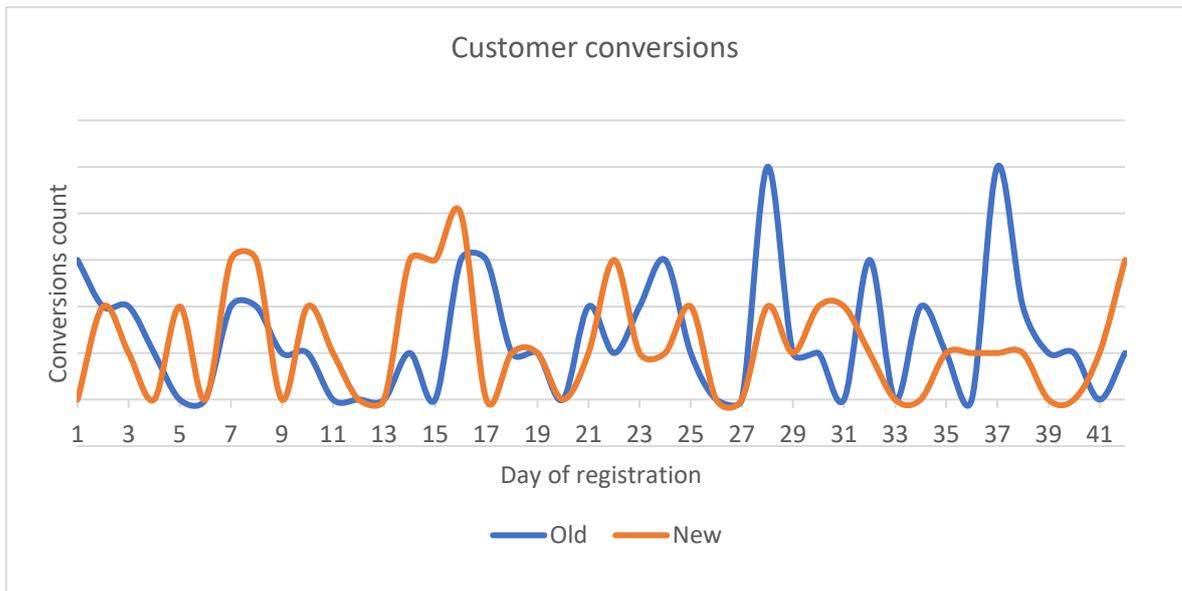


Figure 6. Chart of successful customer conversions by registration path. Note that day of registration refers to the day the user successfully registered to the SaaS service, not the day of onboarding to paying customer. Values shown are total conversions from these registrations by November of 2022.

Successful onboarding has been tracked during and after the A/B testing period. Any conversion that has transpired during or after the testing can be linked to the registration path the customer was originally assigned to when they registered to the website. This way, we can track retroactively the impact of the new user experience and how the changes done to it affected to user's willingness to onboard as a paying customer, even when the conversion happens months after the testing period. Figure 6 shows the data of successful conversions that have been done by the end of November 2022, which is several months after the A/B testing has ended. We can safely assume that majority of the users that have registered during the A/B testing and are willing to subscribe for the service have been onboarded at this point.

