Value creation within a digital service platform through the lens of service-dominant (S-D) logic
A case study of Eljun’s digital payment platform

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Abstract

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The number of companies who base their business model on digital platforms has increased in the recent years. Successful examples of digital platforms are e.g., Airbnb, Klarna or Uber. Compared to traditional linear value chains the value creation process in digital platforms is characterized by co-creation between multiple actors who exchange resources through interactions to mutually create value. Because of this fundamental difference in the value creation process it is necessary to research value creation in digital platform. Screening the literature has however shown that there is research gap in understand the value creation process in digital platforms. Therefore, this thesis aims to understand this context by conducting a case study-based research. For this purpose, the start-up company Eljun is chosen that creates a digital wallet for customers to proceed payments for sustainable transportations. By conducting semi-structured interviews with the central actors of the platform we received insights that allow us to answer the three research questions.

The value proposition canvas for the first research question has shown that the technical integration, costs, and lack of uncertainty are negative perceived values by the actors and positive values result from synergy effects in the platform like enhancing reach and customer experience by offering complementary services. For the second question we applied the view of service-dominant logic to analyse what facilitates value co-creation in the platform which led to the following themes: Adopting customer centric approach, stimulating purposeful communication, fostering collaborative development, cultivating transparent and fair interaction. For the third questions we derived barriers and motivators for value co-creation that are connected to a shared mission, competition, organizational & industrial readiness, number of actors and end-users, and the design of boundary resources.

Keywords: value creation, value co-creation, value proposition canvas, digital platform, service-dominant logic
Popular scientific summary

Digital platforms are complex environments where multiple stakeholders interact and exchange information, products, or services to create value for themselves and others by using digital technology. They create value by facilitating connections between various market sides. Thereby, they generate the most value through the collective actions and interactions of the actors, rather than only relying on the features. Also, they highly depend on the value perceived by varying actors, which requires constant review and adaptation of the value proposition to maintain a business model that remains valid for each actor. To design and manage these platforms effectively, it is crucial to understand how value can be created collaboratively with the actors through the production and development of the platform.

The study starts with exploring the perceived values held by stakeholders who provide complementary services for the digital platform. It then assesses how effectively the current value proposition of the digital platform owner addresses these perceived values and meets the needs of the stakeholders by utilizing the two-sided value proposition canvas. Following this, it explores how value can be created through collaborative efforts between these stakeholders and the platform owner, rather than the platform owner providing the value proposition in isolation. Having these aspects thoroughly examined, the study lastly concludes with uncovering the potential factors that either motivate or hinder stakeholders from participating in value co-creation practices.

The findings from this study could be useful for platform owners who are operating in two-sided markets who are looking to assess the validity of their value proposition. These insights can assist platform owners to understand how well their current value proposition addresses the actual needs of the stakeholders involved in the platform network. They can also guide owners in identifying current shortcomings and developing strategies to improve the value proposition. Furthermore, one of the key findings is that companies who want to effectively engage with their stakeholders should consider the value co-creation concept throughout the production and development processes of their digital platform. To achieve this, findings suggest some essential practices that can help platform owners to promote and facilitate value co-creation within their digital networks.
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1 Introduction

The successful examples of Airbnb, Uber, and Klarna show why companies in the past years have increasingly focused on digital platform business models. The core of success within digital businesses is the process of value creation which is fundamentally different from traditional business models.

While traditional business models follow a linear value chain from producing a product or service to selling and marketing it, digital platforms create value through their network by creating a marketplace where providers and buyers can interact with each other (Helander et al., 2014; Alstyne et al., 2016). This interaction is introduced by Ramírez et al. (1993) with the notion of ‘value constellation’, also known in the literature as ‘value networks’ which refuses the thought that value creation is only an individual endeavour but rather an outcome of interactions among actors hence co-creation of value which can be seen as a joint process of actors.

A digital platform business model can only be successful if all actors perceive a positive value delta. This is crucial since the absence of a single actor can bring the entire platform down as the actors complement each other and contribute to the creation of value jointly. Hence, the platform owner must ensure an attractive value proposition for every actor involved that creates value for them to ensure their commitment (Trabucchi et al., 2022). Moreover, Ronteau et al. (2022) highlight the necessity to constantly review the value proposition as the needs of actors in a fast-paced digital world can change rapidly. Therefore, it is crucial to be flexible, especially in the early stage of a business. “Nearly 90% of start-ups fail within the first five years of business, a key reason being their inability to adapt to their business model” (Ronteau et al., 2022). Even though the literature about digital business models is growing, there is still not much known about the value creation process in digital platforms which is highly relevant for businesses and researchers. This is why there is a need for further research in this area (Mansour et al., 2017; Trabucchi et al., 2022) and where we want to place our study and contribute to the research.

By conducting case-study-based research we aim to understand the process of value creation by using a real-world example. The case for this degree project is the digital payment platform of the Swedish start-up company Eljun. The company has identified a potential business idea by developing a digital wallet (a mobile application) through that users can make payments for sustainable transportation. Eljun’s vision is to provide a unified payment system to make travelling easy, cheap, and sustainable for daily users of transportation (Eljun, 2023). Eljun is still in its initial phase where they are trying to build up their network and formulate their value propositions for potential actors. This makes them an interesting company to work with because this is where the understanding of how digital platforms establish their value network can be captured.
1.1 Case Description

For the case study, we collaborate with the Swedish company Eljun. Eljun is a Stockholm-based start-up company that was founded in 2020 with the goal of unifying the fragmented electric mobility market through a sustainable payment service. Their business idea is to provide a service in form of a digital wallet that allows users to store and manage money for electric mobility. Hereby, all mobility payments can be made through Eljun’s application by getting connected via an API (Application Programming Interface) to the different mobility providers’ websites. Therefore, end users only need to have a single application installed to make payments.

It must be highlighted that Eljun’s application is already available in the app stores, but so far it is only possible to download the app, to create an account, and to top-up money on the user’s digital wallet. App users cannot use it for their payments yet as the company still needs to set up its network and win partners. Therefore, the following description of the business model is based on Eljun’s original ideas and describes the desirable future state. An overview of the current business model is given by figure 1.

The company operates in a multi-sided market, connecting different actors who exchange value through the platform. Primarily, it provides a link between customers and various electric mobility operators, such as EV (electric vehicle) charging stations, shared mobility, and public transportation. They also want to partner with employee benefit providers to access an existing user base. Employee benefit providers work together with companies who offer financial incentives to their employees by offering discounts and grants for services or products from the employee benefit providers’ benefit pool. Eljun plans to cooperate with them to offer their payment services to companies with the employee benefit providers as facilitators. Eljun’s main revenue source is employers who subsidize the use of sustainable transportation with a monthly subscription fee per employee who receives a recurring top-up for Eljun’s wallet.

The main actors in the company’s network are:

- **End users/customers**: They are the users of the platform that can access and pay for the electric mobility options that are available in the Eljun’s network. These customers might receive financial incentives (added to their accounts or in form of discounts) from their employers if they cooperate with an employee benefit provider.
- **Mobility operators**: They offer sustainable mobility options to customers. These are public transportation, car renting/sharing, e-scooter and e-bike renting, electric vehicle charging or similar.
- **Employee benefit providers**: They are the intermediaries between corporations and their employees (customers), and they manage the process of offering incentives for customers/employees based on corporation’s loyalty/benefit rewards. They are also the main channel to reach potential customers as they already have an existing customer base.
Moreover, the platform is hosted in a blockchain to secure and record the transactions between the actors in its network and enhance traceability. In that way, employee benefit program companies can track and verify the transactions and behaviours of their customers and employees in ease. However, it does not have its own token, unlike some other blockchain platforms. Instead, the digital wallet relies on existing currencies and payment methods to facilitate the transaction between actors.

1.2 Problematization

Value creation is a crucial topic for both researchers and companies. The literature studies value creation in different subjects which shows how diverse and complex this field is. It is not possible to generalize value creation as it highly depends on the context (type of business, product, or service). Searching for value and value creation, the literature shows many results in defining the term. The same applies to value co-creation which is studied in different fields often with a focus on end customers and how they can be actively involved in the process of value creation. In the context of value co-creation, the theoretical framework of service-dominant (S-D) logic is often used to explain value creation with a focus on the exchange of resources between actors.

Reviewing the literature for value creation specifically in digital platforms, there is only a manageable amount of research available. Digital business models and platforms have become more and more important topics within the recent decades in the course of digitalization which is why researchers also put more emphasis in this direction. However, there is still a call for more research to understand value creation in digital businesses which underlines the lack of sufficient knowledge in this area. Value co-creation is discussed in the literature as central element of value creation in platforms. Most literature focus on defining value co-creation and explaining the natural characteristics of a platform and its ability to connect actors as an intermediary to integrate resources and foster collaboration to jointly create value (Ronteau et
However, there is a research gap in explaining how value co-creation can be facilitated between actors beyond this basic functionality of a platform. Furthermore, it is surprising that there is a lack of discussion about value co-creation in digital platforms using S-D logic despite the theory’s prevalence in studying traditional businesses. Few studies that made first attempts in this regard are Barqawi et al. (2016) who focused on the field of Service-as-a-Software (SaaS) and strategies of release management and Blaschke et al. (2017) who analyze digital value co-creation networks. However, research that focuses on value co-creation in digital platforms through the perspective of s-d logic is lacking.

The value creation in digital platforms is a complex topic and is also experienced in the practice by companies who focus on digital platform business models. The start-up company Eljun is a good example that shows the difficulty of aligning a business idea to the needs of other actors and creating value for all participants in order to win their commitment. In contrast to traditional business models, a platform owner needs to understand multiple needs and cannot just focus on the end customer which makes the process of value creation more complex. After talking to Eljun it becomes clear that the main challenge is to define strong value propositions to win the commitment of actors and build-up a network that co-creates value for the whole platform.

Our study delivers an academical and practical contribution. The research will support Eljun to create a better understanding of the needs and wants of all actors. This knowledge can be used by them as a foundation to improve their business model and define a strategy on how to build-up the network for the platform. We also attempt to understand a relatively untouched field of research by bridging the topics of digital platforms and value creation. Hereby, we want to apply the perspective of service-dominant (S-D) logic to understand the creation of value and specifically how value co-creation can be facilitated. As one of few studies in this area, we aim to generate a generic understanding of value creation in digital platforms and want to motivate with our study for further research.

1.3 Research questions & purpose

The degree project aims to understand value creation in a digital platform by means of studying the case of the payment platform Eljun. For this purpose, we define the following research questions:

1) How are values perceived by the different stakeholders within Eljun’s digital service platform and how do these fit to the platform owner’s value proposition?
2) How can value co-creation be facilitated among actors from the lens of service-dominant (S-D) logic?
3) What are the motivators and barriers for value co-creation in a digital service platform?

The first research question aims to understand the different perspectives of all actors. When we talk about actors, we mean the core actors who form the core unit of the digital platform by offering services. Therefore, we focus on Eljun as platform owner, on operators who offer transportation services and on employee benefit providers who connect Eljun’s payment platform to employers and their employees. Users such as employees or any commuter are not
considered. The first part of the research question is answered when the actors’ needs and wants are identified and an understanding of their values exist. In the second part of the questions, their values are compared with the platform owner’s offering, and it will be reviewed whether their perceptions match or not. The value proposition canvas will be used to illustrate both.

After analyzing the individual perspectives, the second research question analyze how value can be co-created within the platform. The possibilities to facilitate the co-creation of value will be discussed by applying the view of service-dominant (S-D) logic.

The last research question considers factors that support and hinder the creation of value in the platform based on the case study. We expect to answer this research questions by interpreting the findings from the first two research questions. Therefore, the last research question is seen as a conclusion.

1.4 Delimitations

This chapter shows limitations of the study and explains their impact.

The first limitation is due to the nature of a single case study design that can only investigate the context within a specific environment. The research focusses on value creation in digital platforms and uses the Swedish start-up company Eljun as case company. Therefore, the study is limited by geographical and organisational aspects. As a result, the findings of the study can only be applied to digital platform business model and not to other businesses. However, this is an intended limitation as we specifically want to investigate value creation in digital platforms as the process differ greatly to traditional business models and even to other digital businesses.

The second limitation is the maturity of the business model of a start-up company. The start-up world is fast-paced and influenced by many changes. We experienced this by ourselves that Eljun’s ideas quickly change and that the business model is not set in stone. This makes the analysis of value creation sometimes challenging because we must assume some conditions to talk to actors and there are many uncertainties. However, we still think that the benefits of working with a start-up company for our topic outweigh these challenges due to the great opportunity to learn about the development of value creation.

The third limitation is that we neglect the perspectives of end users. The focus of our study is to understand the value creation process between actors who offer their services and thus involve their resources in the platform. The end user is an important part of the joint value creation process, but we expect the analysis of value co-creation from their point of view to be very different than the other actors. Therefore, we decided to exclude them from our study, but suggest that their perspective will be considered in a stand-alone study.
1.5 Structure

The previous chapters gave an overview of the study by describing the current situation of the case study company and explaining the purpose and aim of the study by defining research questions.

The next chapter focuses on the literature review and explains the theoretical framework. This part is crucial as it analyses which knowledge is already generated by other researchers and uncovers gaps that help to position the study. The keywords for the research are value co-creation, value proposition, digital platforms, digital services, and S-D logic. Hereby, the focus is specifically on the connection of value co-creation within digital platforms whereas S-D logic functions as the theoretical framework to analyse the value co-creation process.

After generating an overview of the literature, the research approach of the degree project will be described in the fourth chapter ‘Methodology’. The research is case study-based and follows a qualitative approach by conducting semi-structured interviews. The research design and application of the research method which includes sampling and data collection will be described. Moreover, the interview guide will be presented and the strategy for data analysis will be explained. The methodology chapter also reflects on the quality and ethical aspects.

Chapter 5 focuses on the empirical findings. We will summarize the main discussions from the interviews and demonstrate their meaning with interesting statements from the interviewees. Chapter 6 builds upon the empirical findings and combines data analysis and discussion. This chapter also applies the key concepts from the literature review and connects these with the empirical findings. This chapter will also answer the research questions and discuss the achieved results and their implications for the case company, but also for the literature.

