

# Digital Transformation

Prerequisites for a digital business model

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# Table of Contents

<b>1. INTRODUCTION.....</b>	<b>1</b>
1.1 BACKGROUND .....	1
1.2. PURPOSE.....	2
1.3 LIMITATIONS IN RESEARCH.....	3
<b>2. LITERATURE REVIEW .....</b>	<b>4</b>
2.1 DIGITAL TRANSFORMATION .....	4
2.1.1 Digital Transformation Strategy .....	5
2.1.2 Digital transformation frameworks.....	7
2.1.3 Summary digital transformation.....	9
2.2 BUSINESS MODELS.....	10
2.2.1 Value propositions.....	12
2.2.2 Business model innovation .....	14
2.2.3 Summary of business models .....	16
2.3 BUSINESS PROCESS MANAGEMENT .....	16
2.3.1 Summary of business process management.....	18
2.4 STAKEHOLDER MANAGEMENT .....	18
2.4.1 Stakeholder theory.....	19
2.4.2 Business ecosystems and partnership.....	19
2.4.3 Customer Relationship Management .....	21
2.4.4 Transportation Management.....	23
2.4.5 Summary of stakeholder management.....	25
<b>3. CONCRETE RESEARCH QUESTION.....</b>	<b>26</b>
<b>4. METHOD .....</b>	<b>27</b>
4.1 APPROACH .....	27
4.2 OPERATIONALIZATION .....	28
4.3 CASE STUDY .....	29
4.3.1 Choice of company .....	29
4.3.2 Choice of supplier.....	29
4.3.3 Recognition of customers .....	30
4.4 DATA COLLECTION .....	30
4.4.1 Interviews .....	30
4.4.2 Secondary data collection .....	31
4.5 ANALYSIS .....	31
4.6 VALIDITY AND RELIABILITY .....	32
4.7 ETHICS IN RESEARCH.....	32
<b>5 RESULTS .....</b>	<b>33</b>
5.1 THE CUSTOMERS.....	33
5.1.1 Company customers.....	33
5.1.2 Essve Sverige AB .....	35
5.1.3 Private customers .....	36
5.2 INTERVIEWS WITH ALABANZA .....	37
5.2.1 Alabanzas digital transformation.....	37
5.2.2 The redesigned business model .....	38
5.2.3 Business Process Management.....	41
5.2.4 Requirements on the stakeholders.....	42
5.3 INTERVIEW WITH KJELLAND TRANSPORT .....	43
5.3.1 Kjelland Transport's Digital Transformation .....	43
5.3.2 Cooperation and partnership .....	43
5.3.3 Business model .....	44
<b>6 ANALYSIS .....</b>	<b>46</b>
6.1 CUSTOMER SEGMENTS AND CUSTOMER RELATIONS .....	46

<b>6.2 ALABANZA’S DIGITAL TRANSFORMATION, BUSINESS MODEL AND BUSINESS PROCESSES .....</b>	<b>47</b>
6.2.1 Digital transformation.....	48
6.2.2 Strategic goal.....	48
6.2.3 Use of new technologies .....	48
6.2.4 Changes in value creation.....	49
6.2.5 Structural changes.....	49
6.2.6 Financial aspects.....	50
<b>6.3 THE REDESIGNED BUSINESS MODEL .....</b>	<b>50</b>
6.3.1 Value proposition .....	50
6.3.2 Revenue model and cost structure.....	51
6.3.3 Key Resources, Key Activities and Channels .....	52
<b>6.4 BUSINESS PROCESSES .....</b>	<b>53</b>
<b>6.5 KJELLAND TRANSPORT .....</b>	<b>53</b>
6.5.1 Digital transformation.....	53
6.5.2 Business model .....	54
<b>6.6 STAKEHOLDER MANAGEMENT .....</b>	<b>54</b>
6.6.1 Alabanza’s view on partnership and cooperation.....	55
6.6.2 Kjelland Transport’s view on partnership and cooperation .....	56
6.6.3 Requirements and response to cooperation .....	56
<b>7 DISCUSSION .....</b>	<b>58</b>
7.1 DIGITAL BUSINESS MODEL.....	58
7.2 GUIDELINE FOR THE REDESIGN OF BUSINESS MODEL .....	58
7.2.1 Mobile storage.....	59
7.2.2 Nissar Alabanza Transportation Technologies (NATT).....	60
7.3 TRANSFORMATIONAL STRATEGY .....	61
<b>8 CONCLUSIONS .....</b>	<b>63</b>
8.1 LIMITATIONS AND PURPOSE .....	63
8.1.1 What are the prerequisites for a digital business model? .....	63
8.1.2 Why should stakeholders cooperate to innovate a business model? .....	63
8.1.3 How can Alabanza adapt its business model and business processes aligned with a digital transformation strategy? .....	63
<b>9 FUTURE DIRECTIONS FOR RESEARCH .....</b>	<b>64</b>
<b>10 REFERENCES.....</b>	<b>65</b>
<b>11 APPENDICES .....</b>	<b>69</b>
11.1 LIST OF TABLES.....	69
11.2 LIST OF FIGURES .....	69
11.3 PATTERN FINDING.....	70
11.4 KJELLAND TRANSPORT INTERVIEW .....	78
11.5 ALABANZA AS IS AND TO BE PROCESSES .....	83

## **Abstract**

This research paper investigates the need from two different stakeholders, in the purpose to formulate prerequisites for a digital business model that are in line with a digital transformation strategy. The paper contains qualitative and quantitative research methods to gather data. The scope of the research was to create a digital business model with business model innovation with input from two stakeholder and data from customers. To create a basis for the research a literature review was executed on the keywords business models, business model innovation, digital transformation, digital transformation strategy, business process management, stakeholder management, customer relations and transport management. Findings showed one digitized business model and one digitalized business model that fits a digital transformation with cooperation between stakeholders.

## **Sammanfattning**

I denna uppsats undersöks behovet från två olika intressenter i syfte att formulera förutsättningar för en digital affärsmodell som är i linje med en strategi för digital transformation. Uppsatsen innehåller kvalitativa och kvantitativa forskningsmetoder för att samla in data. Forskningens omfattning var att skapa en digital affärsmodell med affärsmodellinnovation med input från två intressenter och data från kunder. För att skapa en grund för forskningen utfördes en litteraturgenomgång på nyckelorden affärsmodeller, affärsmodellinnovation, digital transformation, digital transformationsstrategi, affärsprocesshantering, intressenthantering, kundrelationer och transporthantering. Diskussionen och slutsats visar en digitaliserad affärsmodell och en digitaliserad affärsmodell som passar en digital omvandling med hjälp av samarbete mellan intressenter.

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# 1. Introduction

## 1.1 Background

Digital transformation has become relevant for firms to adapt after the transformation to Industry 4.0. Integrating and exploiting digital technologies is one of the biggest challenges companies currently face. No sector will not be affected by digital technologies, as competitors are adapting to the rapid industrial change. Digital transformation is driven by growth, customer satisfaction, increased efficiency in operations, competitive advantage, and increased business agility (Morakanyane, Grace & O'Reilly 2017). Digital transformation is a priority on leadership agendas, approximately 90% of US and U.K business leaders are expecting that digital technologies will make an increasing strategic contribution to their overall business. Regardless of the digital technology the company chooses to accomplish in a digital transformation, there are different frameworks used to choose a strategy. Business leaders must formulate and execute digital strategies to perform operationally better. The question is no longer if a company needs to make a digital transformation, but how to use it as a competitive advantage and how to embrace it (Hess, Benlian, Matt & Wiesböck 2016).

When the supply chain, business processes, products, and sales channels are impacted by digital technologies with a market-changing potential, it results in entire business models being reshaped. (Morakanyane *et al.*, 2017).

Problem is that most of the time when strategy frameworks are studied, they rarely consider the stakeholders in the business model. When redesigning a business model for digital transformation firms are increasingly relying on the stakeholders of their business ecosystem to create and capture the value. (Yi *et al.*, 2022).

In this study, the stakeholders for Alabanza's business model "mobile storage" and the prerequisites for a digital transformation of it will be studied. The business model service is to rent out containers as storage and is driven by factors such as increased turnover, profitability, and competitiveness. The current business model is manual and should be transformed with digital technologies. The research concerning frameworks for considering stakeholders in digital transformation is vague, and the definition of digital transformation in this context varies. The complexity involved in the business model is the logistics of

delivering containers, the stakeholders that should be prioritized in the business ecosystem, and the creation of an optimal offer to the customer. At present, it takes too long to deliver a container and the price is too high. The higher price than expected does not contribute to the growth Alabanza is looking for. Alabanza has no established method for evaluating customer value or for prioritizing customers, which complicates the objective of digital business transformation for targeted customer groups.

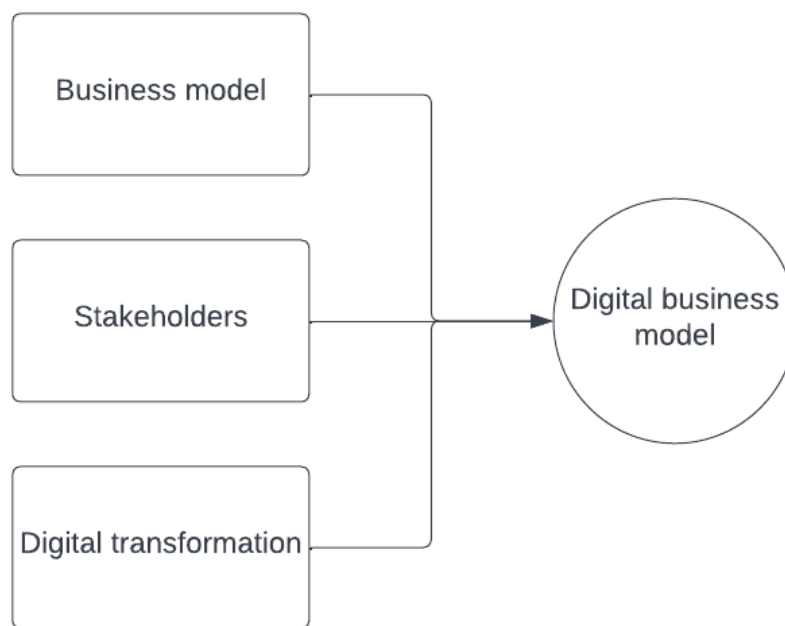


Figure 1. *Key concepts, own.*

## 1.2. Purpose

This paper aims to investigate the needs and requirements of the stakeholders for a digital business model, on which transporters, customers and Alabanza can interact. It also aims for integrating a digital transformation strategy, highlighting the needs and requirements of important stakeholders in the business ecosystem for business model alignment, and formulating prerequisites for the digital business model “mobile storage”. The problem is characterized by four stakeholders:

- Customers that want a good product with a quality of service at an inexpensive price.
- Transportation companies that want a logistics flow with no downtime for their crane trucks when picking up and delivering containers.

- The shareholders of Alabanza wants a profitable business, growth, and good cooperation with transportation companies.
- The employees of Alabanza that wants good workflow.

Digital transformation will require interaction with the stakeholders to create a value proposition and business model. The research questions to investigate the literature area are:

*What are the prerequisites for a digital business model?*

*Why should stakeholders cooperate to innovate a business model?*

*How can Alabanza adapt its business model and business processes aligned with a digital transformation strategy?*

### **1.3 Limitations in research**

This research paper has limitations. All research that contributes to the key concepts digital transformation, business model, and stakeholders which influences the phenomenon digital business model, will be classified as valuable information and contributions to research. The research paper does not investigate the customer's need for a new business model, interface of a platform; nor allocations in digital process management are investigated, and integrations of data methods.

## 2. Literature review

### 2.1 Digital Transformation

Even though modern tech companies were the first in creating the digital transformation, industrial-age industries such as health, electronics, machinery, energy and automotive are following the path of digital transformation. The transformation can create new opportunities, such as data collection and exploitation with connectivity of products, customers, companies, and systems that can make decisions autonomously. (Remane, Hanelt, Nickerson, Neville & Kolbe, 2017)

The definition of digital transformation is fragmented in research (Morakanyane *et al.*, 2017). See table 1.

Authors	Definition
Hess <i>et al.</i> (2016)	“concerned with the changes digital technologies can bring about in a company’s business model, which result in changed products or organizational structures or in the automation of processes”
Liu, Chen & Chou (2011) cited after Morakanyane <i>et al.</i> (2017)	“The integration of digital technologies into business processes”
Chanias & Hess (2016) cited after Morakanyane <i>et al.</i> (2017)	“reflect the pervasiveness of changes induced by digital technologies throughout an organization”
Schuchmann & Seufert (2015) cited after Morakanyane <i>et al.</i> (2017)	“realignment of technology and new business models to more effectively engage digital customers at every touchpoint in the customer experience life cycle”
Piccinini, Gregory & Kolbe (2015) cited after Morakanyane <i>et al.</i> (2017)	“characterized by the use of new digital technologies to enable significant business improvements”
Henriette, Feki & Boughzala (2015) cited after Morakanyane <i>et al.</i> (2017)	“a business model driven by the changes associated with the application of digital technology in all aspects of human society”



Westerman & Bonnet (2014) cited after Morakanayane <i>et al.</i> (2017)	“the use of technology to radically improve performance or reach of enterprises”
Mithas, Tafti & Mitchell (2013) cited after Morakanyane <i>et al.</i> (2017)	“the extent to which an organization engages in any activity of IT”
Lucas, Agarwal, Clemons, El Sawy & Weber (2013) cited after Morakanyane <i>et al.</i> (2017)	“fundamentally altering traditional ways of doing business by redefining business capabilities, processes and relationships”
Fitzgerald, Kruschwitz, Bonnet & Welch (2013) cited after Morakanyane <i>et al.</i> (2017)	“the use of digital technologies to enable major business improvements ”
Bharadwaj, El Sawy, Pavlou & Venkatraman (2013) cited after Morakanyane <i>et al.</i> (2017)	“an organizational strategy formulated and executed by leveraging digital resources to create differential value”

Table 1, *definitions of digital transformation (Morakanyane et al., 2017)*

Digital transformation is the act of turning digital. Depending on the measures and dimensions the transformation will involve, the definition of the transformation differs. A basis for the definitions in Table 1, is that they all are highlighting technologies that are digital. The definition needs to be evaluated against the drive factors of the transformation.

### 2.1.1 Digital Transformation Strategy

To transform into a digital business, two tools need to be used: digitization and digitalization:

- *Digitization* is converting information from analogue to digital, or automation of business processes through information and communication technologies.

- *Digitalization* is the use of digital technologies to change a business model and provide new revenues and value-producing opportunities; the process of moving to a digital business (Nwaiwu, 2018).

A digital transformation strategy is a blueprint for how to reach future states of digital business strategies. It supports companies in governing the transformation that arises from integrated new digital technologies. The concepts of IT-strategies and digital transformation strategies are not the same. Compared to digital transformation strategies, the IT-strategies usually focus on the management of IT-infrastructure within the firm. IT-strategies are parts of digital transformation. Hence, they enable digitalization and automation of business operations. The process of defining a strategy and deciding on the resources that are experienced in the new field the company needs for their development is referred to as strategic planning. (Matt, Hess & Benlian, 2015)

Digital transformation takes on a different perspective and pursues different goals, depending on the company's scope of the digital transformation. From a business-centric perspective, the strategies focus on transforming organizational aspects, products, and processes driven by new technologies and explicitly include digital activities at the interface with or fully on the side of the customers. The result could be a fully digitalized end-user product, and that constitutes a clear difference in process automation and optimization which could be made internally in the company's business processes. Strategies in digital transformation go beyond the process paradigm, which includes changes to and implications for products, services, and business models (Matt *et al.*, 2015). Companies converge multiple new digital technologies depending on their technological maturity and enhance it with ubiquitous connectivity with the intention of reaching sustained competitive advantage and superior performance in their operations. The superiority and competitiveness are reached by transforming multiple business dimensions, including the business model, operations, the customer experience and impacting the people as well as networks. By *operations*, the comprising of processes and decision making is meant, by *people* the skills talent and culture of the company, and *networks* include the entire value system (Ismail, Khater & Zaki, 2017).

Digital transformation is a continuous complex undertaking that can substantially shape a company and its operations. It is therefore important to assign adequate and clear responsibilities for the definition and implementation of a digital transformation strategy. If a

digital transformation strategy is approached half-heartedly, firms may lose their scope and may encounter operational difficulties. Companies should ensure that the person who is operationally responsible for the digital transformation strategy has sufficient experience in transformational projects and directly align his or her incentives with the strategy's targets and progress. (Matt *et al.*, 2015).

Depending on the scope of the transformation the strategy can pursue different goals. IT-strategies refer to digitizing processes and are a part of digital transformation. Digitalization is transforming the whole business model. Either way, you can integrate digital technologies in your business processes for automation and optimization, or a fully digitalized end-user product. It is crucial that the determined strategy considers the whole company and is approached to the max, otherwise risks can occur for not succeeding with the transformation.

