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# The Business Model Grinder

## Generating new business models through modularisation.

Master of Science Thesis
in the Management and Economics of Innovation Programme

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# Abstract

In the modern world, innovation has become a vital piece in order to stay competitive. In the past innovation usually consisted of either process or product innovations. However, as firms' product cycles shortened and competition increased, it grew more difficult for firms to continue developing new products and services. Instead firms started to rethink the way they did business, therefore business models emerged as one of the areas were firms focused most of their resources in order to gain a competitive advantage.

The purpose of this thesis is to identify a different way to conceive and experiment with new business models. This was done by expanding on the Business Model Ontologies conceived by Osterwalder (2004). But instead of constructing new business models from scratch by utilising the different ontologies, the thesis choose to take a modular approach. By using the Business Model Ontologies and the later expansion, the Business Model Canvas, existing business models were broken down and provided the building blocks for new business models. The idea and the process behind breaking down existing business models are detailed in this thesis.

The process of breaking down existing business models, in order to benchmark and compare the different modules is a three step process. This first step is identify, this means that you need to identify what sort of business model you are trying to create and then identify firms that operate with similar business models. Then it is time to break down the selected business models in to their nine constituent modules. In the third step these modules are benchmarked against each other and then reassembled to a new business model that can be tested by the firm.

In order to test this process, the business models of Google and Facebook were broken down in to their respective modules. These modules were then benchmarked against each other and used to create a new business model for the company Radish and their mobile application Mebox. The outcome of the process resulted in a new business models that was a mash up between Google, Facebook and the value proposition of Mebox. This model is currently beeing tested and evaluated by Radish.

## Acknowledgement

This thesis is the outcome of work performed by me, in collaboration with the founders of Mebox over the spring and summer of 2014. To be able to conduct this piece of work has been both challenging and enjoyable. It has allowed me to increase my knowledge in business models as well as the day to day activities of start-ups.

I would like to extend my gratitude to the founders of Mebox, Henrik and David, for all the time that they have spent with me in interviews and discussions. This help has been invaluable in order for me to write this thesis. I would also like to thank Dan Paulin for the help he has extended me when it comes to reading and commenting my essay, as well as keeping me on track and providing me with helpful advice. This thesis would not have been such an enjoyable journey if it was not for you people.

Gothenburg, August 3rd 2014

Rickard Mårtensson

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# 1 Introduction

*The introduction will start by introducing the topic of the thesis as well as giving a brief background of the theories that underlies the topic. The aim and research questions will also be presented as well as the delimitations of the thesis.*

## 1.1 Background

In recent years the focus on business models, as a way of securing the firms competitive advantage, has increased greatly. Business models has existed for thousands of years, but it's only since mid-1990s that business models as we know them started to become popular (Zott, Amit, & Massa, 2011). It is also during this period that the academic research on business models and business model innovation started to pick up pace. One of the problems in this research has generally been how to define a business model and what the definition is supposed to encompass (Zott et al., 2011). However, it has been argued that it is not of great importance that the business model concept is defined, as long as it acts as grouping were relevant concepts that are incorporated under the term are researched and discussed (Baden-Fuller & Morgan, 2010; Chesbrough, 2007; Zott et al., 2011). Although the concept of a business model has not always been clearly defined, four general categories have been identified (Shafer, Smith, & Linder, 2005). These categories are strategic choices, the value network, creating value and capturing value. The category that will be further investigated in this thesis is how the business model helps the firm to capture value from its operations.

Business models have during the last years accounted for a large share of the innovation compared to traditional product and process innovations (Chesbrough, 2007). In part this is due to a shift in focus of the firms, from R&D intensive product development to cheap and fast business model experimentation. The other reason has been the reduction of the product life-cycle, which has increased the importance of quickly being able to capture value in new and innovative ways (Zott et al., 2011). In order for firms to stay competitive in an ever changing environment, they need to assess business opportunities faster as well as quickly determine how to extract value from the opportunity at hand.

In business areas where product life-cycles are notoriously short and where it is difficult to extract value from a product, business models are even more important (Amit & Zott, 2010). One industry that is a good example of this is the e-business industry, which sells their services or products online. They have been in the front line when it comes to experimenting with and developing new business models (De, Mathew, & Abraham, 2001). The innovativeness among these firms can in large be explained by the high level of competition, low barriers to entry and few established firms with proven track records. All of these factors has allowed for new entrants to experiment with alternative business

models in order to gain a competitive advantage. This experimental or discovery driven approach has also proved to be the most beneficial for entrepreneurial firms lacking in resources (McGrath, 2010).

Creating and capturing value is the sole purpose of the firm and it can be done in many ways. Ways that are common in the e-business are advertising, cross-subsidization and freemium versions (McGrath, 2010). But instead of utilizing existing business models, firms should instead modify or construct completely new business models (Amit & Zott, 2010). There are currently a few proposed ways to go ahead when creating a new business models, one of the most popular is Osterwalder's Business Model Canvas (Chesbrough, 2010). Osterwalder's approach breaks down a firm's business operations into nine distinct activities, which can then be explored in detail in discovery driven approach to find an appropriate business model (Osterwalder, 2004). However, this approach requires quite a lot of work when it comes to the discovery approach and if the product is not fully developed it will be difficult to obtain accurate data throughout the discovery process.

There are two major problems in developing business models in uncertain environments. Firstly, it is impossible to predict the future and thus try developing anything when you do not know what the market is going to be like (McGrath, 2010). Secondly, there is also the uncertainty that relates to the product developed, if it will turn out the way the firm believed it would (Amit & Zott, 2012). One of the few successful ways of handling these unknowns is by utilizing real options relating to business models and in parallel try several of them to see which one or ones turn out to be successful (McGrath, 2010). However, creating several business models will be time consuming if a discovery process is launched in all the different directions. So what would be beneficial for the firm would be to develop an approach that would allow for several business models to be created and tested simultaneously while at the same time not having to embark on several customer development processes.

## 1.2 Purpose, Aim and Research Questions

The overall purpose of this thesis is to utilise Osterwalder's Business Model Canvas in order to break down successful existing business models into modules. The successful firms to break down into modules that have been selected for this report are Facebook and Google. There were several reasons why these two firms were chosen. The first one was due to the fact that both are publically traded which makes it easier to retrieve information about their business endeavours. Secondly, Google has been used as a template for researching internet companies, and has as such turned in to the fruit fly of internet firm research (Baden-Fuller & Morgan, 2010). Thirdly, Facebook has a lot of things in common with Mebox, which allows for a better comparison between the firms. Finally both firms have been succesfull at what they do and will therefore be a good benchmark. These firms will be broken down into modules, which then can be assembled into different business models depending on the

environment in which you believe that the firm will operate in. This will allow for different cost and revenue structures depending on different scenarios, which will be drawn from relevant trends existing today. In short this method will allow for the firm to create several real option business models at low cost which will increase their chances of being successful.

The aim of the thesis is to present a framework for how business models can be broken down into modules and then be assembled into new business models. This is done to facilitate a faster process to create business models that then can be tested by the firm to see if it works. In order to illustrate this approach a business model for the e-venture Mebox AB will be created by modules from Facebook and Google. This module based business model is created in order to take a best practice approach to creating business models, which might add the flexibility needed for a firm that operates in an uncertain and changing environment. The resulting business model can then be used by Mebox AB as a foundation on which they can experiment further. This experimentation will also be made easier by the framework that is developed and presented in the thesis.

In order to fulfil the aim, there will be two research questions that will try to address primarily one of the gaps that were identified in the research, see chapter 1.3. That gap is how firms can experiment with business models in an easier way. The two research questions that were composed in order to address the gap were:

1. *How can firms with little resources experiment with current business models in order to create new innovative business models?*

This question aims to address the issue with the barriers that prevents firms to experiment with new business models. So in order to investigate this issue and answer the question, the development of research in business models will be presented. This research will then be used in order to create a framework for how firms can experiment and create new business models.

2. *How would a firm utilise a more structured approach to using a best practice design from other firms' business models?*

This question aims to address how a framework as the one mentioned in the previous question would be used by a firm. This will be done by using the framework created, on the firm Mebox AB.

## 1.3 Academic Contribution

Björkdahl and Holmén (2013:14) states that some of the research directions that should be explored in the future should relate to how “firms experiment with new business models” and “what the “best” processes” should be for these experiments, this means that that new research should take a deeper look into how to experiment with business models. As well as “how can the uncertainties in business model innovation be reduced” (Björkdahl & Holmén, 2013:13). These are gaps that have been identified in up to date research and has backing from the current research (Björkdahl & Holmén, 2013).

Firms are often reluctant to experiment with their business models due to all the uncertainty that is involved, this covers subjects such as management bias and inefficient process for how to do it (Chesbrough, 2010; McGrath, 2010). The best way of conducting these experiments are also up to debate, since the views among the researchers differ on this point (Chesbrough, 2007; Ethiraj & Levinthal, 2004). Firms also suffer the problem with how they can minimise the uncertainties, and there are different approaches to this, however none is complete and gives a full road map from business model experimentation, to testing on a real firm. McGrath (2010) suggests that real options theory should be used when experimenting with new business models. On the other hand some researchers believe that by following a structured blue print in the creation of the business model will reduce the risks (Demil & Lecocq, 2010; Osterwalder & Pigneur, 2010). No studies have attempted to join these two approaches, which is one of the identified gaps. Neither have any of the researchers tried to break down business models in order to recombine them in new ways, this would be another gap in the literature. Both of these gaps are related to the experimental process in business model innovation.

This thesis will in part address the gaps that have been identified, by creating a method that benchmarks current business models and disassembles them into modules in order to have building blocks from which they can experiment and innovate, a type of innovation by combination. It will also show how the method can be used to facilitate the use of real options and thus reducing uncertainties, and thus not betting everything on one horse. This will be done by allowing for several business models to be built be recombining modules in different ways. This will allow the firm to lower the downside risk and being able handle uncertainty in a better way.

## 1.4 Delimitations

The thesis is of a theoretical nature, which means that the findings will primarily be based on theoretical findings combined with, to lesser extent empirical findings. This means that the many of the assumptions and conclusions that are drawn in the thesis, have not been empirically tested. This is due to a range of different factors, but mainly it is related to the long time it would take to actually

evaluate the performance of any of the theoretical findings. Therefore, the theories suggested in this work should be mainly considered as a good approach from a theoretical point of view, and when used empirically they will act as structured template on which business model experimentation can be conducted from.

The main framework that was chosen in the thesis is Osterwalder's business model canvas and the business model ontology; other approaches and ontologies have not been investigated. This is due to the central role that Osterwalder's work has played in a lot of the following research (Gordijn, Osterwalder, & Pigneur, 2005). This means that many of the conclusions that are made in the thesis are based upon the foundation provided by Osterwalder's business model ontology.

The thesis is also limited in the industries that are investigated, and the way that the data is collected and interpreted. In this thesis the industry that is investigated is the online industry, which means that it is not sure that the results are applicable to all industries. The theory that was selected was mostly of a general nature, but in some aspects it was more angled towards the online industry. However, the firms that were chosen as a representation of the online industry and that were to be used as best practice business models might not be representative for the online business in general. Although they are two of the biggest, most successful and well known firms, it still limits the empirical data set to two major firms. The data that was collected was also all of secondary nature, which means that the data was compiled by another source.

# 2 Method

*The research in this report will follow a research process made up out of eight steps in order to secure that the results will be of as a high quality as possible. A research design is a way to provide structure to the early parts of a study by providing "a framework for the collection and analysis of data" (Bryman & Bell, 2011, p. 40). By following a specified framework during the research, the result is likely to be of a higher quality since the included steps in the framework will minimize method errors. After the research process have been described, the description of how the study was conducted will be presented.*

The method will affect the way the research is conducted and in turn the results produced by the research. Thus it is of great importance to utilise a structured approach, this will also increase the validity and reliability of the study. In order to do so, the methodology of this thesis will follow an eight step research process, se Figure 1. This creates an overview of the research process, thus making it easier to follow all the steps that need to be investigated. As well as providing the reader with a good overview of the thesis structure.

