

## **Customer Involvement-Based Business Models**

Bachelor Thesis

ZHAW Zurich University of Applied Sciences

ZHAW School of Management and Law

Meret Horn

Student Number: 14-673-040

Supervision: Prof. Dr. Adrian W. Müller

23 May 2017

## Management Summary

Strategy in a digital age is a challenging undertaking. Businesses are pressured to embrace the capabilities emerging from digitalization, whilst progressively enhancing their efficiency. The interaction with the customer is limited to certain “touch points” although their powerful position can no longer be neglected. Exhausted value creation strategies must be reinvented and individuals must be acknowledged as new locus of value creation. This calls for disruptive business model strategies, beyond the dominant firm and industry logic. Businesses must start to create, deliver and capture value together with the customer, as one integrated system.

This bachelor thesis paves the way for first movers, who wish to create such disruptive business model strategies. It goes further than the already existing recommendations on how customer involvement can be enhanced. This empirical study tests the theoretical feasibility of a fully customer involvement-based business model. It outlines such a business model and defines its critical components.

The examination of academic research on the topics business models and customer involvement served as basis, upon which the qualitative social inquiry was built. The profound analysis of five case studies, which involved customers in their businesses, was followed by a generalization of equivalent findings. This allowed the theoretical conception of a customer involvement-based business model.

The findings lend support to the notion that a customer involvement-based business model is technically feasible. Several critical components were identified. Most importantly customers must be willing and motivated to play a central role in the value creation. As designer or innovator of a product or service the customer is the initiator of all successive activities in the value creation process. The co-creation happens together with the company, which is directly involved in the remaining steps of the value creation process. The value proposition, which solves a pain point in customer’s lives or brings significant additional value to them, is furthermore supported by a digital platform, provided by the company. This allows customers to share their co-creation experience with a global network or community and it fosters the emotional bond with the company. Along with this mutual interdependency, the business model must be embedded in a certain context. A strong ecosystem promotes the network effect and enables new customers to make their own co-creation experience. Through being part of an on-demand economy and through continuously following current trends like individualism, e-commerce or entrepreneurship, the company flexibly adapts to the changing customer.

This bachelor thesis emphasizes the shift from company-centric to customer-centric perceptions. It serves as groundwork for business model innovators and future studies. The developed business model should particularly be applied to existing companies to test its practical feasibility.

# Table of Content

|  |               |
|--|---------------|
| <b>Table of Content</b> .....                                    | <b>I</b>      |
| <b>List of Figures</b> .....                                     | <b>III</b>    |
| <b>List of Tables</b> .....                                      | <b>IV</b>     |
| <b>Abbreviations</b> .....                                       | <b>IV</b>     |
| <b>1 Introduction</b> .....                                      | <b>- 1 -</b>  |
| 1.1 Preface and Motivation.....                                  | - 1 -         |
| 1.2 Research Questions .....                                     | - 2 -         |
| 1.3 Relevance of Thesis.....                                     | - 2 -         |
| 1.4 Structure of Thesis.....                                     | - 3 -         |
| <b>2 Literature Review</b> .....                                 | <b>- 3 -</b>  |
| 2.1 Digital Transformation .....                                 | - 3 -         |
| 2.2 Business Modelling and Business Model Innovation .....       | - 4 -         |
| 2.3 Business Models and Strategies .....                         | - 7 -         |
| 2.4 The Active Customer – Customer Involvement.....              | - 9 -         |
| 2.5 Conclusion of Literature Review.....                         | - 11 -        |
| <b>3 Empirical Study I – Methodology</b> .....                   | <b>- 12 -</b> |
| 3.1 Research Strategy .....                                      | - 12 -        |
| 3.1.1 Quantitative versus Qualitative Research Strategy .....    | - 12 -        |
| 3.1.2 Qualitative Case Study Research .....                      | - 14 -        |
| 3.2 Research Design .....  | - 15 -        |
| 3.2.1 Pre-Case Study .....                                       | - 16 -        |
| 3.2.2 Within-Case Analysis .....                                 | - 19 -        |
| 3.2.3 Cross-Case Analysis .....                                  | - 20 -        |
| 3.2.4 Discussion & Implications .....                            | - 20 -        |
| <b>4 Empirical Study II – Within-Case Analysis</b> .....         | <b>- 21 -</b> |
| 4.1 Within-Case Analysis: Case N° 1: Smart – Ready to Drop.....  | - 21 -        |
| 4.1.1 Introduction .....   | - 21 -        |
| 4.1.2 Data Collection .....                                      | - 22 -        |
| 4.1.3 Analysis.....  | - 24 -        |
| 4.1.4 Evaluation .....   | - 28 -        |
| 4.2 Within-Case Analysis: Case N° 2: Etsy, Inc.....              | - 29 -        |
| 4.2.1 Introduction .....   | - 29 -        |
| 4.2.2 Data Collection .....                                      | - 29 -        |
| 4.2.3 Analysis.....  | - 31 -        |
| 4.2.4 Evaluation .....   | - 36 -        |
| 4.3 Within-Case Analysis: Case N° 3: Uber Technologies Inc. .... | - 37 -        |
| 4.3.1 Introduction .....   | - 37 -        |
| 4.3.2 Data Collection .....                                      | - 37 -        |
| 4.3.3 Analysis.....  | - 40 -        |
| 4.3.4 Evaluation .....   | - 44 -        |
| 4.4 Within-Case Analysis: Case N° 4: Wikipedia .....             | - 45 -        |
| 4.4.1 Introduction .....   | - 45 -        |
| 4.4.2 Data Collection .....                                      | - 45 -        |
| 4.4.3 Analysis.....  | - 47 -        |
| 4.4.4 Evaluation .....   | - 51 -        |

|          |   |               |
|----------|---|---------------|
| 4.5      | Within-Case Analysis: Case N° 5: Ponoko.....                  | - 52 -        |
| 4.5.1    | Introduction .....  | - 52 -        |
| 4.5.2    | Data Collection .....   | - 52 -        |
| 4.5.3    | Analysis.....   | - 54 -        |
| 4.5.4    | Evaluation .....  | - 58 -        |
| <b>5</b> | <b>Empirical Study III – Cross-Case Analysis .....</b>        | <b>- 59 -</b> |
| 5.1      | Research Sub-Questions Analysis .....                         | - 59 -        |
| 5.2      | Main Research Question Analysis.....                          | - 68 -        |
| <b>6</b> | <b>Discussion and Implications.....</b>                       | <b>- 74 -</b> |
| 6.1      | Comparative Conclusion of Primary and Secondary Research..... | - 74 -        |
| 6.2      | General Conclusion .....                                      | - 74 -        |
| 6.3      | Limitations and Recommendations .....                         | - 75 -        |
| <b>7</b> | <b>Bibliography .....</b>                                     | <b>- 77 -</b> |
|          | <b>Appendices.....</b>  | <b>- 82 -</b> |
|          | Appendix A .....  | - 82 -        |
|          | Appendix B.....   | - 83 -        |
|          | Appendix C.....   | - 84 -        |
|          | Appendix D .....  | - 85 -        |
|          | Appendix E.....   | - 86 -        |
|          | Appendix F.....   | - 87 -        |
|          | Appendix G .....  | - 88 -        |

## List of Figures

|   |        |
|---|--------|
| Figure 1: Business Model Canvas.....  | - 5 -  |
| Figure 2: Quantitative and Qualitative Research Strategies .....                                | - 12 - |
| Figure 3: Replication Approach Model .....  | - 15 - |
| Figure 4: Data Collection Protocol .....  | - 17 - |
| Figure 5: Relevant Variables to Be Studied.....   | - 18 - |
| Figure 6: Smart – Data Collection of Case Study Context .....                                   | - 22 - |
| Figure 7: Smart – Ready to Drop Business Model Canvas .....                                     | - 25 - |
| Figure 8: Etsy – Data Collection of Case Study Context.....                                     | - 30 - |
| Figure 9: Etsy Business Model Canvas .....  | - 32 - |
| Figure 10: Etsy’s Self-Reinforcing Cycle.....   | - 34 - |
| Figure 11: Uber – Data Collection of Case Study Context.....                                    | - 38 - |
| Figure 12: Uber Business Model Canvas.....  | - 40 - |
| Figure 13: Wikipedia – Data Collection of Case Study Context .....                              | - 46 - |
| Figure 14: Wikipedia Business Model Canvas .....  | - 48 - |
| Figure 15: Ponoko – Data Collection of Case Study Context .....                                 | - 53 - |
| Figure 16: Ponoko’s Combination of User Design and Multi-Sided Platform Business<br>Models..... | - 54 - |
| Figure 17: Ponoko Business Model Canvas .....   | - 55 - |
| Figure 18: Outline of a Customer Involvement-Based Business Model .....                         | - 73 - |

## List of Tables

|   |        |
|---|--------|
| Table 1: The Nine Business Model Canvas Building Blocks .....                   | - 6 -  |
| Table 2: Selection of Existing Business Models with Customer Involvement.....   | - 8 -  |
| Table 3: Tactics to Meet Quality Criteria for Empirical Social Inquiry .....    | - 14 - |
| Table 4: Excerpt of the Cross-Case Analysis .....                               | - 60 - |
| Table 5: Customer Involvement in Different Business Model Building Blocks ..... | - 61 - |

## Abbreviations

|      |                           |
|------|---------------------------|
| BMI  | business model innovation |
| Inc. | incorporated              |
| n.d. | no date                   |
| no.  | number                    |
| p.   | page                      |
| pp.  | pages                     |
| vol. | volume                    |
| 3D   | three-dimensional         |

# 1 Introduction

This chapter will provide the reader with an introduction to the topic. First, an overview of the problem, as well as the motivation for this empirical analysis will be given. Second the research question will be introduced, and finally, the structure of the thesis will be outlined.

## 1.1 Preface and Motivation

“Business is changing its logic” (Normann & Ramirez, 1998, p.3). In a time where thinking outside of the box is expected, and everybody wants a piece of the cake, business gets increasingly complex. Intense competition, shrinking profit margins, demographic changes and the urge for resource and energy efficiency are only fractions of the challenges companies currently face. Rules that govern the way of doing business have been steadily changing, but through globalization and the extensive use of technology, those rules must once again be new defined. Innovative business strategies are essential to deal with the increasingly intense competition in today’s converging economy. However not only business logic is changing, so are customers. As they get progressively more educated and creative, they start to make use of interactive technologies and thus want to shape their experiences (Ramaswamy & Gouillart, 2010). This has a considerable impact on businesses because it opens up new opportunities to involve them in the process of creation.

This thesis analyzes the theoretical possibility and feasibility of a customer involvement-based business model. Such business model, which fully depends on customer involvement does not yet exist and emerges from existing customer involvement strategies. Therefore, five cases will be analyzed, where customer involvement is already part in one or more stages of the value creation process and concluding from this analysis, a business model pattern will be developed, which fully depends on customer involvement. This customer involvement-based business model aims to lead the way for first movers, giving them an opportunity to outpace their competition through embracing new capabilities in an era of globalization and digital transformation.

## 1.2 Research Questions

The “new consumer” puts much emphasis on experiences and wants to be part of the value creation process. Derived from this reality the importance to involve them more actively into business processes seems evident. How exactly the active consumer can serve as a basis for the successful operation of a business will be analyzed throughout this thesis. Listed below is the primary research question of the thesis as well as four secondary questions.

**Research  
Question**

**How do organizations use customer involvement approaches  
to develop new business models?**

**Sub-  
Questions**

1. How does the value creation for the company work?
2. Which contextual factors are crucial to implement a customer involvement strategy?
3. Which chances and risks are to be aware of, when implementing a customer involvement strategy?
4. What are critical success factors for a successful implementation of a customer involvement strategy?

The sub-questions serve as guidance to answer the primary research question and ascertain that every important aspect to answer the overall research question, will be covered.

## 1.3 Relevance of Thesis

Existing literature highlights the increasing pace of change and complexity for business activities through globalization and digitalization. Newly empowered customers are more active and want to be part of the value creation process. This demands a shift from a company-centric to a customer-centric view. Experts agree on the urge for new business model strategies, which profoundly involve customers in the value creation process. No research so far has empirically elaborated on the viability of such strategies. This thesis will do so through combining and generalizing existing customer involvement strategies. Coherent drivers and conditions, which will be elaborated are furthermore of practical relevance for business model innovators, who wish to implement such strategy.



## **1.4 Structure of Thesis**

The thesis is structured in six main chapters. Following the introduction, the second chapter will outline current literature on digital transformation, business models, and customer involvement. The empirical study I, which corresponds to the third chapter of the thesis, will describe the methodology used for the empirical analysis. In the fourth chapter, empirical study II, the within-case-analysis of the five case studies will be conducted. Subsequently, in the empirical study III which equals chapter five, there will be made a cross-case-analysis of all individual cases. The final sixth chapter will draw a conclusion of the empirical study and will acknowledge limitations as well as recommend further possible studies.

## **2 Literature Review**

This chapter will lay out previous literature on business practices, involving customers. It allows to gather existing information and understand previously debated issues. Hence, the groundwork for this empirical analysis will be outlined.

### **2.1 Digital Transformation**

The economy is about to experience a fourth industrial revolution (Forschungsunion Wirtschaft, 2013; PricewaterhouseCoopers [PwC], 2016). After information technology was introduced by the third industrial revolution as mean to automate specific processes, Industry 4.0 incorporates digitalization from beginning to end, integrating resources, information, objects and people. This evolution bolsters the omnipresent convergence of industries and technologies even more. A mobile phone once only served the purpose to make phone calls. Nowadays it is a tool with countless features and functions, of which making calls is only a minor one. This combination of various products with the result of increasingly digitalized solutions also implies the convergence and centralization of industries (Prahalad & Ramaswamy, 2003). Thus, companies not only foster globalization and make use of the opportunity to expand the markets they serve, but they also face much greater competition. They must prove themselves not only within a particular industry but against the rest of the world while simultaneously managing challenges like demographic changes and decreasing profit margins.

This increasing global complexity imposes one substantial matter on businesses: the augmenting pressure to create value. Compared to the traditional marketplace, the concept of

value creation substantially changed. Prior to the third industrial revolution, the factors considered by the customer in the selection process were only benefit and price (Lanning & Michaels, 1988). Out of different choices, the customer went for the product with the superior value (which means the product where *benefit minus price* was the highest). While previously the price only depended on the company's cost and their perception of the product's value, it now heavily depends on the customer's perception (Prahalad & Ramaswamy, 2000). This shift of power comes from the customer's increasing access to information and their willingness as "educated customers" to negotiate terms and prices with companies. Hence, businesses cannot rely on favorable prices anymore. Instead, they become – not only because of global competition but also because of powerful customers – increasingly pressured to create superior value.

How can this be done within a complex and continuously changing context of digital transformation? Evidence highlights the importance of moving away from the dominant industry logic to enabling heavier investment into developing disruptive business models, which connect digital integration with the powerful customer (Kavadias, Ladas, & Loch, 2016; Prahalad & Ramaswamy, 2003; PwC, 2016).

Business models and business model innovation (BMI) can be seen as a fundamental element, which is key to overcome present challenges. The next chapter will, therefore, further elaborate on it.

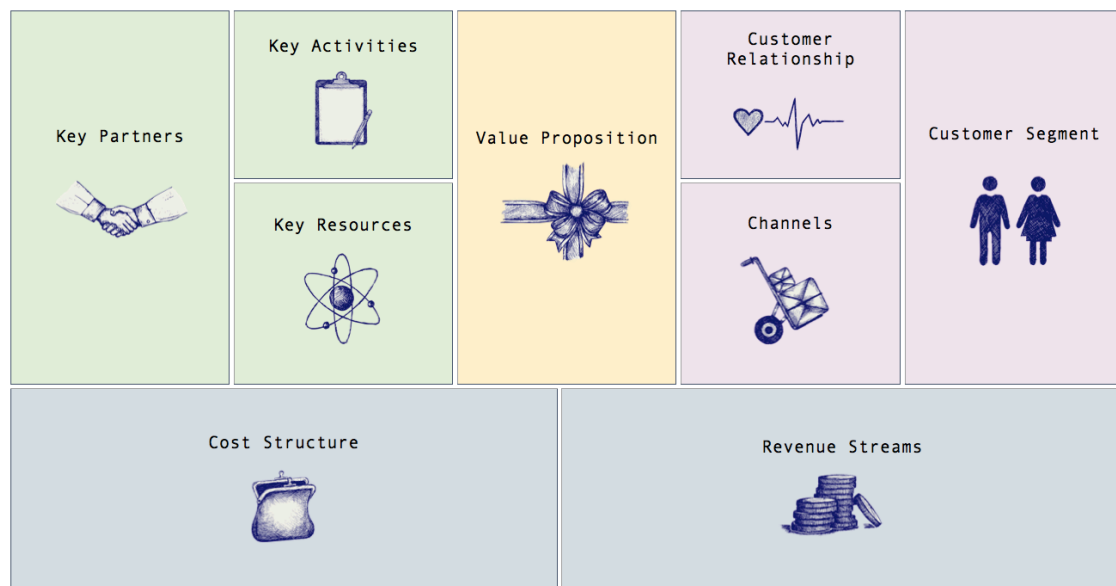
## **2.2 Business Modelling and Business Model Innovation**

This chapter will look into the concepts of business models and BMI. They are of essence for the general understanding of this thesis and furthermore serve as the theoretical and conceptual basis for the empirical analysis.

Among many different definitions of business models, Osterwalder & Pigneur (2010) describe the relevant characteristics in a short and condensed form: "A business model describes the rationale of how and organization creates, delivers and captures value." Value can thereby be defined as "the importance, worth or usefulness of something" (Oxford Dictionary of English, 2010). This value in the form of an offering is created through different activities by the various actors (Normann & Ramirez, 1998). The specific activities may vary from business to business, but overall those activities are all part

of four main dimensions or business areas (Gassmann, Frankenberger, & Csik, 2014; Osterwalder & Pigneur, Business Model Generation, 2010). The focus of the first dimension is the customer. As the core of every business, it is important to know which customer segment will be targeted and who the customers are. The second dimension concentrates on the value proposition. A company's offering can have the form of a product or service and must satisfy customer's needs. Those first two dimensions address the external aspects of a business model, whereas the following two address its internal aspects. The third dimension defines the value chain of a company. The infrastructure, which is needed to create the value proposition. The fourth dimension focuses on the company's profit mechanism and what it takes to secure a company's financial viability.

Within every dimension, different activities are carried out. Osterwalder and Pigneur (2010) referred to those classified activities as building blocks, which will be adapted for this thesis. The entire business model concept, including the different building blocks, is illustrated in Figure 1.



**Figure 1: Business Model Canvas**

Source: adapted from Osterwalder and Pigneur (2010)

Source of illustrations: Melnik (n.d.)

This particular framework of a business model, called Business Model Canvas was developed by Osterwalder and Pigneur (2010). Their intention was to visualize and therefore simplify complex constructs of business models.

The violet building blocks represent the customer dimension, the yellow one stands for the value proposition, the green blocks are concerned with the value chain and the blue ones represent the financial viability. Below follows a short description of the individual building blocks (see Table 1).

---

| <b>Building Block</b> | <b>Outline</b>  |
|-----------------------|---|
| Customer Segments     | Defines for whom value is being created / Who the targeted customers will be                |
| Value Proposition     | Defines which product or service will be created to deliver value to the customer           |
| Key Partners          | Defines the most important key figures to create the value proposition                      |
| Key Activities        | Defines the most important tasks, which must be carried out to make the business model work |
| Key Resources         | Defines the most important assets required, to make business model work                     |
| Customer Relationship | Defines the type of relationship a company establishes with its customer segments           |
| Channels              | Defines how the company communicates with, and reaches its customer segments                |
| Revenue Streams       | Defines how the company is generating revenue   |
| Cost Structure        | Defines all incurring costs to make the business model work                                 |

**Table 1: The Nine Business Model Canvas Building Blocks**

Source: Osterwalder & Pigneur (2010)

---

With this outline, it becomes possible to design, develop and implement new business models, which is highly vital when considering the converging and fast moving business environment. Business model life cycles are shortened, and there is a constant need for adaption and agility (Lindgardt, Reeves, Stalk, & Deimler, 2009). To avoid falling behind due to outdated business models and to overcome the, in the last chapter introduced challenges, companies are required to reshape the traditional organizational business approach through BMI.

BMI can be described as a process of replacing outdated business models (Osterwalder & Pigneur, 2010). There is no general consensus on how many building blocks are to be reinvented exactly to be categorized as business model innovators (Gassmann, Frankenberger, & Csik, 2014). Nonetheless, a Boston Consulting Group study has shown, that business model innovators are six percent more successful in a five-year period than pure process and product innovators (Lindgardt, Reeves, Stalk, & Deimler, 2009). These

business model innovators succeed to fuel their growth and competitiveness through disruptive business models, which are embedded in the digital age. Increasingly digitized product and service portfolios ask for new ways to come away from the dominant firm and industry logic. This can be seen as the main challenge for BMI. As a basis for disruptive innovations, PwC (2016) suggests integrating a digital platform approach. It does not only allow companies to stay close to customers, but in a digital ecosystem, platforms also serve simultaneously as product lifecycle management system and manufacturing execution systems. First movers can make use of this integral element to create disruptive business models.

The innovation of new business models requires basic knowledge on traditional business models and strategies. New transformative business models can only be created through diagnosing current models and understanding its limitations. The next chapter will, therefore, introduce traditional business models and strategies.

### **2.3 Business Models and Strategies**

Despite the still existing industry logic, there is not only one dominant business model of an industry anymore. There are different options of existing business models, which can be adapted to individual companies. It will only be focused on customer involving business models in this section, due to their increasing power and the essentiality to integrate them into the business model.

As overview Table 2 shows a selection of general known traditional business models, which somehow involve customers in the value creation process (Gassmann, Frankenberger, & Csik, 2014). It must, however, be mentioned that even those “traditional” business models can be seen as relatively new since customer involvement only substantially emerged after 1980 (Kleemann, Voss, & Rieder, 2008).

| <b>Business Model Name</b> | <b>Pattern Overview</b>  | <b>Pioneer</b>           |
|----------------------------|--|--------------------------|
| Affiliation                | Company using customers to support sale of products  | Amazon Store – 1995      |
| Crowdfunding               | Funds for company provided by investors who want to support the idea                               | Marillion – 1997         |
| Crowdsourcing              | Internal company tasks are given to a crowd to solve   | Threadless – 2000        |
| Fractional Ownership       | Sharing of assets among a group of people  | Hapimag – 1963           |
| Mass Customization         | Customers can order customized products from company   | Dell – 1984              |
| Open Business              | Collaboration with key partners central for business   | Valve Corporation – 1998 |
| Open Source                | Open sources provided by company, for others to contribute to the value creation process           | IBM – 1955               |
| Peer to Peer               | Company serving as intermediary between different individuals, who belong to a homogeneous group   | eBay – 1995              |
| Self-Service               | Customers execute part of the service, for a smaller end price of the product                      | McDonald’s – 1948        |
| Two-Sided Market           | Company serving as intermediary between two or more heterogeneous groups of customers              | Diners Club – 1950       |
| User Design                | Customer takes part in the value creation process through designing parts of the value proposition | Spreadshirt – 2001       |

**Table 2: Selection of Existing Business Models with Customer Involvement**

Source: adapted from Gassmann, Frankenberger, & Csik (2014)

The table illustrates that various business models already exist, which in one or the other way involve customers in the value creation process. For in-depth explanations on specific patterns, the “Business Model Navigator” published by Gassmann, Frankenberger, and Csik in 2014 can be consulted.

As important as being aware of the business model a company adapted is developing a strategy to make the business model work (Osterwalder & Pigneur, Business Model Generation, 2010). Two strategic areas have to be acknowledged to design a potentially successful strategy: the context of the business model and the business model itself.

The business model itself must be chosen very carefully by taking into consideration the intent of the business. Adapting a certain business model to a specific business will lead the way for the company’s overall strategy. Throughout the process of designing the specific building blocks, strategic choices regarding the four described dimensions of the business will be formulated and implemented.