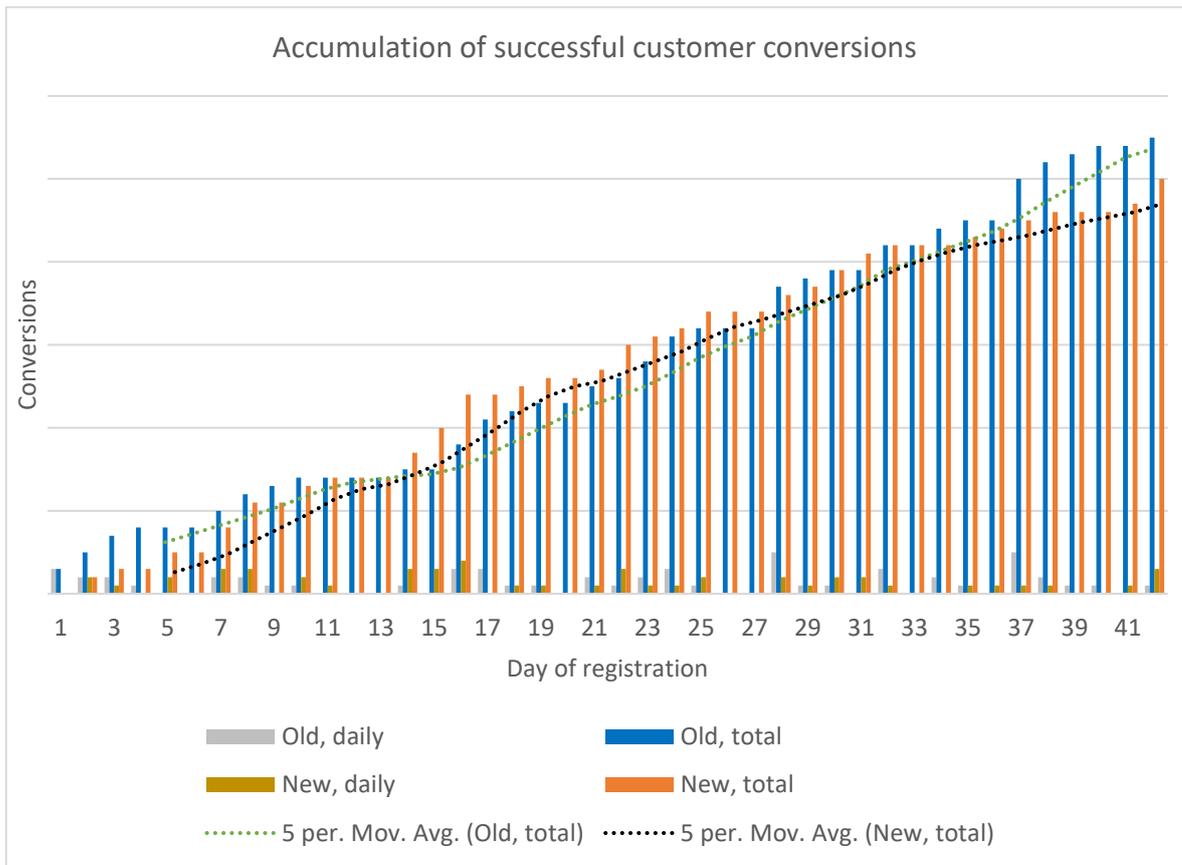


Figure 7. Chart of successful customer conversions in accumulative manner. The chart shows successful customer conversions on both registration paths in daily gain and in accumulative form. Trend lines for both paths' accumulative conversions are drawn with 5 days' average using dotted lines. Values shown are total conversions from these registrations by November of 2022.

Successful onboarding data can be studied by accumulation chart, as shown above (Figure 7). This way we can observe the total amounts of successful customer conversions based on the used registration path and compare them easily with each other. Data can also be analysed with conversion rate, using the equation 1 presented in chapter 2. Table 1 presents the conversion rate in percentage.

Table 1. Conversion rate calculated per registration path. Values are rounded to two decimals.

Registration path	Conversion rate (%)
Old registration	2,59
New registration	2,29

4.5 Review of the results

Inspecting the registration rate from the 42-day testing period (Figure 5) we can relatively safely claim that the amount of successful registrations is indifferent from the registration path user is directed into. While both registration paths seem to be performing somewhat better on certain days compared to the other one, the differences are not very distinctive. Closer look to the data shows that new registration experience led to somewhat more successful registrations, but the difference is not major enough to draw any conclusive conclusions from it.

Successful customer conversions seem to follow similar trend based on data in Figure 6. Based on the chart, first half of the testing period seems to slightly favour the new UX, while the old registration seems to produce more conversion from the latter half of the experiment. Inspecting the Figure 7 gives us clearer picture of onboarding success. Five days' average shows that while the new registration performed somewhat better in generating customer conversion from registrations between 15th and 30th testing day, the old registration has better rate from early and late registrations. Additionally, accumulation of total customer conversion is slightly in favour of the old UX thanks to the increased number of conversions from the final days of the testing period, as seen in Figure 7.