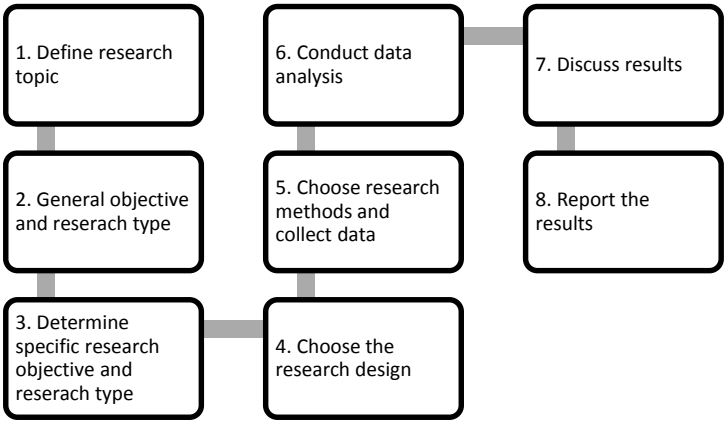


**Figure 1: The 8 step research process (Holmén, 2013)**

All of the parts in Figure 1 are not related to methodology, so the ones that will be discussed further in this chapter are primarily parts three to six . These parts relates to identifying the research topic, choosing how to approach the problem, then how to access data and how to analyse it. The process in Figure 1 will serve as a general framework for how the research will be conducted. However, some of the parts in the process will be composed of smaller sub-processes. A short presentation of parts one to three will be made in section 2.1, in order to set the stage.

## 2.1 Business Research Strategies

The business research strategy is philosophical ideas on how business research can and should be conducted (Bryman & Bell, 2011). When talking about different ways of conducting research and the purpose of it, it is important to first describe the topic of research. The topic will be in the field of business model innovation and will investigate how new business models can be generated. It will build upon well-established and well-researched sub-areas in the field. The general idea of the research topic is that it would be possible to apply one of the major sources of new innovations to the field of business model innovation. This source of new innovations is the concept of innovation

through combination, or simply put combine different ideas or concepts in order to create new ones. Business models generally consist of several different elements, which create a customised model for the firm. At the moment there are many different ways a new business model can be created, ranging from intensive research with customer development and trial and error processes to simply trying to copy a competitor and copying their business model (Chesbrough, 2007).

What this report will try to do, is to solve the issues that are faced by smaller start-ups that don't have the time or resources to engage in the highly time and resource intensive customer development process. In short this report will be about finding a time and resource efficient way to create a unique business model, that doesn't include too many radically new elements and in such a way decreases the business risk of the firm while at the same time provides a customised business model. By utilising the business model canvas created by Osterwalder, which has been used extensively to create new business models, it would be possible to break down existing business models into their building blocks or components (Ethiraj & Levinthal, 2004; Osterwalder & Pigneur, 2010). When they have been broken down, they would then be reassembled in order to create a new business model. This approach to research is usually called formal theory and tries to summarise the literature written in the area in order to come to new conclusions (Scandura & Williams, 2000). It is good in the sense that it maximises generalizability, but it adversely affects the realism of the study.

This sort of research topic would be used in order to construct so called middle range theories, which is theorising conducted in a limited domain (Bryman & Bell, 2011). These theories are somewhere in between grand theories and empirical findings, and they try to explain a limited set of the research (Bryman & Bell, 2011:9). The reason why the theories presented in this thesis are considered to be middle range theories is due to the fact that they have not been observed empirically. Also they are considered to be on a more concrete and specialised level than what could be considered to be grand theory. The study is a qualitative semi-inductive type, by this it means that qualitative findings will be used in order to generate theory (Bryman & Bell, 2011). The reason why it is not purely inductive is due to the fact that very little empirical findings will be used, instead most of the findings will be theoretical or from secondary sources. The aim of the research is to build theory and present a framework in order to facilitate experimentation in firms.

The second step is to introduce the general objective of this research, which is to identify and implement a (potential) general solution to the problem faced by the firm. In order to do so a framework for creating new business models utilising existing business models, will be presented. This will be a practice oriented research that aims to contribute to the knowledge of Mebox in particular, but hopefully create a valid research that will be able to be generalized in other situations. The

research will include real problems that face the firm when it comes to creating business models, especially when the knowledge and time is not available

The third step will be to decide the research type, in this case the research will be a combination of theory and practice oriented research. It will try to describe a problem that is prevalent in the industry in order to build a theory around a new way of developing business models. The object of study will be business models and how they can be developed, while the concepts are the different ways business model innovation can be achieved by varying different elements of the of the underlying business model. As was shown in the literature review, causal relationship between the underlying elements of the business model and the complete business model was established. So the hypothesis is that by altering the underlying elements of a business model, it will be possible to change the behaviour and performance of said business model.

## 2.2 Research Design

The research, which is the fourth step, can according to Bryman and Bell (2011) be divided in to five general designs; experimental, cross-sectional, longitudinal, case-study and comparative. These different designs are good at investing different sort of research questions. The general purpose of a research design is to provide a framework for collection and analysis of data, it can be used to analyse and understand patterns as well as expressing causal connections between variables (Bryman & Bell, 2011). In this thesis, there will be a combination of two designs; cross-sectional and case-study. The reason why a cross sectional design is being used is due high external validity it generates (Bryman & Bell, 2011). This is achieved by collecting data from several different cases at one point in time; in this case the business models of two different firms will be investigated. The cross-sectional design is also particularly good for explaining “how” questions and is suitable when contemporary phenomena are investigated (Bryman & Bell, 2011). The case study approach is good for conducting detailed and intensive analysis of single cases; usually they have been used in order to investigate an organization in depth (Bryman & Bell, 2011). They are especially good to use when a “how” question is asked, when there is little control over the events and when the focus is of a contemporary issue (Yin, 2009). Utilising case studies is also good since it allows for more rich data to be extracted. The rich data makes it easier to create thick descriptions of the case, which increases the quality of the research.

In this study, as mentioned above, there will be a mix of two designs: cross-sectional and case study. This combination is similar to the one used by Hofstede, Neuijen, Ohayv, and Sanders (1990), where they set up case studies on a range of different firms in order to investigate organisational behaviour. This study is set up in a similar way, with two where a cross sectional comparison is made between two case-studies at Google and Facebook and relevant theory. This allows for rich qualitative data to

be gathered from the two selected firms. These two designs are also well suited for qualitative research, due to the rich data that can be gathered (Bryman & Bell, 2011; Hofstede et al., 1990; Yin, 2009).

## 2.3 Research Method

The research method is covered by the fifth and sixth step of the research process. In the fifth step the research method is selected, a research method is a "technique for collecting data" and it can "involve a specified instrument" in order to collect data (Bryman & Bell, 2011: 41). These instruments can be different types of interviews and questionnaires. In this research, the in-data will mainly consist of peer reviewed articles and open interviews with the founders of Mebox.

Bryman and Bell (2011) suggests a three step process in order to improve the research. This process starts off with conducting a literature study to grasp the general ideas and create a bigger picture, thereafter exploring the general problems that exist in the field and the suggested explanations and solutions. The last part is to hold a discussion with the involved company, the founders of Mebox, in order to see how they tackled difficulties, in contrast to the literature. This approach has been followed when this study was conducted.

### 2.3.1 Literature Study

As the research strategy for this study was of a formal theory kind. This means that an extensive literature study was conducted in order to summarise the current research. The literature all came from well renowned peer-reviewed journals that had been accessed via either Chalmers Library Online resources or Google Scholar. The main area of research was business model innovation, but articles in other areas were also covered in order to give a comprehensive understanding of the subject.

### 2.3.2 Exploring Problems

The problem exploration took its start in the literature that was covered. As could be seen in chapter 1.3 Academic Contribution, there were some gaps that were identified in the literature. These gaps were the starting point for the research that was conducted in this thesis. These problems were then used to develop the aim and purpose, which then was developed in to two research questions. Another aspect of the problem was also the ones that were given by Mebox. In order to facilitate their new endeavours they wanted some guidance in how to create a new business model, and also a way to facilitate easier creation of business models.

In order to solve the problem, a framework was created from the reviewed literature. At present several frameworks regarding creating new business models already exist. However, most of them require a rather extensive development process. The new framework was then developed based on

the fact that successful business models can be reverse engineered and combined into new business models. The framework that was designed was then tested using secondary data compiled from annual reports and company specific material from Google and Facebook. The data from Google and Facebook was obtained from conducting a descriptive case study of the two firms business models. This data was then used to create a business model template for Mebox. The framework was developed in order to be used in the online industry, but due to the nature of the study it should be generalizable to other industries as well.

### 2.3.3 Interviews

There were primarily one source of primary data, and that was from an open exploratory interview with the founders of Mebox. Interviews using open questions are a technique in order to get more detailed answers than just yes or no. They are good when it comes to exploring new areas, to create new knowledge for the author and to make the interviewees thinking outside the box (Bryman & Bell, 2011). However, the downsides are that they are time consuming, requires a greater effort and that the variability among the answers increases (Bryman & Bell, 2011).

In this thesis there was one open interview conducted with the two founders of Mebox, the interview template can be seen in Appendix A. It was conducted in order to explore the general way that they worked with their business model, as well as how other firms did it. The interview was in person which allowed for more detailed follow up questions to be asked in order to probe on more interesting topics. It was also good since it was possible to interact to a greater degree with the interviewees.

In the end of the process, a discussion with Henrik and David at Mebox was done in order to verify the framework as well as the business model that was developed. By doing so, the usability of the framework was increased, thus making it more likely to work in reality. It also allowed for final remarks on the work performed, and in what direction they could continue working on their business model.

### 2.3.4 Analysis and Implications

In the sixth step the data analysis will be conducted. This analysis consisted mainly of a breakdown of the business models of the above mentioned firms and a comparison on what components they were made up off. This was done mainly through an exploratory content analysis, which is an approach to analyse data sets and summarise their main points. Thereafter the trends and patterns were analysed in order to see in what way the business model for Mebox should be created.

In the seventh step the results and its implications were discussed, this was done in order to investigate the strengths and weaknesses of the framework as well as the approach in general. How

well the work was possible to use in other areas was also discussed as well as how it may impact future research.

## 2.4 Validity and Reliability

In qualitative research there are two concepts that can help make sure that research is of high quality, these two concepts are validity and reliability (Bryman & Bell, 2011). Validity refers to whether a concept or conclusion from a study is measured or evaluated in a way that actually corresponds to how it works in the real world (Bryman & Bell, 2011). Reliability on the other hand evaluates how consistent a concept or conclusion is, and thus implies how repeatable the study is (Bryman & Bell, 2011). High quality research should be both valid and reliable.

In order to ensure that both validity and reliability remains high, there are primarily four types of measures that are relevant for this study. These types are according to Bryman and Bell (2011):

- Construct Validity treats how well the concept is measured. This can be ensured through using multiple sources of evidence and linking chains of evidence.
- Internal Validity establishes causal relationships, e.g. changes some conditions will lead to changes in others. This can be ensured through the use of thick descriptions and systematically relating the concepts.
- External Validity shows to what extent the study can be generalised. This can be ensured through thick descriptions and by characterising the nature of the study.
- Reliability treats how well the data collection and analysis can be repeated with the same results. This can be ensured through clear research questions and good descriptions of how the study was conducted.

These four types will be used in order to show what measures have been taken in order to make sure that the quality of the study remains high.

In order to ensure a high quality study, the following steps were taken in order to maximise the validity and reliability. First off, the construct validity was ensured through the use of several different sources in the literature study, this would ensure that the direction that this study has taken is based on previous research. However, the research presented in the report is rather new and the conclusions drawn from them are also novel. This presents two general difficulties when it comes to ensuring the construct validity. First, the concept as such is new and is therefore difficult to measure. Second, not much empirical data is measured in this report, thus making it difficult to ensure that the measures reflect the concept accurately.

The internal validity is easier to ensure than the construct validity, since most research that has been utilised have pointed in the same direction. The different modules that make up the business model have all been tested in previous research and causal relationships have been established. Changes in one of the modules will affect the business model as a whole. When it came to the empirical data, it is described thoroughly and the internal relationships between the different modules are discussed. The internal validity of the study, and the framework, is that both Google and Facebook shared a lot of similarities. This is in what to be expected from two similar firms, with similar business models if the internal validity is high.

The external validity on the other hand is more difficult to assess. This study has had a rather narrow field of research, which has been business model innovation within the online industry. This means that many of the conclusions and findings are related to the online industry. However, the general framework has been presented in such a way that it should be generalizable into other areas and industries. This is due to the fact that most of the theoretical research, as well as interviews, have been of a rather general character. It is only the empirical testing of the framework that has been narrower. These arguments would suggest that the study has a rather high external validity.

The reliability of the study is high, since the research question as well as the aim is clear. The process of how the data was collected and analysed, which is described closer in 2.3, is detailed which should make it easy to repeat. Most of the research is also based on secondary data, which makes the information both static and easily accessible and therefore easy to replicate. The interviews on the other hand were open, and even though the interview questions are attached in Appendix 1 the answers are likely to differ somewhat due to their nature. This should not present too much of a problem though, since they questions were of a rather exploratory character. All facts considered, the reliability of the study should be high.