Furthermore, every business model is embedded in a certain context (Osterwalder & Pigneur, Business Model Generation, 2010). An environment which is constantly changing through external forces. These being *market forces, industry forces, key trends and macroeconomic forces*. Appreciating those forces will help to analyze in which directions the business model might emerge. Macroeconomic forces describe the overall market conditions of the economy, the capital market conditions, overall price trends and the economic infrastructure of the market. Industry forces outline specific forces of the industry the business is operating in. Competitors, new entrants, substitutes, suppliers and other stakeholders can be seen as those main forces. Market forces describe forces peculiar to the market of the business. Part of it is market segments, needs, switching costs and revenue attractiveness. The last element of the external forces is key trends. Those can be of technological, regulatory, societal and cultural or socioeconomic nature. Assessing those contextual factors by which businesses permanently are being influenced, help companies to develop the strategy for their business further.

## **2.4 The Active Customer – Customer Involvement**

Customers serve as the core of every business model (Prahalad & Ramaswamy, 2000). As education, as well as information technology advances, customers do however not only care about the finished product anymore, but they want to be involved in the process of creating the product. Their growing network empowers them and allows them to become more active. This shift from passive consumers to active contributors to value creation is a crucial matter for companies when trying to stay ahead of the competition (Normann & Ramirez, 1998). Experts, therefore, agree on the importance to move away from a company-centric to a customer-centric view (PwC, 2016). Furthermore, today's abundant product options decrease the importance of the product itself while the importance of the experience for the customer is increasing (Prahalad & Ramaswamy, 2000).

For companies, it is important to maintain good relationships with their customers, which fosters loyalty. Customers however not only want good relationships, but they also want to be creative and engage with the company to shape their experience (Ramaswamy & Gouillart, 2010). They prefer personalized experiences, which fit their needs and give them the ability to discuss their ideas with in-house experts and other customers. Big networks and interconnectedness allow them to do so. Those experiences happen through

involvements, events, contexts and meanings and can ultimately be shared through engagement platforms (Ramaswamy & Ozcan, 2014). Company's, therefore, should be concerned about creating positive experiences for customers, which will ultimately deepen the relationship. The opportunity for them is to connect digital integration with the empowered customer through digital platforms (PwC, 2016). This allows them deep customer insights, which will help to create positive experiences. Incentives for customers to get involved in value creation processes to shape their experience can be following: saving time, more control, better quality, being creative or dissatisfaction with status quo (Kleemann, Voss, & Rieder, 2008). Behind those incentives is intrinsic and extrinsic motivation (Ryan & Deci, 2000). Extrinsically motivated people do so because of expected rewards. Those could be job benefits, the desire to share knowledge and achieving goals together or the desire to learn new things. Intrinsically motivated people are driven by personal interests or joy. Those can be foster by autonomy, task significance, task identity, skill variety and feedback, as the job characteristics theory suggests (Hackman & Oldham, 1975).

When companies move beyond a traditional value chain process and instead start to blend the market with the boundaries of the firm, then co-creation of value becomes possible (Ramaswamy & Ozcan, 2014). Using the competencies but also experiences of customers allows companies to make use of a joint ecosystem of capabilities and hence enable the customer to be an active part of the process. This emerging desire of customers to contribute to the value creation process, however, implies a reevaluation of models of the industrial economy used up until now (Normann & Ramirez, 1998; Wulfsberg, Redlich, & Bruhns, 2010). As the most used model associated with value creation serves Porter's value chain. The value chain, however, has its limitations when looking at it from the today's economy perspective because of its linear characteristics. It shows the value creation process, starting with the supplier and ending with the customer but it does not consider the possibility of the customer possibly being a supplier or part of another step in the assembly line. In the case of a co-productive relationship, the value is not added step by step through the value chain but created together and simultaneously. Hence it is important to get away from the one-dimensional value chain concept to fully acknowledge the customer as part of the value creation process. This also implies the need for a different strategic approach which must be reflected in a company's business model.



Customer involvement can take place in different forms and various stages of the value creation process. A selection of business models, illustrating possible ways to do so has been given in the previous chapter. Those business models acknowledge the importance of the customer and foster integration and co-creative relationships. The actual co-creation can thereby happen in all different business model building blocks. This means they can co-create value in the form of innovating, designing, producing, delivering or promoting (Rieder & Voss, 2006). Four important aspects to enable co-creation must thereby be acknowledged (Prahalad & Ramaswamy, 2004). Firstly, the dialogue between customer and company needs active investment from both sides. This constant communication implies listening and solving problems. Secondly, access must be given to the customer. Without certain information and tools, the customer cannot be part of the value creation process. Thirdly, the risks arising through co-creation must be assessed. This includes risks of losing customers but also internal responsibilities and risks (like quality or intellectual property), which might be shared in a co-creation relationship. The last aspect is transparency. Co-creation implies a higher level of transparency since the customer is not only at the end of the value chain but actively integrated.

## **2.5 Conclusion of Literature Review**

From the existing literature, it can clearly be seen that increased global competition, fostered by digitalization, pressures companies to find new ways of gaining competitive advantage. As stated by Pisano (2015), “disruptive innovation [...], requires a new business model but not necessarily a technological breakthrough.”. Those new business models must move from being company-centric to being customer-centric. The shifting power to the customer, which is through digitalization continuously increasing cannot be controlled by companies. This emphasizes the urge for companies to see their empowerment as an opportunity to enable positive experiences and to deepen relationships through involving them into the value creation process. It does not only deepen the relationship between company and customer, but it can also bring insights of high importance to the company on how to improve their value propositions. Hence, it can be said, that customer involvement and the co-creation of value can bring significant benefits for both sides. Already existing business models serve as starting point; it can, however, be assumed that there is significant potential to further increase the value of a product or service through designing a full customer involvement-based business model. The theoretical possibility of such a business model will, therefore, be studied in this thesis.

An important remark must be made before the empirical study, regarding the use of the term co-creation. Co-creation can mean the process of creation with all groups of stakeholders, such as employees, suppliers, and customers (Ramaswamy & Gouillart, 2010). This empirical study will however only deal with customer co-creation.

### 3 Empirical Study I – Methodology

This thesis analyzes the interface between business modeling and customer involvement with the aim of fully integrating customer involvement into business modeling. Thus, this chapter is dedicated to the methodology used to answer the research questions. It is divided into the sections “Research Strategy”, where a justification for the choice of the research method is given and “Research Design”, where the research process, relevant for this thesis is described.

#### 3.1 Research Strategy

A research strategy for a social research can be understood as a general orientation on how to get to the answers of specific research questions (Bryman & Bell, 2015). Thereby an appropriate strategy has to be chosen on how to collect and analyze data, which is suitable for the work and leads to the desired outcomes. As Figure 2 shows, there are two possible strategies which can be applied to any research: *quantitative* or *qualitative research*. They hold fundamental differences which are discussed in short below.

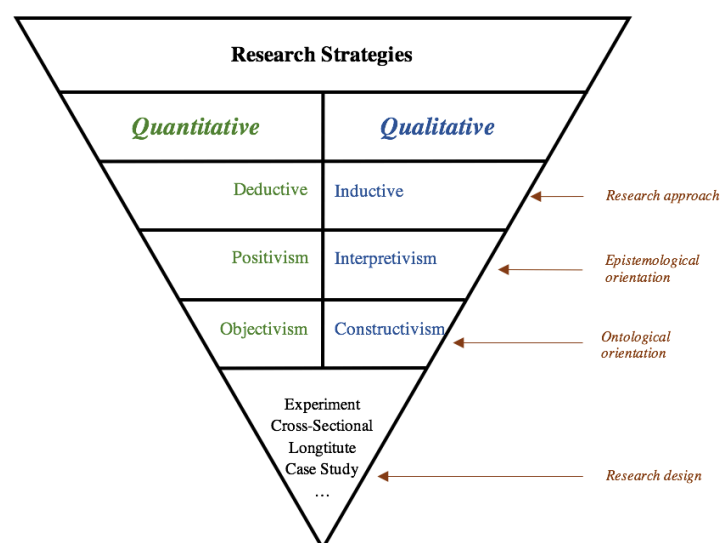


Figure 2: Quantitative and Qualitative Research Strategies

Source: adapted from Bryman & Bell (2015)

### 3.1.1 Quantitative versus Qualitative Research Strategy

A *quantitative social inquiry* can overall be seen as a statistical analysis with the outcome of datasets. The relationship between theory and research can be described as deductive where hypotheses are used for research to verify or disprove the theory (Bryman & Bell, 2015). Quantitative studies follow a positive epistemological orientation, which discusses the question of what can be considered as acceptable knowledge. Positivism thereby advocates the methods of natural sciences to study social issues. Science is to be conducted objectively and only phenomena and knowledge verified by senses can be accepted as knowledge. Thus, it supports the objectivistic ontological position that social phenomena can be seen as external facts which lie beyond our influence. The research for a qualitative social inquiry can be designed through various methods, as long as the research complies with the just described standards.

A *qualitative social inquiry* concentrates on the analysis of a specific content with results mostly in the form of texts. In contrast to the deductive research approach which is used for quantitative research, qualitative research uses an inductive approach (Bryman & Bell, 2015). Thereby research is conducted to generate theory. This explains the result in the form of texts. Based on the view that research methods used for studies of natural science cannot be applied to social sciences, qualitative research “respects differences between people and the objects of the natural sciences and therefore requires the social scientists to grasp the subjective meaning of social action” (Bryman & Bell, 2015, p. 29). This view is known as interpretivism, and hence it implies that social phenomena do not lie beyond our influence but are constantly shaped by social actors (constructionist ontological orientation). Similar to the quantitative research strategy it can also be chosen among different research methods for the qualitative research strategy.

The research design, which in theory describes the method used for the research, can vary from study to study regardless of the strategy chosen. Experimental design, cross-sectional design, longitudinal design, case study design and comparative design are five different types which can be applied as methods (Bryman & Bell, 2015).

For this present study, a qualitative research approach seems most appropriate as the study aims to generate theory out of the research. To generalize the findings to form a customer

involvement-based business model, an in-depth study of already existing cases of customer involvement is necessary. Accordingly, this thesis will work with a case study design which will be described in greater detail in the following section.

### 3.1.2 Qualitative Case Study Research

A case study can be understood as the in-depth analysis of one or multiple real-life bounded systems (Creswell, 2013). It is feasible where a decision is trying to be illuminated: why they were taken, how they were implemented and with what result (Schramm, 1971). The evidence, therefore, can be in the form of different sources of information like documents, reports, artifacts, interviews and observations (Creswell, 2013). Origins of the case study approach can be traced back to the 1920's where this research design was already used by sociologists for social science studies. Nowadays it is widely used in business research because case studies deal with the real-life context of the phenomena, whereas other research methods isolate the context from the phenomena (Eisenhardt & Graebner, 2007). As for every research approach the criteria *reliability*, *replicability* and *validity* must be given to guarantee the quality of the empirical study (Bryman & Bell, 2015). Table 3 summarizes those criteria in more detail and states tactics which can be applied to meet the criteria.

| Criteria                    | Definition  | Case Study Tactic   | Phase of Research in Which Tactic Occurs |
|-----------------------------|---|---|--|
| Reliability & Replicability | process and results of study must be consistent and can be repeated with the same results | <ul style="list-style-type: none"> <li>◦ use case study protocol</li> </ul>   | data collection                          |
| Construct validity          | use of operational measures which truly reflect the concept which is being studied        | <ul style="list-style-type: none"> <li>◦ use different sources for evidence</li> </ul>  | data collection                          |
| Internal validity           | causal relationships between two or more variable must be able to hold water              | <ul style="list-style-type: none"> <li>◦ use logical models</li> <li>◦ address rival explanations</li> <li>◦ do explanation building</li> </ul> | data analysis                            |
| External validity           | findings can be generalized and must be applicable to other natural social settings       | <ul style="list-style-type: none"> <li>◦ use replication logic in multiple-case studies</li> </ul>  | research design                          |

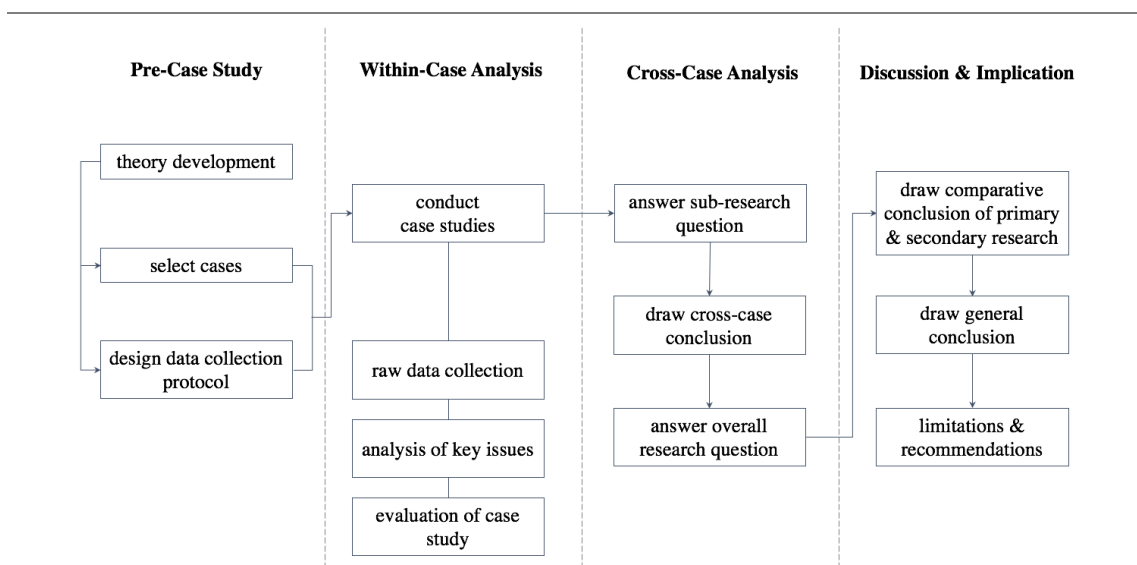
**Table 3: Tactics to Meet Quality Criteria for Empirical Social Inquiry**

Source: Yin (2009), Bryman & Bell (2015)

These criteria need no further explanation, but they have to be bared in mind throughout the process of the empirical study to ensure its quality and empiricism. The stated tactics should be implemented in the respective phase of research.

In theory there exist four different types of case study designs, based on a  $2 \times 2$  matrix which can be found in Appendix A (Yin, 2009). One can distinguish between single-case designs and multiple-case designs, which stands for the number of cases which are analyzed throughout the study. To address the research question of the present study a multiple-case design will be chosen. In the context of this work, the external validity is of high importance. The aim is to form a theory out of the analysis which then can be applied to other systems and settings. For this generalization to be reliable, it is crucial to analyze more than one cases. Yin (2009) furthermore differentiates between holistic and embedded case designs. A holistic case design stands for only one unit of analysis within a case whereas in an embedded case design there is more than one unit to be analyzed in the context of a case. As the focus of this study fully lies on customer involvement in organizations this study can be described as a *multiple-case (holistic) study*.

After being aware of different case study designs, further steps in the research process follow: preparing, collecting, analyzing and concluding data. As theoretical guidance serves a replication approach from Yin (2009) to guarantee a clear structure as well as a feasible replication logic (see Figure 3).



**Figure 3: Replication Approach Model**

Source: adapted from Yin (2009, p. 57) and Crewswell (2013, p. 101)

The above mentioned further steps in the research process will be discussed more deeply in the next chapter. It can thereby be followed the replication approach model of Figure 3 to trace the individual steps.

## 3.2 Research Design

In the previous chapter, a theoretical ground of the methodology for this study was developed. This theoretical knowledge can thereupon be connected to the actual study to identify further steps in the research process. Following the own representation of the replication approach model from Yin (2009) (see Figure 3), the subsections below will discuss all the relevant issues regarding the actual case before the execution of the empirical research.

### 3.2.1 Pre-Case Study

#### **Theory Development**

Theoretical propositions are the basis for the whole research process. They emerge from studying existing literature, which gives insight into the status-quo of research on the topic. Also, they serve as a reference for a conclusion between primary and secondary research. This allows a generalization, which can be used for new cases in the future.

#### **Select Cases**

For a multiple case study, different cases have to be chosen. The operational criteria for the present selection come from the subject of the study as well as from the theoretical framework. These criteria being following:

- Criterion 1: The core of the case must be an organization or a program within an organization with an identifiable business model.*
- Criterion 2: The organization must actively make use of customer involvement as part of their business model.*
- Criterion 3: Sufficient research material on the organization must to be available.*
- Criterion °4: The organizations for the different case studies involve customers preferably in different parts of their business models.*

Based on those four criteria, following organizations were chosen for the multiple case study:

- DHL and Smart collaboration: project ready to drop
- Etsy, Incorporated (Inc.)
- Uber Technologies Inc.
- Wikimedia Foundation: project Wikipedia
- Ponoko

### Design Data Collection Protocol

The data collection protocol is useful as guidance for the within-case analysis. It contains all relevant rules, procedures, and instruments for the analysis of one case (Yin, 2009). This standardized framework increases the reliability of the case study. The data collection protocol for this study can be seen in Figure 4 and was developed and adapted for this work according to Yin (2009, p. 80). Every case study of this thesis will be conducted by following this data collection protocol.

---

| <b>A. Case Study Introduction</b>       |   |
|---|---|
| Background information                  | Overview of substantive issues being investigated   |
| <b>B. Data Collection Procedure</b>     |   |
| Source of evidence                      | Webpages, Artifacts, published reports, internal publications, memoranda, newsletters, audiovisual material |
| Relevant variables                      | Definition of specific measures   |
| <b>C. Analyzing Case Study Evidence</b> |   |
| Analysis of key issues                  | Covered through five case study questions   |
| Instruments for analysis                | Contextual variables, Business Model Canvas, SWOT   |
| Case study questions for case analysis  | Identical for all cases   |

*Figure 4: Data Collection Protocol*

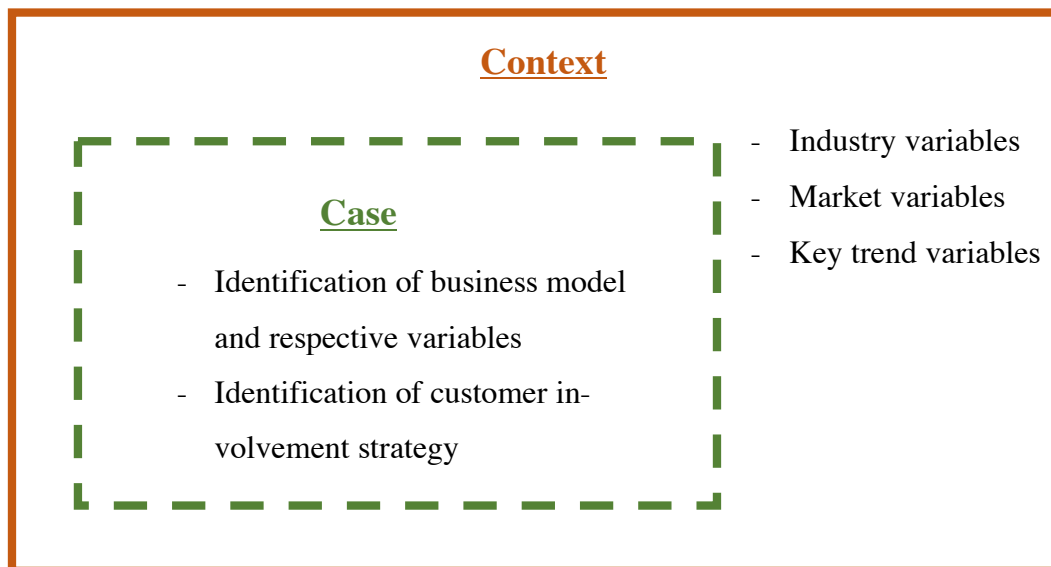
Source: adapted from Yin (2009, p. 80)

---

One goal of the multiple case study analysis is that every single case study can stand for itself, being logical and consistent. It, therefore, is crucial to adapt a generalized approach for all cases. Every case study must contain a **case study introduction** (see Figure 4, **A.**), where a short overview over the case must be given in regard to where the main focus of the case study lies.

The **data collection procedure** (see Figure 4, **B.**) must be identical for all cases. There are to be used different sources of evidence, to increase the construct validity of the work. However all the relevant variables to be studied as well as the instruments used for the analysis of one case must be identical. This guarantees an appropriate generalization when conducting a cross-case analysis. Sources of evidence for this thesis may be private or public documents, archival records or audiovisual material (Yin, 2009). When using this data attention has to be drawn to the fact, that most of those sources of evidence were written for specific purposes. This requires the full recognition when interpreting the usefulness and accuracy of the source.

As mentioned earlier, an advantage of case study analysis is the consideration not only of the case itself but also of the context. Accordingly, data has to be collected, covering the context of the case but also the case itself. Figure 5 lists the relevant variables which are to be studied as part of the context of a case and as part of the case itself. The variables covered are partly adapted from Osterwalder and Pigneur (2010, p. 201).



*Figure 5: Relevant Variables to Be Studied*

Source: own representation

To manage the information gathered, an Excel computer file will be used which organizes the data into themes, being the above mentioned relevant variables. The Excel computer file will be referred to as case study database in the text, and the full documentation is listed in the Appendices B to G.



For the **analysis of the collected data** (see Figure 4, C.) a unified approach must be developed. Every case analysis will, therefore, answer an identical set of questions, called case study questions. Those case study questions will, later on, serve as a basis to answer the research questions. They are derived from the overall research question and adapted to be applicable for the within-case analysis. Those five case study questions are following:

1. *How does the value creation for the company work?*
2. *How does the company use customer involvement as part of their business model?*
3. *Which contextual factors contribute to the company's successful customer involvement approach?*
4. *Which chances and risks does the company face regarding their customer involvement strategy?*
5. *What are critical success factors for the successful implementation of the company's customer involvement strategy?*

Instruments used to answer the case study questions are following:

*Business Model Canvas:* The Business Model Canvas is the key instrument for the case analysis. It serves as main framework for identifying the customer involvement strategy within the different business models. This instrument will be used to answer the case study questions number 1. to 3.

*SWOT Analysis:* Through a SWOT analysis (S–Strengths, W–Weaknesses, O–Opportunities, T–Threats) it is possible to identify opportunities and threats to the company and its business model. The factors will be studied regarding the company and their customer involvement approach. Hence, this serves as an analysis technique for the case study question number 4.

### **3.2.2 Within-Case Analysis**

The within-case analysis consists of three steps: *collecting* case study evidence, *analyzing* the case study evidence and *evaluating* case study evidence (see Figure 3 – second step

of the replication approach model). Through the entire analysis process, the data collection protocol with its defined elements will be followed.

As first step of the within-case analysis raw data will be collected. It is “relatively uncontested data” (Stake, 1995, p. 123 as cited in Creswell, 2013) and serves as basis for the subsequent analysis of key issues. As sources of evidence a wide variety of documents can be used like *empirical studies, articles, administrative documents (reports, internal records, personal documents (letters, memoranda, e-mail correspondence), written reports of events and audiovisual material* (Yin, 2009). In a second step, the collected data will be analyzed. Thereby the focus lies on key themes which are crucial for this thesis. Those key themes are covered through the case study questions. They serve as basis for the cross-case analysis to conclusively answer the overall research question. To answer those case study questions, the analysis instruments and techniques which were described in the data collection protocol will be used. As a final step of the within-case analysis, a short conclusion will be written. This summarizes and evaluates the gained insight of the single case study.

### **3.2.3 Cross-Case Analysis**

After all individual case studies have been fully conducted, a combined analysis of all the cases is to be made (see Figure 3 – third step of the replication approach model), referred to as cross-case analysis. Conclusively the overall research question (which was introduced in Chapter 1.2) on what precisely a customer involvement-based business model looks like will be answered.

### **3.2.4 Discussion & Implications**

In the final chapter of this thesis, a last discussion of the topic will be held. A comparative conclusion of the first and the secondary research will connect the existing and the newly gained insights. The final general conclusion will round up the thesis. Proposals for further studies as well as limitations will thereby be given, which should be considered for further research on this topic.