The A/B testing results show that the conversion rate of registered user of the SaaS product is between 2 and 3 percent for the registered users. This might seem low, but it is roughly in line with product's performance prior to testing. Majority of registrations will never convert to paying customers, so single-digit conversion rate percentage is to be expected. When inspecting the total conversion rates of both registration paths in Table 1 we can see that the difference in the conversion rate is around 0,3 percent in favour of the old registration. When

we consider the total number of registrations from the testing period and the data shown in the Figure 7, the difference can be considered to be very minor.

5 Discussion

Software business is under constant change, as new ideas and technologies can rapidly change how we use and value software. Software deployments in the business field was monopolized by ASP as a standard method from 1990s, until SaaS took its place by offering flexibility and lower entry costs for the client and more cost-effective and flexible way of deployment to the vendor. SaaS isn't without its shortcomings either, but compared to the previous ASP, the benefits of SaaS outweigh the stiffness of ASP for many businesses.

After SaaS emerged, the business models of software businesses had to adopt accordingly. Paying for the product on monthly or yearly basis, befitting to a service the SaaS product is, became the standard way of selling software to businesses, as it happened with many consumer-oriented software services as well. Subscription-based service model by nature incentivises vendors to get as much traffic to the service as possible to make sales of the product. Perhaps naturally this leads to vendors offering some sort of trial or sample system in order to capitalize on that traffic and get the visitors to try the product out with low threshold of investment. Once the user is invested their time to the service, it's much more likely to get them to pay for the service as well. Thus, the freemium model of SaaS business gained popularity in the software business field.

Freemium as a business model is all about incentivising user onboarding and generating conversion. The free version of the product, may it be a time-limited trial or a functionally limited access to the service, is built to encourage users to start paying for the full product access. While the perception of price of the product is often one of the key factors in the decision-making process, especially compared to other similar products available, vendors can only go so far with discounting the product if they wish to stay in the business. Increasing the product value to the user is arguably more sustainable approach for both parties.

Increasing the product value for the customer and thus increasing the sales of the product is the key element of growth hacking. This mindset focuses to onboard customers by said value-increasing methods and getting them to see the value of the product and the impact using it would provide. One of the main elements of increasing the product value in user's eyes and a driving force behind the onboarding process is the act of making positive impact from the get-go. First impression of any interaction we humans encounter is long-lasting and

difficult to change afterwards. This is the reason that SaaS business should pay a special attention to the initial user experience they provide to the new users if they wish to have users to be interested in their product and get them to use it. Increasing the user's experience with a software product has caused the software companies to pay more and more attention to customer relations and how they are managed. This increased interest in the experience of product use has then developed to a definite field of user and customer experience and their design practices.

User experience design concentrates around the reasons the design serves. When the design targets to increase customer conversion through bettering the new user experience, like in this study, the attributes that affect to both conversion and the first impressions about them should be in focus. Visual design is a major part of new user experience, as it immediately gives user an impression of the website. Shortly after comes the perception of ease of use, as the user starts to interact with the product and accumulates micro-experiences of the product from early on. Overwhelming the user with too many options or pieces of information likely affects to these experiences negatively, but well-placed friction can also improve the experience if executed properly. When the NUX phase draws to a close, the user is persuaded to conversion with value-focused incentives. Usefulness of the product and perceived information the use of the product provides, alongside other incentives conversion might bring, are underlined to push the transition to pay for the product.

On this foundation, the company providing the SaaS service studied in this thesis underwent a UX overhaul for their product's initial new user experience, the registration to use the product. The whole process of re-designing the UX and the results of the finished artefact was then studied to find out if the improved first impressions of the product directly affects to the conversion rate of customers to paying ones.

The data gathered from this study shows that while first impressions affect greatly our perception of a product, it doesn't seem to be the deciding factor when it comes to the decision of purchasing it. Other factors, like price and usefulness, are likely affecting the decision making. This might be due to the freemium business model of the studied product, as it provides effectively enough users to experience and experiment with the product before they must make the purchase decision. This leaves users to evaluate the product more in-depth and see what value it brings to them. Additionally, the results don't show how first impressions affect the SaaS product outside the direct path from registration to onboarding.

