TAMPERE UNIVERSITY OF TECHNOLOGY

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BUSINESS MODEL RENEWAL AND ITS NETWORKING ASPECTS IN A TELECOM SERVICE COMPANY

Master of Science Thesis

Prof. Saku Mäkinen and Assoc. Prof. Marko Seppänen have been appointed as the examiners at the Council Meeting of the Faculty of Business and Technology Management on November 9th, 2011.

ABSTRACT

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This thesis examines business model renewal and its networking aspects. Business models are an emerging tool that practitioners, managers and researchers use to describe and illustrate how a company does business. Through innovative business model, a firm might gain competitive advantage, and thus transition in business models and business model innovation are important research topics. Network aspects were studied with four attributes that network pictures have: scope, structure, firm positioning, and processes. The objective of the thesis was to identify how these two concepts relate to each other and how the transition process concerning networks may happen.

This research was done as a single case study. The empirical data was gathered during two business model workshop events with the case company managers and some teleconference calls were also made. The literature review suggested that the most appropriate business model that is both scientifically and managerially valid is the Business Model Canvas. Thus, the Canvas was taken as a starting point as the networking aspects were examined. The literature review and the workshop results proposed that narrative business models such as the Canvas are unable to describe the network attributes. In addition, visual business models and network pictures are unable to illustrate the core of business models – different value activities.

The results indicate that managers and researchers should use both visual and narrative elements when designing business models. This is the case especially when a company does business in a network and the network structure is essential to perceive. Thus, this thesis provides two guidelines regarding the transition from a narrative business model to a network picture. The first guideline deals with the actual transition and the second deals with enhancing the network aspects in the Business Model Canvas. Moreover, the thesis studied the renewal process and its network aspects. The main findings regarding the process were that the designed model has to be feasibility studied and experimented before it can be implemented. Moreover, managing the business model change process is crucial.

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Tämä opinnäytetyö käsittelee liiketoimintamallin uudistamista ja sen verkostonäkökulmia. Liiketoimintamalli on työkalu, jolla tutkijat ja yritysjohtajat pystyvät mallintamaan yrityksen liiketoimintaa. Etenkin innovatiiviset liiketoimintamallit voivat tuoda yrityksille kilpailuetua ja siksi liiketoimintamallien siirtymien tutkiminen on tärkeää. Verkostovaikutuksia selvitettiin verkostokuvauksen neljällä keskeisimmällä ominaisuudella: verkoston laajuus, verkoston rakenne, yrityksen asema verkostossa, ja verkoston prosessit. Opinnäytetyön tavoitteena oli selvittää miten nämä kaksi konseptia suhtautuvat toisiinsa ja mitä verkostonäkökulmia liiketoimintamallista toiseen siirtymisellä on.

Tutkimusmenetelmänä oli yksittäinen tapaustutkimus. Työn empiirinen aineisto koottiin kahdessa liiketoimintamallityöpajassa ja muutamilla telekonferenssipuheluilla. Kirjallisuuskatsaus osoitti, että sopivin liiketoimintamalli, joka on sekä tieteellisesti että yritysjohdollisesti validi, on Osterwalderin ja Pigneurin ehdottama liiketoimintamalli. Siten tuo malli otettiin lähtökohdaksi, kun verkostonäkökulmia arvioitiin. Kirjallisuustutkimus ja työpajojen tulokset osoittivat, että kerronnallinen liiketoimintamalli ei pysty kuvailemaan verkostojen ominaisuuksia. Toisaalta myös visuaaliset liiketoimintamallit ja verkostokuvaukset eivät pysty kuvaamaan liiketoimintamallien ydintä – eri arvoaktiviteetteja.

Opinnäytetyö indikoi, että johtajien ja tutkijoiden pitäisi käyttää sekä visuaalisia että kerronnallisia keinoja liiketoimintamallien kuvaamiseen etenkin, kun yritys toimii verkostossa ja verkostojen rakennetta on oleellista kuvata. Siten tämä opinnäytetyö tarjoaa kaksi ohjetta koskien siirtymistä kerronnallisesta liiketoimintamallista verkostokuvaukseen. Ensimmäinen ohje koskee itse siirtymistä ja toinen koskee edellä mainitun mallin kehittämistä verkostonäkökulmat huomioiden. Lisäksi liiketoimintamallin uudistamisprosessi vaatii tutkimusta liiketoimintamallin toteuttamiskelpoisuudesta ja käytännön kokeiluja. Myös liiketoimintamallin uudistamisprosessin johtaminen on olennaista.

PREFACE

Master’s thesis has at least two kinds of roles in the graduation process. First, it is considered as an official demonstration of the candidate's eligibility for the master's degree. Therefore the thesis demonstrates maturity that the author has gained during his or her degree studies. The second role is to be an independent piece of research. Thus, the objective of the thesis is to bring some kind of value to the scientific and also managerial field. I am convinced that this thesis contributes to both issues.

The writing process has not been a straight forward process as the research problem and even the research topic were not clear from the beginning. Thus, the research theme has evolved during the writing process. Though, it is fair to say that this belongs to the process, and every thesis writer faces these problems.

I would like to thank associate professor Marko Seppänen for his inspiring thoughts and the initial theme for the research. He has challenged me throughout the process. Professor Saku Mäkinen has facilitated this research project, and therefore thanks belong also to him. The case company managers have given access to crucial data for this research, and thus my gratitude goes to them as well. I would also like to thank my family for all the support they have given. They have encouraged me throughout my studies. Finally, I would like to thank my colleagues here at the Department of Industrial Management for all the help and support they have given. It has been pleasant to work here. Thank you.

In Tampere on February 16th, 2012

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Pasi Kuparinen

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ABBREVIATIONS

BM	Business Model
CRM	Customer Relationship Management
KAM	Key Account Management
UML	Unified Modeling Language

1. INTRODUCTION

Companies seek competitive advantage from various sources. Traditionally those sources have been related to processes, strategies and product development. However, today companies seek competitive advantage from all over company's business activities. Barney (1991, p. 102) argues that a company has competitive advantage "when it is implementing a value creating strategy not simultaneously being implemented by any current or potential competitors". He continues that competitive advantage becomes sustained when those other firms are unable to duplicate the benefits of that value creating strategy. Thus, companies are desperately seeking that advance with various means. Lately business world has been keen on new developing topic that promises competitive advantage. That topic is called business modeling. Business modeling is concentrated on illustrating the firm's business architecture and the main aspect of business models is how value created and captured in a company or in a network. Note that business modeling is not business process modeling, because business processes are related to operations, whereas business modeling has strategic aspect.

Standard approaches of value are quite simplistic. They just assume that inventions, which basically are tangible products, are protected with permanent and stable patents and value is created and eventually captured naturally with the help of those assets. Moreover, those approaches assume that all innovations and products have established markets. Therefore value is simply captured with competitive market pricing. (Teece 2010.) This approach might be suitable for classic products but the truth is quite contrary in the present competitive markets. That is why companies need a tool that explains them their value strategy and enables them to innovate their value creation mechanisms. Back in the industrial era, capturing value was relatively easy, namely technology and intellectual property were packed and sold either as a discreet or as a bundled package. Since then technological advancements have allowed low cost financial statement modeling and brought about alternative assumptions about revenues and costs. Also customers have changed their perceptions, as they do not want just products in bundled packages, but instead they want solutions to their perceived needs. (Teece 2010.)

Another aspect of need for business models is the changing business environment. Regarding this thesis there are three megatrends that are significant. The first megatrend is the shift from firm specific view to a network view. This indicates that the firms are more and more concentrated on their core competencies. As a consequence, the value is divided in various sources as the companies are organized as a network. Moreover, the value creation has changed from a chain to orchestrating more complex designs

(Schweizer 2005). The second megatrend is the shift from products to services. Today services produce over 70 percent of the GDP of the European Union and up to 77 percent in the United States (Central Intelligence Agency 2011). Back in the early 1900s the ratio was the other way round. Moreover, there is no sign that the development would slow down, although there will be a saturation point, but nevertheless the growth is fed with new services that increase the amount of GDP. The third megatrend is the technological revolution that has enabled enormous possibilities. With the change that the developing information and communication technology and constantly cheapening computing power bring, the companies are on constant pressure to modify their business and business logic (Pateli & Giaglis 2005).

Essentially all of these megatrends are significant for the thesis as they are strictly related to the case company. That is because the case company is currently operating in a network that provides services with the help of advanced technology. Because of the possibilities of these megatrends, the case company is looking for competitive advantage by renewing their business model. In the future they would like to widen the network perspective, as their vision is to be a service integrator in an ecosystem where the advanced technology has a key role.

1.1. Research context

This thesis is part of Smart Grid and Energy Markets (SGEM) research program. SGEM develops new services and new solutions for future smart grids and energy markets. The vision of the SGEM project is to put Finland on top of the world regarding energy and environment technology. Therefore the program aims at advancing fields that are related to those technologies. One important research field is next generation management systems and next generation business models to support that advanced technology. (Cleen 2010.)

As this thesis is part of SGEM project, the main finance comes from the SGEM consortium. However, the main influencers of the thesis are the Faculty of Business and Technology Management, and the case company. Thus, there are two kinds of perspectives for the thesis. The first are the scientific interests of the faculty members and the second are the managerial interests of the case company.

1.2. Research problem and objectives

As noted previously, business models are an excellent tool to concretize company's business logic and to see how the company's strategy is implemented into practice. Therefore the research problems and objectives of the thesis are related to business models. Defining the research question is probably the most important single task in a research study. The question has two aspects. First, it defines the substance of the study. Secondly, the form of the question defines how to approach this research

methodologically. (Yin 2009, p. 10.) Thus, the research question should be selected and defined carefully.

Since the case company is owned by a venture capital company, and the venture capital company is striving for growth, the case company has created a growth strategy. Based on that growth strategy the company executives have created a vision of their future business. They see it as a networked company that provides services as a service integrator. Therefore, they need to change their existing business model to support the future vision. This process is called as a business model renewal, because it as a term depicts the deliberate top-down action to renew the core logic of the existing business. By depicting their business with a business model, the various business components and the interactions within and between the components become apparent. Therefore, the main theme is business models and especially business model renewal. Moreover, as the future and partly current business of the case company runs on networks, the other focus is on networks. A networked business takes a different aspect regarding business model concept and business model renewal, and thus this thesis is concerned about the effects of this action. Derived from this discussion the main research question is:

> *What kind of aspects does the networked business have on business model concept and business model renewal?*

This research question has several other aspects. First of all, current literature of the business models has to be tracked and looked through, if it has flaws or inconsistencies regarding networking aspects. Secondly, the business model renewal concept and process has to be clarified. After the literature review, the gaps and other networking aspects of business models are experimented with empirical data. The level of analysis is at single company level. In addition, this thesis deals only with the initial phases of business model renewal as it does not cover the implementation of a business model.

The study objectives can be derived from the previously framed research question. The objectives are divided into two categories, namely scientific objectives and managerial objectives. Scientific objectives are axiomatic as the purpose of the theses is to do scientifically valid study with scientific objectives. Company objectives guide other objectives because the actual need and proposals come from the case company. Therefore the main scientific objective is to find out the aspects that the networked view of business models has on the business model renewal. A hybrid objective is to provide insights and guidelines of networking aspects regarding business model formation and designing as a part of business model renewal process. The objectives of the case company are mainly related to the workshops that were arranged for the thesis. Thus, they wanted to figure out how their strategic vision would be transposed into a lower abstraction level – as a business model.

1.3. Research approach

Defining the research approach is crucial, because it affects the results. A widely used research approach classification for business management students is proposed by Neilimo and Näsi (1980). They had four categories in their framework: conceptual research, nomothetical research, decision-oriented research and action analytical research. Later Kasanen et al. (1991) complemented the classification by adding 'constructive research' approach to the framework. See the Figure 1 for the classification.

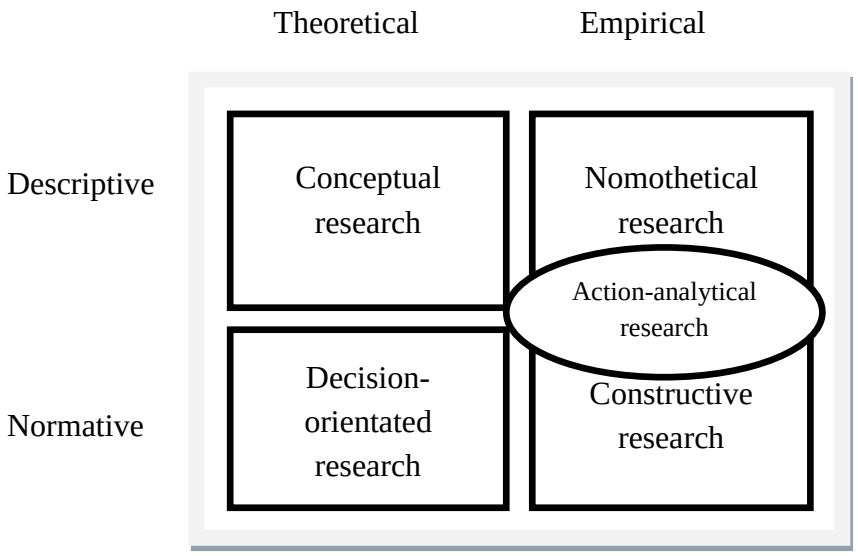


Figure 1. *Research approach classification (adapted from Kasanen et al. 1991, p. 317).*

The Figure 1 above has two axels. The first describes whether the research material is theoretical or empirical and the second describes whether the results of the study are descriptive or normative. Descriptive studies aims at describing, declaring and explaining the studied phenomenon, whereas normative studies aims at finding solutions and regulatories to the perceived situation with perceived circumstances. Usually research studies are consisted of different features of different research approaches and their role varies depending on the phase of the study. Thus, in management sciences the literature review part of the study is usually conceptual whereas the results are either nomothetic or constructive. (Olkkonen 1993, p. 80.)

A conceptual research leans on theories from the existing literature. It strives for describing the phenomenon with the literature and proposes new concepts with analyzes and synthesis. Thus, it does not verify anything and therefore the results are based on arguments that are declaratory and recommendative by nature. A nomothetical research aims at describing and predicting the phenomenon with empirical material. It has natural science characteristics because it leans on the empirical observation. A decision

oriented research is based on a problem that is probed by the literature. There may be an empirical part in the study but its role is to be an application to the problem. Thus the results of a decision-oriented study are solution to explicated problems. An action-analytical research strives for understanding the problem by depicting and declaring it. The empirical part of the study is usually a case study. Thus an action-analytical study takes both sides theoretical and empirical. Finally, a constructive research that was added by Kasanen et al. (1991), gives solutions to a problem by exploring the empirical evidence. (Olkkonen 1993, p. 61.)

It is difficult to categorize this research because the research has aspects from different research approaches. First of all, since this research is done as a case study, its results require empirical evidence. Moreover, since this is a single case study, the results are not appropriate universally but they are appropriate for this particular case. Therefore, this study should focus on the normative analysis. On the other hand, when considering managerial studies in general, this study is tilted towards theoretical studies as this study does not use a large pool of empirical evidence and the research problem is mostly theoretical. Thus, when exploring the descriptive – normative axel, this study is definitely a descriptive one. That is because the objective of the study is to describe the studied phenomenon rather than give action plans or solutions to a problem. As a result of this discussion, the study lies somewhere between nomothetical and conceptual research.

Yin (2009) suggests that there are two different approaches when analyzing qualitative data. The first one is deductive approach. Using deductive approach means that the existing literature is used to formulate the research question and objectives. Thus, deductive analysis may be used to devise a framework by exploring the literature and that framework is tested with qualitative data. Though, when using this approach, the researcher has to be cautious not to introduce premature closure. The premature closures may come up accidentally if the researcher finds his framework appropriate and superior to the existing literature before it is tested on the data. Thus, there is a risk that the framework is not tested properly. (Saunders et al. 2009, p. 489.) The other approach is inductive. It means that collected data is used to find the themes and issues rather than existing literature. Thus, inductive approach leans on empirical data. (Saunders et al. 2009, p. 490.)

This research has deductive approach, since the research question and objectives are defined in the literature review. Thus, the starting point for this thesis is the case company and its needs, but the literature review defines the research themes and issues. In other words, the literature is used to find out how it deals with the research question, and those found issues are defined using a single case study.

1.4. Thesis structure

This thesis is divided into six chapters that are consisted of subchapters. The structure of the thesis, which is depicted in detail in the Figure 2, can be divided into three themes: literature review, research methodology, results and discussion. Above all is the research question and research approach that guide and on the other hand limit every discussion in this thesis. As the results and conclusions of the thesis have to be in line with the research question, it sets the boundaries for the thesis.

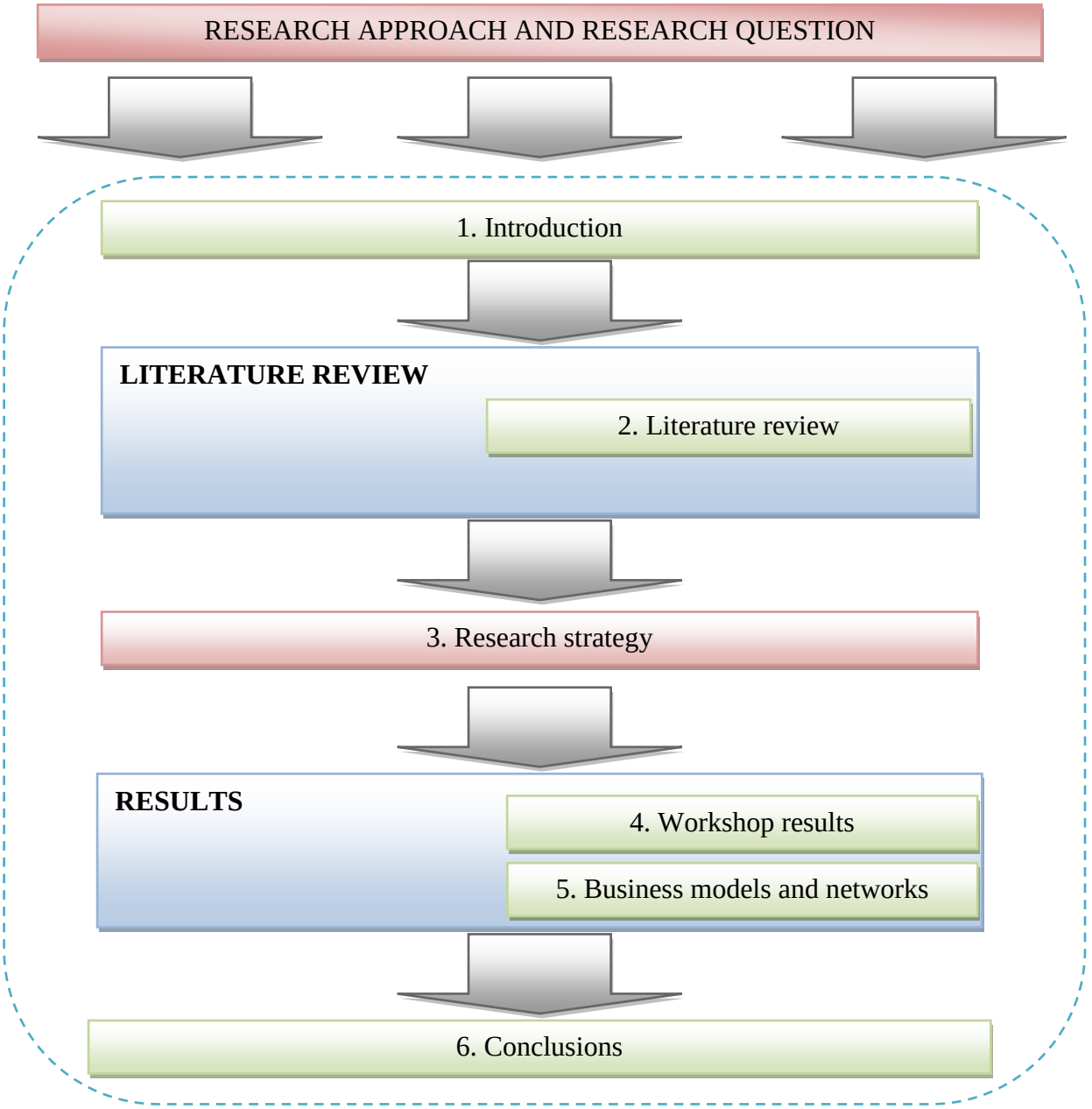


Figure 2. *Thesis structure.*

The first chapter of the study introduces the research topic and states the research questions and objectives. In addition, the research approach is described since this is a

scientific study. Also the case company is introduced in the first chapter. The material for the case company introduction was gathered from the unofficial interviews and meetings, where the case company managers explained their business to the research team. In addition, some of the material was gathered from the public sources like other theses and the Internet.

The second chapter is dedicated to the literature review. As it has become apparent, business modeling is the main concept of the thesis with an emphasis on networks and business model change. Therefore the second chapter covers a wide range of the business model literature. The chapter ends with an evaluation of the network aspects of the business model literature. The purpose of the evaluation is to clarify how the current literature deals with networks and its elements.

Research methods and material are described in the chapter three. Thus, the research and case methods are chosen and justified and the chapter describes how the empirical material was collected and what methods have been used to ensure the validity of the results.

Empirical results that were gathered in the workshop events are described and discussed in the chapter 4. The chapter describes the results in four subchapters. Thus, the first and second section deals with the results of the first workshop. The first section describes the current business model of the case company and the second section describes the scenario model. The third section describes the second workshop and its results. The purpose of this workshop was to map the renewal obstacles and phases. The fourth section depicts the network pictures in such a way as the managers and the research team see it.

The fifth chapter analyzes the results of the fourth chapter together with the literature review. Therefore the fifth chapter provides insights and guidelines of networking aspects regarding business model formation and designing as a part of business model renewal process.

In the last chapter, conclusions and discussions draw this thesis together. Besides conclusions, the thesis' theoretical contribution and managerial implications are assessed. Moreover, the last chapter suggests some future research topics.

1.5. Introduction to the case company

The case company is a multinational company that provides different kinds of services for industrial businesses. Its main businesses are telecommunications, energy, and industry services. More precisely the case company offers construction, designing, maintenance, and consulting services to the telecom, energy and industry sectors. The network division is the largest division generating almost half of the net sales. The network division is further divided into telecommunication and electricity networks.

The company has sites in the Nordic and in the Baltic countries. However, its main locations are Finland and Sweden.

In 2010 Group's net sales was 307 million Euros. The Group is owned by a venture capital company and company's upper management. The venture company owns about two-thirds of the company and the upper management owns the rest of it. In 2009 Finland generated just under 60 percent of the Group's turnover, and thus Finland was, and still is the main site in the case company's business. The case company is Finland based subsidiary of the case company group. Geographically the case company's businesses in Finland are divided into four business areas: south Finland, west Finland, east Finland and north Finland. The workforce of the case company has more than doubled in the past 5 years and at the end of the year 2010 the case company had 3000 employees, of which 1600 worked in Finland.

1.5.1. Telecommunication networks -subunit

Telecommunication networks -subunit is one of the three business units that the case company has in Finland. This thesis is focused on telecommunication networks and its businesses. Telecom unit divides its tasks into three categories. The first is "special works", which includes works that last at least one day. Moreover, special works are more demanding and they usually require excavating tasks. The second category is called "small works". They are short service or installation visits to the customer. So the main difference between these two work tasks is the length and difficulty of the task. See the Figure 3 for the special work process.

Figure 3. *Special works process.*

Basically separate works process has four phases. Firstly, separate works need planning, resource allocation and construction designing. During the first phase also the authorities has to be informed and ask permissions for digging. The second phase is to wait until the excavating entrepreneur has done his or her part – specifically digging the ground. After that the network cable mechanics come to the site and do their work. The last phase is the documentation. In contrast, small works include all kinds of works that are usually done within hours or even in minutes. A typical task is a small service or installation visit done by a single or at most two mechanics. The case company has three phases in its small works process (Figure 4).

Figure 4. *Small works process.*

As seen from the Figures above, the major difference of the processes is that there is no planning or designing phase in the small works. In addition to special and small works the case company separates large projects into a project unit. A major part of the case company's business is to use subcontractors in various parts of the process. That is why managing the subcontractor's work is a challenge for the case company. Those subcontractors are mainly excavating entrepreneurs, as the case company does not have excavating machines by itself, but it has made deals with local entrepreneurs. Another aspect of the case company's business is its seasonal nature. That means that a majority of the work is done in the summertime. Especially the excavating is almost impossible during the winter due to the frozen ground.

1.5.2. Telecommunication collaboration relationships

Actually the case company does not currently work in a pure network, where different actors collaborate tightly with each other. However, the case company works as a focal company and its subcontractors are under the case company in the organization chart. Thus, the subcontractors work alongside the case company's workers. That is because the case company's business unit uses intensively subcontractors to perform tasks. However, the case company calls their arrangement as a network because they have negotiated fixed fees with the subcontractors, and therefore they are not directly competing with marked-based prices. So, the pay is transactional, but fixed and based on negotiated prices for a certain period. The network structure enables the case company to be more flexible, dynamic and it lowers their fixed fees. Thus the summer's peak demand is easier to catch without high investment into personnel and excavating machinery. See the Figure 5 for the current network structure.

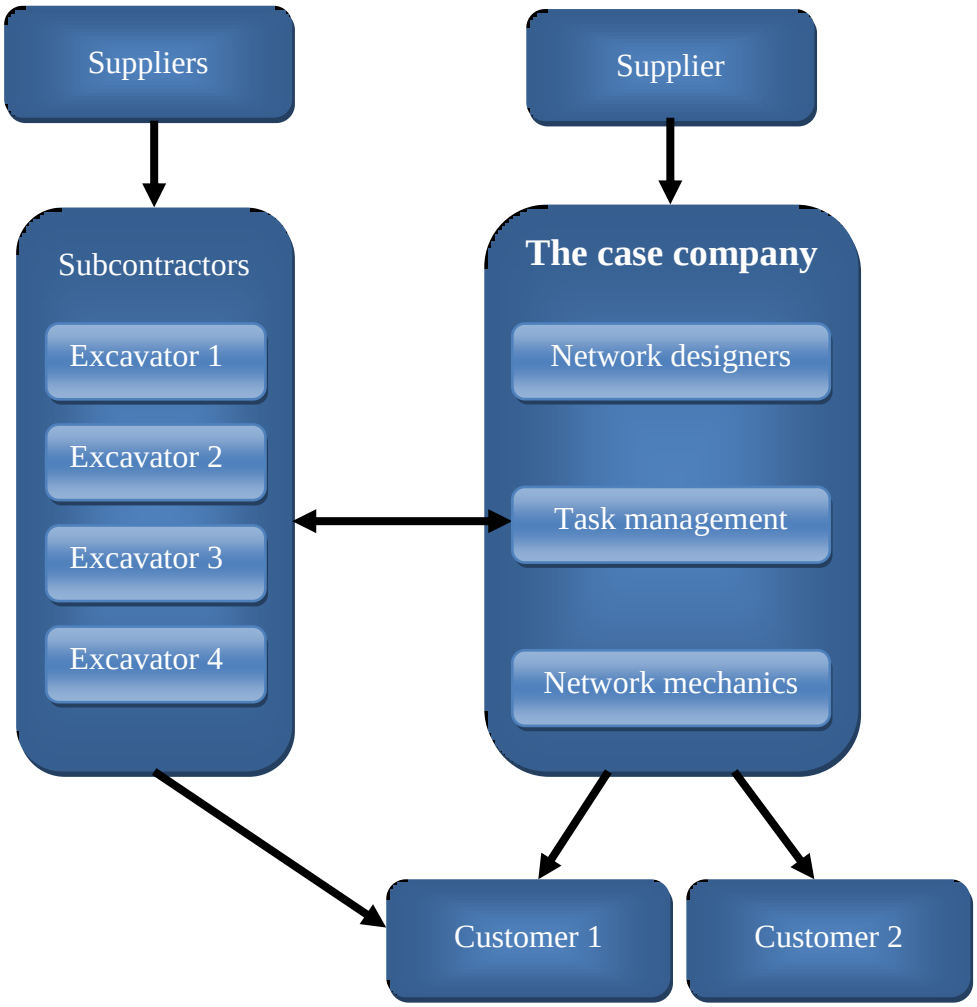


Figure 5. *The structure of the case company's collaboration relationships.*

As seen in the Figure 5, the structure is somewhat typical to a company that uses subcontractors as their work base. Therefore, the current network structure does not bring competitive advance to the company. The processes and linkages between actors might give some competitive advantage. That cannot be verified without comparing to the competitors, but that is out of the context of the thesis.