### *2.1.2 Digital transformation frameworks*

Aligned with digital transformation strategy, *digital transformation frameworks* occur in research. These frameworks are developed based on academic research or investigation in companies that already made their digital transformation, and answers to questions on which procedures and approaches a company should take for a successful digital transformation strategy.

Matt *et al.* (2015) demonstrates a framework based on four elements that most digital transformation strategies have in common. These elements can be ascribed as four dimensions: *use of technology, changes in value creation, structural changes* and *financial aspects*.

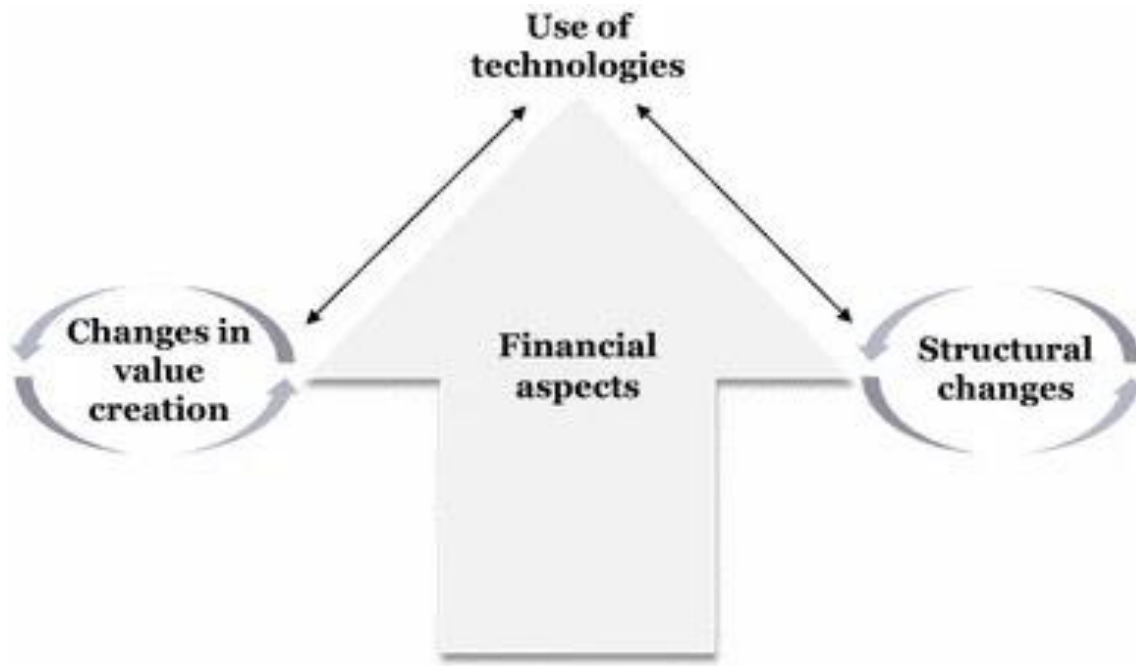


Figure 2. *A framework for digital transformation (Matt et al., 2015)*

The *use of technologies* considers a company's ability to exploit new technologies and its attitude towards them. A company needs to decide, whether it should be a market leader in new technology to create its own technological standards, or if it prefers to use already established technological standards to operate and execute its business processes. Being a market leader can lead to substantial competitive advantage, but requires technological competence, and risk willing initiatives because of the uncertainties of developing new technology. From a business perspective, the use of new technologies often requires changes in *value creation*. The company needs to decide on how much the new technology (digital activities) can interfere and deviate from their current – often still analogue – core business. Further deviations in value creation can offer new opportunities to enrich and expand the current product and service portfolio but can often require more risk-taking and technological changes. The digitization of products and services can require or enable different forms of monetization, as well as adjustments to the company's business scope if new customer segments are addressed. The new different forms of technology usage and value creation create new operations with the need for *structural changes*. Structural changes refer to variations in companies' organizational setup, and more importantly, the placement of the new digital activities within the corporate structure. It can be reasonable to integrate new changes in the corporate structure if the extent of changes is fairly limited, but for more substantial changes it might be more relevant to create a separate subsidiary within the firm. The former three dimensions can only be transformed after

considering *financial aspects*. Questions the business leaders need to evaluate are what areas in the company they afford to transform and the ability to finance. Financial aspects are both drivers and bounding forces for the transformation. Whether the financial pressure on the core business is high or low, companies should openly confront the need for a digital transformation, so they don't lack ways to finance it. (Matt *et al.*, 2015)

Another framework by Gimpel, Hosseini, Huber, Probst, Röglinger & Faisst (2018) demonstrates six action fields to master for the digitalization of the organization.

- Operations
- Value proposition
- Transformation management
- Data
- Customer
- Organization

Operations put importance on integrated IT, flexible operations, digital supply networks and digital manufacturing. Value proposition puts importance on smart products, smart services, individualization, and digital ecosystems. Customer highlights the need for customer experience management, customer insights, multi/omnichannel management, and hybrid customer interaction. Data considers the data integration, analytics, security, and ownership & privacy that develops in digital transformation. The organization has needs of organizational agility, a workplace of the future, a digital skillset, and a digital mindset. Last, transformation management highlights the need for digital strategy, transformation leadership, change management and digital value assurance.

### *2.1.3 Summary digital transformation*

I state that the act of going digital is the digital transformation, and it can either be with the digitization of business processes or the digitalization of a business model. The definition is individual for each company or institution depending on the driving factors and dimensions that are transformed in the company. The transformation process will be more resource-demanding depending on what stage a company is in its digital development.

The strategy can be determined as an IT-strategy, or digital transformation strategy to turn into a digital business. IT-strategies refer to digitizing processes and are a part of digital

transformation. Digitalization is transforming the whole business model, creating new revenue streams with digital technologies. Either way, you can integrate digital technologies into the business processes for automation and optimization, or a fully digitalized end-user product. The strategy needs to be formulated for the whole organization and not only the processes, and distinct responsibilities, resources and competencies shall be committed to the goals strategic planning has determined. A framework serves as a basis to understand driving factors and the status of the company's current transformation and can contribute to decisions in strategic planning. (Matt *et al.*, 2015)

## 2.2 Business Models

The heart of a company is how they create value and receive cashflows in the purpose of growth. Depending on the company's sector, the business model can be adapted for its specific problem solving capabilities that customers are ready to pay for.

The business model concept describes how value is **created, captured, and delivered**, and as a blueprint of how a company does business (Osterwalder & Pigneur, 2010; Chesbrough, 2007). The "...business model can be categorized as digital if digital technologies trigger fundamental changes in these value dimensions..." (Remane *et al.*, 2017:41). A digital business model is a distinct type of business model that exploits digital technologies (Bock & Wiener, 2017).

The digital business model can usually be reproduced for a very low cost. The digital platform of logistics that they aim to create will be more valuable as more users join. The digital business model relies on digital platforms to balance benefits among an ecosystem with multiple organizations and individuals involved. For example, Apple's app store must be able to provide both users and application developers with incentives. A framework for digital business models empathizes with the importance of customer contact points, a digital platform with a central role as a hub, and the need to orchestrate a complex ecosystem with multiple stakeholders. Five components in such a framework for a digital business model are (Remane *et al.*, 2017):

1. *Value proposition*: The reason why a particular customer is willing to pay for a product or service.
2. *Interface*: The interaction between the customer and the service platform.
3. *Service platforms*: Engines to enable the delivery of products or services.

4. *Organizing model*: Structure and processes of the ecosystem to create the products and services.
5. *Revenue model*: Distribution of revenues and costs among the ecosystem participants.

Another framework is currently the state of the art of business models, and puts importance on *value proposition* and *revenue model*, but adds additional factors for a well-functioning business model in the business model canvas (Osterwalder & Pigneur, 2010). See figure 3.

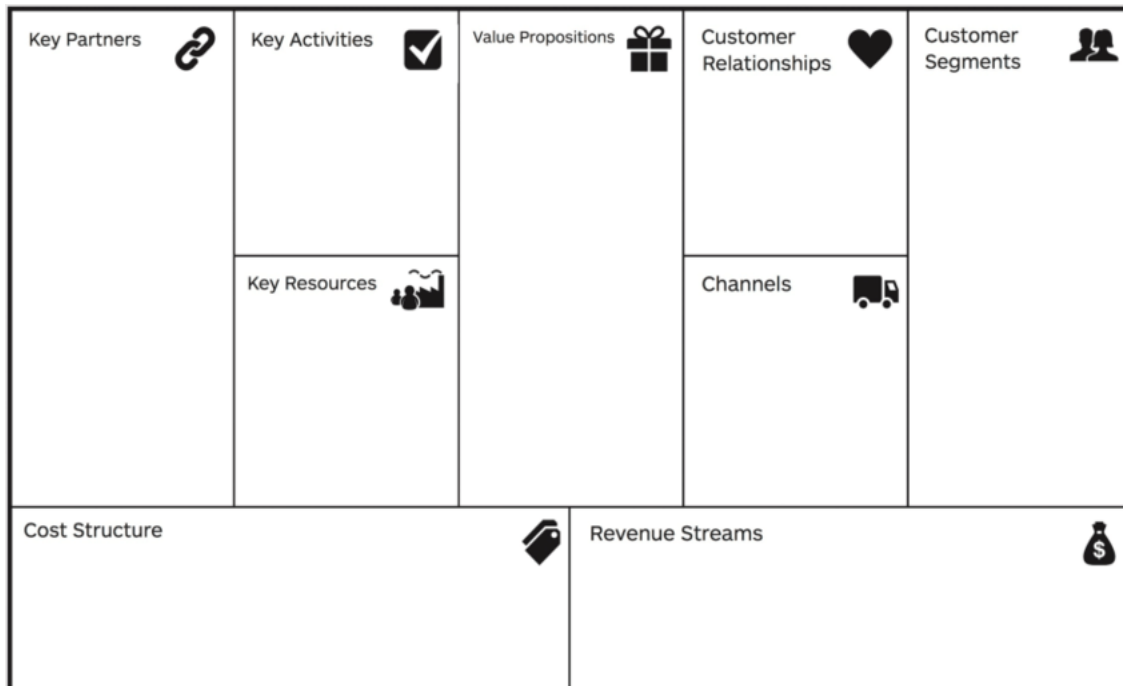


Figure 3. *The business model canvas (Osterwalder & Pigneur, 2010).*

The different elements of the canvas can be explained as:

1. *Key partners*: The network of suppliers and partners that makes the business model work
2. *Key resources*: The most important assets required to make the business model work
3. *Key activities*: The activities to make a business model function
4. *Cost structure*: All costs incurred to operate a business model
5. *Customer relationship*: The relationship a company develops with a specific customer segment
6. *Customer segment*: Defines the different organizations or groups of people the enterprise reaches to serve
7. *Channels* – How a company communicates with their customers and reaches them with the value proposition

8. *Revenue streams*: The cashflows a company receives from each customer segment
9. *Value proposition* – The combination of products and services that creates value for a specific customer segment

An important factor in optimizing the business model is the customer experience, which a well-functioning platform can increase. Customers are increasingly putting higher demands on a customer experience where they can interact with the company, anytime anywhere. Companies must strengthen their digital experience to not lose customers to competitors with a far more developed one. A digital business model therefore can result in an “ownership” of the best customer experience and be rewarded with growth. With the right insight from the customers, a business model created from the customer's perspective can lead to completely new opportunities. (Osterwalder & Pigneur, 2010)

### 2.2.1 Value propositions

Value proposition is the cornerstone of business models. Without support from the other elements of the business model canvas, the value proposition cannot be delivered. The value proposition can be delivered by channels, partners, and with customer relations to the customer segments, which responds with revenue flows. Key activities, key resources and the cost structure is connected because it creates the value to be delivered. See figure 4. (Osterwalder, 2004)

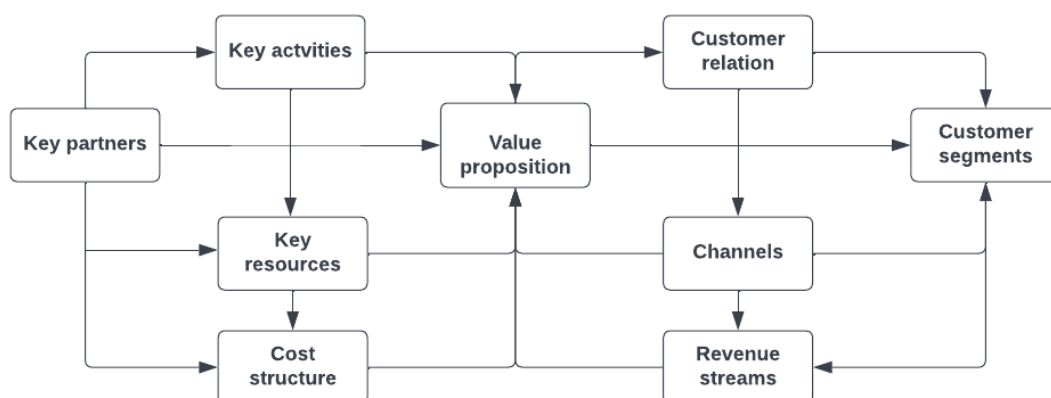


Figure 4. An interlacing of the value proposition, own.

While formulating a value proposition, it is important to consider what problem you solve for the customer, and how you will deliver the solution. Key activities are the activities that a company does to solve the customer problem (Osterwalder & Pigneur, 2010).



The customer value proposition is a strategic tool that is used for communicating to the customer how they aim to provide value for the customers. It is one of the most widely used terms in business, it should be the company's single most important organizing principle, considering it is crucial to the value creation process. A value proposition should be granulated down to customer segments. Evidence from case companies proves that the value proposition makes a significant contribution to a company's business performance. Uber Technologies, offer a value proposition to both customer riders and drivers. The customer seeks low-cost transportation from point a to b, and the customer driver is attracted to the flexible earning potential. Uber does provide the customer and driver with the service platform, where the customer can find the driver, and book with a single tap, and the driver will receive reliable payments. The value proposition Uber presents is solving two specific problems: for the rider, how to hail a cab with a range of options; for the driver, how to earn money at any time with substantial flexibility. While deciding on the value proposition, the manager should consider the strategic level, focus on customer segments, and explicitness of the value proposition, considering the industry, market, and competitive environment. Implications of the value proposition for the firm and customers should be evaluated as well as evaluating what perspective of value proposition they should use for their industry: The *supplier-determined*, *transitional*, or *mutually determined*. Uber is an example of a supplier determining value proposition, providing a platform for its customer segments. (Payne, Frow & Eggert, 2017)

The value proposition can be divided into digital offering or digital experience and concerns the "digitized" solutions a company is offering its customer, intending to create customer value. Successful products involve customers thoughts, acts, values, and relations in different ways depending on the product itself (Gentile, Spiller & Noci, 2007).

Physical products and complementary digital services are offered with established products that enhance the service level with complimentary digital service. The physical products are at the core of the offering, with single or multiple digital services that optimize the value proposition. It can be offerings or recommendations presented in the purchase process of the physical product, that enable a more effective business process. The value proposition can then be even more optimized or differentiated with a digital experience, which is *personalization*, *engagement*, and *community building*. *Personalization* refers to the use of digital technologies

to create tailored offerings for the user, *engagement* as the IT-enabled integration of customers into the value creation process, as to say involving customers in new products and services, and *community building* concerns the use of digital technologies to connect customers with similar interests. (Bock & Wiener, 2017)

A value proposition is how the company communicates to its customer what they provide and are the main idea of the business model, therefore it should be the company's main principle. Depending on what a company want to offer their customers, the value needs to be created and delivered and can be categorized. A company can both create value for customers direct, or indirect by creating a platform for other actors to create value for their customers. A value proposition solves a customer problem, but how it shall be solved is up to the company to determine with its key resources, key activities, cost structure and revenue model for financial resources.

### *2.2.2 Business model innovation*

Business model innovation is the search for new logic for the company and new ways to create and capture value for its stakeholders (Casadesus-Masanell & Zhu, 2013). It focuses primarily on finding new ways to generate revenues and define value propositions for its customers, suppliers and partners. BMI in a business ecosystem is regarded as the foundation of a company's competitive advantages and requires an exchange of resources among various stakeholders to create and capture new value (Yi, Chen & Li, 2022).

To innovate a business model is an ongoing process of exploiting new technologies and business opportunities. Companies commercialize new ideas and technologies through their business model. It takes a lot of effort to explore new ideas and technologies and the process of innovating the business model can be passed on. This is a failure for companies if they want to capture the potential success of a new business model, as the same idea or technology will pass through two different business models and will have two different economic outcomes. The search for a new business model may as well put the importance on being able to balance between current and new business models. (Chesbrough, 2010)

If the senior leadership teams are motivated and eager to support the digital transformation of business models, structures, and processes, they still face significant challenges. The need to balance the exploitation of existing capabilities, at the same time as building up new digital

capabilities that meet new needs and innovate their current business model. The importance of strategic renewal is a major game-changer for incumbent firms to renew established product-based business models with digitalization logic. Strategic renewal in the digital transformation enables companies to provide multisided value propositions. In adjacent industries, the creation and delivery of new value propositions are triggered by the entrance of new competitors and are enabled by business model innovation (Warner & Wäger, 2019).