Increasing the impression of the product could indirectly be the catalyst for more traffic to the website via reputation, and that in turn could then turn to successful conversions. It should also be mentioned that the new implementation of registration requires more actions from users to complete and this might affect the registration rate of new users negatively, although this would also require closer examination for definite conclusions.

Prior studies on freemium SaaS products and the effects of first impressions with their onboarding process are scarce. More research in this field would be ideal to have before we can reliably describe consistent user behaviour within software service registration and signup. This thesis hopes to contribute for that achieving this goal. Yet some similarly targeted, NUX-focused studies have been done in recent years. K. Soong et al. (2018) in their data-driven study of LinkedIn registration found strong positive correlation between quality of registration process and long-term retention. This seems to somewhat contradict the findings of this thesis, as the improved NUX didn't generate similar results, at least with the metrics that I observed. In slightly less aligned study, Drenner et al. (2008) also suggests that improved NUX generates more user interaction, supporting the findings K. Soong et al. presented. Douneva et al. (2016) in their research on first impressions effects in website design imply that users form impressions on websites in a manner that does not simply follow rational impressions of the qualities website possess, but also form implicit impressions about different qualities of websites, which are very challenging to follow and judge. The result of my thesis appears to support this claim, as it implies that measuring the first impressions with set of limited metrics can't completely describe the effect NUX has on users and how users form their impressions of the service beyond rational attributes.

6 Conclusions

This thesis examined the effect of first impressions to customer conversion in a SaaS product using design science research and focusing on freemium business model. The research of the topic was done via studying academic works and literature to establish a theoretical foundation, examining the process of how the impressions can be affected by designing user experience according to your specific requirements, and finally gathering real-world data from a SaaS product to see the results of changing a new user experience and altering the first impressions new users will experience. The research did answer the research questions set for it in a satisfactory manner, and as such is regarded as a success.

During the research it came apparent that very little prior study has been conducted on this specific topic, as majority of software-focused studies have focused on overall web design and UX design, not specifically in the SaaS context, taken the niche of the topic. However, this study found that first impressions of a SaaS product with freemium business model doesn't inherently rely on the new user experience and first impressions it makes to make the sales as changing the experience to more refined one didn't show any direct causality to customer conversion withing the testing period.

The study was limited to inspecting only the direct causality of first impressions change to customer conversion, and as such is limited in terms of describing the effects of changing the first impressions in bigger picture. The effects on overall perception of the product and its effect on future sales or the effect on SaaS products using another business model can't be directly established based on findings of this study alone. These topics would require further research in order to draw any conclusions on the effects in these wider contexts.

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Appendix 1. Transcript of an interview with lead UX designer of the registration process

This research conducted and interview of an UX designer from the vendor company of the studied SaaS product. The interview was done in order to find out how changes to UX affect the perception of the product from the perspective of professional with experience studying customer experience and behaviour in the software space, as this directly affects the impressions users make. Additionally, the target of the interview was to find out whether I could identify any key factors affecting first impressions from the practical execution of UX design process affecting customer conversion specifically.

Interviewee was the lead UX designer of the company's registration overhaul project. She has background in research regarding UX and customer understanding, but in her current position does also graphical designs for the company's products. She was chosen as the interviewee because of her background with customer understanding and familiarity with the topics around it, and as the lead UX designer of the studied project she was the most suitable to comment on the UX changes and their effect on customers' perception of the product.

Questions in the interview focused on both general understanding of practical UX design process and the important parts affecting the customer perception, and the design process and practices of the studied artefact in particular. The questions asked were aimed to understand the UX design perspective in the artefact's development in order to assess the theoretical information of this specific approach via practical examples.

The interview was done in a video call using Microsoft Teams. The interview was recorded, and a transcript was created from it with Teams built-in tools. Transcript contains the full interview between me, the interviewer (referred as 'Interviewer' in the transcript), and the lead UX designer of the studied UX overhaul process (referred as 'Interviewee' in the transcript). Parts of the transcript has been modified in order to fix major transcription mistakes, generalize business sensitive terminology, or to cut irrelevant parts from the transcript. These are marked with [square brackets].

[Transcript cut to beginning of the interview]

Interviewer: The plan is I have a few questions here. Some of these are two partners and everything is recording the.