2. LITERATURE REVIEW

This chapter discusses business models in general but it emphasizes business model renewal and networked business models as they are the main aspects of business models when it comes to this thesis. There has been a growing interest into business models since the end of the 1990s. The interest has remained since and it is still a hot topic among scholars. In spite of or perhaps because of the popularity, the concept of business model has evolved during these decades. (Zott et al. 2011.) Figure 6 shows how the popularity has increased. PAJ refers to articles published in academic journals, whereas PnAJ refers to non-academic journals.

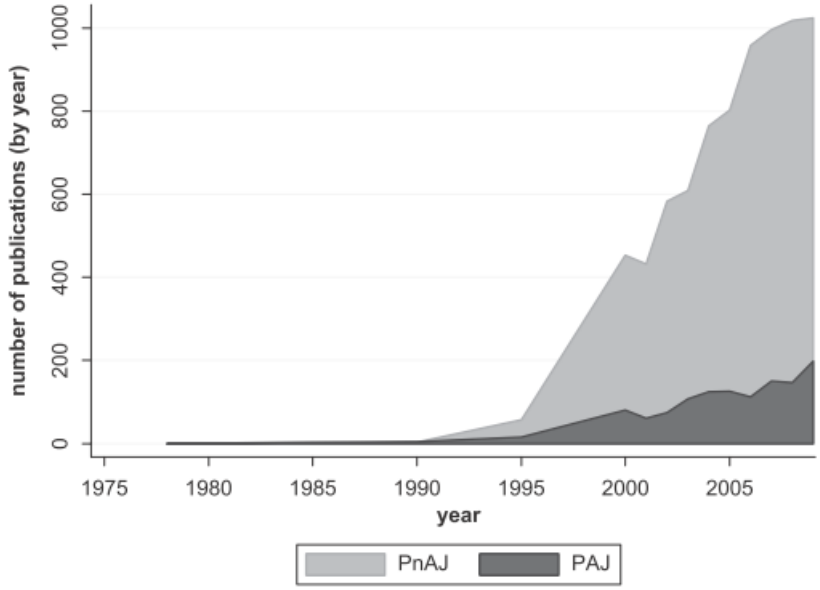


Figure 6. *Graph of academic publications related to business models (Zott et al. 2011, p. 1023).*

Business model driving factors include the emerging knowledge economy, the growth of the internet and e-commerce, the outsourcing and offshoring many business activities, and the restructuring of the financial services industry around the world (Teece 2010). Thus, business modeling is needed to figure out how a company has arranged and will arrange its business. Chesbrough (2010, p. 355) argues that "… a mediocre technology pursued within a great business model may be more valuable that a great technology exploited via a mediocre business model". This quote shows how important business models are, and what their role in the modern world is. It is not enough to have a great technology or service, but you have to know how to sell it and how to build the business infrastructure around the product or service.

2.1. What is a business model?

The term business model comprises of two words; business and model. Therefore it has something to do with business and something with models. Business can be defined as an activity of buying and selling goods and services (Osterwalder 2004, p. 14), whereas a model has multiple definitions. First, a model can be "a schematic description of a system, theory, or phenomenon that accounts for its known or inferred properties". Secondly, it can refer to "a small object, usually built to scale, that represents in detail another, often larger object". Finally, the third appropriate definition concerning business models is that a model "serves as an example to be imitated or compared". (FreeDictionary 2011). This separate inspection reveals that business models can represent company's activities in multiple ways. Therefore there are different kinds of business models for different purpose of use. Thus, some business models attempt to find the logic behind the actual business and describe the logic in a schematic way whereas some consider them as a scale model. Most of the business model conceptualizations are general by nature. Thus, they are general applications that can be theoretically applied to every business sectors. Though, every sector has its own characteristics.

Despite the vast effort to define the concept of 'business model', scholars still do not agree what a business model is. Instead of agreeing a common definition they have approached this definition problem by discussing what a business model is not. (Zott et al. 2011.) Al-Debei and Avison (2010) found three reasons that clarify why scholars have not managed to create a unified theory of business models. The first reason is the youthfulness of the BM concept. It is only recently that business models have appeared frequently in peer reviewed journals. Another problem is that business models have been investigated in rather new industries and sectors such as telecommunication and e-businesses. The last issue is that scholars use business models in different fields of research. A very recent paper by Zott et al. (2011) grasped this third problem by reviewing business model literature. After an extensive review they found three research areas within business models.

1. E-business and the use of information technology
2. Strategic issues such as value creation and competitive advance
3. Innovation and technology management

The term e-business emerged in the 1990s as companies headed to the Internet to do business electronically. The hype of e-businesses created a need for conceptualizing businesses and understanding the logic of the new form of business. Back then e-business was about e-shops, e-commerce and e-markets. More interestingly, the recent advancements in computing power and the decline of computing costs have brought about new ways to create and deliver value to customers. Thus, the discourse has shifted from technological aspects to describing the Internet-based business model concepts

emphasizing social media applications and mobile environment (Wirtz 2011, p. 20). Business models are on topic once again and a great portion of the research of business models is related to Internet businesses. (Zott et al. 2011.)

The second aspect of the business models refers to strategic issues namely value creation, value capture, performance and competitive advantage. This interest in the strategic issues has been increasing in the 2000s. Strategy scholars often note that business models refer to the logic of the firm - i.e. how it operates and creates value and thus business models are strategic tools. (Zott et al. 2011.) This thesis is focused on the strategic side of business models, and thus strategy and business models are discussed more in the section 2.2.

Innovation and technology management refers to innovating business models and commercializing new technology. The main purpose in this context is therefore to understand how technology and business models are converted into market outcomes. (Zott et al. 2011.) Actually this aspect can be seen as two different aspects. Innovative approach has focus on change and it acknowledges that business models are not static. Innovating business models complements the traditional innovation lines such as product, process and organizational innovation. With business model innovation a company can conceptualize new forms of cooperation and collaboration, and come up with new value propositions. (Demil & Lecocq 2010.) The second aspect, which relates to technology, is also important as technology management and especially technological innovations are not suffice to guarantee the success of new technology. (Zott et al. 2011.) That is because the technology itself has no inherent value (Chesbrough 2007). Therefore business models are required to create and capture the value of new technology (Zott et al. 2011). Also this business model innovation theme is important when it comes to this thesis. That is because business model renewal is the main theme in this thesis.

Another classification of business model literature is proposed by Wirtz (2011, p. 26). He argues that the business model literature has three basic approaches. First, the technology-oriented approach includes e-business models and other models that emphasize technology and information systems. The second approach is strategy-oriented business models that emphasize value creation and innovation. Finally, the third approach is organization. Organizational approaches deal with business model architecture and components. Therefore those models focus on the structure of a company and use business models as a framework for organizational structures. (Wirtz 2011, pp. 26–27.)

This discourse shows how incoherent and disorientated the business model literature is. Therefore there is such a little common ground for a unified theory of business models. Despite the differences, Zott et al. (2011) found four common themes among the scholars:

1. The business model is emerging as a new unit of analysis
2. Business models emphasize a system-level, holistic approach to explaining how firms do business
3. Firm activities play an important role in the various conceptualizations
4. Business models seek to explain how value is created not just how it is captured

Accordingly, as these four themes show, the concept of business model has justified its existence among scholars. Business models are an important part when businesses are explained and conceptualized. The third theme, which relates to firm activities, points out the representational nature of business models. Typically business models consist of components that are related to the activities of a company and therefore business models can be viewed as a system. The fourth theme emphasizes value as a key component in business models. Almost every scholar highlights the concept of value in their papers. Moreover, the scholars also agree that value is created through the focal company in cooperation with its partners. (Zott et al. 2011.)

According to some scholars (eg. Amit & Zott 2001; Shafer et al. 2005) there is a missing link between strategy and operations. Thus they suggest that business model concept could be the intermediate medium between resource configuration and strategy regarding especially value creation (Mäkinen & Seppänen 2007). This leads to the argument that business models are neither a strategy nor a business process, but something between them (Osterwalder 2004). The following Figure 7 depicts how business model relates to strategy and business processes.

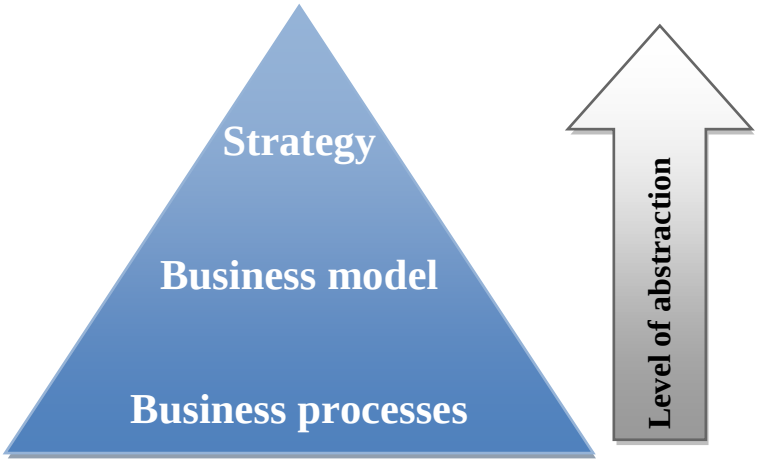


Figure 7. *Business logic triangle (adapted from Osterwalder & Pigneur 2002, p. 2).*

As depicted in the Figure 7, hierarchy reflects to the level of abstraction. A highly abstract business model provides an overview of business, whereas a low-level business model provides more detailed information of the elements and their linkages. Therefore the high abstraction is more related to strategy and low abstraction is related to processes. The level required in each case is related to the users of the business model.

In general, external users and managers require more abstract models than internal users and system developers. (Lambert 2008, p. 282.)

Abstraction can be linked also to the business model conceptualization and how it is used in the BM literature. Scholars use business models at two different levels. First, the abstract level refers to generic representations that can be applied in multiple organizations. Thus, there are some general business concepts, such as ‘freemium’ and ‘double-sided markets’, that can be applied in multiple sectors and therefore these are universal concepts. The second level concerns real world instances and the study of business model implementing in those concrete organizations. Thus, business models help to understand both the functioning and the architecture of a specific organization. (Demil & Lecocq 2010.)

Finally, an important notion considering business model is that they, according to Klang et al. (2010), are consisted of three elements, namely classification, components and configuration. First, the upper level term is classification. Classification refers to ‘the relation of the business model concept to the other management constructs’. Thus the Figure 7 above is a type of classification. Secondly, business model components are the constituting elements. Components are concerned later on in this thesis. Finally, configuration defines the relationship among these components. Some scholars state that components are independent, while others see the dynamics between components. (Klang et al. 2010.)

2.1.1. Business model definition

As the scholars do not agree what a business model is, they do not either agree the definition of a business model. Therefore there is no commonly accepted definition for business models. The controversy can be seen in the Table 1 combined by Palo and Tähtinen (2011).

Table 1. *Business model definitions and key elements (Palo & Tähtinen 2011, p. 379).*

Study	Description/definition	Key elements
Amit and Zott (2001)	Business model represents an important locus of innovation and a crucial source of value creation for the firm and its suppliers, partners and customers	Value creation, actors
Chesbrough and Rosenbloom (2002)	Business model provides a framework that considers the technological characteristics and potentials as inputs and converts them through customers and markets into economic outputs	Technology, value, customers, resources
Hedman and Kalling, 2003	The concept of business model describes the key components of a given business: Customers Competitors Offering Activities and organisation Resources Supply of factor and production inputs A longitudinal process component to cover the dynamics of the business model as well as the cognitive and cultural constraints that management has to take into account	Actors, offering, flows of resources, central firm, dynamics
Helander and Rissanen(2005)	Business models of the companies must be linked to the business models of the other companies involved in the network	Network, interconnectedness of business models
Komulainen *et al.* (2006)	Three core elements of a network business model are: The product/service The business actors and their roles Value-creating exchanges among the actors	Product/service, business actors and their roles, value-creating exchanges
Osterwalder *et al.* (2005)	A business model is a conceptual tool that contains a set of elements and their relationships and allows expression of the business logic of a specific firm. It is a description of the value a company offers to one or several segments of customers and of the architecture of the firm and its network of creative partners	Value offering and value creation, customer segment, network architecture
Shafer *et al.* (2005)	Business model is a representation of a firm's underlying core logic and strategic choices for creating and capturing value within a value network	Central firm, value creation and capture, value network
Timmers (1998)	Business model is defined as: An architecture for product, service and information flows including the various business actors and their roles A description of the potential benefits for business actors A description of the sources of revenues	Flows/exchanges, actors and roles, benefits, revenues
Weill and Vitale (2001)	Business model represents the roles and relations among the firm's customers, allies and suppliers identifying the major flows of product, information and money and the major benefits for the actors	Actors and roles, value exchanges (flows), relations
Westerlund *et al.* (2008)	Business model of a firm describes the way the company creates revenue by specifying the relationships with other actors as well as the firm's position in the value-creating network	Revenue, actors, position, network

To help to find or adapt a suitable definition Al-Debei et al. (2008) have listed three requirements for a business model definition:

1) The definition should be comprehensive and general
2) It is not sufficient to define the business model only in terms of its components
3) The definition should synthesize the different points of view presented in earlier research

These requirements emphasize the general nature of business models. In short, Osterwalder (2004, p. 14) states that a business model is *"an abstract representation of the business logic of a company".* This statement illustrates the representational nature of business models and it is rather general but not comprehensive as it does not define the business logic. A very recent book by Writz (2011) extends this definition as it reviews the business model literature extensively and synthesizes an integrated business model definition:

> *"A business model is a simplified and aggregated representation of the relevant activities of a company. It describes how marketable information, products and/or services are generated by means of a company's value-added component. In addition to the architecture of value creation, strategic as well as customer and market components are considered in order to realize the overriding objective of generating and preserving a competitive advantage." (Wirtz 2011, p. 65)*

This definition is based on earlier research as it is a synopsis of analysis of previous research. Moreover it is general and extensive and it takes a wider perspective than just the components. This definition takes a strategic approach, which is important considering this thesis. Thus, this definition by Wirtz is appropriate for the thesis when discussed business models in general.

2.1.2. Evolution of the business model concept

According to Westerlund (2009) and Wirtz (2011) the concept of business model has evolved over the last few decades. First of all, Westerlund and also Wirtz identify three main periods that show how the term 'business model' has been used and how it has evolved. The first phase in the 1970s and 1980s focused on intra-organizational aspects. Back then business models were used to model internal structures, functions, processes, operations tasks and communication in order to support daily work and decision making. Wirtz (2011, p. 20) sees this period as a technological approach that focused on system construction and system modeling.

In the late 1990s business models were dominated by the emergence the Internet. The possibilities and the success stories of the Internet related businesses created a need to understand their value architecture. So, business models moved towards depicting value-creating processes and other entrepreneurs started to copy those success recipes. Therefore a whole new branch of business models was emerged. (Westerlund 2009, p. 25–26.) Business models lost a lot of credibility in the e-tech bubble, but the appreciation has recovered since (Magretta 2002). The 1990s and the early 2000s was also the period of organization-theoretic approach. Back then the scholars commenced to focus on abstract representation of the company's architecture. (Wirtz 2011, p. 20.)

During the last decade the business model concept has evolved towards strategy and external value network perspective. Therefore the focus of the business models has shifted to include external resources and relationships. (Westerlund 2009, p. 27.) This means that the unit of analysis has evolved from firm centric view to network view. Thus, the unit is not a single company as it was in the 1990s, but it is the network of suppliers, manufactures, partners, investors and customers. (Schweizer 2005.) The strategic aspect indicates that the business model concept has been dissected into components that altogether depict company's strategic choices and the sources of

competitive advantage. (Westerlund 2009, p. 27.) The following Figure 8 illustrates the evolution of business model concept.

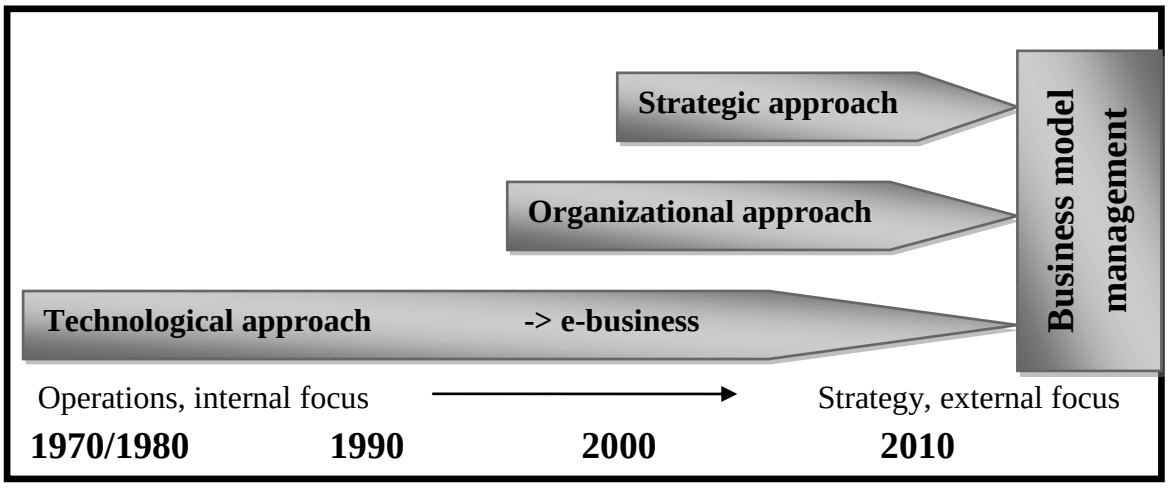


Figure 8. *Evolution of the business model concept. Adapted from (Westerlund 2009, p. 24) and (Wirtz 2011, p. 20).*

As seen in the Figure 8 above, all three approach end up to business model management. Wirtz (2011) argues that business model management would be the unifying theory for business models. He defines that business model management is "… an instrument for controlling a company and [it] comprises all target-oriented activities in the scope of design, implementation, modification and adaptation as well as the control of a business model in order to realize the overriding objective of generating and securing competitive advantages" (Wirtz 2011, p. 66). Thus, business model management is more than just modeling the businesses, which is the level of analysis in this thesis. Therefore, business model management is not included in this thesis.

2.2. Strategy, value and business models

As said, nowadays business models are strictly related to strategic thinking and strategic research. Nevertheless, practically all of the scholars agree that a business model is not a strategy (eg. Osterwalder 2004; Shafer et al. 2005; Zott et al. 2011). Although, strategy and business models have some common issues, they are meant to grasp different parts of business construction. Strategy is often seen as making choices that are related to future business and competitive positioning (Currie 2004, p. 32). Instead of just making choices, business models reflect these choices by facilitating, testing and validating the cause-and-effect relationships that derive from strategic choices (Shafer et al. 2005, p. 203). Thus, strategy as related to business models can be defined as "the choice of business models through which the firm will operate in the marketplace" (Casadesus-Masanell & Ricart 2010, p. 196). This implicates why Osterwalder & Pigneur (2002, p. 2) understand the concept of a business model as "the conceptual and architectural implementation of a business strategy".

Zott et al. (2011) argue that strategy focuses on competition, value capture, and competitive advantage, whereas the business model concept is orientated to cooperation, partnership, and joint value creation. However, for example Tecce (2010) argues that business models can create competitive advantage and they reveal the value capturing mechanisms behind the strategy. As strategy and business models are strongly related to competitive advantage (eg. Barney 1991; Teece 2010), there is a need for business models that may create competitive advantage. However, a successful business model is insufficient in itself to ensure competitive advantage. That is because the elements of a business model are transparent and therefore easy to imitate. The easiness is due to the generic nature of business models and therefore entire business models can be or will be copied even in months. Therefore, business models need something to support their structure and some kind of isolation mechanisms to hinder the copying. (Teece 2010.)

Teece (2010) argue that those processes, systems and assets behind a business model can prevent the copying. Therefore those processes, which constitute a business model, make the difference, not a business model itself. Secondly, a level of opacity limits replication possibilities. If competitors are uncertain about the details of a business model, it might gain competitive advantage. (Teece 2010.) At a wider perspective the main purpose of those processes, systems and assets is to create value. Therefore, the most important element in creating competitive advantage around a business model is to innovate a value mechanism that is hard to imitate. As stated already in the introduction chapter, value is the core of business models and practically every scholar agrees on this argument (Chesbrough & Rosenbloom 2002). Moreover they agree on that different value activities should be the foci of business models. Richardson (2008) has even constructed his study of business model concepts around value activities. Thus, the concept of value and value activities regarding business models have to be discussed to get a comprehensive view of business models and its strategic elements.

Wu and Zhang (2009) state that value activities include value creation, value delivery and value capture. Similarly Richardson (2008) states that a business model is consisted of value proposition, value creation and delivery system, and value capture. In detail, Chesbrough and Rosenbloom (2002), Osterwalder (2004) and many other scholars argue that creating a business model for a company starts by creating the value proposition for the customer. Value proposition is seen as a description of what value a customer or partner receives from the business. Moreover, is asks, why the customer is willing to pay that certain price for that certain offering? Thus, it answers the question of what kind of value the business creates for its customers and other stakeholders. (Osterwalder 2004.) According to Richardson (2008) value proposition has three elements. The first element is offering, which indicates the product(s) and service(s) the company is selling. The second element indicates the customers or target market to whom the company is selling the offering. The third element of a value proposition asks why the market is not served with this kind of proposition. Therefore it indicates why the proposition is better than the ones existing in the markets. (Richardson 2008.) Value

proposition is needed in order to know what kind of value will be created, delivered and captured. Thus, value proposition can be seen as an upper level term for other value activities and it basically affects every value activity. See the Figure 9 for the value activity process.

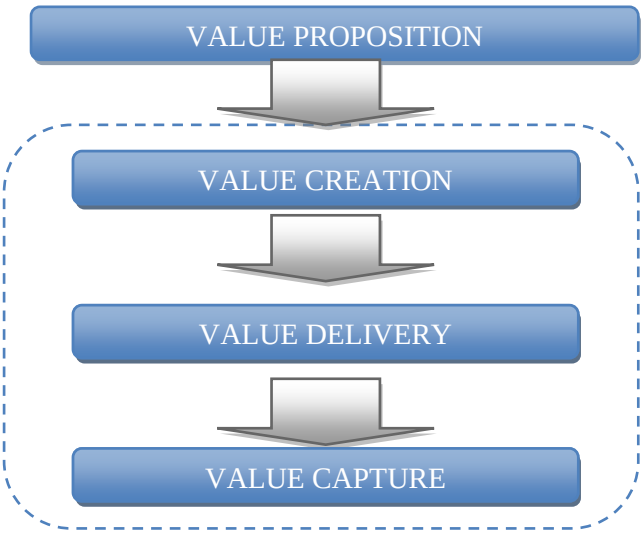


Figure 9. *Value activity process in business models.*

Value creation and delivery refers to the design of company's processes. In other words, they describe the company's resources and competencies and architecture of a company. Moreover, they stretch themselves to the concepts of value chain and value network, because a single company is not able create and deliver value by itself. (Richardson 2008.) Richardson (2008) propose that value creation and value delivery are considered as one component, whereas Osterwalder (2004) states that value creation is part of company's infrastructure activities, while value delivery is strongly linked to the customer interface. Thus, value is created with partners through resources and activities, while value is delivered through channels and customer relationship activities. In addition to value proposition and creation, value capturing is another essential concept when discussing business models. Value capturing means that the inherent value of a product, service or information is caught through appropriate economic logic (Chesbrough & Rosenbloom 2002). Thus, the value capturing is the last phase of value activities regarding business models.

Amit and Zott (2001) have studied business models and value creation. As a result, they listed four elements that add value to a business model: novelty, efficiency, lock-in and complementarities. Business models have novelty when they propose some new value done in a new way. Another aspect of novelty is uniqueness. Uniqueness is preferable in business models because it creates a completely new business logic that no-one of the existing or prospecting competitors uses. Therefore unique business models may have competitive advantage. According to transaction theory, business model efficiency

means that efficiency increases when the costs per transaction decreases. Costs are associated with a particular business model. Thus, an excellent business model has increased efficiency. Business models lock-in customers when they have built in systems that motivate customers to repeat transactions. For instance high switching costs in terms of customer loyalty and trust and positive network externalities increase customer lock-in. Finally, products or services are complementarities when their total value together is greater than the total value separately. Thus a great business model uses complementary offerings whenever it is possible. All in all, if a business model has all or some of these elements, it adds value and therefore it is preferable than the other. (Amit & Zott 2001.)

2.3. Business model components

As business models are described as an architectural configuration, they consist of components. Though, not all of the business models do have a configuration and therefore the components are just listed or there are no components. Nevertheless, a component is not the only term that the scholars have used. In addition to components, scholars have used such terms as elements (eg. Yip 2004), functions (Chesbrough & Rosenbloom 2002), dimensions (Schweizer 2005), and vectors (Venkatraman & Henderson 1998). Though, for instance Demil and Lecocq (2010) argue that components are further divided into elements, but in general all of the terms can be used interchangeably. Al in all, business model components describe the key aspects of business. Business models link those components together and the result is a form where the elements are interlinked forming the core logic of a firm. The focus of the architecture is on the components that create value and explain the interaction of those elements (Osterwalder 2004). As scholars do not agree on business models in general, they are also unanimous in the question what the essential elements in a business model are. Therefore there is no common business model architecture that would have mutually agreed components.

Hamel and Prahalad 1994 identified two cornerstones of business models, namely structures and routines. The first means that business models tend to describe how firms perceive their organizational structure, their business network and the position within that network. The second cornerstone describes how firms develop effective operational routines in order to exploit the potential value of their business. (according to Mason & Leek 2008.) Based on these two cornerstones scholars have widened the framework of business models and they have identified a group of components to describe the nature of business. Though, some of the scholars have concentrated to review this literature to find some similarities in the elements. For instance Westerlund (2009, p. 28) identified four essential elements that are commonly proposed in the conceptual business model papers and some other scholars (eg. Zott et al. 2011) are on the same track with minor

modifications. Therefore those four components proposed by Westerlund (2009) are listed here:

1. Offerings as the firm's value proposition
2. Assets and capabilities as resources
3. The economic logic or revenue logic
4. Relationships with actors in business networks

The first component is obvious as the value is the core of the business models. Among others Lambert (2008) argues that value proposition creates the conceptual primacy of business models. Lambert continues that value proposition is the reason for the entity existing and it is the heart of the business concept. Moreover, she argues that every other element of a business model flow from value proposition. She also found a vast coherence from the literature to support this argument. The second component is also significant, because without resources a firm cannot realize its value proposition. Resources are the muscles of a firm, and thus they do all the creative and hard work. A firm has to find appropriate capabilities and assets to support its value proposition or the other way around. The linkage between resources and value proposition is strong, and thus it is vital to take care of the coherence. (Westerlund 2009.) The third component captures the value that has been proposed. Economic logic explains why a firm can deliver value to customers at an appropriate cost (Chung et al. 2004). Thus it covers both the revenue logic and cost logic. Finally, relationships are also vital to a company. The network characterizes company's recurring ties among the actors it is related to (Chung et al. 2004). As the world has become more and more networked and the value is created in a value network, the business network is an essential part of business model concept.