Different foundations for companies that want to innovate their current business model, by targeting their current one, have been identified (Chesbrough, 2007). For every category the company reaches, they have a degree of business model innovation to develop the business model further. The categories are:

- Type 1 – The company has an undifferentiated business model
- Type 2 – The company has some differentiation in their business model

The company in type 1 do not articulate a distinct model, lacks processes for managing it and has a problem with strategic renewal to become competitive. The business usually competes on price and availability and serves customers who buy in that criterion. The type 2 company has developed a small degree of differentiation in its products and services and can allow them to target a specific customer that reacts towards their performance.

Business model innovation is hard to achieve. Barriers can occur, such as a lack of a positive attitude towards change and business model experimentation. Even though the experiments might fail, the information from the experiment is valuable lessons with approaches that were not effective for the business. Losses can be constrained and afforded if the right financial resources and planning are applied. The experiments create new data and set dynamic capabilities for strategic renewal. The creation of new data can later point out hidden opportunities. The company needs to identify internal or external leaders for business model change, to deliver a new better business model by managing the result from earlier experiment processes. Only by a cultural change of embracing the change of new business models, business model innovation can help companies to renew growth and profits. Conflict can occur in traditional configurations of company assets, whose managers are more likely to resist experiments that might threaten the ongoing value of the company (Chesbrough, 2010). Three key aspects of BMI has been identified, such as identifying novelty, lock-in complementarities, and efficiency (Amit & Zott, 2012).

Finding new logics in the business model is important to stay competitive and create new value for stakeholders. Experimenting with the business model can lead to business model innovation. It is important for companies if they want to create viable growth. A type 2 business model is not that innovative and does not really differentiate their business model compared to competitors. Increasing the innovativeness increases competitiveness. Even though the innovation in the business model is not effective, it creates a foundation for further development.

### *2.2.3 Summary of business models*

A business model is circulating its value proposition. The level of innovation and digital technologies can determine if the value proposition will be a digital solution. A new offer requires business model innovation, but if it is possible to deliver a value proposition, is dependent on all other factors in the business model canvas (Osterwalder & Pigneur, 2010). The value proposition can thereby be optimized with personalization that is only possible with an evaluation of the customer relations and customer segments. A value proposition can create an offer which makes the customer willing to return for the product and contribute with more financial resources. Strengthening the digital experience is competitive if the customers' needs a digital developed solution. Owning the best digital experience requires investments for interface but will increase the communication and reward the company with growth. Finding new logics in the business model is crucial to create new value and revenue streams, but barriers can occur while experimenting with wealth creating capacities in the company.

## **2.3 Business Process Management**

Improving business process management can be used for achieving corporate objectives. This can be made with investments in technology, fact-based decision making, simplification and innovation to optimize the processes. The characteristics of a business process are “they have customers (internal or external), they have defined outcomes and there are users for those outcomes, and they can cross organizational boundaries”. (Lee & Dale, 1998)

Business process modelling can be used for an analysis of the process flow. The current trend of modelling is to use diagrammatic modelling, that only visualises the business processes. Process analysis has little value unless it helps the company to improve its processes. Three steps need to be undertaken to improve the business processes:

1. Specify the system
2. Identify the performance bottlenecks
3. Choose among the possible modifications to resolve the performance bottlenecks

This does not provide the business process improvement either, without the necessary insight and level of detail for the actions that lead to process improvement, supported by tools and techniques. Goals of improving the company's processes should aim at reducing lead time and cost (Vergidis, Tiwari & Majeed, 2008)

To integrate business processes with other companies in the business ecosystem for the automation of a process, each part must communicate different aspects of the company's architecture:

- Business architecture – describes the business strategy, organization, and key business processes.
- Data architecture – describes the structure of an organization's physical and logical data assets and its management capabilities.
- Technology architecture – the logical software and hardware needed to support the deployment of business services, applications, and data, including IT infrastructure, networks, communications, standards, processing, and middleware.

Process architecture represents the fundamental organization of service development and should be maintained by using modeling tools. Integration of data between companies for efficiency, service speed and agility can be described with an integration architecture. For detailed interface descriptions of data exchange, tools like Enterprise Application Integration can be used (Pinheiro, Guerreiro & Mamede, 2021).

An application programming interface (API) enables companies to integrate their business processes between departments and external organizations (Mathijssen, Overeem & Jansen, 2020). Process effectiveness applications provide better optimization, reduce operating cost, increase throughput, and improve product quality (Samad, McLaughlin & Lu, 2007). Self-service, something that can be made with self-service technologies (SST) which can as well contribute to faster delivery and co-value with the customer in the automation of processes (Hilton, Hughes, Little & Marandi, 2013). Adoption of intelligent automation and more automated processes reduces workload in business process management, cost, human resources, and operational time (Ng, Chen, Lee, Jiao & Yang 2021).

Companies need to identify processes that will be improved from a digital change. Different changes, put different demands on tools and techniques. An integration between two company's API's requires monitoring and communication between the two. Internal processes are not dependent on external parts, perhaps external consultants that can model and analyze the process flow to improve it with new techniques and tools.

### *2.3.1 Summary of business process management*

A business model contains business processes, and the change of digitizing shall be communicated to the stakeholders so the business models can be aligned, as well as defining and identifying the processes that shall be eliminated or improved. Business process management creates effective operations and processes. The business processes can be optimized and automated with SST and integration of API:s, and reduces workload, cost human resources and operational time. To model the processes is a first step for improvement, but the improvement also needs support from the right techniques and tools. An improvement of the business processes leads to more efficiency, but needs evaluation of bottlenecks towards KPI:s, such as time and cost.

## **2.4 Stakeholder Management**

To understand the perspective from customers and carrier companies, additional theories of transport management and customer relations management is included in this chapter. The literature also covers business ecosystems and partnerships, since it occurs stakeholders in such context.

Effective stakeholder management is beneficial for the company's strategic management and economic return. It can result in "increased trust that leads to fewer transaction costs, by reducing resources needed to create and enforce contracts and by eliminating the need for elaborate safeguards and cogency that require detailed monitoring. A detrimental relationship can risk the wealth-creating capacity of a company, while a successful beneficial relationship can enhance it. Conflicts between stakeholders can be solved if the managers re-think the problem so that the needs of the stakeholders are addressed, and when this is done value creation can increase significantly. Sometimes trade-offs must be made to solve the conflicts, which need to be evaluated on how to be made, and then work on improving the trade-offs for all sides involved. (Parmar, Freeman, Harrison, Wicks, Purnell, de Colle, 2010)

#### *2.4.1 Stakeholder theory*

Three different philosophies of human behavior in the market setting are self-interest, reciprocity, and opportunism. Self-interest explains that humans are self-interested utility maximizers, and the self-interest of a human being will always be greater than paying attention to another human being's interest. Opportunism is the theory of humans using opportunism that describes that some actors are ready to subtly deceive their exchange partners to maximize their utility. A philosophy has emerged called reciprocity decisions making, which gives a more exact model of human behavior in strategic management. Reciprocity suggests that people maximize their utility while conforming to the norm of reciprocity. That means, that parties in business constellations are ready to sacrifice self-interest for the sake of their principles. Either way, you can be deemed fair with positive reciprocity, or deemed unfair with negative reciprocity, which also determines the degree to which people exhibit reciprocity tradeoff their self-interest and their principles. Fair behaviour results in a reward, and unfair reward results in punishment. Overall, reciprocity is the foundation for mutual agreements and relations with stakeholders and can create so-called "rent". Rent is referred to the profit made after costs for beneficial relationships. The more positive the reciprocity is, the more value is created and captured by the company. (Bosse, Philipps & Harrison, 2008)

Self-interest needs to be considered to form a reciprocity relationship between stakeholders. Tradeoffs can be made when two stakeholders are ready to give up a requirement for the greater good and form value together. The opportunism should be avoided to not create detrimental relations, which leads to decreased trust. Increased trust leads to decreased monitoring in stakeholder management and lowers transaction costs. The interesting part of reciprocity is that it takes an "if you make money, we make money" approach. Positive reciprocity is something that leads to more financial resources earned, but a stakeholder needs to maximize their utility while satisfying the other parts' interest to create "rent".

#### *2.4.2 Business ecosystems and partnership*

The locus of value capture and value creation has shifted to a business ecosystem. This business ecosystem is composed of interdependent stakeholders, for example, customers and suppliers. From a stakeholder perspective, business is understood as a set of relationships among groups that creates the business. The stakeholders interact to jointly create and trade a value. To understand a business is to know how relationships work and change over time between stakeholders, and it is the manager's job to create and distribute value (Parmar *et al.*, 2010).

A business ecosystem is a network where each member contributes to the ecosystem's wellbeing and is dependent on other members for its survival. In the context of business, this sums up the evolution of companies that cooperate. Stakeholders are a part of the business ecosystem. The change of emerging technologies and business opportunities can open up innovation and beneficial business relationships when firms co-evolve capabilities in the creation of products and services. The business ecosystem describes the network of firms, which collectively produce a holistic, integrated technological system that creates value for customers. The benefit of working in a network of companies that cooperate in the delivery of greater value for the company than the value it might have created alone. There are three strategic implications of being part of a business ecosystem. First is the number of resources that must be invested, both in the company's innovation and the development of component or complementary technologies. Secondly, the firm must take the lead in developing innovations in their business model that can keep evolving with complements. Third, is the *assessment of risk* that accompanies cooperation in an ecosystem, evaluating risks in different innovative projects, their success potential and evaluating the technologies that should be enhanced to create a scalable business model. (Mäkinen & Dedehayir, 2012)

When redesigning a business model, firms are increasingly relying on stakeholders in the business ecosystem to create and capture value. The stakeholders can exert a major influence on a company's business model innovation. A system that connects all stakeholders in a business ecosystem, and combines their resources results in a business model that aims at value creation for multiple stakeholders. While evaluating stakeholders, two different groups can be divided into external and internal stakeholders. The internal stakeholders are owners, employees, and representatives of the company and shareholders, while the external stakeholders are customers, suppliers, organizations, creditors, and the government. Benefits of external industries stakeholder ties can offer companies more heterogeneous resources and can as well contribute to organizational learning for the company (Yi *et al.*, 2022).

External technology partnerships allow open business models to accomplish even more. Co-development partnerships are an important mechanism for innovating the company's business model. Depending on the context of the relationship, the character of the relationship varies. To sustain the co-development partnership, one must carefully define the business objectives



and align the business models of each company. There are four steps to implement a co-development partnership (Chesbrough & Schwarz, 2007):

1. Define your business objectives
2. Assess the capabilities you require
3. Determine the degree of business model alignment with partner
4. In managing the partnership, think of future collaboration – not just the current need

Key partnerships describe the network of suppliers and partners that makes the business model work. A partnership is becoming a cornerstone of business models, and companies can create alliances to optimize their business model, risk reduction and acquire resources. Osterwalder & Pigneur (2010) separates the partnerships into four different types:

1. Strategic alliances with not competitors
2. Strategic partnerships between competitors
3. Joint ventures to develop new companies
4. Relations between buyers and suppliers as an assurance of continuous supply

To innovate and create new value, it is important to consider the different stakeholders in the ecosystem. Understanding the business ecosystem can lead to new value creation and value capture. Creating value for different actors in the value chain can be beneficial for the business model while redesigning it. The manager shall understand relations between stakeholders in the ecosystem to execute a strategic renewal. With a partnership, a company can create alliances to be even more competitive in the market. Targeting all actors in the business ecosystem and combining their resources, makes a significant change in how value is created. Research on digital business models that considers stakeholders in the ecosystem have not been found during the author's theoretical research, therefore it is an interesting contribution to this paper.

#### *2.4.3 Customer Relationship Management*

Customers are a stakeholder (Parmar *et al.*, 2010). *Customer relations* are established and maintained for each *customer segment*. Profitable customers are a critical part of a successful digital business model, and to satisfy customers companies may divide them into segments. These segments can be divided into common needs, common behaviors, or other recognition factors. The owners of the company must take a strategic decision on which segments to ignore, and which segments to embrace. Hence, the business model can serve one or several customer

segments. Customers represent a separate segment if their needs require and justify a distinct offer, they require different types of relationships, they have substantially different *profitability*, they are willing to pay for *different aspects of the offer*, or they are reached through *different distribution channels*. Depending on the strategy with the business model, the company can aim to reach different markets which address the customers in different ways. A segmented market separates its customers by various needs and concerns, a multisided platform (or market) is solving different needs and concerns by connecting customer segments to each other, and a company that focuses on a mass market does not differ their customer from each other. (Osterwalder & Pigneur, 2010)

Customer relationship management emerged in the 1970s as a tool to manage and optimize sales-force automation within companies. Today, it is a commonly used tool of enterprise information management for effective customer interaction and customer knowledge management. Customer relationship management is defined as the “integration of processes, human capital, and technology, seeking for the best possible understanding of a company’s customers. CRM allows companies to integrate and centralize their customer data and transaction records. This contributes to the identification of loyal customers and more effective marketing activities. One of the key elements to increasing customer loyalty is to develop personalization software tools – “...the ability to personalize customers user experience in software...” (Gil-Gomez, Guerola-Navarro, Oltra-Badenes & Lozano-Quilis, 2020:2734). Customer relations describes the type of relationship that a company establishes with a certain customer segment. The company must be addressing and specifying what relation they want to keep with each customer segment. The choice of customer relations can have different underlying motives such as:

- Acquire customers
- Retain customers
- Increase sales with complemented offers or services.

Customer relation can also be explained as the degree of value proposition a company can fulfil for the specified customer segment. The type of relation chosen for a customer segment can be specified with questions as such which customers already are established, how much the customer segment cost, what kind of relation the customers are expecting and how the customers are integrated with the rest of the business model. (Osterwalder & Pigneur, 2010).

A positive customer experience can promote an emotional tie between a company's brand and its customer, which enhances the customer loyalty (Gentile *et al.*, 2007).

While developing a customer experience, is to integrate a typically diverse array of stimuli to assess the tradeoffs that are entailed in creating value for customers. The stimuli are typically interactive but are crucial to point out in a customer experience while defining it for the customer segment (Palmer, 2010).

Developing customer relations are important to increase sales and customer loyalty. The brand itself can create an emotional tie with the use of CRM personalization, which is also a way to optimize the value proposition (Osterwalder & Pigneur, 2010). The owners must decide on which customer segments to ignore and which to embrace, by evaluating their profitability or overall benefit for the business model. When that decision is made, a customer experience can be created.

#### *2.4.4 Transportation Management*

Effective operations require a well-functioning transport. Transport is a set of activities related to the movement of people and material goods by appropriate means. It plays a very important role in logistics, because of the goods movement and the creation of ancillary services. Transport in the national economy enables the exchange of goods and services. Transportation should not be too late or too early and using a transport information system provides transport with significant effectiveness with its reliability (Grabara, Kolcun & Kot 2014).

Costs associated with transport are one of the biggest factors that increase cost in logistics. An organization of transport with transport management can often lead to increased sales, and an essential benefit is if the transport manager's ability to control and monitor the transport. (Rydzkowski, 2005, cited after Grabara *et al.*, 2014).

Information systems in transport can provide the transport company with better financial results, increased transport efficiency, more efficient coordination in the exchange of coordination, the possibility of remote monitoring conditions along the route, less use of drivers and optimize the timetable and plans of drivers. In addition, it can also contribute to an adaption of the trips to the requirements of customers without incurring additional costs.

To develop a transport information system, identifying the transportation process is a very important first step (Grabara *et al.*, 2014):

- Information on a selection of modes of transport
- Information about loads (size, type, quantity)
- Information about senders and recipients
- Start and end time

Another important factor to bear in mind is that the quality of the transport of the service provided is just as vital as the processing time of the transport. To execute the transport process more smoothly, companies are increasingly using modern tools of information systems to run the operation more effectively. Telematics is devices and systems that collect data for the transmission of their distance, which transforms into information to the end-user.

The primary alternative when choosing a telematics system is the return on investment. Companies do have different alternatives and need to choose one or several that fits their enterprise in the most optimized way. (Budzik & Zacharski, 2012 cited after Grabara *et al.*, 2014).