The degree project ends with a conclusion of the study and a reflection on limitations. Further research is also suggested.
2 Literature review

For this study the literature streams of value creation in digital platforms are relevant. It is crucial to understand how value is defined and that processes of value creation differ depending on the context. For the case company Eljun, the context is a digital service that is facilitated through a digital platform. After giving an introduction about digital platforms and value creation as stand-alone concepts, chapter 2.3 ties the previous topics together by discussing what is known about value creation in digital platforms. While chapter 2.3 only touches upon the key concepts of joint value creation to introduce the concept, chapter 2.4 explains value co-creation in-depth as it is the main theory and ground for the chosen theoretical framework that will be presented in chapter 3.

2.1 Digital (service) platform

Eljun describes itself as a digital platform that provides a payment solution for sustainable transportation. Therefore, it is essential to understand what a digital platform is and what the central elements of a platform are which is described in this chapter.

In literature, the term ‘platform’ can refer to various concepts depending on the discipline. There are two distinct prevailing perspectives in management research that are inspired by economics, and engineering design. Economics views platforms as market types (ie. multi-sided markets) (Rochet et. al., 2003), whereas engineering design views platforms as technological architectures (Baldwin et. al., 2009).

A digital platform is often described as an ‘intermediary’ or ‘facilitator’ that connects multiple actors (Trabucchi et al., 2022) and allow them to offer complementary digital products and services which is why the term digital service platforms is used in the literature as well (Mansour & Ghazawneh, 2017). Service in this context refers to the usage of skills and resources in a platform among actors to contribute to the joint process of value creation (Mansour & Ghazawneh, 2017). We see the terms digital platforms and digital service platforms in this study interchangeably.

When talking about platform business models, the terminology of ‘plug-and-play’ is used. The goal of a platform is to create a smooth process between all actors to allow them to exchange resources (Ronteau, 2023). Ronteau (2023) explains “The ease of adopting (‘plug’) and using (‘play’) is instrumental to the success of the platforms”. Depending on how many actors or sides are involved, the platform is classified as a two-sided platform or a multi-sided platform. ‘Multi-sided’ is considered the desired outcome of a platform that relies on the contributions of more than one market side (Mattila, 2021). Apart from its architectural design, a digital platform model functions similarly to a marketplace, where providers and users come together (Parker et al, 2016), and each of these actors creates value for the community on a digital platform (Han et al. 2018). Thus, the purpose of a platform is to match supply and demand, as well as facilitate their exchange with one another in a digital marketplace. Prominent examples of digital platforms are Airbnb, Uber or Booking.com.
In technical terms, a platform is essentially the infrastructure that is made up of modular services and boundary resources (Tiwana et al., 2010). Boundary resources, in general, refer to the tools and interfaces that enable interactions among different actors in the system, such as APIs (application programming interfaces) and SDKs (software development kits) (Ghazawneh et al., 2013). Boundary resources can also be of a social nature, such as regulations and incentives. For example, strict regulations for approving complementary services on a platform can decrease the motivation of potential partners (Eaton, 2015). Its purpose is to offer a range of functionalities that complementary products and services can use to operate effectively (Alstyne, 2014) as well as to facilitate their interaction and transaction with the end-users.

When digital platforms orchestrate the interaction among the various actors, they naturally undertake the responsibility of governing the ecosystem. In platform models, it is often provided by a centralized governance structure, which establishes the guidelines and regulations for how the participants should engage with each other. This includes managing pricing mechanisms, resolving conflicts and disputes, handling data and privacy, managing user identities and permissions and so on (Grilo et al., 2021). These variables might have a significant impact on how participants interact. One crucial concept that is closely connected with the governance structures is trust. According to Huber et al. (2014), trust is essential for a platform ecosystem to succeed. Most digital platforms rely on the central authority to define the governance rules. To build trust, platforms often provide transparency and security by making information available among participants through feedback and rating mechanisms.

2.2 Value and value proposition

Before talking about value creation, it is necessary to understand how value is defined. There are many different definitions of value out there, but we focus on the EU standard definition of value (Standard EN: 12973) which analytically explains the terminology by breaking down the different components that influence value. Value can be described by the equation that puts the satisfaction of customer needs in relation to the use of customer resources (see figure 2) (Lindsted & Burenius, 2003). Hence, the numerator of the equation must be bigger than the denominator to have a positive value delta.

Satisfaction of customer needs is the evaluation of how well a product or service meets the customer needs and expectations. Satisfaction can be increased by a product that solves a problem for its user or that helps in getting a job done and improve the user’s gains. Emotional factors can also increase the value for the user when positive feelings are involved during buying the product or using a service. (Lindsted & Burenius, 2003).
On the other side, the use of resources can reduce value which is why these factors must be minimized. Costs such as the initial purchase price, but also additional costs during the product lifetime or switching costs from one product to another can affect the perception of value. The same applies to time for the installation or other effort that a user must invest for its product and therefore has a negative influence on the perceived value. (Lindsted & Burenius, 2003).

Osterwalder et al. (2014) describe value proposition as “the benefits customers can expect from your products and services” (Osterwalder et al., 2014). To ensure an effective value proposition that satisfies customer needs it is essential to consider the user’s perspective and review how the product promises correspond to the actual needs and expectations. The value proposition canvas is a powerful tool to prove this context and investigate whether the product is a fit for customer needs or not. It contains two main parts which are the value map and the customer profile (see figure 3).

![Value Proposition Canvas](image)

*Figure 3: Value proposition canvas (Osterwalder et al., 2014).*

The value map (left part of the canvas) focuses on the product offering and describes in detail how the product or service creates value for the customer. The value map differentiates between three parts which are oriented according to the definition of value that we just learnt. One part describes the offering, and the other two parts explain how the product creates gains for the customer or relieves their pains. (Osterwalder et al., 2014).

The customer profile (right part of the canvas) focuses on the customer perspective and analyses the jobs that the customer aims to get done. These jobs are classified into different categories. Functional jobs are related to tasks that need to be accomplished, social jobs refer to someone’s status symbol or generally to everything that influences how others perceive a person and then there are emotional jobs and supporting jobs. Supporting jobs do not focus on the main part of value creation but occur secondarily during purchasing or consuming value. Moreover, the customer profile contains customer pains and gains which are related to a specific product or service, or generally in relation to getting the job done. These are also divided into different segments and differentiate between their severity. Pains are e.g., undesired outcomes and problems that a customer tries to avoid, but also obstacles and potential risks. Gains are also differentiated by their relevance and customer expectations. Required gains are essential for a product and necessary for its functionality. Expected gains are unspoken things that a customer expects even though it is not required for its functionality.
Desired gains provide essential value if they are met and compared to unexpected gains the customer can think of these gains. (Osterwalder et al., 2014).

Comparing the value map and customer profile, the fit between product offering and customer expectation is visible. This illustrated value helps companies to rethink their value proposition by closing gaps and improving their offerings. (Osterwalder et al., 2014).

2.3 Value creation in digital service platforms

A digital platform, as described by Alstyne et al., (2016) can be considered as a marketplace where providers and buyers interact with each other and create value through their engagement in the platform. This type of marketplace can enable exchanges between businesses (B2B), consumers (B2C), or a combination of both. This ‘matchmaking’ between actors can be seen as the basic value proposition of a digital platform. The participants of the platform do not only create value for their own benefit but also play a crucial role in contributing to the overall value of the platform they are involved in.

Ramírez et al. (1993) introduced the notion of ‘value constellation’, also known in the literature as ‘value networks’, which refers to the value creation is not only an individual endeavour but rather as an outcome of interactions among actors. This concept brings a change from the conventional view of creating value through a value chain approach to a new perspective on value creation based on the network approach (Helander et al., 2014). Lusch and Nambisan (2015) further propose that platforms are evolving towards a network-centric approach where the joint actions of network actors, rather than the features, drive the development of value. Viewed from these perspectives, the value creation within a platform likewise involves a network of actors who collaborate and integrate resources through their interactions and generate value for end-users.

Wan et al. (2017) notes that value proposition of the platform often increases with the number of users it has, due to network effects. In multi-sided markets, this value is determined by the number of products and services available to each market side. There are two different types of network effects: direct and indirect. Direct network effect presents when the value of the platform relies on the number of users in the same market side (de Reuver et al., 2018). Schilling (2002) describes it as the phenomenon where the value of one market side increases with the growing number of actors on the other side. For example, the value of the Airbnb platform increases for the renters as the platform gains more hosts.

Leveraging network effects is crucial for digital platforms to pursue growth, although one challenge that emerges in this context is pointed out by Caillaud et al. (2003), which is commonly named the ‘chicken-and-egg problem’. This refers to the arising issue where a platform requires both service providers and consumers to propose a value proposition, however, neither side of the market would be eager to join unless the other side is already established. Some strategies can leverage the network effects, including personalization of services, establishing trust mechanisms, and creating a user-friendly platform (Beinke et al., 2020).
Considering the ‘chicken-and-egg’ problem, it is the platform owner’s responsibility to define value propositions for all stakeholders involved in the platform. This means that not only the end user of the service but also the service providers need to identify a clear value proposition for themselves to get incentivized to join the platform. The mere ‘matchmaking’ benefit of a platform is often not enough to convince all stakeholders. Therefore, it is necessary to identify the individual needs of every actor and define personalized value propositions (Muzellec, Ronteau, and Lambkin 2015). Because of the occurrence of multiple actors, it is necessary to review the value proposition canvas from Osterwalder et al. (2014). Ronteau et al. (2023) depict the canvas for a two-sided platform as follows:

![Two-Sided Value Proposition Canvas](image)

The main difference to the original value proposition canvas is that the customer profile is duplicated, and the value map receives a new layout where the product offering is the central element as it is unaffected.

After reviewing the literature regarding value creation in digital service platforms it becomes clear that a basic understanding of how value emerges between actors in a platform is available. However, there is a paucity of detailed knowledge about the process of value creation and how a platform needs to be designed to create value for its actors. It would also be beneficial to understand key challenges during this process (Tura et al., 2018). These literature gaps will be addressed with our study.

2.4 Value co-creation

An increasing amount of literature draws attention to the concept of jointly created value. The concept was first introduced by Ramirez in 1999, and it was later on developed and expanded upon by the work of Prahalad and Ramaswamy (2004a, 2004b). In their work, they emphasize that co-creation revolves around the collaborative creation of value with customers (Prahalad et al., 2004a). Their perspective marked a significant shift in recognizing customers as active participants in the value co-creation process. Expanding their work even further, Vargo and Lusch (2004) introduced the term “in-use," stating that value co-creation emerges when customers use a provider's offerings. According to Grönroos et al. (2012), value co-creation is a collaborative process where firms and customers jointly create value through their interactions.

One of the models that made a noteworthy contribution to the field of value co-creation is the DART model (Prahalad et al., 2004a). The model proposes that to achieve value co-creation four aspects should be encouraged in the interaction between service providers and customers: dialogue, shared experiences, risk evaluation, and transparency. To further elaborate on these aspects, dialogue extends beyond communication and incorporates interactivity, engagement,
and a willingness to collaborate (Prahalad et al., 2004a). This aspect fosters mutual learning and shared understanding. However, achieving effective dialogue can be challenging when consumers lack access to and transparency of information (Prahalad et al., 2004a). Providing access to digital tools and services lays the foundation for meaningful dialogue. Furthermore, transparency regarding products, technology, and business systems is vital as it nurtures trust and strengthens relationships (Prahalad et al., 2004b). In a co-creation environment, the risk for all involved parties increases. Therefore, Prahalad et al. (2004b) argue that consumers who actively engage in value co-creation also bear responsibility for associated risks. In such an environment, it is essential for businesses to disclose all potential risks related to their products and services. This openness enhances transparency and trust within the co-creation ecosystem.

To explain where value is created and by whom, Grönroos et al. (2012) introduced the Value co-creation sphere model. As illustrated in Figure 5, the (real) value can be co-created within a joint sphere involving both actors, and the driving force for co-creation essentially originates from the customer's sphere rather than the providers. Hereby, the provider can only offer a potential value which can turned into real value. Vargo and Lusch (2004) claims similarly that a provider can only offer value propositions, but the realization of the value occurs when the customer engages and utilizes the offering provided by the firm. Their statements indicate the importance of grasping the interactions between the provider and the customer to understand how the value co-creation process takes place.

In addressing the aspect of interaction, Ballantyne and Varey (2006) put certain emphasis on communication, considering it a crucial element in facilitating effective and meaningful relational interactions. By fostering open dialogues, companies can better understand customer perspective and develop offerings that align with customer needs and preferences. According to Hunt et al. (2008), the facilitation of these activities such as close communication and joint problem-solving between interacting parties plays an important role in building meaningful social and emotional bonds. Moreover, Ballantyne and Varey (2006) argue that a dialogical approach, characterized by trust, learning, and adaptation, is fundamental for value co-creation. To facilitate such dialogues, they propose that it should involve educating customers on the utilization of both their own resources and those provided by the service provider. The more a customer understands about the firm's resources, the more adept they become at integrating their own resources effectively. This notion is also echoed in the work of Grönroos, who contends that customers possess a certain level of knowledge and skills required for the integration of resources and active participation in the service process (Grönroos, 2008). To
enhance value co-creation, it is necessary for firms to tap into these underutilized resources. Therefore, providing clear instructions for their use during the service process and enhancing their knowledge on how to contribute more effectively to the firm's resources is crucial.

Ballantyne et al., (2006) put forth a comprehensive framework for describing three activities that enable value co-creation between involved parties. These activities are denoted as "relating," "communicating," and "knowing". Firstly, the model touches upon the role of relationships in providing a solid foundation for the generation and utilization of knowledge resources (relating). Secondly, it explores communicative interactions as a means to cultivate and strengthen these relationships (communicating). Lastly, it highlights the significance of possessing the required knowledge to enhance the customer's service experience (knowing).

While extensive research has focused on value co-creation between the customers (or end-users) and providers, we recognize two noticeable gaps in value co-creation literature. Firstly, there remains an understanding of the dynamic of value co-creation between organizations and their non-customer stakeholders beyond this current scope. In that regard, Frow et al. (2021) calls for researchers to identify and explore value co-creation opportunities among a broader range of stakeholders. Secondly, there is a lack of research on the value co-creation processes within digital platform settings. Regarding the digital platforms, where networks of actors are highly complex and interconnected, it is essential to incorporate the perspectives of actors who provide complementary services, as they play integral role in the functioning of digital service platforms. Moreover, their motivations and barriers also remain insufficiently addressed in the literature. While Ajmal et al.'s (2023) study examines the motivators and barriers to value co-creation among actors, there still needs additional research in this area, particularly within the context of digital platforms. Addressing these identified gaps is important to gain a more comprehensive understanding of value co-creation dynamics in digitally enabled business environments.
3 Theoretical framework: Service-dominant (S-D) logic

Although the concept of value co-creation has been under discussion for decades, the service-dominant (S-D) logic is still serves as the most robust theoretical framework that offers a holistic, dynamic, and systematic understanding of how contextual value is co-created within a diverse network of actors (Lusch et al., 2020). Therefore, our study aims to explore the facilitation of value co-creation by establishing a meaningful theoretical connection with the foundational principles of SD logic.