2.4. Osterwalder & Pigneur (2010) framework

As this thesis uses case study methods to collect the empirical data and to analyze the empirical findings, the research team chose to arrange a workshop event to gather empirical data. For that workshop event, the research team needed an illustrative business model that first of all, had to be scientifically valid, and secondly suitable for managerial use. Eventually the team chose to use the framework proposed by Osterwalder and Pigneur (2010).

2.4.1. Justification to use this framework

An appropriate framework should have following attributes. First of all, it had to be scientifically valid and widely used framework. Secondly, since the other major objective was to introduce a framework to the managers of the case company, it should contain the attributes listed by Morris et al. (2005): reasonably simple, logical, measurable, comprehensive, operationally meaningful, and it must not oversimplify a

firm's model. These attributes are excellent considering managerial use, because general application of a business model framework requires simple methods. Therefore, in the Table 2, where different business models are compared, 'YES' means that these attributes are true whereas 'NO' means that these attributes do not match up. The term 'MAYBE' indicates that these attributes are partially suitable for that particular model. Some of the models can be old and outdated versions, in other words an enhanced version from the same author exists, and therefore the term 'OUTDATED' indicates that kind of situation. The evaluation of the attributes is purely subjective.

Since the framework should be general by nature, all of the purely e-commerce frameworks were listed out. Secondly, as it has to be relatively easy to use and logical, it should have a configuration in order to perceive the relation of components better. Thirdly, an operationally meaningful model that is not oversimplifying the business has to cover different aspects of business widely. Therefore a wide range of components is not considered negatively. Although Demil and Lecocq (2010, p. 231) argue that "by specifying only a few general core BM, components, each encompassing various subsidiary elements, we can avoid the disadvantages of the ex-ante approaches while still allowing comparisons across firms". However, as the purpose of the thesis is not to compare business models, but to provide a wide perspective of the case company's core business logic, a wide range of components might do this better than just few components.

In scientific terms, a valid model is a model that is located among the top ones when comparing the number of citations. Note that the number of citations is not the only aspect. A recent publication has usually lower number of citations than a bit older publication, but that recent publication might be more valid because of new information. The following Table 2 indicates the 13 most cited papers when searched for the term "business model" and "business models" in Google scholar search excluding pure e-business models. The search was done on December 10th 2011. Note that Dudosson-Torbay et al. (2002), Osterwalder and Pigneur (2002), Osterwalder (2004), Osterwalder et al. (2005), and Osterwalder & Pigneur (2010) are handled together. That is because the 2002 publications proposed an initial model that has evolved since. Though, the 2002 paper has some different components than the 2004 paper, which in fact is the original one in terms of configuration and components. Nevertheless, the main configuration, the four pillars of a business model, has remained the same since 2002. The latest version of Osterwalder's business model framework was proposed in 2010.

Table 2. *Comparing the business model frameworks.*

Publication	**Number of citations on December 10th 2011**	**BM components** **Number of components / subcomponents**	**BM configuration,** **N = narrative** **NC = narrative with a configuration** **V = visual** **E = examples of the BM**	**Framework for managerial use,** **YES = matches Morris et al's attributes** **NO = no match** **MAYBE = partial match** **OUTDATED = an old version**
(Dubosson-Torbay et al. 2002)	204	12	NC, E	OUTDATED
(Osterwalder & Pigneur 2002)	396	12	NC, E	OUTDATED
(Osterwalder 2004)	431	9	NC, E	OUTDATED
(Osterwalder et al. 2005)	442	9	NC	NO, OUTDATED
(Osterwalder & Pigneur 2010)	161 All together 1634	9	NC, E	YES
(Afuah 2004)	1009	5	NC, E	MAYBE
(Chesbrough & Rosenbloom 2002)	896	6	N, E	YES
(Magretta 2002)	809	3	N, E	MAYBE
(Morris et al. 2005)	379	6	N, E	YES
(Shafer et al. 2005)	314	4 / 20	NC, E	YES
(Hedman & Kalling 2003)	247	7	V, E	MAYBE
(Linder & Cantrell 2000)	223	7	N, E	MAYBE, SOMEWHAT E-BUSINESS RELATED
(Johnson et al. 2008)	183	4 / 17	NC, E	YES
(Petrovic et al. 2001)	180	7	V	MAYBE

As the Table 2 shows, Osterwalder's framework has gained a lot of popularity among the scholars. Even if the 2002 publications would have omitted, the framework by Osterwalder (and Pigneur) would still be popular. Thus, let's investigate other prerequisites for this thesis. Considering the business model components, there are few studies that have taken a comprehensive literature review where the different components are ontologically reviewed. The paper presented here is composed by Shafer et al. (2005). They reviewed the business model literature and combined an affinity diagram (Figure 10).

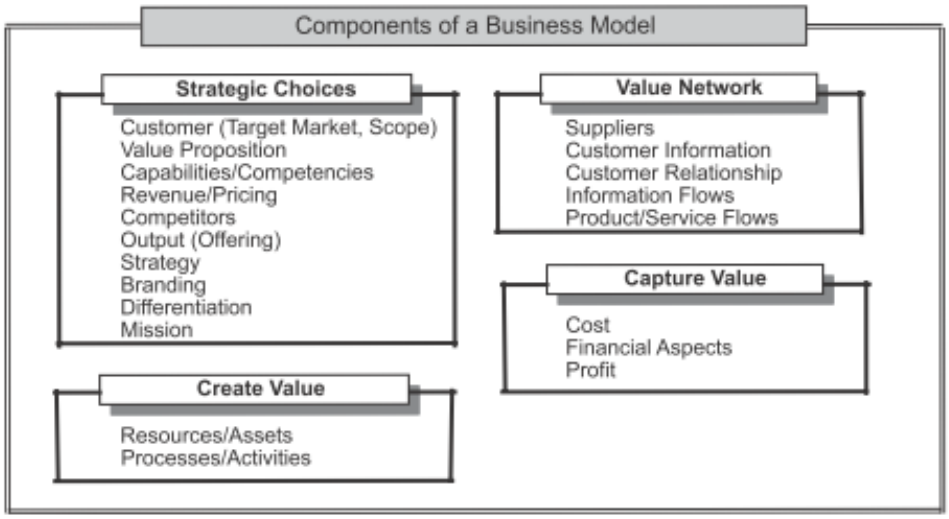


Figure 10. *Business model structure and components (Shafer et al. 2005, p. 202).*

Shafer et al.'s model is very similar to Osterwalder's model (Figure 11), which is introduced in detail in the next section, but their component diagram has even more components than Osterwalder's model. However, many of the extra components indicate process activities and others strategic issues, which do not belong to business models. Therefore, those components cannot be considered as business model components. Thus, by excluding those, the remaining components are in fact like Osterwalder's proposed components. On the other way round, also Osterwalder (2004; 2005) verified and validated the components that he proposed through an ontological literature review.

Osterwalder's papers from 2002, 2004, 2005 and 2010 have gathered well over 1000 citations altogether and the latest version has over 160 citations alone. Moreover, their model has all of the attributes required by Morris et al. (2005). It is easy to use, easy to perceive and suitable for all kinds of businesses. The Canvas dissects business model into nine elements that together depict company's strategy and business opportunities. It can be used to describe the current state and the 'where we want to be' state. Moreover, the 'Business Model Generation' -book (Osterwalder & Pigneur 2010) is aimed at managerial and practitioner usage, and therefore it provides the best available concept

for this research. However, Osterwalder's papers cannot be found in isi.org, which still gives room for a business model that would be scientifically more valid.

2.4.2. Framework components

Osterwalder's framework is illustrated in the Figure 11. The framework is an ontological model. Thus, Osterwalder studied previous papers considering business models and composed an ontological model, in other words reference model, from those papers. Their model provides "concepts and tools that help manager to capture, understand, communicate, design, analyze, and change the business logic of their firm" (Osterwalder et al. 2005 p. 19). The framework has been developed since 2002, as Dubosson, Osterwalder and Pigneur sketched the initial decomposition. After that Osterwalder (2004) framed this initial work into this kind of form in his academic dissertation. After the dissertation major developments are the changes in the component names. The core logic of the business model concept has remained the same. Thus, the changes have been slightly modest while the main target group has shifted towards managers and practitioners.

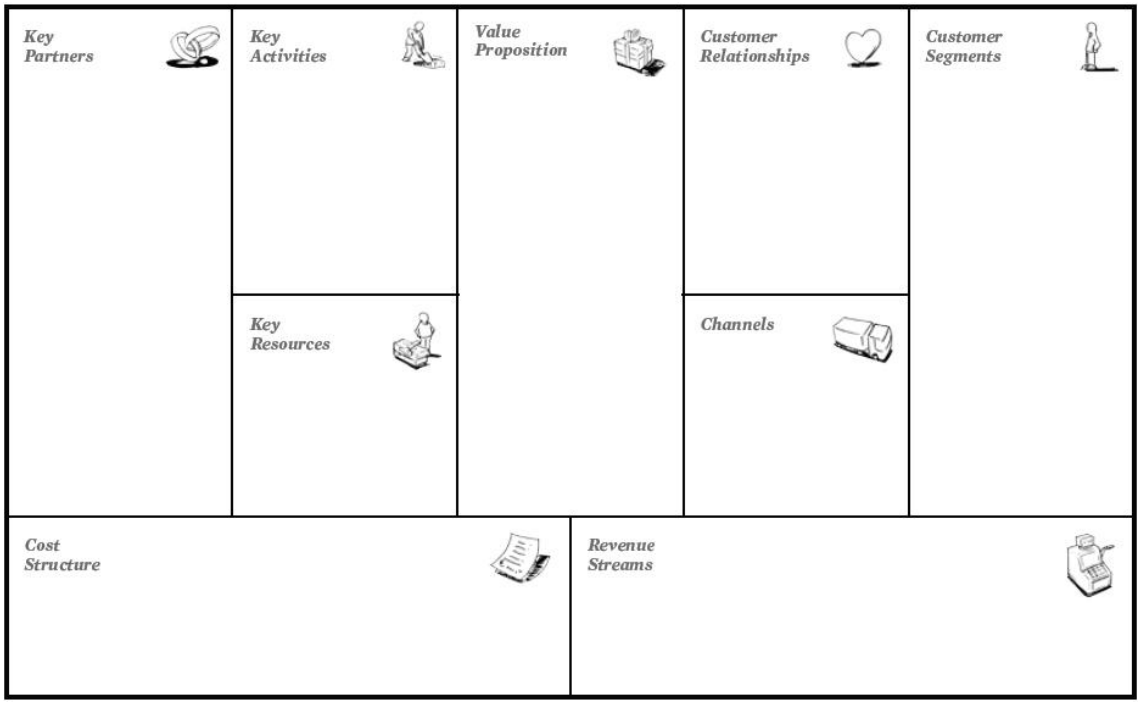


Figure 11. *The Business Model Canvas (Osterwalder & Pigneur 2010, p. 44).*

Customer segments. Customer comes always first – so it does in this model. Therefore the first step is to determine company's customers and customer segments. A customer segment has common needs, and other common attributes that determinates how the segment is behaving. It is an important decision to choose, which segments are served and which not. Once customer's specific needs are known, an organization is able to sketch a business model around those needs. In short, customer segmentation answers

the question: For whom are we creating value? (Osterwalder & Pigneur 2010, pp. 20–21.)

Value proposition. The core, as it lies in the middle of the canvas, is value proposition. Value in general and value proposition were widely discussed already and thus they not expanded further. Briefly, value proposition is an aggregation or bundle of benefits that a firm offers. (Osterwalder & Pigneur 2010, pp. 22–23.)

Channels. Channels are company's interface when it communicates with customers and when it distributes its outcomes to customers. Thus also customer experience forms when a customer is in contact with a channel. Basically there can be two types of channels: own and partner's managed channels. It is good to remember that channels can be allocated also by company's ability to impact the customer. Hence, channels are typed into direct and indirect channels. Broadly, own channels lead to higher margins but they can be costly to operate, whereas partner channels lead to lower margins with lower fixed costs. (Osterwalder & Pigneur 2010, pp. 27–28.)

Channels also have fife different functions that they serve. First, they raise the customer's awareness by e.g. advertising. Second, they allow customer to evaluate the company's value proposition. Third, they allow customer to purchase. Fourth, they deliver company's value proposition with every action they make. Finally, after a purchase a channel provides post-purchase support for customers. (Osterwalder & Pigneur 2010, pp. 27–28.)

Customer relationships. Customer relationships relate to the form of customer involvement and interaction in the contact and purchase process. Therefore, relationships can range from personal, for instance personal assistance, to automated, for instance automated services. With customer relationships a company can acquire and retain customers and boost sales. (Osterwalder & Pigneur 2010, pp. 28–29.)

Revenue streams. Revenues are the arteries of a company – it lives as long as revenues flow. Therefore companies must clarify how much its customers are willing to pay, in other words how much they value company's offering. Revenues can be either transactional or recurring. Transactional fees are one-time payments like asset sales whereas recurring fees are ongoing payments like subscription fees. Therefore companies have multiple pricing mechanisms to choose from and they have to figure out what kind of mechanism would be the most suitable in their business model. (Osterwalder & Pigneur 2010, pp. 30–31.)

Key resources. Resources allow companies to perform their activities whereas key resources allow companies to offer their value proposition to customers. Resources can be owned, leased, or acquired from partners. There can be physical, financial, intellectual and human resources. Physical resources include every tangible asset such as physical facilities and machines. Intellectual resources are mainly intangible and they

include among others brands, patents and copyrights. In this context human resources are not just personnel, but the knowledge and creativity the personnel has. Finally, financial resources are emphasized in a business model if a company needs plenty of capital and/or financing its customers is part of the value proposition. (Osterwalder & Pigneur 2010, pp. 34–35.)

Key activities. Key activities are the tasks or broadly speaking the main functions of companies. Key activities enable companies to operate successfully and to create and to offer a value proposition. Fox example in consultancy the key activity is problem solving. (Osterwalder & Pigneur 2010, pp. 36–37.)

Key partners. As the world becomes more and more complex, partners become more valuable. According to Osterwalder and Pigneur there are three motivations for creating partnerships. First, the need for optimizing and allocating resources and activities drive companies together in order to reduce costs. Second, sharing risks and managing uncertainty are important aspects in a competitive environment. Those factors drive companies to form strategic alliances and joint ventures. Third, firms can also acquire particular resources or activities. This extends company's capabilities and therefore the main purpose is not cost reduction as in the first motivation factor. (Osterwalder & Pigneur 2010, pp. 38–39.)

Cost structure. Cost structure describes the most important costs incurred by the particular business model. Osterwalder and Pigneur distinguish two broad approaches that firms can have when they plan their cost structure and business models. The first is cost-driven approach, where firms focus on minimizing costs. The other approach is value-driven, where they focus on value creation and therefore are less concerned with the costs. (Osterwalder & Pigneur 2010, pp. 40–41.)

2.5. Change and business models

Traditionally business models are static projections of the current business and they do not depict or forecast the future of the company. A change in a business model is a respond to perceived threat, challenge or opportunity. Thus by altering their existing business models companies can keep moving forward. Without a change or changes companies may not survive in the competitive world. Moreover, understanding changes helps adapting business models more effectively (Osterwalder & Pigneur 2010, p. 200). Thus, the reasons for changes have to be clarified in order to understand why changes are needed. Robbins (2003, p. 556) has listed six reasons for change in an organization: nature of the workforce, technology, economic shocks, world politics, social trends and competition (Figure 12). Each of these forces may be an initiative for a company to improve its performance or each of them has to be dealt with just to justify company's existence.

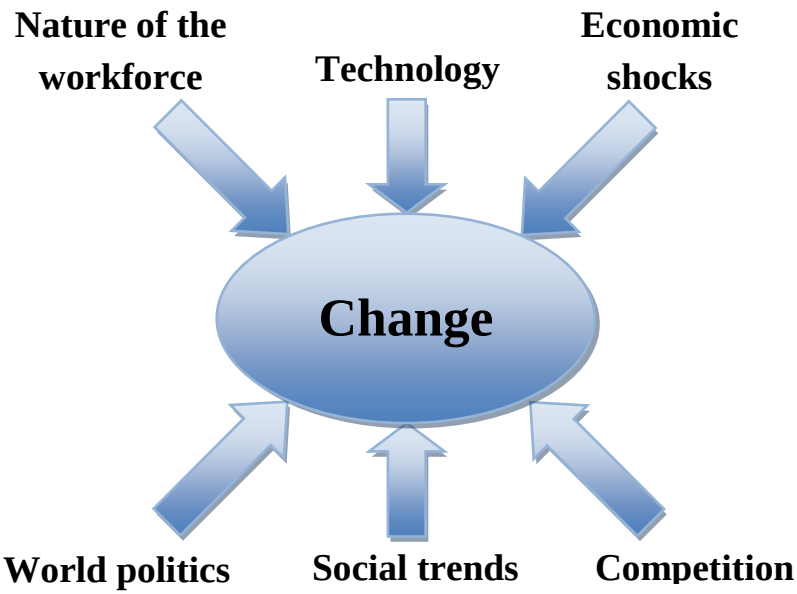


Figure 12. *Forces for change (adapted from Robbins 2003, p. 556).*

Nature of the workforce has shifted over the recent years. The major driver is the cultural diversity that has increased and therefore organizations and especially human resources have to adjust and adapt themselves into this multicultural challenge. Another aspect is the increase of professionals, which also changes the organizational culture. Technological possibilities are a major game changer in the modern world. Computing power has become more and more cheaper and new mobile solutions provide new working methods. As the current economic insecurity proves, economic shocks change businesses as well. Economic shocks are also related to world politics, which can create new possibilities as well as new threats. For instance opening of markets in China brought about enormous possibilities but the juxtaposition of Muslims and Christians create a threat to the modern world. The fifth aspect, social trends, like social media and people moving to urban areas, create pressure for change in companies' businesses. The last, but not the least, reason for change is competition. Competition might be the biggest reason for constant change and improvement programs in companies. (Robbins 2003, pp. 556–557.)

Regarding specifically business models, Osterwalder and Pigneur (2010) have studied, which environmental factors affect business models. As noted in the Figure 12 it is the environment that initiates the change and forces companies to review their business models. Osterwalder and Pigneur propose that there are four forces that compel companies to change their business models. By and large, those forces are the same as in the Figure 12, but Osterwalder and Pigneur have chosen these four forces because they are the main threats of existing business models. Those forces are: key trends, market forces, industry forces and macroeconomic forces (Figure 13).

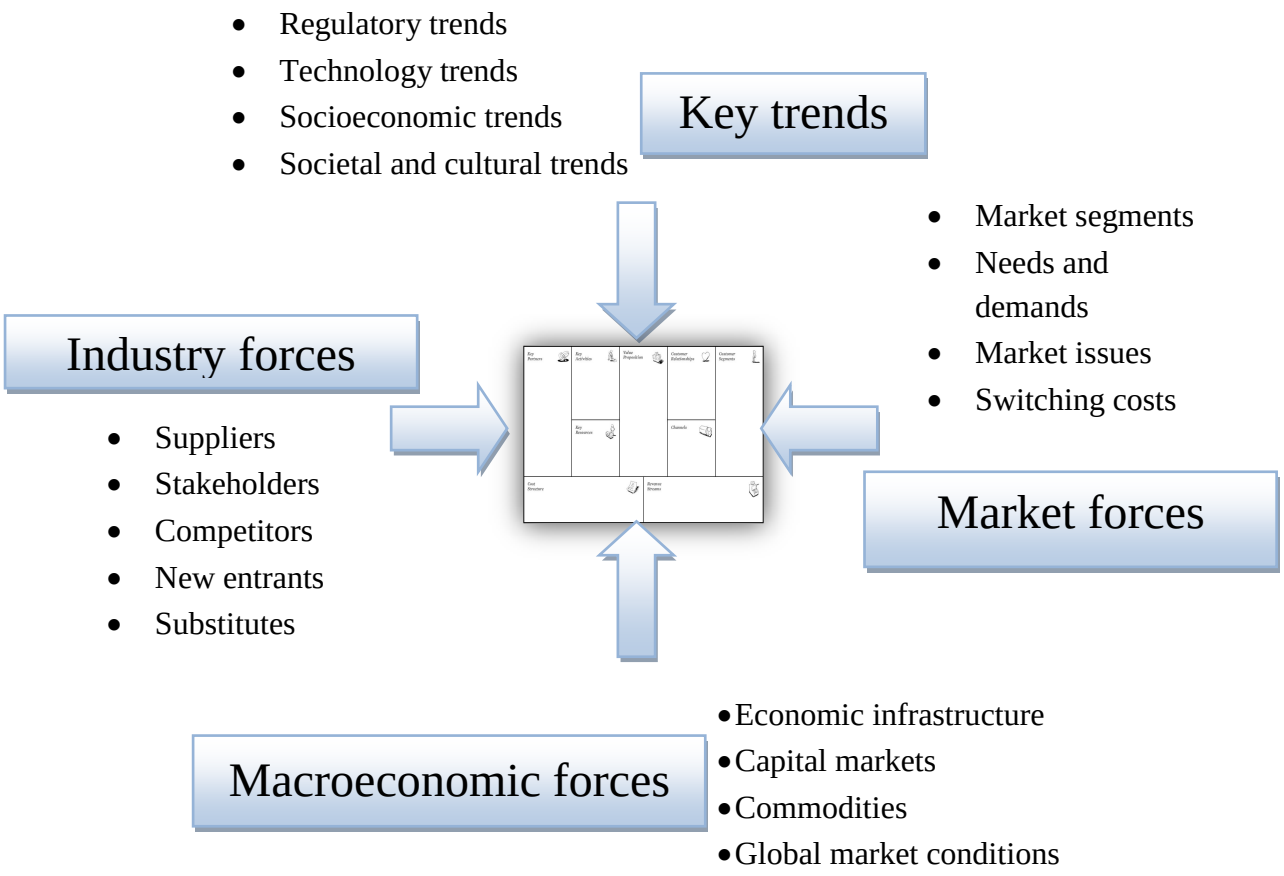


Figure 13. *Business model environment (adapted from Osterwalder & Pigneur 2010, p. 201).*

2.5.1. Change models

Demil and Lecocq (2010) have divided changes to voluntary and emergent changes. Voluntary changes are intended choices related to one or several core component, whereas emergent changes are unintended and partly beyond executive's control. Emergent changes may come from the environment as from the sources described above, but they may also be the result of unanticipated effects of voluntary decisions. Thus, as the components of a business model are interlinked, a deliberate change to a business model may bring up unwanted effects. However, not all emerging changes are negative. A positive effect comes if a company catches an emergent opportunity and exploits its possibilities successfully. Another aspect of a change is whether it is incremental or radical. An incremental change in general is an adjustment between or within the core components of a business model, but a radical change challenges the core logic of a business model. (Demil & Lecocq 2010.)

Because of these change drives depicted in the Figure 12 and Figure 13, companies are under constant pressure to change their existing business model (Linder & Cantrell 2000). Improving a business model is a complex art. Excellent designs are likely to be

highly situational and the design process involves iteration. (Teece 2010.) Regarding business models and change Linder and Cantrell (2000) have identified four kinds of change models: realization model, renewal model, extension model, and journey model. Figure 14 illustrates these four types of business model changes. The x-axel indicates the degree of the core logic change in a business model.

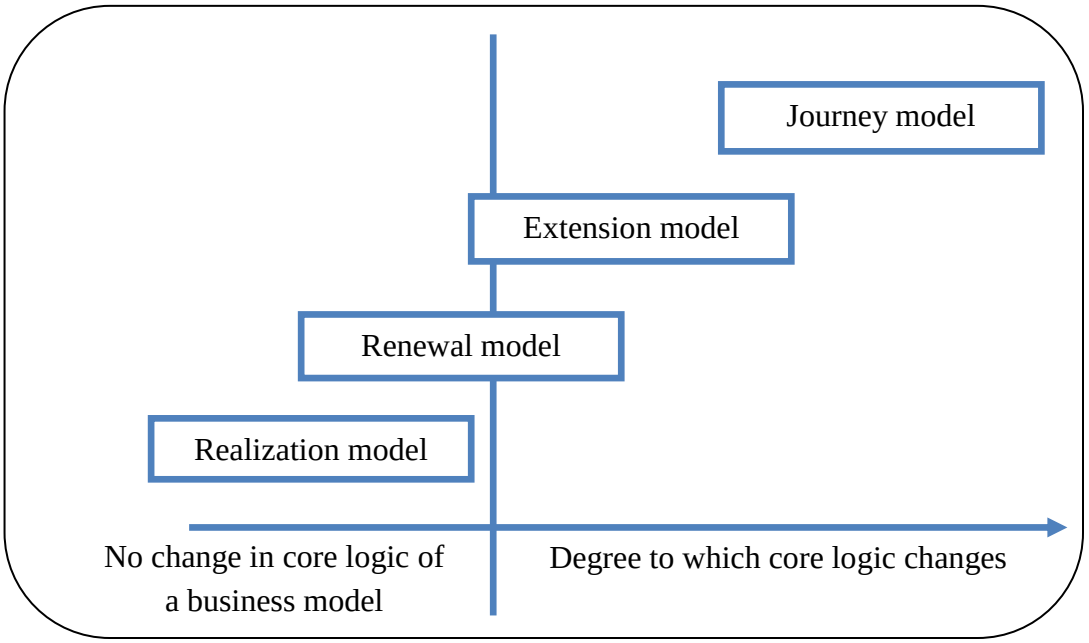


Figure 14. *Business model change (adapted from Linder & Cantrell 2000, p. 13).*

Realization model maximizes returns from the existing business model by exploiting its existing potential. Therefore the logic of the current business model does not change. For example, a geographic expansion and a customer base growth do not change the existing model, but instead they exploit it more efficiently. When executing a renewal model, a company consistently and consciously revitalizes its business components. So, they make counteracts to respond the competition for example by creating new brands or going to untouched markets. Extension model expands business by integrating new functions to the current model. Extension model involve forward or backward integration. Some extension models utilize firm's internal capabilities to create new business lines, thus extending the business model to a new business. Journey models move companies to a new operating model. In a journey model companies shift their value propositions and never go back to the old. For example a company's globalization from a local player is a journey model. (Linder & Cantrell 2000.) What is the most important is the degree of change in the core logic. By acknowledging the degree and estimating its effects, a company can predict the impacts of a change.

Similarly to Linder and Cantrell (2000), also Wirtz (2011) has proposed change models for a business model change. He states that a business model can be changed partially or wholly. In a whole change the existing business logic is changed. A partial change

changes a component whereas a whole change affects every component. Thus the extent of a change varies dramatically. Consequently he argues that there are five change models: stabilization model, evolution adaptation model, extension model, migration model and radical innovation model (Figure 15).