To summarise the reliability of the study is high. The validity of the study is also high but it is more difficult to keep the high validity due to the nature of the study. The biggest issue is to make sure that the construct validity remains high; this is more difficult due to the novelty of the research. On the other hand, both the internal- and external validity of the study are considered to be high. All in all the study performed should be of high quality.

# 3 Literature Review

*The literature review will be divided into five sub-parts, which will cover the background and history of the business model concept and the emerging field of business model innovation. These two parts will introduce the research conducted in these fields as well as how it has evolved. Thereafter the part that contains the concept of web 2.0 will be introduced in order to underline the difference between business models in physical and digital firms. In the fourth part the issue regarding innovating in complex systems will be examined, as well as modularity as a potential solution to the complexity issue. In the last part the business model ontology will be presented, which will summarise and tie this literature review together.*

## 3.1 Background to Business Models and the Research Performed

Business models have existed since business itself started to exist and they can be defined as the firms way to capture value from their activities (Baden-Fuller & Morgan, 2010; Chesbrough, 2007; Demil & Lecocq, 2010; Teece, 2010). The original aim behind the firm's business model is still the same, to capture value from their activities more efficiently than their competitors; although the way that the firm tries to do it has evolved.

Business models have evolved significantly since they were first introduced, this can be seen as something fully rational. Because if a business model is highly successful and helps the firm to generate above industry returns, it has simply helped the firm to capture value from a market deficiency and is thus a so called arbitrage opportunity. What will happen then is that other firms will copy the successful business model and when doing so eliminate the arbitrage opportunity. The business model research has also evolved, and can be categorised in to five different phases as can be seen in figure 2 (Gordijn et al., 2005).

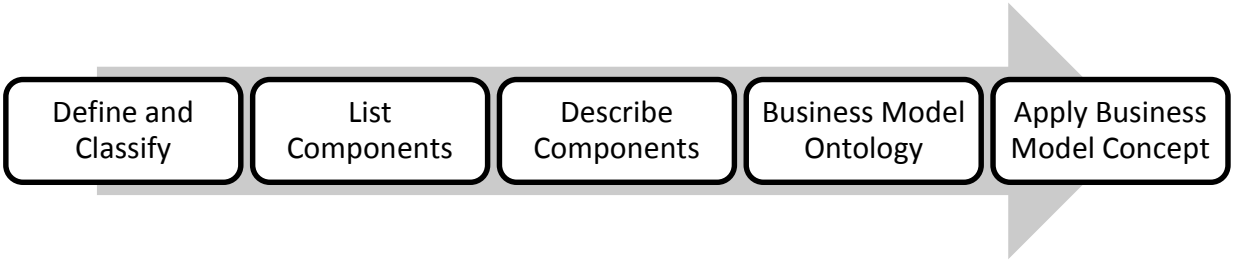


**Figure 2: The Five Phases of Business Model Research**

The first phase was when researchers started classifying business models, almost in line with what had been seen in biological research (Baden-Fuller & Morgan, 2010). In the second phase researchers started to list what components belonged in the business model and which did not (Linder & Cantrell, 2000). In the third phase researchers started to describe all the ingoing components that had been

found relevant in the previous phase. In the fourth phase these components were assembled into business model, which resulted in business model ontologies (Osterwalder, 2004). In the fifth and final phase, where most present research is conducted, the focus among researchers has mainly been to apply and test different business models in order to evaluate their performance (Gordijn et al., 2005).

When looking into business model research, especially in the fifth phase, it can quickly be deducted that there has not been a coherent way of studying or comparing them (Baden-Fuller & Morgan, 2010; Demil & Lecocq, 2010). In a recent research conducted by Baden-Fuller and Morgan (2010), they tried to find a scientific link between models used in the natural sciences and economics and the ones used in business studies in order to gain insight in how to compare and evaluate business models in the best possible way. In general, models are created to address the problem of a lack of knowledge; this is the case in both biology and economics, as well as in management (Baden-Fuller & Morgan, 2010). Both biology and economics have developed different ways to explain different events, in economics the focus has been on creating mathematical models whilst in biology the purpose has rather been to find model organisms. Management on the other hand have not had that sort of explanatory framework to rely on (Baden-Fuller & Morgan, 2010). This makes it more difficult to simulate how different scenarios or events will play out, compared to if there were models that could be used for the purpose.

In the field of economics models has been utilised in order to try a range of different scenarios and questions. By utilising tested models, it is possible to transform the data into rich data upon which theories can be constructed or further research can be conducted on. Biologists do it in a similar way by experimenting on different classes of organisms. They then try to generalise the findings and test it on other organisms to see if their hypothesis stand true (Baden-Fuller & Morgan, 2010). As can be seen both fields use models in order to find out and explain how the world they are studying works. The closest thing that can be found in the field of management and business model research would be business model case studies that could be considered the equivalent to model organisms used in biology (Gordijn et al., 2005). This would suggest that the type of model thinking used in biology would be the most transferable to the business model world (Baden-Fuller & Morgan, 2010).

A problem with this comparison to biology is that experiments performed on the model organisms are done in a lab, and the model organism is also breed for the sole purpose of being experimented on. Biologists have bred different model organisms for the different classes that exist in nature, e.g. the lab-mouse is used to simulate the entire group of mammals. The findings on one of these organisms are then generalised to the entire class. Baden-Fuller and Morgan (2010) suggest that a normal McDonald's outlet or the firm as a whole can be used as the lab-mouse in the world of business

modelling. Finding the branch standard firm or concept, would make it possible to find the lab-mouse of the internet business. Derived from the general research performed on the topic, Google seems to be the lab-mouse of the internet business (Baden-Fuller & Morgan, 2010). Even though Google and McDonald's are considered to be generic models of their industry or even businesses at large and researchers have used them lab-mice. There is still the general problem of experimenting with them, since it is highly unlikely that either of these firms would allow anyone to come and change their business model in order to see what would happen. Even though there are problems using these sample organisms in business model research, a rough framework can still be constructed. This might allow a partial diversification between the industries, or sample organisms, that are researched.

## 3.2 Business Model Innovation

In highly volatile markets, using different strategies based on the firms positioning or capabilities will not give the firm a sustainable competitive advantage. These strategies are often the source to a firm's demise, since when these strategies are successful; the firm will keep on utilising them to such a degree that they will be very vulnerable to changes in their business ecosystem. This will lead to the situation that the firm's competitive advantage turns into a competitive disadvantage because of the inertia that has been building up in the firm (McGrath, 2010). Instead the firms should focus on developing a sustainable competitive advantage, which can be done by realising that the business ecosystem is changing and understanding that in order to handle these transformations, companies have to change with it and not try to rely on their historical successes.

### 3.2.1 Why Business Model innovation?

"A mediocre technology pursued within a great business model may be more valuable that a great technology exploited via a mediocre business" (Chesbrough, 2010). This statement shows that even though the product may be superior, there are a lot of other aspects that are equally or even more important than the performance of the product. In times were product life cycles are getting shorter and the development costs are rising, the focus of the firm should switch towards generating more innovative business models (Chesbrough, 2007). Innovative business models are also a way of picking the low hanging fruit, since there are still a lot of progress to be made in that area, while much of the innovations and cost saving activities have already been achieved in the operations area (Amit & Zott, 2012). By being innovative with the firm's business model, the firm will furthermore be able to not only realise the value from their technologies faster, but they will also be able to create a sustainable competitive advantage.

In order to attain a sustainable competitive advantage the firm can utilise business model innovation. The reason why business model innovation has become such a popular topic both amongst

researchers and firms is due to the fact that it provides a new solution to the dilemma of competitive advantage (Amit & Zott, 2010, 2012; Björkdahl & Holmén, 2013; Chesbrough, 2007; McGrath, 2010). A new business model will not discover a new product or service, but what it might do is to redefine it and change how it is delivered or how the firm can profit from it (Björkdahl & Holmén, 2013). Business model innovation is becoming more important due to the uncertain, complex and fast moving environments that modern firms are acting on. Often, the choice of quickly retrieving value from a product makes the difference between success and failure (McGrath, 2010). In order for firms to create value in a different way they can start experimenting with business model innovation.

There are primarily four ways that value can be created through business model innovation. These four drivers of value are: novelty, lock-in, complementary products and efficiency (Amit & Zott, 2012). These drivers will become even more powerful when they are used in combination. An example of this is Apple and their move from being a computer and hardware manufacturer to becoming a market leader in distributing media and mobile phone applications. They achieved this by first introducing a novelty in the iPod and a complimentary product in the iTunes music player and store, this combination was more efficient than its competitors and gave Apple a competitive advantage. By doing so, they effectively locked the users in their network and the cost of switching music supplier increased dramatically. After that, they were able to utilise their compliments to launch more products, like the iPhone and iPad, for which they created more compliments, like App Store, and consequently create further lock in effects. These changes enabled Apple to rise from being an underperforming hardware company to now being one of the world's most valuable firms. These changes that Apple made were a business model innovation which enabled them to adapt to new market conditions. Organisations that aim to gain a sustainable competitive advantage need the ability to anticipate and react to the consequences of an evolving market by simultaneously evolving their own business model (Demil & Lecocq, 2010).

### 3.2.2 How Business Model Innovation!

From the previous section it is understood that business model innovation is a cheap way for managers to stay competitive and also to a certain extent replace more expensive product and process innovations (Amit & Zott, 2010). Since the importance of business model innovation is clear, the next question arises; how do you actually proceed to create a new business model?

In the literature the general consensus among the researchers is that business model innovation is an experimental activity, e.g. Amit and Zott (2012), Brink and Holmén (2009) and McGrath (2010). This would entail that multiple ideas need to go through a trial and error process in order to see which is likely to provide the most value added for the firm. These different changes to the business model can be both of a radical or an incremental nature. But there is no need to radically innovate the business model in order to give the firm a competitive advantage. Sometimes just small changes to the current activity system will result in the firm's ability to extract more value from its resources (Amit & Zott, 2010).

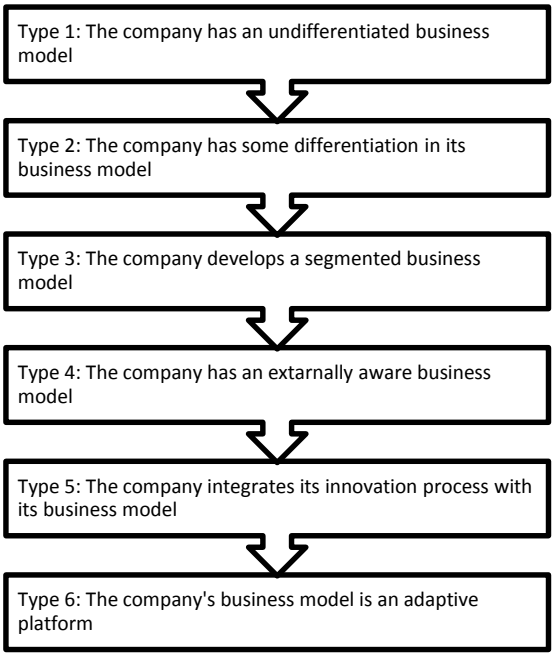


**Figure 3: Chesbrough's 6 types of Business Models**

In order to start the business model innovation process, it is important to first take stock of where the firm is at the moment. Chesbrough (2007) presents a framework containing six different types of business models that are ranked regarding to how valuable they are to the firm as can be seen in figure 3. Thereby the first in the framework and therefore the least valuable type is a business model that is undifferentiated from its competitor's business models and the sixth, and most valuable, business model is one which acts as adaptive platform on which experimentation can be made. The reason why these are presented is in order for the firm to establish where they are at the moment and in what direction they need to evolve in order to reach the most valuable type of business model. This sixth type is a dynamic approach and not a static approach to business modelling and that acts as a blueprint (Demil & Lecocq, 2010). So when a firm reaches the sixth type of business model, they will be able to adapt to an evolving market through the use of one or more experimental business models that are being tested in parallel (Chesbrough, 2007).

When the firm has achieved a business model that is dynamic and which allows change, they need to keep on evolving and experimenting with their business model (Chesbrough, 2007). In contrast to conventional strategies, which rely heavily on market analysis and execution, business model innovation will be more reliant upon discovering and exploiting new opportunities (McGrath, 2010). This means that the business model innovation process will be a discovery driven process rather than an analytical approach.