Service-dominant logic has emerged as a theoretical lens for rethinking the role of economic exchange and value creation among actors. Up until then, marketing literature has predominantly been influenced by goods dominant orientation which views value as inherently embedded in tangible units of outputs and sees the delivery of these outputs as the primary basis of exchange (Vargo et al., 2020). In opposition to that, pioneered by Vargo and Lush (2004), S-D logic introduces a paradigm shift that considers service as the fundamental basis of exchange, in which “service” is characterized as the application of one’s knowledge and skills for the benefit of others or oneself (Akaka et al., 2014).

By shifting the understanding of value from a mechanistic perspective that is centered on the goods being transferred from one actor (provider) to another (beneficiary), SD logic adopts a dynamic, relational and phenomenological view of value. To further emphasize this, S-D logic suggests that the value emerges and evolves in the process of the service (Grönroos, 2011), with the involvement of multiple actors (e.g., firm, customer and other actors) playing a role to enable mutually beneficial service exchange, often referred to as service-for-service exchanges. This indicates that the essence of the service exchange lies in enabling reciprocal value creation (Lusch et al., 2004).

In their work, Vargo et al. (2008) discuss the multifaceted nature of value, unraveling three dimensions that underpin our understanding: value-in-exchange, value-in-use, and value-in-context. Value-in-exchange refers to the nominal value assigned to a good through a
transaction, which aligns with a traditional economic view. However, the discourse of Vargo et al. (2008) extends beyond this view of a static exchange, highlighting the significance of value-in-use which implies that value is not inherently embedded in the good, but it is essentially derived from the integration, application, and utilization of a given good. Thus, it is vital to SD logic that value is not only determined by the features of goods but rather dynamically co-created during the use and experience of the goods (Lusch et al., 2015). Vargo also introduces the concept of 'value-in-context', which expands on value-in-use by acknowledging that the value derived from the use of a certain resource is shaped by a particular context (e.g., time, place, and social setting) (Akaka et al., 2014; Grönroos et al., 2013). In other words, it recognizes the same resource may yield varying value perceptions depending on the circumstances in which it is used.

A fundamental aspect of S-D logic is its inclusive view that considers all social and economic actors as resource integrators. This view acknowledges that actors, whether customers or firms, have dual roles as both service providers and beneficiaries. These further blur the conventional distinction between “producers” and “consumers” in value creation. However, it is important to note that this generic actor view does not imply that all actors are homogenous, but rather it entails that all actors are actively engaged, and their interactions contribute to the co-creation of value (Lusch et al., 2016). Furthermore, Lusch et al. (2004) recognizes the integration of two types of resources: Operant and operand resources. They argue the superiority of operant resources (knowledge, skills, and competencies) as they have the ability to actively influence other resources and drive value creation in contrast to operand resources (money and goods) which are passive and require action to generate value. However, despite highlighting the fundamental role of operant resources in exchange, they also emphasize the mediating role of operand resources in the process of value creation.

One of the central premises of the S-D logic is that value is consistently co-created through the actions and interactions among multiple actors. This perspective brings into focus the profound concept of "value co-creation." To further enhance an understanding regarding the social aspects of value co-creation S-D logic introduces a service-ecosystems view. This perspective, as defined by Lusch et al. (2016), represents a “relatively self-contained, self-adjusting system of resource-integrating actors connected by shared institutional arrangements and mutual value creation through service exchange”. This view acknowledges the generation of value which unfolds over time within a networked web of actor interactions (Chandler et al, 2011; Lusch et al., 2011). Furthermore, it emphasizes the significance of institutions and institutional logic within the intricate systems of value co-creation and service exchange. These institutions play a critical role in shaping the social frameworks, including values and norms, that govern the interactions and exchanges among actors in a service ecosystem. It is worth noting that institutions not only enable but also restrict the integration of resources by influencing how value is both collaboratively created and assessed, as pointed out by Akaka et al. (2012).

With the advances in information systems (IS), business networks are increasingly expanding beyond their conventional limitations of time, space, and organizational boundaries. Through the application of digital technology, firms can facilitate a diverse range of economic and social
actors in not only exchanging resources but also integrating them in digital environments, rather than only relying on physical settings (Blaschke et al., 2019). This holds important implications for the role of IT when exploring value co-creation. Lusch and Nambisan (2015) recognize that IT artifacts play a dual role in service ecosystems. They act as enablers for service exchange among actors (operand), while also serving as catalysts for value co-creation activities and processes (operant) (Lusch et al., 2015). Regarding the digitally enabled service ecosystems, Blaschke et al. (2019) propose the notion of digital value co-creation networks from the lens of SD Logic. In their work, such ecosystem is characterized by 3 key elements: (1) it relies on a digital infrastructure, including technology, data, and physical components, (2) it aims to provide digital services through dynamic value co-creation among orchestrators, third parties, and beneficiaries, and (3) it is composed of a network of actors that adjust and evolve to meet the requirements of service beneficiaries.

Within the context of value co-creation, the concept of value proposition holds great importance in SD Logic. It emphasizes the interconnectedness of actors within a service ecosystem through value propositions (Lusch et al., 2008). This perspective recognizes that firms cannot create value propositions in isolation, but they can only offer them. The actual value creation of value occurs during the in-use experience which is driven by customer interaction and contextual factors. To further highlight these statements, Karpen et al., (2012) state that operant resources enable firms to present value propositions. This implies that customers actively participate in the process by contributing their own resources (such as knowledge and skills), which influence and shape the realized value.

For a successful application of S-D logic, Vargo and Lusch (2008) propose two key organizational capabilities for firms to embrace: collaborative and absorptive capability. Collaborative capability denotes an organization's ability to engage openly, truthfully, and symmetrically with other actors in the network (Lusch et al., 2008). Absorptive capability, on the other hand, concerns the organization's ability to assimilate new information from the environment from other actors in the network (Lusch et al., 2008). This necessitates maintaining an open-minded attitude towards participating actors and creating an environment that promotes sharing of ideas, concerns, suggestions, and constructive criticism among actors. Through these sharing practices, not only does the firm gain valuable insights, but the other actors in the network also benefit from the exchange of knowledge. This also underlines the one of the distinct characteristics of S-D logic, its perspective on the participating actors in the network as operant resources (Lusch et al., 2006) that have the ability to influence improving of service experience and desired solutions. According to Vargo and Lusch (2006), this perspective leads to some important principles, such as the need to invest in long-term relationships with other actors and promote the better quality of service flows. Additionally, it indirectly emphasizes concepts like symmetric relationships, transparency, ethical approaches to exchanges, and sustainability.
<table>
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<tr>
<th>Foundational premises of service-dominant logic</th>
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<td><strong>FP 1</strong></td>
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<td><strong>FP 9</strong></td>
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<td><strong>FP 10</strong></td>
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Lusch and Vargo (2004) presented a list of 10 foundational premises within the framework of service-dominant logic. For our research, we will specifically focus on FP4, FP6, FP8, and FP10. Among these, FP4 advocates the primacy of operant resources and states that a firm's own and available operant resources, i.e., knowledge and skills, rather than its operand resources, i.e., goods and services, play a key role in the firm's competitive advantage. FP6, on the other hand, states that there is no value until the offering is used by the customer. More specifically, it claims that value is not an inherent attribute of the service offering itself but rather emerges through the use by customers. FP-8 places the customer at the center of value creation and indicates that value is created collaboratively with customers, rather than for customers, emphasizing its relational context. Finally, FP-10 focuses on the phenomenological/experiential aspects of value, which are determined by the service beneficiary. In this context, the term "beneficiary" indicates the generic nature of the actor (Lusch et al., 2014). Here, the value cannot be predefined by a service provider, and the value of a service is always subject to the contextual factors of the beneficiary.
4 Methodology

This chapter aims to explain the strategy of how the study is approached by the right choice of research design and method to tackle the research questions.

The first chapter describes the research design of the study. After that, the research method is explained with a focus on data collection and sampling. Chapter 4.3 gives insights into the interview structure by explaining the interview guide. The following chapter explains how the data will be analysed. We conclude the methodology chapter by reflecting on the quality of the research and reflect on ethical aspects that need to be considered during the research.

4.1 Research design

The study aims to better understand the process of value creation, more precisely the role of value co-creation in a digital platform through the lens of S-D logic.

Value creation is complex and highly dependent on the context and by using S-D logic as a theoretical framework, the study can become intangible by only investigating from a theoretical perspective. This is why real-world examples are crucial to better explain the phenomenon of value creation and in this way contribute to the literature. To fulfil this practical approach, a case study research design is chosen.

We decided on a single case study which allows us to deep dive into the specific problem. In this way, we can receive in-depth insights and get to the bottom of the problem which is more valuable for us instead of investigating on the surface multiple cases. For the case study, we chose to work with the start-up company Eljun. By the choice of the company, we emphasized the type and maturity of the business model. Eljun is a good fit with their business model of an innovative digital payment platform as we specifically want to understand value creation within digital platforms. Furthermore, we expect to face comprehensive insights including real-world obstacles when working with a start-up company that has not yet launched and built up a functioning platform. Actors who are not yet tied into a defined process and biased towards a platform experience are more reflected which helps us to understand the whole process of value creation. Eljun is in an early pre-launch stage where it is crucial to define how value should be created in the platform as this pave the way to a success business model. By accompanying Eljun through this stage and experiencing the changes and discussions first-hand, we aim to receive a broad perspective that helps to explain and illustrate theories.

Considering the formulation of the research questions, by using ‘how’ and ‘what’ as the main question words (compare chapter 1.3) demonstrate the suitability for a case study design (Yin, 2018). These questions aim to generate in-depth explanations of a problem.

We draw the boundaries of the case study around the company’s business model for a time frame of four months from May to August 2023. This means all actors who are potentially part of Eljun’s platform are considered for the study which includes Eljun as platform owner and all actors who offer services and are therefore essential parts of the platform and the
contribution of value creation for the end user. Hereby, we focus on the core part to generally understand the position of involved businesses. Involving the end user would be the next step but is neglected in this degree project as it requires a stand-alone study. How exactly we plan to conduct the research is covered in the following chapter.

4.2 Research method

As presented in the previous chapter, the research strategy is based on a typical case study design and follows a qualitative approach. Important characteristics are that the study is intense with a focus on a single case to explain a context in detail. In the following, this chapter aims to present the selected research method including sampling and how data is collected.

For this study, primary research will be conducted which means we collect data through a qualitative research method. Qualitative semi-structured interviews are chosen as the preferred method for data collection. Through interviews, it is possible to generate a lot of data, to react to interviewees' needs, and to discuss certain aspects in-depth which is particularly important in the context of value creation because it often requires multiple questions to get to the core problem and uncover intrinsic needs. Flexibility is also necessary because we talk to different actors who will have diverse backgrounds and concerns. To not miss out on any important information it is essential to adapt to individual situations during the interviews. However, it is also expected to have common topics e.g., in similar branches. Furthermore, some structure is needed to guide through the interview and keep the initial research questions in mind to not deviate too much from the central topic. Moreover, interviewees should have some preparation time for the interview as we expect the knowledge about Eljun’s platform to be very different from actor to actor and most of the time limited as there is not an active cooperation yet. This is why semi-structured interviews with a pre-defined interview guide are an effective choice for collecting data.

Besides how data is collected, it is crucial to consider the data source. Sampling needs to be done purposively in relation to case studies to receive appropriate results (Bell et al., 2019). The sampling group for this study are potential actors of Eljun’s platform including Eljun as the platform owner itself. To create a comprehensive picture, we aim to interview at least one organisation per sector. The representative from every organisation should be a person who is empowered to make decisions and has the expertise to evaluate business models and potential cooperations. Therefore, we aim to talk to managers, business developers, or similar. To reach these persons, Eljun provided a list with a total of 20 companies and contacts they already have been in contact with in the past to introduce their business idea and win participants for their platform. Most of the contacts are from more than six months ago and no collaboration has happened until today. Therefore, there is a risk of limited willingness to participate in an interview. To receive a higher response rate, the initial contact for an interview invitation is done by Eljun directly. The growth manager sent out an e-mail with some background information and highlighted the chance to improve Eljun’s business model for the sake of a potential partnership which should give incentives to actors to agree to an interview. Then, we followed-up on this with another e-mail. In the end, we arranged seven online interviews with external companies as they are spread over Sweden and three internal interviews with Eljun. As preparation for the interview, we provided the interview guide and a basic presentation
about Eljun’s business model. The detailed procedure of the interview will be described in the following chapter.

4.3 Interview design

As introduced in the previous chapter, the research method for this study is qualitative semi-structured interviews which were conducted online on Zoom or Microsoft Teams. The interviews took around one hour each to enable in-depth discussions. Most of them took place end of June and the beginning of July. Every interview was supported by an interview guide which differ from whether it is an interview with external actors or with Eljun. Both interview guides are addressed in the following paragraphs.

Every interview starts with an introduction where the aim of the interview and the frame conditions are explained. We also ask for permission to record the interview to create the transcription automatically after the session. This makes it easier to analyse the data especially such long interviews when it is barely impossible to write all the details down. Moreover, in qualitative research, it is sometimes important to capture not only the content but also how certain phrases were formed by the interviewee (Bell et al., 2019). After going through the formalities, the official part of the interview starts. We decided that both of us join the interview, but only one person should act as the moderator and be responsible for guiding the interview and asking most of the questions to avoid confusion. While the person who guides the interview tries to ensure that all topics from the interview guide are covered, the other person can listen accurately to ask more ‘between the line’ questions to uncover contexts that otherwise get lost. Furthermore, it is helpful to have a back-up person in case technological issues arise or the internet connection becomes unstable.

The interviews with Eljun’s employees are structured according to three overall topics (see figure 8). The first is called ‘general’. This section covers background information such as the role of the interviewee to ensure that the interviewee is a suitable participant for the study. Further questions aim to understand Eljun’s business idea and how their business model looks like in detail. There are many open questions about Eljun’s revenue stream and what kind functions the application contains for end customers. Therefore, we hope to close all knowledge gap and receive a comprehensive overview of Eljun’s business model.