- The ability to scale the system: Simple devices and the software does not have limitations to expand the scope of retrieved data
- Interactivity: Has advantages from the point of view and better contact with the driver
- Other features: Tools that can make the driver more inventive and secure quality of the transport process in interaction (photo viewer, video)
- Open or closed system: A closed system offer only the information from its sensors such as GPS position, open systems allow communication and information between trucks or companies
- Hardware or software: Operating systems that only work on the provider's platform or those that can be installed on different hardware
- The scope of processing the collected data: The ability to represent data as statistics or the ability to represent data with folded parameters
- Central server: Installation of a central server of the transport company that can be reached through the internet, for example, cloud solutions

- The possibility and scope of the data export for further information systems in the enterprise

A rising phenomenon discussed in the research is the appliance of smart transportation. Using mobile devices and devices installed in the city, or sensors embedded in the vehicles, it is possible to offer optimized route suggestions and autonomous driving. Route optimization is the method of proposing the best route for a specified destination to decrease traffic constellation and can be developed by various machine learning and data collection methods. An interesting machine-learning approach is using decision trees. Every single decision choice is broken down into subtasks with the help of collected data and can thereafter present different outcomes of the decisions. (Zantalis, Koulouras, Karabetsos & Kandris, 2019).

A transportation company that uses telematics and transport systems can increase their efficiency and digitize business processes. To create an information system for transport the business processes of the carrier need to be identified. A carrier company that uses the benefits of an information system can decrease cost and increase efficiency in operations with the ability of surveillance for their customers.

#### *2.4.5 Summary of stakeholder management*

Cooperation with the stakeholders in the business ecosystem can create new value for the business model. It also sets dynamic capabilities if the company understand its market that changes rapidly with digital technologies. The complexity of stakeholder management is that no actor in the ecosystem shall feel they are treated with negative reciprocity, then detrimental relations can arise. All stakeholders have the self-interest to utilize their capacities, but considerations shall be made for other companies for mutually beneficial relationships. When a business model is redesigned, either digitalized or digitized the needs of other stakeholders shall be involved since it will affect the value creation of all actors involved. One stakeholder of Alabanza is the transportation company with carriers for container delivery. If they have an active use of telematics and information systems their operations shall be seen as effective. Even if the price for carriers is high, the use of information systems and telematics can capture value for Alabanza as well.

### 3. Concrete research question

Research revealed that a business model can either be digitalized or be digitized. Digitization sets basis for a digital business model and is an IT-strategy that includes automation of manual processes for process optimization, or the conversion of analog activities to digital. Digitalization is the development of a digital business model, which is a fully digitalized end-user product. Transformational strategy needs to be followed strictly with distinct responsibilities, resources, and competencies. The value proposition that a company decides is the primary principle they shall follow in their organization. A changed value proposition results in a redesigned business model. It can be adapted to different stakeholders depending on the customer relations in different customer segments with different needs. A business model can be aligned with stakeholders if the redesign is communicated with the change in business processes, and an effective carrier company uses telematics that can be integrated in Alabanza's digital processes. Business model innovation can create digital business models and be optimized with input from stakeholders, hence the cooperation with the stakeholders can create new value for the business model. It does also set dynamic capabilities for the strategy as the company can understand their stakeholders in market change. Positive reciprocal relations lead to more value creation, negative reciprocity leads to a detrimental relationship and less "rent".

These finding creates concrete research questions referring to there are in the literature review, to find an answer to the stated research questions in the purpose (see chapter 1.2).

#### *Digital Business Model*

- How digital is Alabanza's redesigned business model?
- What does the value proposition require of Alabanza?

#### *Stakeholders*

- How can the different requirements of stakeholders be considered for a mutual beneficial relationship?
- How are stakeholders affected by the new business processes?
- How digitally mature and efficient is Kjelland Transport?

#### *Digital transformation*

- How developed is Alabanza's organizational digital transformation?
- What are the drivers of digital transformation?

## 4. Method

To answer the research question, the study has contained observations of Alabanza's operations, literature studies and interviews with the main stakeholders. First, data from literature were gathered while observing the case company's operations. Secondly, quantitative data from the customer database. Thirdly, qualitative data from Alabanza and Kjelland Transport. Lastly, the results were analyzed and discussed, and more data from literature were gathered to find additional reasoning for the results. See figure 5.

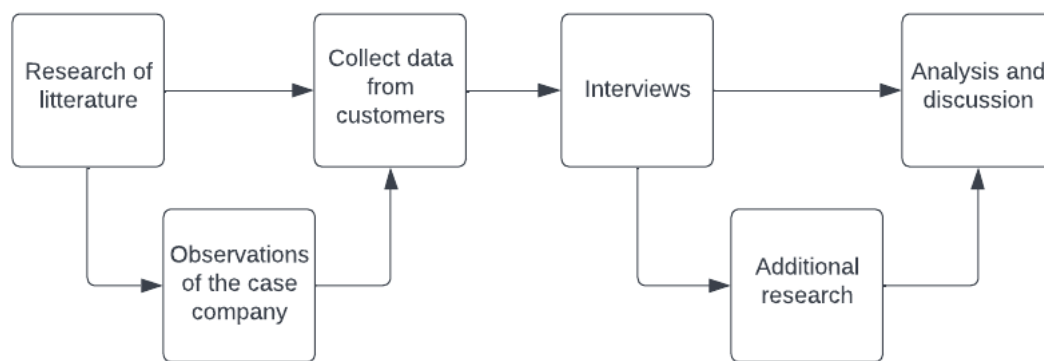


Figure 5. *Overview on research method, own.*

### 4.1 Approach

First, articles related to the subject related fields were studied to get an overview of the term digital transformation and digital business models. Thereafter, a brief meeting took part with the examiner and case company, to figure out what problem with an academic foundation fit for scientific research and as well provide Alabanza with beneficial knowledge for a redesigned business model. To answer the research question and conclude, I will be open to findings in the research but will proceed with a conscious awareness of my knowledge of digital process management, digital business models, digital transformation, stakeholder management and carrier logistics. During and before the research I have certain knowledge and view of Alabanza's current business and the factors that have an impact on it. However, I don't have the knowledge of how they specifically shall comprehend their stakeholders, strategy, and business model to adapt to a digital transformation. With the help of empirical research in the form of qualitative interviews and observations in real-time situations, as well as theoretical data I will identify *what needs to be explained*, and therefore, this research is *abductive*. (Kuhn 1970, cited after Philipson, 2013)

## 4.2 Operationalization

First, the research question served as a foundation for the theoretical chapters, for finding proper articles that were in line with the paper's topic. The theoretical part is a major pillar for breaking down concrete research questions that can be transformed into interview questions. The key terms, stakeholder management, digital business models, and digital transformation strategy were used to create an understanding of the phenomena of digital transformation.

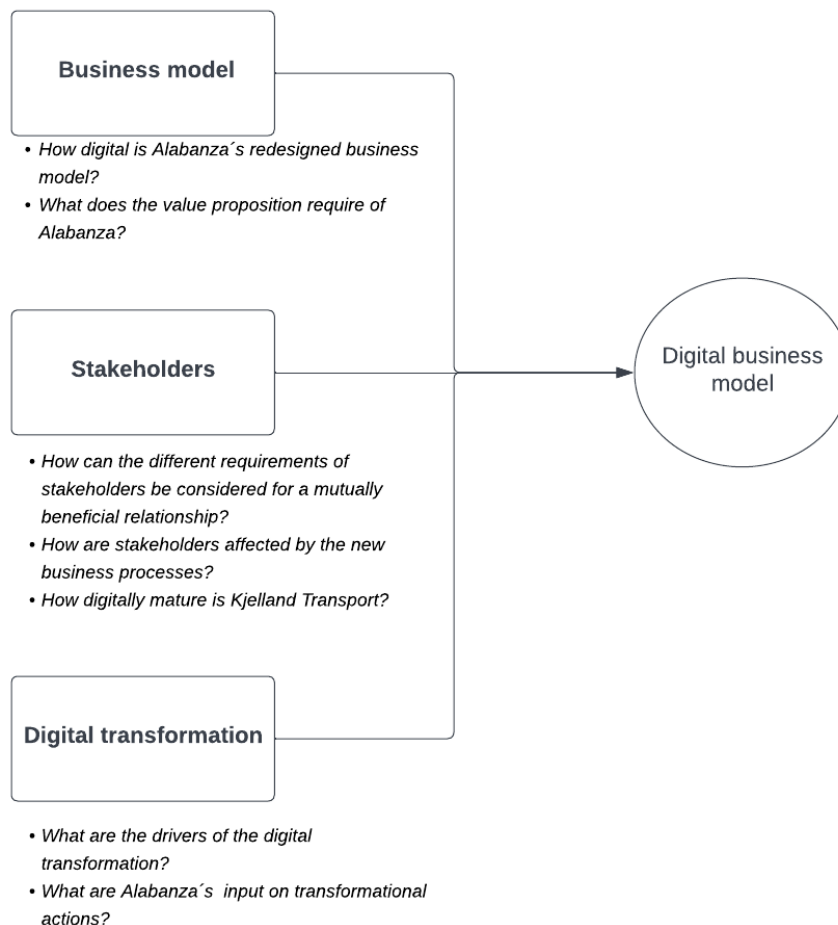


Figure 6. *Operationalization of research, own.*

Specifically, the different dimensions of the framework of Matt *et al.* (2015) were decomposed to find out Alabanza's current situation to adapt to a digital transformation. Then, the strategy and goal of the transformation were asked to understand the drivers of the digital transformation. (Morakanyane *et al.*, 2017)



The business model canvas (see figure 3) was used to identify Alabanza's degree of digital transformation for the business model, and if the outcome would be a digitized or digitalized business model (Osterwalder & Pigneur, 2010). Questions to find out Alabanza's As Is and To Be processes, as to say how their current processes look like and how they want it to be like because it put specific requirements on the stakeholders that are involved in their business ecosystem.

Kjelland Transport AB was just as Alabanza questioned on their development of digital transformation, but as well how they would react to a change in Alabanza's digital transformation.

The customers were not interviewed but quantitative data was gathered to understand different needs of container type.

### **4.3 Case study**

This research paper is limited to three cases which are stakeholders and will be affected when mobile storage goes digital.

1. Alabanza and its employees
2. Carrier suppliers
3. Customers

#### *4.3.1 Choice of company*

While choosing the company for this subject the author was networking with social contacts for a company that undergoes a change in digital transformation for expansion. Alabanza AB was in a critical decision situation, where the choice of a digital business model and its processes need to be balanced with their stakeholders for a scalable business model. In the company, two managers (also the two owners) and one employee were interviewed.

#### *4.3.2 Choice of supplier*

A supplier with delivery solutions for containers was chosen with trustful relationships with Alabanza AB and is considered as a potential partner to make the new business model effective. The relation was important, so the author could perform his research properly. The carrier supplier chosen was Kjellands Transport AB, due to that they run the majority of Alabanza's delivery of mobile storage. At Kjelland Transport, the CEO of the company was interviewed

because it's a top-down organization that answers to his command. If the CEO of Kjelland Transport AB chooses to cooperate with Alabanza, the partnership has a high probability to be completed.

#### *4.3.3 Recognition of customers*

Alabanza's customer database of customers was investigated to find different demands on container type, customer segments, customer volumes, average fees of the container and lease time.

### **4.4 Data collection**

A qualitative approach is used to identify key issues and for stakeholders. When a qualitative method is used correctly, it provides deeper insight into problems than quantitative methods (Jepsen & Rodwell, 2008). When the interviews were completed, Philipson's (2013) well-grounded theory for pattern-finding was used to gather the data for analysis and conclusion. During the research, data from literature were gathered, quantitative data from customers, and qualitative data from Alabanza and Kjelland Transport.

#### *4.4.1 Interviews*

For Alabanza and Kjelland Transport, information is collected by interviews. The approachable interviewing technique consists of two minimum requirements (Jepsen & Rodwell, 2008)

- interview questions should be specific in their clarity and focus
- they should be appropriately patterned to suit the experiences of the interviewees.

The wording - but not the of the questions - should be adaptable to the experience of the person being interviewed. Interviews will ensure that the questions are open, and broad, and invite respondents to answer freely concerning their business environment or customer experience.

Before every interview, the interviewee was informed about the topics and areas the interviews will concern. The contact was made by email and phone messages. Alabanza's needs and requirements were investigated to implement the redesigned business model, in line with their digital transformation strategy.

Areas interviewed for Alabanza were:

1. Digital transformation
2. Digital transformation strategy
3. Redesign of business model

4. Business processes
5. Cooperation and partnership

The three respondents of Alabanza were asked the same questions and were remarkably close in time. Interview times related to the respondent are demonstrated below in table 2.

	<b>Respondent 1</b>	<b>Respondent 2</b>	<b>Respondent 3</b>
<b>Time</b>	73 minutes	72 minutes	71 minutes

Table 2. *Length of interviews, own.*

Areas interviewed for Kjelland transport were:

1. Digital transformation
2. Cooperation and partnership
3. Business model

The interview length of time was 91 minutes.

#### 4.4.2 Secondary data collection

The customers are considered a stakeholder and will be affected by a digital transformation. Customers from the database and the specific demand on container types were observed to be able to contribute to the theoretical chapter on customer relations. Observations on customers in industries, customers with the highest volume, profitability, and a comparison between private customers and company customers to show which customer segment rents most containers and fits the redesigned business model.

### 4.5 Analysis

After all the data was gathered from the different stakeholders, an analysis of the data material was carried out and compared with the theoretical chapter. During this time more theoretical data was collected, for being able to discuss all the material that occurred in the observations. Analysis of the results from Kjelland Transport was made by identifying statements in the transcribed interviews. The analysis of the result from Alabanza was made with Philipson's (2013) method for pattern finding in qualitative data but was adapted and simplified due to the lack of respondents that could make it possible to find global patterns. Therefore, patterns in every area investigated were identified by Alabanza's respondents, as well as statements that are valuable because it matches the information in the theoretical research. Kjelland Transport

could only provide the research with one respondent, therefore only statements were used for the result and analysis.

#### **4.6 Validity and reliability**

Validity is “it determines whether the research truly measures that which it was intended to measure or how truthful the research results are. In other words, does the research instrument allow you to hit "the bull's eye" of your research object?” (Golafshani, 2003;599, cited after Joppe, 2000).

Reliability is to the extent to which results are repeatable. If another researcher repeated the study, would they obtain the same result? Another aspect of reliability is to demonstrate research decisions during the research project, a researcher should be able to understand what was done, by reading for example a research diary. (Grossoehme, 2014)

The validity of this research was made by contacting the interviewees with the results to get a confirmation that the author had interpreted their answers correct. The reliability was made by choosing an academically accepted pattern-finding method, and close communication with the examiner and supervisor for guidance in the research process.

#### **4.7 Ethics in research**

All interviewees were informed beforehand that the interviews would be anonymous if they so wanted.

## 5 Results

Results were gathered from firstly the customers, secondly Alabanza, and thirdly Kjelland Transport.

### 5.1 The customers

152 out of 219 containers are rented by companies, and 64 out of 219 containers are rented by private persons. A remarkable share of the customers is active in the automotive and construction industry, and the others are more point a mass market.

#### 5.1.1 Company customers

In one of Alabanza's digital tools for administration, the top twelve company customers could be identified. Essve, are providing Alabanza with the largest revenue stream, and thereafter Astra Zeneca and Intertek Semko, which are highly technological companies in need of extra storage see table 3.

Company	Industry	Volume of revenue streams
Essve Sverige AB	Construction	5,60%
Astra Zeneca AB	Medical	1,90%
Intertek Semko AB	Certifications of electrical applications	1,10%
Essve Produkter AB	Construction	1,00%
H&H Tuonti OY	Wholesaler	1,00%
GH däck och motor AB	Car industry	1,00%
3on Reklambyrå och Webbyrå AB	Advertising	1,00%
HNH Bygg AB	Construction	0,90%
Myten AB	Restaurant and catering	0,80%
ALX Industry 2.0 AB	Real estate and business consultancy	0,80%
Samhall AB	Cleaning and maintenance	0,80%
Keolis Sverige AB	Public transportation	0,70%

Table 3. Top customers of Alabanza, collected from the database.

The companies renting a container now, are mostly at a period of 1-3 years. Prices can differ because of the type of container. A ten feet container is less expensive than 20 feet. The generated monthly cash flows come from the customer with a rental period of 1-3 years. See table 4.

Years of leasing	Number of containers	Generated monthly cashflows	Average fee (monthly)
<10	8	6642 SEK	830 SEK
7-10	10	5642SEK	564 SEK
5-7	16	9172 SEK	573 SEK
3-5	38	30231 SEK	796 SEK
1-3	46	32628 SEK	709 SEK
>1	34	24296 SEK	656 SEK

Table 4. *Overview of company customers, own.*

Companies that use mobile storage need extra storage. Table 5 highlights different industries and their share of the containers that Alabanza have in service. One company customer is not included in the result – Essve Sverige AB. Results indicate that construction and building industry has the biggest share of containers, as well as the automotive industry that uses the containers as storage for their tires. See table 5 below.