A discovery driven approach means that the firm will endeavour on different paths in order to find a business model that suits their firm. A study conducted by Brink and Holmén (2009) on a range of new bioscience firm showed that most of them tried to alter their business models, and the success factor in the end was not the technology they had in the firm but rather the business they developed around it. Most of the firms embarked on a discovery driven process, in which they identified and exploited different opportunities that arose by drawing upon their existing business capabilities and combined it with a new technological capability (Brink & Holmén, 2009). The discovery driven is a very experimental approach and can therefore be considered risky, due to the fact that the firm has to change some of its success factors.

In order for a firm to be comfortable with taking an experimental approach to business model generation, they will need to change the way that they evaluate the performance of their investments. This means that a firm should never full rely on a single strategy or business model; instead they should take a real option approach to business model experimentation (McGrath, 2010). So instead of focusing on one business model, they should try out several business models in parallel and then evaluate the performance of each one, before deciding which one to implement.

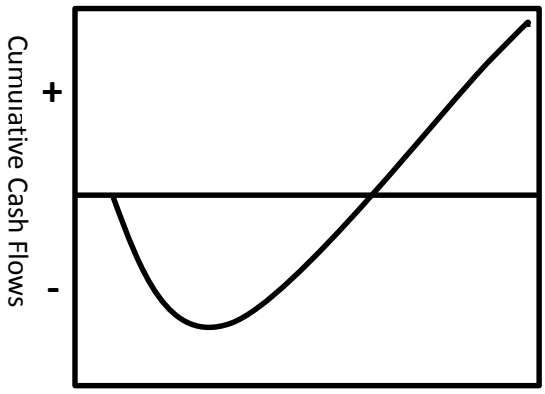


Figure 4: Traditional Investment appraisal

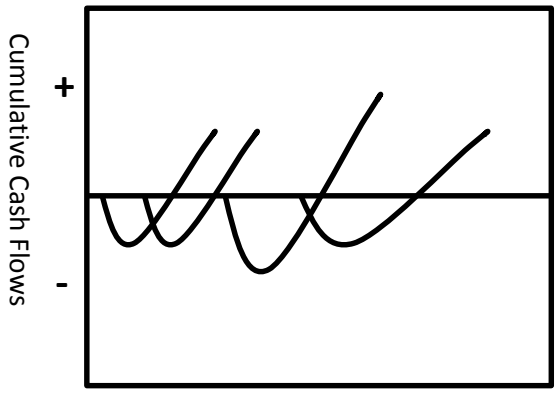


Figure 5: Real Options strategy appraisal

As can be seen in figure 4 and 5, where figure 4 depicts the traditional view on investment decisions and figure 5 the real options view on investments, the risk will be significantly lower with the real options strategy. In the traditional view there is an unlimited downside, while in the real options strategy the downside will be limited and the accumulateed upside from all the real options can still be significantly positive. When utilising this real options approach when experimenting with business models, the firm will be able to increase its strategic agility which in turn will make them more innovative as well as present good middle ground between action and analysis (Chesbrough, 2010).

### 3.2.3 Implementation of new Business Models

In order to develop a good business model, it is of importance to first realise in what way the firm does business. This means that the managers would have to sit down and analyse all the ingoing parts and in what way the firm creates value for the customers. By doing so they will be able to get an overview of the processes included in the business model, thereafter the manager can start to analyse and evaluate the distinctive parts to find room for improvement (Linder & Cantrell, 2000). The managers also need to encourage the trial of new business models with real money and real customers (Chesbrough, 2010). After the first investments in creating a new business model have been carried out, it is important to keep on evaluating and improving the business model. It should be seen as an evolutionary process, the way that the firm does business should evolve with its customers. Even though managers might become averse to changing business model due to the fact that their previous success might have been tied to the business model they formerly used (Chesbrough, 2007).

## 3.3 Web 2.0

The advent of Web 2.0 is also the start of internet as we know it today. Web 2.0 differs from web 1.0 in the way that communication takes place, in web 1.0 the communication was only one way meaning that there was simply put it a supplier and a user of online content (O'Reilly, 2007). In web 2.0 this is no longer the case and now almost all communication is two-way meaning that the user may now both supply and consume content. The current trend is that users generate more content than traditional content suppliers (Enders, Hungenberg, Denker, & Macuch, 2008).

Web 2.0 and the e-business that have followed it have changed the business ecosystem by introducing new ways of creating value and attracting potential customers in a way not possible before. Several researchers consider the web 2.0 and e-business to be a disruptive innovation that has changed the way business is done fundamentally (Amit & Zott, 2001; Enders et al., 2008; Leem, Suh, & Kim, 2004). According to Lee (2001), there are primarily five attributes of web 2.0 that have contributed to its disruptiveness:

- Economics of exchanging information: information has increased its reach without losing any of its richness.
- Connectivity and interactivity: in web 2.0 information systems are more connected and two-way communication has been made possible.
- Network economies of scale: the digital economy has increased the power of network effects.
- Speed of change: life cycles of products and services have shortened, and with that the possibility to capture value from them.

- Economics of abundance: Information can be reproduced and distributed at almost no extra cost.

These major sources of disruptiveness are also the fundamentals needed to capitalise on the potential that the web 2.0 provides. So in order to capitalise on these sources, there is a need to understand the differences in how value is created between digital and physical firms (O'Reilly, 2007). In physical firms, value creation is primarily founded in transforming a raw material to a product in the most efficient way possible. However, in digital firms value is created through a five step process of refining the data, which is to: gather, organize, select, synthesise and distribute. The disruptive attribute that makes the greatest difference between the physical and the digital firm, is the economies of abundance. This is due to the fact that information will not be devalued after the value creation process, instead it will increase its' value the more it is used and the more it is shared (Lee, 2001).

When a product gains in value the more it is used, it is said to exhibit demand side economies of scale. This means that most digital products that trade in information will be susceptible to demand side economies of scale. In contrast to the physical firm, where it is more common with supply side economies of scale, which allows the firms to increase the value of the product the more they produce. However, the most efficient way to do business is by achieving both supply- and demand side economies of scale, something that is very often noted in network economies (Lee, 2001).

Economies of scope is another concept that is widely used when it comes to processes in physical firms, and it occurs when improvements done on one process can be used to increase the efficiency of another unrelated process. In physical firms this is most commonly in the way that fabrication of good X reduces the cost of fabrication for goods Y. In digital firms, they can utilise their digital assets and share information collected from the customers across many different markets (Lee, 2001). Since both there are strong economies of scale and scope in the digital economy, the network effects are also very high (De et al., 2001). When digital firms have obtained a strong position in the network, it will be easy for them to utilise their current asset base to expand their scope to encompass even more processes (Lee, 2001).

There are also two other concepts that heavily influence the way that digital business is handled; switching and transaction costs (Lee, 2001). Both of these costs are associated to the network economy and are either lowered or increased as the network gets larger. Switching costs relate to the costs associated with a switch of any of the firms tangible or intangible assets that they have made an investment in (Farrell & Klemperer, 2007). The most classic example of this is the QWERTY-keyboard, although there are better and more optimal keyboard layouts, the QWERT-keyboard retains its

position as the industry standard due to the high costs of relearning a new keyboard layout for the current user base. This means that in order for a new product or technology to overtake an incumbent one, it not only needs to be better, but it needs to be so much better so that can compensate for the switching costs involved in adapting the new product. Transaction costs are "the searching, negotiating, monitoring, and enforcement costs that have to be borne to allow a market exchange between two parties to take place" (Lee, 2001). Internet has allowed the lowering of switching costs by making it easier for the parties to reach out further from the core network of the business and still obtain rich information (Lee, 2001; Tapscott, Lowy, & Ticoll, 2000). So when the network of a firm increases the associated switching costs will increase while the transaction costs will decrease, leading to a higher retention of customers and a greater value added.

### 3.3.1 Business Models in Web 2.0

With the new markets and business opportunities created by web 2.0, there was a surge of different business models that tried to seize these opportunities (Enders et al., 2008). A general attribute of these new business models were that the customer had a big influence. A lot of these models have been thought of before but have never been financially feasible. However, with the opportunities that web 2.0 offered it was suddenly possible (McGrath, 2010). The common theme about most of these business models was that they included free products to some extent.

These business models are advertising, cross-subsidisation, promotion, freemium, barter and gratis. The general description given by Dubosson-Torbay, Osterwalder, and Pigneur (2002) and McGrath (2010) are as follows. The advertising business model is probably the most straight-forward, and it makes advertisers pay for the content instead of the users. In the four other business models the users will also be given the product for free, but the providers expect to capture value in other ways. When a firm utilises cross-subsidisation they give products away or sell at a very low price, but they expect to capture value from other services or products related to the subsidised product. When it comes to the promotion business model, products are given away for free in order to promote another product not associated to the free product. In the freemium case, a basic product is available for free, but if the user wants to use the more advanced version they have to pay for it. When using a barter business model, a free service or product is given away and the customer will in return provide something that the firm considers to be valuable. The gratis model is when a product is provided for free just because the producers enjoy interacting with other like-

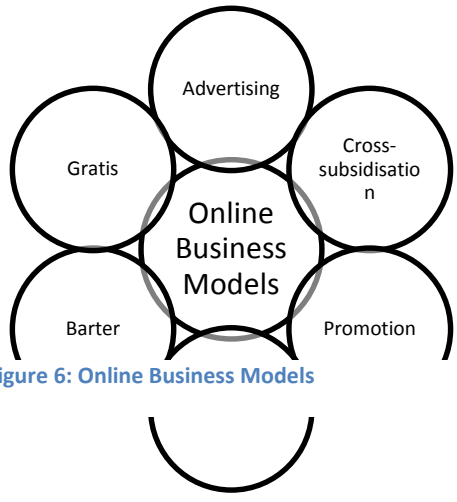

Figure 6: Online Business Models

minded persons. However, this sort of business model is difficult to monetise on its own and need to be part of a bigger business or live of donations.

### 3.3.2 Mobile Business Model

In order to understand the new types of business models that can be provided through mobile technology better and to find the target customer. Leem et al. (2004) introduced a framework that broke the business models down into sub-components. First, they were broken down into B2C or B2B, depending on what sort of customer the business models was aiming to serve. Second, each sub-category was again broken down. B2B were broken down in a value chain perspective, while B2C was broken down according to the customer's perspective on added value (Leem et al., 2004). Since this literature review is mainly aimed at investigating the B2C relationship, further investigations of B2B will not be made.

According to Leem et al. (2004), the B2C break down consists of three categories; commerce, intermediary and information. They all try to capture one kind of value added that the customer can realise. First, the commerce category provides contents or services that enable the customers to perform commercial transactions. Second, the intermediary category provides a platform where information can be shared between customers or between other content providers and customers. Last, the information category provides personalised information to the customer.

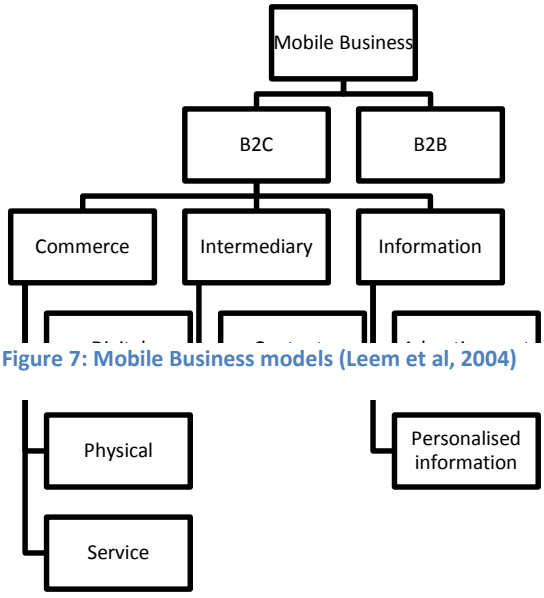

Figure 7: Mobile Business models (Leem et al, 2004)

### 3.3.3 Social Networking Business Models

"Social Networking Services are the fastest growing type of social software – both in the Internet and in company-wide Intranets" (Richter & Koch, 2008:1). This is in due to the service provided to the users, a new way of getting to know new people and they help managing your current contacts (Enders et al., 2008). Most social media communication is not very in-depth in its contents, which research has shown is not either what people are looking for when it comes to web interactions (Enders et al., 2008; Lee, 2001). As reported recently in the news, social networking services have not slowed down in their expansion, rather the opposite.

Due to the growth of the business, a lot of different firms have appeared, some more successful than others. In their research Enders et al. (2008) investigated what models social networking sites used to gain revenues and how they could expand their revenue with the current model. They found that the

most common revenue model was the advertising model, a model that saw its use mainly on sites were the traffic was very high. The second most common revenue model, often used in combination with the first, was the subscription model. It resembles a freemium model, where some of the content is available for free, but in order to gain full access the subscription fee must be paid. The most important factor in this type of model was that the user had a high willingness-to-pay; otherwise it was difficult to get it sustainable. A third option that was explored was the transaction model, which worked the way that a transaction fee was paid every time a transaction was completed. However, this model was not used to a large degree and it also required a great degree of trust from the users in order to work.