The second theme focusses on Eljun’s value propositions for the different actors and is directly connected to the first research question. By asking related questions we want to understand how Eljun evaluated the value of the platform for the different actors that they plan to cooperate with in order to formulate the value propositions.

The last theme is ‘interaction within the platform’. Here, we specifically want to focus on how Eljun plans to integrate actors in the platform their work with each other and what opportunities exists foster value co-creation in the platform.
The interview guide for the actors follows a similar structure. At the beginning of the interview the interviewee will be asked if he/she is familiar with Eljun’s business model. In any case we repeat the main aspects of the business idea and illustrate these using some slides to ensure that everyone has the necessary knowledge to answer the further questions. The interview guide contains questions regarding three main areas (see figure 9). First, some general questions to receive background information about the company, and the role and expertise of the interviewee to ensure that the interviewee is a suitable participant for the study. Furthermore, we want to know about the first contact with Eljun and their first thoughts about the business model to start with some questions that are easy to answer and encourage the interviewee to feel comfortable in the interview setup. The second part of the questions are regarding Eljun’s value proposition for their company. These questions aim to understand how the interviewee perceives the benefits that come along with joining the digital platform, but also the negative aspects that hinder a potential collaboration. Talking about these aspects should generate data to answer the first research questions. The third part focuses on the interaction with other actors in the platform. We want to understand what kind of interactions might be possible in the platform and if these interactions are beneficial and desirable for the actors to answer the second research question. For the third research questions which should discuss barriers and motivators for value co-creation we do not have formulated specific interview questions as we expect to identify certain aspects when talking with the actors in general about the business model and their desires and worries to join.

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<tr>
<th>Part I – General</th>
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<tbody>
<tr>
<td>1. Could you shortly describe your company?</td>
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<tr>
<td>2. What is your role in your company and for how long have you been working there?</td>
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<tr>
<td>3. When and how did you hear about Eljun for the first time?</td>
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<tr>
<td>4. What are your first thoughts about Eljun’s business idea?</td>
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<th>Part II – Value proposition</th>
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<tr>
<td>5. How do you perceive Eljun’s current value proposition for your company?</td>
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<tr>
<td>6. How could Eljun improve the value proposition? What is important for you?</td>
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<tr>
<td>7. What potential benefits do you expect gaining from participating in the platform?</td>
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<tr>
<td>8. How do you see your chance to win actors for your platform?</td>
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<th>Part III – Interaction within the platform</th>
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<tr>
<td>9. What are your thoughts about being part of Eljun’s platform together with other actors?</td>
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<tr>
<td>10. What kind of interactions with other actors can you imagine within the platform?</td>
</tr>
<tr>
<td>11. What are your expectations about potential interactions with other actors when joining the platform?</td>
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</table>
All the questions in the interview guides are formulated consciously broad and general to keep flexibility. Before the interviews we could not know what kind of aspects are important for the interviewees which is why we did not want to limit ourselves by creating a too detailed plan. The order in which the questions are asked is completely free. In most cases, it is not possible to keep a structure because the interviewee will mention multiple aspects at the same time which is why it is necessary to adapt to their responses by asking additional questions and building on answers to open new subjects. Furthermore, we use information from previous interviews to test their relevance for other actors in following interviews.

4.4 Data analysis

The next step after conducting data is to analyse it. As we are dealing with a large amount of textual and unstructured data and the purpose of our research questions is to identify among others perceived values and common opinions, we decided to do a thematic analysis (Bell et al., 2018). The procedure of the data analysis will be described below which is aligned with the different steps introduced by Braun and Clarke (2006).

That all interviewees agreed to the recording of the interview facilitated the data analysis as we could transcribe the interview automatically through Microsoft Word without worrying about missing out on important aspects. We listened to all interviews again while reading the transcript and highlighted crucial information that are referred to our research questions to get familiarized with the data.

The next step is the initial coding. All the statements that were highlighted before were copied in a excel file below each other together with the name of the interviewee to ensure that they can be recognised again. After transferring all interview statements, we wrote codes next to the data that highlight the content of the statement to make it easier to identify their content and identify similar ones.

After going through all the data again, the actual work of thematic analysis begins by searching for themes. This will be done by identifying repetitions, similarities, and differences between the codes in order to define broader themes that merge codes. These themes group all recurring statements that discuss a similar topic that is relevant for the study. This process of finding patterns by grouping repeating data is the main characteristic of thematic analysis (Bell et al., 2019). If the theme is too large, we also created sub-themes to generate a more precise overview of the crucial parts to highlight their importance. During this process there might occur codes that are only named once or codes that are irrelevant to the study. These will be eliminated to receive cleaned data.

For the coding part we decided to code the data twice to separate the first and second research question. Perceived values and value co-creation are two related topics that overlap. This is why we expect that codes can fit to different themes depending on the context. By splitting the analysis for the respective research questions, we ensure that all statements are considered for the analysis. For the third research question we do not do a separate coding because barriers and motivators are more a conclusion that can be derived after answering the first two questions.
4.5 Evaluation of trustworthiness

To verify the quality of the research we follow the approach of Lincoln & Guba (1985) and Lincoln & Guba (1994) who introduced the criteria for trustworthiness to evaluate qualitative research. These criteria are credibility, transferability, dependability, and confirmability (Bell et al., 2019).

The first criterion is **credibility** of the findings. This refers to conducting research according to good practices and to incorporate the member of the study to validate the correctness of the interpretation and the analysis of findings (Bell et al., 2019). To achieve credibility, we aim for an honest and open conversation with interviewees. We realised that actors were hesitant to talk to us as they thought we directly work with the case company. Therefore, we communicated clearly in the beginning of the interview that our study is from an academic interest and that Eljun is the mere case study for the thesis. Furthermore, we offered to share our thesis with the interviewees before publishing it to verify the findings and receive respondent validation.

**Transferability** is the second criterion that is related to external validity which describes to what extent the findings are generalizable which is generally limited for qualitative studies due to their specific context (Bell et al., 2019). Alternatively, Guba and Lincoln (1985) call for the need of a ‘thick description’ to provide in-depth explanations for other researchers. We put a strong emphasis on describing the case study or rather the business model in our thesis to create transparency. In the beginning of the thesis, we already provided a broad overview of the company according to the details we received from the website and initial talks to the company. For an in-depth presentation of the case company, we used multiple interviews to receive a comprehensive overview that will be presented later in the study together with the empirical findings. Furthermore, we decided to split empirical findings and data analysis into two separate chapters and apply theory only in the data analysis chapter, to have more space to describe the interview findings without confusing the reader by related the findings to the theory. This is important to us because we want to be transparent about the interview content and the interviewees insights that can be meaningful for further studies.

**Dependability** follows an ‘auditing’ approach to demonstrate which is the third criterion of evaluating trustworthiness (Bell et al., 2019). We used the benefit of being in a research team of two people which allows us to discuss findings and compare our interpretations to increase reliability. With the decision of conducting every interview together with one person being the moderator and the other person being mainly the observer and listener we can decrease misunderstandings and misinterpretations. Beyond that we decided that the effort is not in proportion with the benefit to write down all preliminary results and thoughts to provide an audit for other readers. However, we explained every step and why we argued in a specific way which demonstrates the trustworthiness of our work.

The last criterion that needs to be discussed is **confirmability**. This describes the risk of being subjective because of the influence of the researcher’s own values. Being fully objective is impossible to achieve (Bell et al., 2019). During our study we interpret data and make our own conclusion which contains the risk of being not objective. With the awareness of the existence
of biases and subjectivity this risk can be decreased but not fully eliminated. During conducting the interviews, we try to use open-ended questions and avoid leading questions to not influence the interviewee which is sometimes challenging due to lacking experience.

### 4.6 Ethical considerations

An important aspect in research that needs to be considered is to respect ethical principles (Bell et al., 2019). For this purpose, Diener and Crandall (1978) defined four main areas where issues can occur. These are harm to participants, lack of informed consent, invasion of privacy, and deception. As we do not intentionally disregard ethical principles during our thesis, we neglect the discussion of deception and focus on the other three potential issues.

Any **harm to participants** must be avoided. We tried to make the process around the interviews as pleasant as possible. This starts by inviting participants to our interviews and trying to convince to join with good arguments, but never force or harass them to participate. We decided that two follow-up e-mail is acceptable when we do not receive an answer. In this e-mail we tried to explain the reasons and benefits of the study and express our appreciation for their time, but never try to make them feel guilty to not contribute. During the interview we ensured to create a fair and relaxed atmosphere to not stress the interviewee. We assured the interviewees that it is okay to not answer every question if they feel uncomfortable or getting in conflict of interest with their company or private statements.

We already touched upon **lack of informed consent**. Before the interviews and also in the beginning we try to provide all necessary information, which cover why we conduct research, what the study is about, who we are, and how we are planning to conduct the interviews. We also provided an interview guide beforehand to be as transparent as possible and allow for some preparation. Therefore, all interviewees were aware of the general conditions and made a conscious decision to participate in the interview. Moreover, we shared our plan about the handling and storage of data in order to provide all information to the interviewee whether they want to be recorded or not. We ensured that the recordings and transcribes will not be shared with others and deleted in a timely manner after publishing the thesis. We also informed that only the company name will be used, but private names will not be considered to respect privacy. Hereby we also cover the main aspects of **invasion of privacy** which is closely related to lack of informed consent (Bell et al., 2019).
5 Empirical findings & analysis

In the following chapters, the findings from the interviews are presented. The chapters are structured according to the research questions and contain the key statements of the respective topics.

The following table provides an overview of the conducted interviews. In sum, we could arrange ten interviews. Every type of actor is represented: public transportation, e-scooters, EV charging stations, car sharing, employee benefits providers and Eljun itself. The different actors are described in the paragraphs below the table to understand their role and significance for the platform.

<table>
<thead>
<tr>
<th>Abbrev.</th>
<th>Actor</th>
<th>Initials</th>
<th>Company</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>O1</td>
<td>public transportation</td>
<td>H. K.</td>
<td>Region Stockholm (SL)</td>
<td>Business Developer</td>
</tr>
<tr>
<td>O2</td>
<td>public transportation</td>
<td>H. A.</td>
<td>SJ</td>
<td>Product Manager</td>
</tr>
<tr>
<td>O3</td>
<td>public transportation</td>
<td>J. D.</td>
<td>Skånetrafiken</td>
<td>Business Developer</td>
</tr>
<tr>
<td>O4</td>
<td>e-scooter, e-bikes</td>
<td>C. B. J.</td>
<td>Dott</td>
<td>General Manager Sweden</td>
</tr>
<tr>
<td>O6</td>
<td>EV charging</td>
<td>A. H.</td>
<td>Vattenfall</td>
<td>PSO Roaming</td>
</tr>
<tr>
<td>O7</td>
<td>EV charging / car sharing</td>
<td>B. P.</td>
<td>OKQ8</td>
<td>Business Developer</td>
</tr>
<tr>
<td>E1</td>
<td>Eljun</td>
<td>A. M. L.</td>
<td>Eljun</td>
<td>Growth manager</td>
</tr>
<tr>
<td>E2</td>
<td>Eljun</td>
<td>T. S.</td>
<td>Eljun</td>
<td>CEO</td>
</tr>
<tr>
<td>E3</td>
<td>Eljun</td>
<td>F. B.</td>
<td>Eljun</td>
<td>CTO</td>
</tr>
</tbody>
</table>

Figure 10: Overview conducted interviews (Source: Own work).

Public transportation:
Governmental companies are owned by the different states of Sweden and operate the local public transportation. Skanetrafiken is the local train operator in South Sweden (region Skane) and SL operates within Stockholm’s region. Both companies offer train and bus services within their regions. SJ is Sweden’s market-leading train operating company. They offer domestic but also interstate rail traffic services between Norway and Sweden.

E-scooter:
Dott describes itself as a micro-mobility company that operates rentals of e-scooters and e-bikes in Europe. As a Dutch-French company, their market presence is especially high in the Netherlands and France, but they also aim to grow in other European markets such as Sweden (O4,2023; dott,2023).

Car renting:
OKQ8 is known as one of Sweden’s largest fuel companies, but they also offer complementary services at their fuel stations and beyond that are connected to sustainable mobility e.g., customers can rent vehicles at OKQ8’s stations (OK-Q8 AB, 2023).
**EV charging stations:**
Besides car renting, OKQ8 also offers EV charging for their customers that is located at about forty of their fuel stations. Beyond that, they sell charging boxes at cooperations and private households. (OK-Q8 AB, 2023).

The Swedish company Vattenfall operates more than 40,000 charging points in Northern Europe and holds one of Europe’s largest charging networks. In Sweden, they partner with other companies to provide public charging stations across the country. Besides public stations, Vattenfall offers charging stations for private households and businesses (Vattenfall, 2023).

**Employee benefit providers:**
Benify is the market’s leading global benefits and total rewards platform. The Swedish company works together with more than 1600 companies and thus has access to more than 2 million employees worldwide. Benify unifies the entire process of benefit enrolment and payment. This means that employees whose employer works with Benify can access Benify’s desktop or mobile application to search for benefits. These benefits are subsidized by the employer which means that employees receive a discount for their next purchase or they can benefit from a recurring grant in the form of a subscription that gets automatically reduced from their payroll. If employees want to enrol into a certain benefit, they will get forwarded to the suppliers’ side to redeem the. (Benify, 2023). Joining Benify’s platform is free of charge for suppliers of benefits. The revenue is generated through the companies that participate in benefit programmes. They pay a fee per employee who uses the platform. (EB, 2023)

5.1 **Provided value from platform owner’s perspective**

The case study description in the first chapter already gave an overall overview of Eljun’s business model. Adding on this information, this chapter focuses on the insights from the interviews which in detail describe how Eljun evaluates its business model and the provided benefits for its actors and how they want to facilitate the cooperation in the digital platform. We conducted interviews with Eljun’s most relevant employees who drive the development of the start-up company forward. These include the CEO and CTO who are the founders of the company and the growth manager who is responsible for winning companies to join the platform. We conducted multiple interviews with Eljun as the business model still evolves which is why some conditions (technical integration, revenue streams etc.) have changed over time and might change again in the future. We are only presenting the latest information.

**Values for end users**
Even though this study focusses on the network of the actors and neglects the end users’ perspective, they are crucial for the value proposition of all actors and therefore need to be highlighted in this section. The end user can be seen as the main recipient of value through the digital platform and therefore, connects all actors. Eljun describes its digital platform as a unified system that facilitates payments for sustainable transportation.