Industry	Share of rented containers
Construction and building	27/152
Automotive industry	23/152
Transportation	10/152
Real estate development	8/152
Sport / outdoor associations	8/152
Medical science	6/152
Fuel stations	6/152
Engineering and technical services	6/152
Wholesalers and retail	6/152
School industry	6/152
Restaurant / food	5/152
Counties	5/152
Industrial design industry	4/152
Music and entertainment industry	4/152
Technological certifications	4/152
Convenience stores	4/152
Hotel	4/152
Cleaning and maintenance	3/152
Museum / local history association	3/152

Logistics	2/152
Beverage and snacks	2/152
Print services	2/152
Law enforcement	2/152
Electricity generation	1/152
Veterinary	1/152

Table 5. *Industries that use mobile storage, own.*

There are 9 different containers in the product portfolio of Alabanza. The 20 feet container is by far the most popular one, with a total share of 88 out of 152 containers (approximately 58%). Second, in popularity, is the 10 feet container with a total share of 26/152 containers. See the demand on different containers below in table 6.

Number of containers	Type of container								
	20''	10''	20'' ISO	8''	20'' Tyre	40'' ISO	10'' ISO	MBox	20'' Longside
88	X								
26		X							
11			X						
9				X					
7					X				
6						X			
3							X		
1								X	
1									X

Table 6. *Demands on container type, own.*

### 5.1.2 Essve Sverige AB

Essve has a similar business model as Alabanza. Essve rents out containers with construction supplies in them (screws, nails, etc.) to construction sites or builder's merchants, and when the leasing period is completed, they charge the renter for the inventory that is used. Essve uses the cooperation with Alabanza for two reasons:

1. Container supply
2. Transportation services

The transportation services are usually when the container needs to go back to the depot, which Essve lets Alabanza take responsibility for. Essve have now 90 containers in service

and 22 at Alabanza's depot, ready for deployment. All Essve's containers are 10 feet containers.

### 5.1.3 Private customers

The private customers are not the biggest part of Alabanza's business, since they are the smallest segment. Compared to the company customers, the private customers are not providing with the same revenue streams each month. In recent years, the share of private customers are increasing. The average fee is lower than the company fees, which indicates either more usage of 10 feet containers or a lower overall price for the customers, see table 7.

Years of leasing	Generated monthly cashflows	Average fee (monthly)	Number of containers
<10	392	392 sek	1
7-10	624	624 SEK	2
5-7	4006	445 sek	9
3-5	5999	666	9
1-3	11398	600	19
>1	21568	898	24

Table 7. *Overview of private customers, own.* Private customers are more likely to hire a 20 feet container with a share of 35 out of 64 (approximately 55%). The 10 feet container is more popular for private customers than for company customers, with a share of 14 out of 64 containers (approximately 22%). See table 8.

Number of containers	Type of container					
	20''	10''	20'' ISO	8''	10'' ISO	20'' Longside
35	X					
14		X				
7			X			
4				X		
3					X	
1						X

Table 8. *Private customers container demand, own*



## 5.2 Interviews with Alabanza

Alabanza's interview points out different similarities and differences in their view on the new business model, digital transformation and what incitements they would need from a carrier company to develop a digital business model. It also shows, how the different interviewees at Alabanza want to transform their business processes to digital. Four different areas were investigated in the interviews with Alabanza:

1. Digital transformation and strategy
2. Digital business models
3. Business process management
4. Cooperation with stakeholders

In the result tables, the R stands for respondents that made statements, Q is for the question, and the topic is the questions sector within the chosen area.

### 5.2.1 Alabanzas digital transformation

Patterns were found in all topics discussed. The topic demonstrates the question of the area of digital transformation and framework. Nine questions in 5 topics were asked within the area of digital transformation and strategy to find out the driving factors and applicability of Matt *et al.* (2015) framework for digital transformation strategy. See table 9.

TOPIC	Q	PATTERN 1	PATTERN 2	PATTERN 3
<b>DIGITAL TRANSFORMATION</b>	<b>1</b>	Fairly digitalized but in need of digitalizing mobile storage		
<b>STRATEGIC GOAL</b>	<b>2</b>	Gain growth and market leader in price		
<b>USE OF NEW TECHNOLOGIES</b>	<b>3</b>	New technologies are positive for improvement	New technologies are positive for improvement but challenging	
	<b>4</b>	Creation of technologies to exploit new technologies		
<b>CHANGES IN VALUE CREATION</b>	<b>5</b>	Creating new value will involve the delivery process	Creating new value will involve the delivery	An idea of digital ecosystem is neglected by two

		process and customer experience
<b>STRUCTURAL CHANGES</b>	<b>7</b>	It can create a new brand or develop operative business units
<b>FINANCIAL ASPECT</b>	<b>8</b>	There is a lack of resources because of lack of external investors
	<b>9</b>	It is worth it to invest but private risk needs to be considered

Table 9. *Patterns found around digital transformation, own.*

Important statements that respondents that were found in the interviews that are additional information about the research. Q stand for question. See table 10.

<b>TOPIC</b>	<b>Q</b>	<b>STATEMENT</b>	<b>RESPONDENTS</b>
<b>STRATEGIC GOAL</b>	<b>2</b>	To improve work methods and routines	2
<b>CHANGES IN VALUE CREATION</b>	<b>5</b>	Different values can be created with a digital business ecosystem; Capture value in the digital business ecosystem	1
	<b>6</b>	Manual checks for security need to be done	1
	<b>6</b>	It is purely a burden in terms of resources and focus	1

Table 10. *Statements found in digital transformation, own.*

### 5.2.2 The redesigned business model

The business model canvas was used to understand if Alabanza want to create a digital business model or a digitized business model (Osterwalder & Pigneur, 2010). Twentynine questions were asked, 9 topics (the elements of business model canvas, see figure 3) within the area business model. Patterns were not found in all areas and a lot of individual opinions point at differences in the answers, see table 11.

<b>TOPIC</b>	<b>Q</b>	<b>PATTERN 1</b>	<b>PATTERN 2</b>
<b>VALUE PROPOSITION</b>	<b>1</b>	Improved prices in carriers with digital services	
	<b>2</b>	Temporary and permanent needs of storage	Individual opinions about value delivery

	<b>3</b>	Individual opinions about customer problem	
<b>CUSTOMER SEGMENTS</b>	<b>5</b>	Value is created for private storage needs, permanent and temporary	
	<b>6</b>	Long term customers are companies and associations	
<b>CUSTOMER CHANNELS</b>	<b>7</b>	Customers want to be contacted by email and partners	Facebook and google should be used (individual opinion)
	<b>9</b>	The offer needs evaluation methods for the customer	
	<b>11</b>	Email and chat services at the webpage	Two additional communication approaches
<b>CUSTOMER RELATIONS</b>	<b>14</b>	Homogenic relations and liquidation of esse is an individual opinion	
<b>REVENUE MODEL</b>	<b>15</b>	Low price products and carrier costs is not something the customers are willing to pay for	
	<b>16</b>	The company prefers e-bill or direct debit as payment method	
	<b>17</b>	Simplicity of automatic payments is positive but some customers are in need of control	
	<b>18</b>	Insurance of goods and carrier transportation are individual ideas	
<b>KEY RESOURCES</b>	<b>19</b>	Container supply and competences in business development and IT-development	
<b>KEY ACTIVITIES</b>	<b>21</b>	Business supporting partners and IT-system is key	Price mechanism and digital business processes
	<b>22</b>	Partner relations and web-based communication is underrepresented	
<b>KEY PARTNERS</b>	<b>26</b>	Digital development and logistic activities acquired	
<b>COST STRUCTURE</b>	<b>27</b>	The perception of cost is shared	

Table 11. *Patterns found around the redesigned business model, own.*

Important statements that were found in the interviews that is additional information about the research. Column 1 is topic, R is number of respondents that stated the statement. see table 12 on following page.

TOPIC	Q	STATEMENT	R
<b>VALUE PROPOSITION</b>	1	no decision taken yet	1
	2	Temporary needs for storage; permanent needs of storage	2
	2	Financial easement for temporary and permanent needs	1
	3	Construction material and tires are a main storage problem to solve	1
	4	Customer expectations needs to be addressed	1
<b>CUSTOMER SEGMENTS</b>	4	Delivery of product is slow	1
	5	Companies that wants a cheaper solution for permanent needs	1
	6	Essve is mentioned as an important customer	2
	7	Rather become attractive for more customer segments	1
	7	The entertainment industry	1
<b>CUSTOMER CHANNELS</b>	7	No more segments but more construction companies	1
	10	On the webpage	3
	10	Over the phone for persuasion	1
<b>CUSTOMER RELATIONS</b>	12	Low expectations for a non-technological product	2
	12	Access to support in delivery or return of container	2
	13	Mostly individual customers	1
	13	Essve, because of their lack of performance and capacity consumption	1
	13	Non digital aware customers	1
<b>REVENUE MODEL</b>	15	Square meters and the type of container	2
	18	No decision made yet	3
	18	Transport customers goods to the magazines with digital service; carrier transportation; insurance of goods	1
	18	To create franchises with a reciprocally agreement	1
	19	A homogenic pricing is the best solution	2
	19	Homogenic pricing, except for good customers	1
<b>KEY RESOURCES</b>	20	Effective carriers	2
<b>KEY ACTIVITES</b>	21	Supply of containers and procurement processes	2
	21	Expanding business activities	2
	22	Trust building activities	1
<b>KEY PARTNERS</b>	23	Important suppliers and subcontractors	2
	23	We are not that dependent on partners at the moment	1
	23	In need of partnership building	1

	<b>24</b>	Effective carrier companies	2
	<b>24</b>	As long it is a balanced relationship; Construction and renovation companies; real estate brokers; Builders merchants; Cleaning, moving	1
	<b>25</b>	The sister company responsible for marketing and IT	2
	<b>25</b>	Container suppliers	1
	<b>25</b>	Kjelland Carriers	1
	<b>26</b>	Surveillance on carriers in a digital platform	1
<b>COST STRUCTURE</b>	<b>28</b>	The resources of consultants and development	2
	<b>29</b>	Carrier cost	2
	<b>29</b>	The most expensive cost is to build new systems, an extraneous cost	1

Table 12. *Statements found around the redesign of business model, own.*

### 5.2.3 Business Process Management

Alabanza where asked within the area of business process management which processes, they would like to digitalize and automize, since automation is defined as digitization (Mwaiwu, 2018). Two topics were discussed within the area. Patterns were found in the two questions asked, see table 13.

TOPIC	Q	Pattern 1	Pattern 2
<b>PROCESSES TO DIGITALIZE</b>	1	Allocation between customer and container in the contracting process should be digitalized	
<b>PROCESSES TO AUTOMIZE</b>	2	The customer booking of container should be automatized	The booking, delivery, and credit checking should be automatized

Table 13. *Patterns found around improvement of business processes, own.*

Important statements that respondents that were found in the interviews that is additional information about the research. See table 14.

TOPIC	Q	STATEMENT	R
<b>PROCESSES TO DIGITALIZE</b>	<b>1</b>	The customer requirement and booking process	2
	<b>1</b>	Calculation of carrier cost and booking a carrier	2
<b>PROCESSES TO AUTOMIZE</b>	<b>2</b>	Allocation between customer and container	2

	2	Checking of container	1
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Table 14. *Statements found in around improvement of business processes, own.*

#### 5.2.4 Requirements on the stakeholders

Patterns were found in the interview question but not in all answers. Three topics within the area of *cooperation and partnership with stakeholders* were investigated with three questions, regarding the topics of customers, Alabanza, and Kjelland transport which are considered as main stakeholders of the redesigned business model. See table 15.

TOPIC	Q	PATTERN 1
<b>REQUIRMENTS ON THE CUSTOMER</b>	1	Accuracy in the booking process and honest explaining of the conditions
<b>REQUIRMENTS ON ALABANZA</b>	3	Potential profit sharing and price reductions in not required from Alabanza

Table 15. *Patterns found in requirements on stakeholders, own.*

Important statements that respondents that were found in the interviews that is additional information about the research. R stand for respondents that stated the statement. Q for question. See table 16.

TOPIC	Q	STATEMENT	R
<b>REQUIRMENTS ON THE CUSTOMER</b>	1	Not that much, it's like an e-store check-out process	1
<b>REQUIRMENTS ON KJELLAND TRANSPORT</b>	2	Integration of API	2
	2	Working in our IT-system	2
	2	Ability to take orders	2
	2	Accepting commercial terms based on calculation	2
	2	Accepting demands on carrier	1
	2	Ready to apply hands on activities	1
<b>REQUIRMENTS ON ALABANZA</b>	3	To develop a well-functioning system	2
	3	Integration of data and API	2
	3	Find carrier partners	1

Table 16. *Statements found in requirements on stakeholders, own.*

### 5.3 Interview with Kjelland Transport

The interview with the CEO of Kjelland Transport gave insights on different implications and consequences on Alabanzas need in the redesigned business model. The following areas were involved in the interview:

1. Digital Transformation
2. Partnership and cooperation
3. Business model

In the result tables, Q is for the question, the topic is the sector within the area.

#### 5.3.1 Kjelland Transport's Digital Transformation

Kjelland's maturity in digital transformation is to exploit existing technologies for efficiency in operations. Three questions were asked around digital transformation. See table 17.

TOPIC	Q	STATEMENT
<b>DIGITAL TRANSFORMATION</b>	1	Follows everything new in their industry; use of transportation programs; self-booking system; clock in system for the truckdrivers
	2	Improval of efficiency and money saving is good
	3	No, we recently invested in our servers

Table 17. *Kjelland Transport's digital transformation, own.*

#### 5.3.2 Cooperation and partnership

Results indicate the CEO of Kjelland Transport's view on three different topics within the area of cooperation and partnership with stakeholders. Six questions were asked on three topics. See table 18.

TOPIC	Q	STATEMENT
<b>COOPERAION AND PARTNERSHIP</b>	1	Operates all over Sweden; hires carrier companies in business network depending on geographical area
	2	The biggest container customer; good at what they do; no interests except they are good customers,
	3	Loyalty is important; volume does not matter; use of advance notices
<b>STRATEGIC ALLIANCES AND CO-CREATE VALUE</b>	4	Would not create an alliance with a container company; interest conflicts can occur; no discounts
	5	Can't tie themselves to one customer; only possibility is to buy Kjelland

<b>RELATIONS WITH STAKEHOLDERS</b>	<b>6</b>	Information about prices is not shared; the more volume the better price; volume is prioritized;
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Table 18. *Statements found in cooperation and partnership with stakeholders, own.*

### 5.3.3 Business model

To understand how Alabanza and Kjelland Transport can cooperate questions were asked about Kjelland Transport's business model and operations, and how Alabanza's requirements on them can be met. 19 questions were asked in the topics of business model, revenue streams, facilitating activities for the operations, business processes, business model alignment and development of price that fits Alabanza's needs. See table 18 on following page.



<b>TOPIC</b>	<b>Q</b>	<b>STATEMENT</b>
<b>BUSINESS MODEL</b>	<b>1</b>	Carrier services; Self developed carriers for efficiency; selective hiring process;
	<b>2</b>	No plans of developing the business model further
<b>REVENUE STREAM</b>	<b>3</b>	Fixed price; calculated hour price; customers pay for the time
<b>FACILITATING ACTIVITIES</b>	<b>4</b>	Customers should order through our website; advance notice; no need for better communication with Alabanza; information about container number and location is important
<b>BUSINESS PROCESSES</b>	<b>5</b>	Booking process is digital; booking is made by phone if the customer don't have a computer on a construction site etc.
	<b>6</b>	No need for further digitalization or digitization in carrier services;
	<b>7</b>	Information systems are used but not for the operations
	<b>8</b>	Telematics are used; tom tom for fleet management and logistics; GPS in the trucks; surveillance in webfleet;
	<b>9</b>	End-customers should not have to much information, makes it complicated for the customer
<b>BUSINESS MODEL ALIGNMENT</b>	<b>10</b>	We can work in Alabanza's system if we integrate it; can rationalize time; positive if more customer do it
	<b>11</b>	A meeting with Alabanza about data integration and cooperation
	<b>13</b>	Would require more from Alabanza; guidelines in the delivery process; we need to understand Alabanza's work methods and routines;
	<b>14</b>	A business model alignment is 100% possible
	<b>15</b>	Agreements can be made after a meeting
<b>REQUIRMENTS FROM ALABANZA</b>	<b>15</b>	No, the basis of fixed price it that sometimes they earn from it, sometimes not; we can carry two 10 feet containers for the same price as one 20 feet container;
	<b>16</b>	No, we must make sure that the it is the right crane on the carrier and truckdriver; location matters
	<b>17</b>	Carry two different containers might require two different cranes; we ask different questions than Alabanza to the end-customer; Alabanza don't have the same information
	<b>18</b>	Not the pricing chart; delivery process might go wrong; our responsibility;

Table 18. *Statements found in Kjelland Transport's business model, own.*

## 6 Analysis

The analysis and discussion are formed by the different areas that were investigated in the interviews and Alabanza's customer database.