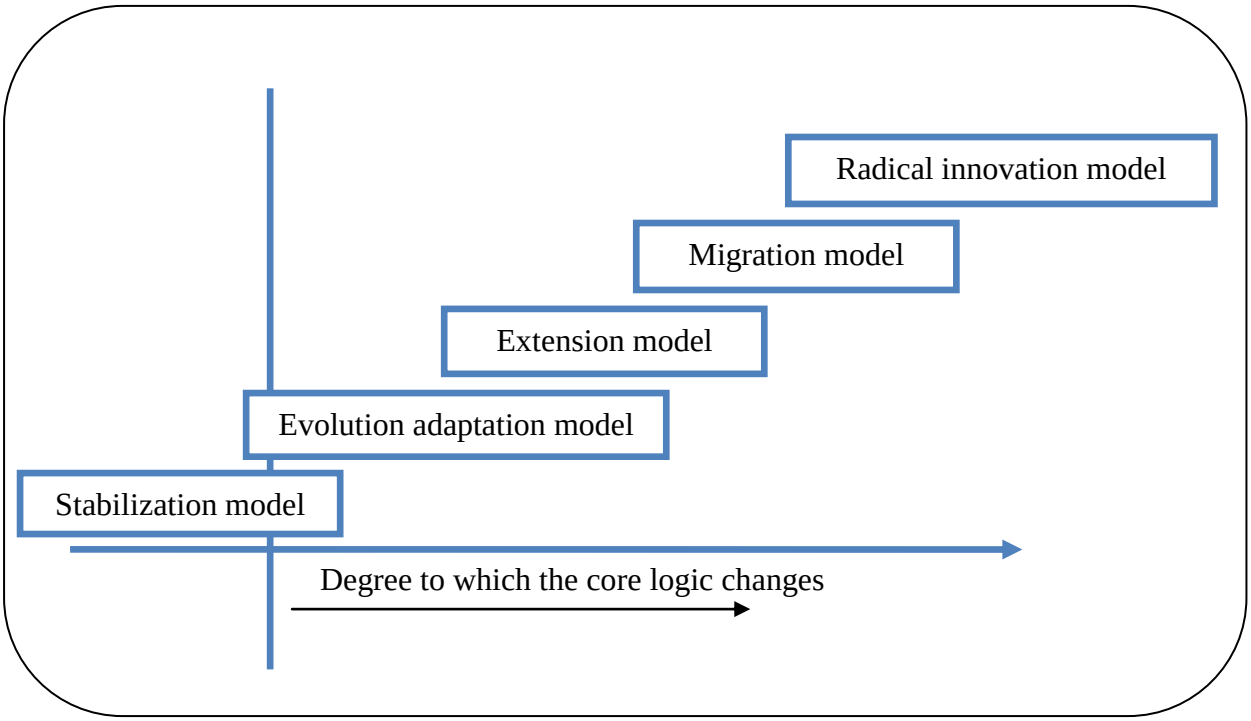


Figure 15. *Change models (adapted from Wirtz 2011, p. 248).*

A stabilization model is a stable model that can be applied only when there is low intensity of competition. Even a component change is not profitable because of low rate of success. Due to the strict regulation tobacco industry is an example of stabilization model. Evolution adaptation characterizes continuous change. Thus, detailed improvements are implemented as they come apparent. Hence, the business model is adapted constantly. Intel is an example of this kind of business model change. That is because their innovative products modify the market offer as they come to the markets. Otherwise Intel's business model is not changing radically. Extension model extends the existing business model by changing a component significantly. However, the basic structure still remains intact. For example, a new distribution channel extends a business model. Migration model refines the interactions between business model components. With a migration model a company can distinguish itself and gain competitive advantage. Finally, the radical innovation model makes a complete upheaval to the existing business model. Thus, the structure and the components of the existing model are renewed. An example of this is Nokia in 1990s as it changed its business from pulp, cable and rubber industry to telecommunication industry. (Wirtz 2011, pp. 249–250.)

2.5.2. Enablers and disablers of a business model change

Because of forces for change, change is constant and always present in organizations. If organizations keep doing the same that they are accustomed to do, they are almost certain to fail. Interestingly, Doz and Kosonen (2010) state that business models are tended to be stable by nature and therefore hard to change. Their logic is that the stability comes from constant need for efficiency and predictability. Thus, the companies want reliable and efficient scale ups as they focus on growth of the current business. Moreover, traditional management practice is based on repetition of tasks, which in fact increases stability. This stability causes rigidity in business models. (Doz & Kosonen 2010.)

To overcome that rigidity and to renew business models Doz and Kosonen propose that strategic agility is needed. They divide strategic agility into three components: strategic sensitivity, leadership unity and resource fluidity (see Table 3). First, companies with heightened strategic sensitivity are superior when recognizing and identifying opportunities for new business models. Second, business model changes and transformation requires collective commitment and tough and risky decisions. Therefore new and adaptive leadership is essential to enable the change. Thirdly, resource fluidity allows companies to redeploy and reallocate their resources. In general, a change in a component requires a change in the business processes and thus a change in resources. Therefore resources need fluidity to allow a smooth change. (Doz & Kosonen 2010.)

Table 3. *Factors that accelerate business model renewal (adapted from Doz & Kosonen 2010, p. 372).*

Strategic sensitivity	Leadership unity	Resource fluidity
1. Anticipating - Sharpening foresight	**6. Dialoguing** - Exploring underlying assumptions	**11. Decoupling** - Gaining flexibility
2. Experimenting - Gaining insight	**7. Revealing** - Transparency of motives	**12. Modularizing** - Assembling and disassembling
3. Distancing -Gaining perspective	**8. Integrating** - Building interdependencies	**13. Dissociating** - Resource access and allocation
4. Abstracting - Gaining generality	**9. Aligning** - Sharing common interest	**14. Switching** - Using multiple business models
5. Reframing - Seeing the need for renewal	**10. Caring** - Empathy and compassion	**15. Grafting** - Acquire to transform

Also Effectuation, experimentation and organizational leadership may help to change companies' existing business models. First of all, experimentation refers to that business models should be experimented in practice with real customers and real money. Effectuation refers to taking action rather than overanalyzing the environment. This kind of action taking might reveal latent possibilities. Finally, organizational leadership is obvious as organizational inertia is a major barrier for a change. (Chesbrough 2010.) All in all, transforming the business model of a successful company is never easy, as inertia from many sources defends the status quo (Doz & Kosonen 2010).

2.5.3. Dynamic business models

A business model is a snapshot at the given time of the interactions between the core components. Instead of a static model, a business model should be concerned as a motion picture, where a single frame is the current model. Therefore the business model evolves in the course of time and it is constantly changing. This kind of thinking requires dynamism because without dynamic modeling managers are not able to respond to a threat or opportunity from the firm's environment as quickly as they are required. Dynamic view integrates change in the business model concept and therefore it ensures performance over time. (Demil & Lecocq 2010.)

The other aspect of dynamic business models is that their core components are interlinked and thus the changes that occur within or between the core components have an effect to the other core components. Therefore interactions will follow the choices made in a core component, such as value proposition or organization, and those choices have an impact to the other core components and their elements. The impact may or may not have preferable consequences. In addition, those impacts and their consequences are hard to anticipate. Thus dynamics keeps the business model in a constant state of disequilibrium. (Demil & Lecocq 2010.)

Demil and Lecocq (2010) suggest that managers should have 'dynamic consistency' when they manage business models and the changing environment of the business models. They clarify that by identifying the consequences of change in one component on the other components managers can introduce deliberate changes or reduce change-effects in order to maintain or improve performance. Thus, dynamic consistency is needed to resist the effects of a change and to anticipate the change patterns. This kind of capability requires that managers monitor the risks and uncertainties that could affect the firm's business model. Moreover it requires a deep knowledge and understanding of the concerned business model and of the relations it consists of. By understanding the patterns and relations of BM components the managers can implement deliberate actions that promote consistency between their business model components. (Demil & Lecocq 2010.)

Mason and Leek (2008) have a slightly different perspective on dynamic business models. They describe dynamic business models as "preconceived organizational and network structures build through the development of interdependent operational and administrative routines that evolve through problem solving activities" (Mason & Leek 2008, p. 776). This kind of definition refers that a business model is dynamic because business models evolve as knowledge is created and transferred in a network. Therefore company's structures and routines are on a constant change. (Mason & Leek 2008.) All in all, both internal and external changes affect business models.

2.5.4. Business model renewal

Due to the incoherent literature, scholars have used different terms to describe transition from a current to a future business model. Researchers have used terms such as business model 'renewal' (Linder & Cantrell 2000; Doz & Kosonen 2010), 'transformation' (Aspara et al. 2011), 'augmentation', 'extension' (Linder & Cantrell 2000) and 'evolution' (Demil & Lecocq 2010; Morris et al. 2005). Although these terms have differences in their meanings, they all can be used to describe change in a business model. Therefore these are used interchangeably in context of business model change process. (Pateli 2002 according to Gunzel & Wilker 2009.)

The term evolution is used to describe the constant change due to changes of the environment and the survival of the fittest models. The evolution theories suggest that traits are inherited by natural selection and thus the species evolve and adapt to their environment over time (University of Michigan 2010). Renewal describes a single process from current to a future state and it is somewhat radical action. Moreover, renewal is a deliberate top-down action that is often based on strategic decisions. In context of business models the term renewal is used when discussed business model innovating or other complete renewal process. Transformation describes a less deliberate process than renewal, and it may not be a radical but an incremental process. Transformation has genetic heritage and thus it features the adaptation to the environment. In contrast, in a renewal process the environment can be created or the environment may adapt to the desired business model. In conclusion, the most appropriate term considering this thesis is renewal.

Osterwalder and Pigneur (2010) recognize five epicenters that can serve as the starting point for a business model renewal. Those epicenters are resource-driven, offer-driven, customer-driven, finance-driven and multiple-epicenter driven. A resource driven renewal states that the renewal origins from existing infrastructure or partnerships. Thus the existing resources are used to create and attract new offerings and customers. An offer-driven renewal creates new value propositions, whereas customer-driven renewal origins from customer needs. A finance-driven renewal stems from new revenue streams and pricing mechanisms and finally a multiple-epicenter renewal has multiple starting points. (Osterwalder & Pigneur 2010.)

If business model changes are seen as renewals or transformations, in other words not as a continuous, dynamic process, then a business model has a life cycle (Gunzel & Wilker 2009). By simplifying the life cycle, it can be divided into three main phases, namely planning, changing and implementing (Osterwalder 2004). Wirtz (2011, p. 245) proposes a simple four-phased process for a business model life cycle. Its phases are initiation, concept, implementation and evaluation (Figure 16). These phases are rather general but their function is to depict the change process commonly.

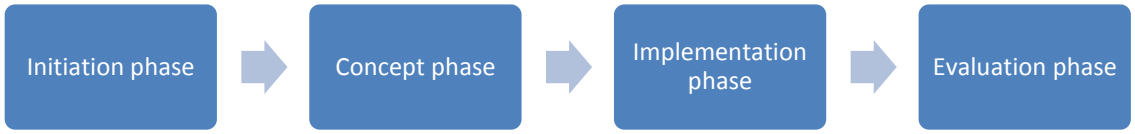


Figure 16. *Business model change process (adapted from Wirtz 2011, p. 245).*

During the initiation phase the managers analyze the current business model and identify its advantages and disadvantages. There are also some triggers that have initiated the change process. Once those triggers are identified, managers can assess if there are some opportunities for business model innovation or if those triggers create some threats for certain business models. The second phase elaborates those initial ideas into a draft. That draft has a detailed description of the business model concept. Moreover, possible partners that enable the concept are identified. The implementation phase includes constructing a project schedule and a risk management program that both are vital due to the extent of the changes. Finally, the evaluation phase evaluates the implementation phase and tracks if there is any room for improvements. (Wirtz 2011, p. 245.) Similarly, Osterwalder and Pigneur (2010, p. 249) propose a five-phased design process (Figure 17). Their process is rather similar to process proposed by Wirtz. The main difference is the addition of the mobilize phase where the business model participators set the stage for a new business model by describing the motivation, creating awareness and assembling elements and tools for a successful business model design.

Figure 17. *Business model renewal process (adapted from Osterwalder & Pigneur 2010).*

Osterwalder (2004) states that business model implementation is related to the processes of a company. Thus the newly sketched business model is decomposed and translated into business structures, business processes, and infrastructures and systems. Implementation is a crucial phase as it determines how a business model actually performs. According to Doz and Kosonen (2010) one of the major challenges of

implementing a particular business model is to reflect about its totality rather than specific components. Therefore managers have to acknowledge the whole logic of the particular business model in order to execute it successfully. It might be a challenge because executives have their own reasonability areas in which they are concentrated and they might not know what kind of interactions their current area has with other functions. Moreover it is even harder to imagine a different system of activities and its interactions. (Doz & Kosonen 2010.)

2.5.5. Business model designing

Business model concepting and designing is another essential theme considering this thesis as the empirical part of the thesis considers mainly these phases. First of all, Pateli and Giaglis (2005) describe a three-phased business model design process, which is decomposed into six substeps. Their design process is based on Petrovic (2001) and Auer & Follock's (2002) proposed business model evolution model. Pateli and Gialis' change model has a technology innovation approach. So, it is intended in a situation when a company has innovative technology that influences its business and therefore its current business model. Moreover, their model has a strong network perspective. This is because they suggest that a company cannot handle a major innovation by itself and therefore it needs a partner that has the missing capabilities to accomplish the change. The process is based on three learning stages, namely understand, identify and change. These stages are rather general steps in a learning and adaptation process. This model is not suitable in the raw when it comes to this thesis's approach and objectives but it supports them nevertheless. The following Figure 18 describes the BM change process phases.

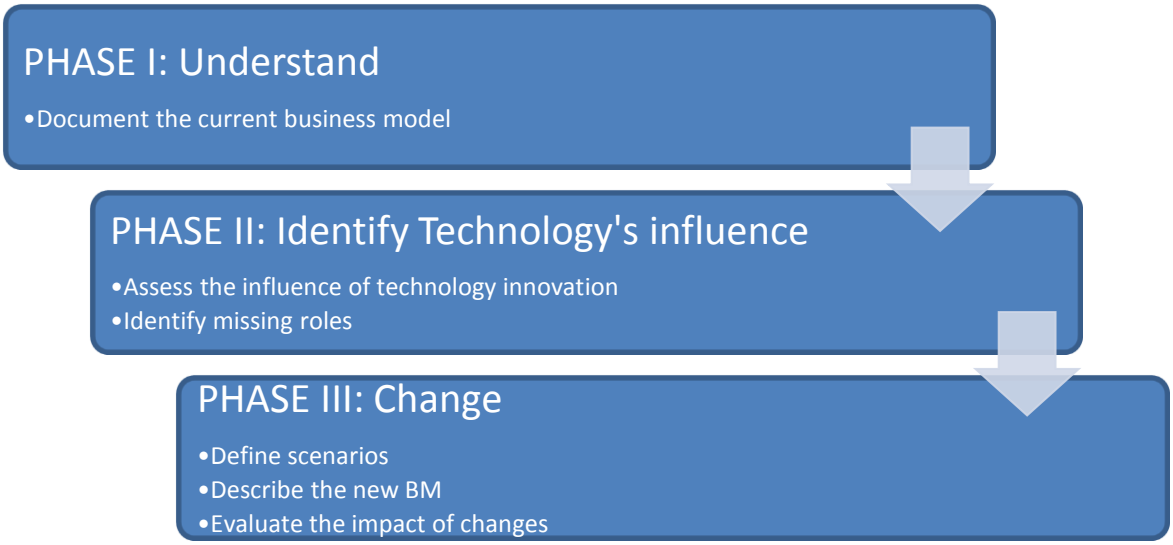


Figure 18. *Business model renewal process (adapted from Pateli & Giaglis 2005, p. 171).*

Phase I is about understanding the current business model. It is critical to understand and to analyze the current situation in-depth in order to benchmark and assess it against technology innovation impacts. The analyzing tool can be by and large any business model framework that a company finds suitable. Pateli and Gialis suggest that Osterwalder and Pigneur's proposed framework that was introduced in the chapter 2.4 is an appropriate tool in this phase. (Pateli & Giaglis 2005.)

Phase II concerns with assessing the impact of technology innovation on the current business model. This phase tries to identify possibilities for evolution or extension of the current BM. The first step in this phase is to assess the influence of technology innovation. So, the benefits and impacts of the given technological innovation are identified with regard to the key elements of the business model. After the identification the changes of the key elements are imposed on the current business model. The second step in this phase is to identify missing roles. A company is not expected to have all the capabilities by itself and therefore it seeks alliances and other cooperation modes to complement its own capabilities. Thus, this phase tries to identify missing competencies that the newly identified changes might bring. (Pateli & Giaglis 2005.)

Phase III concerns with the design and description of the future business model. The first task is to define scenarios for the new roles. Each scenario tries to depict a different cooperation scheme. Moreover, each scenario defines the responsibilities of the players in the new business environment. This task enables companies to experiment with different business model propositions, and to explore their implications. The second task is to describe the new business model in terms of indicating the value that each player brings to the future business model. The third task is to evaluate the impact of changes. It is necessary to conclude the process by estimating the impact of the transformed business model on the structure and dynamics of the markets concerned. (Pateli & Giaglis 2005.)

Also Wirtz (2011, p. 194) proposes a designing process regarding business models. He has named four phases, namely idea generation, feasibility study, prototyping and decision-making (Figure 19). The result of his design process is a business model that is ready to be implemented. Thus, Wirtz considers that the design process reaches all the way from an insight to the threshold of implementation.

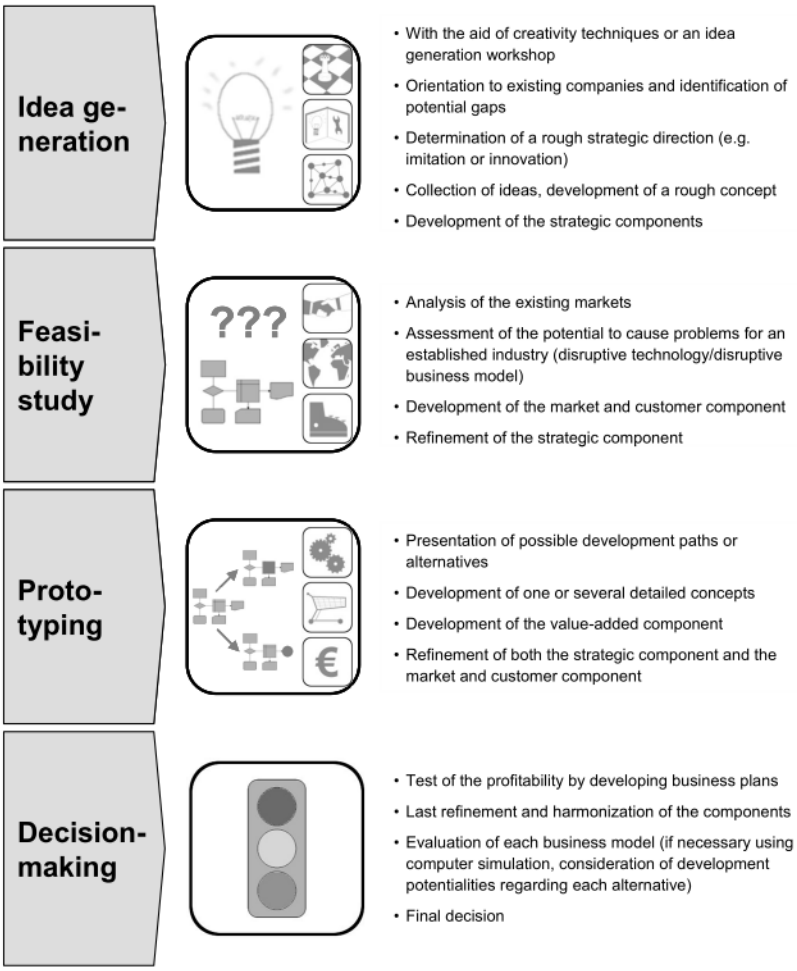


Figure 19. *Business model design process (Wirtz 2011, p. 194).*

Osterwalder and Pigneur (2010, p. 248) state that business model designing is the actual filling of a business model Canvas. Therefore their design process includes phases like ideation, visual thinking, prototyping and scenarios. Thus, the ideas and information that are gathered for the designing phase are transformed into business model prototypes. The prototypes are explored and tested and the most satisfactory business model is to be implemented. They propose that an appropriate testing tool is the SWOT framework. SWOT comes from terms strengths, weaknesses, opportunities and threats.

Also Sandström & Osborne (2010) describe a design process (Table 4). Their aim is to provide guidelines to managers to handle a product innovation process involving a business model renewal and multiple actors working as a network. Thus, this guideline includes elements that are related to product innovations and its starting point is that the capable networking actors are unknown.

Table 4. *Managerial guidelines for how to renew business models (Sandström & Osborne 2010, p. 12).*

	Managerial action
Step 1	Map all relevant actors in terms of their incentives, resources and activities.
Step 2	Find out how value is created and distributed among the actors
Step 3	Identify actors which are critical for the adoption of product innovation
Step 4	Design a business model which aligns incentives throughout the established actor network.

2.5.6. Thoughts about business model renewal literature

First of all, this thesis covers only the initiation and concept & design phases of business model renewal process. In addition, the implementation phase is scratched depending on whether the phases after the actual designing of a business model are considered as designing or implementing. Such phase include feasibility study and prototyping. Nevertheless, the actual implementation phase, where a business model is translated to processes is out of the scope of the thesis. Scholars have studied business model renewal at conceptual level and they have proposed the phases of a business model life cycle. They have described the steps of initiating, designing and concepting a new business model rather comprehensively. However, business model implementation is a barely untouched subject in the business model literature (Osterwalder et al. 2005).

Wirtz's (2011) design process is related to business model innovation and his model includes a strategic component that is developed during the process. This means that his process assumes that a business model designing is related to strategy designing. Therefore, it lacks the view that actually a business model realizes the strategy, as for example Osterwalder and Pigneur (2002) see it. To remind and recap their view, they understand the concept of a business model as "the conceptual and architectural implementation of a business strategy" (Osterwalder & Pigneur 2002, p. 2). This view indicates that strategy formation and business model formation are not parallel but sequential phases. Though, the formation of strategy and business models can be iterative as well. Interestingly, also Osterwalder and Pigneur's (2010) design process lacks the strategic point of view. Their design process does not clearly state the importance of strategy as a main influencer. However, it is an important to note that business model innovation can be the source of competitive advantage, and strategy may not have anything to do with an innovative business model. Nevertheless, as this thesis's focus is on a business model that is derived from the strategy and therefore it is an implementation of that strategy, the business model literature lacks a design process where a business model realizes the strategy. Therefore idea generation phase is not needed as the strategy reveals the initial story. Also Pateli and Gialis' (2005) design

process lacks this point of view as it takes technological innovation as the main influencer of a business model.

Moreover, the current literature does not describe how the network should be taken into account during the design and implementation processes. Sandström and Osborne (2010) have a strong network view on their guideline. Thus, their guideline is essential for the objective the thesis. Their level of analysis is appropriate, as it gives instructions for managers, but their approach is related to product development. That means that they assume that a business model is designed based on network capabilities and network structure. Thus, the actors that are capable of producing a certain part of the value activities are chosen first and the business model is designed based on that network. Moreover, their level of analysis regarding business models is related to network incentives and networks in general. In this thesis the level of analysis is the individual company and its network. In addition, the approach is the other way round as the business model is designed based on strategic views and the network incentives and network structure are composed after the initial business model. Thus, a network does not determine business model, but the business model determines the network.

2.6. Networks and business models

Networks are an important aspect of this thesis since the case company does business in a network and their intention is to deepen the network integration even more. Therefore the relationship of business models and networks is inspected in this section. Network pictures, which are introduced in the section 2.6.2, are an important aspect of the thesis since they can be work as the practice of business models and their networking aspects (Mason & Spring 2011).

2.6.1. The concept of networking

Networking gained attention as Jarillo (1988) and many other scholars before and after his publication argued that a networked operations model is beneficial in industrial context. The problem of networking is the abundance of terminology and approaches concerning networks. The terminology ranges from partnerships to joint-venturing along with clusters, strategic alliances, and system suppliers. Consequently, the theoretical and also practical definition is ambiguous. Nevertheless, the best way to describe a networked environment is to say that it is neither completely market-based nor hierarchically organized but something between them (Figure 20). Thus networking gets different forms depending on where it is located between those two extremes. A network is therefore consisted of actors and their relationships. Moreover there is some type of exchange between the actors. The type of exchange may vary from physical goods to information and money. (Vesalainen 2002, pp. 8–11.)

Figure 20. *The relationship of markets, networks and hierarchies.*

Although the concept of networking was not proposed until the 80s, networks and networking is not a phenomenon that has emerged. Actually networking is intrinsic to the nature of business activity and therefore it has always been there since the early days of industrialization and even since the beginning of merchandize. (Ford & Redwood 2005.)

Network structures have some superior advantages. First, by outsourcing activities, companies can avoid making large investments in assets, which results to high return on assets. This also leads to concentrating on the core competence and gaining competitive advance by focusing on a particular activity. Secondly, a network provides access to capabilities beyond organizational boundaries (Rajala & Westerlund 2008). Thirdly, because the rate of technology development is rapid, existing capabilities become quickly obsolete. A network structure enables agile switching of suppliers and manufacturers, which enables companies to better exploit the opportunities of new technologies. (Afuah 2004 , p. 136) On the other hand if a network structure requires a long-term commitment, it is not feasible to switch network partners (Vesalainen 2004, p. 19). Thus it is a question of the type of the relationship whether this is an advantage or not. A network view of business models has some advantages.

Besides advantages a network structure has also two major disadvantages. First, it is difficult to have competitive advantage if the company does not perform major value-adding activities. Second, outsourcing complicates interaction, coordination and communication. (Afuah 2004, p. 137.) Therefore, alliance management, revenue sharing and transparent cooperation are critical success factors for network management (Pateli & Giaglis 2005).

Möller and Halinen (1999) have identified four levels of analysis regarding networks. At the first level an entire industry is viewed as a network whereas at the fourth level an individual has networked with other individuals. See the following Table 5 for the classification.

Table 5. *Four levels of network management (adapted from Möller & Halinen 1999, p. 417).*

Level of management	Key issues
Level 1: Industries as Networks – Network Visioning	Networks, as configurations of actors carrying out value activities form the "environment" the firms are embedded in. Understanding networks, their structures, processes and evolution is crucial for network management.
Level 2: Firms in the Network – Net Management	Firm's strategic behaviour in networks can be analyzed through the focal nets they belong to and the position and roles they play in these nets. Positions are created through business relationships. Capability to identify, evaluate, construct and maintain positions and relationships is essential in a network environment.
Level 3: Relationship Portfolios – Portfolio Management	Firm is a nexus of resources and activities. Which of these activities are carried out internally and which through different types of exchange relationships is a core strategic issue. A capability to manage a portfolio of exchange relationships in an integrated manner is required.
Level 4: Exchange Relationships – Relationship Management	Individual customer/supplier relationships form the basic unit of analysis in a network approach to business marketing. Capability of creating, managing and concluding important relationships is a core resource for a firm

Regarding this thesis, the levels 2 and 3 are the most important ones and therefore those are introduced here. At the second level firms form a network and therefore it is the most common case when networks are discussed. The third level has a bit more interesting point of view as it views that a firm is a nexus of resources and activities. Thus, this view considers networks as activities and resources and it is concerned only if these activities are executed internally or externally. (Möller & Halinen 1999.)

2.6.2. Network pictures

ARA (actors, resources and activities) model by Håkansson and Johanson (1992) has been in favor of the networking scholars for years. Nevertheless, the ARA model that describes actor bonds, activity links and resource ties is now being replaced by a new concept called network pictures. Network picture is a subjective representation of the actor's environment and its exchanges. There is no commonly accepted definition for network pictures, but for example Ford and Ramos (2006, p. 2) define network pictures as "… a representational technique that aims to capture or illustrate views that specific actors have of the networked environment within which they operate". This definition indicates that network pictures are tools for researchers and managers to interpret how actors see their surroundings (Ramos & Ford 2011). Thus network pictures can be used similarly to business models, as a research tool. Moreover, network pictures illustrate the very essential elements of networking, and thus it is an ideal concept to introduce in case of networked business models.

Scholars do not propose instructions how to draw a network picture because a network picture should illustrate actor's views and it therefore their structural compositions vary (Henneberg et al. 2006). Instead, they have listed elements that should be in a network picture. At least two scholar groups have conceptualized the elements of network pictures. First is introduced a structure by Ramos and Ford (2011). Their construction is a three-element theoretical model. Those elements are scale & structure, processes, and personal positioning (Figure 21). Also Leek and Mason (2010) have used this framework with slight modifications as they studied network pictures. Their elements

were number and nature of actors, relationships and actors, actor's positioning and processes. The first and the second element can be considered as scope and structure.