## **4 Empirical Study II – Within-Case Analysis**

This section will deal with the empirical analysis of five individual case studies. All cases were collected and analyzed by following the data collection protocol, which was developed in the previous chapter. All information was collected in the case study database and can be found in the Appendices B to F.

### **4.1 Within-Case Analysis: Case N° 1: Smart – Ready to Drop**

This within-case analysis will deal with the car brand Smart and its “ready to drop” program. The case analysis will be structured in four parts. Firstly, a short introduction to the case will be given. The second part will illustrate the raw data collection process and significant key findings will be illustrated. The third part will analyze the collected evidence, and the fourth part will draw a short overall conclusion on the case study.

#### **4.1.1 Introduction**

Smart, a passenger car brand of the German car manufacturer Daimler AG will be in focus in this case study. As a joint venture of Daimler AG and the Swatch Group, the Smart car was introduced as Daimler’s smallest and lowest-priced car brand in 1998 (Lewin, 2004). It is the embodiment of urban driving due to its small and compact form.

Smart and DHL Parcel started a joint pilot project in 2016 called “Smart – ready to drop”, in the cities Stuttgart, Köln, Bonn, and Berlin (Daimler AG, n.d.). It was introduced as a service where Smart owners can use their trunk as mobile addresses for parcel deliveries (Smart, n.d.). This project initiated by the Smart lab, a creative think tank by the brand, is supposed to innovate urban mobility. It enlarges the usage range of the Smart car and aims for a further boost of the Smart car as a city car. Although this pilot project seems to be only a service for customers right now, there is more behind it. It can be seen as a prototype of new business model designs, which revolutionize urban mobility. Possible future joint ventures between car manufacturers and postal and logistics companies make it suitable for a case for this thesis. It serves as an ideal illustration of a co-delivery business model where customers are involved in the delivery process of the value proposition. In this case study, it will, therefore, be analyzed in the same procedure as other cases with an already existing business model.

The next chapter illustrates the process of data collection and the actual data collected. Subsequently, this data will be analyzed through answering the defined case study questions (see Chapter 3.2.1). Lastly, a conclusion on the customer involvement approach in this case study will be drawn.

#### 4.1.2 Data Collection

The data collection for the case “Smart – ready to drop” is based on different sources of evidence, which are: online data gathering, books, press release, newsletters. All gathered information is stored in the case study database and can be found in Appendix B. Relevant excerpts are presented below to represent results of the data collection, as well as to give a further explanation where needed.

| <i>Variables</i>                      | <i>Detail</i>  | <i>Sources</i>                            |
|---------------------------------------|--|---|
| <b>context variables</b>              |  |   |
| <b>Industry</b>                       | automotive & logistics   | Daimler AG (n.d.)                         |
| <b>Competitors</b>                    | volvo in-car delivery  | Volvo (n.d.b)                             |
| <b>New entrants</b>                   | none so far  |   |
| <b>Substitute services</b>            | home delivery, pick up stations, delivery to post office   | Deutsche Post DHL Group (n.d.b)           |
| <b>Market</b>                         |  |   |
| <b>Needs &amp; demands</b>            | increased mobility & flexibility, less time available  |   |
| <b>Switching cost</b>                 | high if service tied to car brand  |   |
| <b>Revenue Attractiveness</b>         | attractive if simplification of the customer's daily life<br>lower overhead costs for firm through co-delivery |   |
| <b>Location of business</b>           | <i>local:</i> Stuttgart, Köln, Bonn, Berlin  | Daimler AG (n.d.)                         |
| <b>Key Trends</b>                     |  |   |
| <b>Technology trends</b>              | digitalization, mobile intelligence  | Signer (2016)                             |
| <b>Regulatory trends</b>              | increased regulation on data security & data protection  |   |
| <b>Societal &amp; cultural trends</b> | interconnection, elevated expectations   | Mason, Mattin, Luthy, & Dumitrescu (2015) |
| <b>Socioeconomic trends</b>           | urbanization, shift to e-commerce  |   |

**Figure 6: Smart – Data Collection of Case Study Context**

Source: own representation

Figure 6 illustrates the data collected about the case study context. This case takes place in the automotive and logistics industry, where for both sectors, a before unknown business practice was developed: in-car delivery of parcels. The only competitor on the market is Volvo with its in-car delivery service, which was launched in 2015 (Volvo Car Group, 2015). Their service is available in Sweden, Norway, and Switzerland in collaboration with respective postal services and various e-commerce businesses (Volvo Car Group, n.d.). Other car manufacturers who are planning on adapting this practice are so far unheard of. Alternative services to the in-car delivery are the traditional home delivery and delivery to the post office but also pick-up stations, where the customer also takes an active part in the delivery process (Deutsche Post DHL Group, n.d.b).

Turning to the market where the business model operates in it can be seen that several forces are presently driving the market. Part of those forces are needs and demands of customers who are continuously transforming the market perspectives (Osterwalder & Pigneur, 2010). In today's fast moving environment people have less time for small tasks. They spend more time away from their home and need to be increasingly mobile and flexible. Therefore they are willing to spend money if it simplifies their complex daily life and if it brings a significant added value to them. The revenue attractiveness for the company exists and goes together with the opportunity to save part of the delivery costs. The fact that so far the service is bound to the car brand of the owner signals a high switching cost for the customer. The identified key trends in the context of this case are all going in line with the provided service by Smart. The highly demanded interconnection from everywhere, with everything, is built on increasingly high expectations (Mason, Mattin, Luthy, & Dumitrescu, 2015). This cultural trend gives the customers much power, and hence businesses are adapting to keep up with those trends and socioeconomic shifts.

Besides collecting data of the case study context, data of the actual case was gathered, which can be found in Appendix B. A few key remarks to understand the business model will be made below.

The in-car delivery program makes use of mobile intelligence, where the car is part of the customer's digital ecosystem (Singer, 2016). This can only work with an outstanding technical solution. This solution for Smart is a hardware based on their car2go technique. Car2go is a car-sharing concept and was launched by its mother company Daimler AG in 2008 (Gassmann, Frankenberger, & Csik, 2014). Based on a pay per use business model pattern, customers rent the cars by the minutes and only pay for actual usage of the service. The service counts 1.9 million customers so far and is available in Europe, North America and China (Daimler AG, n.d.). To make this business model work, the cars need to be equipped with software which allows remote-controlled opening of the cars. This digital access system was developed by Daimler AG together with the software company TSS and is the same as the one smart is using for the „ready to drop” (Singer, 2016). Thereby a little box, called Connectivity box has to be installed by Smart on the windshield of the car. It connects to the internet (for localizing purposes) and contains a digital key for the mailman to open the car.

The smartphone-based app allows the customer to generate a TAN (transaction number) when ordering online from one of the partnering e-commerce businesses (Singer, 2016; Smart, 2016b). This TAN has to be entered into the c/o field of the address. The mailman can then localize the car through GPS but only if the vehicle is parked within a range of 300 meters to the home address (WELT, 2016). The delivery, therefore, takes place between 11 pm and 5 am (Smart, n.d.). The car can be opened within a limited time frame, with the help of the TAN number and the Connectivity Box (Daimler AG, n.d.). This access authorization expires once the car gets relocked. Simultaneously the car owner receives an automatic text message with a delivery confirmation. Besides delivery of parcels, the car trunk can also be used to drop-off parcels, which the mailman gets when already stamped. This short digression on the process of delivery illustrates the technical finesse and potential of this system.

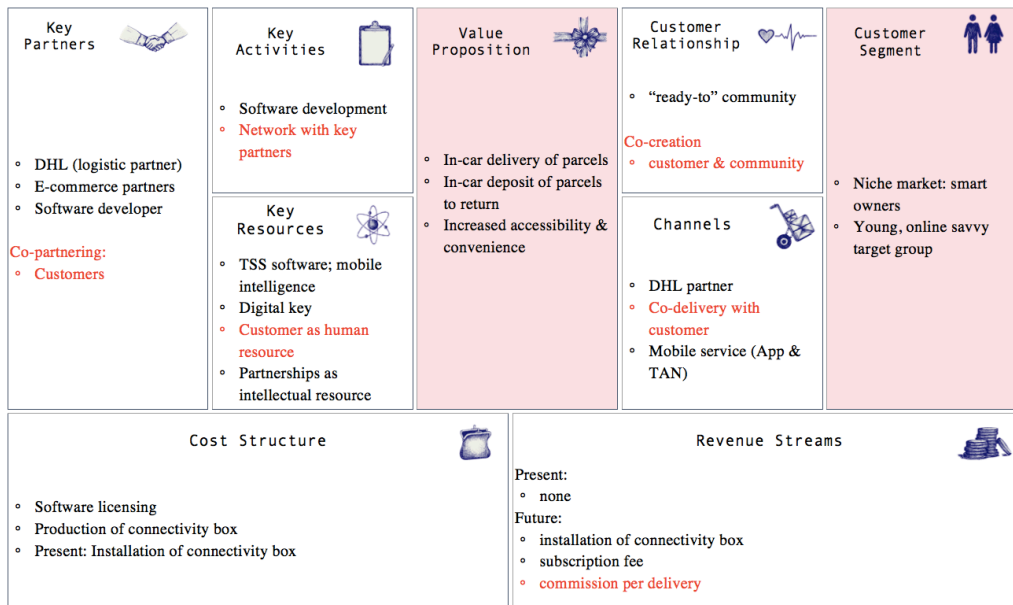
The online shops participating in the pilot project are Amazon, Allyouneed fresh, Fashion ID, Aponeo, Disapo, Music Store, Alternate, AC-Foto and Streetlights (Deutsche Post DHL Group, n.d.a). Along with the customers, those online shops are important partners for Smart and their “ready to drop program”.

### 4.1.3 Analysis

In this chapter, the collected data will be analyzed. To identify Smart’s customer involvement approach, the case study questions, which were developed in Chapter 3.2.1 will be answered.

#### **1 | How does the value creation for the company work?**

Smart – ready to drop is a service embedded in a company but with much potential as an independent business unit. Their value proposition consists of the service to drop off purchases and pick up returns from car trunks of customers, and its process was described in the previous chapter. Different factors are crucial for the business concept to work. These factors are bundled in building blocks and summarized as a Business Model Canvas in Figure 7.



**Figure 7: Smart – Ready to Drop Business Model Canvas**

Source: own representation

Most important key partners for such a service are customers who purchase goods online and e-commerce businesses which supply the customer’s demand. In the case of Smart – ready to drop, also DHL is an important key player who is responsible for the delivery. The service does not work without software engineers and their software either, which allows temporary access to the cars. The software development is a key resource, key activity and is part of the cost structure and the channel (for the use of the mobile app and TAN). The business model gets profitable when car owners pay a subscription fee, and Smart can establish their “ready to drop” program as premium service. Smart will also receive an agreed contribution from the respective revenues of DHL since DHL has Smart cars at their disposal for the partial delivery. The cost which occurs for the company is limited to the development costs of the software.

Since the service is owned by Smart, they target a niche market which consists of their Smart car owners (who drive a newer version of Smarts) who are young and online savvy. They reach them through creating an exclusive community for all “ready to drop” participants where they can exchange their experiences and ask questions. This is done for strengthening customer relationships. However, customers are not the only target for the

value proposition, but they are also an active part of the areas channels, customer relationships, key resources and key partners, which is subject to the second case study question.

## **2 | How does the company use customer involvement as part of their business model?**

As the red marked words and areas in Figure 7 show, customers are involved in different areas of this service business. Their most important function besides being highly relevant as customers is their participation in the delivery process. Therefore, they are also generally involved in the value proposition of this “ready to drop” program. Through the co-delivery, they moreover become a key partner, a key resource and the most important part of the channel. Another result of the co-delivery is the strengthening of the customer relationship. The relationship is not a one-way relationship where the company tries to reach the customer, but it is a co-creation where the customer is regularly engaging with the company. Being it through visiting the online app to generate a TAN when ordering online or through participating in the community smart created for the “ready to drop” participants. No matter if this service business is owned by a car manufacturer or a logistics company, it strongly ties the customer to the company because an active participation is being created where the customer engages with the company more than ever. Smart was not involved in any online shopping experiences of their customers before but through this program they are. It helps them to shape this new mobility concept where the car counts as extension of the customer’s lives. For the customer it means increased independence; He does not have to be at home to wait for parcels but can just pick them up in the car whenever it is suitable. This active customer involvement creates a positive experience for a process which was before rather irritating.

## **3 | Which contextual factors contribute to the company’s successful customer involvement approach?**

“To understand a system we need to understand how it fits into the larger system which it is a part of” (Normann & Ramirez, 1998, p. xvi). For the case analysis it is therefore crucial to understand which contextual factors contribute to the company’s successful customer involvement approach. One element of this third case study question are trends, which are perfectly supported through the in-car delivery. The trend of being very flexible and always connected, together with all emerging digital opportunities is the reason why people see their car as an extension of their living space (Smart, 2016a). It serves as their



urban assistant which allows the extension of existing mobility concepts into new innovative fields. Smart – ready to drop lets the customer exploit and live up to those trends. The process of receiving parcels was rather a struggle before because customers order more, are however less at home. So not having to pick the parcels up in a post office or to wait longer for them until they can be at home to receive it, is a gift of time for them which allows them to use this time efficiently for something else. It illustrates that Smart listened to the needs of the customers to have more time and reacted to those needs.

#### **4 | Which chances and risks does the company face regarding their customer involvement strategy?**

To involve customers into the business model the way Smart is intending to, brings many chances for the company. Foremost it creates an incredible bond between the customer and the company. It allows the customer to use their car as urban assistant and this increases the dependency on Smart. Smart can gain a lot of customer insights on their behavior out of this service, which they can use for future business development. Also it increases Smart's brand awareness because they presented something almost unknown before and they are ahead of competition. If smartly used, all those chances could increase Smart's competitive advantage. Their probably biggest chance, however, is to develop their service for their loyal customers further, making use of the installed software in the Smart cars. This development could go into new business fields like car sharing, which could be more easily developed since they have already done the preliminary work now.

Through the development of the car2go software, it is unquestionable that they have much experience with mobile intelligence and the risks it bears. Their "ready to drop" service includes, however, a third partner, who is another potential source of risk. There is a security risk when the opening or closing of the car fails. The owner of the car would not care if it would be the fault of Smart or DHL. Therefore it would reflect negatively on Smart and could potentially damage their reputation or even bring legal consequences with it.

#### **5 | What are critical success factors for the successful implementation of the company's customer involvement strategy?**

It is difficult to evaluate critical success factors for Smart's implementation of their customer involvement strategy because it cannot yet be assessed if their current trial phase

will be a success. It, however, can be said that Smart could not have started their pilot phase without the willingness of the customers to participate. The willingness was there because the service directly addresses a need customers have. One critical success factor was good communication from Smart to their customers because the service is a direct intervention into their private life. Without gaining their trust, customers would not have participated in the pilot. Also Smart could only start this project because their car owners were the right target group for the service. It is an online savvy target group which is not afraid of further digital intervention into their lives.

#### **4.1.4 Evaluation**

The analysis shows that Smart's ready to drop program seems to be a part of a bigger plan. The bigger plan is to enter into the sharing economy with their cars, which are through the connectivity boxes already set up. Since Smart as a brand of Daimler AG is part of the mother company's main business model, an entire business model adaptation from Daimler AG is out of the question. It can be assumed that the company will embed the new business model into their existing organization – either integrated or as a separate business unit. To note is that the “ready to drop” program can be seen as a prototype of a potential future business model in the field of peer to peer.

Regardless of how Smart will develop their business model, the analysis of customer involvement through co-delivery shows that this customer involvement strategy works if it manages to increase the company's profitability. As long as there is no profitability for the company but only increased brand awareness and loyalty, it cannot function as a business model. It then can only be seen as marketing tool or service. If, however, most likely a logistics company, integrates this as a unit into their business it can generate value for both sides. The co-delivery with the customer allows the company to save costs through outsourcing the delivery and it strengthens the customer relationship through creating a positive customer experience. Customer involvement in the delivery of a product requires good communication between all parties involved, as well as high trust from the customer side. It is a chance for a deep customer relationship with the company but simultaneously a high risk factor for the company. If the business model is adapted by a car manufacturer, there are limited business opportunities for them due to the limitation of their existing customers. A logistics company like DHL however, could develop a solution which works for multiple car brands.

## **4.2 Within-Case Analysis: Case N° 2: Etsy, Inc.**

The second within-case analysis will examine the American corporation Etsy, Inc., referred to as Etsy. Structured in the parts introduction, data collection, analysis, and evaluation there will be given insights into the company's customer involvement approach.

### **4.2.1 Introduction**

Etsy is an online marketplace for home and handmade products (Etsy Inc., n.d.a). The e-commerce platform was founded in 2005 to foster creative entrepreneurialism. The focus lays on handmade, vintage and craft supplies, which are sold through their platform. The business model can be described as multi-sided platform business model since interdependent online shops and customers connect through the platform and its network (Osterwalder & Pigneur, 2010). Customer involvement can be strongly assumed, and therefore Etsy seems suitable as a subject for this case analysis.

In the next chapter, the process of data collection will be displayed. Subsequently, the data will be analyzed through answering the case study questions, which were developed in Chapter 3.2.1. The last chapter will conclusively evaluate Etsy's customer involvement approach.

### **4.2.2 Data Collection**

All data for this case study has been collected through online data gathering, books, press release, newsletters and annual reports. Important key information gained through this data collection are given below. The full data collection on this case can be found in Appendix C.

The New York City-based company has currently 1.7 million sellers and 28.6 million buyers and operates on a global scale (Etsy Inc., n.d.a). Thereby 87% of sellers are women (Etsy Inc., 2016). Since their April 2015 initial public offering (IPO) the company is still not profitable and reported slowing growth since the IPO (Cao, 2016). However the stock price seems to recover slowly, and their annual report states an 19% increase in gross merchandise sales and a 33% revenue increase, compared to 2015 (Etsy Inc., 2016). 64% of total visits and 48% of total gross merchandise sales came from a mobile device. Their

main competitors are Ebay, Craigslist, DaWanda and some smaller e-commerce platforms but only the German company DaWanda operates on a similar scale and sells only handmade and vintage items (Fallon, 2016).

Further information on the context of Etsy’s business practice was gathered in the case study database. An excerpt of which can be seen in Figure 8. This allows a further elaboration on important context issues below.

| <i>Variables</i>           | <i>Detail</i>   | <i>Sources</i>                            |
|----------------------------|---|---|
| context variables          |   |   |
| <b>Industry</b>            | e-commerce platform for creative entrepreneurship   |   |
| Competitors                | Ebay, Craigslist, Bonanza, ...  | Fallon (2016)                             |
| New entrants               | DaWanda   | Fallon (2016)                             |
| Substitutes                | direct e-commerce, fairs, etc.  |   |
| <b>Market</b>              |   |   |
| Needs & demands            | sellers: business flexibility and independence, demand for creative products,<br>all-in-one platform convenient for customers | Etsy Inc. (n.d.a)                         |
| Switching cost             | low for shops & customers   |   |
| Revenue Attractiveness     | more attractiv the bigger the community   |   |
| Location of business       | global  | Etsy Inc. (n.d.a)                         |
| <b>Key Trends</b>          |   |   |
| Technology trends          | digitalization, web 2.0   |   |
| Regulatory trends          | consumer protection, privacy of consumer information  | Etsy Inc. (2016)                          |
| Societal & cultural trends | multiple jobs, entrepreneurship, sustainability   | Etsy Inc. (2014)                          |
| Socioeconomic trends       | self-centric, vintage, shift to e-commerce, DIY   | Mason, Mattin, Luthy, & Dumitrescu (2015) |

*Figure 8: Etsy – Data Collection of Case Study Context*

Source: own representation

Besides Etsy’s direct competitors there are easily reachable substitutes, but customers (sellers and buyers) increasingly choose peer to peer trade through platforms like Etsy out of convenience reasons and because it covers the needs and demands of the sellers. Along with the ever-growing digitalization, also goes the shift to increasing e-commerce activities from sellers and buyers. No physical attention of entrepreneurs is required, and with the newly gained business flexibility, multiple jobs become possible. Trends towards self-employment and micro-businesses are increasing and go in line with the high number of female sellers on Etsy. The importance of Etsy’s business context regarding their customer involvement approach will be further analyzed and discussed in the next chapter.

When looking at the case itself it can be said that the platform consists of different areas: market, seller service, technology and community (Etsy Inc., 2016). Those are key activities and serve their main purpose to connect creative entrepreneurs and customers (Etsy

Inc., n.d.a). Those two interdependent parties are thus the main key partners but also customers of Etsy, and they have a direct or indirect stake in every building block of the business model.

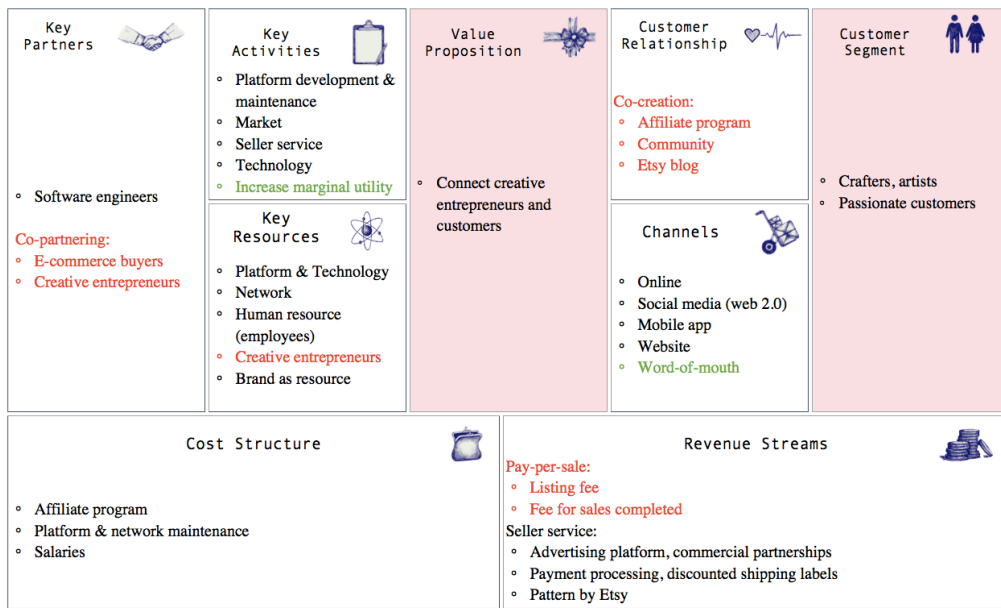
Resources the company uses for their business are besides the sellers themselves also 1043 direct employees, the platform, technology and their brand (Etsy Inc., n.d.a). The market itself develops the brand. It is important for the platform's growth that the buyer associates the purchased products with the brand Etsy, instead of the seller's shop brand (Cao, 2016). Etsy's revenue streams consist of indirect commerce participation: On a pay-per-sale basis sellers pay a 0.20 USD listing-fee and a 3.5% fee for every sale completed (Etsy Inc., 2016). Further earnings the company receives through seller services: sellers pay Etsy for promoted listings, for the direct-checkout-option (Etsy's payment processing service), and for "pattern by Etsy" which allows the seller to create a custom website. Further revenue comes from commercial partnerships and shipping labels, which sellers can purchase through the platform. Costs incurred for the company through salaries, their affiliate program which will be described in the following chapter, as well as through the development and maintenance of their platform.

### 4.2.3 Analysis

This chapter will analyze Etsy's customer involvement strategy through answering the following case study questions, which were developed in Chapter 3.2.1.

#### **1 | How does the value creation for the company work?**

As mentioned previously Etsy's platform serves the purpose to connect sellers of hand-made and vintage goods with customers purchasing those goods. They thereby heavily rely on both. Crafters are their direct customers, through whom they earn most of their revenue. Customers buying those goods are Etsy's indirect customers, whom they have to attract to the platform to make purchases. Figure 9 shows all crucial parts of their value creation.