End users benefit from making payments through one place (Eljun’s application) without changing the interface. This is possible through two API integrations. The first API integration allows opening an operator’s website without leaving Eljun’s application. The common website opens in the same window and allows the user to finish the booking process as usual.
The second API connection is necessary for the check-out process on the operator’s site. The user has a new payment option next to the already common ones like Swish or paying by credit card. This new option is visible through an Eljun button that signals that the digital wallet can be used for the payment. Pressing Eljun’s payment button automatically connects to the user’s digital wallet and finalises the payment. Eljun identifies the main user benefit from having the same payment process for all kinds of transportation options without leaving the Eljun application. Eljun’s CTO describes this as “an effortless and seamless process” (Eljun, 2023). It needs to be addressed that Eljun currently examines another option besides the API integration (Eljun button) which is the Eljun card. With an Eljun card, the payment can be handled as a normal credit card. The user only needs to put in the card information.

Besides this main functionality value is created through two different account options. The basic account is free of charge and therefore has a low barrier for users to create one. The premium account requires a fee (the amount is not defined yet) but has additional options such as a family wallet. This means multiple users can share money and use the same balance for their payments.

The above-described benefits apply to all users. Some employees whose employers work together with a benefit programme such as Benify gain additional value. Eljun’s vision is that employers subsidize sustainable transportation by arranging a recurring monthly top-up on their employee’s wallets. This money can be spent on any kind of transportation that is available in Eljun’s app. These incentives shall push the use of sustainable transportation by having a paying and booking process that is facilitated by Benify.

**Values for employee benefit providers**

The main value for employee benefit providers is that the cooperation with Eljun automatically enables access to the main transportation companies. Instead of working on single agreements with them, Eljun bundles the offering through their application which makes it an interesting offering for employers and their employees. Therefore, Eljun considers themselves an attractive company to work with. Furthermore, through conversations with employee benefit providers, Eljun identified that ESG reporting for employers is challenging because of the lack of possibility of tracking employees’ spendings. An ESG report covers the company’s impact within the areas of environmental, social, and governance (PwC, n/a). Blockchain makes traceability possible and Eljun can provide these data to the employee benefit providers who can satisfy their customers (employer) with additional insights that can be used for the ESG reporting.

**Values for operators**

The main benefit for operators to join the platform is gaining new potential users without additional costs and effort. The cooperation with employee benefit providers and Eljun as central actors between them enables automated interactions with businesses and access to a huge potential user base. This available user base and employers who subsidise sustainable transportation will lead to an increased usage of the operators’ offerings. Eljun’s co-founder describes the company as “the operators’ best friend” (E3, 2023). There will be a commission fee for operators to cover the cost for the technical integration, but this should be a similar amount such as conventional credit card processing fees that are charged by companies like...
Mastercard or Visa. In case the Eljun card will be implemented the fees for operators might be higher because cooperation with a credit card provider is necessary. As mentioned before, this option will currently be evaluated by Eljun. However, the CTO evaluated this option to be more expensive because the credit card processing fee would get added to the commission fee as a “middleman is involved”. The complexity and required effort of implementation are about the same. A negative aspect would be the rigid and non-flexible structure of the credit card providers which makes a difficult to find a suitable partner for the innovative payment platform. Right now, both options will be technically proved.

5.2 Perceived values within the service platform

This chapter refers to the first research question and discusses how actors of the service platform perceive value. Based on the conducted interviews with operators and employee benefit providers, we identified multiple themes resulting from the thematic analysis and present these below in separate paragraphs. Moreover, we discuss influencing factors that affect the value proposition of Eljun as platform owner towards its stakeholders.

Technology

Blockchain: One part of the interview focused on the technology of the platform, more precisely blockchain, to figure out what role the type of technology plays for the interviewees. It emerges that most of the operators are not aware of the potential benefits of blockchain technology. The interviewees we talked to lack the technical knowledge to evaluate the technological aspects of the platform solution and to differentiate between the usage of blockchain and other IT solutions. Some operators express themselves critically towards the new technology and tend to resist it due to a lack of experience and uncertainties involved. Public transportation companies mentioned that they are reserved and hesitate to work with blockchain technology and prefer working with “proven solutions that are widely used and understood” (O1, 2023).

In contrast to the operators, the employee benefit provider identifies a potential value due to blockchain technology. They argue that blockchain makes it easier to trace and track customer data. This data can help their customers (employers) to do their ESG reporting. Employers are interested in knowing how much money their employees spend on sustainable transportation which can be done through blockchain technology.

Technical integration: To enable the connection between Eljun and its actors technical integration is necessary. How this integration looks like is not yet defined as Eljun still evaluates the different options on how the customer can process the payment which can either be done through a button by an API integration from the actors’ website to Eljun’s wallet or an Eljun card. Because of this existing uncertainty, we asked the actors about both options and their general experience with collaborating with other companies.

All operators agreed that the technical integration means the biggest ‘pain’ for them to join the network. O6 underlines “when joining these networks, our main concern is the setup […] that needs to be simple for us” (O6, 2023). Every interviewee connected joining a platform with a
complex technical integration that requires time, money, and resources. Depending on the type of integration the degree of complexity is rated differently by the interviewees. A full API integration where the customer can pay through their Eljun wallet on operators’ websites or apps is rated as the most complicated solution and therefore, the barrier to join is the highest. A one-side API integration where the customers get forwarded from Eljun’s app to the operators’ websites is assessed as less complicated but still means effort for the companies to implement. The less complex solution would be a credit card setup which can be compared to Apple pay which is the fastest and easiest way because operators already know the setup from conventional card payment from cooperations with Visa and Mastercard.

The employee benefit provider agreed that most issues with partner companies arise because of the technical integration. However, EB sees the issue normally on the side of the supplier of benefits such as Eljun. For EB itself the technical integration is not an issue as it is their daily business to connect employers with suppliers of benefits. Therefore, technical integration is nothing the company worries about.

From the technical point of view, EB highly values the connection with Eljun as a middleman instead of cooperating with the operators directly as they know about the involved challenges when working with public companies. Therefore, they appreciate potential cooperation with Eljun to circumvent issues that would arise during direct cooperation with operators. This context is also confirmed by one of the public transportation companies “I really like the approach that the employee benefit programmes talk to Eljun instead of directly talking to PTA (public transport authorities) as it reduces the complexity a lot because a direct integration is not necessary […] it takes out the technical hassle” (O3,2023).

**Network synergies**

**Winning customers:** This is named as the main value receiving from the participating in Eljun’s platform. EB sees a huge potential to work with Eljun to provide their customers (employers) and their employees with a broader offering. By cooperating with Eljun EB wins directly multiple mobility companies that complement the portfolio of benefits. It is especially attractive because public transportation and micro-mobility are daily services that employees use. On the other side, operators benefit from the existing user base that employee benefit programmes can provide which means new potential customers for them. According to the operators, these customers are particularly interested when the employer subsidizes public transportation to win recurring customers and thus obtain customer retention.

**Reach customers:** To compete in the market operators try to continuously identify new channels where they can sell their services. O3 explains that working with digital resellers is one possibility to increase the reach and the use of public transportation. Combi-tickets should help to achieve this e.g., concert or sport event tickets include the train ticket. Eljun is another option to increase reach says O4 “On a strategic level, what kind of commercial gain can we get from a partnership with Eljun - I would say reach is the first one that comes to my mind.” (O4,2023.). O7 states losing customer data as a negative aspect related to using external channels. They prefer to drive sales through their own channels to not lose important customer
information that captures the customer behaviour such as how customers interact with the service and what they buy.

**Lack of certainty**

They are many uncertainty factors for the actors involved that Eljun has either not defined yet (general conditions) or that are not predicable at this stage which is why all actors are hesitated to commit themselves to join Eljun’s digital platform. O4 makes clear “[…] but the short-term benefit versus cost-effort. That’s a little bit unclear and needs to be tangible.” (O4,2023.)

The first uncertainty factor is the costs. Operators need to know how much the commission fee is and if there are any other fees involved such as possible card processing fees. The public transportation companies highlight that everything above a usual credit card fee of 1% is too much for a public organisation to pay. O4 also refers to the competitive market situation and low margins within the micro-mobility sector which limits their willingness to invest in new cooperations. O4 explains “we are willing to bargain some of our margins to be able to achieve a better reach. The trade-off needs to make sense” (O4,2023).

The second factor is the business model which needs to be transparent and comprehensible. O1 underlines that it is important to understand the full business idea including Eljun’s revenue stream to ensure the long-term stability of the start-up company which is an important condition for the train operator before they agree on a cooperation.

The third factor is regarding the technical integration. The companies need to be aware of whether it is an API integration, a card, or something else as the complexity is different. This information is needed to estimate internal development costs and deployment of resources.

The fourth uncertainty factor is the size of the network, meaning the number of participating actors which makes the app relevant for customers. “Otherwise, it is just another app on the market” (O7,2023). Most actors asked which companies are already willing to cooperate as a prerequisite for their evaluation of joining the platform. This dilemma is defined as the chicken-and-egg problem which describes the challenge of attracting both parties that are needed for the platform’s success. The operators want to know which employee benefit providers will join the network to estimate the reach and at the same time the employee benefit providers need insurance about the commitment of operators.

The last and probably most important factor is the size of the potential user base that Eljun aims to reach through its cooperation with loyalty programmes and organic growth. “Eljun needs to manage to attract a lot of users first so that we would consider implementing it” states O3 (O3,2023).

**Customer-oriented offering**

**Payment options**: Offering various payment options is generally perceived positively by the operators as it provides flexibility to the customer. They can decide based on their individual habits and preferences which option to choose.
The operators highlight the need to design customer interfaces as easy and simple as possible. This is one of the aspects of how they evaluate whether they should add a new payment method to their systems or not. O3 mentioned that “Our goal is to provide a service for customer that is super simple and easy to make bookings without any confusion or complexity.“ These requirements also apply to the interface of Eljun’s app. Moreover, O3 explains that a new payment method that customers do not know about can lead to confusion which is why there must be a significant demand for it first. O2 notes “customers are most likely sceptical of new payment methods and need to be incentivized” (O2,2023).

Complementary services: All operators perceive the idea of a joint platform with mobility providers as very positive. They explain, that from a customer perspective, it is crucial to have all services together especially the services that are complementary to each other. O1 and O2 highlight the last mile issue and the importance of providing a door-to-door solution to make the trip for the customer as convenient as possible and a real alternative to using the car. Therefore, the presence of micro-mobility companies in the platform that offer e-scooter or bike renting is perceived as beneficial whereas the opinion about car rentals is controversial. The train operators follow the strategic goal of reducing the usage of cars in the cities, but some also considered car sharing and car rental as a ‘last mile’ solution which could be a helpful complementary service. O3 takes a step further and questions the plan of having EV charging companies on the same platform “Having EV charging companies within Eljun’s network might become an issue. It is not sure yet what position we have on this, but from all (operator) options EV charging would definitely come at the bottom from our perspective […] but it's probably not a showstopper for us.”

Mobility-as-a-service (MaaS): During all interviews, the term MaaS arose even though Eljun does not position itself as a MaaS provider. The operators named MaaS as the key opportunity for their business to satisfy customers. When talking about MaaS, operators mean the integration of various types of transportation within one platform. Hereby the focus should not only be on the payment, but on the entire booking process along the entire customer journey. O7 states “We are looking more into the MaaS ecosystem […] Eljun only focuses on one piece of the puzzle which is the payment.” (O7, 2023). O7 further explains that having all mobility providers in one app where customers can plan their whole journey with complementary services and make the payment would be more attractive and provide real value for them. For example, the two companies MaaS Global and Travis are named who try to build their business model around MaaS. However, according to O7 this topic is very complex, and none achieved a breakthrough yet.

5.3 Facilitating value co-creation in a service platform

This chapter refers to the second research question and explores how value co-creation can be facilitated in a service platform. Based on the interviews conducted with operators, employee benefit providers and platform providers, several themes were identified from thematic analysis and presented below in separate paragraphs.

Data-driven practices: One important theme derived from data analysis was the data-driven capabilities within the service platform. A total of 5 interviewees, both from operators and
employee benefit providers stakeholder groups, expressed their varying views on how they think about sharing and utilizing customer data. Firstly, all interviewees agreed on their interest in data. O1 emphasized the potential benefits of sharing customer data for analytical purposes, such as understanding volumes and overall usage trends. O4 pointed out the potential of leveraging data to "tailor a better service for their customers". According to him, data is a gateway that opens up new revenue streams. EB shared a desire for external entities to effectively package data-driven products and demonstrate a positive return on investment. He underscores the lack of understanding of the factors that play out in the employer's benefit offerings and believes that being data-driven could serve as a guideline to improve benefit strategy for the company and its clients (employer companies).

During the discussions, some concerns regarding data emerged among the interviewees. Besides seeing the value of sharing data, O4 expressed some doubts rooted in past experiences. "We shared data with other companies for various reasons, which has come back to us in a negative way, which is why I'm mentioning it as a concern," he reflected, indicating the sensitive nature of data-sharing practices. Two other operators, on the other hand, conditioned their involvement in data-driven practices on adherence to legislation and privacy. Differently from these concerns, O3 brought up the prospect of losing their own customer data as the reseller (Eljun) would have the customer relation.

**Comprehensive Solution:** For participants, this theme describes the ability to bundle different activities (e.g., booking, payment) of an entire trip, regardless of varying travel modalities. Almost all operators shared this envision of providing users with a single platform that allows effortless booking and payment of all integrated services. O2 reflected that achieving this kind of goal through their own individual platform might not be feasible, which leads them to be open to collaborations to make it happen. Similarly, EB also acknowledged the value of having everything gathered in one place for customers. He believed that this approach could enhance customer loyalty and engagement by referring to "increased stickiness"

**Simple And Easy Experience:** There was a prevailing and clear opinion among the majority of participants on designing a simple and easy experience for end-users. According to the overall insights, some other key points that have been touched upon were to employ widely recognized technologies, facilitate smooth connections between the service of various regions, and ensure effortless loyalty/benefit points redemption.

**Learning From Others:** Some interviewees expressed their interest in learning from other actors through their participation in a network. In this aspect, O3 put particular emphasis on interaction with private companies. To overcome the challenges posed by public sector regulations that often impede the pace of innovation, he highlights the promise of observing more agile private entities that are free from these regulations. By seeking inspiration from their experiential process, he believed they could better discern customer needs, while avoiding the risks and financial commitments associated with any developments that might not yield success. O2’s perspective, on the other hand, was more to seek interaction with other actors.
beyond their current interactions, as he stated, “Right now we mainly communicate with train operators but the exchange of information with others is missing.”