### 6.1 Customer segments and customer relations

Result extracted from the customer database gives insight into three different areas:

1. Customer segments
2. Container demand
3. Profitability

A company that focuses on a mass-market does not differentiate their customers (Osterwalder & Pigneur, 2010). Alabanza wants to keep equal relations with all customers but to eliminate Essve. In customer relations, a statement refers to Essve as a resource-consuming customer.

Customers represent certain separate segments if their needs require and justify a distinct offer, require a different type of relationships, or give Alabanza substantially different profitability (Osterwalder & Pigneur, 2010). Alabanza is creating value for Essve, by supplying them with mobile retail construction containers. Essve is only contributing to 5,60% of the mobile storage business volume, even though it has 90 containers in service at the moment. Essve has completely different other needs than the other customers and is a separate segment. Opportunism is using other stakeholders to only maximize your utility, which Essve seems to do now (Bosse *et al.*, 2008). Only Essve has a separate relation.

The automotive industry and construction industry are the most valuable industrial segments with a higher volume of revenue stream. A respondent called out the need for targeting the construction industry more. To reach them by a separate distribution channel, might increase sales but would also require separate relations with them. The relationship could benefit CRM and personalization for customer experience (Gil-Gomez *et al.*, 2020). There is a low expectation of customer service on the container, but access to support in delivery and return of the container is important. Customer relations should be established for each customer segment in a business model (Osterwalder & Pigneur, 2010). CRM allows companies to integrate and centralize their customer data, which contributes to more effective marketing activities and loyal customers. There are no signs of CRM activities in the organization, instead, it shows that homogenous relations are preferred; the implication of which is that it

does not consider the possibility of personalization of software tools, increasing customer loyalty (Gil-Gomez *et al.*, 2020).

The private customers, on the other hand, are profitable but do not bring as large cashflows as the companies. Private customers are more likely to not pay the carrier fee, which is a hinder to improving the carrier price in a new business model. The price brings a negative customer experience, which decreases customer loyalty (Palmer, 2010). Companies, on the other hand, have more financial ability to pay the carrier fee.

In common for the two segments are that they have the same basic needs, storage for temporary or permanent use. Table 6 and table 8 tell us that the 20 feet container is by far the most popular, even though less so for private customers.

Forming a *value proposition* should be granulated down to a *customer segment level*. Questions five and six points out that the value delivered by Alabanza is to satisfy “storage needs, permanent and temporary”, and long-term customers are the most important customers. The lack of patterns on the topic of *customer segments* is concerning since an optimized *value proposition* can only be made with a more granular perspective of segmentation (Payne *et al.*, 2017).

Customers want to be contacted by email and partners. Facebook and google are Alabanza’s two main channels for marketing activities and reaching the customer with their value proposition. The customer channels are the main income of feedback, and Alabanza does not have a method to centralize data collection. That partly makes it unable for Alabanza to create multisided value propositions for strategic renewal (see what Warner and Wäger, 2019) and use benefits of CRM (Gil-Gomez *et al.*, 2020).

## **6.2 Alabanza’s digital transformation, business model and business processes**

Analysis on Alabanza’s digital transformation, business model and business processes is investigated in this section. Alabanza’s view on partnership and cooperation, needs and requirements on stakeholders is in chapter

### 6.2.1 Digital transformation

Alabanzas digital transformation is in progress as they use digital systems and tools. Alabanza have two different business models, mobile storage, and magazine storage. The magazine storage is almost completely automated by digital technologies, except for a manual check routine for surveillance of the process and is thereby digitized. To go completely digital, mobile storage and magazine storage needs to be completely digitalized. So far, it is still digitized. (Nwaiwu, 2018).

### 6.2.2 Strategic goal

Patterns were found in Alabanza's strategic goal with the DT, which are to gain growth and become a market leader in price. These factors can be considered the driving factors of the digital transformation, according to (Morakanyane *et al.*, 2017). Statements do as well point to the driving factor to improved work methods and routines, and with the adoption of intelligent automation and more automated processes by replacing manual tasks. The workload in BPM, cost, human resources, and operational time can be reduced with automation (Ng *et al.*, 2021).

A similar view on the strategic goals of the digital transformation but misses the aspect of which business dimensions that should go digital. The business model, the compromising of processes and decision making in operations, the skills and talent of the company, and the value system of the business needs to be evaluated for reaching superiority and competitiveness (Ismail *et al.*, 2017). Therefore, the pattern in the topic of digital transformation is a positive sign in one aspect, because it highlights the need of digitalizing the business model of mobile storage. If a digital transformation strategy is approached half-heartedly, firms may lose their scope and may encounter operational difficulties (Matt *et al.*, 2015). Further strategic planning need to be made by Alabanza.

### 6.2.3 Use of new technologies

New technologies are positive for the improvement of the business but can as well be challenging. Alabanza is creating their technology in the form of a system, but since an IT-system is already an invented technology it should not be considered as their own created technology. Using existing technologies that fits business objectives, creates an ability to exploit new technologies. (Matt *et al.*, 2015)

#### 6.2.4 Changes in value creation

Alabanza seems to have decided on how much digital activities can interfere with their analogue activities. Assuming the company would decide on the patterns found, Alabanza should develop conditions to exploit technologies in their business processes. It contributes to a better customer experience and creates an emotional tie in the brand to its customers (Gentile *et al.*, 2007).

The changes can interfere with the booking and delivery process, but surveillance of operations need to be done to prevent fraud. The company needs to decide on how much the new technology (digital activities) can interfere and deviate from their current – often still analogue – core business. No signs on further changes in value creation are described. The digitization of products and services can require or enable different forms of monetization, as well as adjustments to the company's business scope if new customer segments are addressed. (Matt *et al.*, 2015)

One respondent stated that value could be captured and created in the digital ecosystem which the author interprets business ecosystem. Regarded as a foundation of a company's competitive advantage it requires an exchange of resources between stakeholders to create and capture value (Yi *et al.*, 2022). The idea of a digital ecosystem is positive since it is important for value propositions (Gimpel *et al.*, 2018). Developing the digital ecosystem would put Alabanza in need for more strategic planning. The assessment of risk, number of resources to invest, and take the lead in developing innovations in the business model that can evolve with digital complements from actors in the ecosystem (Mäkinen & Dedehayir, 2012). This would lead to the statement “it is purely a burden in terms of resources and focus”.

#### 6.2.5 Structural changes

The new technologies that Alabanza want to pursue can create a new brand or business units' results demonstrate. It is completely dependent on how much the new value creation and technological activities can be integrated in their current company, otherwise they shall consider creating a subsidiary within the firm (Matt *et al.*, 2015). Strategic planning need to be executed before decisions are made.

### 6.2.6 Financial aspects

Financial resources can make losses affordable in business model innovation because they create valuable lessons (Chesbrough, 2010). Financial resources are also the key for the transformation as a driver and bounding force, and companies should confront the need of the transformation, so they don't lack ways to finance it (Matt *et al.*, 2015). Alabanza lack external resources now and can thereby not make a transformation without private investments from the owners with risk initiatives. They are openly confronting the need of digitalizing mobile storage but should gather financial resources for the growth they are aiming at with the transformation. The former three dimensions of the framework from Matt *et al.* (2015) can only be transformed after considering the finance of the transformation.

## 6.3 The redesigned business model

The redesigned business model of Alabanza is the constructed with questions from Osterwalder & Pigneur (2010) business model canvas.

### 6.3.1 Value proposition

The *value proposition* is the reason why a particular customer is willing to pay for a product or service (Remane *et al.*, 2017:42). It is a strategic tool to communicate with the customer how they aim to provide value, and makes a significant contribution to their business performance. The *supplier determined value proposition* is a value proposition based on delivering a product. A value proposition should be the main principle of the organization (Payne *et al.*, 2017). One respondent demonstrates that no decision has been taken yet for a new value proposition. Alabanza's value proposition today is temporary and permanent needs of storage. "Digital services for transportation of goods" is referred to Alabanza's other business model, magazine storage, but improved carrier prices are a value proposition that the company want to create.

Delivery of product is slow today for the customers, but a financial easement for the customer is a problem-solving solution. Understanding what problem, you solve for the customer, is an important step toward forming a value proposition (Osterwalder & Pigneur, 2010). Two respondents also lift the importance of self-service, something that can be made with self-service technologies (SST) which can as well contribute to faster delivery and co-value with the customer (Hilton *et al.*, 2013).

Temporary and permanent needs of storage is a problem-solving activity but not that differentiated compared to other competitors. The value proposition could be optimized with a digital experience. Personalization refers to tailoring an offer for the user with digital technologies (Bock & Wiener, 2017).

An idea is presented that could fit in to the *value proposition* from the topic *revenue model*. The digitalization of transportation of goods from the customer to the magazine storage. Even though magazine storage is part of Alabanza's second business model, the idea is valuable. It can complete the digitization of magazine storage to full digitalization. Provide revenues and value-producing opportunities with digital technologies is digitalization (Nwaiwu 2018). Alabanza could strengthen its position by digitalizing the network in the ecosystem, creating an IT-platform whereas companies that work with transportation of goods can use their service and can co-create value together (Mäkinen & Dedehayir, 2012). With the right partners and suppliers, the business model could work, for example, a strategic alliance with a moving company. It would require business model innovation, to capture value from the current business model of mobile storage and create new value in a digital platform (Chesbrough, 2010). A digital business model is usually reproduced at a low cost (Remane *et al.*, 2017).

### 6.3.2 Revenue model and cost structure

The revenue streams are the cash flows a company receives from each customer segment (Osterwalder & Pigneur, 2010). Most of the customers are companies and contribute with more financial volume. The revenue model of mobile storage is today partly digitized, some of the analogue process steps have done the digital step to use online bills and payment methods. Another statement shows the author that the company are willing to pay for square meters and the type of container.

The *cost structure* is shared by all respondents and statements point at expensive prices for carriers, resources for development and consultants, carrier costs and an extraneous cost for IT-system development. Carrier is not a cost, since it is the customers that pay for the transportation of a mobile storage. The *cost structure* is all costs incurred to operate a business model (Osterwalder & Pigneur, 2010).

### 6.3.3 Key Resources, Key Activities and Channels

The *key resources* for developing a digitalized mobile storage business model are container supply and competencies in business development and IT-development according. It is correct in one aspect, the digital business model will not function without these assets, but in another aspect, the underlying fundamental basis for the digital transformation of financial resources is not considered (Matt *et al.*, 2015). The exchange of resources of various stakeholders to create and capture new value for business model innovation is also passed on (Yi *et al.*, 2022) except that two of the respondents mention effective carriers.

*Key activities* are described as “business supporting partners and IT-system” in pattern one, and “price mechanism and digital business processes” in pattern two, whereas question 22 underrepresents the need for relations with customers. In a statement by two respondents, the supply of containers and procurement is important. Business supporting partners is indeed a valuable tool to expand the business but should only be included in channels since it is an approach to reaching customers (Osterwalder & Pigneur, 2010). The IT-system, is a digital technology and could increase the customer experience, or develop a self-service process (Hilton *et al.*, 2013) and is a key activity that makes the digitization of mobile storage possible.

Two other statements are “expanding business activities” and “trust building activities” but neither of them is concrete directions to business model that functions. Rather it is to reach out to new customers and reaching more growth. Channels are how a company communicates with their customers and reaches them with the value proposition (Osterwalder & Pigneur, 2010). Alabanza has marketing activities and IT-infrastructure implemented in their business which is contributing to their sales and operations. With CRM, more effective marketing activities could be accomplished (Gil-Gomez *et al.*, 2020).



## 6.4 Business Processes

Goals of improving the company's processes should aim at reducing lead time and cost (Vergidis *et. al* 2008). The allocation between a customer and container in the booking process should be digitalized, and statements show that "requirements and booking process". The function would require Alabanza to digitize the business process from order to the retrieval of the container. The allocation would need a database in the technological architecture that can distribute a specific container to the specific customer (Pinheiro *et. al.*, 2021). Alabanza must separate their business model with the two tools of digital transformation. The processes Alabanza will automate is converting analogue processes to digital processes through *digitization*. Moving to a digital business, with the use of digital technologies to change a business model and provide new revenues, is *digitalization* (Nwaiwu, 2018).

To automate business processes is a digitized solution a company can offer to its customers and is a digital offering (Gentile *et al.*, 2007). It would strengthen Alabanza's value proposition's digital dimension; with a physical product with complimentary digital services (Bock & Wiener, 2017). The definitions in table 1, support the assumption that digital technologies used in business processes are a major step toward digital transformation. An initial step to improving the business processes is to specify the system, identify the performance bottlenecks and choose a possible modification to resolve the performance bottleneck (Vergidis *et. al*, 2008). Booking, delivery, calculation of carrier cost, and credit checking needs to be automatized in the business processes for efficiency and digitization, and statements shows that the calculation of carrier costs. To calculate the carrier costs depends on Kjelland Transport, but the credit checking could be made with digital credit services. To improve the processes Alabanza have to analyze and use digital tools.

## 6.5 Kjelland Transport

Following section analyses Kjelland Transport's digital transformation and business model. Kjelland Transport's view on partnership and cooperation and response on requirements will be analyzed in chapter 6.6.

### 6.5.1 Digital transformation

Kjelland Transport follows market change with digital technologies for efficiency in operation but does not create its own digital technologies. The *use of new technologies* considers a company's ability to exploit new technologies and its attitude towards it. The

company have moved from analogue processes to digital processes, with a self-booking system and clock in system for the truck drivers. IT-strategies are the management of IT-infrastructure within the firm (Matt *et al.*, 2015). Further on, they are having a positive attitude toward new technologies that increases efficiency and saves financial resources. An example is their use of telematics and information system, which can increase the efficiency and monitoring of their logistic operations (Grabara *et al.*, 2014). From a *financial aspect*, the CEO has decided to not invest any further in the digital transformation because they recently invested in ownership of servers instead of cloud solutions.

#### 6.5.2 Business model

The integrated digital technologies in the business processes for automation and optimization show us that the carrier company's business model is partly digitized (Mwaiwu, 2018).

Kjelland Transport's *value proposition* is self-developed carriers for efficient carrier services. They have no plans of developing the business model further. Their revenue model is based on a fixed price and the customers pay for the time a carrier needs to operate. A value proposition is the company's organizing principle (Payne *et al.*, 2017) and the CEO is very selective in his hiring process for truck drivers and procurement processes of new trucks to match efficient carrier services.

Facilitating activities in operations is to book the carrier through the website with clear communication with the use of advance notice. Information about container number and locations is important. Even though the business processes have been automatized, booking is made by phone at some points when the customer doesn't have access to a computer. This indicates that sometimes the core business is analogue (Matt *et al.*, 2015). Telematics is used to collect data for Kjelland Transport for surveillance of the operations, with an open system with GPS and an open system to allow communication between the carriers, customers, and the company. The use of telematics and information system increases efficiency in operations (Grabara *et al.*, 2014). There are no signs of smart transportation in the operations that optimize the routes for the carriers (see what Zantalis *et al.*, 2019).

### 6.6 Stakeholder management

The stakeholders of the redesigned business model are identified in the introduction of the paper. Both Alabanza and Kjelland Transport were asked about what the new digitization of

business processes and redesigned business model would require from the different stakeholders' customers, Alabanza, and Kjelland Transport.

#### *6.6.1 Alabanza's view on partnership and cooperation*

Alabanza's key partners were identified in the business model area as their suppliers for resources of "digital development and logistics". The suppliers referred to, is the sister company responsible for marketing and IT-development, and the logistic services in carriers. Co-development partnership is an important mechanism for innovating the company's business model (Chesbrough & Schwarz, 2007). Key partnerships describe the network of suppliers and partners that makes the business model work (Osterwalder & Pigneur, 2010). Alabanza has marketing activities and IT infrastructure implemented in their business. The logistic activities are functioning, but the statements are pointing at they need effective carrier companies to make the business model function. Statements are different, whereas one mentions they are not that dependent on partners now, and another one is expressing a need for partnership building. While redesigning a business model for a new value proposition, companies are increasingly relying on stakeholders (Yi *et al.*, 2022).

One respondent is referring in his statements to other companies integrated with their business network, such as builders' merchants, construction companies, real estate brokers, and moving and cleaning companies. These stakeholders are identified in the customer database and could be important partners because of their contact with private customers with storage needs. An external stakeholder can benefit Alabanza with organizational learning (Yi *et al.*, 2022). The question is on what level Alabanza should start configuring with these customers for collaboration. Stakeholders for a cooperation can create positive reciprocity and more value (Bosse *et al.*, 2008). The managers of the company can use these customers to jointly create and trade value. This is a complex situation since the locus of value capture and value creation has shifted to a business ecosystem composed of stakeholders such as suppliers and customers (Parmar *et al.*, 2010). Starting to innovate the business model with the customer of mobile storage can threaten the ongoing value of the company (Chesbrough, 2010). Customers in need of extra storage at Alabanza magazine could be reached for new value creation with the digital transportation service, but companies are at the same time valuable customers.