## 3.4 Modularisation, a solution to the complexity problem

Complex systems are a research area which has been on the rise and it includes the studies of how the interactions between sub-components give rise to the behaviour of an entire system (Fleming & Sorenson, 2001). This means that it is difficult to change only small components of a system without actually changing the behaviour of the entire system. In line with most other sciences, business models can be viewed as a semi-complex system (Linder & Cantrell, 2000), since the changes in one of the ingoing components might change the behaviour or performance of the entire business model.

The evolution of products and processes, this competition between designs, gives rise to structures and complexity in the environment (Beinhocker, 2007). When new business models are introduced which leads to the evolution of how business is done, the system as a whole increases in size and consequently also in complexity. This could for example be that if the firm changes its revenue model, it is likely that it also has to change its cost structure and this might lead to even further changes. One way to simplify the system is to divide it into smaller systems that can be investigated (Ethiraj & Levinthal, 2004). Then the impact of the sub-systems can be evaluated to find the impact they will have on the system as a whole.

One way of breaking down complex systems is by the use of modules. According to Ethiraj and Levinthal (2004:159(1)) “modular designs are a useful means of managing complexity”. Modular approaches to business models have been taken by several firms and researchers, as a way of making the business model creation process more tangible (Ethiraj & Levinthal, 2004; Linder & Cantrell, 2000; Osterwalder, 2004; Pohle, Korsten, & Ramamurthy, 2005). These authors have mainly used it the other way around, which means that they have used modules in order to create a complex system not breaking it down. However, it has filled its purpose and by aligning what components that belong to a business model and how they are to be created.

The problem when taking a modular approach to a complex system is that it might be difficult to integrate all the separate modules if a systems approach was not taken from the start (Ethiraj & Levinthal, 2004). Because when alterations are done on one module, ripple effects will appear in other ones. This means that modules are helpful to simplify and quicken the product development process, but it comes at the cost of a lower performance (Ng, 2010). So systems that are of a very complex nature will be difficult to modularise with good results. However, complex systems that have fewer inherent activities are instead rather well suited for the use of modules (Ethiraj & Levinthal, 2004).

In order to decompose complex systems into modules, and then recombining them again requires a detailed selection to be made. First, when decomposing a complex system it is important to group elements that have a high degree of interaction together and to remove elements with a weak interaction from these groups (Ethiraj & Levinthal, 2004). Secondly, the recombination needs to be done in when there is information regarding the performance of the different elements or modules, in order to achieve a higher performance (Ethiraj & Levinthal, 2004). This means that modularisation is good compliment to the discovery driven approach of business model innovation. By decomposing business models and recombining them in new configurations, will allow for the testing of several different business models with little extra effort. The modularity also allows the different models to be ran in parallel and are therefore in compliance with the use of a real options theory (Ethiraj & Levinthal, 2004).

## 3.5 Business Model Ontology and the Business Model Canvas

Ontology originates from the field of philosophy and treats the organisation and nature of reality, it is defined as “an explicit specification of a conceptualization” (Guarino, 1997). The general nature of ontology is that it tries to define the existence and classify how entities belong together, a way of bringing order to nature. Osterwalder (2004) used the ontology concept in order to classify business models according to how the underlying elements belonged together, by investigating how, what and who of the firm.

The basic business model of the firm was made up by four classes. These classes are according to Osterwalder (2004):

- Product: What sort of business the company was engaged in, the products it offered and the value propositions the firm had.
- Customer interface: Who the firm targeted as their customers, how it delivered them products and services, and how it builds a relationship with them.

- Infrastructure Management: How the firm builds its infrastructure and how it overcomes the challenges of delivering the product or service.
- Financial Aspects: How will the firm generate money, and what does its cost structure look like.

These four classes where then used as a stepping stone to investigate what elements that constituted each of the classes. Osterwalder (2004) found that these four classes were made up out of nine elements or business models components as they were called.

| Pillar | Components of the Business Model | Description |
|---|---|---|
| **Product** | Value proposition | The overall view of a company's products and services that are of a value to the customer. |
| **Customer Interface** | Target Customer | The segment of customers a company wants to offer value to. |
| | Distribution Channel | The means of getting in touch with the customer. |
| | Relationship | The link a company establishes between itself and the customer. |
| **Infrastructure Management** | Value Configuration | The arrangement of activities and resources that are necessary to create value for the customer. |
| | Capability | The ability to execute a repeatable pattern of actions that is necessary in order to create value for the customer. |
| | Partnership | The voluntarily initiated cooperative agreement between two or more companies in order to create value for the customer. |
| **Financial Aspects** | Cost Structure | The representation in money of all the means employed in the business model. |
| | Revenue Model | The way a company makes money through a variety of revenue flows. |

Table 1: The nine components of the Business Model (Osterwalder, 2004)

As can be seen from table 1, each class or pillar is divided into either one or several business model components. These components are the essence of a business model and the basic elements of the business model ontology presented by Osterwalder (2004). Each of the components are separate modules that can be altered individually, however the change of one will impact the behaviour of the entire business model. These components have been the foundation of many articles and books published afterwards that tried to create a road map on how to generate a business model (Osterwalder & Pigneur, 2005, 2010).

In an attempt of simplifying the business model ontology and make it more easily understandable outside of academia, Osterwalder and Pigneur published the book *Business model generation: a handbook for visionaries, game changers, and challengers.* In this book they introduced the Business Model Canvas, which was a strategic management tool built upon the conclusions drawn from the business model ontology research (Osterwalder & Pigneur, 2010).

A solid understanding of what a business model actually is and what elements that should be included in it are of utmost importance (Osterwalder & Pigneur, 2010). After management have taken stock of their position, they can start utilising the business model canvas in order to embark on trial and error experiments. Since the model created is a conceptualisation of a wide range of business models, it is supposed to be used as a holistic guidance towards understanding the business model (Osterwalder & Pigneur, 2010). However, there are some differences between the business model canvas and the nine business model components presented in the business model ontology.

These differences mainly refer to the naming of the different components. Value configuration has changed name to key resources and capability has changed name into key activities (Osterwalder & Pigneur, 2010). As can be seen from figure 8, all of the parts are connected in one way or another and some of them have more interdependencies than the others.

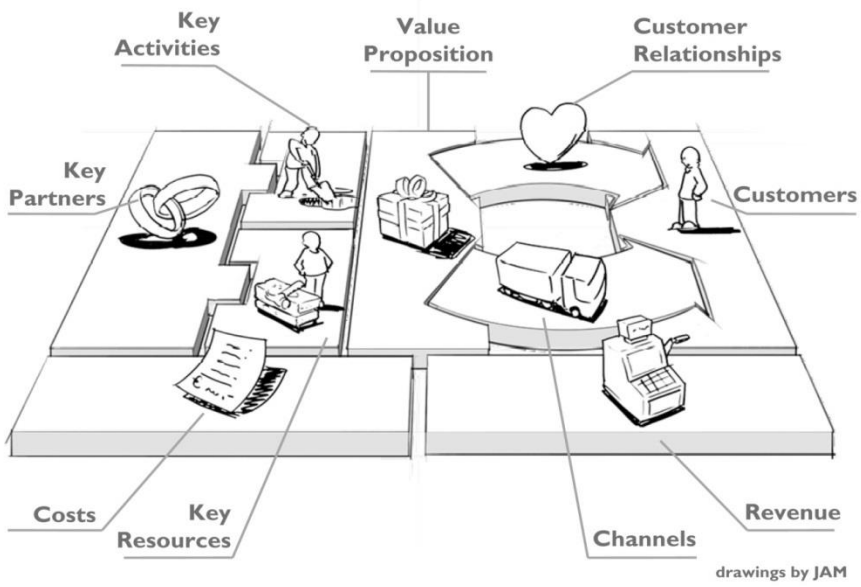


Figure 8: Business Model Canvas (Osterwalder, 2010)

# 4 The Framework

*In this section the creation of the framework that will be used to disassemble and then reassemble business models will be introduced. By building upon the Business Model Ontology and the Business Model Canvas introduced by Osterwalder, the framework will utilise a structured approach for creating new business models.*

As was presented in the previous chapter, there exists plenty of theory that exemplifies, both in theory and empirically, how business models can be created. The existing theory on business model innovation is quite extensive, and in order to make this thesis as relevant as possible only the most recent directions of business model research will be utilised. These latest directions are the ones that can be seen in Figure 2 in the previous chapter. So the framework will utilise the business model ontology and its extension the business model canvas, in order to create theoretical business models that can be empirically tested by the firms in question.

As has been shown by Osterwalder and Pigneur (2010), it is possible and even advisable to have a structured approach when creating new business models. In their book "Business model generation: a handbook for visionaries, game changers, and challengers", they introduced the business model canvas. By doing so they introduced a new bottom up approach to creating and innovating new business model. A concept that has been proven to give firms a competitive advantage, as can be seen in the literature review. The canvas is the interface between practice and theory, and helped bringing the concept of the business model ontology to the practitioner. This allowed practitioners to start building business models by assessing each one of the nine building blocks that the canvas consists of. By doing so the firm is more likely to assess potential strengths and weaknesses to a higher degree than if they would just rush into business and let the model develop on some sort of ad hoc basis.

The bottom up approach introduced by the business model canvas, allows for a holistic approach to creating new business models. However, in many cases there is not a need to investigate all the parts specified in the business model canvas, and in most cases there is also a need to get some examples on how other firms in similar situations have designed their business model. It is this extension or modification of business model creation process that this thesis will address. Instead of building a model bottom up, this framework will show how a business model can be broken down. When an existing business model has been broken down, it can be used in three ways:

1. As a template for how similar firms construct their business models.
2. As a way of benchmarking similar business models in order to find the best components.
3. As a way of replicating successful business models.

This approach allows for practitioners to utilise the business model canvas in a new way. A business model consists of, as mentioned earlier, several building blocks and together they make up a system. These building blocks are all interconnected and the change in one will inherently impact another. However, these interconnections can be either stronger or weaker depending on what the business model looks like. This system of interconnections between the building blocks turns the business model as a whole into a semi-complex system. Working with semi-complex systems presents some problems, especially as the systems grows (Ethiraj & Levinthal, 2004). One common solution to these problems, as was presented in the literature review, was the use of modules. Modularisation is usually the concept of breaking down complex structures into smaller more manageable parts, and by doing so it is possible to decrease the complexity of the system.

In many ways the business model ontology and its extension the business model canvas, is an example of modularising a complex system. Osterwalder (2004) did this by breaking down the business model into what he and other researchers (e.g. Gordijn et al. (2005) and Guarino (1997)) believed to be the constituent parts of a business model. This way of breaking down a complex problem to smaller constituents is very typical for modularisation. This is very similar to what many car and truck manufacturers have been doing for long time. For example, Scania have for long utilised a modular system in their truck manufacturing, which allowed them to utilise a few standardised components in order to assemble a wide range of truck models (Brunninge, 2009). This allowed Scania to gain a competitive advantage over its competitors and thus generate greater returns. The building blocks of the business model canvas can then to a certain degree be compared to the components of a truck, in order to make the argument more tangible. So by using a specified number of building blocks, or modules, from the business model canvas, a wide array of different business models could be created. By utilising this approach, it should be possible to innovate a lot with very little effort needed (Pohle et al., 2005).

The framework will present a three-stage process in order to identify & search, break down and reassemble a new business model. The first two stages can then be repeated until a satisfactory bank of business models have been broken down. These modules taken from the broken down business models can then be put into a "module library" that when its big enough can be used to create a multitude of new business models.

The first stage of the framework is to identify and search for appropriate existing business models. Identifying means that the first thing that will be needed to do is to identify what sort of business or industry that will be investigated. This is due to the fact that there is such a wide array of different business models available. In order to be able to benchmark or combine different modules, it is helpful

if they come from similar industries. It is also of importance to investigate if the firm has a similar idea or way that they conduct their business. For example, if Instagram where to look for a suitable firm, they would look into several firms business models in order to find similarities in how the firms make business. In the case of Instagram, they would need to look into how the content is provided, and since Instagram's content is mostly user generated, then a firm that also has user-generated content would be suitable to benchmark against. So if they were to choose between Google and Facebook, they would be better of looking into Facebook's business model, since they also have user-generated content. Google on the other hand utilises to a greater extent content that they have generated themselves. When the industry and type of business model has been identified, it is time to start searching for appropriate business models to break down. The search process is rather arbitrary, and will in this case be dependent on availability and robustness. Availability is simply how easily information regarding the business models can be accessed or found. It usually helps if the firm has been thoroughly and/or is publicly traded, so information can be collected from annual reports or websites. Robustness means how well the developed the business model of the firm is, and how competitive it is compared to other firms in its market. After this first stage has been completed and industry, as well as firm/firms has been identified, the next stage will take place.