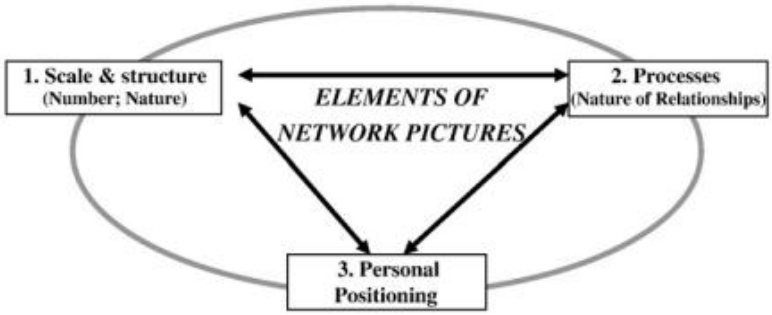


Figure 21. *Elements of a network picture (Ramos & Ford 2011, p. 449).*

First of all, the scale of a network equals the number of actors identified by the individual, whereas the structure, the constitution of a network, is defined by the nature of the actors. The nature of the actors can be seen as relationships, aspirations and problems. Relationships define how the actors are interlinked, whereas aspirations why they are interlinked. Problems define the uncertainties and challenges that the actors face. Thus, the structure is a complex system, whose form depends on three aspects. It is crucial to define both scale and structure to get the initial picture of the network. (Ramos & Ford 2011)

Processes are the relationships of actors and therefore those processes include actor bonds, resource ties, and activity links. Actor bonds are defined with such terms as trust, commitment and closeness as they measure the quality of the relationship. Companies own all kinds of assets and resources, which are shared between the actors. Those shared resource linkages are called resource ties. Activity links refer to the resources that are transferred or transformed in a network. (Ramos & Ford 2011.) Activity linkages can be considered as traditional supply chain flows; information, material and financial flows (Fiala 2005).

Personal positioning is determined by that actor's surroundings and relationships to the network. For example activity links and resource ties and moreover resource constellation that the actor owns, all determine the personal position. It is vital to be aware of one's own position in order to negotiate properly. (Ramos & Ford 2011.) Ford et al. (2002, p. 48) argue that "company's position is defined by the characteristics of the company's relationships and the benefits and obligations that arise from them". The different focal company positions are reviewed in the next section.

Besides these three elements reviewed above, Henneberg et al. (2006) have postulated an eight element construction, of which four elements differ from Ramos and Ford's (2011) proposed core elements. The first element is power. Power refers to the independency or dependency of an actor. Therefore it defines how depended the actor is

on the network. Secondly, they argue that a network picture can have information regarding time horizon, as if it tells the duration of the relationship. Thirdly, there can be a certain focus activity, resource or actor in a network picture. If a focus is identified the actors must prioritize it. Finally, the network picture should take also environmental forces into account. Those forces are the ones that are outside the visibility of the network picture, but they can influence the network. These four elements are not key elements regarding this thesis and therefore they are not considered when sketching the pictures.

2.6.3. Network types

Tapscott et al. (2000) have proposed that value networks or business webs, as they call them, can be classified into five categories, namely Agora, Aggregation, Distributive network, Alliance, and Value chain. They have differentiated the webs with two attributes: control and value integration. Control can be either hierarchical or self-organizing, whereas value integration ranges from low to high. A hierarchical network has a dominant actor that leads and controls the network whereas a self-organizing network is the opposite of a hierarchical network. A high value integrated network has multiple actors that provide value to the network and a solution to the customers, while a low integrated network provides a basket of choices, such as wholesalers. See the following Figure 22 for the business web typing.

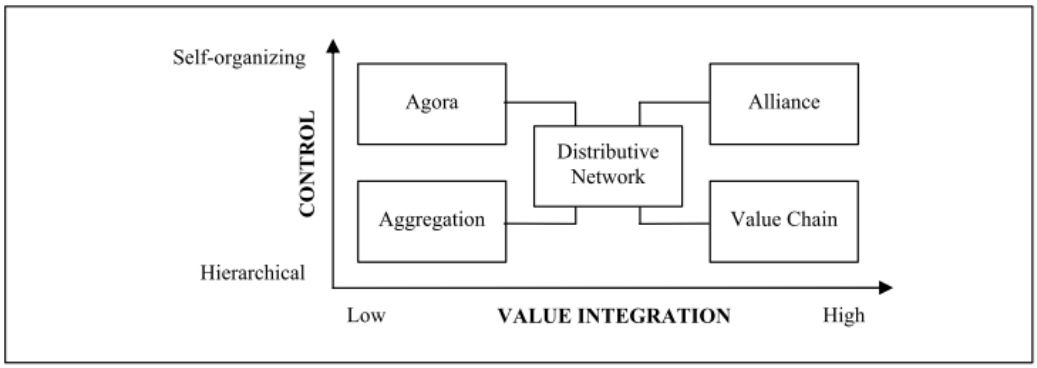


Figure 22. *Business webs (Tapscott et al. 2000 according to Osterwalder 2004, p. 27).*

Agora type of network enables buyers and sellers to organize merchandize rather freely to exchange a wide range of products. EBay is a good example of Agora network. In an aggregation network a leading actor takes control of merchandize and sets itself between buyers and sellers in such way as Amazon does. In a value chain a hierarchical actor provides a solution with its networking partners, such as Dell does. Linux is an example of an alliance since it is providing a high valued solution in a self-organized network. Finally, FedEx or any other parcel service is an example of distribution network that mobilizes the economy. (Tapscott et al. 2000 according to Osterwalder 2005)

Also Schweirzer (2005) has proposed a classification of different network types. The main aspect of this classification is that the focal company can be part of multiple networks as a layer player or market maker, or it can rely on a single network and work there as an orchestrator or an integrated actor. See the following illustration for the classification (Figure 23).

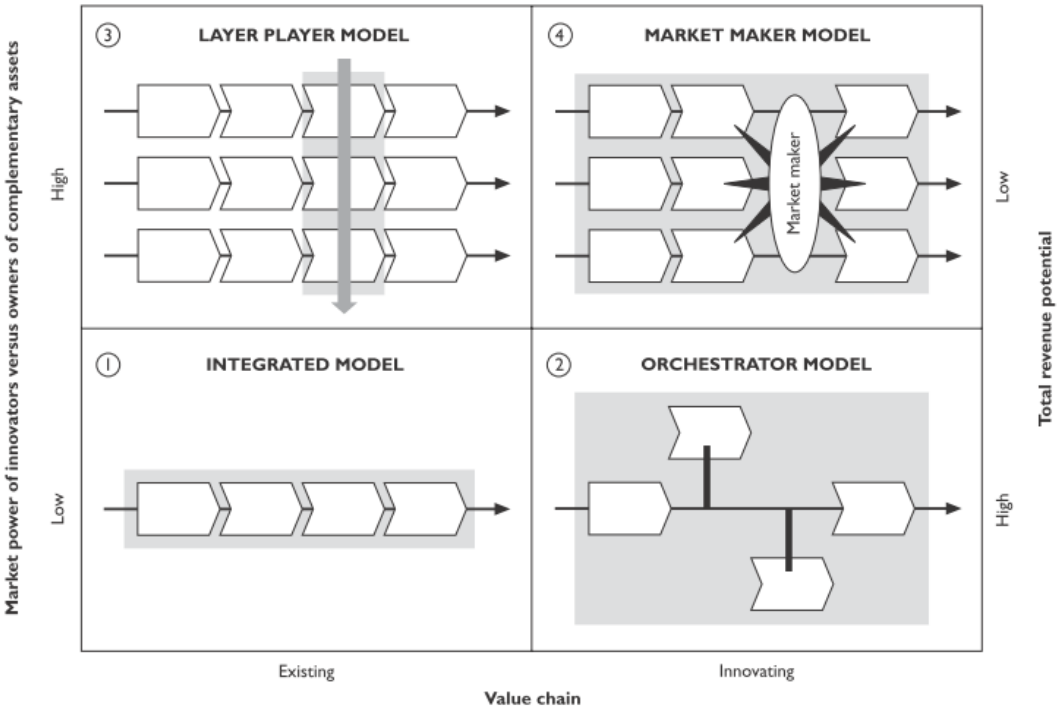


Figure 23. *Typology of business models from network point of view (Schweizer 2005, p. 48)*

As seen from the various classifications, a focal company can arrange its network and its role in a network very differently. Thus, actor positioning and network hierarchy are essential elements when networks are narrated and visualized.

2.7. Business modeling versus process modeling

Although the notion was made that business models are not process models, it is essential to define and emphasize the differences between process modeling and business modeling. That is because, as noted in the network pictures section, the network pictures tend to describe networks as processes, not as business models. Gordijn et al. have researched this theme and they found seven differences between process modeling and (e-)business modeling (Gordijn et al. 2000, pp. 50–51):

1. The concepts in e-**business modelling are centred around the notion of value**, while in process **modelling concepts focus on how a process should be carried out** in operational terms.

2. In an e-business model, an actor **adds value** and is profitable, while in a process model an actor **performs an operational process.**

3. In an e-business model, **objects represent something of value to a stakeholder**, while in a process model **objects serve as inputs and outputs for activities** and may be used the steer the process flow.

4. In an e-business model, **object properties can be used by a stakeholder to determine the value of an object**. In a process model, **object properties are used to determine state transations**.

5. In an e-business model, **value exchanges represent a transfer of ownership**, while in a process model **a flow of information or goods implies a change of state**;

6. In an e-business model, we have the notion of "One good turn deserves another", which is conceptualised by the value interface. Such a notion is **absent** in process modelling.

7. In an e-business model, we are **only interested in activities which are capable of adding value and are profitable**. Decomposition of such activities is done to discover smaller chunks of activities that still add value and are profitable. Discovering these activities often leads to re-assignment of activities to actors. In a process model, decomposition serves the goal of clarification of the workflow or to show the assignment of activities to working actors. Hence, the model decomposition rules are different.

Although the context of the research is e-business, those above mentioned differences are applicable to general business models as well. One should though remember that the above mentioned business modeling refers to a representational technique that does not embody narrative business models such as Osterwalder and Pigneur's (2010) Business Model Canvas. Nevertheless, those differences are important, as discussed what kind of differences the different kinds of business models have. Moreover, business modelling and process modelling happen at different levels of an organization (Figure 24).

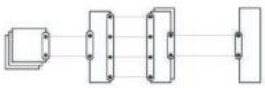
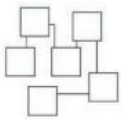
Requirement viewpoint	Stakeholders involved	Requirement viewpoint focus	Requirement viewpoint representation
Business value viewpoint	 C*O's Marketeers Customers	 Values, actors, exchanges	 e^3–*value* ontology and UCM scenarios
Business process viewpoint	 Tactical marketeer, Operational management	 Processes, workers, information, goods, and control flows	 UML • Activity diagrams • Sequence diagrams • Interaction diagrams High-level Petri Nets

Figure 24. *Value modeling and process modeling (Gordijn & Akkermans 2001, p. 12).*

To conclude this section, the main point is to emphasize the value when describing and drawing business models. Thus, business modeling, as a representational technique, illustrates the flows and exchanges of value between the actors, whereas a process model describes flows of resources and activities between the actors.

2.8. Assessing and evaluating networked business models

The purpose of this section is to evaluate how the existing business model literature takes into account the different attributes of networks. The following Figure 25 illustrates and comprises well the different attributes that a networked business model should have.

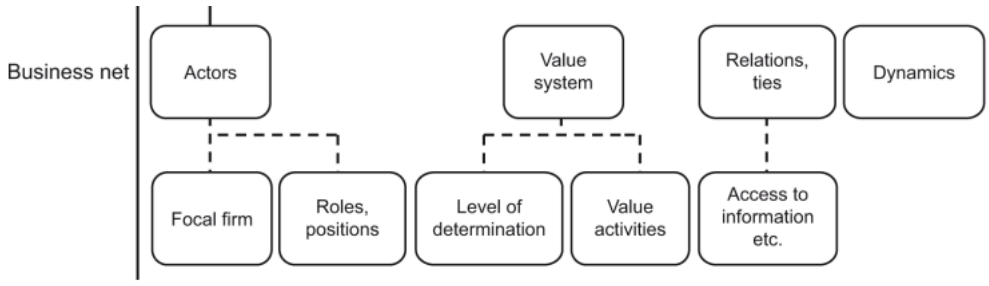


Figure 25. *Networked business model elements (Palo & Tähtinen 2011, p. 380).*

Therefore, at a business net level, a business model should recognize different actors and their relationships and ties. Those relationships form a value system that creates and

delivers value to customers. Finally, the dynamics, in other words the network processes, fills those relationship ties between the actors (Ramos 2008).

2.8.1. Criteria to evaluate business models

As mentioned previously, business models tend to be general by nature and therefore they are mainly applied at the firm level. Thus, the most cited and also used business models are firm centric and they only concern the exchanges of a focal firm. Hence, a business model is often hard to distinguish from strategic frameworks. This firm centric view loses the flexibility and creative ambiguity that the business models would otherwise have. If the perspective is widened to a network, the observer can have a more comprehensive view of the value network and its interactions. (Mason & Spring 2011.) Therefore, some scholars have proposed business models that emphasize the network or even take the network centric view.

The purpose of this chapter is to do a literature review of the business models and to review how they handle the networks and its elements. In other words the business model papers are assessed based on three attributes proposed by Ramos and Ford (2011). The only difference is that the first element is divided into scale and structure. Therefore the elements to be identified are: number of actors (scale), structure of the network, network processes, and actor positioning. Those four network picture elements are ideal when it comes to recognizing networking aspects from business model literature, because a business model can describe and illustrate them if it recognizes their existence.

Besides networking elements, the level of analysis is an important inspection object. Therefore, similarly to networks, there are business models that take different level of analysis. For example Palo & Tähtinen (2011) recognized three networking perspectives. The first is a single firm perspective, which describes the business from the focal company point of view. This kind of perspective assumes that the focal company may have partners and other stakeholders, but it views business models from company's standpoint and therefore it explores only company's internal actors. The second level of analysis is a single firm within a network. This kind of perspective recognizes that the focal firm is a part of a supply chain, value network or an actual network, but it still focuses on a single company and its business. The third perspective is a pure network point of view. It views how the network is operating and creating value. Thus, some of the studies focus on a single company and its networked characteristics while others focus on a network and its activities.

Mason and Spring (2011) have also categorized business models into three categories based on their level of analysis. However, they have a bit wider perspective as they see that the scale is from individuals interacting to develop a business model to industry or market level. Therefore their initial level is that an individual interacts to create and

develop a business model and thus business models can be used as narrative and calculative devices in innovating processes (Doganova & Eyquem-Renault 2009). The second level is the firm level precisely as Palo and Tähtinen see it. Finally, the third level interacts at industrial or market level. Such business models describe the dynamics and logics of an entire industry.

The type of concept refers to where the concept is located between strategy and process. In other words a strategic business model concept is usually a descriptive listing of business model components and thus it does not form those components and give relationships of those components. However, a process description-like business model may describe the actors and relationship linkages of those actors. These are not universally valid presumptions, but generalizations. Thus 1/5 is a purely narrative model. 2/5 is a narrative model that has a configuration between the components. 3/5 is not a process-like or visual model nor purely narrative model but something between them. 4/5 has a clear illustrative structure as it depicts the process but it does not use Unified Modeling Language (UML)-type coding to depict it. Finally 5/5 illustrates a business model like a business process with UML-type of coding. Thus, generally speaking, a strategic related business model describes the business logic while a process related business model illustrates the business process in terms of incomes and outcomes.

The fifth column describes the characteristics of the cooperation as described in that particular business model. It therefore clarifies what kind of terminology the paper uses when discussing about cooperation. Besides the hierarchy perspective, the study perspective describes whether the conceptualization is based on general management (G) or e-commerce (E).

The papers listed below, in the Table 6 are selected with heuristic methods. The main data source is the synthesis of business model literature by Klang (2010). In addition to papers listed by Klang, some others are also taken into this review because they seem valid and they have some network aspect. The main aspect including a paper in this assessment is that it has some kind of business model configuration and it includes business model components as well. The configuration is important because it reveals the relationships of the components. Therefore some of the conceptual models are excluded from the review and the emphasis is on the rigorous model approach papers. See the following Table 6 for the synthesis. The mark '✓' indicates that the certain element was identified from the certain paper whereas 'o' indicates that the element was not found.

Table 6. *Synthesis of the network perspectives on business models*

Authors	**Study scope**: S = single firm, S&N=Single firm within a network N = Network	General / E-commerce	Type of concept	Characteristics of cooperation	Network elements			
					Scope	Structure	Actor positioning	Processes
Hamel (2000)	S&N	G	2/5	Value network: suppliers, partners, coalitions	✓	✓	o	o
Ericsson (2000)	S	E	5/5	-	o	o	✓	✓
Linder & Cantrell (2000)	S	E	2/5	-	✓	o	o	o
Amit & Zott (2001)	S	E	2/5	-	✓	✓	o	o
Gordijn & Akkermans (2001)	S	E	5/5	-	o	o	o	o
Petrovic et al. (2001)	S	E	2/5	-	o	o	o	o
Weill & Vitale (2001)	S&N	E	5/5	Ally	✓	✓	✓	✓
Betz (2002)	S	G	3/5	Resources	o	o	o	o
Chesbrough & Rosenbloom (2002)	S	G	1/5	Position within value network	✓	o	✓	o
Magretta (2002)	S	G	1/5	-	o	o	o	o
Hedman & Kalling (2003)	S	G	4/5	Suppliers	✓	o	o	o
Afuah (2004)	S	G	2/5	Connected activities	✓	o	✓	o
Yip (2004)	S	G	3/5	-	o	o	o	o
Morris et al. (2005)	S	G	2/5	-	o	o	o	o
Schweizer	N	G	3/5	Value chain	✓	✓	✓	o

(2005)								
Shafer et al. (2005)	S&N	G	2/5	Value network	✓	o	o	o
Johnson et al. (2008)	S	G	2/5	Key resources	✓	o	o	o
Richardson (2008)	S	G	2/5	Value network	o	o	✓	✓
Demil & Lecocq (2010)	S	G	2/5	External organization	✓	o	o	o
Osterwalder & Pigneur (2010)	S	G	2/5	Key partners and resources	✓	o	o	✓
Palo & Tähtinen (2011)	N	G	5/5	Business net	✓	✓	✓	✓
Mason & Spring (2011)	N	G	3/5	Network architecture	✓	✓	✓	o
Authors	**Study scope:** S = single firm, S&N=Single firm within a network N = Network	**General / E-commerce**	**Type of concept**	**Characteristics of cooperation**	**Scope**	**Structure**	**Actor positioning**	**Process**
					Network elements			

As seen in the Table 6, there are only few papers that take most or all of the network characteristics into account and are able to describe the networked business. Moreover, in general those business models are illustrated as processes. Nevertheless, let's take a closer look at the models proposed by Weill and Vitale (2001), Mason and Spring (2011), and Palo and Tähtinen (2011). Osterwalder and Pigneur's (2010) business model is inspected in the next section.

Weill and Vitale (2001) have proposed an e-business model that highlights three aspects, namely participants, relationships and flows between the actors. Their 'business model' is therefore very close to a network picture. Actually there are no notable differences between these two illustrative models. See the following Figure 26 for an example and legend of Weill and Vitale's notation.

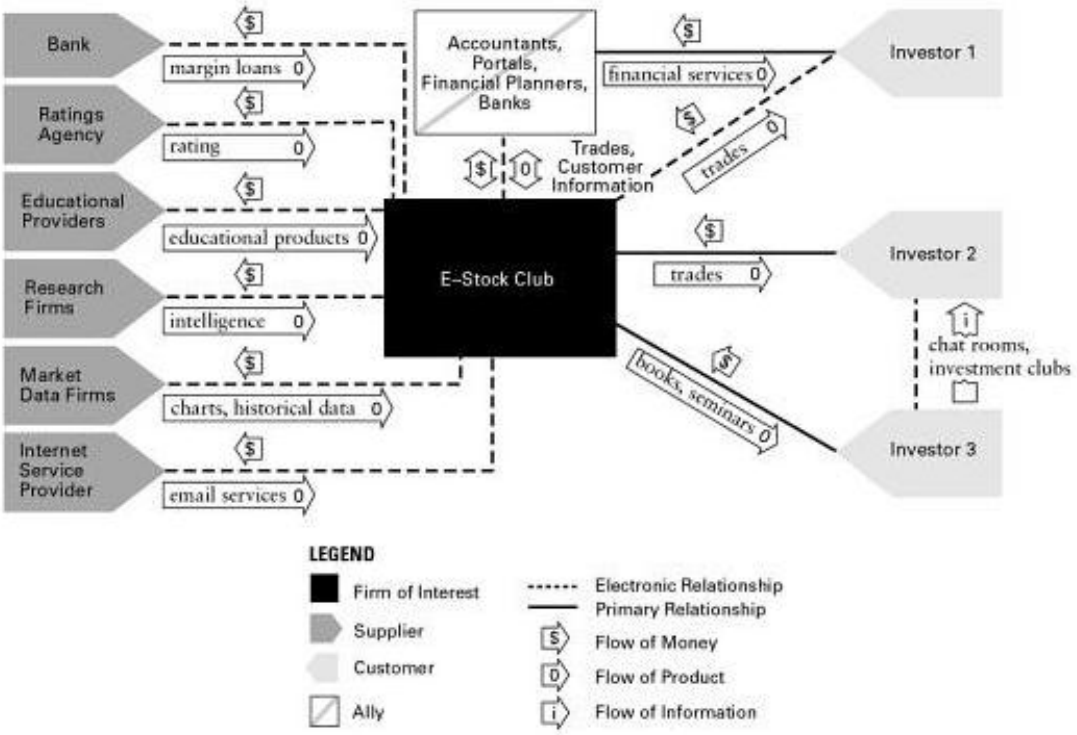


Figure 26. *An example of Weill and Vitale's business model notation (Weill & Vitale 2001, p. 62).*

First of all, the model is excellent tool to illustrate networking aspects, because it is an illustrative tool that describes the scope, structure, actor positioning and processes to some extent. However, it is an inadequate tool to describe a business model of a company. Some reasons were already given in the section 2.7 where the process models and business models were distinguished. Therefore the model above lacks the core of business models - the value and especially the value proposition. Thus it does not give an answer why a customer would buy a certain product or service. Palo and Tähtinen's (2011) business model is rather similar to Weill and Vitale's business model. An example of their model is illustrated in the Figure 27.

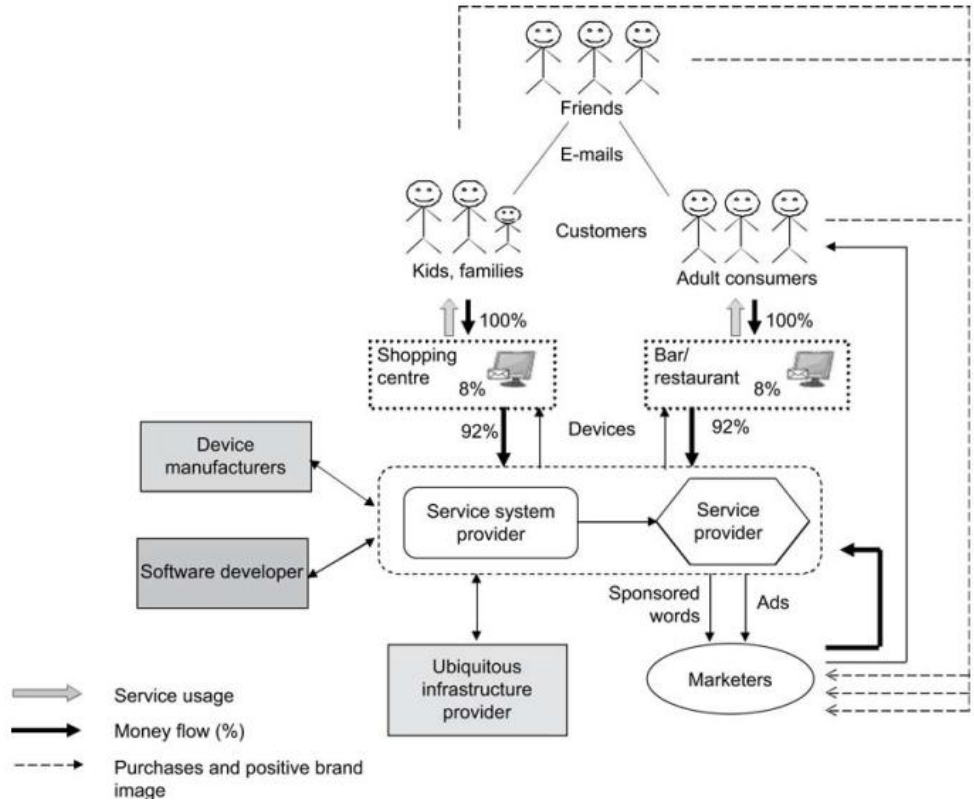


Figure 27. *An example of Palo and Tähtinen's business model notation (Palo & Tähtinen 2011, p. 384).*

Palo and Tähtinen (2011) have the same problem as Weill and Vitale had ten years before them. Their illustrative model does not describe why the customer chooses this offering. Therefore it does not explain the value transactions. Thus it is an inadequate model to be a business model. The third business model that is introduced here is presented by Mason and Spring (2011). Their starting point is rather same as this section's. Thus, they state that current business models are unable to describe the practices of networking aspects. Therefore they proposed a new kind of tool to study business models and networks (Figure 28).

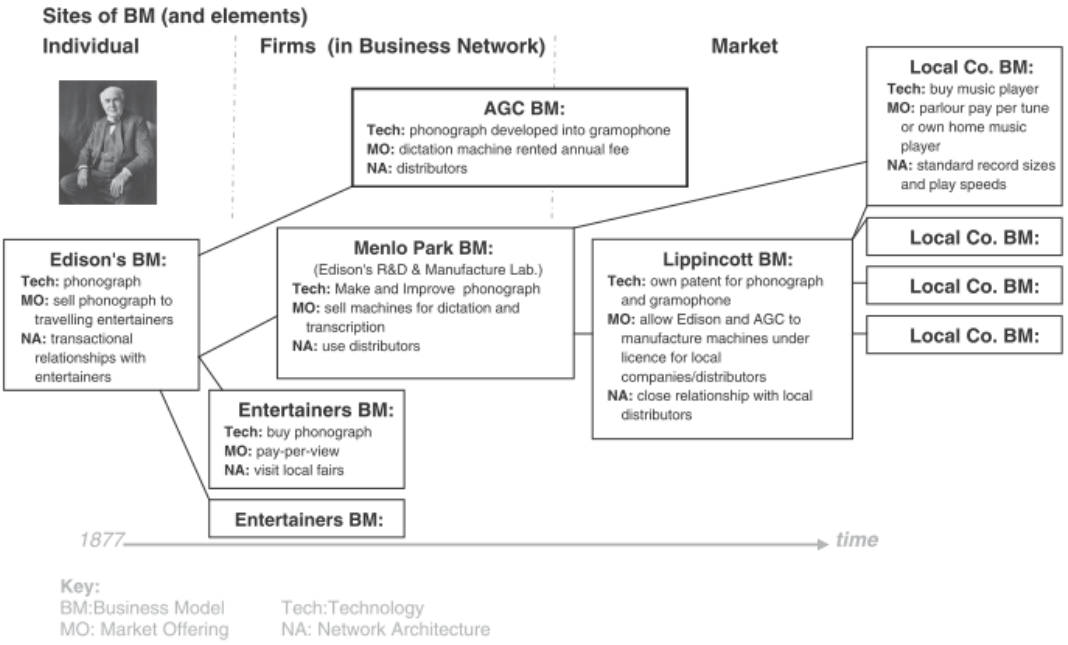


Figure 28. *An example of Mason and Spring's business model notation (Mason & Spring 2011, p. 7).*

Mason and Spring are able to describe individual actors and their business models and business model linkages in a network. Nevertheless, the process descriptions between the actors are inadequate in their notation. Thus, this kind of model is able to illustrate the scope, structure and actor positioning quite well, but the actual content of the interactions is not described. Moreover, this kind of illustration still lacks the value transaction linkages. The following section compares Osterwalder and Pigneur's (2010) business model elements and network picture elements. Therefore, it tries to explain the differences between a narrative and a visual model.