### 6.6.2 *Kjelland Transport's view on partnership and cooperation*

Kjelland Transport is operating all over Sweden, even if they can't use their carriers in some geographical areas. In that case, they hire other carrier companies in their business network. One type of partnership is strategic partnerships between competitors to make the business model work. Another type of partnership is strategic alliances with non-competitors (Osterwalder & Pigneur, 2010). Containertjänst, Alabanza's competitor and Kjelland Transport's largest container customer, is not an interest for the CEO of Kjelland Transport except they create a lot of financial volumes. For good cooperation with a customer, Kjelland Transport values loyalty and good communication. A partnership with Kjelland Company to co-create value with a strategic alliance is not possible for Alabanza because it could cause a conflict of interest between Kjelland Transport and its current customers. A detrimental relationship can risk the wealth-creating capacity (Parmar *et al.*, 2010) and managers are likely to resist business experiments that threaten the ongoing value of the company (Chesbrough, 2010). Kjelland Transport is keeping the relations equal, and information of prices is not shared between customers. Large financial volume providing customers are prioritized in their relations, and the more valuable you are for Kjelland Transport the more negotiable the price on carriers is. Stakeholders interact to jointly create value and increased trust leads to fewer transactions (Parmar *et al.*, 2010). Kjelland Transport interact a lot with containertjänst because of their large volume and good relationship.

### 6.6.3 *Requirements and response to cooperation*

Alabanza wants to automatize its business processes for booking of mobile storage, delivery of the mobile storage and lower the carrier cost in their value proposition with a digitized calculation process (see chapter BPM). There is as well a statement that the checking of the process could be made as well to facilitate the carrier companies. The digitization of container booking and specifically the automated booking of carrier transport would be embraced by the CEO of Kjelland Transport. It can rationalize away time which saves money and increases efficiency. Hence, they first need to understand Alabanza's work methods and routines, as well as data architecture so the API can communicate with their backend servers (Mathijssen *et al.*, 2020).

To implement a co-development partnership, the companies must define their business objectives, assess the capabilities each part requires, determine the degree of business model alignment and think of future collaborations instead of just the current need (Chesbrough &

Schwarz, 2007). For the customers, the redesigned business model requires accuracy in the booking process and an honest explanation of conditions from the customer so the carrier company can have an efficient operation. Integration of business models could be integrated to a degree of 100% according to the CEO of Kjelland Transport, but for that, a meeting needs to take place for data integration and cooperation.

To integrate the business model with Kjelland transport, would require integration of data processing so they can work in Alabanza's IT-system. It is also important for the stakeholders of Alabanza that their commercial terms based on calculation and demands on carriers are accepted. Improved prices in carriers are much harder to accomplish and hinder Kjelland Transport's revenue model. A possibility would be to carry two 10 feet containers for the price of one 20 feet container. Problem is that when carrying two containers to two different locations, the right crane on the carrier and a truck driver that operates nearby needs to be used. With an exchange of resources, firms can create and capture value (Yi *et al.*, 2022).

Kjelland Transport has a different requirement process from the end-customer, compared to Alabanza which provides them with additional information about the destination's requirements on the carrier. If Alabanza would use the same questions about delivery to the end-customer (the customer of Alabanza), the complexity occurs in the payment process. If something goes wrong in the delivery process, the payment is already fixed between Alabanza and the end-customer and extra cost will affect Kjelland Transport. Therefore, Alabanza must identify the transportation process in detail (Grabara *et al.*, 2014). Another approach would be to integrate tools in their booking system, that gives Kjelland Transport ability to secure quality in their transportation process.

## **7 Discussion**

This chapter contains an argumentation on what measures and actions Alabanza should do to formulate a digital business model with a digital value proposition, two possible business models and how those models suit a digital transformation strategy. It also contains a discussion about prerequisites for a digital business model.

### **7.1 Digital business model**

To transform a business model to a digital business model, the tool digitalization needs to be used, and not digitization. The use of digitization is a way to digitalize your company and is major step to a digital transformation by automating processes with digital technologies, but not a step toward a digital business model. To create a platform, with revenue streams that are created by digital key activities, is a digital business model. To create a platform that automizes processes for revenue streams from a physical end-product, is not fully digitalized.

The process of moving to a digital business model requires the whole business model to circulate a digital solution in a digital value proposition, that solves customer problems with IT-applications and software connected to a physical value chain. Key activities in a digital business model need to be digital to solve the customer problem. Without a digital solution, the business is regular business model, or a digitized business model.

To create a digital business model for the business ecosystem, relations with stakeholders need to be defined. Without relationships personalization software tools can not be developed. It is neither possible to understand other stakeholder's relation to each other in the business ecosystem. Customers can serve as the main income for feedback and development of the business model to co-create value. Business model innovation and external technology partnerships exploited, to provide value for the whole ecosystem.

### **7.2 Guideline for the redesign of business model**

To develop the business model, business model innovation needs to be used. Customer relations, stakeholder relations, key partners, and a value proposition needs to be defined and decided. Reaching new customer segments can be made with new partners that functions as a

distribution channel for the product. There are two business models Alabanza can create according to the analysis. One is digitized and one is digitalized.

### 7.2.1 Mobile storage

The redesigned mobile storage is a digitized business model. It would strengthen Alabanza's value proposition digital dimension and is a major step towards digital transformation. It is a *supplier determined value proposition*. It would also contribute to a digital customer experience and competitiveness, if Alabanza can differentiate its value proposition with an automated booking carrier, which can rationalize time away for both Kjelland, Alabanza, and the customers. To develop the digitized model mobile storage, Alabanza needs to sit down with key partners to determine data integration for the automation of processes. Both companies would need to identify their processes. Kjelland Transport and Digital Dominance (the sister company) are key partners to deliver the value proposition of mobile storage for permanent and temporary use identified in this paper. Without these partners, a digitization of mobile storage is not possible, because Alabanza itself does not have the required resources. See figure 7.

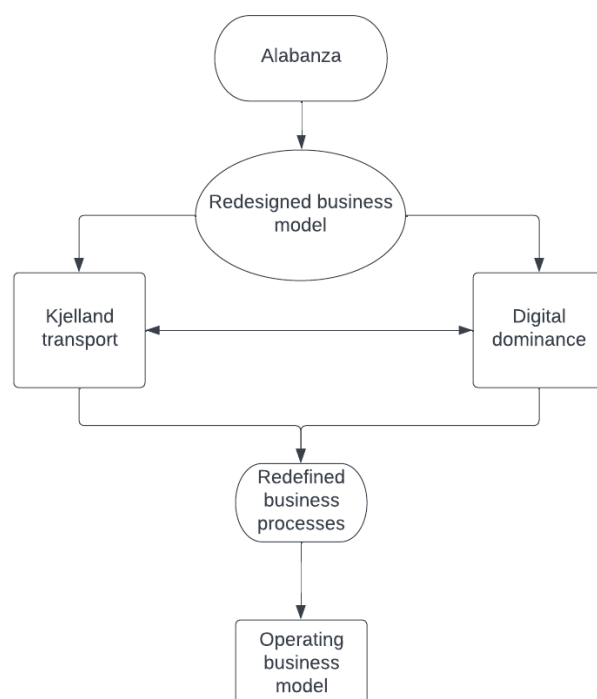


Figure 7. Overview of actions to digitized business model.

Other partners need to be identified, depending on the market Alabanza want to reach. If Alabanza wants to reach more customers, they need to establish customer relations for each segment to enhance marketing activities. Construction companies and automotive companies shall have a separate relationship, which must be carefully handled to not risk detrimental relationships with other customers. To develop the channels, company customers, and their ability to work as a distribution channel need to be identified, serving as key partners in the channels. Joint ventures could be created for geographical expansion, with Alabanza as a key resource for business.

A customer to terminate is Essve. Their low profitability and resource-consuming relationship is a hinder for expansion and growth. A termination would lead to more key resources in container supply, and with the right customer requirements in the booking process, two 10 feet containers could be delivered at the same time. That would lower the carrier fee and increase volume, but a digital interaction between the two customers, Alabanza and most importantly Kjelland Transport for the right crane type is required.

For the customer, a potential booking by the phone function could also be developed, to eliminate analogue activities like phone calls and emails, and would as well differentiate their business model. Complementing services can be developed as digital revenue streams, but needs more investigations in the customer segments to find their needs. The customer experience need to be evaluated as well with a deeper investigation of the customers' needs and behaviors. Customer relations need to be established with different customer segments.

#### *7.2.2 Nissar Alabanza Transportation Technologies (NATT)*

Identified in the topic revenue model, Alabanza wants to create a digital transport solution for goods to and from their magazine storage. The most advocate for this business model, is the value proposition and the co-creation of value in the digital ecosystem. It is *supplier determined*, and *multisided value proposition* which contributes to strategic renewal. It is a completely digital solution, that solves problems for two stakeholders. The customers, that require transportation for their goods and possible even a storage solution, and the company that moves the customer's goods. It could, moreover, create value for competitors, that wants to use Alabanza's transportation for goods.



Some key resources are established, such as storage for the goods and IT-development. Resources of financial capital, telematics for operators, and carriers of goods need to be established. These resources could be established with a company that is in contact with private customers that has a need for storage. Business model innovation is required and an understanding the relationship between stakeholders in the new business model, to co-create value and for the best possible digital transport solution.

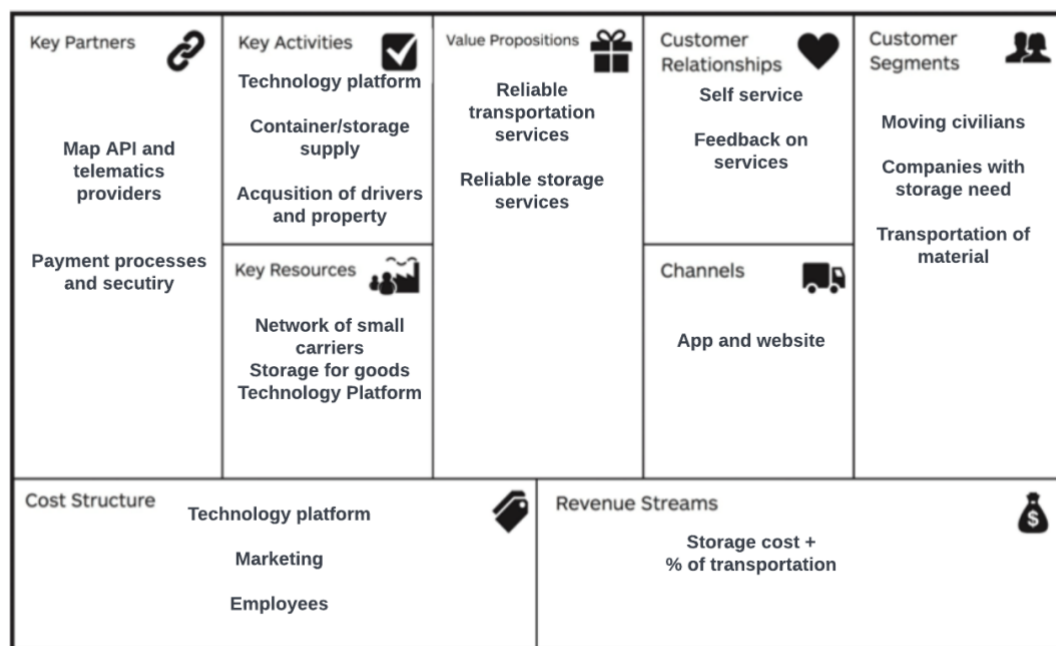


Figure 8. *Illustrated business model canvas, own.*

Important to bear in mind is that the development and marketing activities for a platform leader can cover a geographical expansion. Alabanza can start small, but the change would need a subsidiary due to its a completely different business model, with completely different technologies than Alabanza's current business models. Digital business models can be reproduced at low cost, but development costs are high. Lots of resources in form of investments would need to be made, as well as networking, focus and time. On the other side, owning a technology creates the foundation of being a platform leader, where other actors can create value for them.

### 7.3 Transformational strategy

Alabanza's ambition for a digital transformation of the business model "mobile storage" was not digitally mature enough to make it completely digital. On the plus side, digitization of the

business model is still classified as a step toward digital transformation. There are different consequences of deciding between the complete digital business model “Alabanza transport technologies, or the digitized business model “mobile storage” for Alabanza’s overall company transformation strategy.

“Mobile storage” is by far the easiest way to reach a digital transformation but is not a digital business model. Referring to the framework developed by Matt *et al.* (2015), the *use of new technologies* is using automation technologies and data integration which are existing technologies. The *change in value creation* is decided on, the digital technologies can interfere with the delivery process, but frauds need has to be prevented by monitoring. *Structural changes* is not needed for “mobile storage” since the digital technologies can be integrated into the company’s business processes, and the business concept remains the same. Alabanza lacks *financial resources* at the moment, and owners need to decide whether or not to invest in digitization of “mobile storage” and make an assessment of risk and payback. A more efficient process leads to cost reduction but also improvement of lead time, which was a problem in the solution today. A decision needs to be made which evaluates the strategy, with the aim for growth. The more volume of carrier needs Alabanza can deliver to Kjelland, the lower they set the price.

“NATT” business model is more difficult to develop. It would reach a complete digital transformation of the business model, but other factors need to be evaluated. First, no decision is made on a new value proposition for customers. The *use of new technologies* is not decided for this business model and would have the need for telematics and automation of processes, as well as self-service on the depot facilities. Digital technologies are embedded in this business model, and therefore a *structural change* with a subsidiary is required. *Changes in value creation* would consider using the storage in the parent company Alabanza and creating a business ecosystem for transportation services. Above all, creating a platform requires a great amount of risk, experiments with the business wealth-creating activities, and *financial resources*. Alabanza lacks *financial resources* for that now.

## 8 Conclusions

### 8.1 Limitations and purpose

This research paper was limited to the stakeholders' employees of Alabanza, owners of Alabanza, the stakeholder Kjelland Transport and the customers. All research that contributes to the key concepts digital transformation, business model, and stakeholders that leads to the phenomena digital business models is considered valuable. This paper aimed to investigate the needs and requirements of the stakeholders for a digital business model, on which transporters, customers and Alabanza can interact. It also aims for integrating a digital transformation strategy, highlighting the needs and requirements of important stakeholders in the business ecosystem for business model alignment, and formulating prerequisites for a digital business model.

#### *8.1.1 What are the prerequisites for a digital business model?*

The prerequisite for a digital business model is a solution that solves a customer problem with digital technologies. Revenue streams and value is created by providing a digital solution that can be developed further with business model innovations. Mobile storage can be digitized since it only includes the automation of business process with digital technologies. NATT can be digitalized since it circulates around a digital value proposition.

#### *8.1.2 Why should stakeholders cooperate to innovate a business model?*

Stakeholders need to cooperate in redesigned business models to integrate business processes or co-create new value with partnership business model innovations that benefits stakeholders in the business ecosystem. Communication to understand the relations between stakeholders are needed to create positive reciprocity in the business ecosystem for better company performance and mutual beneficial relationships.

#### *8.1.3 How can Alabanza adapt its business model and business processes aligned with a digital transformation strategy?*

Alabanza must decide if they want to create a digital business model, or a digitized business model, because both examples demonstrated in discussion lead to a digital transformation but only one to a transformation of the business model itself. The business processes will be digitized in both business models which is a major step towards digital transformation. Assessments of risk, capacities, structural change, technological competence, and finance shall be evaluated to create the best solution for viable growth.

## 9 Future directions for research

To formulate a strategy that leads to a digital transformation the company Alabanza, should investigate areas and create action plans for:

- Business process management
- Interface
- integration of API
- customer relations
- customer experience
- Co-creation partnerships
- Digital process management

Alabanza need model their business processes in detail to identify areas which shall be improved. KPI:s and goals with improvement should be defined to reach a better efficiency in the company. Therefore, Alabanza is in need of *business process management*. One manual step in the process can be eliminated, but that would require an *integration of API* with Kjelland Transport. Different methods, consequences and risks should be evaluated while making an integration of data. As mentioned in the analysis, the *customer relations* are not defined. This research paper did not either investigate the different customer segments that can create a customer experience, which is beneficial for competitiveness. Some of the customers could as well be partners, but an evaluation of which customers that would be an optimal alternative for a *co-creation partnership* in a redefined business model. *Digital process management* should be investigated to find the right self-service technologies, tools and techniques automation that can improve and digitize business processes. Interface for the customers should be designed to create a customer experience.