**Figure 9: Etsy Business Model Canvas**

Source: own representation

Key activities contain the development and maintenance of the platform: this being for direct market activities, seller services, technology and for the extension of their community and network. The latter is a very important part of their value creation and is crucial for their growth. The online community is the basis for their customer relationships. Its development thereby heavily relies on Web 2.0. Web 2.0 is a term used to describe the shift to today's increased usage of the internet; the increasing information sharing and interconnectedness through user-generated content and social media (Investopedia, n.d.; Oxford Dictionary of English, 2010). Etsy makes use of this development to strengthen their brand value through blogs, affiliate programs (where they pay influential bloggers to promote the platform) and through a high online presence on social media platforms like Pinterest and Instagram. Since there is no delivery of physical goods necessary for Etsy, their channel interaction also happens online, through their website, mobile app, social media and word-of-mouth.

As described in the previous chapter, the company has a diversified revenue from market activities and seller services which is a further crucial part of their value creation.

## **2 | How does the company use customer involvement as part of their business model?**

Customer involvement is highly important for Etsy. This is illustrated through the red marked words and areas in Figure 9. The green marked words stand for indirect customer involvement.

Similar to every other customer involvement strategy, customers are generally involved in the building blocks customer segment and value proposition. Moreover, the same actors who serve as their customers also serve as key partners in their business model. Without the end-customer knowing about the platform and purchasing goods, sellers could not sell their products and thus would not be able to generate revenue for themselves or for Etsy. Etsy could technically still operate their platform, but no business model can work if no revenue is being generated. Hence, the co-partnering of Etsy and its customers is the basis for all further customer involvements.

Besides co-partnering, sellers also represent a human resource which is compelling for Etsy's business practices. Without their work the platform would be a homepage with no purpose. Also crucial for Etsy is the co-creation of the customer relationship and the channel interaction. As briefly described, Web 2.0 is the main tool used by Etsy to increase their brand awareness and brand value. This however only works if there also is a promotion from their customer's side. Etsy, therefore, has an affiliate program where they pay certain affiliates a provision for concluded transactions by customers after visiting the affiliate's blog and clicking on the promoted product from Etsy (Etsy Inc., n.d.b). The process can be tracked through cookies. This way, the program contributes to the community development where sellers and customers can interact and exchange, all with the result of promoting the brand Etsy. This promotion is very favorable for Etsy's brand development and therefore also for sellers because their shop awareness concurrently increases. Critiques would argue that it is rather counter-productive for sellers since they only "rent" customers from Etsy and are therefore not able to increase their own brand value as entrepreneurs. This community development Etsy strives for is a self-reinforcing cycle, which can be seen in Figure 10. It is also known as *Network Effect* an economical theory developed by researchers from Harvard Business School (Shapiro & Varian, 1999). The cycle, however, can be subject to potential disruption, which will be discussed in the fourth case study question.



*Figure 10: Etsy's Self-Reinforcing Cycle*

Source: own representation

### 3 | Which contextual factors contribute to the company's successful customer involvement approach?

Co-partnering is Etsy's basic customer involvement approach. All other co-practices from Etsy and their customers are a result of the co-partnering. The key question, therefore, is how the company can attract sellers and how they can make them stay. Etsy strongly relies on present trends of technological, social but also socioeconomic nature.

Etsy responds to the trend of entrepreneurship and micro-businesses and lets sellers run their own online business. As the business only exists online, they support flexibility, independence, and creativity, which directly addresses women (Etsy Inc., n.d.a). Those mostly mother-entrepreneurs can avoid traditional barriers of launching a business which seems very promising to them. Once the company can win sellers to sign up online with their business, Etsy tries to make them stay through a user-friendly interface and through adding seller services (Cao, 2016).

Making sellers stay is easier than attracting customers. This is mainly due to many substitutes and low switching cost for buyers. The platform therefore needs a strong ecosystem: The better the reputation and the bigger the community, the more other customers will be attracted (Casto, 2014). The online interface must be user-friendly, and there must be a great effort from Etsy to actively develop a community.



#### **4 | Which chances and risks does the company face in regard to their customer involvement strategy?**

The way Etsy integrates their customers in their business model bears many opportunities but also a number of risks:

One major chance is the ability to build a more diverse potential customer base than if they would operate a direct e-commerce business (Gassmann, Frankenberger, & Csik, 2014). The potential customer base is however still limited compared to platforms like Ebay, due to the niche market of homemade and vintage goods they operate in. The more diverse sellers Etsy can attract as key resources – the more different customer types are being attracted. Knowing this, Etsy could expand their fields of offerings, to develop and nurture its self-reinforcing cycle. This community development as result of their customer involvement strategy allows them to build community-based economies, which pose many chances for a business and its brand.

When analyzing Etsy's risk regarding their customer involvement strategy it can be said that the business is a difficult balancing act, since some of their current strengths could promptly turn into significant risks. When considering their brand value it can be seen that the association of purchased goods with the brand Etsy, instead of the seller-brand is positive for Etsy. However, it also poses a risk. The bigger the brand value of Etsy, the higher is the risk of losing sellers as customers and key partners. When sellers only feel as part of a mass who all offer something on a huge platform, it might seem more promising to switch to competitors, where they still get positive seller experiences. Same happens when sellers start to sell many goods through Etsy. At one point it might be more profitable to set up an own e-commerce website instead of sharing an increasing part of their revenue. If Etsy loses its exclusivity, which could also happen when there is a lack of control over the traded goods to ensure that there are no "made in China" products among them, Etsy could consequently lose its customers. Those scenarios pose a severe risk for Etsy. Every company is very dependent on their key partners. When customers are the most important key partners, and they end the partnership, the consequences are more severe compared to no co-partnering and thus the whole business model could collapse.

## **5 | What are critical success factors for the successful implementation of the company's customer involvement strategy?**

Etsy's key success factor for their successful customer involvement approach is a strong ecosystem of shared capabilities which stands and falls with the community. As shown in Figure 10 the community development cycle and therefore the ecosystem works well if there are no disruptions and if customers stay passionate. To keep up this customer involvement strategy, Etsy therefore needs to continuously increase seller experience to minimize the risk of losing their key partners. Their newest attempt to do so is their "Etsy Studio" service, which allows sellers to customize their web shop for some fee (Hagan, 2017). For the community development (and with it the whole cycle) not to stagnate, customers need to be kept passionate, which is another critical success factor of their strategy. This can be achieved through improving technology and adding services (Cao, 2016).

### **4.2.4 Evaluation**

Etsy's customer involvement approach stands or falls with the management and control of their key partners and key resources. Since sellers and buyers are not only Etsy's target segment but also their key partners, managing and avoiding potential disruptions are central for a successful development of their business model. Continuously they need to make use of strong digital tools like user-generated content and a virtual community to promote their brand. However, they also need to make sure that their one key resource, which is their brand, does not get too strong and can be managed properly. Otherwise, they run the risk of losing sellers as key partners. Either because on a certain scale, the online business may seem more profitable to sellers without Etsy or because the seller experience gets too negative when all products are solely associated with the brand Etsy, and hence, sellers feel like they are only renting customers from them.

This case analysis illustrates the importance of customers in this business model. It not yet is a fully customer-based business model because their online resource, the platform, can function regardless of the customers. However, to be profitable the company needs their customers as co-partners and with it, as key resources and driver of the relationships.

### **4.3 Within-Case Analysis: Case N° 3: Uber Technologies Inc.**

The third within-case analysis will discuss the company Uber Technologies Inc., referred to as Uber. In the following four chapters, namely introduction, data collection, analysis, and evaluation, the company will be analyzed and evaluated regarding their customer-involvement strategy.

#### **4.3.1 Introduction**

Uber is the owner of a ride-hailing application. The American technology start-up was founded in 2009 and operates on a global scale (Uber Technologies Inc., n.d.d). The smartphone application facilitates a peer to peer network which allows an on-demand hail of taxi cabs. As a non-traditional taxi provider, which makes no use of taxi drivers as employees, the company heavily relies on customer involvement and seems therefore suitable as case study.

This case analysis has been conducted to analyze Uber's thriving approach to customer involvement. The next chapter displays main findings which were gathered throughout the data collection. After that, the company's customer involvement approach will be analyzed through answering the case study questions, and the final chapter will evaluate their customer involvement strategy.

#### **4.3.2 Data Collection**

All data for this case study has been collected through online data gathering, books, press release, and newsletters. Important information, which was gained through the data collection are given below. All data is stored in the case study database, which can be found in Appendix D.

In Figure 11 an excerpt of this data collection protocol can be seen. It shows important information on the context of Uber's business model.

| <i>Variables</i>           | <i>Detail</i>   | <i>Sources</i>                                     |
|----------------------------|---|--|
| context variables          |   |  |
| <b>Industry</b>            |   |  |
| Competitors                | Didi Chuxing, Lyft, Olacabs, Yidao Yongche, GrabTaxi,...                      | Chen & Huet (2015)                                 |
| New entrants               | Gett&Juno   | Solomon (2017)                                     |
| Substitutes                | traditional taxi service  |  |
| <b>Market</b>              |   |  |
| Needs & demands            | simplicity, low price, flexible new way to earn money                         | Gassmann, O., Frankenberger, K., & Csik, M. (2014) |
| Switching cost             | the bigger for the customer, the bigger the network for the company           |  |
| Revenue Attractiveness     | the higher for Uber, the bigger the network, increased through surged pricing |  |
| Location of business       | global  | Uber Technologies Inc (n.d.a)                      |
| <b>Key Trends</b>          |   |  |
| Technology trends          | digitalization, demonetization  |  |
| Regulatory trends          | law regulations in taxi industry  |  |
| Societal & cultural trends | shared economy: collaborative consumption, sustainability                     | Gassmann, O., Frankenberger, K., & Csik, M. (2014) |
| Socioeconomic trends       | on-demand economy   | Scott (2015)                                       |

**Figure 11: Uber – Data Collection of Case Study Context**

Source: own representation

When looking at the company’s competitors, it can be said that there are many, including new alliances formed by competitors to fight Uber (Chen & Huet, 2015; Solomon, 2017). Uber, however, was the pioneer of this peer to peer business model in urban mobility. None of the others who later on entered the market with a similar business model, have achieved the same popularity as Uber.

In the context of Uber’s business model strategy, it can be seen that the company is responding to increasingly important market needs and demands from both their customers, which are drivers and passengers. Passengers appreciate the digitalized taxi service, which is cheap and simple to use through a mobile app. This increasing shift into an on-demand economy, where services can be ordered through the touch of a button is combined with the trend of collaborative consumption where the value is created *by and for* the people (Kavadias, Ladas, & Loch, 2016). For car drivers, it is a new, flexible way to earn money (Gassmann, Frankenberger, & Csik, 2014).

Uber’s new disruptive business model simplifies the traditional taxi industry (Koch, 2017). Its success shows that the company was able to solve a pain point for customers. There is no hailing for a taxi anymore but instead, through a system of constant tracking of the car, the passenger can feel safe, and there is no need to carry cash because the whole system only works with a registered credit card. Through cutting out the roles of the taxis, Uber could not only capture their market share, but according to its founder Travis Kalanick, they managed to expand the market.

The company's main business can be described as facilitating a digital peer to peer network in the field of transportation, based on a platform. Their customers – drivers and passengers – independently sign up online to make use of the service. Drivers are thereby treated as independent contractors, running their own business with their cars (Uber Technologies Inc, n.d.a). Passengers can choose among different Uber categories: economy (UberX, UberXL, UberSelect), premium (UberBLACK, UberSUV, UberLUX) and carpool (UberPOOL) (Uber Technologies Inc., n.d.e). The registration of a credit card is obligatory and in contrast to traditional taxi services the driver is not being tipped for the ride. The channels the company uses to reach its customers are the website, mobile app, PR, social media marketing and word-of-mouth (Oakley, 2016).

Uber's key activities, besides the technological facilitation and development of the platform, are the development of the network of drivers and passengers to increase marginal utility of the service (Oakley, 2016). Together with the software developers, drivers and passengers represent the company's key partners as well as important key resources. Another important key resource for the company is their surge pricing and routing and matching algorithms (Uber Technologies Inc., n.d.f). The surge pricing technology is based on the logic of dynamic pricing and adapts the fares for rides according to the demand in the area. For Uber drivers, it is visible on the app through colors, in which areas the demand is temporarily higher. The routing and matching algorithms are another important resource for Uber. It tracks every car and directs cars to people and people to places (Nguyen, 2015).

The company's main revenue stream is a 20% to 25% commission on every ride, which they call service fee (Huet, 2015; Uber Technologies Inc, n.d.b). The exact figure depends on the location of the service. Through their surge pricing technology, the commission further increases. Also, they charge passengers credit card processing fees and cancellation fees for canceled trips (Uber Technologies Inc., n.d.c). Furthermore, Uber possesses luxury services like UberBOAT through which they create another revenue streams with higher fares and commissions (Uber Technologies Inc., 2015). Uber's expenditures include the technology development and maintenance, salaries for their direct employees, marketing and lobbying expenditures as well as their extensive research into autonomous driving technology (Somerville, 2016).

### 4.3.3 Analysis

This chapter will analyze Uber’s customer involvement approach, taking into consideration the information given in the previous chapter on the company and its context. For the analysis, the case study questions which were introduced in Chapter 3.2.1 will be answered.

#### 1 | How does the value creation for the company work?

The principle idea of Uber’s business model is to create and develop a peer to peer transportation network through a mobile application. All crucial aspects upon which the business model is built can be seen in Figure 12.

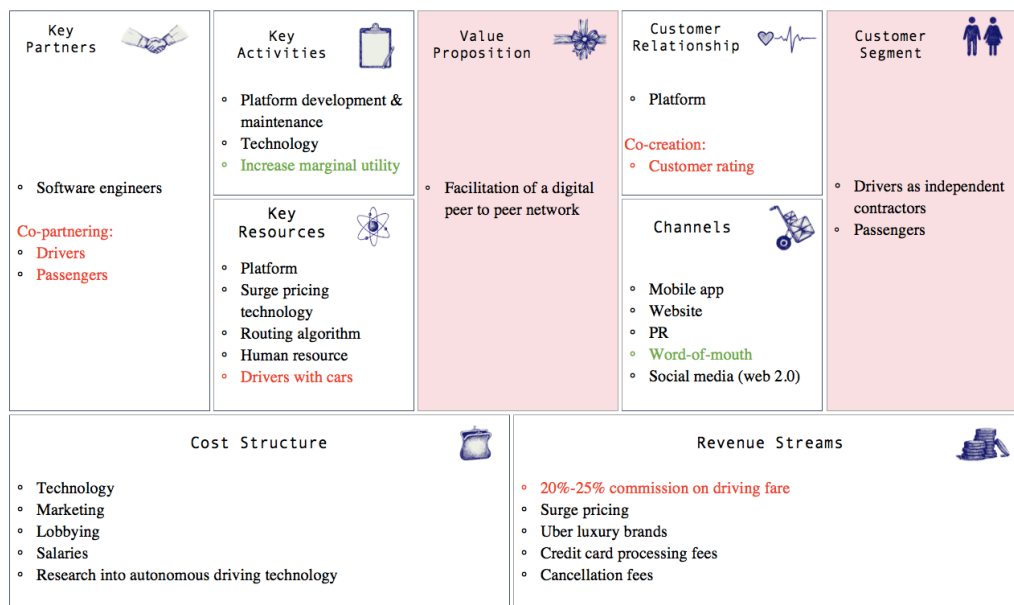


Figure 12: Uber Business Model Canvas

Source: own representation

To develop a network Uber relies on increasing the marginal utility of their service: the more users Uber can win, the more attractive is the network for other users and the higher are entry barriers for new players in the market (Gassmann, Frankenberger, & Csik, 2014). Uber serves as an intermediary for all transactions which is inevitable for their existence (Solomon, 2017). Without the centralization of the entire service through their app, their business would be redundant. They make use of different tools like the registration of a credit card to foster the customer’s dependence on the app. Once the network is established, it can grow through a self-reinforcing cycle, which attracts more drivers

and passengers increasingly. The role of the network is to be emphasized in Uber's business model. A network can be seen as the formation of relationships with the purpose of reaching one's goals faster and more effectively. It is different from a community where the focus lies on the mutual exchange of people with similar interests. Uber created their network to be better, faster and cheaper than traditional taxi cabs (Eckhardt & Bardhi, 2015). In comparison to their biggest competitor Lyft, Uber nowhere promotes their service as a community. Even though the company makes use of the sharing economy, passengers seem more concerned about reaching their destination through spending less money than about the exchange with the driver. To increase the potential of this self-reinforcing cycle, they offer different categories of cars. This allows them to get a larger customer base (of drivers and passengers). Drivers as one of their customers, can use all different car brands to work flexibly and only need to possess a car and a smartphone. The asset sharing eliminates Uber's dependence on physical assets which saves them costs and allows them to offer a cheaper service than their competitors (Kavadias, Ladas, & Loch, 2016). The customer therefore pays less and simultaneously encourages sustainable behavior through collaborative consumption.

## **2 | How does the company use customer involvement as part of their business model?**

Customer involvement is highly important for Uber's peer to peer business model. Their two customers, drivers and passengers are equally important to make the business model work. All words and areas of direct customer involvement are marked red in Figure 12 and the indirect customer involvement elements are marked green.

Similar to every other customer involvement strategy, customers are generally involved in the building blocks customer segment and value proposition. Moreover, drivers and passengers must sign up to the platform, allowing Uber to use confidential credit card details and to be tracked whenever the app is in use. This makes them very important key partners of the company because their collaboration is crucial. Both are furthermore indirectly involved in Uber's key activity, which is to increase the marginal utility of the platform. Once the company successfully raises awareness in a market, the self-reinforcing cycle in which both customer groups are involved starts to work.

Through the communal use of customers' cars as a resource, drivers themselves become a resource of the peer to peer transportation business model. This may change once Uber

fully implements self-driving cars into their business. This would however also mean that the entire peer to peer business model would transform into a new business model, in which only passenger would be involved. In the current model, the participation of the drivers is crucial for Uber. Even though the company would technically be able to operate their platform, there would not be any revenue generation without drivers.

The customer relationship mainly happens online without any further effort from Uber. The company however heavily relies on word-of-mouth marketing to strengthen its network, as well as for channel interaction to reach new customers. There cannot be seen closely as much marketing effort by Uber compared to other platform providers. Hence, the importance of customer's word-of-mouth marketing is even bigger.

### **3 | Which contextual factors contribute to the company's successful customer involvement approach?**

Stimulating for Uber's successful customer approach are mainly needs and demands the company is responding to, as well as trends the company is embracing. Regarding the involvement of passengers, it can be said that the increase in demand for simple and cheap products and an overall increase of costs for services results in their appreciation of Uber's cheaper service. This benefit contributes to the willingness of passengers to be actively involved. The trend of digitalization and demonetization, which makes passengers lives much easier can be seen as a further factor. Uber managed through digitalization the extension of the on demand-economy into the very traditional taxi industry. To supply the service on a low-cost level, they implemented collaborative consumption into their business model. Collaborative consumption is a further trend which customers like, especially since it results in lower costs for them.

The successful involvement of drivers into the business model is due to two factors: Firstly, where there is a demand, there will be a supply. Uber's choice to implement drivers with their cars as a key resource into their business models, allows drivers to earn money very flexible. The barriers to this "own business" are low, unlike the traditional taxi industry, where permissions have to be acquired and where the whole system is more complicated due to regulations. Secondly, drivers are attracted through Uber's large network. The "hype" which was created around the company contributed to the willingness of drivers to participate.



#### **4 | Which chances and risks does the company face in regard to their customer involvement strategy?**

Uber's concurrently biggest chance and risk is their brand image (Gassmann, Frankenberger, & Csik, 2014). If trusted, the network – and therefore the customer involvement – can increase rapidly. If the two customer groups, however, lack trust, Uber risks losing their key partners. This can be illustrated by recent incidents which harmed the company's reputation. A supposing aggressive workplace culture, safety-issues, transparency regarding regulations and women harassments caused Uber increasingly negative publicity lately. This can affect the willingness of customers to be involved in the business.

The push strategy Uber follows in their global expansion can be seen as continuous chance (Scott, 2015). People are prone to follow certain “hypes”. If Uber manages to create this hype in new regions, they have a good chance to increase the number of customers as key partners. Also the increase of digitalization will allow Uber to further increase their global network.

When analyzing their efforts into autonomous driving technologies, it can be said that this poses a risk to the company's customer involvement approach. Despite the opportunity for Uber to run their business 24 hours a day and to earn not only commission on fares but all fares, it would mean that drivers would be cut out of the business model and hence it would not be a peer to peer business model anymore. Furthermore, the sustainability of their business practices can be questioned due to disregarding certain national labor and taxi cab laws and regulations. Their aggressive approach could cause a ban from certain countries. Their implementation of drivers themselves into the business model regarding the compliance to labor laws hence serves as a further risk factor.

#### **5 | What are critical success factors for the successful implementation of the company's customer involvement strategy?**

A critical success factor for the successful implementation of Uber's customer involvement strategy is their strong ecosystem. Only with a big network, further customers will be attracted. As long as the self-reinforcing cycle does not stop, the company will be able to apply their customer involvement approach successfully. To avoid stagnation of the cycle, Uber needs customers' trust. For some it is trust in form of feeling safe, for others

it is trust into Uber to keep offering cheaper taxi service than competitors, despite their bad reputation.

Accurate and efficient key resources serve as further critical success factor (Nguyen, 2015). Since their entire ecosystem is based on their technology, Uber must facilitate and manage it keenly. The technology must be simple to use and must allow flexibility for the driver as well as for the passenger.

#### **4.3.4 Evaluation**

The company successfully managed to disrupt the taxi cab industry logic to change the dominant business model into a peer to peer business model (Kavadias, Ladas, & Loch, 2016). This success was managed through their ability to implement a low-cost business model, which simultaneously solves a pain point for passengers and increases simplicity and flexibility. The involvement of drivers was thereby a strategic choice to save costs through asset sharing and to minimize fares with the gained capacity.

The analysis of Uber's customer involvement approach shows that the company heavily relies on drivers and customers as target segment but also as partners. Theoretically, the company would be able to eliminate drivers from the business model, this, however, would transform them from a tech company into a service business. Thus, the involvement of two different parties (drivers & passengers) is crucial for Uber to be able to keep their position as an intermediary. Further involvement from their customers could be determined in the areas of key activities (indirect involvement), key resources and channels. Their most important role is to nurture the network, and the with it linked self-reinforcing cycle. This helps Uber to get a competitive advantage and increases the entry barriers for new players in the market.

## **4.4 Within-Case Analysis: Case N° 4: Wikipedia**

This case study will deal with Wikipedia, a specific project initiated by the Wikimedia Foundation. Structured in the parts introduction, data collection, analysis, and evaluation there will be given insights into the foundation's customer involvement approach.

### **4.4.1 Introduction**

Wikipedia is a project to build an open source, free online encyclopedia (Wikimedia Foundation, 2016). It belongs to the non-profit organization Wikimedia Foundation and was founded in 2001. "Wikipedia is created by people, for people" (Wikimedia Foundation, 2015). This quote summarizes the approach of the foundation's large-scale global collaboration upon which the website is built. According to statistics on web traffic, it is the fifth most popular website worldwide (Alexa Internet Inc., n.d.). It thus serves as a prime example for the illustration of open source business models and their dependence on customer involvement.

The following chapter will present key information of the project and its context. In the subsequent chapter, those findings will be analyzed to understand the underlying customer involvement approach. The final chapter will evaluate the key findings and sum up this case study.