Interviewee: Yeah.

Interviewer: Registration over how we did in the early this year.

Interviewee: Umm.

Interviewer: Uh, so if you don't mind, we can start.

Interviewee: Yeah, sure.

Interviewer: Right.

Interviewer: Uh, first thing.

Interviewer: If you don't mind, could you?

Interviewer: Uh.

Interviewer: Describe a little bit about the designing process or methods you used when we with designing there.

Interviewer: We need to use that experience for that.

Interviewer: Registration overhaul.

Interviewee: Yeah. So.

Interviewee: This I did this project.

Interviewee: Within my first few months at [Company] so.

Interviewee: There was some extra challenges to the design process I guess.

Interviewer: Yeah.

Interviewee: Maybe this isn't super relevant for your thesis, but.

Interviewer: The worst right?

Interviewee: For the project it like impacted it a lot.

Interviewer: Yeah.

Interviewee: Uh, like as you know, I was like the first designer at [company], so.

Interviewee: Entering the company and.

Interviewee: Disrupting developments in the way that they normally worked was.

Interviewer: Yeah.

Interviewee: Uh, a little bit rocky and I think they kind of expected me to just make.

Interviewee: Uh, a UI for them to copy and develop.

Interviewer: Yeah.

Interviewee: But.

Interviewee: I guess as you know, the UX process isn't just making a UI.

Interviewee: So for this registration overhaul.

Interviewee: Umm.

Interviewer: Yeah.

Interviewee: There was a lot of like compromising on on the process to get it forward quickly enough because we hadn't really. We hadn't established any kind of process yet.

Interviewer: Yeah.

Interviewee: Uh, with?

Interviewee: Inserting the design into the development flow.

Interviewee: So.

Interviewee: I would say that it was a bit rushed to make the designs in time for the development because they were developing basically faster than I could design.

Interviewer: Yeah.

Interviewee: So that was some frustrations, I think from their side.

Interviewee: Umm. And then to kind of balance this, there wasn't as much user research or user studies behind this?

Interviewee: Umm that I would normally prefer.

Interviewee: So like my process in general, usually starts with.

Interviewee: Umm.

Interviewee: Benchmarking and looking at existing registration flows and what other companies are doing.

Interviewee: Uh, what's normal and like a sass registration?

Interviewee: And.

Interviewee: And generally.

Interviewee: This kind of two ways you can go about a registration. You can do it.

Interviewee: Quick and easy and then or you can do it. That's a little bit more personalized to the type of customer that you want to attract.

Interviewee: And I guess this.

Interviewee: Uh Overhaul was a little bit of both, so the goal was to make it.

Interviewee: Not just more visually appealing, but.

Interviewee: Easier to sign [you] while still.

Interviewer: Yeah.

Interviewee: Introducing the product in a way. So in the first steps there's.

Interviewee: Umm you have the first screen where you simply enter the e-mail.

Interviewee: And that.

Interviewee: Is separate from the rest of the forms because.

Interviewee: After doing some benchmarking, I saw that this was done a lot to kind of draw the user in, so they have only one they come in, they see only the first page with one.

Interviewee: Uh form field, so it appears to be like really simple. So then once they enter the e-mail and you have their attention, so to speak, then they continue to fill out their personal details.

Interviewee: And then.

Interviewee: Uh, where the, I guess not complicated, but the more.

Interviewee: Friction.

Interviewee: Uh. Part of the IT is when they have to name their site.

Interviewer: Yeah.

Interviewee: So this was done because.

Interviewee: Umm, I think there was a lot of confusion of customers coming in and to [company] for the first time and.

Interviewer: Yeah.

Interviewee: They have their list of sites there and it's a little bit confusing, like if they aren't familiar with the terms like what is a site? What is this?

Interviewer: That's it.

Interviewee: So.

Interviewee: It was an attempt to.

Interviewee: Introduced the concept and make it feel personalized in a way that they are control of. Oh, this is what I want to call it.

Interviewer: Yeah.

Interviewee: And also to inform them that.

Interviewee: This can't be changed or it's really difficult to change later on, which was because of technical reasons.

Interviewer: Yeah.