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## **11 Appendices**

### **11.1 List of tables**

1. *Definitions of digital transformation (Morakanyane et al., 2017)*
2. *Length of interviews, own.*
3. *Top customers of Alabanza, collected from the database.*
4. *Overview of company customers, own.*
5. *Industries that use mobile storage, own.*
6. *Company demands on container type, own.*
7. *Overview of private customers, own.*
8. *Private customers demand on container type, own.*
9. *Patterns found around digital transformation, own.*
10. *Statements found in digital transformation, own.*
11. *Patterns found around the redesigned business model, own.*
12. *Statements found around the redesign of business model, own*
13. *Patterns found around improvement of business processes, own.*
14. *Statements found in around improvement of business processes, own.*
15. *Patterns found in requirements on stakeholders, own.*
16. *Statements found in requirements on stakeholders, own.*
17. *Kjelland Transport's digital transformation, own.*
18. *Statements found in cooperation and partnership with stakeholders, own.*
19. *Statements found in Kjelland Transport's business model, own.*

### **11.2 List of figures**

1. *Key concepts, own.*
2. *A framework for digital transformation, (Matt et al., 2010)*
3. *The business model canvas, Osterwalder and Pigneur (2010).*
4. *An interlacing of the business model, own.*
5. *Overview on research method, own.*

6. *Operationalization of keywords, own.*
7. *Overview of digitization of business model, own.*
8. *Illustrated business model canvas, own.*

### 11.3 Pattern finding

#### Digital Transformation

**Q1: How developed is alabanza in their digital transformation?**

Digital tools and systems are applied			
Whats left is to digitalize Moblie storage			
There are still some analog areas in admin			
Automate the integration of economy and booking system			

**Q2: What is the strategic goal with a digital transformation?**

To gain growth and become market leader in price			
For the customer experience			
To improve work method and routines			
From start, is was to settle in to the business			

**Q3: What is your attitude towards using new technologies?**

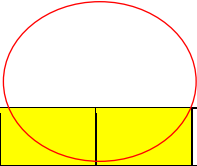
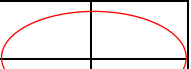
Open to new technologies			
It contributes to effective operations			
It improves business processes			
There are barriers now for new technologies			
It creates security in operations			

**Q4: Would you like to create own technologies or use existing ones?**

Create conditions for exploiting new technologies			
Already created our own system			
To small to set own standards			
Exploiting new technologies for the business			
Using new technologies for customer experience			

**Q:5 What technological changes are you willing to do in your value creation activities?**


New value creation activities			
Changes in the delivery process			

Changes in the customer experience			
Different values can be created with a digital business ecosystem			
Capture value in the digital business ecosystem			
Eliminate manual value creating processes			


**Q:6**How much can the digital activities interfere with your current analog activities?

To develop effective operations and competitiveness			
It is a burden purely in terms of focus and resources			
It can interrupt, but manual checks for security needs to be done			

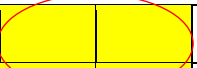
**Q: 7** Can the digital transformation force structural changes in your company?

It can create a new brand			
It is challenges to develop operative business units			
It is challenges with dividing assets in two companies			
Can drive Operative business units or aggregators			
I only need to adapt and change the routines			

**Q:8** How much does your company afford to invest in digital transformation?

Lacks financial resources now			
Depends on external financial resources			
Keep investing at the right pace			

**Q: 9**Is it worth it investing in digital transformation?

As much as the owners can afford related to risk			
Yes, to stay competitive in a long-term it is important for the business			
Yes, but we need to adapt the pace of investments for digitalization			
No, because of the shortage of containers in the market			

## The redesigned business model

### View on value proposition

**Q1: What value proposition would you like to develop with a digitalization of the business model?**

Improved prices in carriers			
Digital services and customer offer			
No decision taken yet			
Self service			
Digital communication			
Quick deliveries and response			

**Q3: What customer problem do you solve?**

Extra storage			
Customers in need of storage for construction materials			
Storage for car tires			
Customers in need of storage for renovations			

**Q4: What does the customer think is problematic today with your solution?**

Problems with customer expectations			
Delivery of products is slow			
Expensive carrier fee			

### View on customer segments

**Q5: For whom do you create value today?**

Private storage for urgent needs			
Private persons with permanent storage needs			
Construction companies			
Tyre-shops			
Restaurant with temporary needs			
Essve			
Companies that want a cheaper solution for permanent needs			
Temporary needs in retail			

**Q6: Who are your most important customers?**

Mobile retail (essve)			
Long term continuing customers			
Companies			
Associations			

Carshops			
Customers with low rate starting cost			

**Q:7 Do you see any potential new customer segments in a digitalization of the business model?**

Rather become attractive for more segments			
The entertainment industry			
More construction companies but no new segments			

#### View on customer channels

**Q: 8Through which channels does your customers want to be reached?**

Email			
Partners that are already connected with the customer			
Telephone			
Facebook			
Google			

**Q9: How can your customers evaluate your offer?**

In need of new approaches for feedback on services			
Information about the price, products, and service			
Simplicity in carrier services			

**Q:10 How do you make it possible for the customer to buy your product?**

On the webpage			
Over the phone or email for persuasion			

**Q:11 How can the customer get support in a digital business model?**

Email and chat services			
At the webpage			
New technologies at the facilities			
Thread based communication			

#### Customer relations

**Q:12 What expectation does your customers have on your customer relations?**

Low expectations for a non-technological product			
Access to support in delivery or return of container			

**Q:13 Is it any customers that are more resource intensive?**

Mostly individual customers			
Esseve, because of their lack of performance and capacity consumption			
Non digital aware customers			

**Q:14 What relations are established today?**

Essve, but they need to be liquidated because of lack of business model alignment			
We want homogenic relations			
Essve, we help them with their operations and have a good relation			

**Revenue model**

**Q: 15 What value are your customers willing to pay for?**

Square meters and the type of container			
Services we have not delivered yet			
Low price products			
Companies usually don't complain over carrier costs			

**Q:16 How do they pay today?**

Automatic e-bill or direct debit, which is positive			
Analog bill, which we don't prefer			
Credit card, which is negative due to rising costs			

**Q:17 How do you think they would prefer to pay?**

The simplicity with automatic payments is appreciated			
Some customers are in need of control			
Private customers might prefer swish or credit card			

**Q:18 Is it any new revenue models you would like to develop?**

No decision is made yet			
Transport customers goods to the magazines with digital service			
Carrier transportation			
Insurance of goods			
To create franchises with a reciprocally agreement			

**Q:19 Would you consider having different prices for different customer segments?**

A homogenic pricing is the best solution			
Private customers pay less historically			
It could work if a customer segment is especially differentiated			
Homogenic pricing, except for good customers			

### Key resources

**Q: 20 What new resources does your new value proposition require?**

Resources for developing the IT-system			
Resources for development of business concept			
Organizational competences			
Container supply			
Effective carriers			
Resources for properties and real estate development			

### Key activities

**Q: 21 What key activities does your new offer require?**

Supply of containers and procurement processes			
Business supporting partners			
IT-system for economy and operations			
Expanding business activities			
Price mechanism for product			
Digital business processes			
Activities targeting customers			

**Q: 22 What key activities does your customer relations require?**

Web based communication			
With strong growth and stable customer inflow the partners is the main relation			
Trust building activities			

### Key partners

**Q: 23 Do you have any key partners today?**

Important suppliers and subcontractors			
The transportation companies			
We are not that dependant on partners at the moment			
In need of partnership building			

**Q: 24 Who could be potential partners?**

Effective carrier companies			
Real estate companies			
As long it is a balanced relationship			
Construction and renovation companies			
real estate brokers			

Builders merchants			
Cleaning, moving			

**Q: 25 Who are your key suppliers?**

The sister company responsible for marketing and IT			
Container suppliers			
Kjellands Carriers			

**Q: 26 What key resources do you acquire from partners and suppliers?**

Digital Dominance, for marketing and digital development			
Logistic activities, could be improved more			
Property area for the depot			
Not that much at the moment			
Surveillance on carriers in a digital platform			

**Cost structure**

**Q: 27 What are your most important costs today?**

The cost of capital			
direct costs (salaries, projects)			
Indirect costs, properties, cost of administration			

**Q: 28 What key resources are the most expensive?**

The resources of consultants and development			
To lease properties, might cause relocation			

**Q: 29 What key activities are the most expensive?**

Carrier cost			
The most expensive cost is to build new systems, an extraneous cost			
The onboarding process due to lacking efficiency			
Marketing activities			
To build the depot facilities is the most capital demanding			

**Business process management**

**Q:1 Which processes would you like to digitalize?**

The customer requirement and booking process			
Calculation of carrier cost and booking a carrier			
Allocation between customer and container			
Customer contracting and payments			
Communication with customer			



Customer cancellation notice			
Checking of container			
Integration of business and booking system			

**Q:2 What processes would you like to automate?**

The customer booking of container			
Booking of carrier and delivery date			
Credit checking of customer			
Allocation between customer and container			
Customer service			

### Cooperation and partnership

**Q: 1 What would that require from the customer?**

Accuracy in the booking process			
<i>Being honest with the transporter</i>			
<i>Explaining the conditions</i>			
<i>Not that much, it's like a e-store checkout process</i>			

**Q: 2 What would that demand from the carriers?**

<i>Integration of API</i>			
<i>Working in our IT-system</i>			
<i>Ability to take orders</i>			
<i>Accepting commercial terms based on calculations</i>			
<i>Ready to apply hands on activities</i>			
<i>Accepting demands on carrier</i>			

**Q: 3 What does that require from Alabanza?**

To develop a well functioning system			
Integration of data and API			
Potential profit sharing			
Price reductions for customers			
Find carrier partners			
Give volume to carrier partners			

## 11.4 Kjelland Transport interview

### Digital transformation

How developed is Kjellands digital transformation?
<i>We are following with everything that's new as tools. Four years ago, we started using a transportation program where the customer can themselves book carrier with and follow their order, and we have a salary system where the truckdrivers clock in.</i>
What is your attitude towards new technologies?
<i>Everything that we can earn money on and is contributing to efficiency is good.</i>
Are you investing at the moment in digitalizing your company?
<i>No not right now. We have bought servers so we can keep software and data on our own servers.</i>

### Cooperation and partnership

Where in Sweden do you operate?
<i>We operate all over Sweden. But most of the times, if we need a crane truck for containers, we hire someone through our business network. It costs less. Most of the times, if we transport containers, the customer does not either require a crane because they have them on site”.</i>
What is your relation to containertjänst AB?
<i>“It is our biggest container customer. The biggest in Sweden, I assume. I think they are the best in the business because they are good at what they do, with the right staff, communication, have a hell of a lot of containers and contacts, are driven and take good decisions. I do not have any interests in them except they are a good customer”.</i>
What do you consider as a mutual beneficial cooperation?
<i>With my customers, it is simple. They need to be loyal and prioritize us. Does not matter if they call here once a year or 100 times a year. I consider Alabanza as a good customer, because just like containertjänst they use advance notice. You need to plan for container transportations, it is not like ordering a cab”.</i>
Would you consider having a strategic alliance with a container company?
<i>No, because it competes with other customers I have. We are very careful about that. I would never ally myself like that. That would create a conflict of interest between</i>

*my customers. They can compete with quality, leasing and price, but never with carrier price. I never give out special prices or discounts, even if the customer has 20 containers to transport the same day. We need to work like that I think, otherwise we would not have so much work to take on.*

Are you open to create value with another noncompeting company?

*No, because then I would tie myself to one single customer. I don't want that. We have a principle of driving for all customers. The only possibility would be if the buy Kjelland.*

How do you keep good relations with your stakeholders?

*Well, I don't tell anyone that competes about the prices they receive from us. Because prices can be different. One big customer uses index pricing, which can sometimes be more expensive for them and sometimes cheaper. And of course, if a customer is making up 15-20 millions of our revenue, they get a better price. Everything else would be strange. I can not prioritize the smaller ones. When they make money, we make money*

## Development of business model alignment

Can you explain your business model?

*Well, we drive what people want us to drive. Since 15 years ago when I bought Kjelland, I have been developing our carriers design so it can fit our needs and become more effective. We have competitors in Stockholm, but we are very selective when we hire people. They are responsible for our interaction on site with the customers.*

Do you have any plans to develop the business model further?

*No not really, as long it is jobs to take on we expand as much as we can. Then we have a government that knocks on the door with raising taxes and such so it is not that easy. We have a problem with the price on diesel, which brings big costs for us.*

What price mechanism do you use?

*We use hours, and I have been counting on what every truck needs to cash in, and minus 20% that we can not invoice from the customer. The monthly cost for every carrier is calculate, and then we calculate an hourly fee, for an estimation of the fixed price, how long it takes to transport a container to a destination.*

Which facilitating activities can a container company do to contribute for more cost effective operations?

*Order through our website, which Alabanza do, and to order with a quite good advance notice. Information about the place on the container, and the number on it. Another thing that would facilitate is if they would have a crane on the depot to unload the containers. We do not lift close to electrical cables, because of the safety for our truck drivers. We are not in need to develop the communication more today.*

Is your booking process digital?

*Yes it is, most of our orders come through the webpage, but some call in if they don't have access to a computer out on a construction site for example.*

Is it something that you would like to digitalize or automize in your company?

*Yes, but not on the container sector. We would like to have a digital inventory system from our suppliers of rental equipment services. Today it is manual when we deliver and pick up equipment, but that is something we think could be solved with tags. Like DB Schenker and postal services.*

Do you use different information systems?

*Yes, we use Åkeriföreningens index. We have the digital salary agreements, new regulations for the transport sector.*

Do you use telematics in your operations?

*We use TomTom for fleet management and logistics, GPS in all our trucks, so we can see them in our transport software, WebFleet. Our customers can log in with their customer number and see the status on the order.*

Do you think it's possible to make Alabanza's end customer to see the status on transport instead?

*Then they would need to log in to Alabanza's customer number, which I don't think is such a smart thing. It is not either that good with too much information. If a end customer can for example follow times, our route can be completely different from theirs.*

Alabanza want to digitalize their booking process, but it requires Kjellands to work in their system. What would be the complications of that?

*That is not too hard, but we need to integrate our systems, so they send their orders digital to us. It works, but we need their system to communicate with ours. I would be*

<i>positive to a change like that, and I would like to see our other customers to make that change. The affair would be more effective for their recipients, and would rationalize time away.</i>
What would that require from Alabanza?
<i>We should sit down and talk, about what their API looks like, how our looks like and where the data should be sent in our system.</i>
What would you like Alabanza to know more about transport and logistics?
<i>Not that much, because our cooperation works out fine. They don't stress too much like other rental companies</i>
What would the digitalized booking process require from the end customers?
<i>The capacity of carriers is enough to transport the next day, but that is only in exceptional cases. Other customers have implemented guidelines for their customers on the delivery process. I think it would put more demand on Alabanza than the end-customers, and I would like to sit down with their recipients to understand their work-methods and routines.</i>
How much can you integrate your business model with Alabanzas business model?
<i>100%, since it is only about integrating our systems to each other.</i>
Would a sit down contribute to a reciprocal cooperation in your business models?
<i>Yes, that would make it work even better. Then we can make agreements. There been problems with the end-customer not having effective communication with our customer because of lacking guidelines.</i>
Would it be possible to carry two containers for two different customers in the same area, and have a price reduction?
<i>No, fixed price basis is that sometimes we earn from it, sometimes they earn from it, but if we carry two 10 feet containers we will take the same price as for a 20 feet container.</i>
So it is not possible to route from one customer to another?
<i>No, because we never know what carrier that is taking the job. We will take the carrier that is closes and fits for the route, and we also must make sure the carrier's truckdriver is a residential on the right side of Stockholm. If a truck driver lives at the south side, and has the last delivery at the north side, he will be stuck in traffic and that costs me money.</i>

So it's not possible for you to transport a container from our depot in Vallentuna to two nearby destinations in Åkersberga for a price reduction?

*No. Because at one customer, the container might need to be lifted 2 meters from the carrier. At the other customer, it might need to be lifted 15 meters. Then we might need two different carrier types, and we don't know that beforehand. Alabanza does mostly not know how long it will be lifted, that is information we receive when we speak to the end-customer over the phone. This is logistics that Alabanza does not notice, because we don't ask Alabanza questions about that. It does not add any value for us to ask Alabanza about that information, because they don't ask the end-customer the same questions as we do.*

## **11.5 Alabanza as is and to be processes**

### **As is processes:**

1. Marketing activities on internet
2. Responding to an offer.
3. Will be reconnecting with customer
4. Create a digital agreement with the customer
5. Sign the customer with BANK-ID
6. reconnect with the customer and agree with the delivery date.
7. Adding transport during the driving schedule
8. to confirm with the customer in before we send out the container that we can actually receive
9. Booking transport
10. confirming with the haulage company that it has been delivered/picked up
11. Invoice the customer for transport and hire

### **To be processes:**

1. Marketing activities
2. Customers place a completed order online.
3. credit check is done directly in check out.
4. Customer puts in that they want a pickup
5. the transport company receives a booking request
6. the company confirms the booking to the customer
7. the container is delivered to the customer
8. I receive a notification that a transport has been completed
9. invoice the customer
10. Monitor the process