**Fair Interactions:** Several respondents have shared their insights regarding the importance of fair and equitable interactions in between actors and the platform owner. EB, while considering a potential partnership with Eljun, raised a point about the alignment of their business models. He noted that currently, Eljun's business model may not perfectly match the way they hope to work together. He explained, “When customers make purchases through us, all the revenue goes directly to Eljun, regardless of whether they act as intermediaries... We are bringing in new end-users and employers to their platform, and we hope for a business model that better accommodates partners like us or the operators.” O3 reflected on a similar concern of fair exchange, although from a different angle. He mentioned the possible loss of customer data when third parties resell their tickets. However, he pointed out to a mutually beneficial exchange by suggesting that they are open to exchange data if it helps in making their tickets more widely available and in generating innovative solutions to reach their goals faster. He further emphasized, “We need private companies to come up with innovative packages to include our services, as we are not fast enough to keep up with the technical development.”

**Complementary E-mobility Services:** One theme that emerged from the interviews is the potential of combining various transportation services to improve customer convenience. Both private and public transportation companies expressed a shared motivation to address the last mile issue, aiming to reduce individual car usage and challenge the short-travel flights with more flexible offerings that could make customers’ lives easier. O2, the train operator, implies the main motivation to be a part of Eljun lies in being a part of an “ecosystem of complementary services”. In that regard, they have already taken tangible steps towards embracing this concept by initiating collaborative projects involving e-scooters and car sharing. His insight also provides a nuanced perspective towards cars, particularly when offered as shared or rental options — “Cars can be seen as the biggest competitor but also as a complementary service (shared or rental cars) and therefore worth looking into.” O3 also emphasizes the value of combining micro-mobility services with the tickets or discounts for their customers. Private micro-mobility company, O4, also states that their aim is not to compete with public services like the metro but to complement them.

**Driving Marketing Practices:** In our discussions, it became clear that incorporating effective marketing practices is crucial for respondents aiming to increase customer engagement. In the interviews, this specifically describes facilitating the commercialization of various actors' services through digital channels or leveraging data, often through notifications. For some respondents, it's mentioned as a critical need, while for others, it's a considered as a collaborative strategy. Mentioning the approach of offering free services to partners like Eljun, EB pointed out the challenge of limited resources for their own marketing efforts. This emphasizes their pressing need for additional resources to promote their offerings and enhance customer engagement. On the other hand, O6 took a brand-centric approach, indicating that one major motivation factor for joining the platform could be enhancing its brand image. More specifically, she mentioned that being associated with other e-mobility actors within the platform would positively impact their brand reputation in the market. O7 approached such
practices from a strategic standpoint, viewing it as a good opportunity to be a part of Eljun’s network. He stated, "It would be nice if we could interact with the end-user through that app and push offers to them... I think we'll be open to exploring joint efforts with other actors on the platform and see if that's something that could add benefit to our customers. ". E2 shared a similar perspective by discussing their future plans for a specialized marketing channel that allows actors to offer discount and promotions to the end-users who have digital wallets. He continued, stating that this approach would enable actors to target potential end-users who may not be active users of their services yet.
6 Analysis & Discussion

In this section, we present the argumentation for addressing the research questions of our study. Firstly, we elaborate on the perceived values and assess the fit of Eljun’s value proposition for their actors by creating a two-sided value proposition canvas. Secondly, the second research questions will be analyzed in relation to the Service-dominant (S-D) Logic framework. Finally, the barriers and motivators for value co-creation will be derived and discussed. Following this, this section outlines both the practical and theoretical implications of these findings.

6.1 Perceived values and their fit to Eljun’s value propositions

This section aims to analyse the data from the empirical findings concerning the first research question “How are values perceived by the different stakeholders within Eljun’s service platform and how do these fit to the platform owner’s value proposition?” The value proposition canvas by Osterwalder et al. (2014) that was introduced in the theory chapter allows us to investigate the fit between the platform owner’s value proposition and the actors’ actual perceived values.

We approach the analysis in three separate steps. First, we draw the value map that presents Eljun’s offering and how the company addresses it to alleviate pain and create gains for the other platform actors. Second, we summarize the pains and gains from the actors’ perspective and illustrate their main jobs by creating the customer profile for every actor, respectively. The third and last step of the analysis part is the evaluation of the fit between the value map and the customer profile. Based on these results we discuss the implications for the start-up company and their business model.

6.1.1 Eljun’s value propositions

The aim of this chapter is to understand how Eljun defines its value propositions for operators and employee benefit providers. For this purpose, we set up a two-sided value map based on the empirical findings from chapter 5.1.

The two-sided value map is shown in figure 11 and combines the value map for the operators (left part) and the employee benefit providers (right part) in one. The central element is the service offering of Eljun which is the same for both parties: Eljun offers a digital platform that connects end users and employees whose employer cooperates with an employee benefit provider with operators of sustainable transportation. The service Eljun offers is a digital wallet and card that customers can use to make payments on the operators' websites. Hereby, Eljun’s app functions as a unified portal to reach these via an API integration. The payments are subsidized by cooperating companies who work with employee benefit programmes. Furthermore, The digital platform is built on a blockchain that among others enables the traceability of payments.

The remaining parts of the value map – the pain relievers (at the bottom of the map) and gain creators (on top of the map) – must be viewed separately as they differ between operators and employee benefit providers.
Operators

Gain creators. An essential gain creator for operators is that Eljun’s platform enables access to a huge customer base with a high potential for customer retention because of the automated process with businesses that subsidize recurring payments for their employees. Another important gain creator is Eljun’s customer-centric approach. A payment platform that encompasses the main transportation companies means value for end users and therefore for operators, too. That the business idea supports the overall goal of driving sustainable travel options and reducing fossil-based, environmentally unfriendly options should attract both customers and partners and is a nice-to-have gain creator.

Pain relievers. Costs and the use of resources are naturally essential pains for companies. Therefore, Eljun aims to request only fair commission fees that cover the costs and develop a system that is relatively easy to implement. To reduce confusion, Eljun uses blockchain technology only within their own environment and decided against the use of tokens or cryptocurrencies. For intersections with partners conventional solutions such as API is used.

Employee benefit providers

Gain creators. The essential gain creator for employee benefit providers is to complement their benefit scope for customers with attractive daily use services such as public transportation. This additional offering will help to attract new companies and retain employees as active users through the idea of a monthly subscription model. Moreover, gains are created by customer data that tracks the flow of money.

Pain relievers. It is essential that employees benefit providers can join Eljun’s platform for free to respect their business model. Moreover, cooperating with Eljun instead of multiple single operators reduces the complexity for the benefit provider to only arrange the technical integration once.
6.1.2 Perceived values

In this chapter, we change the perspective and analyse Eljun’s offering from the actors’ view. For this, we illustrate two customer profiles based on the findings from the interviews. These summarize the pains and gains connected to Eljun’s service and describe the jobs of operators (see figure 12) and employee benefit providers (see figure 13).

Operators

Customer jobs. The operators’ main job is functional. They want to ensure their customers’ mobility by providing transportation from a starting point to a target destination. Moreover, all actors have the social job of promoting sustainable transportation. To make it possible for customers to use the service, supporting jobs are necessary such as offering the ticket purchase and facilitating the payment through an interface that is easy and simple to use throughout the entire customer journey.

Pains. There are rather high obstacles to getting started with Eljun’s platform. These are a lack of sufficient budget and resources, also owed by the low margin mobility sector which hinders joining the platform if fees higher than 1% are involved and to cover costs for the initial technical implementation.

Furthermore, there are multiple risks connected to uncertainties that can lead to negative consequences and can be classified as rather high pains. Eljun as a start-up company is new in the market which is why its success is uncertain and long-term cooperation is not ensured thus there is a risk for operators of wasting time with an idea that does not pay off. Moreover, they lack commitment from actors to get started with the platform. Other moderate risks are a missing demand for the new payment method, a slow adaption, and the risk of confusion resulting from having a new payment option during the check-out process. Using blockchain technology can also cause a potential risk as a new technology with missing experience can lead to suspicion.

There is also a pain that is not connected to Eljun’s offering but to an existing problem related to the fulfilment of a job. Most operators struggle to make their customers a holistic offering for their whole journey as they usually only provide a few limited services. Therefore, there is a request for complementary services between operators in order to make commuting comfortable and easy and ensure accessibility throughout the whole country. In this context, operators mentioned the lack of mobility-as-a-service platforms that enable the planning and booking process of various transportation types. A moderate negative side effect of outsourcing the payment process is that actors lose control over customer data.

Gains. The essential gains for operators are expanding their customer base by winning new users and increasing their reach. If Eljun cannot provide these gains, the business idea will not be successful for operators.

That Eljun provides a new additional payment method to existing ones is an expected gain that benefits the end user. Subsidized transportation by employers is a strong benefit for end users, but the platform would also work without this feature. A desired gain for operators is to get
connected with other mobility providers to offer complementary services. This is possible regarding the payment process, but not expected and therefore, means a strong gain for operators.

**Employee benefit providers**

**Customer jobs.** The employee benefit providers main functional job is to connect companies with suppliers of benefits in order to offer an attractive scope of benefits to employees. Providing an app and the technical integration for a smooth process including the handling of the subsidies and payroll reduction is another supporting job that they need to get done.

**Pains.** Similar to the operators the employee benefit providers fear some risks that are connected to the lack of commitment from actors in this early stage of the start-up company and the uncertainty about long-term stability. General problems are cooperations that require a financial burden as the business model from employee benefit providers intends that partnerships are free of charge as suppliers benefit from cooperating with them directly through access to a user base. Moreover, they often face problems during the set-up of the technical integration between their own platform and suppliers or partners.

**Gains.** Receiving access to mobility companies through Eljun’s platform is an essential required gain that is needed to convince companies to join the platform. New cooperations help employee benefit programmes to attract new partners and persuade employees to use services on a recurrent basis. A desired gain is the access to customer data that can be provided to employers to prove the money flow which is highly valued by companies.
6.1.3 Fit of value propositions and perceived values

Combing the results from the previous chapters a two-sided value proposition canvas is formed (see figure 14). This illustration provides all key information to answer the first research question fully “How are values perceived by the different stakeholders within Eljun’s service platform and how do these fit to the platform owner’s value proposition?”. One part of the question which addresses the perceived values and the value proposition by the platform owner was analyzed in the previous chapter, but by combining these findings we are able to evaluate the ‘fit’ of both.

Looking at the right side of the canvas which displays the fit between Eljun’s value proposition to employee benefit providers, it can be captured that there is a good fit. The only risk that is not addressed by Eljun is the uncertainty of having partners on board in order to establish an attractive offering for employers. This problem is certainly a common issue for start-up companies, however, Eljun needs to find a strategy to overcome this so-called ‘chicken-and-egg-dilemma’ to get started with their launch.

Looking at the left side of the canvas which reflects the operators’ situation, it appears that there is a mismatch between the operators’ pains and Eljun’s try to relieve these. One pressing topic is costs and efforts to join the platform. This pain is already discovered and addressed by Eljun however a sufficient solution is not yet defined. The uncertainty about not
having clear frame conditions increases mistrust in operators and reduces their willingness to commit. This also applies to the technical integration that according to Eljun is very simple and easy, but operators are still very sceptical and need more security and concrete information on how it works. Therefore, frame conditions need to be defined and illustrated to operators to eliminate uncertainty factors that trigger risks for undesired outcomes.

Furthermore, according to the interviews, the biggest pain for operators is the fragmented mobility sector with many operators who are specialised in certain mobility types e.g., public transportation only focuses on trains and buses but disregards micro-mobility options such as bikes. This is a huge barrier to making customers a holistic offering to compete against cars and flights. Solution mobility-as-a-service is named as needed platform that enables the planning and booking process of the whole journey through a single application. This pain is currently not addressed by Eljun. As this topic came up during every interview the question remains whether Eljun provides enough value through their payment platform by relieving some pains and creating gains for actors that outweigh the negative aspects.

6.2 Facilitating Value Co-creation in a Service Platform

Within this section, the empirical findings are analyzed through the lens of the SD Logic framework, its foundational premises along with the relevant value co-creation literature that supports it. This section addresses research question three “How can value co-creation be facilitated among actors through the lens of SD logic?”. The discussions derived from interviews revolved around several key points. This entails placing the end-users as a primary focus, facilitating effective and purposeful communication, fostering a collaborative development with actors, and cultivating trust and transparency within a service ecosystem.

6.2.1 Adopting Customer Centric Approach

The link between customer-centricity and service-dominated logic has been established since the work of Vargo and Lusch (2004). Foundational premise 8 states, "A service-centered view is inherently customer-oriented and relational." More specifically, scholars emphasize the importance for firms to cultivate an understanding of their customers and tailor experiences that adapt to their evolving needs. According to findings from data collection, it is evident that all categories of respondents position the customer at the core of their business decision-making processes. The notion of customer-centricity is articulated by respondents at various points including the provision of comprehensive solutions for varying service needs, understanding the service in-use experience, as well as designing easy and simple service use.

Based on the data collected, operators frequently stressed the importance of enhancing their service use experience from start to finish. This involves eliminating any friction that could inconvenience customers as they move from one point to another. A key issue highlighted is that the existing shared mobility system (private/public) does not entirely fulfil customer needs. For example, scenarios where customers are compelled to switch between different modes of transportation to reach their ultimate destination, or when they need to travel across various cities or regions, can result in interruptions and add complexity to their journeys. Given this keen understanding of customer needs from data collection, a vital need emerges for a
comprehensive mobility service bundle enabling customers to plan and pay for their entire journey using a single application. This suggestion better supports customers to shape their journeys in accordance with their unique preferences and requirements by allowing them greater flexibility and control over their individual processes, thereby enabling a better fit with their specific contexts. This also echoes the premise of customers taking an active role in the process of value generation within the framework of S-D logic (FP-6). Gouillart et al. (2010) reinforce this perspective by asserting that customers should have the autonomy to engage in interactions as they see fit in their experience.