The next stage is to break down the chosen business model. This stage is the one where the most work will be needed. This is because the respective modules, from the canvas in the business model, have to be identified and broken down. When the firm's business model has been selected, it is time to analyse all parts of it in accordance with the business model canvas. First the business model will be analysed on the first ontology level, which can be broken down into: product, customer interface, infrastructure management and financial aspects (see Figure 9). This is the first breakdown of the business model and after that has been completed; each part will be broken down further. The next level is more specified on what each of the modules should be identified and what they should include. When the business model has been broken down into its nine

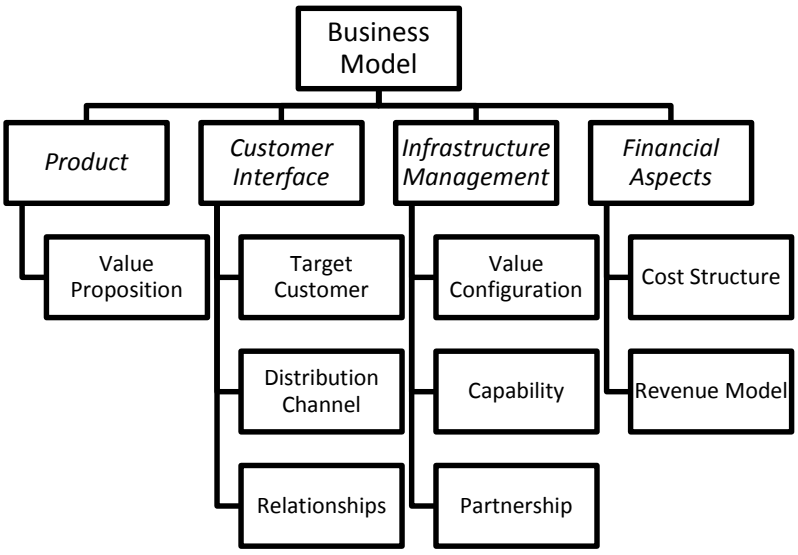


Figure 9: Breaking down the Business Model

constituent modules, the separate modules can be analysed in order to investigate their fit or in order to benchmark them against another model. The general idea behind breaking down the business model is not to get every module exactly right, but rather to see what the modules that constitutes the business model looks like.

The next stage is to reassemble a new business model from the modules. However, before the assembling starts, a thorough analysis of the different modules is needed in order to ensure a good fit. It is also in this stage that different modules can be benchmarked against each other in order to determine what the most efficient and desirable characteristics are. The different modules can then be used as either a blue print to create a similar model, or in order to generate ideas on what components the business model might consist of. As mentioned earlier, the different modules will not be used in order to construct a ready to use, complete business model. Instead they will be used as a way of generating ideas on higher abstraction level. Utilising this approach will generate clear economies of scale; the more business models that are broken down, the more modules will be accessible. For example, when one model has been broken down only one model can be created, but when more models are broken down, the amounts of new business models that can be created increases exponentially.

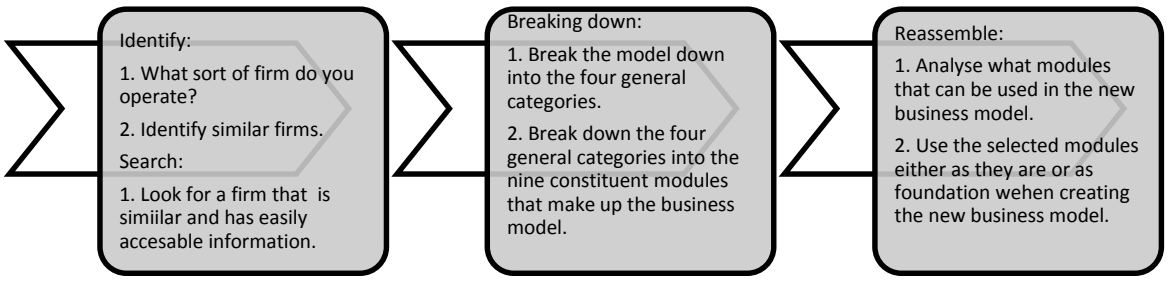


**Figure 10: Business Model Grinder Framework**

The three-stage process is illustrated in Figure 10, where the three different stages are broken down into the tasks that should be performed at each stage. This illustration shows that the process is rather on a rather high abstraction level and not a precise science. But, the main purpose of the framework is to create a structured approach to innovating and creating new business models.

# 5 Using the Framework

*In this section, the framework that was introduced in the previous chapter will be used on two existing firms: Google and Facebook. This is done in order to show how the framework would be used in reality, as well as on what level of abstraction that it is supposed to be used. However, there will be a combination of modules from the two respective firms, as well as general modules used in the literature. The chapter will start off with a short description of the firms, and then it will progress in accordance with the framework.*

The first firm to be introduced is Google, which was founded in 1998 by Larry Page and Sergey Brin, when they introduced a new search engine. They created an algorithm that was unique compared to its competitors, which used the new ways of ranking pages, primarily through the importance of the page (Google, 2014b). This turned Google in to the most used search engine used on the Internet. Google had it as their goal to organize all the worlds' information and make it easily accessible (Google, 2014b). However, it was not until the year 2000, when Google launched their new online advertising service; AdWords, that they really started growing. This new service allowed for firms to have a selected advertisement, meaning that when relevant searches were made, the firm's products or website would be displayed. This innovation allowed Google to start monetizing the search engine, and turned them into one of the highest valued firms in the world. This also led Google to branch out; they are not just a search engine any longer but provide a range of different services, as well as creating a lot of content on their own (Google, 2014b). An example of this is Google Maps, a service that provides maps and directions on basically every place on the earth.

The second firm that will be analysed is Facebook. The company was founded in 2004 by Mark Zuckerberg and his college friends. It has from the start been a Social Networking Site (SNS), meaning that it allows for users to share content like pictures, status updates and personal information. The site started out relatively small and only accepted Harvard students as members. However they soon started growing faster, and in 2006 anyone could join Facebook (Facebook, 2014b). The next big step for Facebook was when they went public in 2012, they also reached the landmark one billion users the same year (Facebook, 2014b). Facebook generates their income by selling advertising on their webpage, these ads are usually targeted against specific groups depending on what sort of product it is.

Both these companies have one big similarity, and that is how they generate their revenues. Both of the firms also have relative advantages compared to non-online advertising channels, since both of these firms have amassed a lot of data on their users. This allows them to better target specific user

groups for specific ad campaigns. However, there is a big difference in how efficient they are when it comes to generating revenues from ads.

## 5.1 Breaking down the business models

In this section, the business models will be broken down. Information used for this will mainly be gathered from websites and annual reports. There will also be an addition of common modules used in the literature that are widely used by firms.

### 5.1.1 Value Proposition

The value proposition is the overall view of a company's products and services that are of a value to the customer (Osterwalder, 2004). It also the value proposition that separates the firm's value proposition from its competitors. Some general examples could be that the new product has better performance or that the new service can reduce costs. In general the value proposition is one of the things that are generally difficult to imitate, unless the product or service is only used in one specific market. If that is the case the module can be imitated and launched in another market. A firm that has done this successfully is Rocket Internet, who made it their business idea to imitate successful value propositions and bringing them to new markets (Jakobsson, 2014).

In the case of Google the value proposition was rather simple; they provided a service that made information easily accessible. They did this in a way that was more efficient than their competitors (Google, 2014b). Google introduced a wide variety of services that made information that prior had been costly, freely available. For example, by launching their maps site, they provided a free direction service, which could be used in your cell phone. This service which previously had been expensive, and had been provided at a cost by different navigation companies were now provided by Google for free.

Facebook did not come up with an entirely new value proposition, but they rather used the SNS foundation and added to it. They added a news feed, which displayed all the updates from the user's connections, as well as the ability to tag you friends in photos (Facebook, 2014b). These features turned out to be highly sought after by the users and this turned out to be the original value proposition of Facebook. They have then brought in extra elements, in the same way as Google, which have added further to their original value proposition.

### 5.1.2 Target Customer

The target customer is the segment of customers a company wants to offer value to (Osterwalder, 2004). This can be done in many different ways and can range from targeting either a broad market of customers or try to target a narrow niche segment. There are four general ways of targeting customers according to Kotler and Armstrong (2013:201-205), from the broadest to the narrowest:

1. Undifferentiated (mass) marketing: This means that the whole market is targeted with one offer.
2. Differentiated (segmented) marketing: This means that several market segments are targeted, but the offer differs between the segments.
3. Concentrated (niche) marketing: This means that the firm tries to capture large shares of smaller segments, instead of going for smaller shares of bigger segments.
4. Micromarketing (local or individual marketing): This means that the offering will be tailored for individual customers and locations.

These are the four most common ways of targeting customers, but there are also mixes of these four ways that can be used in order to find the desired customer segment.

Google in this case, had a rather undifferentiated offer when they started off. Then they started to use a more differentiated marketing approach the more they grew. In the beginning the search engine was an undifferentiated product. However, the more they grew and the more information they gathered on their users, the narrower the search engine capability got. This means that if two different users search for the same term, they will get different results. The results will also differ depending on what country the user is in.

Facebook on the hand started on the opposite side of the spectrum. They started out small with a very concentrated marketing offer, the site was only launched at Harvard and it only permitted Harvard students to be members (Facebook, 2014b). They then expanded to different schools and ended up open to everyone two years later. Now they offer a rather undifferentiated offer, and everyone is basically targeted in the same way. However, they usually launch some test models of new products on specific markets to try them out (Facebook, 2014b).

### 5.1.3 Distribution Channel

The distribution channel is the firm's way of getting in touch with the customer (Osterwalder, 2004). This can be done in many different ways; however tell tales of efficient channels are that they distribute the value proposition in a fast and cost effective way.

Both Google and Facebook have basically the same distribution channel, they utilise Internet as ways of distributing their services. Some of their mobile services are also available at the different app-stores that are available to different operating systems.

### 5.1.4 Relationships

Customer relationship is the link a company establishes between itself and the customer. This is one of the most important factors when it comes to retaining customers, the stronger the relationship,

the greater the switching costs will be (Dubosson-Torbay *et al.*, 2002). The most common ways to create strong relationships is through automated systems that allows for the identification of the customers preferences and then offer services accordingly and through communities or co-creation, which means that the users add content and value themselves creating a network effect (Amit & Zott, 2001).

Google have utilised several of these approaches to creating customer relationships, this is due to the fact that Google is such a large firm and have interests in many fields. For example they utilise automated systems when it comes to displaying and tailoring search results for their search engine. These automated systems utilises user information in order to tailor the search results for the specific user (Google, 2014b). On the other hand YouTube as well as Google+, which both are part of Google, utilises communities and co-creation to build relationships with their users.

Facebook on the other hand have relied heavily on building a strong community among their users, one that encourages the users to share more content (Facebook, 2014b). This is facilitated by providing services that make the users even more interconnected (McGrath, 2010). For example, when introducing the functionality to create and invite people to events on Facebook, they separated users from non-users. This created incentives for non-users to join and for users to stay due to the community that exists.

### 5.1.5 Value Configuration

The value configuration, also known as key resources, is the arrangement of activities and resources that are necessary to create value for the customer (Osterwalder, 2004). These resources are highly important to the firm and are needed to drive the business. Value configuration usually consists of the relation between human, financial, physical and intellectual resources (Osterwalder & Pigneur, 2010).

Google's initial value configuration consists mainly of intellectual resources. These resources are the algorithms that were used to create Googles search engine and the AdWords advertising platform (Google, 2014b). Both of these systems/algorithms made it possible for Google to successfully monetize their business model, since neither of these intellectual resources would have been as successful on their own. Google has subsequently altered their value configuration as they have entered new segments. When they entered the mobile OS segment, they launched an app store that allowed for user made programmes to be spread. There has also been a financial aspect, since they managed to bring all their services to the users basically free of charge.

Facebook's value configuration has always been a combination between intellectual and human resources. They started out with an interface and functions that appealed to the users, however the

product/service Facebook does not hold any value if there are no people using it. So they have been very dependent on their marketing scheme. By keeping it exclusive at first made it attractive to other users, they then launched it bigger. One of the main concerns of Facebook is that the site should never go offline (Facebook, 2014b). This has showcased the importance of having skilled programmers, human resources, who monitor and service the site.