Interviewee: Uh, that it couldn't be changed so.

Interviewee: Uh, yeah. And then then that's the last step. And they have a little splash screen with loading because it can take.

Interviewee: A few seconds to create the site so then they have something to watch while it's being created.

Interviewee: Yeah. So then going back to like the design process.

Interviewee: Am I kind of?

Interviewee: Left that topic but.

Interviewer: That's alright.

Interviewer: The covered plenty there.

Interviewee: Yeah. Anyway, have after the benchmarking done, it's generally.

Interviewee: And to try out some designs, some iterations and at that point I would normally do some user testing initially to make sure the design is like on the right track, but because of the time constraints.

Interviewee: It was more like OK, here's a design, and they're already developing it. So I would say that created a little bit of confusion because as the design like moved forward, there were things that were caught in the earlier.

Interviewee: Steps that I needed to redesign, whether for technical reasons or usability reasons.

Interviewee: So there is a bit more back and forth instead of straightforward iterations.

Interviewer: Yeah.

Interviewee: Umm.

Interviewee: And we also, I mean we don't have any kind of design system.

Interviewee: So all of the interface elements were coming from scratch and.

Interviewee: Uh, I think that was a challenge for me because I'm not.

Interviewee: Super based on a lot of UI or graphics I've come from more of a research background and.

Interviewee: Uh, more heavy on the.

Interviewee: User understanding rather than creating like a pixel perfect interface so.

Interviewer: Yeah.

Interviewer: All right.

Interviewee: Yeah.

Interviewer: Right.

Interviewer: That's plenty tear.

Interviewer: Maybe we can move to the next topic. So from your perspective.

Interviewer: How that need for that registration flow over how was decided? So what was the main driving factor behind it?

Interviewee: I'm there.

Interviewee: The main decision to do it, I guess, was based on.

Interviewer: Yeah.

Interviewee: Trying to get more customers to finish the registration form that we were having a lot of drop off so they would enter registration and then leave without completing it.

Interviewee: So this was an attempt to get customers to complete the registration and get them into the product more quickly.

Interviewer: Right.

Interviewer: Good.

Interviewer: The next one: if you had to name it one or few key chains that were these are designed to the new UX over how what would those be?

Interviewer: That were missing from the old one.

Interviewee: Yeah.

Interviewee: I'm trying to even remember what the old one looked like.

Interviewer: Yeah.

Interviewee: Obviously there was like the fact that it was really outdated looking and so that's kind of affect the perception of the customer once they come to the form for the first time. And it was really in contrast to our website or our website is more new, fresh looking and then they were coming to the registration and it looked completely different from the website. So that can be.

Interviewer: Yeah.

Interviewee: Like obviously confusing like. Is this the same product? I mean in the right place so.

Interviewee: And in the newer registration then I tried to use more similar colors and more simple layout and modernize it a bit would say that was the biggest difference and then like I said before, changing the flow a little bit so that they're brought into the form with that first page and then.

Interviewee: Uh.

Interviewee: Giving them more product information when they create the the site because that didn't exist before.

Interviewer: Yeah.

Interviewer: Would.

Interviewer: Moving on.

Interviewer: Can you remember how the decisions was made?

Interviewer: [And what data] should gather from the registration forms like.

Interviewee: Umm.

Interviewer: Name[s] emails and whatever [there is collected], but there's some specification.

Interviewer: Who decided that?

Interviewee: I think.

Interviewer: Or are you just handed the information that this and this and this?

Interviewee: Yeah, basically we used the same more or less the same information that the old form collected.

Interviewee: UM.

Interviewee: Except I don't remember if the phone number was.

Interviewee: Mandatory on the old site, but that there was a lot of conversation on whether or not to make that mandatory and it was decided that finally it would be optional.

Interviewer: Yeah.

Interviewee: Umm.

Interviewee: But then, otherwise, the information that sales receives from the.

Interviewee: Registration form then needed to be.

Interviewee: The minimum name work e-mail.

Interviewee: Company and what country they're from. So that was like pretty standard sales wanted that information. So there wasn't much.

Interviewer: Yeah.

Interviewee: Uh, leeway on those things.

Interviewer: All right.