2.8.2. Problems of networked business models

First of all, the Table 7 and Table 8 compile the differences and similarities between the two concepts and their abilities to describe each other's elements. Table 7 describes the weaknesses of the Business Model Canvas when it comes to the network perspectives, whereas Table 8 explains how the elements of the Canvas relate to network elements.

Table 7. *Network picture elements relating to business models.*

Network picture illustration	Osterwalder & Pigneur 2010 BM Canvas
Scope	Narrow, describes only partners & customers
Structure	Partly, describes only partners and customers
Actor positioning	No
Processes	
- Actor bonds	No
- Resource ties	Yes, described as resources
- Activity links	Yes, described as activities

Table 8. *Business model elements relating to network pictures.*

Osterwalder & Pigneur 2010 BM Canvas	Network picture illustration
Value proposition	No
Customer segments	Yes, relates to actors
Channels	Partly, if channels are actors or activities
Customer relationship	Partly, if considered as activities
Key partners	Yes, relates to actors
Key activities	Partly, exterior activities are illustrated as activity linkages
Key resources	Yes, exterior resource ties and interior resources can be illustrated
Revenue streams	Yes, illustrated as activity linkages
Cost structure	Partly, no interior costs but exterior costs and fees illustrated as activity linkages

Magretta (2002) states that business models are like story tellers – they tell stories that explain how a company works. A visual image does not tell a good story unless it is a motion picture (Purchase et al. 2010). Moreover, a visual image needs some qualitative words to make story. To add those words one needs imagination and imagination adds information to the picture. In that case, that does not represent the actual story. Moreover, those static images may not be strategically orientated. Instead, static images illustrate the processes of a company or a network. Therefore, they do not tell why a company is successful and why it has competitive advantage. A narrative is considered as "a set of events and the contextual details surrounding their occurrence" (Doganova & Eyquem-Renault 2009, p. 1562). A plot is crucial part of a narrative because it ensures its coherence and it connects the elements of a narrative (Doganova & Eyquem-Renault 2009). In case of business models, and especially the Canvas that is proposed by Osterwalder and Pigneur (2010), the plot can be considered as the structure and configuration of the nine elements. The plot follows those elements and ties them as a story.

Perkmann and Spicer (2010) consider that a narrative business model is a representation of how a company might succeed in a particular environment. They continue that "… business models – as texts – assist entrepreneurs and managers by providing narratives designed to convince constituents of the quality of a firm's business, typifications that create a sense of legitimacy around the venture, and recipes that instruct constituents about what exactly they should do" (Perkmann & Spicer 2010, p. 11). Moreover, Doganova and Eyquem-Renault (2009, p. 1559) state that a business model is "... a narrative and calculative device that allows entrepreneurs to explore a market". A narrative test, which tests if the story is coherent, exposes whether a business model makes sense or not (Magretta 2002). Therefore, narrative business models outperform in storytelling.

A narrative business model provides qualitative words, typifications and recipes that a static visual image does not provide. Therefore, I state that current narrative business models are unable to describe or depict the attributes of a network. On the other way round, network tools and especially network pictures are very alike to visual business models and they are superior tools to illustrate the networks and their attributes. In other words, there is a gap between strategically oriented business models and process orientated oriented business models in terms of describing networks and their attributes and functions. Moreover, visual business models are unable to describe strategic issues like competitive advantage and value proposition. Hence, I state that only a narrative business model is able to describe the very essential ingredient of business models – the different value activities that were introduced in the section 2.2. Therefore these issues require more attention and some guidelines to fill the gaps.

3. RESEARCH METHOD AND MATERIAL

This chapter describes the research strategy and case methods that were used for the thesis. Moreover, this chapter describes the research material collection process.

3.1. Research method and strategy

As mentioned earlier, this thesis is based on a single case study. A case study focuses on understanding the dynamics within particular settings. A case study can provide descriptions, test theory or generate theory. Single case studies have limited generalizability of the findings. (Eisenhardt 1989.) Case study is also a strong method in the studies concerning change processes. That is because the case approach allows studying contextual factors and process elements in the same real-life context. Thus, a case study is an obvious choice for the study of business networks. (Halinen & Törnroos 2005.) Based on these arguments, the case study methodology is the most appropriate choice for this thesis. As this thesis uses case study methods, its scope is to describe and find out preliminary and speculative explanations for the phenomenon that is studied.

The phenomenon that is studied can be articulated as how networks and their elements affect business models regarding especially the early phases of business model renewal. Thus, the both concepts are discussed and compared based on both literature and empirical evidence. Based on the comparison, some kind of recommendation is given. The recommendation considers two issues: how these two concepts relate to each other and how they can be joined or how they could approach each other. Moreover, as the other main aspect is the renewal process, the networking aspects of that process are described. Thus, this study tries to understand and give preliminary and speculative explanations for these two concepts and their relations in a change process.

3.2. Research material collection

Empirical data for the thesis was collected in two workshop events and some e-mail exchange and telecommunication was also done.

3.2.1. The first business model workshop

In short, a business model workshop is an event where a group of people assembly for a day to compose a business model for a certain company or organization. Usually there are around six to nine people of which half or more of the attendees are from the particular company and the other half are the facilitators of the event. The event lasts about 6 hours roughly from 9 am to 15 pm.

The research team leader had held these events before several times and therefore the concept and schedule were clear. Thus, as justified earlier in the chapter 2.4.1, this event should use the framework proposed by Osterwalder and Pigneur (2010). Therefore the event followed the path and guidance that is presented in the Osterwalder and Pigneur's book. The framework has been popular among the consultants, scholars and practitioners (see the earlier note) and thus it is a valid framework for a business model workshop alongside managers. The main task in the event is to fill the Osterwalder's proposed business model canvas with post-it stamps. See the structure and schedule of the workshop:

10:00 - 10:15	Interviews on participants' backgrounds and objectives for the workshop
10:15 - 12:30	Filling the business model canvas based on current situation
12:30 - 13:00	Lunch break
13:00 - 15:15	Overview of the future vision, then building business model for the year 2015.

Altogether, there were six participants in the workshop. Three of them were facilitators from the university and the other three were from the case company. The research team tried to ensure the validity of the event by inviting four members from the case company's network division from different positions, so that they would have a wide perspective of the business that the case company practices. After all, three members from the network division confirmed the participation and joined the event. Their titles in the case company were Chief Development Officer (CDO), Project Director, and Development Manager. Therefore the team was frankly strategically oriented though the managers had some practical surface as they coordinated some daily issues on the field. Therefore the setup was rather ideal as two of the managers had field experience from the operations whereas the CDO had strategic view. Regarding business models, this kind of setup has benefits; because the two sides can present their views and then argue and make a common two-sided solution. The facilitator group consisted of researchers from Tampere University of Technology. One of the research team members worked as an observer who documented the event, while the other two members facilitated the discussion. Thus those two did not suggest any solutions, but they asked defined questions and intervened the discussion only if it was of the track.

In spite of all precautions the CDO from the case company had a conference call from 10 am to 12.30 pm and the development manager was absent from 11.45 am to 13.30 pm. Thus the discussion was not as lively as it would have been if all the participants were present all the time. However, the absences affected only to the first section and the second section, which was more significant section, was carried out without interruptions.

As the first section was finished, the participants had a lunch break and after the lunch they started the second section of the event. By the beginning of the second section every participant was present and thus the second section was followed through without any interruptions. To get a view of the future, the CDO held a presentation about the business in service sector and about the strategy of the case company. Thus the presentation triggered the discussion and gave an insight about the result. Note that the purpose of the workshop was not to innovate a new business model, but to derive a business model that realizes the strategy. The event was documented with an audio recorder and a digital camera.

3.2.2. The second business model workshop

The second workshop was held on Monday 28th of October 2011. There were five participants in that event - three from the university and two from the case company. The only difference compared to the first event was that the CDO was not attending. The target of this event was to identify obstacles which impede the implementation of future business model. Thus this was a follow-up event for the first event. The objectives had therefore managerial purposes, but the results strengthened understanding of the case company's challenges and gave important data for the renewal process. Also this event was recorded and photographed.

The obstacles were identified in a negative brainstorming session. In a negative brainstorming session the participators first write on sticky notes every obstacle that is preventing the issue to happen. The writing is done without conversation and every obstacle that comes to their mind is valuable at this point. After that, the sticky notes were classified into several categories that had common themes. As the themes were clear, the implementing phases were determined through a discussion session. The case company managers did most of the creative work while the research team worked as event facilitators.

3.2.3. Network picturing

As the business model workshops were arranged and the results were studied, the research team drew an initiative network picture of the case company's network. The network pictures were then sent to the case company managers in order to receive their view of the network structure and processes. The order was this, because there was not enough time for another workshop and the research team had the network picturing techniques and knowledge about the case company's business. Thus, it was interesting to first get an outside view of the network structure and then enhance this view with the managers. Though, one might consider that this approach biases the study, but as a term network picturing means a subjective view of the company network. Thus, it is important that the managers approve the picture and they comment on that. Moreover

the picture is iterated few times so that it can be considered as a subjective view of the managers. The phone contacts were recorded for further usage.

As the scholars do not give any instructions how to draw a network picture and the concept is meant to be flexible, I tried to include the four elements of network picturing proposed by Ramos and Ford (2011). First is the scope, which indicates the number of actors and the perspective. In this case the perspective was chosen as narrow, because a business model does not recognize further than supplier – customer relationships. The second element is the network structure, which can be identified as relationship linkages between the actors. The third element is the personal positioning, which indicates company's position in a network. Finally, the fourth element is the processes between actors.

Processes include activity linkages and resource ties. Activity linkages are considered to be the flows of supply chains. Therefore, the flows of material, information and finance are illustrated in the picture. Though, the concept of information is in this context wider than just knowledge. Thus, it covers all the other activities, such as decision making and management flows, as well. Moreover, as business models are concerned about value activities, the value adding activities were illustrated separately. Resource ties require that also main resources are mapped. Note that actor bonds, as qualitative words of the relationship, were not described, but they were illustrated as importance of the activities. Thus, they were emphasized with thickness of an activity arrow. This arrow thickness gives also some hints and aspects of the relational power between the actors.

4. WORKSHOP RESULTS

This chapter describes the data that was gathered during the study process. First, the current business model is described in the chapter 4.1 and the scenario for the future business is presented in the chapter 4.2. Then, the chapter 4.3 describes the results of the second workshop. The chapter 4.4 describes and illustrates network pictures that were created for the thesis.

4.1. Current business model

The current business model was gathered during the business model workshop in the 26th of October 2011. The gathering methods are described in the section 3.2.1. The model is described in the following Figure 29.

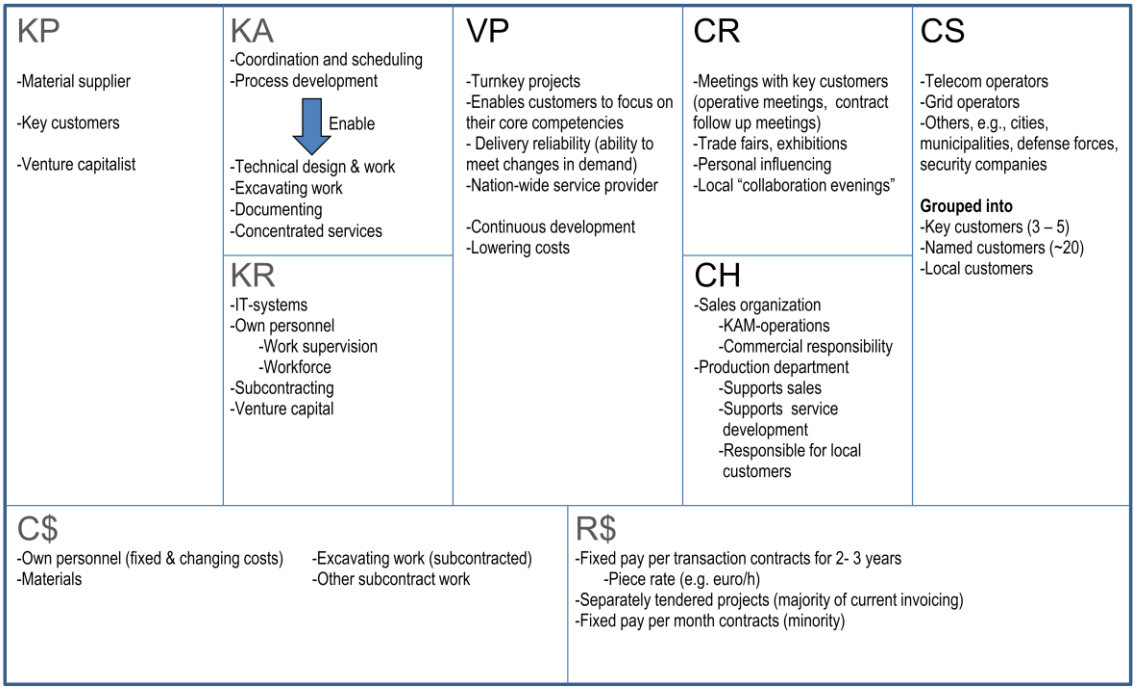


Figure 29. *Current business model of the case company's network division.*

The filling of Osterwalder and Pigneur's business model Canvas starts from the value proposition and the path goes from customer side to resources and activities side of the canvas. Thus, the case company states that they are the nation-wide service provider that delivers turnkey projects on reliable schedule. The company enables their customers to focus on their core competencies by providing everything from designing to finishing work. Moreover, their purpose is to lower customer's costs all the time by continuous improvement.

The case company classifies their customers into three groups. First, there are key customers, which include 3-5 large companies that have long and nation-wide contracts with the case company. Then there are circa 20 named customers that are mostly regional customers. Finally, there are local customers that are small and indeed local. The case organization relates to customers with traditional means. Thus, their main influence channels are direct and personal contacts with customers and occasionally trade fairs and other exhibitions. The main channel of the sales is the sales organization, which consists of key-account managers and other sales team. Besides the sales organization the other important channel is the production department which in fact does not take part in the actual sales but instead works as a supporter for the sales. The production department works as a channel because of the nature of the business of a business to business service company. Therefore, the sales team and the production department must work together to ensure the right solutions for the customer.

The case company sees that their key activities are labor coordination and scheduling. Moreover, as the continuous development is part of their value proposition, the process development is a key part of their activities. These three things enable the processes that are described in the chapter 1.5.1. The activities lead to key resources and competences. The CDO argues that the IT-system is actually the foremost resource that they have. After that comes the personal and subcontracting in general. Also venture capital is an important asset. Considering partners the workshop team argued that they have only three partners. Thus, they listed that the key customers, material supplier and the venture capitalist are the key partners. Note that they already see that the key customers are also their key partners. Thus the key customers have a double role in the business model.

Today their revenue comes from contracts that are made either for a single project or longer term. In longer, fixed contracts, the fees for a certain transactions are fixed but the type, volume, and schedule of the works are agreed as they are required by the customer. Project based contracts are normally tendered projects that the case company has won. They have also some fixed pay per month contracts but these are in the minority. The cost structure is also somewhat typical because most of the costs come from the materials and labor. Also subcontracting is a major expense.

Network aspects

As scope and structure are consisted of actors and their relationships, the first task is to identify those from the business model. First of all, in a narrative business model that takes a single company view, the scope reaches usually only to the nearest actors. Thus, they are rather easy to catch. The structure might be a bit harder to construct, because the linkages are not clearly described in a narrative business model. This is the case, if there is no additional information available, but usually the managers have a good perception of the structure.

In this case the actors can be recognized from the key partners section and from the customer segments section. Therefore the key actors are material supplier, venture capitalist, and key customers. For the sake of clarity customers are considered as one group, because the basic activities are the same for all customers. In this case the channels do not have network actors. The structure is quite simplistic as all of the actors are connected to the case company and there are no interconnections between the other actors.

Actor positioning refers to the characteristics of actors' relationships and the advantages and the disadvantages that arise from those relationships (Ford et al. 2006). Actor positioning is the most difficult element to identify from the Canvas. That is because none of the nine business model elements describes the relationship status or negotiation power of a company in a value network. Thus the positioning has to be determined from the intuitive perspective. Though, in this case the value proposition explains the relationships. 'Turnkey projects' indicates that the case company regards itself as a central company, and thus its negotiation power in the network is strong. Note that this does not refer to the negotiation power towards the customer, but the relative power within the network.

Processes are the last network picture element. They are consisted of actor bonds, resource ties and activity links. Activity links can be rather clearly derived from (external) key activities. Thus, activity linkages include coordination and scheduling of the excavating work. All the other activities are internal activities. Also revenue streams and exterior costs are activities. Moreover, the channels and customer relationships have activity linkages. When it comes to the resource ties, there are two identifiable resources: subcontracting and venture capitalist, but they are not shared resources. Therefore resources that are tied, does not exist. Actor bonds, in other words the quality of relationships, cannot be identified in the business model. Moreover the activity linkage comparison is hard to make, because a simple narrative business model does not describe that kind of attribute.

4.2. Scenario for the future

The initiator for the change of the business model of the case company is the venture capitalist that owns the case company. In its interests is maximal growth and then exit. In other words, the venture capital company wants that either the case company will get significantly bigger market share, or it will find or create new business from somewhere else so that its growth in terms of revenue would be rapid. After the growth factor is clearly visible, it will sell the company to another venture capital company or it will cash its value by going public. All in all, this kind of radical growth requires a new strategy and business model. Thus, the executives of the case company have created a bold strategy for the future. In the first phase they want to renew their business logic, but to stay in the current business. Thus, the customers and the competencies required

by the customer remain the same, but the logic under that customer interface will change to be more flexible, more efficient and more motivating. This will eventually lower the case company's costs and so that the case company will get competitive advantage from low costs and from more flexible performance. The second phase is to find new kind of business that is supported and enabled by the future business model.

The scenario was created for the year 2015 because 2015 is neither too far away nor too early. Thus, as the workshop group discussed what would be an appropriate year for the scenario, the year 2015 felt like a mid-term plan. Concerning business model renewal the appropriate time frame depends on the level of the change. In this case the level of change is pretty dramatic. With this in mind, the scenario period should have been a bit longer, or the goals should have set at lower level. Nevertheless, actually the target year is not that important. That is because the most important task is to get the total vision of the future business. The implementing schedule might come later on. Thus, after modeling the scenario it is important to divide the model into pieces and sub-targets and set timely targets for those sub-targets. Therefore, after the big picture is clear it is easier to set time frames.

The scenario for the year 2015 is depicted in the Figure 30. The revenue streams and cost structure components were not filled because the workshop group mutually agreed to leave them blank due to time shortage.

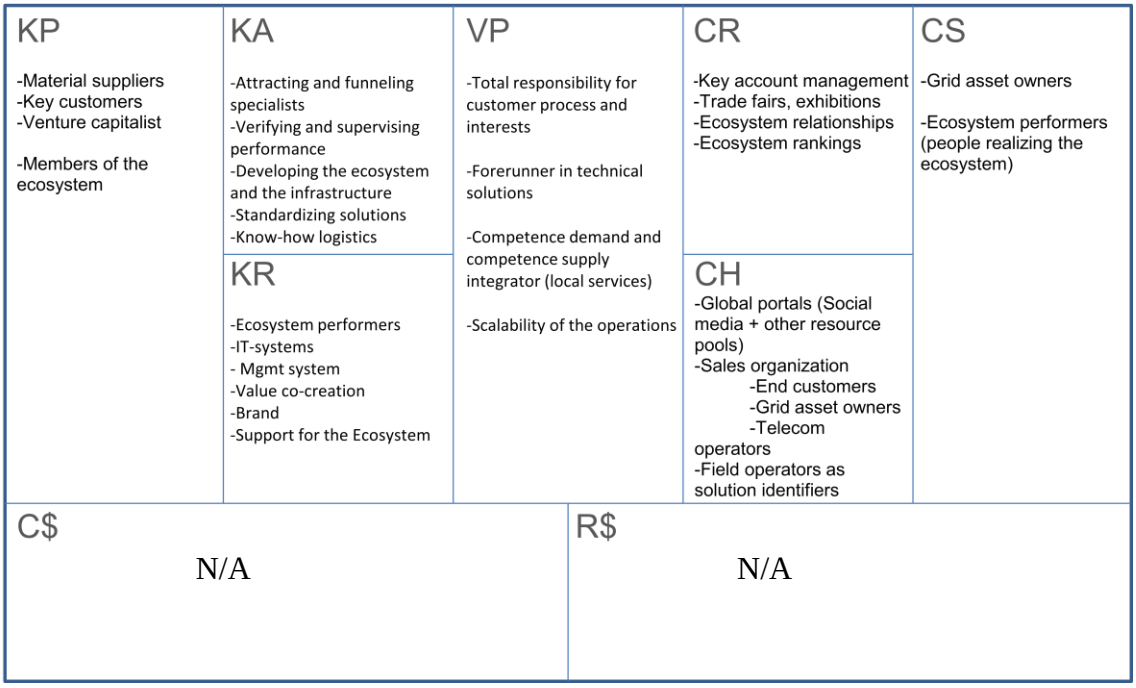


Figure 30. *Network division scenario 2015.*

The above scenario is based on the CDO's vision about the company's future. Thus they stated that their value proposition would say they are the competence integrator that takes total responsibility for the customer process and interests. By competence

integrator they mean that they would have a resource pool of labor and with that resource pool they could perform various tasks to the customers. Thus they would not have labor with monthly salary, but a resource pool that could be paid based on their actual work performance. The buzz word ecosystem is also on their lips. In this case the term ecosystem describes the diversity and vastness of resources. They see that those ecosystem members would have multiple roles in their business model. The members would be partners, customers, work as a channel and resource of the company. The interesting part is that they see that the performing labor is actually their customer as well. By identifying the members as customers, the company acknowledges the importance of these people. Besides causing expenses, the ecosystem members also bring more revenues by identifying flaws and solutions in the field. The rest of the business model components remain roughly the same compared to the current model.

All in all, it is unlikely that the case organization would achieve this kind of business model by the year 2015, but at least they have set the targets high. By aiming at the sky the company can achieve at least part of the goal. Even the CDO admitted himself that these goals may be unrealistic, because of the resistance of change, time limits and time shortages. Note that also Perkmann and Spicer (2010, p.10) argue that "… business models tend to be ideal types that may never be instantiated in reality but provide ongoing inspiration for improvement and change". Therefore the overoptimistic business model just provides a platform for change.

Moreover, this kind of business logic might be unique considering even globally. Thus there is no guarantee that people would engage themselves into this kind of system, not to mention that the current workforce would accept this change. Nevertheless, there is some evidence from this kind of resource pools. Think about the way that the labor service companies do their business. First of all, they provide temporary workforce for companies that need such a labor. Moreover, because they have vast resource pools they can provide workforce with such competencies that the companies require. Therefore, this kind of business model has some kind of applications already, though in different business sectors.

Network aspects

Scope can be recognized once again from key partners and customer segments sections. Thus, the actors are material supplier, key customers, venture capitalist, and members of the ecosystem. The structure can be derived from key activities and value proposition. As the main value proposition is "total responsibility for customer process and interests", it stands out that the company wants to control a huge portion of the value chain. The ecosystem means that the actual work is chopped into pieces and handed out to the ecosystem to perform the tasks. Thus, the ecosystem takes a role between the case company and the customer.

By continuing the discussion from the previous paragraph, actor positioning is rather easy to catch. Thus, as the case company wants to be a major player in the network, it takes the leading role. Once again, the key activities form the body of the processes. Therefore the processes include funneling and attracting specialists and technicians, verifying and supervising performance, standardizing solutions, and developing the ecosystem. No shared resources between actors can be recognized.

4.3. Second workshop event

The second workshop event concentrated on the business model renewal and its objective was to identify obstacles which prevent implementing the 2015 scenario. The obstacles were divided into three phases based on the implementation order. The order was based on the case company managers' views. Therefore the workshop recognized the renewal phases and compiled some other issues that have to be addressed during the change process. Those issues are not straightly related to the boxes of a business model, but they ensure the core of doing business – like profitability and continuity of the business. See the following Table 9 for the identified obstacles.

Table 9. *Renewal phases and questions.*

I	• **Will the new integrator model be profitable?** • **What kind of should the pull control system be?** • **How to attract the resources? Motivation? Incentives? Rewards?** • **What kinds of sanctions are necessary?**
II	• **How to ensure the maintenance security when changing towards new business model? Task force?** • **The attractiveness of the brand?** • **The sufficiency of the resources and their competences?**
III	• **What are the services we will provide for customers?** ⇨ **What R&D areas should be focused on?** • **What kind of IT-system supports the business model?**

The table indicates that first task is to ensure the basics of the business. It means that the future model has to be profitable and the core of it, the ecosystem, has to be on conceptual level a system that could work.

The second phase considers all the other choices and blanks that the business model leaves open. Also ensuring that the company has resources and competences that are needed for the change is a part of this phase. This phase includes also some sort of testing and experimenting.

During the third phase the infrastructure is build. In this case the basic tools and instruments that are needed are mainly technological; this means that at least some investments in IT-system have to be made. Thus the last phase includes all the capital intensive activity and therefore the process is harder and more costly to change or even cancel. The work before the third phase is related to testing the model and doing the tuning and choices related to options that the business model leaves open.

The discussions during the second workshop strengthened the research team's views on the need for an intermediate step before the '2015 scenario'. This intermediate step is therefore a phase where the task performers will be separated from the case company's interior business to an exterior unit. Thus, there will not be an ecosystem yet, and the company will still do business at the network service business. Moreover, the IT-system will at this point be ready to support task management. Thus, the task performers are working autonomously.

4.4. Case company network pictures

As mentioned in the previous section, there is a need for an intermediate step between those two quite extreme business models, and thus three network pictures were created. The first indicates the current structure. The second indicates the structure by 2015 and the third illustrates the structure beyond 2015, as the ecosystem is working.

4.4.1. Current network picture

A sketchy network structure was illustrated already in the Figure 5. It showed that the case company's network is basically like any other subcontracting network. A more detailed version was created based on the data gathered during workshops and teleconferences. This version does not represent a network derived from the business model, though the business model surely inspires this picture. Instead, it is a network as the case company managers see it. Thus, the picture is approved by the case company managers. See the following Figure 31 for the current network picture. Note that there is a common customer interface for the sake of clarity and also because the interface and its activities are not that important considering this particular case.