### **4.4.2 Data Collection**

All data for this case study has been collected through online data gathering, books, magazine articles and annual reports. Important information, which was gained through the data collection are given below. All data is stored in the case study data base, which can be found in Appendix E.

| <i>Variables</i>           | <i>Detail</i>  | <i>Sources</i>  |
|----------------------------|--|---|
| context variables          |  |   |
| <b>Industry</b>            |  |   |
| <b>Competitors</b>         |  |   |
| New entrants               | Scholarpedia, Citizendium, Britannica, ...                                 | Scholarpedia (n.d.), Encyclopedia Britannica (n.d.), Citizendium (n.d.) |
| Substitutes                | physical encyclopedias   |   |
| <b>Market</b>              |  |   |
| Needs & demands            | online and free access to knowledge  | The Economist (2016)  |
| Switching cost             | high due to network effect   |   |
| Revenue Attractiveness     | none (belongs to NPO)  | Wikimedia Foundation (2016)   |
| Location of business       | global and multi lingual   |   |
| <b>Key Trends</b>          |  |   |
| Technology trends          | digitalization, shift to online knowledge economy, trend of global forums, | The Economist (2016)  |
| Regulatory trends          | Established policies & guidelines  | Wikipedia (n.d.)  |
| Societal & cultural trends | free knowledge ecosystem   | The Economist (2016)  |
| Socioeconomic trends       |  |   |

*Figure 13: Wikipedia – Data Collection of Case Study Context*

Source: own representation

Figure 13 shows context details of the Wikipedia project. This online project only became possible through the development of digitalization (The Economist, 2016). It serves the market demand of having online access to knowledge, including encyclopedias. With the creation of Wikipedia also the trend of global and digitalized forums has been anticipated. Wikimedia Foundation, therefore, applied the already existing open source business model to create an online knowledge economy. This promoted the free knowledge ecosystem, which was anyhow demanded and in the process of development. Competitors with the same business model like Scholarpedia, Citizendium and Britannica entered the market later on as a response to Wikipedia (Citizendium, n.d.; Encyclopedia Britannica, n.d.; Scholarpedia, n.d.).

Wikimedia Foundation's business model for their Wikipedia project is based on the idea of collective brainpower (Gassmann, Frankenberger, & Csik, 2014). The product (online encyclopedia) is supposed to develop through collaboration within a public community (Osterwalder & Pigneur, 2010).

The online encyclopedia works as follows: Based on the so-called MediaWiki software, which was developed for the Wikipedia project, everybody is allowed to contribute to the content of the website (Wikimedia Foundation, 2016). The target customers are therefore volunteers (called "Wikipedians"), who contribute through editing content and readers, who make use of the website. The more frequently an editor contributes, the higher is the chance to become an administrator (The Economist, 2013; Weber, 2004). This indicates

higher authority and enables the volunteer to freeze or delete entries and to overall channel knowledge (The Economist, 2013; Weber, 2004). Those editors, volunteers helping with the maintenance of the website as well as software operator are Wikipedia's most important partners. They all have some stake in Wikipedia's main activities, which are the co-production of content, the development and facilitation of the website, research, crowdsourcing and the tracking of content changes (Gassmann, Frankenberger, & Csik, 2014; The Economist, 2013; Wikimedia Foundation, 2015). Wikipedia relies on three key resources for the sustainability of the project: The MediaWiki Software, the Wikipedia platform, volunteers who create content and donors (Wikimedia Foundation, 2016). Donors are essential to finance the project. No revenue is being generated through Wikipedia, only contributions from fundraising are used to finance the arising costs from the software development and facilitation (Wikimedia Foundation, 2015).

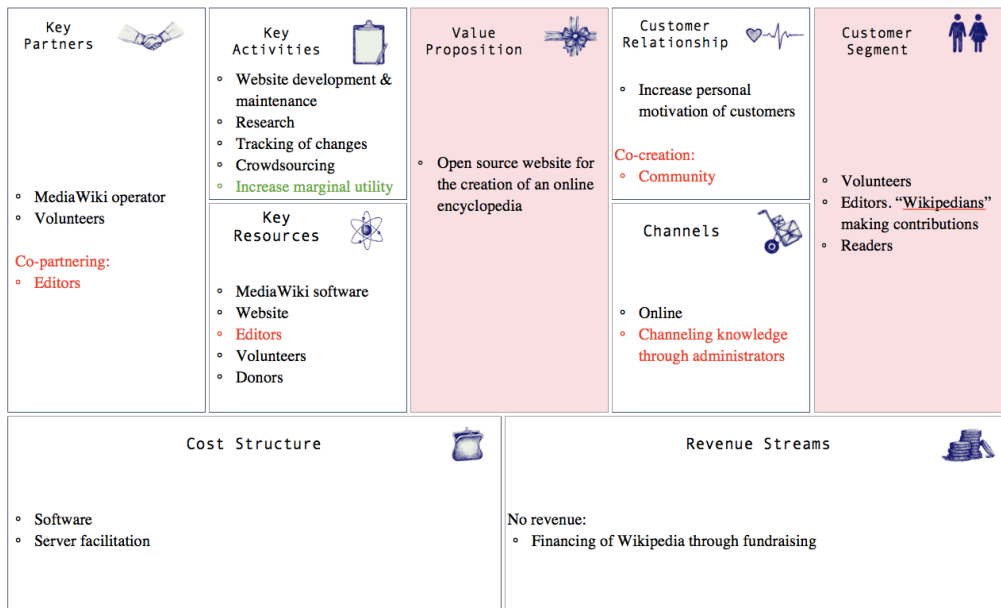
Wikipedia's relationship with its customer is being co-created through a community of volunteers and the thereby resulting network effect (The Economist, 2016). The intent behind is to increase the personal motivation of the volunteers because Wikipedia heavily depends on their goodwill. Through online channels volunteers and readers are being reached. Administrators have a role of channeling the knowledge before readers can see it (Weber, 2004).

#### **4.4.3 Analysis**

This chapter is concerned with Wikipedia's customer involvement approach. The analysis will be conducted through answering the case study questions, which were developed in Chapter 3.2.1.

##### **1 | How does the value creation for the company work?**

The in the last chapter described elements of Wikipedia's business practices are assembled in the Business Model Canvas and illustrated in Figure 14.



**Figure 14: Wikipedia Business Model Canvas**

Source: own representation

The value creation for Wikipedia is being created through open sourcing. It provides every interested party who accesses the internet, with free knowledge. Its biggest advantage comes from making use of collective brainpower. The limitations of only having few editors and therefore limited knowledge is being eliminated through making the code of the website publicly available. This results not only in quality benefits but it also saves the Wikimedia Foundation many costs. External research and development sources are far less expensive which is the only reason why Wikimedia Foundation can carry this huge non-profit project.

Highly important for the value creation is the community of volunteers. Those intrinsically motivated people feel the need of self-expression and want to belong to a group of people who create something useful (Weber, 2004). To attract and retain them, Wikipedia must foster affiliation and social bonding with them. Without those people joining the community and being intrinsically motivated, no value can be created especially since there is no revenue generation. When those people are motivated it also results in the initiation of the self-reinforcing cycle (also called network effect) which will attract more volunteers.

## **2 | How does the company use customer involvement as part of their business model?**

As to be seen by the red marked words and areas in Figure 14, customer involvement is critical for Wikipedia. The green marked words imply indirect customer involvement.

Similar to every other customer involvement strategy, customers are generally involved in the building blocks customer segment and value proposition. Customers in this context are however not only content-reader. The one customer group of editors and volunteers is the content-creator, which is comparable to a product designer. Wikipedia could operate the platform without them; it would, however, lack content. The editors and the volunteers who help to create content form a community together, which stands for the movement of free knowledge (Wikimedia Foundation, 2015). This community is an important key resource for Wikipedia because they co-create and co-produce value together with the Wikipedia's platform. Besides the involvement in the platform's key activities, the community co-creates the customer relationship. As shortly mentioned in the analysis of the previous case study question, the community promotes the network effect. The more volunteers participate in the project, the more will be attracted. This is the key element of the customer relationship and critical since Wikipedia does not spend any money on advertising. Lastly, one part of the volunteers – the administrators – are additionally involved in the delivery of the value proposition. They channel the knowledge (freeze, delete, edit) before it will be publicly displayed.

## **3 | Which contextual factors contribute to the company's successful customer involvement approach?**

Without past digital trends and the development of the online knowledge economy, Wikipedia would not have been able to implement their customer involvement approach and become so popular. The anticipation of those trends happened at a perfect timing and allowed Wikipedia to be the pioneer of a revolution towards a free knowledge ecosystem. They managed to initiate the network effect very early, which resulted in very high entry barriers for similar platforms. Those people who want to contribute to this ecosystem, are aware of the fact that their contribution will most likely be seen on Wikipedia (as the biggest platform), which motivates them even more.

The successful approach was further due to the implementation of a set of policies and guidelines (Wikipedia, n.d.). The open source customer involvement approach can easily fail if the wrong kind of volunteer is being attracted, who degrades the value of the website (Weber, 2004). Wikipedia tries to govern this factor through their policies and guidelines.

As for last contextual factor, contributing mainly to the growth of the network effect is the fact that they are being featured on Google. Google as largest search engine worldwide has an immense impact on what people click on. Them featuring Wikipedia articles of any issue on the first google results page certainly has a positive effect on Wikipedia's self-reinforcing cycle.

#### **4 | Which chances and risks does the company face regarding their customer involvement strategy?**

Wikipedia's key resource of collective brainpower can be seen as their biggest chance. The global diversity of people participating does not only increase their potential customer base but strengthens the bond of the community.

Wikipedia however also faces various risks which could impact their customer involvement approach. The community must be diverse with people from many different backgrounds (The Economist, 2016). Wikipedia runs a high risk of having cultural-biased content on their website if this is not the case. This can immediately impact the website's credibility. Involving many people from diverse backgrounds is however not only favorable but can also be seen as another risk factor. Edit wars or anti-social behaviors which are likely to occur when divers people work on the same content-creation. Those edit wars can impact the personal motivation of volunteers, which is an important aspect of the customer involvement strategy.

As last risk factor can be seen the lack of reliability and trust, due to the articles not being written by professionals nor being peer-reviewed. This assumption is supported by traffic statistics, which show that the daily average time spent on Wikipedia is 4:23 minutes (Alexa Internet Inc. , 2017). This supports the assumption that many people use Wikipedia as the first source for an overview but simultaneously keeping in mind that it is not



reliable and therefore conduct further study elsewhere. If this development cannot be stopped, Wikipedia runs the risk of losing its volunteers.

### **5 | What are critical success factors for the successful implementation of the company's customer involvement strategy?**

Deriving from the analysis above, Wikipedia's most critical success factor is to maintain a trustworthy community, which promotes the self-reinforcing cycle. Another factor is the kind of volunteer which are being attracted. They should create high-quality content. The higher the quality, the higher Wikipedia's reliance and hence the bigger the potential for successful customer involvement strategies. Similar to the kind of volunteer as a critical success factor, the point of view is another crucial factors. If not neutral (which should be aspired), it can have negative influences on the customer involvement success. Fair play and the with it associated motivation of the volunteer can be seen as last critical success factor for Wikipedia. This motivation, which can decrease if the interaction within the community is not appropriate, is the basis upon which Wikipedia's entire community is built on.

#### **4.4.4 Evaluation**

Wikipedia's open source business model pattern can be seen as very successful. It is embracing a free knowledge ecosystem, which becomes increasingly important through digital advances. For its success, the project, therefore, itself heavily relies on a strong ecosystem: a community of volunteers, who actively participate in the growth of the value proposition. It is remarkable how big Wikipedia managed to grow as a non-profit project. This can be traced back to their perfect timing of entering the market and their ability to initiate a self-reinforcing cycle through their community.

The customer involvement through open sourcing serves thereby as basis. The project of an online encyclopedia could theoretically also have been launched without customers; however, this would have implied higher costs (for the compensation of experts writing the encyclopedia). This would have been difficult to bear for a non-profit organization and which would also have resulted in a narrower knowledge platform due to less collective brainpower.

## **4.5 Within-Case Analysis: Case N° 5: Ponoko**

This case study will analyze the customer involvement approach of the on-demand manufacturing company Ponoko. The case study will be structured as follows: introduction, data collection, analysis, and evaluation.

### **4.5.1 Introduction**

Ponoko, a start-up from New Zealand, is specialized on on-demand production of user-designed products (Ponoko, n.d.e). The business was founded in 2007 and offers beside global shipping of products also a marketplace where products and design plans can be sold and bought (Ponoko, n.d.c; Ponoko, n.d.e).

Their business model, which allows customers to design any desired products has been the first of its kind at the time the business was launched (Gassmann, Frankenberger, & Csik, 2014). How customers can be involved in the crucial step of designing any product will be subject of this case study.

The case study will be structured in three parts: The first part will give information on Ponoko's business model and its context, which was gained in the data collection process. The second part will analyze the company's customer involvement strategy, and in the third part a conclusion of the strategy will be drawn.

### **4.5.2 Data Collection**

All data for this case study has been collected through online data gathering, books, press release, newsletters and video files. Important information gained through this data collection are given below. The full data collection, can be found in Appendix F.

At the point where three-dimensional (3D) printing became popular for mainstream (between the years 2000 and 2005), Ponoko smartly made use of this evolution (O'Handley, 2017). Their business model was created for small firms, entrepreneurs and individual designers, who cannot finance their production facility, nor big amounts of inventory (Stern, 2011). Figure 15 illustrates important contextual factors the company operates in.

| <i>Variables</i>           | <i>Detail</i>  | <i>Sources</i>                                     |
|----------------------------|--|--|
| context variables          |  |  |
| <b>Industry</b>            | manufacturing & e-commerce platform                                    |  |
| Competitors                |  |  |
| New entrants               | 3D systems, skyou,...  | Rivera (2017)                                      |
| Substitutes                | ownership of such printing devices, different production methods       |  |
| <b>Market</b>              |  |  |
| Needs & demands            | on-demand manufacturing for small batches                              | Gassmann, O., Frankenberger, K., & Csik, M. (2014) |
| Switching cost             | low, the further advanced technology                                   |  |
| Revenue Attractiveness     | combine user design and multi-sided platform business model            |  |
| Location of business       | ship global; offices in NZ & US  | Ponoko (n.d.e)                                     |
| <b>Key Trends</b>          |  |  |
| Technology trends          | new production technologies like 3D or laser cutting                   | Gassmann, O., Frankenberger, K., & Csik, M. (2014) |
| Regulatory trends          |  |  |
| Societal & cultural trends | entrepreneurism  |  |
| Socioeconomic trends       | on-demand manufacturing, micro-factories (3D), mass customization, DIY | Gassmann, O., Frankenberger, K., & Csik, M. (2014) |

**Figure 15: Ponoko – Data Collection of Case Study Context**

Source: own representation

Ponoko made use of new production technologies like 3D printing or laser cutting and saw a business opportunity since the technologies were still too expensive for private people to purchase. Increasing opportunities, which were created through globalization and digitalization fostered small entrepreneurial businesses. Many of those small businesses, however, need to survive without large sums of funding and therefore Ponoko's business model was created within this environment. As a pioneer of on-demand manufacturing services there were no existing competitors when Ponoko entered the market, this however changed over the years (Gassmann, Frankenberger, & Csik, 2014; Chafkin, n.d.). As production technology further advanced, production devices became more affordable, and new entrants entered the market (Rivera, 2017).

Besides the company's manufacturing services, they also facilitate an online marketplace where the user-designed product plans or products themselves can be sold by the designer. The company's key activities include the production of the designed goods as well as the maintenance of the platform and support for product designers through offering design programs and templates. On the one hand they serve the business-to-customers market (private product designers and platform customers), and on the other hand, they also serve the business-to-business market (small business owners) (Ponko, n.d.a). The channel through which they reach customers is their website. The delivery is partly carried out by Ponoko but the customer is responsible for the final assembly of all manufactured pieces. Their profitability is being ensured through charging material and production costs for

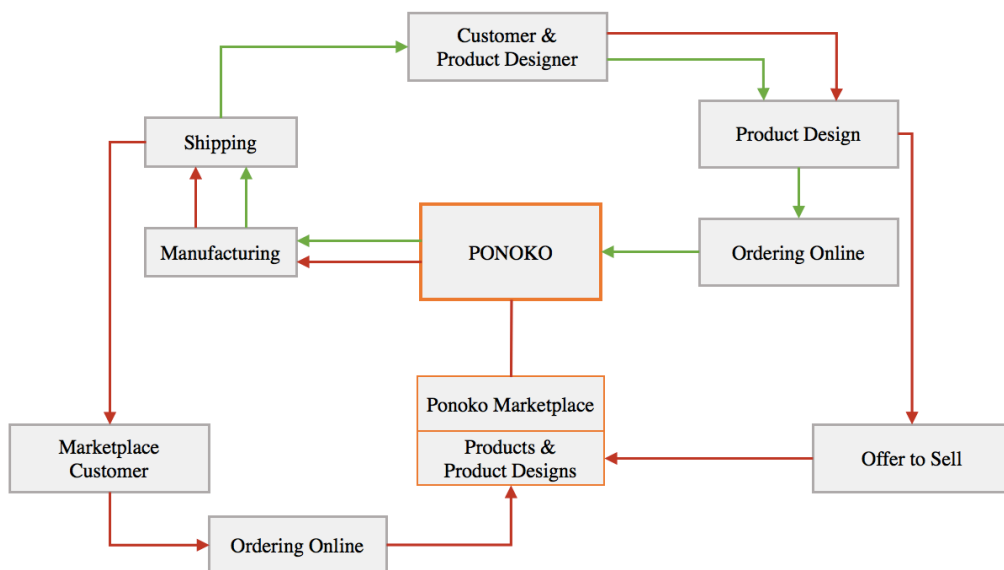
manufacturing orders. For platform operations, Ponoko does not charge its customer. However, all orders placed are manufactured by Ponoko (Ponoko, n.d.d).

### 4.5.3 Analysis

This chapter will analyze Ponoko’s customer involvement strategy. The following case study questions, which were developed in Chapter 3.2.1 will, therefore, be answered.

#### 1 | How does the value creation for the company work?

To understand Ponoko’s business practices, it is crucial to be aware of the company’s approach of combining two business models, namely user design and multi-sided platform. The company itself acts as a central operating point which is illustrated in Figure 16.



**Figure 16: Ponoko’s Combination of User Design and Multi-Sided Platform Business Models**

Source: own representation

The *green* cycle illustrates the user design business model. The customer designs a product and places the order, Ponoko then manufactures and ships it to the customer. The *red* cycle illustrates the multi-sided platform business model. The seller designs products and uploads the design plan and/or the entire product on Ponoko’s platform. Platform buyers can then order the products or design plans. When a product has been ordered, Ponoko manufactures the same product and ships it to the buyer. When ordering a design plan, the process is the same, except for the buyer’s ability to adapt any specifications (like

material or size) before the manufacturing process takes place. The design plans are made available for buyers through licensing agreements with the sellers (Ponoko, n.d.d).

The business model Ponoko adapted with their platform is similar to the one which has been analyzed in the second case study through Etsy, Inc. (see Chapter 4.2). In this case study, there will be focused on the analysis of the user design business model and the corresponding customer involvement approach. For insights into the multi-sided platform business model, it can be referred to the second case study of this thesis.

Pokono’s main value proposition their on-demand manufacturing of products on a small scale (Gassmann, Frankenberger, & Csik, 2014). The different elements of the business model, which were partly introduced in the previous chapter can be seen in Figure 17, embedded in the Business Model Canvas.

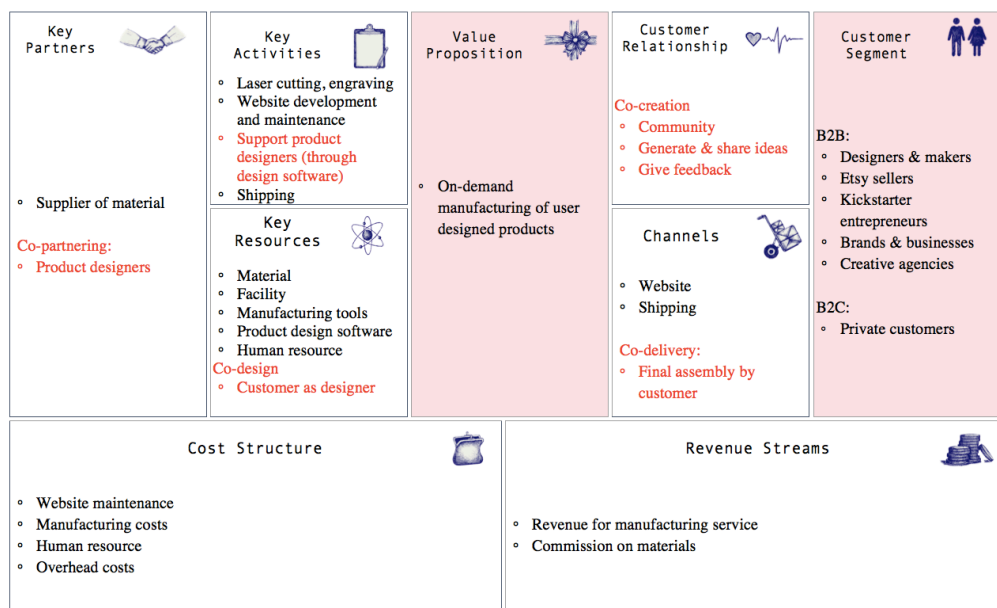


Figure 17: Ponoko Business Model Canvas

Source: own representation

To stay profitable, Ponoko heavily relies on their customers as designers of product plans and products as well as on the suppliers of the material. The customer can therefore also be seen as one of the company’s key resources. Other key resources are production facilities, tools, materials, and employees. Costs occur for the maintenance of the platform

and website, for designing tools, for the production and further overhead costs. The customer relationship is being co-created with the customer. Through giving them the opportunity to engage with a community of other product designers and potential customers, Ponoko fosters the common creation and exchange of ideas and feedback (Ponoko, n.d.b).

Ponoko plays an important role in micro-factories of product designers, where designers invent, design, prototype and sell products, but outsource the manufacturing part to Ponoko (Anderson, 2010). This step is an important risk and cost reduction for entrepreneurs. The synergies with the product designer are as important for Ponoko as for the product designer. Only through this synergy, Ponoko does not need to invest into product development. They embrace customer creativity and hence can gather a larger customer base compared to if only few employees would design the products.

User design can be compared to mass customization. The latter is a longer existing, however more limited form of co-production. Customers can co-design only in the limited fields of the company's product offering (like t-shirts or mugs) (Chafkin, n.d.). For Ponoko's customers, there are no boundaries on what to design.

## **2 | How does the company use customer involvement as part of their business model?**

All areas where customer are directly involved can be seen in Figure 17 as red marked words or fields.

Giving away the process of product design and development to customers makes it unviable for a company to conduct business without the customer. The customer is its most important key partner and key resource. Customers must be enabled to design through the company providing them with a product design software and support. This makes the customer additionally part of Ponoko's key activities and can be named co-production. The delivery process of the products can be analyzed as another point of customer involvement. Designs are manufactured in pieces, and the customer is responsible for the final assembly at home. Through the community Ponoko created for its customers, the customer-relationship is being co-created. The exchange of ideas, feedback and support, embraces the connection between customers but also with the company.

Their customer involvement approach encourages customer creativity and transforms a simple product into a customer experience where the customer can play an important role in the value creation process.

### **3 | Which contextual factors contribute to the company's successful customer involvement approach?**

Contextual factors which contribute to customer's willingness be involved in Ponoko's business model are most importantly causalities between current market developments and key trends:

The development of new production technologies enables small-batch manufacturing at adequate unit costs (Gassmann, Frankenberger, & Csik, 2014). The affordability is an important factor of the customer involvement approach but simultaneously poses a risk to Ponoko. The on-demand manufacturing gets increasingly affordable compared to expensive traditional large-scale manufacturing, however, the tools needed (like a 3D printer) are still too expensive for small businesses to be directly purchased. Therefore, they rely on Ponoko to undertake this step. Together with the trends of self-employment, do-it-yourself and an increasing on-demand economy (enabled through digitalization), Ponoko can successfully involve customers and limit its core business to manufacturing.

A further factor which contributes to Ponoko's successful customer involvement approach are the high risks, costs, and difficulties which come with operating a business. Those factors can mainly be related to the infrastructure which is needed for any business. Ponoko eliminates the necessity of this infrastructure, of which manufacturing and carrying inventory are part.