### 5.1.6 Capabilities

The capabilities or key activities of the firm are the ability to execute a repeatable pattern of actions that is necessary in order to create value for the customer (Osterwalder, 2004). In other words, the capabilities of the firm are what allow it to sustain its value proposition. This can be either to ensure that costs are kept low or that the firm continues to innovate to keep the competition away.

Google focuses its capabilities on remaining the market leader in search engines and advertising. So the main capabilities for them are the continued improvement of the search engine as well as the AdWords platform. This continued improvement, as well as attracting new users to their services and locking them into the Google network, is their main focus (Google, 2014b).

Facebook's capabilities are focused around expanding as well as retaining their user base. They have done that in two ways: improving the service and acquiring potential competition. The improvement of the service have been done by adding additional features as well as making sure that the user experience stays high (Facebook, 2014b). Facebook have also acquired a lot of competing or supplementing firms, the best-known examples of this are Instagram and Whatsapp (Wikipedia, 2014). One explanation for this is to avoid users leaving Facebook's platform.

### 5.1.7 Partnerships

The firm's partnerships are the voluntarily initiated and cooperative agreement between two or more companies in order to create value for the customer (Osterwalder, 2004). Many of the online firms uses so called two sided business models, which means that both suppliers and users need to be treated as partners to the firm (Rochet & Tirole, 2003). Examples of these partnerships can be joint ventures or rewards for high content providers.

Google's business model revolves heavily around partnerships, both with its users and its advertisers as well as with other suppliers. Google need the income from the advertisers in order to provide free content to its users. This income is provided by the users that click on the advertisements. Google, via its other sites, such as YouTube, are also good at rewarding content providers by giving them a share of the advertising income (Google, 2014b).

Facebook's partnerships are similar to Google's in the sense that they are partnering with both their users and their advertisers. However, they also put effort into attracting more firms and developers to develop content that can be used on Facebook (Facebook, 2014b). They also encourage firms to create pages and in that way provide content in a non-advertising way.

### 5.1.8 Cost Structure

The cost structure is the representation in money of all the means employed in the business model (Osterwalder, 2004). There are many ways that a firm can look at its costs. Osterwalder and Pigneur (2010) suggest that the cost structure can be divided into two major classes: cost-driven and value-driven. The cost-driven approach is about minimizing costs, while value-driven is about increase the value for the customer. There are also different sorts of costs; primarily fixed and variable. These types also show whether economies of scale can be reached in an easy way for the firm.

Google has four major posts of cost: cost of obtaining revenues, R&D, sales & marketing and administrative. The greatest ones are the costs of obtaining revenues and R&D (Google, 2014a). In general Google has a cost structure that allows it to be scaled up easily, as most software firms have, which would indicate that economies of scale could be obtained easily. Their strategy, in the way of being either value- or cost–driven, is more value oriented. They focus on providing more value to the customers by adding more services, while they at the same time try to increase the advertising incomes so they can provide everything cheap or free (Google, 2014b).

Facebook has got the same cost categories as Google. However, the differences between them are not significant as it was in the case of Google. The main reason for this is due to the lower costs of obtaining revenue, which most likely has its causes in the greater word-of-mouth factor of Facebook. They also have a mix between value- and cost-driven approaches to their cost structure, but as in the case of Google they tend to be more value-oriented (Facebook, 2014a). However, they do show clear signs of having economies of scale in their operations.

### 5.1.9 Revenue Model

The revenue model specifies in what way a company makes money through a variety of revenue flows (Osterwalder, 2004). There are six general ways that online businesses generate revenue: advertising, cross-subsidisation, promotion, freemium, barter and gratis (Dubosson-Torbay et al., 2002; McGrath, 2010). Out of these six, the most common way of generating revenues is through advertising (Facebook, 2014a; Google, 2014a).

Google primarily generates its revenues through advertising, more than 90 per cent of their revenues come from advertising (Google, 2014a). This is primarily due to the fact that they offer most of their services for free, and therefore they will not generate revenues in the form of sales to the same extent.

In the case of Facebook, they also generate a majority of their revenues through advertising. The advertising revenues were almost 90 per cent in the case of Facebook (Facebook, 2014a). They also have some revenues from the sale of products and fees. However, their business model, as well as Google's relies heavily on that the service is supposed to be free. That is the main reason why advertising revenues are still the most important for the firms.

### 5.1.10 Identifying Patterns and Trends from the Data

The general trend that can be seen among the two firms is that they have a lot in common. This is reasonable, since both of them are operating in the same industry and both of them are successful. The fact that both of them have managed to be successful, suggests that they have identified certain services that the users appreciate and therefore return to their services. The most protruding trends and patterns that could be discovered are presented below.

First off, both of the firms have very similar and yet very different value propositions. On an abstract level they both trade in information and both of them try to make it more available to their users, as well as their advertisers. However, the firms have chosen to do it in two different ways. Google has chosen to make information that used to be costly or difficult to obtain, freely and easily available to their users. While Facebook on the other hand have focused on dealing with personal information that has always been free, but difficult to obtain and sustain. The general SNS value proposition has become very successful due to the availability of connecting with other people and trading in personal information. This is therefore likely to be one of the most important success factors for online based firms, make information that previously was difficult to access easily accessible.

The reason why their value propositions as well as other parts of their business model could become so successful is due to the way they distribute their services. This is mainly done online through the internet and the respective firms channels. This allowed for the firms to create cost-structures that made it easier to obtain economies of scale, since the marginal cost was decreasing for every new user. This coupled with that their main revenue streams arose from advertisement, a source that grows the more the user base grows. However, a feature that distinguishes the two firms is how much they spend in order gain increased revenues. Google spends more, related to their earnings, than Facebook in this aspect, this is most likely due to the fact that Facebook uses a word of mouth advertising to a greater extent than Google. Google on the other hand are better at capitalising on their user base through advertisement, a feat that can be attributed to their AdWords marketing

platform. To summarise, Internet gave both firms the possibility to create cost and revenue structures that allowed them to generate scalable services that could be monetized through advertisement. This also means that the firms are very sensitive, since their main source of revenue comes from one source. As soon as the service loses its appeal among the users the advertisers will also disappear.

The sensitivity that the firms have against changes in users and in turn advertisers have shaped the focus of the firms. Both of them try to lock their users in and to attract new ones, primarily through the use of communities and co-creation between users and the firm. These factors increase the switching costs for the users and make them less prone to switch platform or provider (Rochet & Tirole, 2003). Both Google and Facebook have shown that they have the capabilities to keep on innovating and improving their value proposition in order to keep the users as well as attracting new ones. However, the firms have not always been successful in innovating, and competitors have then emerged. They solved this problem by being aggressive on the financial side and acquired potential future competitors. This showcases the benefits of having strong financials and quickly acting against firms that could potentially offset their market position.

Neither of the firms supplied any content themselves in the beginning, Google just compiled information available on the web while Facebook allowed for the users themselves to supply the content. They both managed to do this through automatized algorithms that could either sort information or facilitate interactions, and the more they were used the more specialised the offer to user became. This means that there are strong network effects in the industry, which creates a winner takes it all environment. The successful firms grow quickly, while the losers disappear from the market.

## 5.2 Mebox

The research project has been conducted in collaboration with Mebox, an e-venture start-up, who is currently working on producing the next generation's mobile photo application. They have received soft funding from various institutions as well as been selected as the winners in a range of start-up competitions. The mobile application (hence called app), utilises facial recognition in combination with social media applications. This will allow users to share photos, privately, with each other. This sharing of photos between friends, without making them publicly available has been identified as a service that does not presently exist (RadishAB, 2013). The service is primarily aimed towards teenagers and young adults, this segment is considered to be a good starting point and is considered to have a great growth potential (RadishAB, 2013). The firm's vision is to become the global platform for the users' private collection of pictures of him/herself, and to help other users to do the same(RadishAB, 2014). The aim of the firm is to quickly amass a big user base in order to create an increased value for the users (RadishAB, 2013, 2014). The team behind believes that this is possible due to the strong network

effect that exists in the app. Due to the fact that the more friends a user invites the more pictures will be made available to the user, thus creating a self-reinforcing circle. They have also created teaser pictures, which will increase the interest for the app and make new users more prone to join.

In order for Mebox to effectively extract value from their app as well as being able to present an innovative business model to potential investors they contacted the author of this thesis. Since they are operating in a highly uncertain environment, they believe that a module based business model will help them in their approach to find the proven ways of extracting values from e-business (H. Appert & D. Runemalm, personal communication, August 6, 2014). In an interview with the creators of Mebox, they stated some general issues that they experienced when it came to creating a business model.

They found that one of the most difficult parts in creating a business model came to the part of finding a good value proposition (H. Appert & D. Runemalm, personal communication, August 6, 2014). They currently worked with an iterative process, a sort of trial and error, to investigate what the users valued. This approach was utilised in order to find a value proposition, by creating a service around their facial recognition algorithm, in order not to only rely on the algorithm (H. Appert & D. Runemalm, personal communication, August 6, 2014). They have also considered if they wanted to be product- or user-centred service, this is a big issue since they do not know which approach will help them capitalise the most from their service. At the moment they try to make the service more user-centred, since this has previously been a good approach.

When they created Mebox they also used ideas from other firms, both when it came to the software as well as the user interface (H. Appert & D. Runemalm, personal communication, August 6, 2014). They believed that it was of great importance, as had been seen in other start-ups, to grow their user base. To achieve this they tried both to reach out to new users, as well as retain they already have. The fact that the easily accessible Internet is still rather new to most users (easily accessible in the sense of having access on the smartphone) they believe that the focus should be to position themselves among the potential users (H. Appert & D. Runemalm, personal communication, August 6, 2014). By positioning themselves, they wanted to create a niche that would allow them to expand the brand when the time was right.

The founders of Mebox believe it to be helpful to look at what other firms have done in similar situation. By doing so, new ideas to solve a problem could be generated. They state that this is to a degree related to effectuation, a principal that helps identify new opportunities, which aims at minimising uncertainty (H. Appert & D. Runemalm, personal communication, August 6, 2014). This

means that by looking at how other firms have tackled similar problems, it will reduce the uncertainty and thus increase the likelihood of success. They also felt that by doing so, they did not have to spend as much time on developing ideas from the core, which would let them do more with less time.

# 6 Creating Mebox Business Model

In this section, a business model will be developed for Mebox that is based on the different modules that were extracted from Google and Facebook earlier in this chapter. The modules will be assembled in such a way that seems to fit the market Mebox is in, as well as the vision that the founders have for the firm.

### 6.3.1 Value Proposition

The value proposition is one of the modules that Mebox already have, since they have a product that already is up and running. Their value proposition to the customer is the ability to see photos of yourself taken by other people, as well as sharing your own pictures with other people (RadishAB, 2013; 2014). This will all be done in relative privacy as well, meaning that the photos will not be visible to a wider public. This means that their value proposition will relate to making information available to a wider group of people, thus in line with both Google and Facebook (Facebook, 2014b; Google, 2014b). However, their specific value preposition resembles a more privacy centred version of Facebook. This means that a lot of similarities can be found between Mebox and Facebook.

### 6.3.2 Target Customer

The target customer of Mebox was teenagers and young adults, which is a segment that is usually susceptible to innovations (RadishAB, 2013). This could be seen on how Facebook targeted their customers; they started out with targeting primarily college students and then progressed into different age groups (Facebook, 2014b). Therefore, it would be good to start out with a concentrated marketing approach aimed towards the teen or young adult segment in order to capture a large share of the specific market segment (Amit & Zott, 2001). When they have achieved this in the specific segment, they should aim to expand in to new segments (Enders et al., 2008). These new segments might not be used to this kind of product, but they will start using it when it reaches critical mass (Richter & Koch, 2008). This is what Facebook did, and they now have users that are far from their original target customer. The service provided by Mebox is also likelier to be accepted by an older customer segment, since it has many similarities with classic ways of storing photos, either in the computer or in physical photo albums.

### 6.3.3 Distribution Channel

The distribution channel that Mebox should use is rather self-evident. They will use Internet and the different outlets available for them online. This will mean, since Mebox is an app, that they will distribute it via the different app stores that are available online, which has proven to be a very efficient way of spreading content (Amit & Zott, 2001). These would be in the first stage App Store (for Apple products) and Google Play (for Google products). When the product has gotten larger, then

complementary services can be launched. Examples of these can be webpages that allow the users to interact outside the app as well (Enders et al., 2008).