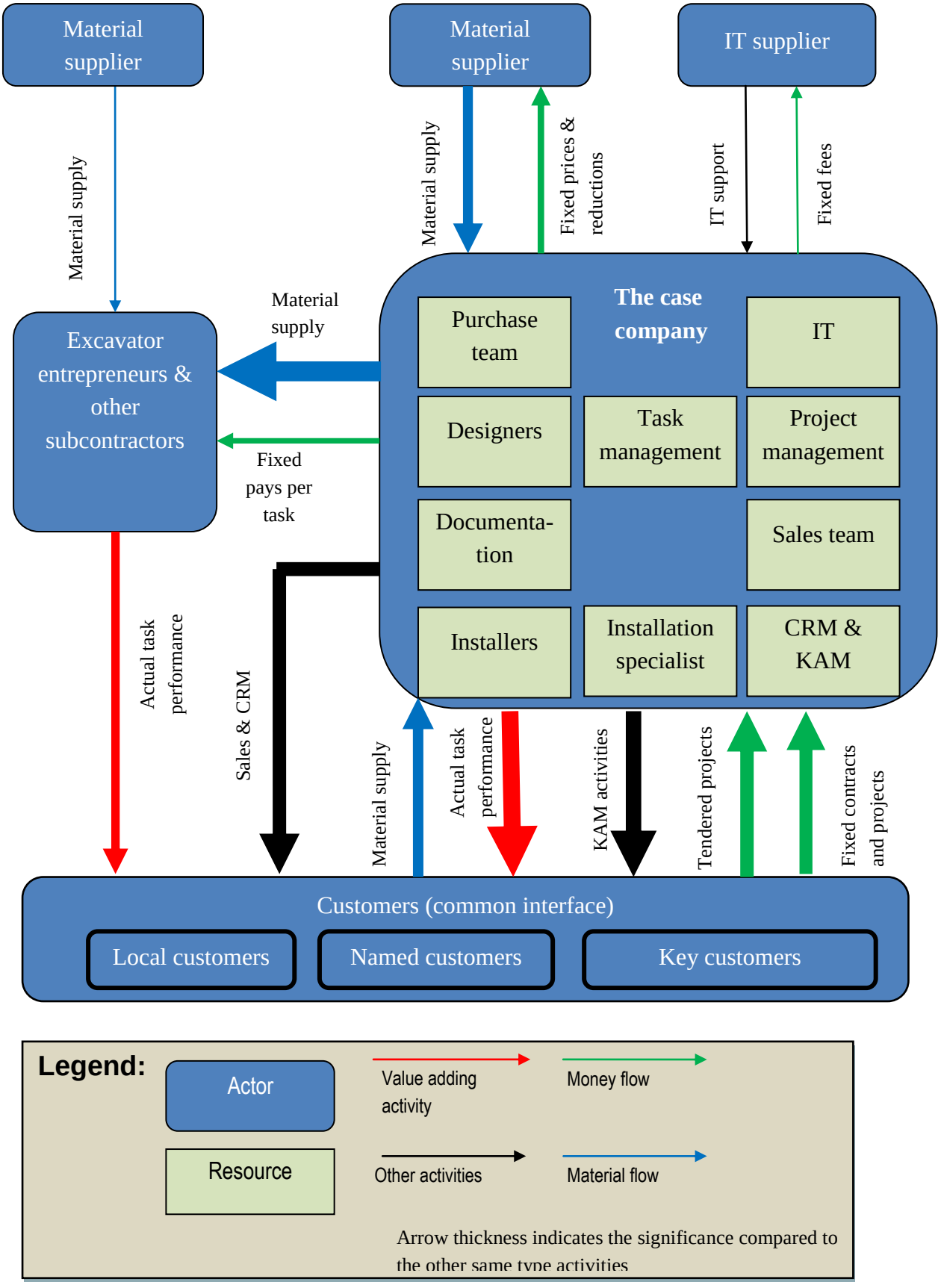


Figure 31. *Current network picture.*

The current network picture visualizes the activities between the actors. Thus, there are no actual surprises when compared to the earlier discussion. The major difference is the actual visualization itself and its capability to visualize and concretize the activities to a map. This kind of illustration is superior to emphasizing the significance of certain activities. Thus, one can straight away say that the subcontractors are not key players and the main activity happens between the case company and its customers.

4.4.2. Network picture by 2015

The next network picture illustrates the situation that should be implemented by the year 2015. Its main aspect is that the task performers are extracted from the company's core to an autonomous unit. See the following Figure 32 for the network picture.

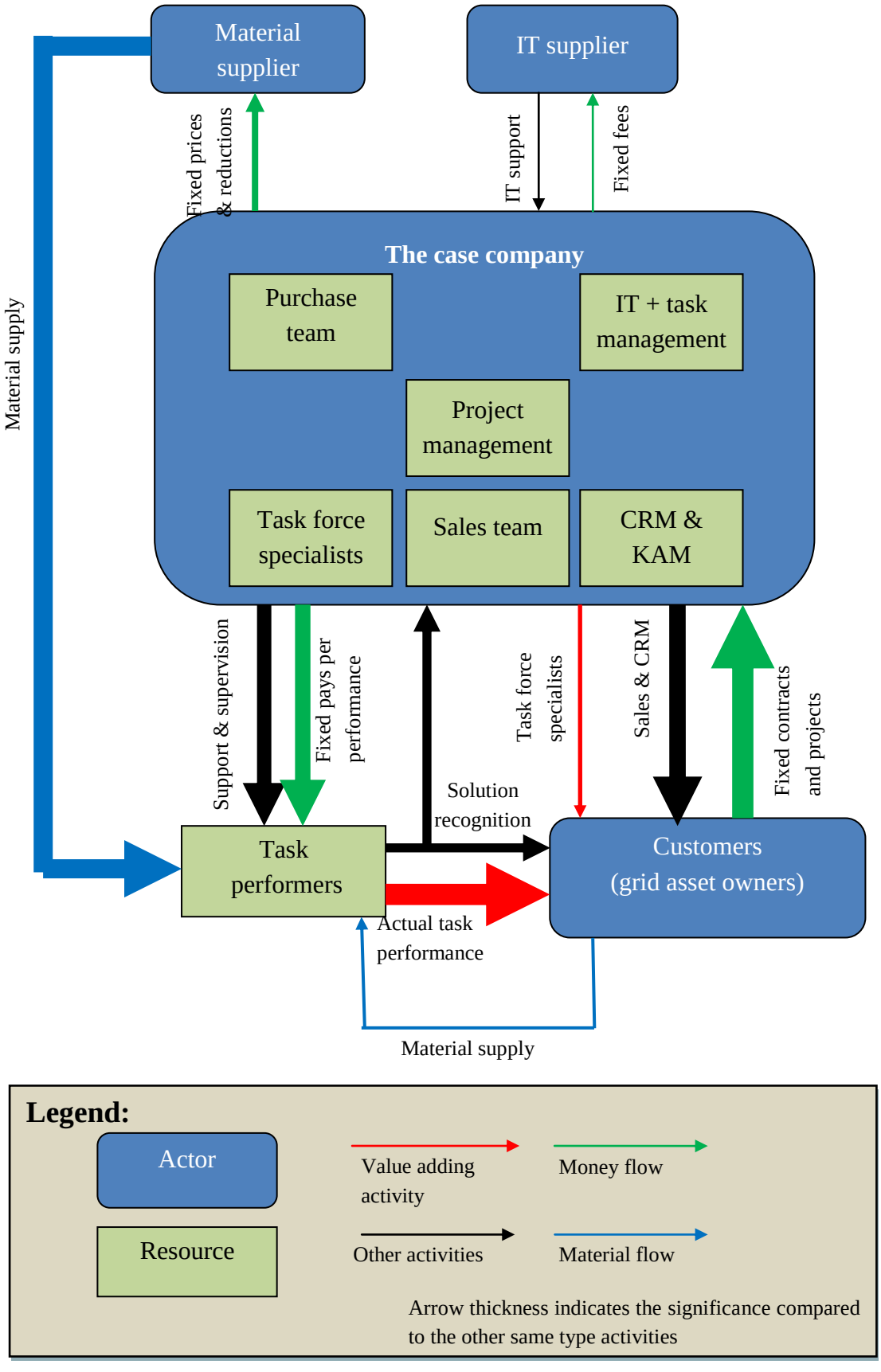


Figure 32. *The case company's network picture by the year 2015.*

This picture indicates that the task performers have moved to an exterior resource. Moreover, it indicates that the activity balance has shifted towards the task performers emphasizing their importance. The material flow comes mainly from one source, as there is only one supplier. The other minor material flow comes from the customers. The main added value is performed by the task performers. Thus, the company needs only some emergency task specialists that do all the tasks that require skillful labor with a short notice. The money flows are somewhat similar to the earlier picture.

4.4.3. Network picture beyond 2015

The last network picture represents the situation that was described in the scenario 2015 business model. Thus, the 'ecosystem' is working and running and the company is looking for other business sectors. In this picture the task performers have been taken by the ecosystem. The ecosystem is located on the center of the picture because its role is such important. Note that the money flows are not illustrated because they were not described in the 2015 business model scenario. See the network picture in the following Figure 33 on the next page.

This network picture indicates and emphasizes the significance of the ecosystem and its resource pools. Those systems are the key to success and therefore they have to be attracted, motivated and compensated. The picture has simplified a lot compared to the current picture. That is because there are many uncertainties and thus a future picture cannot be that accurate due to those uncertainties. The main purpose is to sketch an initial picture that has all the main activities. Moreover, the picture has simplified, because there is only one material flow and only one value adding activity. The case company's activities have shifted almost completely to serve the ecosystem and its performance.

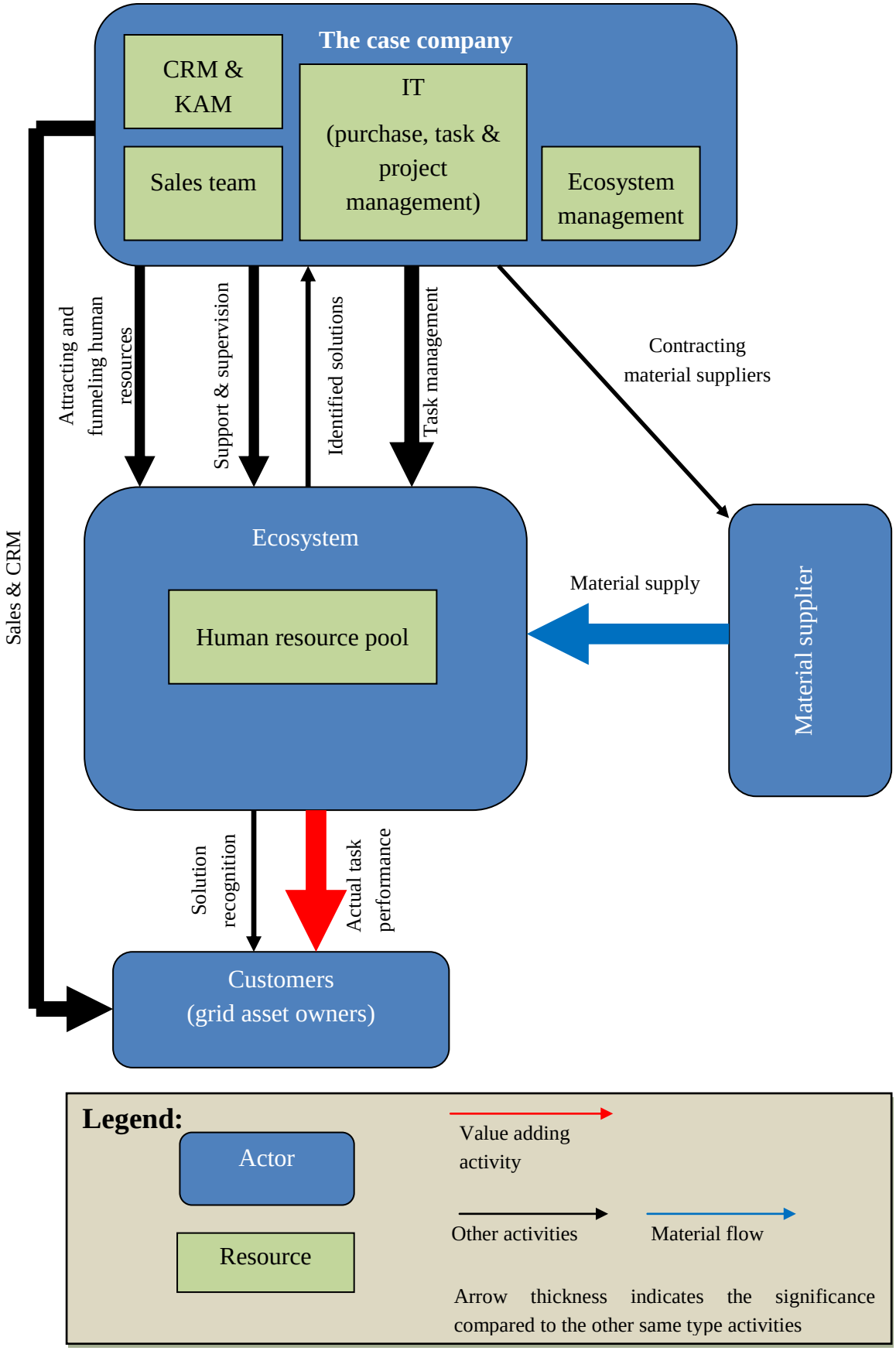


Figure 33. *The case company's network picture beyond the year 2015.*

5. LINKING BUSINESS MODEL CONCEPT AND BUSINESS MODEL RENEWAL WITH NETWORK ASPECTS

This chapter compiles the findings that were collected in the chapter 4 and answers the research question. This chapter is comprised of two sections. First, it addresses the differences between network pictures and business models as illustrative and descriptive tools. Secondly, this chapter addresses the business model renewal and its networking aspects.

5.1. Business model concept with a networked view

As argued in the section 2.8.2, there is a gap between narrative and visual business models when it comes to describing and illustrating the network attributes and functions. Therefore, some kind of guideline is needed to fill this gap. This guideline takes the business model by Osterwalder and Pigneur (2010) as a starting point, because it is a justified as an appropriate business model for the thesis. The main differences between Osterwalder and Pigneur's business model Canvas and network pictures were already discussed on conceptual level in the section 2.8.2. Therefore this section discusses and describes those differences based on both conceptual and empirical evidence.

At conceptual level, as the Table 7 and Table 8 show, the Canvas is not able to describe the networking attributes. Also the results section showed that the business model Canvas lacked the ability to describe networks. Moreover, the literature review showed that networks are traditionally visualized, because a visualized structure shows the linkages between actors. Thus, the literature review and the results chapter illustrated that the network picturing concept is a right tool to visualize networking aspects. Therefore, in order to take a network view and to study networks, a visualized picture of the network actors, structure and processes is needed. At the same time a narrative business model, such as the Canvas, describes well the different aspects of value proposition, value creating and value capturing, which are essentials of a business model. Thus, as these two concepts are able to describe their aspects of intention appropriately, there is no reasonable intention to merge these two different concepts, but to provide tools which bring them closer to each other. Thus this section tries to compile a systematic guideline to move from a business model to a network picture.

5.1.1. From a narrative business model to a network picture

The first guideline describes the transition from a narrative business model to a network picture. A network picture requires three elements, namely scope & structure, actor positioning and processes (Ramos & Ford 2011). Thus, the only way to make the transition is to recognize those attributes from the Business Model Canvas. The tasks are done similarly as in the results section. Therefore, the first task is to define the actors from the business model. Second, place the scope and actors on the picture according to the value chain. Third, define interior as well as exterior resources. Fourth, identify activities between the actors. Fifth, set emphasis on the activity linkages.

As the results section and the literature review implied, the actors are located in the key partners and customers segment sections. In addition, exterior channels are important actors in a network. Moreover, in some cases the key resources section can reveal some actors, as the current business model indicates. This is the case especially, if those actors are not considered as key partners. One should remember, that a business model, in general, does not cover all actors and therefore it is managers task to recognize the whole set of actors. Also some actors may be fuzzy, because only their role is recognized, not the actor itself. This is the case especially in business model innovation, where new actor roles are discovered, but the actors are not identified.

The structure of a network is traditionally based on the value network and value chain. Thus, the suppliers are in the upper section of the picture and customers are in the bottom of a picture. In other words, the value flows and increases downwards. Partners and the actual case company are traditionally placed in the center of the picture. A narrow scope, such as a narrative business model, is therefore rather easy to structure.

As mentioned, personal positioning, in a narrow picture such as business models tend to be, is traditionally in the middle of the picture. However, as the beyond 2015 network picture shows, it can vary. Therefore, the positioning is determined by the position in the value network, but there is no corresponding component for this in the Canvas. Therefore, the positioning is not an easy task. Although, the value proposition section gives some hints for the positioning. One should though remember that positioning is subjective, and therefore there is no right or wrong position.

Processes can be clearly recognized from key activities section. More activities are found in the revenue streams and cost structure sections, and in the channel activities and relationships. Resource ties are the linkages of resources. Therefore, the key resources section is the key component for resource ties. Actor bonds, the quality of the relationship, can be described, not very well though, with the activity linkage emphasis. The emphasis is not viewable in a narrative business model and thus it is managers' task to set those emphases on activity linkages. See the following Table 10 for the guideline.

Table 10. *Guideline to recognizing network attributes from the Canvas.*

Scope	Recognize from sections • Key partners • Customer segments • Key resources to some extent • Channels
Structure	Differentiate suppliers, partners and customers and place them in the picture.
Personal positioning	In a narrow picture, traditionally in the middle. Value proposition gives hints. Though, positioning is strongly a subjective issue.
Processes	
- **Actor bonds**	Based on managerial views. No direct correspondence in a narrative business model.
- **Activity linkages**	Recognize from sections • Key activities • Revenue streams • Cost structure (money flows to exterior actors) • Channels & customer relationships
- **Resource ties**	Key resources shared with exterior partners

What is interesting is how the managers saw that the venture capital company is a key partner according to the business model, but in the network picture the venture company is missing. This indicates the fact that business models tend to operate on a strategic level whereas network pictures illustrate the daily processes. Thus, the daily processes are not interested in capital and other higher level issues. All in all, a network picture and also a business model are managers' and researchers' personal views of their current and future state, and therefore subjective views of the company's situation relative to the environment.

5.1.2. How to enhance the network view in a narrative business model

Osterwalder and Pigneur's (2010) business model Canvas and its elements are the starting point in this section, as the whole business model is inspected to give hints how to enhance the networking view in the business model formation process. The Business Model Canvas does not provide, in general, any means to input anything that would

emphasize some components or some issues inside a component. Thus, by and large, every component and everything inside a component are equal. In case of networks it would be beneficial, if there were some structure and emphasis inside the components. That is because in case of networks it is crucial to distinguish internal and external actors, activities and resources. Moreover, it would be beneficial to emphasize certain activities. Thus, a business model would get some visual elements. Therefore, for example internal and external activities should be distinguished with colors and for crucial activities and resources a larger font should be used. Those visual elements would make a difference when it comes to emphasizing the transition to a more visualized view and to get some advantages of a visual view.

In their book Osterwalder and Pigneur (2010, p. 148) advise to use visual storytelling by drawing pictures of the business model components. Those pictures are drawn on post-it notes to illustrate certain activity. They suggest that this visual storytelling helps to understand the core logic better. Though, this kind of visualization does not relate to network pictures and their attributes, because drawn pictures do not articulate the actors and structure any better than words. Instead, in general, it is harder to interpret those pictures than words. Unless, those pictures were parts of network pictures, but that is not what Osterwalder and Pigneur propose. Therefore, a simple color and font emphasizing would be better regarding to emphasize the network view in the Canvas.

Concerning the business model components, the value proposition defines part of the network structure and personal positioning. That is, because in value proposition, a company states what kind of value they provide to the customer. Thus, the value should be proposed so that the personal positioning in the network comes clear. The Business Model Canvas uses such terms as key customers, key partners, key activities and key resources to indicate different actors and processes between the actors. Thus, it does not provide a wide scope of actors, and therefore the scope is narrow. From a single company point of view the current narrow scope is relevant, and therefore there is no reason to widen the scope. The only aspect is to distinguish external and internal actors and processes. Also, some qualitative words should be used to describe the nature of cooperation in the key partners section. Finally, the shared resources should be named and separated.

In this case, the channels were internal resources, and therefore they proposed external activities towards the customer. However, channels can be also external actors, such as wholesalers. Therefore, channels have a double role considering networks. In case of revenue streams the sources of revenues are crucial. Therefore, the sources of revenues should be described and emphasized. Finally, the external and internal costs should be distinguished and also emphasized. See the following guideline for the business model formation considering networks (Table 11).

Table 11. *Enhancing the Osterwalder and Pigneur's BM Canvas with network aspects.*

Value proposition	• Remember your position in the value network • Express the VP so that the personal position in the value network can be recognized
Customer segments	• Name important customers and customer segments
Channels	• Separate internally resourced channels and externally resourced channels • Separate activities and resources
Customer relationships	• Identify external activity linkages
Key partners	• Name key partners and characteristics / nature of the cooperation qualitatively
Key activities	• Name internal activities and external activities separately • Emphasize important activities
Key resources	• Name internal resources and external resources separately • Name shared resources as well
Revenue streams	• Name the revenue sources and their relative amount
Costs	• Specify internal costs, external costs and payments, and their relative amounts

5.2. Business model renewal process with network aspects

First of all, as stated earlier, this thesis's approach is strategic, and therefore the business model that was formed in the workshop event is derived from the case company's strategy. However, as discussed in the section 2.5.6, there is no appropriate process in the literature for this case. Therefore, this section describes a design process that is considered to be appropriate for this case.

I consider that the definition of business model implementation should be as Osterwalder (2005) defines it. He states that business model implementation is the translation of the business model to more concrete processes and structures. Implementation is therefore something that is done after the model is considered as appropriate for the company. Implementation requires a lot of resources and capital, and therefore it is not done until the model is confirmed to be suitable. Thus, the design

phase includes phases from business model formation to business model testing and evaluation. It covers all the phases that ensure the appropriateness and validity of a certain business model.

If a business model is derived straight from strategy and vision, there is not much room for business model innovation - at least in this case. Therefore, the formation session is rather straightforward process, but the catch is the evaluation and testing of that business model. The more radical the model is, the more unfamiliar the components are. Therefore a renewal process, as it describes a radical change process, requires emphasis on the testing and evaluating of the business model. Based on the workshops there are three phases between business model formation and implementation (Figure 34).

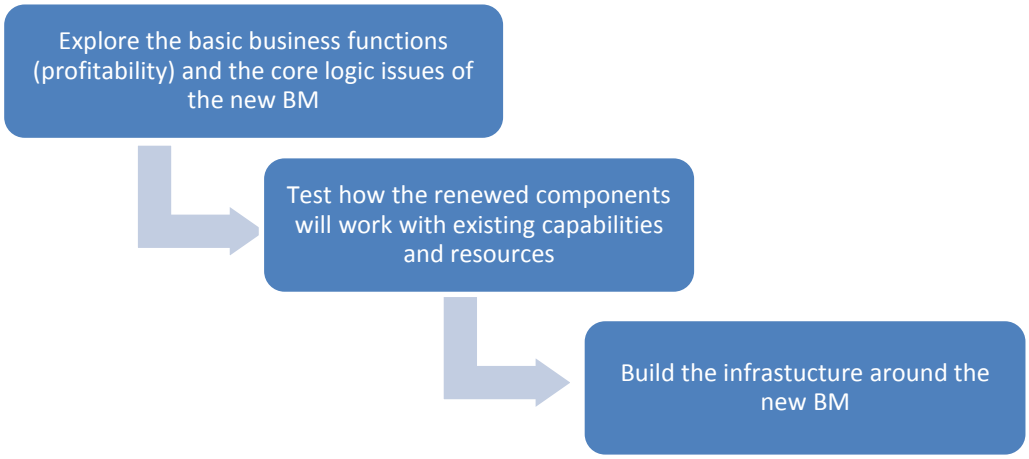


Figure 34. *Business model testing and evaluation.*

The first box indicates the need for some kind of feasibility analysis such as Wirtz (2011, p. 198) proposes – in slightly different context though. Wirtz proposes that feasibility analysis should include environmental analysis, industry and market analysis, and competitive analysis. Therefore, he sees that the newly sketched rough model needs to be analyzed before it can be put forward. This was also noticed as the research team discussed with the case company managers. However, in this case the analysis is not considering the environmental issues, but the internal logic of the business model. Thus, as this renewal will not consider external processes towards the customers, but the internal processes. The analysis should be focused on internal and network issues. Thus, besides those analysis listed by Wirtz there should be analysis concerning internal processes. Moreover, as this thesis' context is networks, also the network should be feasibility studied. Thus, the analyzing context is dependent on what component is the main change component in the renewal.

There should be some tools for those analyses. For example, Osterwalder and Pigneur (2010) propose SWOT analysis for an appropriate and simple tool for a business model

evaluation. In this context it may be, but in a business model renewal SWOT analysis is not enough. Wirtz (2011, p. 201) proposes Porter's five forces[1] for an analyzing tool. It considers external threats and their effects to the business. For assessing internal and networking processes the business model literature does not propose any tools, but basic brainstorming techniques are adequate for analyzing. The analyzing results should be used to refining or rejecting the business model.

The second box in the Figure 34 indicates the need for prototyping (Wirtz 2011) and experimentation (Chesbrough 2010). Wirtz (2011) and also Osterwalder and Pigneur (2010, p. 165) consider that prototyping is related to selecting and enhancing the idea generation. Though, Osterwalder and Pigneur mention that also field testing is one type of prototyping. In context of business model innovation, McGrath (2010) argues that significant experimentation brings out more than analytical approaches. Therefore this experimentation phase is a natural continuum after the analysis. She adds that business models cannot be fully anticipated beforehand and that is why experimentation is needed. Experimentation requires investments, and thus it is not feasible to experiment the business model too widely. Chesbrough (2010) argues that high fidelity is an essential part of experimentation. Fidelity requires real transaction with real money. An appropriate scope is some regional business unit or in some cases even a team. In case of customers the experimentation should be with just one or few customers at most. For more about experimentation principles and parameters can be read from Thomke (2003).

Therefore, in this case, the most critical components and processes that were recognized and analyzed in the previous phase should be experimented in the field. The existing resources and capabilities should be exploited. Once again the experimentation results and experiences should refine the business model. In extreme cases managers should reject the model, if it does not work at the process level.

The third box in the Figure 34 implies that right before the implementation the business infrastructure has to be created for the business model. In this case the main infrastructure is related to information technology. Thus, if the company wants to fully utilize the potential of the business model, it certainly needs new kind of IT-solutions. Thus, the infrastructure that enables the business model has to be build. That may require heavy investments, and thus it is essential to know that this chosen, enhanced model will work. Once the infrastructure has been built, it should be tested in small scale with the new business model.

After the business model is confirmed to be appropriate and the required infrastructure has been built, the next phase is to implement it. Due to inertia, a simultaneous full scale implementation may not be possible, and therefore the implementation should be

[1] see more from Porter (1998, p. 26)

gradual. Nevertheless, the implementation phase is not the main scope of the thesis. Another aspect that arose from the conversations with the managers was the business model change management. One issue in change management is naturally the organizational inertia and how to overcome that. Another issue that arose was how to measure the change. Thus, the managers wanted to follow the progress with some kind of indicators. At the moment they do not have any indicators for change process. Both of these issues are out of the scope of the thesis.

Network aspects

This section continues the discussion of business model renewal process, but it takes the network perspective. As introduced in the literature review, Sandström and Osborne (2010) have proposed a four-phased guideline to managers regarding networks and business model renewal (Table 4). Its phases are (1) mapping all relevant actors in terms of their incentives, resources and activities, (2) find out how value is created and distributed among these actors, (3) identify actors which are critical for the adaptation of the product innovation, (4) design a business model which aligns incentives throughout the established actor network. Their approach for this guideline is that a company has made a product innovation and it is looking for the best business model and network partners for that innovation. This case has some similarities with Sandström and Osborne's guideline. First of all, they both consider about business model renewal process. Secondly, the network and its functions are an essential theme. Thirdly, the network actors and structure are not clearly visible during the business model formation. Finally fourthly, incentives are another essential theme considering network actors. Therefore it is feasible to use their guideline for the basis and adapt it to the renewal process that was sketched in the previous section. Also the network attributes should be taken into account.

First of all, as the previous sections imply, the partners and their competencies and activities are not clearly visible during the business model formation process. Thus, the possible actors and their competencies and activities must be mapped and they have to be contacted right after the business model formation, as Sandström and Osborne propose. During the feasibility study the appropriate actors must be chosen and the network structure and activities has to be analyzed. This can be done as Sandström and Osborne suggest in the second phase of their guideline. Also the value chain and value activities of the network are mapped and analyzed to get the roles and activities correct. Besides the network activities, also the motivations and incentives of the partners should be assessed. As the structure and the activities are clear, the crucial new activities based on the new business model should be tested with the partner(s) with real processes including real money and real incentives. After small scale testing, the results are analyzed. If the business model works as intended, the building of the required infrastructure between the actors is the next phase. As the infrastructure is build, it

should be tested. By and large, the implementation process does not differ from the general view. The operations model is refined through the whole process.

The network change management is another issue that has to be dealt with. Network management is even more difficult than a single company management. That is because a network has independent actors with their own motivations. Thus, the change process management at the network level is more essential to get a successful result. However, this is also out of the scope of this thesis. See the following Figure 35 for the business model renewal process and its initial thoughts about network aspects.