The concept of service-dominant logic perceives value as something that is phenomenological and context-dependent (FP-10) (Lusch et al., 2008). Given its subjective nature, it's crucial to analyze value not only on a mass level of customer needs but also on an individual level. An illustration of this viewpoint was highlighted by an operator during the discussions. He pointed out the diverse customer behaviours driven by factors such as travel frequency and distinct preferences in app usage, such as storing tickets or varying payment methods. Furthermore, he argued that it's not about gathering all information in one place but rather making information (such as content or notifications) meaningful and useful in the way that's most valuable for each kind of customer. What becomes evident from these statements is the necessity of the platform provider and other stakeholders to grasp how value manifests itself within the unique processes and usage patterns of each individual. In the service-dominant logic literature, this can be articulated as managing and understanding the in-use experience. Digital platforms have the potential to generate a significant amount of customer data due to their dynamic nature, facilitating various user interactions and operational functionalities. This capability, however, becomes particularly powerful when used effectively to grasp the contextual factors that play for customers. As the analysis of interviews shows, its importance lies not only in the generation of this data but in the purposeful utilization of it.

Embracing a customer-centric approach also requires designing an effective sequence of activities within a platform. This involves creating an intuitive interface while eliminating any confusing or time-consuming elements, as consistently emphasized by respondents. This process further underlines the importance of understanding and analyzing the value-creation activities of customers using the digital platform. By understanding how they integrate with these activities, it could be possible to align and efficiently coordinate the design in a way that can fit into customers’ in-use processes.

6.2.2 Stimulating Purposeful Communication

As previously mentioned in FP-8, the concept of embracing a service-centered perspective goes beyond the adoption of a customer or stakeholder-centric approaches as well as the alignment with their needs and contexts. It also involves embracing the concept of relational exchange by placing a great emphasis on cultivating relationships over transactions. To further elaborate this, grasping stakeholder needs and contexts and shaping offerings accordingly is only the starting point. A shift from core offerings towards dynamically designing the service experience is essential. However, communication in this sense is particularly valuable when it
is two-way communication. This view is further underscored by Ballantyne and Varey (2006), who emphasize the dialogical perspective as a key element of effective relational interactions.

The data collected from actors indicates an inclination toward interactive communication across varying forms. As the platform is currently in its design phase, the communication needs of the respondents are closely tied to grasping and clarifying the specific expectations set for them during this crucial stage. Additionally, there is a recognized need for a well-defined business approach, complete with its associated features. Providing such transparent understanding is valuable within S-D orientation, as it equips actors with the necessary knowledge. When actors are more knowledgeable about the process, they can more effectively integrate their individual resources. Coherently, multiple operators mentioned their desire to be involved in active participation in discussions addressing the needs and challenges at hand. Moreover, an e-mobility actor states his willingness to share knowledge and expertise to support start-ups like Eljun and help develop their business models. Just like the platform owner, end-users and other actors have their own resources (knowledge, skills and competence) to offer and contribute to the service process (Grönroos, 2008). Thus, it becomes vital for the platform owner to tap into these resources of relevant actors to enhance service experience and contribute to value co-creation through extensive communication among relevant actors. Collecting their input through feedback, discussion sessions, and involving them in the co-production process of the service platform enhances the value creation process for all actors in the network. This aligns with the platform owner’s goals of open feedback from stakeholders who are also eager to offer their insights. They also emphasized direct communication with actors to scrutinize the main challenges they face in their business operations and with end-users, along with their willingness to engage in discussions initiated by these actors. Empowering such collaborative opportunities for the co-production of the platform is a central idea within the S-D logic. It empowers actors to actively shape the content and nature of the service platform’s core offerings, thereby enhancing the achievement of desired outcomes.

Nevertheless, it is also noteworthy to recognize that stakeholders may display varying levels of engagement desires towards the platform company. This could partly be because of the differing levels of motivation or adopted strategy. Let’s consider, for instance, the respondent from EV charging industry. For her, motivation leans more towards reinforcing their brand image through being a part of a network with other sustainable mobility entities. However, due to their busy industrial and organizational operational processes, they find themselves constrained in terms of time and effort to dedicate to intensive relationships. As a result, they might not be inclined to participate in extensive interactions among the network of actors. Hence, considering the diverse nature and intensity of actors’ engagement within the network, it becomes essential to understand the distinct needs and desires of actors in terms of collaborative capabilities. Such understanding is vital to remain relevant in stakeholders’ own value creation process and align with the diverse nature and intensity of their engagement. By doing so, it might become possible to improve healthy communication without burdening stakeholders or pressuring them into complying with excessive communication requirements.
Looking from the perspective of end customers, the data gathered by the platform owner reveals their approaches to communicating with users, which can be broken down into three key components: surveys, data analytics, and direct feedback. Their approach not only reflects the platform owner's ability to empower users by allowing them to influence core functions and prioritize them based on the insights obtained from users’ feedback and surveys, but it also unveils hidden user preferences through the lens of data analytics. By investigating user interactions with the app, the platform can identify and remove underutilized features while refining crucial ones. This systematic approach ultimately contributes to an enhanced user experience.

Under this heading, we argue that having an effective understanding of customer and stakeholder needs and addressing these at a particular point in time is not the only important factor to co-create value according to S-D logic. Equally important is the ability to purposefully communicate with these actors and engage in collaboration through an ongoing, meaningful dialogue during the production as well as the development of the service processes. By doing so, the platform not only displays adaptability and flexibility in response to evolving needs but also designs a value proposition that remains valid for the actors involved in its service platform. Analysing the collected data, it becomes evident that establishing clear communication channels is valuable to the actors and platform providers. Reassessing feedback actively, sharing insights about challenges, market trends, emerging technologies, and clearly demonstrating how their input is integrated into the value proposition emerges as essential practices.

6.2.3 Fostering Collaborative Development

The concept of operant resources is central to value creation within the SD logic paradigm (FP-4). As mentioned in the previous part, leveraging actors’ operant resources can make substantial contributions—often through feedback—to enhance the performance of the service platform. In such a dynamic, it is also important for platform provider to be equally open to share its skills and competencies and support the development of external partners’ capabilities, instead of only focusing on the provision of their own offerings. This approach underlines collaborative competence development and mutual benefits in a service platform which is also strongly emphasized within in literature of SD orientation. This idea is further supported by Norman et al. (1993), who stress the empowering role of firms for their customers/partners and its influence on enhancing value creation, “[…] when they make not only their own offerings more intelligent but their customers -partners- more intelligent as well”.

The architecture of the digital service platform inherently embodies the concept that when diverse actors pool their unique operand and operant resources, a collective intelligence emerges, providing benefits for all stakeholders involved. In Eljun's service platform, this is viewed when benefit providers, operators, the platform provider, as well as the end-users, are all participants, contributing their distinct operand resources (offered benefit services, e-mobility services, technological infrastructure) and operant resources (knowledge and competence) into the service platform. SD Logic emphasizes the primacy of operant resources, viewing them as a foundation for competitive advantage (FP-4). However, it also suggests that
value creation is facilitated by operand resources (Lusch et al., 2020). During discussions with various actors, they shared a spectrum of opportunities aligned with their unique organizational goals, needs, and contextual factors to further empower the collaboratively developed operant and operand resources, such as sharing knowledge and competence as well as facilitating integrated solutions.

Firstly, one key takeaway from the discussions is the emphasis placed on sharing knowledge and competence. This involves the exchange of insights and expertise, drawn from the varied industries and experiences of network actors. An example from the interviews with public actors highlights the strict regulation they face and how it limits their experimentation and subsequently hinders innovation and competency growth. In this regard, they perceive the agility of small start-ups like Eljun as a valuable resource, as they can learn from their innovative experiments to enhance their competencies and in turn improve their offerings for their end-users. This desire of knowledge and competency sharing, however, extends beyond the exchange between the platform provider and the actors. According to operators' statements, it also involves learning from other sustainable transportation actors within the network. Given the inherent complexity of sustainability challenges and the need for collaborative problem-solving, actors in the electric mobility field express a strong inclination to engage in joint discussions and mutual learning across diverse organizations within the industry. Such a dynamic shows a mutual willingness shared among network actors to participate in reciprocal knowledge and competency sharing. Importantly, such willingness to share knowledge and skills leads to the notion of meaningful relationships, as highlighted by Hunt et al. (2008). According to them, the coordination of these activities such as close communication and joint problem-solving plays an important role in the emergence of meaningful social and emotional bonds between interacting partners.

Based on the data analysis, another collaborative opportunity that consistently emerged was the capability of effective data management and its potential benefits for improving both the service platform and the operations of its partners. A service platform operates in an environment that is rich in data-driven insights due to the diverse activities and interactions of end-users across different market sides. Hence, partners believe that a service provider is equipped with the ability not only to manage and interpret end-users' data but also to present it in a purposeful way that develops their knowledge and skills, thereby improving their operations. This can be seen as a form of collaborative competence development, where the service platform shares its expertise to develop the skills of its partners. Building on this, another opportunity that is expressed by several participants has centered on the joint marketing initiatives, specifically aligned with the needs and preferences of the end customers. This is recognized by the service platform provider and several other partners as it can allow them to mutually expand their marketing reach and intelligence of their offerings.

### 6.2.4 Cultivating Transparent and Fair Interaction

To facilitate collaborative knowledge and competency development, it is crucial to build transparency and trust throughout the entire service process. Enhanced transparency can act as a catalyst in cultivating trust among actors and providers and lead to active participation in the
collaborative development of the service platform. As one interviewee pointed out, their previous negative encounter with data sharing has led to a loss of trust, primarily because of insufficient transparency, which left their organization uninformed about the potential consequences. His experience highlights the importance of a more transparent information exchange between the platform provider and the involved actors to facilitate value co-creation.

Furthermore, SD logic emphasizes that all exchanges should be symmetric. This means that there should be fairness and transparency in the interactions between different actors in a service platform, including end customers and other actors. In their research, Lusch et al. (2008) elaborate on the concept of symmetric information and treatment, highlighting two key aspects: “(1) not misguiding actors by not sharing relevant information that could enable them to make more informed decisions, and (2) ensuring all parties involved in exchanges are treated fairly. This equitable treatment involves avoiding communications that seem inaccurate, abusive, intrusive, or excessively one-sided.” The data results show a common concern among several actors regarding the need for a symmetric and fair exchange. For the benefit program provider, who serves as the primary source of the customer base and offers Eljun free of charge, there is an expectation of alignment in business models within greater collaborative goals. On the side of the operator, the focus was more on the potential risk of losing customer data. Despite the potential benefits of the platform providing wider availability of their tickets, they also hope for a reciprocal arrangement from the platform owner, possibly in the form of innovative packaging, in exchange for utilizing this data.

6.3 Barriers and Motivators of Value Co-creation

In addressing the third research question, “What are the motivators and barriers for value co-creation in a digital service platform?” we identify several motivators and barriers influencing engagement in value co-creation within the service platform from the perspective of actors. These factors encompass a presence of shared mission, competitive dynamics, organizational and industrial readiness, the number of multiple actors and end-users and the design of boundary resources.

Shared Mission

The analysis of interview data shows that having a shared mission within a value co-creation network has a critical role to play in the value co-creation network. According to an interviewee, perceiving the service platform merely as a facilitator may fall short in persuading diverse actors to engage in the value co-creation process. His statement suggests that a strong sense of purpose, alignment of goals, and clear mission statements are essential motives for actors to participate in the process of value co-creation. However, it is important to note that the nature of this shared mission can vary significantly based on the contextual factors and the unique organizational goals and strategies of each actor.

During discussions, for some actors, the emphasis leans more towards economic gain. These actors prioritize expanding their market reach and tangible rewards that positively impact their financial position. In the highly competitive mobility market, several actors operating in transportation express the challenges of revenue generation, which makes profitability a
compelling motivator. While profitability remains a priority for many organizations, there is a recognition that a responsible approach to society and the environment is equally important. Certain actors, particularly those offering public transportation services, place a strong emphasis on their sustainability goals in the long term. As stated by one actor, "We are now a profitable company, and we need to make profits. But we still have a responsibility for this society when it comes to transportation and the environment... sustainability is a major aspect of our value proposition, more important than just revenue". This underlines their commitment to environmental and social responsibility, even at the expense of financial gains. Moreover, e-mobility actors recognize the need for collaborative problem-solving to compete with environmentally unfriendly options like flights and individual car use. In addition to e-mobility actors, sustainability is also seen as a shared goal by Benefit providers, driven by the increasing demand for sustainability-focused offerings from their customers (the employer companies) in their pursuit of achieving sustainability targets.

When there are actors in the network with conflicting interests, however, that could pose a barrier to actors’ participation in the value co-creation process. In the case mentioned by the public e-mobility actor, the involvement of EV charging actors can be seen as potentially conflicting with the shared interest of reducing individual car use. This conflict arises because EV charging actors may contribute to road congestion, which goes against the broader goal of promoting sustainable transportation. Conflicting interests may lead to the slowing of progress in value co-creation if actors perceive that their objectives conflict with those of others in the network.

In summary, the data analysis reveals that economic gain and sustainability are two important factors in relation to shared missions motivating actors to engage in the value co-creation process. Furthermore, it shows the role of acknowledging and addressing potential conflicts that may arise from the diverse interests of the actors, as these conflicts can act as hindrances. Understanding and leveraging these dynamics can be critical for effective value co-creation initiatives.

**Competition**

Based on the research findings, actors in various segments of the e-mobility industry, particularly those offering complementary services like e-scooters and train operators, tend to view each other as potential collaborators. The underlying rationale as stated in interviews is that by combining their efforts, they can collectively provide more comprehensive solutions.

However, in industries that have high competition, such as the e-scooter sector, the presence of direct competitors within the same network can become a potential barrier to value co-creation. Concerns about potential market share losses can discourage actor’s participation in value co-creation activities. According to a respondent in e-scooter industry, the influence of competition on participation varies based on an actor's specific market position. If an actor holds a strong market position, competition may be perceived as less of a concern and might even be viewed as advantageous. On the other hand, for actors with weaker market positions, competition can represent a significant barrier to participating in value co-creation.
This dynamic, however, doesn't apply to industries like local train operators, where they serve distinct geographic regions without direct competition. In such cases, these operators do not consider each other as competitors. The lack of competitive pressures makes it more possible for them to collaborate. Instead of viewing competition as a hindrance, it becomes a catalyst to be more engaged in value co-creation.

**Organizational & Industrial Readiness**

Data findings indicate that actors encounter various challenges in their present circumstances, which leaves them unprepared for investment in a collaborative effort, creating a barrier to their engagement in the value co-creation process. During the discussions, these challenges were primarily centred on both organizational (ie. business processes) and broader industry-specific concerns.