Interviewer: Right.

Interviewer: Uh next?

Interviewer: Well, I guess we.

Interviewer: It touched this topic on the previous one a little bit already, but.

Interviewer: Uh.

Interviewer: [Alright]. Or do you have any more comments on how the thought process was? How there?

Interviewer: The separation of the toast.

Interviewer: Data collections were divided to for the new registration. What [we had in] the old one was the one single [form] and now we have multiple steps.

Interviewee: Yeah. Yeah. Well, we could at least see where the drop off was.

Interviewee: So by page if they completed the first page and then whether or not how many people completed the second page.

Interviewee: And.

Interviewee: There was kind of two different.

Interviewee: Steps in the analytics. So firstly we did it just.

Interviewee: By page. So where the drop off was by page and then after that.

Interviewee: We did more.

Interviewee: Uh.

Interviewee: Uh, specific?

Interviewee: Analytics using [analytics technology].

Interviewee: Where we did screen recordings and you could see.

Interviewee: Uh where?

Interviewee: They were getting confused where they were clicking, what was taking too long.

Interviewee: And the results from that were pretty.

Interviewee: Like, not surprising. I mean, we didn't get much from it. Basically the frustrations came from.

Interviewee: Very few random things that weren't really having to do with the form so.

Interviewer: Yeah.

Interviewee: But at least we could then like validate that. OK, this seems pretty good in general.

Interviewer: Yeah. Is that process in Europe Union, the good one to go with this kind of thing so?

Interviewer: Did you have some?

Interviewer: Where the IDs that say or that structure of the enrollment process.

Interviewee: Uh, yeah, I I wanted to have, like, more specific times.

Interviewee: Umm, when they did the first release.

Interviewee: Umm, I guess that the the data that's logged.

Interviewee: Is sent specific enough to.

Interviewee: Calculate the exact.

Interviewee: Time. So it was like rounded up to minutes instead of seconds I think.

Interviewer: Yeah.

Interviewee: If I remember correctly I so I would have liked to have more like detailed.

Interviewer: Yeah.

Interviewee: Information but.

Interviewee: In the end, I guess it we didn't.

Interviewee: Needed because the the main point was that we wanted to increase the registration.

Interviewee: Uh.

Interviewee: Complete.

Interviewee: Uh, like the number of completions?

Interviewer: Yeah.

Interviewee: And I think that was achieved more or less.

Interviewer: Yeah.

Interviewer: And did you have free reign over there? Look and feel of [the design].

Interviewee: Yeah.

Interviewer: It was the framework already there.

Interviewee: I did have free reign. [] And so that was kind of, I mean that's good and bad. It was. It's good obviously because then I can just do what I what I think would be right. But also it was it was like being thrown into a jungle or something where you don't know your way around because this was at the beginning of working with the company. So I was kind of like it's this OK, but yeah I just basically tried to.

Interviewee: To.

Interviewee: Do something similar to.

Interviewer: Yeah.

Interviewee: Many registration forms. I mean, they're all pretty much the same type of information that you're putting in. So in terms of like the form fields, that's pretty simple. And then borrowing the colors from the website as well.

Interviewer: All right, great.

Interviewer: Ten final question here, in your opinion, did the final version.

Interviewer: [of the registration] match the designs you had, [and] if it [didn't,] what was missing there.

Interviewee: Eventually it did.

Interviewer: Yeah.

Interviewee: In the beginning there was some inconsistencies with like the fields and things not being aligned correctly and the colors not showing up correctly. So there was quite a bit of back and forth with that and those changes eventually were like really.

Interviewee: Waiting there in the backlog for a long time.

Interviewee: Uh.

Interviewee: And I think even now there's there's like, some more stuff we could fix.

Interviewee: Uh, like the phone number field really bothers me because I wanted a a flag.

Interviewee: To represent the country.

Interviewer: Yeah.

Interviewee: But there was some reason why that couldn't be included so.

Interviewee: I I'm still missing that.

Interviewer: OK.

Interviewee: But otherwise it in the in the end it was pretty accurate.

Interviewer: All right.

Interviewer: Well, thanks a lot. I'll stop the recording.

[Transcript ends]