### **4 | Which chances and risks does the company face in regard to their customer involvement strategy?**

A big chance for Ponoko is their flexibility regarding new customer demands. Whatever product trends might arise – Ponoko can manufacture everything users can design and is not limited to certain products. Increasing individualism among customers can be seen as another chance for Ponoko. The bigger the group of people who want unique products, the higher the attractiveness of Ponoko's manufacturing services.

As mentioned above, one risk for Ponoko is the development of new production technologies. The further advanced, the lower the unit costs and thus it gets more attractive for customers to take on the manufacturing themselves. This would consequently cut Ponoko out of the manufacturing process. The steady advancement of production technologies furthermore implies the need for always being on top of technologies, which can get costly for a start-up like Ponoko.

### **5 | What are critical success factors for the successful implementation of the company's customer involvement strategy?**

One critical success factor is the existence and quality of the product design software. This is crucial since the main customer involvement happens in the field of product design. Another critical success factor is the type of customers Ponoko is acquiring. The biggest part of their revenue comes from manufacturing itself, the business model therefore only works if customers who need a larger quantity of their designed products make use of the service and not only “design geeks”. Accurate and efficient manufacturing instruments and execution is a further critical success factor. Since the crucial customer involvement happens in the product design, the customer becomes emotionally attached to the entire value creation. If the result differs from the initial design, Ponoko runs a high risk of losing them because it could be seen as personal criticism on their skills.

#### **4.5.4 Evaluation**

The user design business model pattern according to Ponoko's case implies many different areas of customer involvement. It is an illustration of a service which would not work without the customer because the first customer involvement takes part at the very beginning of the value chain. This makes the customer an essential part of the business model, since the service cannot take place if there are no designs.

Ponoko managed very smartly to embed a multi-sided platform into their primary service of on-demand manufacturing. With this, they manage to increase their customer base, since not every person is skilled enough to design their own products. Thus also customers who are only interested in buying can make purchases whereby Ponoko made sure through the platform that all purchases get manufactured by them. As long as they can keep up with the advances in production technology which prevents their service from being redundant, this customer involvement strategy can be seen as successful.



## **5 Empirical Study III – Cross-Case Analysis**

After collecting and analyzing the individual case studies, all findings must be combined to address the main research question. This chapter will deal with the cross-case analysis of the five cases. All sub-questions, which were developed in Chapter 1.2 will thereby be answered separately. Conclusively the main research question will be answered, taking all previous answers into consideration.

### **5.1 Research Sub-Questions Analysis**

All four sub-questions, which were identified as mean to answer the overall research question will be answered in this section. As a basis, therefore, serve the established case-study questions, which were answered in every case study analysis. The relevant evidence gathered, was collected in an Excel file. The full representation of the cross-case analysis can be found in Appendix G. Table 4 summarizes the most important aspects of the cross-case analysis, which allow to answer the research questions.

|                      |   | Case Studies   |  |   |   |  |
|----------------------|---|--|--|---|---|--|
|                      |   | 1: Smart   | 2: Etsy  | 3: Uber   | 4: Wikipedia  | 5: Ponoko  |
| Case Study Questions | 1   How does the value creation for the company work?   | Co-delivery  | Multi-sided platform   | Peer to peer  | Open source   | User design / multi-sided platform   |
|                      | 2   How does the company use customer involvement as part of their business model?                                      | <ul style="list-style-type: none"> <li>General: customer segment, value proposition</li> <li>Channels (co-delivery), key partners, key activities, key resources, customer relationships</li> </ul>  | <ul style="list-style-type: none"> <li>General: customer segment, value proposition</li> <li>Key partners, key activities, key resources, customer relationships, channels, revenue streams</li> </ul>   | <ul style="list-style-type: none"> <li>General: customer segment, value proposition</li> <li>Key partners, key activities, key resources, customer relationships, channels, revenue streams</li> </ul>  | <ul style="list-style-type: none"> <li>General: customer segment, value proposition</li> <li>Key partners, key activities, key resources, customer relationships, channels, revenue streams</li> </ul>  | <ul style="list-style-type: none"> <li>General: customer segment, value proposition</li> <li>Key partners, key activities, key resources, customer relationships, channels, revenue streams</li> </ul>       |
|                      | 3   Which contextual factors contribute to the company's successful customer involvement approach                       | <ul style="list-style-type: none"> <li>Following key trends</li> <li>On-demand economy</li> <li>Responding to needs of customers for more flexibility</li> </ul>   | <ul style="list-style-type: none"> <li>Following key trends</li> <li>Strong ecosystem</li> <li>Promoting flexibility for women</li> <li>Strong ecosystem: community and reputation</li> <li>Network effect</li> </ul>  | <ul style="list-style-type: none"> <li>Following key trends</li> <li>Demand for simpler and cheaper products</li> <li>On-demand economy</li> <li>Strong ecosystem: network</li> <li>Network effect</li> </ul>                                 | <ul style="list-style-type: none"> <li>Following key trends: perfect timing of anticipating trend</li> <li>Network effect</li> <li>Strong ecosystem: knowledge economy</li> </ul>   | <ul style="list-style-type: none"> <li>Following key trends</li> <li>Development of new production technologies</li> <li>On-demand economy</li> </ul>  |
|                      | 4   Which chances and risks does the company face in regard to their customer involvement strategy?                     | <p><b>Chances:</b></p> <ul style="list-style-type: none"> <li>Customer loyalty</li> <li>Brand awareness</li> <li>Customer insights</li> <li>Future development in new fields: carsharing</li> </ul> <p><b>Risk:</b></p> <ul style="list-style-type: none"> <li>Security risk</li> <li>Reputation risk</li> </ul> | <p><b>Chances:</b></p> <ul style="list-style-type: none"> <li>more divers potential customer</li> <li>Community development</li> </ul> <p><b>Risks:</b></p> <ul style="list-style-type: none"> <li>Loss of exclusivity</li> <li>Too strong brand value</li> <li>Loss of sellers as key partners</li> </ul> | <p><b>Chances:</b></p> <ul style="list-style-type: none"> <li>Brand image</li> <li>Global network</li> </ul> <p><b>Risks:</b></p> <ul style="list-style-type: none"> <li>Brand image</li> <li>Compliance with laws and regulations</li> </ul> | <p><b>Chances:</b></p> <ul style="list-style-type: none"> <li>Potential customer base</li> <li>Loyalty through community</li> </ul> <p><b>Risks:</b></p> <ul style="list-style-type: none"> <li>Content cultural biased</li> <li>Decreasing personal motivation</li> <li>Lack of reliability and trust</li> </ul> | <p><b>Chances:</b></p> <ul style="list-style-type: none"> <li>Flexibility regarding new trends</li> </ul> <p><b>Risks:</b></p> <ul style="list-style-type: none"> <li>New production technologies</li> </ul> |
|                      | 5   What are critical success factors for the successful implementation of the company's customer involvement strategy? | <ul style="list-style-type: none"> <li>Customer willingness</li> <li>Direct addressing of customer need</li> <li>Communication</li> <li>Trust</li> </ul>   | <ul style="list-style-type: none"> <li>Community</li> <li>Additional value</li> <li>Simple digital interface</li> </ul>  | <ul style="list-style-type: none"> <li>Network</li> <li>Trust</li> <li>Accurate and efficient technology</li> <li>Simplicity and flexibility</li> </ul>   | <ul style="list-style-type: none"> <li>Community</li> <li>Right kind of volunteer</li> <li>Fair play and motivation of volunteer</li> </ul>   | <ul style="list-style-type: none"> <li>Existence and quality of product design software</li> <li>Right type of customer</li> <li>Accuracy and efficiency of execution</li> </ul>                             |

Table 4: Excerpt of the Cross-Case Analysis

Source: own representation

### Research Sub-Question 1 | How does the value creation for the company work?

To answer this question, evidence from the first and the second case-study question must be taken into consideration (see Table 4).

There is no unique answer to this question. All companies, which were analyzed throughout the case study analysis, used a different form of value creation. The distinctive characteristic all business models had in common is their significant influence by customer involvement. Thus, they can be seen as companies with customer-centric business models. When looking at the second case study question on how the company used customer involvement as part of their business model, it can be said that customers were involved in a minimum of seven business model building blocks of the total nine building blocks. Table 5 summarizes those areas of involvement, which is followed by an analysis of the individual business model building blocks and the respectively identified customer involvement:

|   |                       | Case Studies |         |         |              |           | Total customer involvement count |
|---|-----------------------|--------------|---------|---------|--------------|-----------|----------------------------------|
|   |                       | 1: Smart     | 2: Etsy | 3: Uber | 4: Wikipedia | 5: Ponoko |                                  |
| Business model building blocks            | Customer Segment      | ✓            | ✓       | ✓       | ✓            | ✓         | 5/5                              |
|   | Value Proposition     | ✓            | ✓       | ✓       | ✓            | ✓         | 5/5                              |
|   | Key Partners          | ✓            | ✓       | ✓       | ✓            | ✓         | 5/5                              |
|   | Key Activities        | (✓)          | (✓)     | (✓)     | ✓            | ✓         | 5/5                              |
|   | Key Resources         | ✓            | ✓       | ✓       | ✓            | ✓         | 5/5                              |
|   | Customer Relationship | ✓            | ✓       | ✓       | ✓            | ✓         | 5/5                              |
|   | Channels              | ✓            | (✓)     | (✓)     | ✓            | ✓         | 5/5                              |
|   | Revenue Streams       |              | ✓       | ✓       |              |           | 2/5                              |
|   | Cost Structure        |              |         |         |              |           | 0/5                              |
| Total customer involvement per case study |                       | 7/9          | 8/9     | 8/9     | 7/9          | 7/9       |                                  |

*Table 5: Customer Involvement in Different Business Model Building Blocks*

Source: own representation

**Customer segment:** The first obvious area of involvement is the customer segment. Every profit-driven business needs to be involved with customers, regardless of their customer involvement strategy. For customer-centric business models, this area however serves as the core of the business model.

**Value proposition:** The other evident area of customer involvement is the value proposition. The term customer involvement implies that the customer is somehow involved in the service or product which creates value for himself. Therefore all companies with a customer involvement approach involve customers in the value proposition.

**Key partners:** In all cases, the respective customer involvement approach was important enough for the company, to see the customer as a key partner. This happened through their significant contribution to make the business model work.

**Key activity:** Customer involvement in the company's key activities can be seen in all five cases. The involvement is however of different nature: In two case studies, namely, Wikipedia and Ponoko, there can be seen a direct customer involvement. In those cases, the value proposition of the company is being co-produced with the customer. In the case of Ponoko, this happens through customer designing and Wikipedia co-produces through co-writing and –editing. In the three other cases, there can be seen an indirect customer involvement. Smart's customers are part of key activities through actively delivering the product. One of Etsy's and Uber's key activities as owner of a platform is the increase of the marginal utility of its platform. This happens through shared efforts with the customers because customers play an important role in keeping the self-reinforcing cycle (also called network effect) up, which increases the marginal utility.

**Key resources:** In all five cases the customer can be seen as a key resource by serving as an important asset for the entire business model. Depending on how important of a key resource the customer is, the business model can or cannot work without him. This insight will be discussed in depth later on in the text.

**Customer relationship:** In in all case studies the customer relationship can be identified as co-created. The companies allow their customers to exchange thoughts which create

value for other customers. This co-creation either happens through the possibility of rating the service and giving feedback, or it happens through an established community, where customers can further connect with other customers.

**Channels:** Direct customer involvement can be identified in three of five cases. In the case studies on Smart, Wikipedia and Ponoko the customer co-delivers the value through participating in the actual delivery (Smart), channeling knowledge before making it available for the public (Wikipedia) or through being involved in the assembly of the product (Ponoko). Etsy's and Uber's customers can be seen as indirectly involved in the delivery. word-of-mouth communication is important for the delivery of the value proposition, whereby Uber relies more on raising awareness through word-of-mouth communication than any other analyzed company.

**Revenue streams:** Customer involvement in the revenue streams building block takes place in two of five case studies (Etsy and Uber). In both cases, the company earns its main revenue through a specific commission on completed sales.

**Cost structure:** There could not be examined any customer involvement in the cost structure building block of any case study.

The cross-case analysis of the distinctive areas of customer involvement illustrates the high customer involvement in all case studies. It is therefore impossible to only define a customer involvement-based business model based on the involvement in specific building blocks. There can, however, be identified direct dependencies between the different business model building blocks which indicate the automatic customer involvement if the predecessor is subject to customer involvement as well. This can be illustrated by customers automatically becoming a key partner as result of being a key resource or a key activity. These direct dependencies are to be aware of when answering the research question on how to develop a customer involvement-based business model. They will therefore be further discussed in Chapter 5.2, where the analysis of the main research question will take place.

## **Research Sub-Question 2 | Which contextual factors are crucial to implement a customer involvement strategy?**

To answer this question, evidence from the third case-study question must be taken into consideration (see Table 4). The analysis of the five case studies exposed certain similarities regarding crucial contextual factors for the implementation of a customer involvement strategy. Those crucial factors are following:

- **Strong ecosystem**

An ecosystem can be described as “a complex network or interconnected system” (Oxford Dictionary of English, 2010). In all case studies, the importance of this interconnected system could be observed, yet not always in the same form. The building and cultivating of a network or community were thereby most important. Due to no involvement of tangible goods produced by the companies, they must rely on other methods to promote their services. The high importance of this ecosystem can also be seen as a consequence of digitalization and gets promoted through Web 2.0. If the main value proposition is a platform, the company is dependent on a globally interconnected system, since an only national customer base is too limited.

- **Following trends at the right time**

All five case studies embodied modern and digitalized services and simultaneously promoting people’s individual freedom. The oldest of the studied services is Wikipedia, launched in 2001 (Wikimedia Foundation, 2016). It is no coincident that all of those services are relatively young and can be seen as products of the digital world. Digitalization is the basic phenomenon on which those services are based on. Thus, it implies other trends like e-commerce, entrepreneurialism and overall individualism. The studied companies successfully managed to follow those at the right time. This fact supports the importance of innovation and strategic foresight in the business world.

- **Being part of an on-demand economy**

In all five cases, the companies managed to be part of an on-demand economy which is also a product of digitalization and the increasing pace in the global economy. Regardless in which field, all case companies enable their customers to set the tone instead of pushing their service out to them. Thereupon customer involvement and customer experiences are promoted.

- **Network effect**

The network effect was in all case studies observed as an important contextual factor for the involvement of customers. The omnipresent connectivity of customers leads automatically to sharing their experiences with others. This activates the in the within-case analysis repeatedly described self-reinforcing cycle or network effect. It can however not only be seen as nice side effects for the companies, but they heavily rely on it and actively try to foster this factor. The better the services make use of this network effect, the higher the entry barriers for competitors and hence, the bigger the customer involvement gets.

### **Research Sub-Question 3 | Which chances and risks are to be aware of, when implementing a customer involvement strategy?**

To answer this question, evidence from the fourth case-study question must be taken into consideration (see Table 4). Through the case studies, following general chances and risks were determined, of which companies must be aware of when implementing a customer involvement strategy:

#### **Chances**

- **Better insights into customer behavior**

Involving customer into the business model automatically provides companies with far more and deeper insights into the behavior of their customers. If this immense quantity of data is managed properly, it can clearly serve as basis for future disruptive innovations and improvements of the customer experience, which ultimately leads to competitive advantage.

- **Increased customer loyalty**

If customers are not only represented at the end of the value chain but operate as active partners, a much stronger bond between company and customer can be created. Customer loyalty then does not only depend on the customer relationship anymore but is being co-created within the value creation process.

- **More diverse customer base**

Customer involvement also implies enabling customer experience. Through communities and networks those experiences are shared, and thus other customers are being attracted. Through the involved customers, other potential customers who otherwise may not have been the targeted ones get attracted too which ultimately

gives the company access to a broader and more diverse base of potential customers.

- **Increased flexibility**

To execute a customer involvement strategy, a company needs a rather flexible company structure itself. Only then dynamic reactions to changing customer demands become possible. This increased flexibility enables the company to make use of the customers – who are anyways unconsciously co-shaping the organization – by continuously adapting to their changing demands.

## **Risks**

- **Reputation**

The biggest risk for companies with a customer involvement approach is the risk of reputational damage. Through many more customer touchpoints, the customer gets an exclusive insight into the company's business practices. The extent of this insight is far bigger compared to customers who only receive the finished value proposition. When the co-creation experiences are not as positive as expected, it can lead fast to damage of the company's brand image, mainly due to the interconnectedness of customers.

- **Diverse customer base**

A more diverse customer base, which is a chance, can simultaneously be a big risk for a company. The involvement of different customers can lead to cultural bias if there is no balanced mix and it can overall lead to more conflicts due to the increased diversity. Once this happens, the customer's personal motivation to be involved in the value creation decreases, which can be of existential manner for a company.

- **Less control**

Companies with a customer involvement strategy do not have the same control over the value creation as companies who are in charge of their entire value creation process. This limited control leads to a limited influence on the value proposition which ultimately bears a risk. Especially as a provider of a digital platform, the company for example only has limited influence over their newly participating customers, due to the network effect. If the company does not know how to handle this limited control it can only turn to the worse for them.



Being aware of the specific chances and risks regarding customer involvement approaches is important for customer-centric business model strategies. Furthermore, it must also be kept in mind that the higher the degree of customer involvement, the higher is the company's exposure to the mentioned risks but the greater also becomes the potential to make use of the mentioned opportunities.

#### **Research Sub-Question 4 | What are critical success factors for a successful implementation of a customer involvement strategy?**

To answer this question, evidence from the fifth case-study question must be taken into consideration (see Table 4).

First and foremost, it needs the customer's willingness and motivation to successfully implement a customer involvement strategy. If this is not given, the strategy cannot exist. As a result from the case study analysis following additional critical success factors can be determined:

- **Providing additional value**

Customer involvement implicates additional effort for the customer. They seem to be willing to have this effort, however only if there is an additional value for them. This additional value can be given through solving a pain point in the customer's life or through being part of a unique experience.

- **Trust**

The implementation of the strategy does not work without establishing a foundation of trust between the company and the customer. On one hand, the customer's run the risk of wasting their valuable time if the value does not turn out as expected and on the other hand customers are aware of the increased customer insights the company gets through their involvement. Without good communication and trust in the company, customers would not choose to get involved in the first place.

It is worth mentioning that the factor trust is not to be mixed up with a good company reputation. As the third case study on Uber illustrated, a company with a customer involvement strategy can be highly successful despite their bad reputation. In this case customers, after all, seem to trust the company regarding being able to deliver this mentioned additional value, which is simplicity and lower prices. With

a bad reputation the company runs the risk to lose its customers, this, however, will not happen as long as they manage to deliver the additional value.

- **Network / Community**

Without an active network or community, the customer involvement approach will not be successful. This is due to the company increasingly serving as a nexus between the experiences of the individual and the economy as a whole. Without engagement platforms, customers are not able to share their experiences and to connect to others.

- **Efficient but simple technology**

As all of these customer-involving companies are relatively young and fully embedded in the digitalized world, an efficient but still simple technology is another crucial factor. If this is not given or if the technology is not continuously being improved according to trends, the willingness of customers to be involved will not be existent.

## 5.2 Main Research Question Analysis

The previous assessment of crucial contextual factors, opportunities, risks and critical success factors serves as a basis to answer the main research question:

### **How do organizations use customer involvement approaches to develop new business models?**

It is to be recapitulated shortly that a business model which fully depends on customer involvement does not yet exist. Many companies with customer involvement approaches are a provider of digital platforms, which practically need the involvement of customers, technically, however, would be able to operate their business (software) without them. From the previously analyzed case studies, case number 5 (Ponoko) was the company closest to a full customer involvement-based business model. This chapter will identify why and how exactly customer involvement must be used to develop a customer involvement-based business model.

In a first step, there must be clarified in which areas customer involvement must take place to develop customer involvement-based business model. Out of the four at the beginning introduced business dimensions (customers, offer, infrastructure and financial viability) there will be focused on the areas infrastructure and financial viability. This is because customers in any business model take place in the “customer-dimension” which therefore is not a decisive area for a customer involvement-based business model. Similarly, the offer dimension is automatically subject to the customer, when implementing a customer involvement strategy.

When elaborating on the financial viability of a business, it can be said that without an intact profit mechanism, no company can survive. This must also be kept in mind, when creating a customer involvement-based business model. This means that the value proposition must still be affordable for the customer, despite its high degree of involvement. As supporting evidence therefore serves the car company Local Motors. Their open source business model is very close to a fully customer involvement-based business model. Through multiple platforms, the customer can help designing every step of the value creation process (Ramaswamy & Ozcan, 2014). The company can therefore keep their research and development costs very low, which would impact its financial viability positively. Due to generally high costs of their value proposition (cars) however, customers who help design, cannot automatically buy the cars. The customer relationship in this case may be very deep, due to a strong community of creative people. However the emotional attachment to the individual car is not high enough for a purchase, due to the high costs. This lends support to the notion that in a customer involvement-based business model, which is targeting private individuals, the value proposition must still be in an affordable price range in order to secure the company’s financial viability.

When looking at the infrastructure dimension of a company’s business model, it can be said that being a part of either key activities or key resources logically implies being a key partner for the company. The crucial areas within the Business Model Canvas, where attention should be drawn to are therefore particularly key activities and key resources. Both building blocks are equally important and cannot exist without each other, whereby key resources emerge from key activities. When creating a value proposition, a company

most likely first determines which actions are needed to create the desired value proposition and in a second step which resources are needed to carry out those activities. Being aware of this, a further assessment of key activities is required.

All analyzed case studies have one fact in common: Their value proposition consists of an intangible asset. In three of five cases, the company took on the role of an intermediary in managing and facilitating an online platform (Uber, Etsy, and Wikipedia). In the other two cases, the companies provided a specific service (Smart and Ponoko). Key activities of the platform provider (besides the maintenance and development) mainly focus on increasing its marginal utility. This happens through customers who therefore can be seen as a crucial element to enable the business's profitability. However, they cannot be seen as the most existential element of the business model. This element is represented by the software. Even without customers, the software could be operated. When looking at the other two services, it can be said that Smart – ready to drop similarly depends on the software to carry out the service, which therefore is comparable to the other four cases. Ponoko, however, does not depend on a software as a fundamental component of the value creation, but on the customer as a product designer. Without the product designs, the company cannot offer its on-demand manufacturing services. This logic can consequently also be applied to the field of key resources which was said to be built upon the key activities; For platform providers, their most important key resource is the software itself, without which they could not operate their business. For the on-demand manufacturing service Ponoko, it is the customer as a product designer.

This observation suggests that the understanding on which particular element serves as the existential basis for the creation of the value proposition is key for the determination of a customer involvement-based business model. Only if customers are involved somehow in this integral element, the development of a customer involvement-based business model becomes possible. Moreover, it is not sufficient for a company to only execute the role of an intermediary. Its direct involvement in the primary value creation process of together with the customer as an initiator is required.

When this existential factor is given, the locus of the business model has been created, and further implications of the business model can be developed. These further implica-

tions include the previously analyzed critical success factors and crucial contextual factors. This altogether embodies a customer involvement-based business model. Figure 18 illustrates an outline of this business model concept. The process of its creation is summarized in steps below.

① The first step is to be aware of the context the business model must be embedded in. These contextual factors (which were explained in Chapter 5.1 / sub-question number two) must be fully present at any given time. They also partly determine which characteristics customers must have: creative, individualistic, entrepreneurs, wanting to be connected to others.

② The second step is to identify the company's value proposition. Since the business model pattern should be applicable for both, tangible and intangible products, this block will be left out. Essential characteristics the value proposition must include are customization and additional value (through solving pain point or providing unique experience).