Regarding organizational unpreparedness, one actor mentioned that they are in the midst of operational changes. When an organization is undergoing substantial operational changes, it may hesitate to engage in the value co-creation process. These changes can divert resources and attention away from collaborative efforts which makes it difficult to align with external actors. On the other hand, a respondent from EV charging industry emphasized broader industry-specific challenges. These challenges cover regulatory compliance, technical standards, and market-specific hurdles. According to her, these challenges are currently the primary obstacles that their organizations must effectively navigate and address. These ongoing challenges pose a significant barrier to their participation in value co-creation.

**Number of Actors and End-Users**

Building upon Ghazawneh et al.'s perspective (2013) that measures success in a digital platform in terms of size, including metrics like the number of users, partners, and offerings, our research findings emphasize that the presence of numerous actors and partners within a service platform significantly impacts the motivation and willingness of actors to engage in value co-creation activities. One consensus among actors is the necessity of achieving a critical mass of users before considering involvement in the service platform. This is primarily due to the fact that end-users are more inclined to engage with a service platform when they perceive a substantial number of end-users, as it fosters trust and attraction towards the platform. In that regard, one interviewee expressed concern, stating, "A volume of users is needed first; otherwise, too many payment options can distract or confuse customers."

Another point that was emphasized regarding actors' participation in value co-creation was the importance of having all actors onboard. This is essential because being a part of a diverse ecosystem of partners can enrich the value proposition for end-users. It enables end-users to access a broader range of services and expertise. This diversity can make the platform more relevant to end-users, as it offers more comprehensive solutions to their needs.

While a critical mass of actors and partners can serve as a motivator for value co-creation by enhancing trust and network effects, it poses a challenge when the service platform is in its
initial stage. Effectively addressing this 'chicken and egg' dilemma becomes important for the platform's growth and management strategy, as highlighted by interviewees.

**Design of Boundary Resources**

As assessed in the literature review, the boundary resources (both technical and social) are the backbone of the digital service platforms as they provide various functionalities that complementary actors can utilize to enhance their operations and improve their interaction and transactions with end-users (Alstyne, 2014).

Technical boundary resources, encompassing APIs, tools, and data formats, can provide a common language for communication and integration between actors involved. Our research findings consistently highlight technical integration (e.g., API) as a major concern among actors when it comes to be a part of the digital service platform. This concern rise from the perceived complexity of integrating their offerings with Eljun's digital platform and the challenges posed by incompatibility with their current systems. One example is highlighted by EB, who emphasized the complexities of their existing technical infrastructure, mentioning that these complexities can lead to difficulties when attempting to integrate with other digital service platforms. As this process can be resource-intensive, consuming time, money, and effort for organizations, it potentially presents a barrier to effective value co-creation. By providing such resources and support based on the varying need of organizations, the motivation of actors to engage in a co-creation of value might be increased. In this context, addressing these concerns may necessitate the development of custom middleware solutions, accompanied by clear documentation and support during the integration process.

The social boundary resources, platform rules, contracts, norms, and trust mechanisms, define how the structure of relationships between actors should look in the digital platform. One relevant aspect revealed during discussions was the importance of privacy and compliance with legislation when it comes to sharing customer data. This implies that any data-sharing practices must be conducted in a manner that respects the rights and preferences of end-users. Moreover, O4 expressed organizational concerns about confidentiality when sharing data on the digital platform, reflecting on the lack of trust due to their negative experiences. His comment holds importance, as it indicates that in his previous encounters, data was not treated with the expected level of fairness. These indicate the need for well-defined platform rules, regulations and guidelines to address such concerns around privacy and confidentiality. Otherwise, the lack of these can easily hinder the creation of a trust environment thus preventing actors' willingness to be involved in value co-creation activities.

In conclusion, when technical and social boundary resources are effectively implemented, they can form the basis for trust, and collaboration in a digital platform. This in turn creates an environment where actors feel more confident and motivated in participating in value co-creation initiatives.
6.4 Implications

Theoretical Implications
This study contributes to both the literature on value co-creation and digital platforms, by bringing them together and providing a holistic understanding of the value co-creation process in digital platforms. These contributions are explained in the following paragraphs.

Value co-creation concept stands as a key component in the generation of value within digital platforms. While existing literature on value co-creation in digital settings primarily addresses how diverse actors align and integrate their resources to collaboratively create value, our study investigates deeper. It explores how these actors’ interactions and resource integration processes can be further facilitated within a digital platform, beyond digital platform’s fundamental functionality of providing an infrastructure for connecting actors’ offerings/services. To do this, it proposes four core value co-creation practices that are grounded on empirical data. Furthermore, by incorporating these findings into the framework of service-dominant logic and its most crucial pillars supporting value co-creation, the practices we propose entail an integrative and systematic approach that enables us to identify and address various aspects of value co-creation.

Building upon the insights from Lusch and Nambisan's (2015) work in the context of digital platforms, we understand that the collective actions of actors drive the development of value, rather than just the platform's features. Based on their perspective and recognizing the crucial role played by relational and collaborative aspects in value creation within digital platforms, our study makes an important contribution to the development of value co-creation processes in the digital settings by taking the interaction between stakeholders and platform owners to the center.

Moreover, our study provides contribution by addressing a crucial aspect that is often overlooked in the literature on digital platforms and value co-creation – the value creation processes between non-customer stakeholders. Despite being frequently neglected, these stakeholders play a crucial role in shaping the development of value within the digital platform as they serve as essential complementary service providers that define the platform's essence. Therefore, our study takes an approach by examining the stakeholder level of analysis by exploring ways in which these actors can be more actively involved in the value co-creation process so that the platform can operate more effectively and harmoniously.

Practical Implications
Each of the three research questions has resulted in important implications and conclusions for practitioners.

Applying the two-sided value proposition canvas to answer the first research question has shown that it is a meaningful tool to verify the effectiveness of the platform owner’s value proposition towards their stakeholders’ needs and to better understand their perceived values. Moreover, the analysis of the case study confirmed the condition that the basic value proposition – the mere matchmaking process – is not sufficient to satisfy stakeholders. Therefore, it is crucial that the owner defines an additional strong value proposition in order to
succeed with their business model. Another aspect is the necessity for practitioners to define a strategy to tackle the chicken-and-egg-dilemma to convince stakeholders to join the platform. The analysis showed that uncertainty is a huge factor that has a strong negative impact on the perception of value. Therefore, we suggest practitioners be transparent and disclose and discuss the main frame conditions of the platform in detail (costs, efforts, strategy, participants, etc.) to achieve trust and thus reduce pain points.

The second research question proposes four critical qualities that facilitate value co-creation practices for platform owners. These qualities can serve as a potential roadmap for those who are in the process of building a new digital platform network, but they can also provide useful insights for those evaluating their existing digital platform networks. As the case study primarily centers on digital payment services, it's worth noting that the contributions may have more relevance in this specific setting. However, they also hold potential for broader applicability across various contexts within other types of digital platforms.

Lastly and crucially, the third research question provides insights into the perceived barriers and motivators for stakeholders in a digital platform to engage in value co-creation activities. These identified factors are not only valuable for understanding the dynamics of value co-creation within digital platform, but they also inform entrepreneurs who are attempting to establish their own digital platform networks. Moreover, they might initiate important discussions about the development of effective resolution mechanisms for addressing the hindering factors and to find ways to promote motivating factors for value co-creation.

Social and Ethical Implications
This section considers societal and ethical implications that can be drawn from this master’s thesis.

Studying value creation in digital platforms has generally a positive impact on society. By understanding the needs and wants of different stakeholders in a platform, it is possible to derive the right actions to increase the value for every collaborating party in a network. On the one hand, this can support defining a strong value proposition and creating a business model that has long-term success to be economically successful and achieve economic growth for society. On the other hand, our findings have shown that a strong customer-centric approach leads to value creation for stakeholders and thus helps to improve the services of the platform for end customers which increases the lifestyle of people. This is especially true for the chosen case study as transportation is relevant for all individuals and a better service enhances living quality.

Another important aspect of society is sustainability. In our study, we discovered that while profitability remains a priority for many organizations, there is a recognition that a responsible approach to society and the environment is equally important. Certain actors, particularly those offering public transportation services, place a strong emphasis on their sustainability goals in the long term. Sustainable practices can also be a shared mission that strengthens the common activities in a platform and function as a motivator. Therefore, sustainable aspects should already be considered at an early stage of building a business.
This study's ethical implications center around the collaborative knowledge and competency development enabled or facilitated by digital service platforms. Value co-creation on digital platforms relies on the ability of all involved stakeholders to act transparently and with a focus on building trust. Moreover, ensuring a fair allocation of value among all actors involved is specifically important during the design phase of the network and the business model. All these components emerge as a foundational consideration for fostering a collaborative environment where stakeholders can engage in value creation in a mutually beneficial way. The research implies the need for stakeholders to be ethically conscious and mindful of the impact of their decisions on all involved parties. This requires considering the ethical outcomes of business models, the design of digital networks, and the implications for diverse stakeholders in the collaborative process.

6.5 Critical reflection & further research

This section critically reflects on the procedure and chosen methods for this thesis, takes limitations into account, and calls for further research.

The first reflection is regarding methodology. Since the study focuses on values of actors and underlying needs, subjective influencing factors need to be considered. Firstly, we could win interviewees representing all kinds of different industries that are relevant for the study, however we could only conduct one interview per company. Naturally, this leads to limitations since an employee is only a representative of the company and holds their own values and opinions. Therefore, the interview results may vary from person to person. Secondly, subjectivity also applies to us as interviewers during the data collection and analysis process. Interpretations and language barriers can slightly falsify statements and information between the lines can get lost. These are natural limitations and were tried to minimize as far as possible which was discussed in the methodology chapter.

The second reflection concerns the overall research strategy. We are convinced that the case study design led to important and interesting insights but is still not sufficient to fill in the existing research gaps in the literature about value creation in digital platforms. We consciously decided to neglect the perspective of end users in our study to respect the scope of a master thesis, however we believe that the end user’s perspective is important to achieve a holistic view about this specific case and gain more insights that help Eljun to build up a strong business model. We suggest further research by using Eljun as a case study and put the end user in the center of research and to investigate their involvement and interaction in the platform with the other actors. In addition, further research about value creation in digital platforms is needed in various contexts (other cases) to gain new insights, receive diverse aspects, and challenge the results from this thesis.

Finally, we want to reflect on the impact created through our study. We believe that our thesis encourages other researchers to explore this highly relevant field further and inspires us to use S-D logic as framework to analyze value co-creation. We are also aware that our thesis only has limited impact as stand-alone study but are confident that we contribute to the literature by bringing up new aspects to foster the understanding of value creation in digital platforms. Furthermore, the case company Eljun can benefit from the findings since they help to create an
understanding about potential partners and can be used as foundation to implement changes in their value proposition to improve their business model.
7 Conclusion

The key takeaways of the analysis, discussion and implications of these findings are summarized in this section.

The aim of this study was to contribute to the current body of knowledge on value creation within digital service platforms, with a specific focus on a platform specializing in payment services. The research started by searching through the identification of perceived value-creating factors among non-customer stakeholders those providing complementary services within the digital platform. Subsequently, it progressed towards uncovering value co-creation practices that can enhance and facilitate value co-creation within the digital platform. Lastly, it concluded with an exploration of the motivators and barriers that influence value co-creation among these diverse stakeholders.

Addressing the initial research question, this study explores two phases in the analysis: the identification of factors that influence how non-customer stakeholders perceive the value of a digital platform, and an assessment of how well these identified factors align with the current offerings of the platform owner. In the first phase, this study can conclude to three main negative and positive factors that impact the perceived value of stakeholders based on the empirical data. It is revealed there is a resistance to emerging technologies, notably blockchain, which causes complexity. Secondly, the technical integration process, entailing costs and effort, emerges as a primary hurdle for actors to be part of the digital platform. Thirdly, concerns regarding costs, lack of transparency, and uncertainty about participants and the success of a new digital platform were identified as key drivers reducing the perceived value. On the contrary, three positive factors have been identified: the platform’s ability to reach to a wider user base, introduction of novel features and functionalities that are believed to facilitate customer centricity, and the provision of complementary services by diverse e-mobility and bene-fit providers acknowledged as distinct value determinants. In the second phase, when these factors are subjected to an assessment against the existing offerings of the platform owner, it is revealed that there are several points that need improvement. Given that the operators' pains outweigh their perceived benefits, it is essential to focus on developing a greater understanding of their needs and concerns to achieve a positive outcome. Additionally, there is a need from all actors for a clear strategy that could tackle the chicken-and-egg dilemma. Lastly, a critical reflection arises regarding the relation of the current solution to the e-mobility industry, which centers primarily on the payment process. Findings reveal that broadening these services to include aspects related to journey planning and booking has the potential to address both the operator's and end-users' main pain points.

In the context of the second research question, the study investigates how value co-creation can go beyond the fundamental functionality of the digital platform, that is to enable the integration of stakeholders’ services. The proposed set of value co-creation practices based on the empirical data is as follows: (1) adopting an end-user-centric approach—developing an understanding of the subjective value and contextual factors surrounding an individual user, making the service experience more comprehensive, meaningful and intuitive, (2) stimulating purposeful communication—enabling an ongoing and meaningful dialogue with stakeholders.
during both production and development phases to ensure the platform to remain adaptable and design a lasting value proposition for all stakeholders, (3) fostering collaborative development—empowering the development of stakeholders’ emerging capabilities, which involves not only nurturing the growth of their knowledge and expertise but also finding ways to the creation of integrated solutions that can leverage the intelligence of each stakeholder, (4) cultivating transparent and fair interaction—establishing a transparent and trustworthy environment while supporting fair and non-opportunistic service exchanges with all stakeholders involved.

Moreover, in reference to the third question, the study has explored factors that are influential for the stakeholders during the process of value co-creation within digital platforms. These factors can serve as either motivators or barriers, based on the specific contexts the stakeholders are in. The identified barriers and motivators are including the alignment of missions of stakeholders in the network, the perceived competition among the stakeholders, organizational & industrial preparedness of stakeholders, the design of the technical and social boundary resources in the digital platform. All of these factors can provide an understanding for the platform owners to consider while they are establishing their network as these insights can assist them in formulating strategies to promote motivators and overcome barriers.

The study generates value by contributing to the existing body of literature on both value co-creation and digital platforms by integrating them and offering a detailed understanding of the value co-creation process within digital platforms. It introduces core practices through the lens of service dominant logic and supported by empirical data, which provides a systematic approach to facilitate value co-creation in digital service platforms. It also provides practical insights for platform owners through offering guidance on evaluating their value proposition, introducing them with value co-creation practices and addressing the potential barriers and motivators that influence the engagement from value co-creation in a digital network.
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