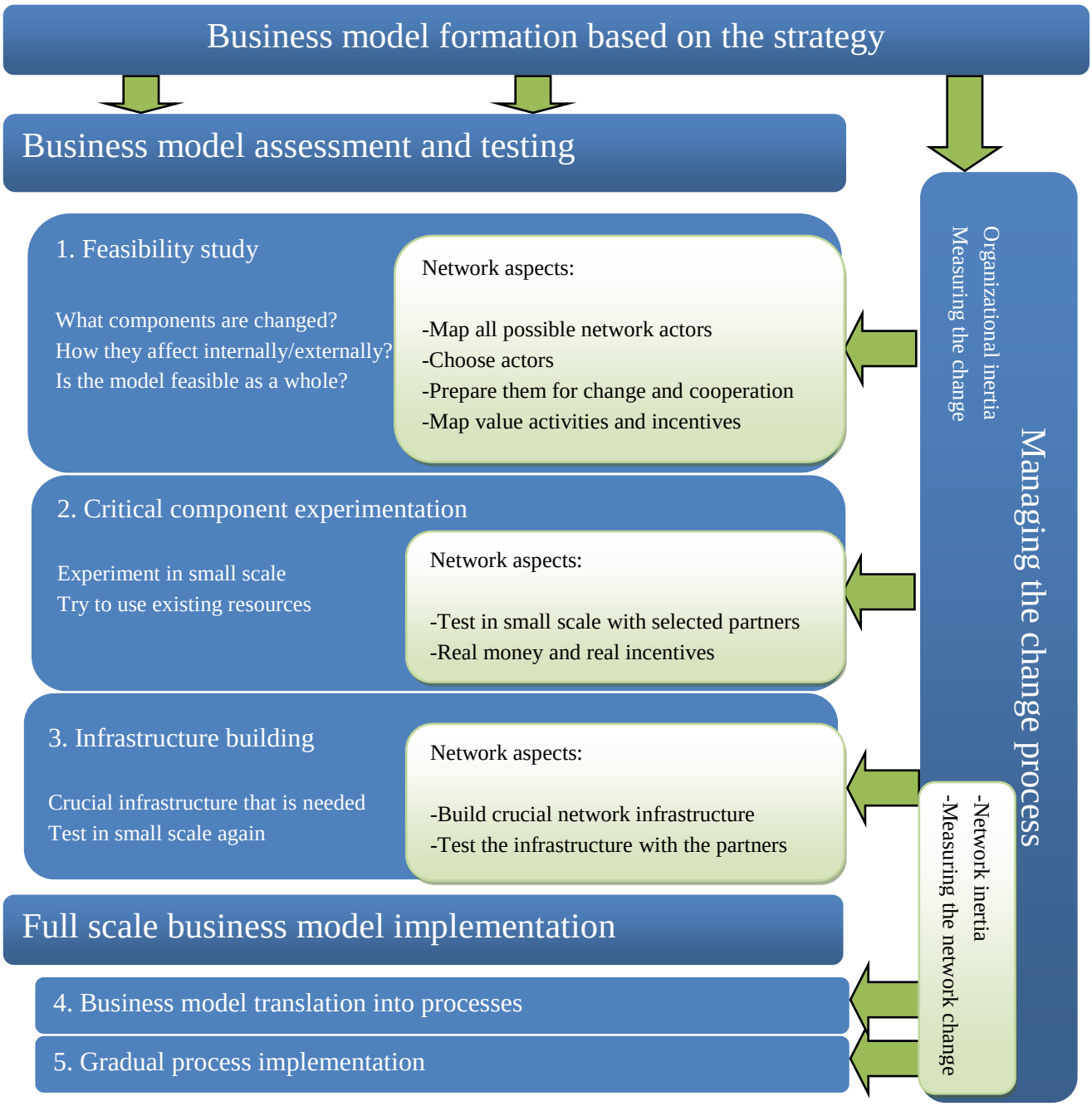


Figure 35. *Business model renewal process and its networking aspects based on strategic views.*

Note that these are just initial thoughts of how the design and implementation should be done. Another note is that this business model designing is like a new product development process. Therefore after every step there should be a gate that has to be passed[2]. That 'gate' defines how the actual model should be enhanced or it determines if it is feasible to continue the process at all.

[2] See the Stage-Gate process for new product development from Cooper's book Winning at New Products (2001)

6. CONCLUSIONS

This chapter sums up the discussion and makes the conclusions of how this thesis has performed theoretically and managerially. Moreover, it assesses the thesis methodologically and describes the limitations of the study. The last section proposes some suggestions for further research.

6.1. Theoretical contribution

The objective of the study was to identify how business models and networks relate to each other and how the business model transition process concerning networks may happen. The literature review defined the objective as it identified network pictures and its attributes to an appropriate tool to describe and illustrate networks. Moreover, the literature review identified that Osterwalder and Pigneur's (2010) Business Model Canvas is an appropriate tool to represent the concept of business models. That Canvas is considered as an example of narrative business model, whereas a network picture is very close to visual business models.

As these two concepts, business models and network pictures, were compared, it came out that the current literature of business models is such diverse in terms of recognizing the network attributes. Narrative business models are strong to indicate the value proposition, creation and capturing, but they lack the ability to describe network attributes. On the other way around, a visual business model can visualize the network and its attributes, but it lacks the ability to describe value activities. The empirical evidence strengthened and confirmed this view. Therefore, the literature of business models is scattered in terms of modeling. Moreover, Zott et al. (2011, p. 1031) argue that "… the business model concept seems to focus more on cooperation, partnership, and joint value creation". However, as this thesis proposes, narrative BM concepts and especially the Canvas are not able to illustrate properly those structures. Therefore, scholars should more carefully recognize the different characteristics of narrative and visual models and their abilities to describe businesses. Based on the evidence of the thesis I propose that both concepts, narrative business models and network pictures, should be used to describe how a company and its network work. If both concepts are not used, this thesis provides a guideline that is a useful tool to enhance the Business Model Canvas with network and visual elements. Note that the enhanced Canvas still lacks the visualization of a network, and therefore it does not represent networks properly.

Considering the transition process in context of business model renewal, the literature review found out that business model literature concerning the change process is mainly

concerned about business model innovation. Therefore, it does not recognize a business model renewal process, which initiates from strategy. Thus, this thesis described and explained a renewal process that initiates from strategy. This process calls for business model feasibility testing and business model experimentation. Therefore, the business model should be validated and tested before it can be implemented. These phases were found in the literature, but they were in the context of business model innovation. In that context these phases are considered as strategy creators and definers (Wirtz 2011), not as business model enhancers. Therefore, scholars should recognize the different initiators of business models and their aspects in business model transitions. Moreover, this study examined networking aspects of the business model renewal process. The networking aspects have been studied in context of product development with a link to business model renewal (Sandström & Osborne 2010), but the literature did not recognize the aspects in context of business model renewal that is derived from strategy. Therefore, this study listed some preliminary thoughts about the networking aspects.

6.2. Managerial implications

As modeling businesses is a way to communicate business elements and structures to others, the main utility is to notice the differences between these two concepts. A narrative business model concept is an essential tool to describe the various value activities and the core logic of a single company. In contrast, a visual network picture illustrates the network structure and activities in a way that the narrative business model cannot do. Therefore, I state that these two concepts supplement each other. Hence, managers should use both concepts when they want to tell the story of a company. A single tool is not enough for a company that recognizes networks as an important part of their business.

The guideline that helps to enhance the network view might also be useful for managers. With simple techniques managers can visualize and emphasize certain elements that are important concerning networks. Moreover, the transition guide helps to recognize network elements from a business model. However, usually this kind of guide is unnecessary, because a network picture is a subjective view of a network that managers are able to construct without guides. Nevertheless, some individuals who are not familiar with the future business of a company might get some hints from this transition guide.

The business model renewal phases have some implications concerning the case company managers. As it combines the literature and the obstacles that the managers described, it gives them some insights about the business model renewal process in this particular context.

6.3. Assessments and limitations of the study

The topicality of this study highlights the recent work done by Mason and Spring (2011), and Palo and Tähtinen (2011), who have tackled this research field recently and recognized the need for a networked business model concept. Even though there is a wide range of studies concerning networks and business models, none of these have tackled in their essential concepts. Thus, this study has some new insights to the research field. Moreover, the highly appreciated Strategic Management Society has devoted a complete track for understanding transitions in business models in their conference (Strategic Management Society 2012). This indicates the need for more research in the field of business model renewal. The thesis is assessed with four terms; credibility, transferability, dependability and conformability proposed by Trochim (2006).

Credibility. This research was made as a single case study. Thus, its purpose was to give some preliminary description for the phenomenon that was studied. The research issues were derived from the literature review and the empirical evidence described and explained those issues. As the problem was to describe the aspects of networked business on business model concept and business model renewal, this kind of research approach is appropriate. However, according to Yin (2009, p. 45), multiple case study method would be more suitable, because this case does not represent: a critical test of existing theory, or a rare circumstance, or is a typical or representative case. Thus, this research would have been more valid, if it had more cases. However, Yin (2009, p. 46) continues that a multiple case study can require extensive resources and time, and therefore it is not preferable method for a single student.

Transferability. In the case of case studies, the general postulate is that the results cannot be generalized. Though, in given context the generalizability can exist. Thus, a study has some implications, if the case circumstances exist in the transfer environment. In this case, the main assumption considering the renewal is that the business model is derived from strategic vision and there is little room for business model innovation. Moreover, the business model renewal context has to be linked to external processes with external actors, as of partners. The customer interface remains practically untouched. Finally, the level of analysis is a single firm in a network. If these assumptions are realized, then this thesis might have some transferability to other cases. All in all, this process has a strong case context.

In case of business model and network picture concepts and their fundamental differences, the conclusions are mainly applicable to other cases. I state that the differences are based on human cognitive characteristics and attributes, and therefore both concepts should be used to describe how a company works. The guideline considering the translation of a business model to a network picture is also transferable,

if the BM Canvas is used and the network pictures are drawn in such way as in this thesis.

Dependability. Dependability refers to qualitative reliability. Designing a business model or a network picture is very intuitive work. Thus, every model is unique - even if it is done by the same participants. One should note that the essence of business models and network pictures is to provide a subjective view of the business at given time. Therefore, the material collection cannot be replicated exactly - as qualitative studies tend to do. The study material collection techniques and the material itself were documented, and therefore the study process and analysis of the material might be replicable and repeatable. As a qualitative, narrative thesis, the results of the thesis are prone to subjective views and therefore other researches might not end up to same conclusions. This reliability issue was dealt with an extensive literature review and the literature was used to support and fill the gaps in the empirical evidence.

Concerning the conceptual differences between a narrative and a visual business model, the literature review explained those differences fairly well, and therefore the empirical setting was not crucial to prove those differences. The empirics only strengthened the view that was described in the literature review. It did not explain the reasons behind the conceptual differences. However, the renewal process is very prone to subjective bias, because it did not have enough literature or empirical evidence to support it.

Confirmability. The research data and research data collection procedures were not confirmed by any other researcher, although the workshops were conducted with experienced researchers. Thus, the workshop events and results may be appropriate, but the research process itself might lack some important aspects. However, as a descriptive single case study, the data and results are not meant to be generalized, and therefore this study has rather subjective view.

This research process had few managerial objectives that were not related to the actual thesis and its results. Therefore, the workshops and their structure and contents were not ideal for the thesis. Thus, if the research objective concerning especially about the business model renewal was taken into account, the second workshop would have gone deeper into the networking aspects. At this time, the research was adapted to the results of the workshops. Thus, the research material limits the results section. Also the single case limitations have to be remembered.

6.4. Suggestions for further research

This section introduces some suggestions for future research questions. First of all, since this thesis deals only with initial and premature phases of the business model renewal, it would be interesting to follow the actual path of the process all the way to the implementation and evaluation phases. Thus, a longitudinal study would have to be

conducted for that purposes. Palo and Tähtinen (2011) refer to this as they call for observing the development of a business net and its business model. Moreover, as this renewal process concerned only the process itself, the management side of the process was not covered. Thus, the business model change management, which is not covered in the literature, would be an interesting topic.

Concerning the change, Wirtz (2011, p. 246) calls for indicators for success in the evaluation phase of a business model design process. Thus, the effects of change have to be continually measured and they have to measurable. He concludes that measuring guarantees sustainability and detects undesired changes at an early stage. Also the case company managers called for change measurements and indicators. These indicators should comprehensively describe the change process at rather strategic level. Thus, the indicators should describe the progress and success of the change process. For example Capability Maturity Model Integration (CMMI)[3] is a tool for process improvement in organizations, and therefore it might give some answers to business model change processes as well. Thus, the first proposed research question is:

> What kinds of performance indicator tools are appropriate to use in case of business model transition process?

The second question relates to this first question. Since the literature does not recognize business model validation and testing when a business model is derived straight from the strategy, and this thesis only discussed those only at conceptual level, there is need to examine what kind of validation and testing process is needed and what kind of tools are appropriate for this validation. This kind of study requires multiple, longitudinal cases to be accepted universally.

> How to validate and test properly a business model?
>
> What kinds of tools are appropriate for business model validation?

The research implied that there could be some similarities between new product development and business model designing. Thus, those two concepts might have some common issues and especially the business model designing might get some insights from new product development. It would be interesting to find the similarities and differences. Moreover, Klang et al. (2010) argue that the research about how other disciplines than strategic and entrepreneurial disciplines of management science relate to the business model concept is scarce and poor. Thus, studying this relationship would be an interesting opening.

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[3] See more from http://www.sei.cmu.edu/cmmi/

How the established product development process concepts relate to business model transition process?

Finally, the case company's new organizational form would be an interesting case example for a new kind of business models that are meant to be flexible in changing environments. The Strategic Management Society (2012) has listed this as one of the core questions related to business model transitions.

REFERENCES

Afuah, A. 2004. Business models: A strategic management approach. New York, McGraw-Hill/Irwin. 415 p.

Al-Debei, M. M., El-Haddadeh, R. & Avison, D. 2008. Defining the business model in the new world of digital business. Proceedings of the Fourteenth Americas Conference on Information Systems. pp. 1-11.

Al-Debei, M. M. & Avison, D. 2010. Developing a unified framework of the business model concept. European Journal of Information Systems. Vol. 19, No. 3, pp. 359-376.

Amit, R. & Zott, C. 2001. Value creation in E-business. Strategic Management Journal. Vol. 22, No. 6-7, pp. 493-520.

Aspara, J., Lamberg, J., Laukia, A. & Tikkanen, H. 2011. Corporate Business Model Transformation and Inter-Organizational Cognition: The Case of Nokia. Long range planning. In press. pp. 1-23.

Auer, C. & Follack, M. 2002. Using Action Research for Gaining Competitive Advantage out of the Internet: Impact on Existing Business Models. BLED 2002 Proceedings. pp. 767-784.

Barney, J. 1991. Firm Resources and Sustained Competitive Advantage. Journal of Management. Vol. 17, No. 1, pp. 99-120.

Betz, F. 2002. Strategic business models. Engineering Management Journal. Vol. 14, No. 1, pp. 21-28.

Casadesus-Masanell, R. & Ricart, J. E. 2010. From Strategy to Business Models and onto Tactics. Long range planning. Vol. 43, No. 2-3, pp. 195-215.

Central Intelligence Agency. 2011. GDP - composition by sector. Available: [https://www.cia.gov/library/publications/the-world-factbook/fields/2012.html]. Date of access: 8.12.2011.

Chesbrough, H. & Rosenbloom, R. S. 2002. The role of the business model in capturing value from innovation: evidence from Xerox Corporation's technology spin-off companies. Industrial and corporate change. Vol. 11, No. 3, pp. 529-555.

Chesbrough, H. 2007. Business model innovation: it's not just about technology anymore. Strategy & Leadership. Vol. 35, No. 6, pp. 12-17.

Chesbrough, H. 2010. Business Model Innovation: Opportunities and Barriers. Long range planning. Vol. 43, No. 2-3, pp. 354-363.

Chung, W., Yam, A. & Chan, M. 2004. Networked enterprise: A new business model for global sourcing. International Journal of Production Economics. Vol. 87, No. 3, pp. 267-280.

Cleen. 2010. Developing smart grids and energy markets. Available: [http://www.cleen.fi/en/Comms/Cleen_Factsheet_SGEM_final.pdf]. Date of access: 8.12.2011.

Cooper, R. G. 2001. Winning at new products: accelerating the process from idea to launch. Cambridge, Massachusetts, Perseus Publishing. 425 p.

Currie, W. 2004. Value creation from e-business models. Great Britain, Elsdevier Butterworth-Heinemann. 425 p.

Demil, B. & Lecocq, X. 2010. Business Model Evolution: In Search of Dynamic Consistency. Long range planning. Vol. 43, No. 2-3, pp. 227-246.

Doganova, L. & Eyquem-Renault, M. 2009. What do business models do?: Innovation devices in technology entrepreneurship. Research Policy. Vol. 38, No. 10, pp. 1559-1570.

Doz, Y. L. & Kosonen, M. 2010. Embedding Strategic Agility: A Leadership Agenda for Accelerating Business Model Renewal. Long range planning. Vol. 43, No. 2-3, pp. 370-382.

Dubosson-Torbay, M., Osterwalder, A. & Pigneur, Y. 2002. E-business model design, classification, and measurements. Thunderbird International Business Review. Vol. 44, No. 1, pp. 5-23.

Eisenhardt, K. M. 1989. Building Theories from Case Study Research. The Academy of Management Review. Vol. 14, No. 4, pp. 532-550.

Eriksson, H. E. & Penker, M. 2000. Business modeling with UML. Open Training. pp. 1-12.

Fiala, P. 2005. Information sharing in supply chains. Omega. Vol. 33, No. 5, pp. 419-423.

Ford, D., Berthon, P., Brown, S. J., et al. 2006. The Business Marketing Course: Managing in Complex Networks. Great Britain, Glasgow, Wiley. 288 p.

Ford, D. & Ramos, C. 2006. Network pictures: Conceptual development and preliminary findings. 22nd IMP conference. pp. 1-36.

Ford, D. & Redwood, M. 2005. Making sense of network dynamics through network pictures: A longitudinal case study. Industrial Marketing Management. Vol. 34, No. 7, pp. 648-657.

FreeDictionary. 2011. Definition of model in the Online Dictionary. Available: [http://www.thefreedictionary.com/model]. Date of access: 8.12.2011.

Gordijn, J. & Akkermans, H. 2001. Designing and evaluating e-business models. IEEE Intelligent Systems. Vol. 16, No. 4, pp. 11-17.

Gordijn, J., Akkermans, H. & van Vliet, H. 2000. Business Modelling Is Not Process Modelling. Conceptual Modeling for E-Business and the Web. Springer Berlin / Heidelberg. pp. 40-51.

Gunzel, F. & Wilker, H. 2009. Patterns in Business Models: A Case Survey. Proceedings of RENT XXII Conference: Entrepreneurial Growth of the Firm. pp. 1-14.

Håkansson, H. & Johanson, J. 1992. A model of industrial networks. Industrial Networks: A New View of Reality. London, Routledge, Univ. pp. 28-34.

Halinen, A. & Törnroos, J. 2005. Using case methods in the study of contemporary business networks. Journal of Business Research. Vol. 58, No. 9, pp. 1285-1297.

Hamel, G. 2000. Leading the revolution: how to thrive in turbulent times by making innovation a way of life. Boston, USA, Harvard Business School Press. 336 p.

Hedman, J. & Kalling, T. 2003. The business model concept: theoretical underpinnings and empirical illustrations. European Journal of Information Systems. Vol. 12, No. 1, pp. 49-59.

Henneberg, S. C., Mouzas, S. & Pete Naudé. 2006. Network pictures: concepts and representations. European Journal of Marketing. Vol. 40, No. 3, pp. 408-429.

Jarillo, J. C. 1988. On strategic networks. Strategic Management Journal. Vol. 9, No. 1, pp. 31-41.

Johnson, M. W., Christensen, C. M. & Kagermann, H. 2008. Reinventing your business model. Harvard business review. Vol. 86, No. 12, pp. 57-68.

Kasanen, E., Lukka, K. & Siitonen, A. 1991. Konstruktiivinen tutkimusote liiketaloustieteessä. Liiketaloudellinen aikakauskirja. Vol. 40, No. 3, pp. 301-329.

Klang, D. J. H., Wallnöfer, M. & Hacklin, F. 2010. The Anatomy of the Business Model: A Syntactical Review and Research Agenda. Summer Conference 2010. Opening Up Innovation: Strategy, Organization and Technology. pp. 1-31.

Lambert, S. 2008. A conceptual framework for business model research. 21 st Bled eConference eCollaboration: Overcoming Boundaries through Multi-Channel Interaction. pp. 1-24.

Leek, S. & Mason, K. 2010. The utilisation of network pictures to examine a company's employees' perceptions of a supplier relationship. Industrial Marketing Management. Vol. 39, No. 3, pp. 400-412.

Linder, J. & Cantrell, S. 2000. Changing business models: surveying the landscape. Accenture. pp. 1-15.

Magretta, J. 2002. Why business models matter. Harvard business review. Vol. 80, No. 5, pp. 86-93.

Mäkinen, S. & Seppänen, M. 2007. Assessing business model concepts with taxonomical research criteria: A preliminary study. Management Research News. Vol. 30, No. 10, pp. 735-748.

Mason, K. & Spring, M. 2011. The sites and practices of business models. Industrial Marketing Management. Vol. 40, No. 6, pp. 1032-1041.

Mason, K. J. & Leek, S. 2008. Learning to Build a Supply Network: An Exploration of Dynamic Business Models. Journal of Management Studies. Vol. 45, No. 4, pp. 774-799.

McGrath, R. G. 2010. Business Models: A Discovery Driven Approach. Long range planning. Vol. 43, No. 2-3, pp. 247-261.

Möller, K. K. & Halinen, A. 1999. Business Relationships and Networks:: Managerial Challenge of Network Era. Industrial Marketing Management. Vol. 28, No. 5, pp. 413-427.

Morris, M., Schindehutte, M. & Allen, J. 2005. The entrepreneur's business model: toward a unified perspective. Journal of Business Research. Vol. 58, No. 6, pp. 726-735.

Neilimo, K. & Näsi, J. 1980. Nomoteettinen tutkimusote ja suomalainen yrityksen taloustiede: tutkimus positivismin soveltamisesta. Tampereen yliopisto. 145 p.

Olkkonen, T. 1993. Johdatus teollisuustalouden tutkimustyöhön. Teknillinen korkeakoulu. 143 p.

Osterwalder, A. & Pigneur, Y. 2002. An e-business model ontology for modeling e-business. 15th Bled Electronic Commerce Conference. pp. 1-12.

Osterwalder, A. 2004. The business model ontology. Dissertation. University of Lausanne. pp. 1-172.

Osterwalder, A., Pigneur, Y. & Tucci, C. L. 2005. Clarifying business models: Origins, present, and future of the concept. Communications of the association for Information Systems. Vol. 16, No. 1, pp. 1-25.

Osterwalder, A. & Pigneur, Y. 2010. Business Model Generation. USA, John Wiley & Sons Inc. 281 p.

Palo, T. & Tähtinen, J. 2011. A network perspective on business models for emerging technology-based services. Journal of Business & Industrial Marketing. Vol. 26, No. 5, pp. 377-388.

Pateli, A. G. & Giaglis, G. M. 2005. Technology innovation-induced business model change: a contingency approach. Journal of Organizational Change Management. Vol. 18, No. 2, pp. 167-183.

Perkmann, M. & Spicer, A. 2010. What are Business Models? Developing a Theory of Performative Representation. Research in the Sociology of Organizations. Vol. 29, pp. 269-279.

Petrovic, O., Kittl, C. & Teksten, R. D. 2001. Developing business models for ebusiness. International Conference on Electronic Commerce. pp. 1-6.

Porter, M. E. 1998. Competitive strategy: techniques for analyzing industries and competitors. Free Press; Toronto: Maxwell Macmillan Canada. 397 p.

Purchase, S., Lowe, S. & Ellis, N. 2010. From "taking" network pictures to "making" network pictures: A new metaphorical manifesto for industrial marketing research. Journal of Organizational Change Management. Vol. 23, No. 5, pp. 595-615.

Rajala, R. & Westerlund, M. 2008. Capability perspective of business model innovation: analysis in the software industry. International Journal of Business Innovation and Research. Vol. 2, No. 1, pp. 71-89.

Ramos, C. 2008. Developing network pictures as a research tool: capturing the output of individuals' sense-making in organisational networks. Dissertation. University of Bath. pp. 1-330.

Ramos, C. & Ford, I. D. 2011. Network pictures as a research device: Developing a tool to capture actors' perceptions in organizational networks. Industrial Marketing Management. Vol. 40, No. 3, pp. 447-464.

Richardson, J. 2008. The business model: an integrative framework for strategy execution. Strategic Change. Vol. 17, No. 5-6, pp. 133-144.

Robbins, S. P. 2003. Organizational behavior. New Jersey, Prentice Hall. 752 p.

Sandström, C. & Osborne, R. G. 2010. Managing business model renewal. forthcoming in International Journal of Business and Systems Research. pp. 1-15.

Saunders, M., Lewis, P. & Thornhill, A. 2009. Research methods for business students. England, Prentice Hall. 614 p.

Schweizer, L. 2005. Concept and evolution of business models. Journal of General Management. Vol. 31, No. 2, pp. 37.

Shafer, S. M., Smith, H. J. & Linder, J. C. 2005. The power of business models. Business horizons. Vol. 48, No. 3, pp. 199-207.

Strategic Management Society. 2012. SMS 32nd Annual International Conference. Call for Proposals. Available:

[http://prague.strategicmanagement.net/call_for_proposals.php]. Date of access: 19.1.2012.

Tapscott, D., Lowy, A. & Ticoll, D. 2000. Digital capital: Harnessing the power of business webs. Harvard Business Press. 320 p.

Teece, D. J. 2010. Business Models, Business Strategy and Innovation. Long range planning. Vol. 43, No. 2-3, pp. 172-194.

Thomke, S. H. 2003. Experimentation matters: unlocking the potential of new technologies for innovation. USA, Harvard Business Press. 320 p.

Trochim, W. 2006. What is the Research Methods Knowledge Base? The Research Methods Knowledge Base. Available: [http://www.socialresearchmethods.net/kb/qualval.php]. Date of access: 8.12.2011.

University of Michigan. 2010. Evolution and Natural Selection. Available: [http://www.globalchange.umich.edu/globalchange1/current/lectures/selection/selection.html]. Date of access: 3.1.2011.

Venkatraman, N. & Henderson, J. C. 1998. Real Strategies for Virtual Organizing. Sloan management review. Vol. 40, No. 1, pp. 33-48.

Vesalainen, J. 2002. Kaupankäynnistä kumppanuuteen. Tampere, Metalliteollisuuden keskusliitto, MET. 220 p.

Vesalainen, J. 2004. Katetta kumppanuudelle: Hyöty ja sen jakaminen asiakas-toimittaja -suhteessa. Tampere, Teknologiateollisuus ry. 206 p.

Weill, P. & Vitale, M. R. 2001. Place to space: Migrating to eBusiness Models. Boston, USA, Harvard Business Press. 372 p.

Westerlund, M. 2009. Managing networked business models : essays in the software industry. Dissertation. Helsinki, Helsinki School of Economics. pp. 1-87.

Wirtz, B. 2011. Business Model Management. Germany, Springer Fachmedien Wiesbaden GmbH. 342 p.

Wu, X. & Zhang, W. 2009. Business Model Innovations in China: From a Value Network Perspective. US-China Business Cooperation in the 21 st Century: Opportunities and Challenges for Enterpreneurs. pp. 1-9.

Yin, R. K. 2009. Case study research: Design and methods. United States of America, Sage Publications, Inc. 219 p.

Yip, G. S. 2004. Using Strategy to Change Your Business Model. Business Strategy Review. Vol. 15, No. 2, pp. 17-24.

Zott, C., Amit, R. & Massa, L. 2011. The Business Model: Recent Developments and Future Research. Journal of Management. Vol. 37, No. 4, pp. 1019-1042.