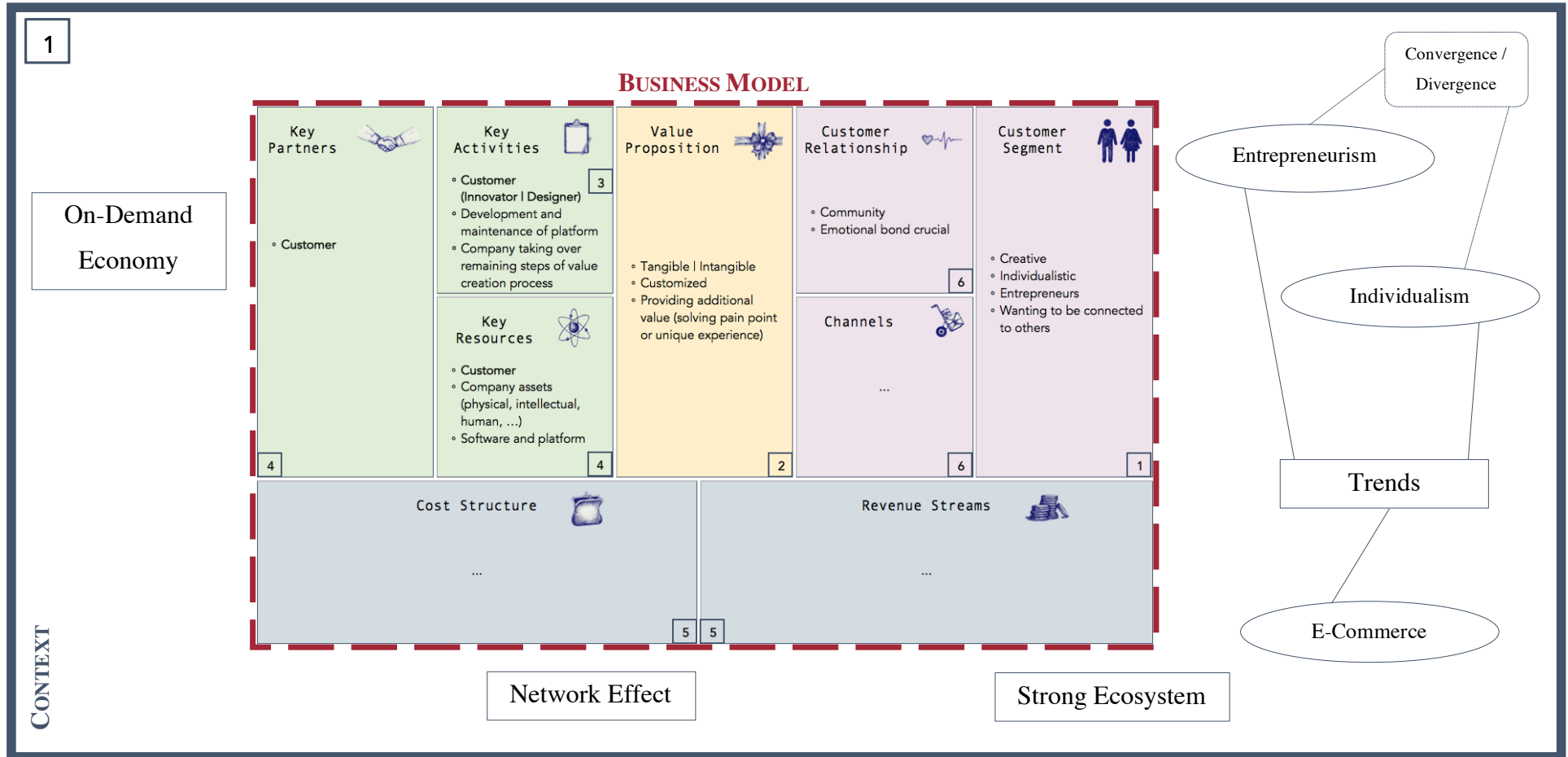
③ In a third step, there will be focused on the key activities. The customer must be involved in the first phase of the value creation process and serves therefore as initiator and key for all successive activities. His role can be innovator or designer. Following his activity, the company must also be directly involved with certain activities. Those must take place additionally to the development and maintenance of a platform. They must contribute directly to the overall value proposition and must be of such importance to the customer that a strong dependence is being created. This can happen in the form of taking over the remaining steps of the value creation process.

④ The fourth step consists of defining key resources and key partners. They derive from the prior determined activities whereby the customer must be the most important key resource.

⑤ Simultaneously in a fifth step, it must be determined which costs arise in the process and how the business can generate revenue to become profitable.

⑥ In a sixth step, the business model can be mapped out in terms of customer relationship strategy and channel activities, regarding the specific value proposition. Significant parts of the customer relationship are thereby the community development, as well as creating a strong emotional bond between the customer and the value proposition.

Conclusively it can be said that the ideal outline of a customer involvement-based business model would involve: an innovative customer, who solves his own pain point or creates a truly unique experience; a company, which must be involved in the execution of the service or must be crucial to create the complete product; a mutual interdependency between customer and company, which exist at any given time. Without those elements, the value can more easily be created without the other party. Both parties must, therefore, have something unique to offer.



**Figure 18: Outline of a Customer Involvement-Based Business Model**

Source: own representation

## **6 Discussion and Implications**

This final chapter will draw a comparative conclusion of the primary and secondary research and a general conclusion of this thesis. Finally, limitations and lessons learned will complete the study.

### **6.1 Comparative Conclusion of Primary and Secondary Research**

The secondary research highlighted the importance of change management and business model innovation to keep up in the increasingly competitive environment. As widely discussed by experts, customer involvement strategies can be assumed to prosper in the future. They however fail to provide relevant support for such future strategies. The primary research allowed a generalization of how already existing customer involvement approaches can be advanced to a full customer involvement-based business model. An assessment of the theoretical feasibility of a customer involvement-based business model was made in the empirical analysis. The findings lend support to the notion that such a business model is feasible if embedded in a context where globalization is promoted and regional flavor is still desired. The substantial interdependency between company and consumer bears chances and risks for both sides and can only function if there is a common ground of trust. The empirical analysis agrees with the existing literature on the urge of certain elements like constant communication, available access for customers, profound risk assessment and transparency to enable customer co-creation.

### **6.2 General Conclusion**

This study can be seen as helpful attribute to deal with challenges, which emerged through globalization and digitalization. Experts are well aware of those challenges and underline the importance of customer involvement as part of the solution. To provide a starting point and support business model innovators in this field, this study analyzed the theoretical feasibility of a fully customer involvement-based business model. Important contextual factors as well as specific elements of the business model itself were elaborated, which should be embedded in future disruptive models. It includes the essentiality of the customer to be part of the very first step in the value creation process, namely through innovating or designing. Also the company must take on an active role in the value creation process, besides providing and maintaining a digital platform, where the customer can share the co-creation experiences with a global community. The value proposition



itself must hold additional value or must create a unique experience for the customer. Only then they are willing and motivated to take on the effort of designing or innovating. Trust in the company, as well as a simple and efficient technology are further crucial success factors, which must be given for a successful implementation of such a business model. The success however also depends on certain contextual factors, in which the business model must be embedded, like a strong ecosystem, following key trends or operating in an on-demand economy. If those elements can be implemented, the company has the opportunity to operate flexibly, to establish a very strong relationship with its customers and to gain much deeper insights into their behavior. The community gives them access to a more diverse customer base, which however also poses a risk for the company. Further risks like the loss of control or the higher risk of reputational damage must be assessed profoundly to decide if a customer involvement-based business model is worthwhile.

As closing remark it can be said, that a customer involvement-based business model goes in line with a full digital ecosystem and fully embraces the era of customer-centric views. It might seem as an extreme solution which bears the risk of total failure if the customer involvement cannot be implemented as expected. However, it can also be seen as a chance to exceed the success of existing customer involvement strategies and gain a substantial competitive advantage as first mover.

### **6.3 Limitations and Recommendations**

Finally, a number of limitations regarding the empirical study will be acknowledged: Firstly, there was only one qualitative research method used for the within-case analysis. This implies a great reliance on this single method. To increase the overall validity, more than one qualitative research method could be used. Secondly, one must be aware of further crucial factors for a success of a business, which were omitted for simplicity matters in this empirical analysis. Factors such as management structures, macroeconomic forces and stakeholder management shape businesses significantly and must be assessed profoundly. Thirdly, it can be said that only documents as evidence for case studies do not cover the unmitigated truth. As every business model, as well as many written documents, are of subjective nature, the assessment of the feasibility of a customer involvement-based business model is difficult. As stated, the theoretical feasibility of such can be assumed,

however, such strategy should be applied theoretically or practically to an existing company to test its feasibility. It therefore is recommended to test the developed customer involvement-based business model on an existing company or on a potential start up business. This allows the analysis of the above described further crucial factors, which are highly dependent on the particular company, and which have a crucial impact on the success of such a business model.

## 7 Bibliography

- Alexa Internet Inc. . (2017, May 3). *wikipedia.org traffic statistics*. Retrieved May 5, 2017, from <http://www.alexa.com/siteinfo/wikipedia.org>
- Alexa Internet Inc. (n.d.). *The top 500 sites on the web*. Retrieved from <http://www.alexa.com/topsites>
- Anderson, C. (2010, January 25). *In the Next Industrial Revolution, Atoms Are the New Bits*. Retrieved May 5, 2017, from [https://www.wired.com/2010/01/ff\\_newrevolution/](https://www.wired.com/2010/01/ff_newrevolution/)
- Bryman, A., & Bell, E. (2015). *Business Research Methods* (Vol. 4). Oxford: Oxford University Press.
- Cao, J. (2016, August 3). *Etsy Climbs to 10-Month High After Raising Annual Sales Forecast*. Retrieved April 28, 2017, from <https://www.bloomberg.com/news/articles/2016-08-03/etsy-climbs-to-10-month-high-after-raising-annual-sales-forecast>
- Casto, H. (2014, January 31). *Pros and cons of selling on Etsy*. Retrieved April 25, 2017, from [https://www.youtube.com/watch?v=6\\_95qiLdVec](https://www.youtube.com/watch?v=6_95qiLdVec)
- Chafkin, M. (n.d.). *The Future of Manufacturing*. Retrieved May 5, 2017, from <https://www.inc.com/magazine/20091001/the-future-of-manufacturing.html>
- Chen, L., & Huet, E. (2015, September 28). *Uber Wants To Conquer The World, But These Companies Are Fighting Back (Map)*. Retrieved May 1, 2017, from <https://www.forbes.com/sites/liyanchen/2015/09/09/uber-wants-to-conquer-the-world-but-these-companies-are-fighting-back-map/#28abef514fe1>
- Citizendium. (n.d.). *Welcome to Citizendium*. Retrieved May 5, 2017, from <http://en.citizendium.org>
- Creswell, J. W. (2013). *Qualitative Inquiry & Research Design* (Vol. 3). Thousand Oaks, California: SAGE Publications, Inc.
- Daimler AG. (n.d.). *smart ready to drop: smart-Kofferraum wird zum Paketfach*. Retrieved April 20, 2017, from <https://www.daimler.com/produkte/services/mobility-services/smart-ready-to-drop.html>
- Deutsche Post DHL Group. (n.d.a). *Kofferraumzustellung für Smart Besitzer*. Retrieved April 20, 2017, from <https://www.dhl.de/kofferraumzustellung>
- Deutsche Post DHL Group. (n.d.b). *Pakete empfangen*. Retrieved April 20, 2017, from <https://www.dhl.de/de/privatkunden/pakete-empfangen.html>
- DHL International GmbH. (2016, July 25). *DHL now delivers parcels to smart car trunks* [Press Release]. Retrieved April 20, 2017, from [http://www.dhl.com/en/press/releases/releases\\_2016/all/parcel\\_ecommerce/dhl\\_now\\_delivers\\_parcel\\_to\\_smart\\_car\\_trunks.html](http://www.dhl.com/en/press/releases/releases_2016/all/parcel_ecommerce/dhl_now_delivers_parcel_to_smart_car_trunks.html)
- Eckhardt, G. M., & Bardhi, F. (2015, January 28). *The Sharing Economy Isn't About Sharing at All*. Retrieved May 3, 2017, from <https://hbr.org/2015/01/the-sharing-economy-isnt-about-sharing-at-all>
- Eisenhardt, K. M., & Graebner, M. E. (2007). Theory Building from Cases: Opportunities and Challenges. *Academy of Management Journal*, 50(1), 25-32.
- Encyclopedia Britannica. (n.d.). *Encyclopedia Britannica*. Retrieved May 5, 2017, from <https://www.britannica.com>
- Etsy Inc. (2014). *Building an Etsy Economy: The New Face of Creative Entrepreneurship*. Retrieved April 24, 2017, from [https://extfiles.etsy.com/Press/reports/Etsy\\_NewFaceofCreativeEntrepreneurship\\_2015.pdf](https://extfiles.etsy.com/Press/reports/Etsy_NewFaceofCreativeEntrepreneurship_2015.pdf)

- Etsy Inc. (2016). *2016 Annual Report*. Retrieved April 28, 2017, from [https://investors.etsy.com/~/\\_/media/Files/E/Etsy-IR/annual-report-proxy-materials/etsy-ar2016.pdf](https://investors.etsy.com/~/_/media/Files/E/Etsy-IR/annual-report-proxy-materials/etsy-ar2016.pdf)
- Etsy Inc. (n.d.a). *About Etsy*. Retrieved April 24, 2017, from <https://www.etsy.com/about>
- Etsy Inc. (n.d.b). *Become an etsy affiliate*. Retrieved April 24, 2017, from <https://www.etsy.com/affiliates>
- Fallon, N. (2016, June 19). *14 Etsy Alternatives for Crafty Entrepreneurs*. Retrieved April 24, 2017, from <http://www.businessnewsdaily.com/5287-etsy-alternatives-handmade-sites.html>
- Flick, U. (2011). *Qualitative Sozialforschung: Eine Einführung* (4th ed.). Reinbek bei Hamburg: Rowohlt Taschenbuch Verlag.
- Forschungsunion Wirtschaft. (2013). *Umsetzungsempfehlungen für das Zukunftsprojekt Industrie 4.0*. Frankfurt: Büro der Forschungsunion.
- Gassmann, O., Frankenberger, K., & Csik, M. (2014). *The Business Model Navigator: 55 models that will revolutionise your business*. Harlow: Pearson Education Limited.
- Hackman, J. R., & Oldham, G. R. (1975). Development of job diagnostic survey. *Journal of Applied Psychology, Vol. 60*, pp. 159-170.
- Hagan, S. (2017, February 14). *Etsy's new market for crafts will take you from yarn to bonnet*. Retrieved April 28, 2017, from <https://www.bloomberg.com/news/articles/2017-02-14/etsy-s-new-market-for-crafts-will-take-you-from-yarn-to-bonnet>
- Huet, E. (2015, September 11). *Uber Raises UberX Commission To 25 Percent In Five More Markets*. Retrieved May 1, 2017, from <https://www.forbes.com/sites/ellenhuet/2015/09/11/uber-raises-uberx-commission-to-25-percent-in-five-more-markets/#42196c583214>
- Investopedia. (n.d.). *Web 2.0*. Retrieved from <http://www.investopedia.com/terms/w/web-20.asp>
- Kavadias, S., Ladas, K., & Loch, C. (2016, October). The Transformative Business Model. *Harvard Business Review*, pp.90-98. Retrieved from <https://hbr.org/2016/10/the-transformative-business-model>
- Kleemann, F., Voss, G. G., & Rieder, K. (2008, May). Crowdsourcing und der Arbeitende Konsument. *Arbeits- un Industriesoziologische Studien, 1(1)*, pp. 29-44.
- Koch, R. (2017, January 3). *How Uber Used a Simplified Business Model to Disrupt the Taxi Industry*. Retrieved May 2, 2017, from <https://www.entrepreneur.com/article/286683>
- Lanning, M. J., & Michaels, E. G. (1988, June). A Business is a Value Delivery System. *McKinsey Staff Paper, no. 41*.
- Lewin, T. (2004). *Smart thinking: the little car that made it big*. St. Paul, Minnesota: MBI Publishing.
- Lindgardt, Z., Reeves, M., Stalk, G., & Deimler, M. (2009, December). Business Model Innovation. Boston: The Boston Consulting Group, Inc.
- Mason, H., Mattin, D., Luthy, M., & Dumitrescu, D. (2015). *Beat accelerating customer expectations with trend driven innovation*. Hoboken, New Jersey: John Wiley & Sons, Inc. .
- Melnik, A. (n.d.). *Colourbox*. Retrieved May 11, 2017, from <https://www.colourbox.com/supplier/aleks-melnik-234909>

- Nguyen, T. (2015, November 3). *ETA PHONE HOME: HOW UBER ENGINEERS AN EFFICIENT ROUTE*. Retrieved May 4, 2017, from <https://eng.uber.com/engineering-an-efficient-route/>
- Normann, R., & Ramirez, R. (1998). *Designing Interactive Strategy: from value chain to value constellation*. Chichester, England: John Wiley & Sons Ltd.
- Oakley, D. (2016, January 27). *The Uber Business Model Canvas*. Retrieved May 1, 2017, from <http://businessmodel.guru/the-uber-business-model-canvas/>
- O'Handley, C. (2017, January 25). *The evolution of 3D printing*. Retrieved May 5, 2017, from <http://blog.thomasnet.com/evolution-of-3d-printing>
- Osterwalder, A., & Pigneur, Y. (2010). *Business Model Generation*. Hoboken, New Jersey: John Wiley & Sons, Inc.
- Oxford Dictionary of English* (Vol. 3). (2010). Oxford : Oxford University Press.
- Pisano, G. (2015, June). You Need an Innovation Strategy. *Harvard Business Review* 93, no. 6, 44-54.
- Ponoko. (n.d.a). *Get Your Product Designs Custom Made By Our Designers & Robots. Fast*. Retrieved May 4, 2017, from <https://www.ponoko.com/>
- Ponoko. (n.d.b). *Design Ideas*. Retrieved from <https://www.ponoko.com/blog/>
- Ponoko. (n.d.c). *FAQ*. Retrieved May 4, 2017, from <http://support.ponoko.com/hc/en-us/articles/220287548>
- Ponoko. (n.d.d). *Selling FAQ's*. Retrieved May 5, 2017, from <https://www.ponoko.com/mingle-and-share/selling-and-giving-away-faqs>
- Ponoko. (n.d.e). *The big idea*. Retrieved May 5, 2017, from <https://www.ponoko.com/about/the-big-idea>
- Prahalad, C. K., & Ramaswamy, V. (2003, July). The New Frontier of Experience Innovation. *MITSloan Management Review*, 44(4).
- Prahalad, C. K., & Ramaswamy, V. (2004). Co-creating unique value with customers. *Strategy & Leadership*, Vol. 32(no. 3), pp. 4-9.
- Prahalad, C., & Ramaswamy, V. (2000, January-February). Co-opting Customer Competence. *Harvard Business Review*, no. 78 (1), 79-87.
- PwC. (2016). *Industry 4.0: Building the digital enterprise*. Retrieved May 11, 2017, from 2016 Global Industry 4.0 Survey: <http://www.pwc.com/gx/en/industries/industries-4.0/landing-page/industry-4.0-building-your-digital-enterprise-april-2016.pdf>
- Ramaswamy, V., & Gouillart, F. (2010, October). Building the Co-Creative Enterprise. *Harvard Business Review*, no. 88 (10), 100-109.
- Ramaswamy, V., & Ozcan, K. (2014). *The Co-Creation Paradigm*. Stanford: Stanford University Press.
- Rieder, K., & Voss, G. G. (2006). *Der arbeitende Kunde. Wenn Konsumenten zu unbezahlten Mitarbeitern werden*. Frankfurt/Main: Campus Verlag GmbH.
- Rivera, P. (2017, March 29). *Top 3D Printing Companies*. Retrieved May 5, 2017, from <http://investingnews.com/daily/tech-investing/3d-printing-investing/top-3d-printing-companies/>
- Ryan, R. M., & Deci, E. L. (2000). Self-Determination Theory and the Fasciation of Intrinsic Motivation, Social Development, and Well-Being. *American Psychologist*, Vol. 55(1), pp. 68-78.
- Scholarpedia . (n.d.). *Welcome to Scholarpedia*. Retrieved May 5, 2017, from [http://www.scholarpedia.org/article/Main\\_Page](http://www.scholarpedia.org/article/Main_Page)
- Schramm, W. (1971). *Notes on Case Studies of Instructional Media Projects* . Washington, DC: Working paper for the Academy for Educational Development.

- Scott, M. (2015, July 7). *What Uber Can Learn From Airbnb's Global Expansion*. Retrieved May 2 2017, from <https://www.nytimes.com/2015/07/08/technology/what-uber-can-learn-from-airbnbs-global-expansion.html>
- Shapiro, C., & Varian, H. R. (1999). *Information Rules: A Strategic Guide to the Network Economy*. Boston: Harvard Business School Press.
- Singer, E. (2016, August 2). *Smart ready to drop: flexibler Paketservice dank Konnektivität*. Retrieved April 20, 2017, from <https://www.daimler.com/innovation/next/smart-ready-to-drop-flexibler-paketservice-dank-konnektivitaet.html>
- Smart. (2016a, September 2). *smart ready to drop | Kick-off session with Simon Gosejohann, Anna Frost & Niko Woischnik* [Video File]. Retrieved April 21, 2017, from <https://www.youtube.com/watch?v=v7q2JbtxWwE>
- Smart. (2016b, August 8). *smart ready to drop | Tutorial* [Video file]. Retrieved April 21, 2017, from <https://www.youtube.com/watch?v=UD8Yu0RHRWw>
- Smart. (n.d.). *Post. Modern gedacht*. Retrieved April 20, 2017, from <https://www.smart.com/de/de/index/ready-to-drop.html>
- Solomon, B. (2017, April 26). *Gett Buys Juno For \$200 Million, Uniting Would-Be Uber Competitors*. Retrieved May 1, 2017, from <https://www.forbes.com/sites/briansolomon/2017/04/26/gett-buys-juno-for-200-million-uniting-would-be-uber-competitors/#329f012b6089>
- Somerville, H. (2016, September 14). *Uber debuts self-driving vehicles in landmark Pittsburgh trial*. Retrieved May 4, 2017, from <http://www.reuters.com/article/us-uber-autonomous-idUSKCN11K12Y>
- Stern, B. (2011, August 5). *Video Interview with David Ten Have of Ponoko* [Video File]. Retrieved May 5, 2017, from <http://makezine.com/2011/08/05/video-interview-with-david-ten-have-of-ponoko/>
- The Economist. (2013, May 6). *Who really runs Wikipedia?* Retrieved May 5, 2017, from <http://www.economist.com/blogs/economist-explains/2013/05/economist-explains-who-really-runs-wikipedia>
- The Economist. (2016, January 15). *Wikipedia celebrates its first 15 years*. Retrieved May 5, 2017, from <http://www.economist.com/blogs/democracyinamerica/2016/01/happy-birthday-wikipedia>
- Uber Technologies Inc. (n.d.a). *Info*. Retrieved from <https://www.uber.com/info/how-much-do-drivers-with-uber-make/>
- Uber Technologies Inc. (n.d.b). *Payments and Earnings*. Retrieved May 1, 2017, from <https://www.uber.com/en-ZA/drive/resources/payments/>
- Uber Technologies Inc. (2015, November 25). *Set Sail with UberBOAT* [Press Release]. Retrieved May 4, 2017, from <https://newsroom.uber.com/us-florida/uberboat-powered-by-stella-artois/>
- Uber Technologies Inc. (n.d.c). *How are rider cancellation fees charged?* Retrieved from <https://help.uber.com/h/eebc0564-5228-4d70-997c-0fe63f0753c2>
- Uber Technologies Inc. (n.d.d). *Our trip history*. Retrieved May 2, 2017, from <https://www.uber.com/en-CH/our-story/>
- Uber Technologies Inc. (n.d.e). *There's a ride for every price*. Retrieved from <https://www.uber.com/en-CH/ride/>
- Uber Technologies Inc. (n.d.f). *What is surge*. Retrieved from <https://help.uber.com/h/e9375d5e-917b-4bc5-8142-23b89a440eec>