### 6.3.4 Relationships

The relationships that will be important for Mebox, at least in the beginning, will be between Mebox and its users. This is because Mebox relies on the users to supply the content to the service, therefore without the users there will be no service. In this case Mebox should use a combination between Google's and Facebook's approach. They should invest in creating a strong community around the service and facilitate picture sharing with their top-of-the-line facial recognition algorithms, similar to what Facebook did in their community (Facebook, 2014b). By utilising their services well, and when they have established a strong user base they should also contemplate introducing easy integration in to other systems/websites in order to facilitate further sharing. Which is what both Google and Facebook have integrated in most of their websites and applications (Facebook, 2014b; Google 2014b).

### 6.3.5 Value Configuration

Mebox's initial value configuration, or key resources, is largely consistent of two parts. The first being the algorithm, that will allow for facial recognition of the photos that are used in the app. This is very similar to the value configuration used by Google (Google, 2014b). The second is the interface and the community that they developed, which will constitute most of what will be seen in the app itself. However, one thing that is lacking at the moment, and will probably be needed to add in order to extract value from the app, is some sort of algorithm that will help them monetize the service. This is where they could utilise the approach that Google (2014b) did, and create and advertising algorithm. That allows potential advertiser to target specific customer segment and thus generate revenues.

### 6.3.6 Capabilities

The capabilities that Mebox must focus on in order to sustain their competitive advantage and continue offering an attractive value proposition to the customer can be split up in to two categories; technical and social. The technical aspect will be more important in the beginning, when it comes to attracting users without having a large user base (Facebook, 2014b). This is because in order to beat an incumbent technology, the new technology must be greater than the old technology as well as the switching costs experienced by the users. Since then there will be a need to launch a better technology (Chesbrough, 2010). However, when the service starts to grow, then the complimentary resources (the social and community aspect in this case) will be more important in order to generate network effects. This can be seen clearly in the case of Facebook as well as Google, when they first started out they utilised a better technology then the competition. When they managed to attract the new users,

they gained an even stronger grasp over the market (Facebook, 2014b; Google, 2014b). Mebox should utilise the same approach by starting off with a technique that is better than the competitors, as well as a different niche and then continue building their competitive advantage by attracting more users, which will create complimentary resources for the firm. If Mebox should chose to utilise an approach of monthly subscriptions for data space, it will be important for them to make sure that the availability remains high and that no downtime arises, since this will create a distrust in the service. This focus on uptime was a very important factor when Facebook started and has remained on of their key focus areas (Facebook, 2014b).

### 6.3.7 Partnerships

In the case of Mebox, the partnership approach that would be most suitable for them would be similar to the ones used by Google and Facebook (Facebook, 2014b; Google, 2014b). In order for them to become successful, they would likely need to use a two-sided business model in the same way as Facebook (2014b) did. This means that they need to create strong partnerships with advertisers, as well as with their users in order for them to grow and attract more users. One approach could be for different advertisers to create forums or sub-communities, like on Facebook (2014b), where users can interact with the advertiser. This will allow for a more a greater benefit since the advertiser would be able to gain direct feedback (De, Mathew, & Abraham, 2001). Thus allowing them to specify and target potential customers better.

### 6.3.8 Cost Structure

The cost structure of Mebox will be rather similar to Facebook's, since both of them are based on users adding content to the service. As suggested by the founders, as well as what similar firms have been choosing to do, Mebox should adopt a value-driven cost structure. This means that they should focus on providing more value than their competitors do; this will help them attract more users and thus building their user base (Osterwalder & Pigneur, 2010). They will have their greatest costs when it comes to generating revenues as well as when it comes to R&D, which is what could be seen from both Facebook (2014b) and Google (2014b). These are both costs that are associated with providing greater value for the user, since they are about expanding the community around the service as well as the technology behind it. Therefore, by continuing on the path Mebox have already started, they should be able to add features and utilise new technology, which will allow them to generate more value for their users (H. Appert & D. Runemalm, personal communication, August 6, 2014). This means that Mebox should keep on focusing their resources on R&D as well as expanding their user base through either advertisement or other marketing campaigns.

### 6.3.9 Revenue Model

The revenue model for Mebox can be one of two options, either they go for an option where it is free for the user or they go for an option where the user has to pay. The first option would mean that they would rely on advertisement in order to gain their revenues; this is a popular approach and is the primary revenue stream for both Google and Facebook (Facebook, 2014b; Google, 2014b). However, since the service will be in app format at first, it might be difficult to combine advertisements and high user satisfaction (H. Appert & D. Runemalm, personal communication, August 6, 2014). This is due to the limited space that exists in the user interface. The other option would be a subscription model, which would mean that the users would pay a monthly or yearly subscription fee in order to use the service. This should be more in line with the firm's value proposition, as well as with the value-centred cost structure. However, neither Facebook nor Google have tried this and might therefore be more of an untested approach. An alternative approach that was discussed was to charge the users for the online storage that they utilised, and thus charge a subscription fee that is similar to the one used by Googles online storage site, Google Drive (Google, 2014b). This means that the service of photo sharing would be free while the storage space would be limited and thus used as the revenue source for the business model.

# 7 Discussion

*In this chapter there will be a discussion regarding the work that has been performed, in particular the framework and process that was presented. This discussion will revolve around how the framework was developed, how it was used and the general usefulness of it. In this chapter the two research questions will also be discussed and answered.*

## 7.1 The Framework

The literature review was distilled into a framework on an alternative way of breaking down business models, benchmarking the corresponding modules and selecting the best fit ones in order to create a new business model. This approach, as far as the author knows, is new and as such allows the firm to experiment more to a lesser cost than previous methods have.

The framework that was created is intended to work as a base for analysing different business models. This is helpful, primarily, in two ways: it will provide a good tool to benchmark different business model modules and evaluate which one or ones would be the best fit for the firm. It is also useful as a tool to evaluate the industry that the firms operate in. By looking at the different modules it is possible to analyse the industry's key drivers and thus see what the trends in the industry are at the moment. These are two aspects that can be very valuable to newly established firms, as well as firms that want to rethink their business model. This is due to the fact that the framework will assist in having a structured process when it comes to evaluating the competitive environment as well as other successful firms. These new inputs might act as inspiration for new ideas.

The results that were obtained from the empirical testing of the framework were as expected. The break down and reassembly of the business models allowed for the development of a new business model. When the new business model was developed for Mebox, it utilised the modules that were collected from Google and Facebook. Even though the two firms had rather similar business models, the different modules of the two could still be assembled into one rather unique business model for Mebox. However, it should also be considered that the business model that was developed for Mebox only serves as a foundation and more work need to be done in order to get all the details in place.

An aspect of the framework that needs to be considered is the fact that it based solely on theoretical material, and that it will only provide rough guidance. It does not give a detailed approach to how to create a new business model; however it provides the tools and processes needed to guide the user through it. Neither has the model been empirically tested enough to give it proper validation. Even though the framework and process has these shortcomings, it is still the author's firm belief that it can be helpful as well as serve as inspiration for future research. Another aspect that was introduced in

the literature review, but was not followed up in the empirical section, was the part about real options. Utilising a real options approach can be good way at minimising risks; this approach would therefore be a good complement to the framework. This is because the framework will allow for the assembly of several similar business models with little effort. All of these different business models can then be launched as real options in order to test them, and then select the most successful one for firm wide implementation.

## 7.2 The Research Questions

The aim of the thesis was to present a framework that would help firms to break down current business models into modules and then reassemble these modules into new business models. This aim was possible to achieve through an extensive literature review, as well as empirical testing of the developed framework. In order to fulfil the aim of the thesis, two research questions were posted. In order to highlight the findings a short answer to the questions will be given, a summary of what the thesis has been exploring.

1. *How can firms with little resources experiment with current business models in order to create new innovative business models?*

When conducting the literature review as well as when talking to the founders of Mebox, it became evident that developing a business model has turned into a rather cumbersome process. After conducting the literature review and discussions with Mebox, it was found that Osterwalder's Business Model Canvas had been a commonly used tool in order to create and experiment with business models. However, instead of taking a bottom up approach, as Osterwalder did, this study would take a top down approach. So instead of building up a business model from scratch, inspiration was collected from the truck industry and modularisation, and instead existing successful business models were broken down into modules. These modules could then be mixed and used in order to reassemble a completely new business model with modules that had been tested before. This approach would reduce the uncertainty for the firm when it comes to creating new business models, and it will also help them experiment more, since the different modules can easily be arranged in different ways. By rearranging the modules, new business models will be created in an easy way. The more the firm utilises this approach, the more modules will be generated, thus making it easier to experiment even further.

2. *How would a firm utilise a more structured approach to using a best practice approach from other firms' business models?*

This question was more aimed towards how the framework in the previous question would be used and what the modular business model might look like. In order to illustrate the example, the firm Mebox was used. The more detailed approach can be seen in chapter 5. However, a specified three-step approach was used in order to create a new business model. This is in order to ensure that proper firms are selected for the comparison, that the firm's business model is broken down in the right way, and that the modules are assembled accordingly. By using the business models of Google and Facebook, a new business model could be created for Mebox. This new business model can then be used as a foundation for further experimentation and in-depth investigations.

## 7.3 Strengths and Weaknesses

This study was conducted in order to produce a framework that can easily be used in order to start developing a business model for the firm. A formal study like this one obviously has strengths and weaknesses. These strengths and weaknesses are in part related to the method and in part to the general concept of the study. The parts that are related to the methodology are described under the reliability and validity section in chapter 2. The parts that are related to the general concept and that will discuss the actual purpose of conducting a study like this will be discussed now.

The strengths of this study are related to the extensive literature review, which has combined literature from the areas of business models with literature from other areas. This has allowed for some concepts to be explored in combinations that usually have not been seen in other studies. All the research that was reviewed has also been condensed into a framework that is rather specialised, which means that it has gone rather in depth. At the same time the study has also utilised well-known concepts and tools, which should make it more robust in the new ideas that are developed. Even though some of the concepts are used outside their original field of study, they should still hold value and be significant. This means that this study is rather likely to be generalizable outside the narrow field of the online industry. The study also tested the developed framework and discussed with practitioners on its pros and cons, and they found it to be helpful.

The strengths of the study are also the source to some of its weaknesses. It is difficult to know if the concepts that are drawn upon to create the framework can actually be used in that kind of way. The empirical testing of the study is also one of the weaknesses. This is due to the fact that it has only been tested on a small firm, and there were only two firms used to supply the modules for the new business model. This sample can be considered too small to draw any conclusions from. The time period can also be considered too short in order to actually test the business models in reality to see how they would perform. As was mentioned earlier, this study has been of a more theoretical nature, and as

such has come up with new theory that might be helpful to practitioners. However, the lack of testing by practitioners is a weakness.

As can be seen, this study contains both strengths and weaknesses. By understanding the nature of the study and its novel approach to creating business models, some of these strengths and weaknesses could be tested by future researchers that use it over a longer period of time.

# 8 Implications

*In this chapter, a brief summary of the results will be presented as well as how it relates to prior research. What impacts this research might have as well as in what category of research it falls into will be presented, as well as possible future research paths.*

There were primarily two results from the research; the first one was to create a framework and a process that can be used to create new business models. The second was to test the framework in the real world in order to create a new business model for the firm Mebox. This research falls into the later stages of the business model research, which was presented in Figure 2. The first results relates to concept of business model ontology, while the second results falls under the research topic applying the business model concept. This research relied heavily upon the business model ontology presented by Osterwalder and his later work, the business model canvas. So this piece of work can be seen as an extension to Osterwalder's research.

If the framework and process turns out to perform as intended, then the implication among practitioners might be great. This is because it structures an approach that has been used among practitioners in an unstructured way. Borrowing with pride has for long been a concept that has existed in the world of business. But utilising this structured approach to analysing and breaking down business models should provide the firms with a more valuable framework to work within. This process might also have implications among researchers, since it allows for a structured approach to analyse, benchmark and evaluate different business models, as well as their building blocks. This might assist them in determining what factors make great firms so successful.

The possible future research paths can go in several directions. From a practitioners viewpoint, the framework can be evaluated in order to see how good it is at developing new business models and how easily it actually can be used to break down present ones. From an academic viewpoint, the framework can be evaluated on how well it can be used to benchmark different business models against each other.

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# Appendix A – Interview Template

1. Can you describe Mebox?
2. How does it work?
3. Do you have a business model at the moment?
4. What problems do you encounter when you try to create business models?
5. How have your efforts, so far, looked like when you have been looking into business models?
6. Do you usually look at competitors in order to get inspired on your business model?
7. Do you believe that a framework (explains the purpose of the study) could be helpful in order to create innovative business models?
8. How extensive do you need your business model to be?