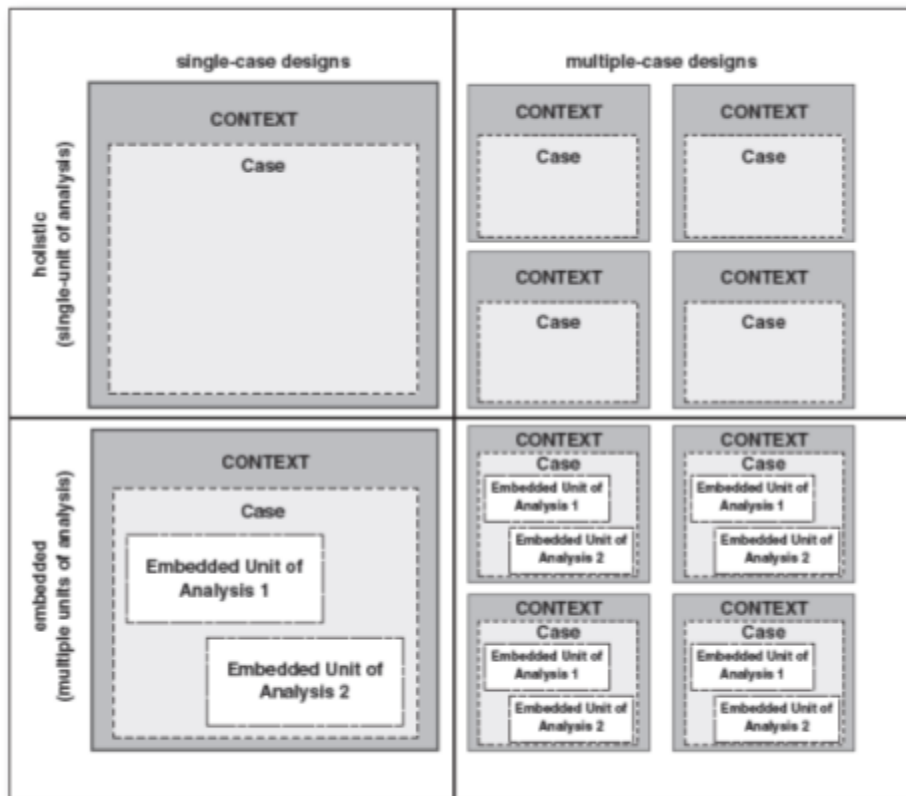
- Volvo Car Group. (2015, November 24). *Volvo lets you have your Christmas shopping delivered directly to your car* [Press Release]. Retrieved April 21, 2017, from <https://www.media.volvocars.com/global/en-gb/media/pressreleases/169498/volvo-lets-you-have-your-christmas-shopping-delivered-directly-to-your-car>
- Volvo Car Group. (n.d.). *Volvo in-car delivery – in short*. Retrieved April 21, 2017, from <https://incardelivery.volvocars.com/#/>
- Weber, S. (2004). *The Success of Open Source*. Boston, MA: Harvard University Press.
- WELT. (2016, July 25). *Technik: Smart ready to drop*. Retrieved April 21, 2017, from <https://www.welt.de/motor/news/article157280825/Technik-Smart-ready-to-drop.html>
- Wikimedia Foundation. (2015, December 31). *2015 Wikimedia Foundation Annual Report*. Retrieved May 5, 2017, from [https://upload.wikimedia.org/wikipedia/foundation/a/ab/2015\\_Wikimedia\\_Foundation\\_Annual\\_report.pdf](https://upload.wikimedia.org/wikipedia/foundation/a/ab/2015_Wikimedia_Foundation_Annual_report.pdf)
- Wikimedia Foundation. (2016, November 19). *Our projects*. Retrieved May 5, 2017, from [https://wikimediafoundation.org/wiki/Our\\_projects](https://wikimediafoundation.org/wiki/Our_projects)
- Wikipedia. (n.d.). *Policies and Guidelines*. Retrieved May 5, 2017, from [https://en.wikipedia.org/wiki/Wikipedia:Policies\\_and\\_guidelines](https://en.wikipedia.org/wiki/Wikipedia:Policies_and_guidelines)
- Wulfsberg, J., Redlich, T., & Bruhns, F.-L. (2010). *Open production: scientific foundation for co-creative product realization*. Hamburg: Springer-Verlag.
- Yin, R. K. (2009). *Case study research: design and methods* (4th ed.). Los Angeles: SAGE Publications, Inc.

# Appendices

## Appendix A

### Basic Types of Designs for Case Studies

Source: COSMOS Corporation as cited in Yin (2009)





## Appendix B

### Case Study Database for Case N° 1: “Smart – ready to drop”

Source: own representation

#### Case No 1: Smart - ready to drop

| <i>Variables</i>                      | <i>Detail</i>   | <i>Sources</i>                            |
|---------------------------------------|---|---|
| <b>context variables</b>              |   |   |
| <b>Industry</b>                       | automotive & logistics  | Daimler AG (n.d.)                         |
| Competitors                           | volvo in-car delivery   | Volvo (n.d.b)                             |
| New entrants                          | none so far   |   |
| Substitute services                   | home delivery, pick up stations, delivery to post office  | Deutsche Post DHL Group (n.d.b)           |
| <b>Market</b>                         |   |   |
| Needs & demands                       | increased mobility & flexibility, less time available   |   |
| Switching cost                        | high if service tied to car brand   |   |
| Revenue Attractiveness                | attractive if simplification of the customer's daily life<br>lower overhead costs for firm through co-delivery  |   |
| Location of business                  | local: Stuttgart, Köln, Bonn, Berlin  | Daimler AG (n.d.)                         |
| <b>Key Trends</b>                     |   |   |
| Technology trends                     | digitalization, mobile intelligence   | Signer (2016)                             |
| Regulatory trends                     | increased regulation on data security & data protection   |   |
| Societal & cultural trends            | interconnection, elevated expectations  | Mason, Mattin, Luthy, & Dumitrescu (2015) |
| Socioeconomic trends                  | urbanization, shift to e-commerce   |   |
| <b>business model variables</b>       |   |   |
| <b>Business model pattern</b>         |   |   |
| Key partners                          | DHL, customers, e-commerce partners, software developer   | Signer (2016)                             |
| Key activities                        | Software development, network with key partners   |   |
| Key resources                         | TSS software, digital key, customer as human resource, partnerships as intellectual resource  | Signer (2016)                             |
| Value proposition                     | <b>in-car delivery of parcels &amp; in-car deposit of parcels to return</b><br>increased accessibility, convenience                                       | Signer (2016)                             |
| Customer relationship                 | "ready to"- community,<br>co-creation with customer   | Smart (n.d.)                              |
| Channels                              | DHL partner, co-delivery with customer, mobile services (App, TAN)  | Daimler AG (n.d.)                         |
| Customer segments                     | Niche market; smart owners,<br>young, online savvy target group   | DHL International GmbH (2016)             |
| Cost structure                        | software licensing, production & installation of connectivity box   |   |
| Revenue streams                       | Present: none<br>Future: Installation of connectivity box, subscription fee, evt. share per delivery  |   |
| <b>customer involvement variables</b> |   |   |
| <b>Type of customer involvement</b>   |   |   |
| Type of customer involvement          | co-delivery   |   |
| Strengths                             | fast, no unpleasant confrontations, comfort, independency, flexibility,<br>taking digitalization development into consideration                           |   |
| Weaknesses                            | need of connectivity box, only limited e-commerce partners, only smart driver can use ready to drop, service only works when car is close to home address |   |
| Opportunities                         | Future potential of connectivity box (carsharing), overall interconnection  | Signer (2016), Preuss (2016)              |
| Threats                               | Security issues, trust, reputation, software failure  |   |

## Appendix C

### Case Study Database for Case N° 2: Etsy, Inc.

Source: own representation

#### Case No 2: Etsy, Inc.

| <i>Variables</i>                      | <i>Detail</i>  | <i>Sources</i>                            |
|---------------------------------------|--|---|
| <b>context variables</b>              |  |   |
| <b>Industry</b>                       | e-commerce platform for creative entrepreneurship  |   |
| Competitors                           | Ebay, Craigslist, Bonanza, ...   | Fallon (2016)                             |
| New entrants                          | DaWanda  | Fallon (2016)                             |
| Substitutes                           | direct e-commerce, fairs, etc.   |   |
| <b>Market</b>                         |  |   |
| Needs & demands                       | sellers: business flexibility and independence, demand for creative products,<br>all-in-one platform convenient for customers  | Etsy Inc. (n.d.a)                         |
| Switching cost                        | low for shops & customers  |   |
| Revenue Attractiveness                | more attractiv the bigger the community  |   |
| Location of business                  | global   | Etsy Inc. (n.d.a)                         |
| <b>Key Trends</b>                     |  |   |
| Technology trends                     | digitalization, web 2.0  |   |
| Regulatory trends                     | consumer protection, privacy of consumer information   | Etsy Inc. (2016)                          |
| Societal & cultural trends            | multiple jobs, entrepreneurship, sustainability  | Etsy Inc. (2014)                          |
| Socioeconomic trends                  | self-centric, vintage, shift to e-commerce, DIY  | Mason, Mattin, Luthy, & Dumitrescu (2015) |
| <b>business model variables</b>       |  |   |
| <b>Business model pattern</b>         | multi-sided platform   |   |
| Key partners                          | co-partnering, customers, creative entrepreneurs, software developers  |   |
| Key activities                        | develop & maintain platform: market, seller service, technology,<br>increase marginal utility  | Etsy Inc. (2016)                          |
| Key resources                         | platform(technology)/network, human resource, brand as resource,<br>creative entrepreneurs   |   |
| Value proposition                     | connect creative entrepreneurs and customers   |   |
| Customer relationship                 | co-creation: affiliate program, community, etsy blog   | Etsy Inc. (n.d.b)                         |
| Channels                              | online, social media, mobile app, website, word of mouth   |   |
| Customer segments                     | direct: crafters, artists<br>indirect: passionate customers  |   |
| Cost structure                        | etsy affiliate program, platform & network maintenance, salaries   | Etsy Inc. (n.d.a)                         |
| Revenue streams                       | pay-per-sale: listing-fee & fee for sales completed<br>seller service: advertising platform, payment processing, discounted<br>shipping labels, commercial partnerships, pattern by Etsy | Etsy Inc. (2016)                          |
| <b>customer involvement variables</b> |  |   |
| Type of customer involvement          | multi-sided platform   |   |
| Strenghts                             | supporting micro-producers, not subject to traditional barriers of<br>launching business, allows flexibility as mother-entrepreneur  |   |
| Weaknesses                            | buying & selling process is US centric   |   |
| Opportunities                         | more divers potential customer base, building community-based<br>economies, achieving sustainable growth, etsy studio  | Gassmann, Frankenberger, & Csik (2014)    |
| Threats                               | interface must always be top (not slow etc), loss of exclusivity through<br>more competitors or "made in china", loosing customers through strong<br>brand value                         |   |

## Appendix D

### Case Study Database for Case N° 3: Uber Technologies Inc.

Source: own representation

#### Case No 3: Uber Technologies Inc.

| <i>Variables</i>                      | <i>Detail</i>   | <i>Sources</i>                                     |
|---------------------------------------|---|--|
| <b>context variables</b>              |   |  |
| <b>Industry</b>                       |   |  |
| Competitors                           | Didi Chuxing, Lyft, Olacabs, Yidao Yongche, GrabTaxi,...  | Chen & Huet (2015)                                 |
| New entrants                          | Gett&Juno   | Solomon (2017)                                     |
| Substitutes                           | traditional taxi service  |  |
| <b>Market</b>                         |   |  |
| Needs & demands                       | simplicity, low price, flexible new way to earn money   | Gassmann, O., Frankenberger, K., & Csik, M. (2014) |
| Switching cost                        | the bigger for the customer, the bigger the network for the company   |  |
| Revenue Attractiveness                | the higher for Uber, the bigger the network, increased through surged pricing   |  |
| Location of business                  | global  | Uber Technologies Inc (n.d.a)                      |
| <b>Key Trends</b>                     |   |  |
| Technology trends                     | digitalization, demonetization  |  |
| Regulatory trends                     | law regulations in taxi industry  |  |
| Societal & cultural trends            | shared economy: collaborative consumption, sustainability   | Gassmann, O., Frankenberger, K., & Csik, M. (2014) |
| Socioeconomic trends                  | on-demand economy   | Scott (2015)                                       |
| <i>Variables</i>                      | <i>Detail</i>   | <i>Sources</i>                                     |
| <b>business model variables</b>       |   |  |
| Business model pattern                | peer to peer  | Gassmann, O., Frankenberger, K., & Csik, M. (2014) |
| Key partners                          | software engineers, drivers, passengers   |  |
| Key activities                        | increase marginal utility (of drivers & passengers, through drivers & passengers), platform development, technology                         | Gassmann, O., Frankenberger, K., & Csik, M. (2014) |
| Key resources                         | Uber platform, surge pricing technology(algorithm), routing algorithm, human resource (employees), drivers with cars                        | Uber Technologies Inc (n.d.f)                      |
| Value proposition                     | facilitation of digital peer to peer network  |  |
| Customer relationship                 | online through platform, rating through customers   | Oakley (2016)                                      |
| Channels                              | mobile app, website, word of mouth, PR, social media marketing  | Oakley (2016)                                      |
| Customer segments                     | drivers as independent contractors, passengers  |  |
| Cost structure                        | technology, marketing, lobbying, salaries, research into autonomous driving technology  | Somerville (2016)                                  |
| Revenue streams                       | 20%-25% comission on driving fare, surge pricing, uber luxury brands, credit card processing fees, cancellation fees                        | Huet (2015), Uber Technologies Inc (n.d.c)         |
| <i>Variables</i>                      | <i>Detail</i>   | <i>Sources</i>                                     |
| <b>customer involvement variables</b> |   |  |
| Type of customer involvement          | co-production   |  |
| Strenghts                             | social aspect of peer to peer network, winner takes it all because of self-reinforcing cycle, flexible response to current market situation | Gassmann, O., Frankenberger, K., & Csik, M. (2014) |
| Weaknesses                            | Transparency, ethics, safety issues   | Chen & Huet (2015)                                 |
| Opportunities                         | Uber advanced technologies center   | Somerville (2016)                                  |
| Threats                               |   |  |

## Appendix E

### Case Study Database for Case N° 4: Wikipedia

Source: own representation

#### Case No 3: Wikipedia

| <i>Variables</i>                      | <i>Detail</i>   | <i>Sources</i>  |
|---------------------------------------|---|---|
| <b>context variables</b>              |   |   |
| <b>Industry</b>                       |   |   |
| Competitors                           |   |   |
| New entrants                          | Scholarpedia, Citizendium, Britannica, ...  | Scholarpedia (n.d.), Encyclopedia Britannica (n.d.), Citizendium (n.d.)                               |
| Substitutes                           | physical encyclopedias  |   |
| <b>Market</b>                         |   |   |
| Needs & demands                       | online and free access to knowledge   | The Economist (2016)  |
| Switching cost                        | high due to network effect  |   |
| Revenue Attractiveness                | none (belongs to NPO)   | Wikimedia Foundation (2016)   |
| Location of business                  | global and multi lingual  |   |
| <b>Key Trends</b>                     |   |   |
| Technology trends                     | digitalization, shift to online knowledge economy, trend of global forums,  | The Economist (2016)  |
| Regulatory trends                     | Established policies & guidelines   | Wikipedia (n.d.)  |
| Societal & cultural trends            | free knowlledge ecosystem   | The Economist (2016)  |
| Socioeconomic trends                  |   |   |
| <b>business model variables</b>       |   |   |
| <b>Business model pattern</b>         |   |   |
| Business model pattern                | open source   |   |
| Key partners                          | MediaWiki operator, editors, volunteers   |   |
| Key activities                        | development & maintenance of website, research, tracking of changes, crowdsourcing, increase network effect<br>co-production: review edits from editors | Wikimedia Foundation (2015), The Economist (2013), Gassmann, O., Frankenberger, K., & Csik, M. (2014) |
| Key resources                         | MediaWiki software, website, volunteers, editors, donors  | Wikimedia Foundation (2016)   |
| Value proposition                     | open source website for the creation of an online encyclopedia  | Wikimedia Foundation (2016)   |
| Customer relationship                 | increase personal motivation of customers,<br>co-creation: community  | Gassmann, O., Frankenberger, K., & Csik, M. (2014), The Economist (2016)                              |
| Channels                              | online, channeling knowledge through administrators   | Weber (2004)  |
| Customer segments                     | volunteers "wikipedians" making contributions, readers  |   |
| Cost structure                        | Software & server facilitation  | Wikimedia Foundation (2015)   |
| Revenue streams                       | No revenue. Financing of Wikipedia through fundraising  | Wikimedia Foundation (2015)   |
| <b>customer involvement variables</b> |   |   |
| <b>Type of customer involvement</b>   |   |   |
| Type of customer involvement          | co-production   |   |
| Strengths                             | External R&D sources cheaper or free, collective brainpower   | Osterwalder & Pigneur (2010), Gassmann, O., Frankenberger, K., & Csik, M. (2014)                      |
| Weaknesses                            | not peer-reviewed   |   |
| Opportunities                         | collective brainpower   | Gassmann, O., Frankenberger, K., & Csik, M. (2014)  |
| Threats                               | editors too homogeneous with specific interests, cultural bias, anti-social behavior  | Wikimedia Foundation (2016), [Weber (2004)]   |

## Appendix F

### Case Study Database for Case N° 5: Ponoko

Source: own representation

#### Case No 3: Ponoko

| <i>Variables</i>                      | <i>Detail</i>  | <i>Sources</i>                                     |
|---------------------------------------|--|--|
| <b>context variables</b>              |  |  |
| <b>Industry</b>                       | manufacturing & e-commerce platform  |  |
| Competitors                           |  |  |
| New entrants                          | 3D systems, skyou,...  | Rivera (2017)                                      |
| Substitutes                           | ownership of such printing devices, different production methods   |  |
| <b>Market</b>                         |  |  |
| Needs & demands                       | on-demand manufacturing for small batches  | Gassmann, O., Frankenberger, K., & Csik, M. (2014) |
| Switching cost                        | low, the further advanced technology   |  |
| Revenue Attractiveness                | combine user design and multi-sided platform business model  |  |
| Location of business                  | ship global; offices in NZ & US  | Ponoko (n.d.e)                                     |
| <b>Key Trends</b>                     |  |  |
| Technology trends                     | new production technologies like 3D or laser cutting   | Gassmann, O., Frankenberger, K., & Csik, M. (2014) |
| Regulatory trends                     |  |  |
| Societal & cultural trends            | entrepreneurism  |  |
| Socioeconomic trends                  | on-demand manufacturing, micro-factories (3D), mass customization, DIY   | Gassmann, O., Frankenberger, K., & Csik, M. (2014) |
| <b>business model variables</b>       |  |  |
| <b>Business model pattern</b>         | user design  |  |
| Key partners                          | supplier of materials, product design customers, platform customers (sellers & buyers)   |  |
| Key activities                        | laser cutting, engraving, maintenance of online website support product designers, shipping, co-production   |  |
| Key resources                         | material, facility, manufacturing tools, human resource (employees), customer as designer, product design software   |  |
| Value proposition                     | manufacturing (laser cutting & engraving service) for user-designed products<br>(online marketplace for produced products and user-designed plans)                   | Ponoko (n.d.e)                                     |
| Customer relationship                 | co-creation: community, generate & share ideas, give feedback,   | Ponoko (n.d.b)                                     |
| Channels                              | direct: website, shipping<br>co-delivery: final assembly by customer   |  |
| Customer segments                     | business-to-business: designers & makers, etsy sellers, kickstarter entrepreneurs, brands & businesses<br>business-to-customer: Private customers                    | Ponoko (n.d.a)                                     |
| Cost structure                        | overhead costs, manufacturing costs, maintenance of website  |  |
| Revenue streams                       | revenue for manufacturing service, commission on materials (manufacturing through platform buyers)   |  |
| <b>customer involvement variables</b> |  |  |
| <b>Type of customer involvement</b>   | user design  |  |
| Strengths                             | no investment into developing product needed, embraces customer creativity, no need for a big lab, reduces risks for small companies, no inventory management needed | Gassmann, O., Frankenberger, K., & Csik, M. (2014) |
| Weaknesses                            | Interface  |  |
| Opportunities                         | online-shop, community, flexibility to market demands  |  |
| Threats                               | if trends are fads, development of two parallel business models  |  |

# Appendix G

## Case Study Database for Cross-Case Analysis

Source: own representation

|                                      |   | Case Studies  |  |  |   |  |   |
|--------------------------------------|---|---|--|--|---|--|---|
|                                      |   | Case Study 1: Smart   | Case Study 2: Etsy   | Case Study 3: Uber   | Case Study 4: Wikipedia   | Case Study 5: Pomoko   |   |
| Case Study Questions                 | 1 How does the value creation for the company work?   | co-delivery   | multi-sided platform   | peer-to-peer   | open source   | user design / multi-sided platform   |   |
|                                      | 2 How does the company use customer involvement as part of their business model?                                      | channels: co-delivery<br>as result part of key partners & key resources<br>customer relationships: co-creation  | Key partners: co-partnering<br>Key resources<br>Customer relationship: co-creation<br>revenue streams: commission                            | Key partners: Driver with car<br>Key resources: indirect participation through self-reinforcing cycle of month<br>Channels: word of mouth<br>Customer relationship: community<br>revenue streams: commission | Key partners: co-partnering<br>Key resources: co-design<br>Key activity: co-production<br>Customer relationship: co-creation through community and network effect<br>Channels: knowledge channelling through administrators                                 | Key partners: co-partnering<br>Key resources: co-design<br>Key activity: co-production<br>Customer relationship: co-creation<br>encourages customer creativity, enables customer key partners to apply for and address risks of small businesses<br>co-delivery: home assembly |   |
|                                      | 3 Which contextual/factors contribute to the company's successful customer involvement approach?                      | Following key trends<br>Responding to needs of customers to have more time: time-gift from smart<br>on-demand economy<br>strong ecosystem   | Following key trends<br>promoting flexibility for women<br>strong ecosystem: community and good reputation                                   | Demand for simpler and cheaper products<br>Following key trends: Digitalization,<br>democratization,<br>collaborative consumption<br>strong ecosystem: network   | following digital trend: online knowledge economy,<br>perfect timing of anticipating trend,<br>high entry barriers for new entrants through network effect,<br>set of policies & guidelines diminishes value-degrading,<br>featured on google search engine | development of new production technologies<br>following key trends: on-demand economy (through digitalization), self-employment,DIY  |   |
|                                      | 4 Which chances and risks does the company face in regard to their customer involvement strategy?                     | Chances:<br>bond<br>Brand awareness<br>Customer insights<br>Basis for future<br>development in new<br>business fields: e.g.<br>carsharing<br>customer willingness<br>to address of customer need<br>direct communication<br>to address right target group | Chances:<br>more divers potential<br>customer base as result of co-partnering<br>community-development                                       | Chances:<br>Brand image<br>Current push market<br>entry strategy<br>digitalization for<br>global network   | Chances:<br>collective ban/pow<br>to increase potential<br>customer base and<br>strengthen bond with<br>community   | Chances:<br>flexibility in regard<br>to new product<br>trends<br>individualisation<br>attracts user design   | Risks:<br>development of new production<br>technologies |
|                                      | 5 What are critical success factors for the successful implementation of the company's customer involvement strategy? | strong ecosystem: community<br>in order to offer & sustain performance through adding services and improving technology   | strong ecosystem: community as self-reinforcing cycle<br>strong brand image<br>accurate and efficient technology<br>Simplicity & flexibility | strong ecosystem: network as self-reinforcing cycle<br>strong brand image<br>accurate and efficient technology<br>Simplicity & flexibility   | trustworthy community<br>fairplay and motivation of volunteer,<br>neutral point of view   | existence & quality of product design software<br>right type of customer (ideally successful entrepreneurs)<br>accuracy & efficiency of manufacturing instruments and execution  |   |
| Business / Programm Launched? (Year) |   | 2016  | 2005   | 2009   | 2001  | 2007   |   |