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BEDRIJFSECONOMISCHE WETENSCHAPPEN

*master in de toegepaste economische wetenschappen:
innovatie en ondernemerschap*

Masterproef

Open business models in the services industry

Promotor :
Prof. dr. Wim VANHAVERBEKE

Copromotor :
dr. Anna ROIJAKKERS

Thomas Verdonck

*Masterproef voorgedragen tot het bekomen van de graad van master in de toegepaste
economische wetenschappen , afstudeerrichting innovatie en ondernemerschap*

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Foreword

This master thesis constitutes the final piece of my education of Master in Business Economic Sciences – Innovation and Entrepreneurship - at the University of Hasselt. Writing a thesis is not an easy task and without appropriate guidance and support it is impossible to come to a satisfying result. Therefore I managed to implement knowledge from experts in the field.

First of all I want to thank my thesis promoter Professor Doctor Wim Vanhaverbeke for his assistance and critical remarks. His knowledge of the research field and suggestions of some interesting references have helped me to conduct this research to my full potential.

Secondly, writing this master thesis in English was an enriching and challenging experience. Despite his busy work scheme, Jeffrey Brown, supported and helped me going through the different chapters. Due to this, I gathered a lot of knowledge and insights into the English language, giving this thesis an added value.

The road to obtaining the title of Master in Business Economic Sciences wouldn't have been able without the support and cooperation of my fellow students and professors at the University of Hasselt, which enabled me to enrich my knowledge and prepared me to take my first steps on the labour market. Also, special thanks go to my parents and brother to give me the opportunity to study at a college that intellectually stimulated me day after day. Finally, I want to address some words to my girlfriend, Isabelle, for her support and encouragement which gave me the motivation to conduct this research with happiness and joy.

Summary

During the last couple of decades, managing businesses and industries have undergone a huge metamorphosis. This transformation resulted from several global phenomena that caused managers of enterprises to change the way they ran their business. Companies have to build and take part in networks, involve stakeholders to think about the way things are headed and adapt business models to this new environment. An interesting model of dealing with these challenges is open innovation. After all, to survive as an enterprise in the future it will be necessary to shift from a closed whole to an open system.

So far, research on open innovation was limited to product-oriented industries and high technological companies in particular, but not much is known about how innovative systems could be introduced in services, which are critical success factors and how business models should be reshaped. Nevertheless, open business model innovations in services are interesting to look at, because the sector has become one of the dominant economic powers and is looked at as one of the most promising areas for future economic development (Küpper, 2001). Also, traditional manufacturing industries are suffering from a combination of shorter product life span and commoditization, creating a commodity trap. In order to escape this trap companies will have to focus on services innovation. To carry out this research with much precision I clearly defined the boundaries, making intensive services, similar to the ones investigated by Chesbrough (2011), the subject of my study. This thesis is one of the first explorative investigations on open innovation in services and offers some extending ideas on the initial theories from Chesbrough (2011) and Hulzebos and Piepenbosch (2011). This resulted in the following central research question: *Besides the concepts explained in "Open services innovation (2011)", are there other possible approaches to open services innovation?*

To successfully search for new approaches in the area of open business models in the services industry a lot of attention was spent at the design of this research. Chapter 2 therefore focuses on open innovation in general, providing a solid base to start the thesis. Due to shifts in enterprises' internal and external environment (e.g. the increase of mobile trained workers, more capable universities, diversified knowledge available all over the world and globalisation), the traditional way of doing business was threatened. Open innovation offers an answer on how to successfully deal with these new phenomena. In short, this means the use of purposive inflows and outflows of knowledge to accelerate internal innovation, and expand the markets for external use of innovation, respectively (Chesbrough, Vanhaverbeke, & West, 2006, p. 1). As a counterpart, the subsequent chapter took a similar structure as the first one but looked at innovation in services. It became clear that this is not quite the same as open innovation in manufacturing industries; for labour-intensive, interactive services, the actual providers are part of the customer experience and thus part of the innovation (Berry,

Venkatesh, Parish, Cadwallader, & Dotzel, 2006). Also the need for physical presence of stakeholders is quite different from products.

The knowledge of both open innovation in general and innovation in services provided crucial input to search for new approaches of open business models in the services industry. Moreover, in chapter four I critically analysed and compared the initial theories on this topic from Chesbrough (2011) and Hulzebos and Piepenbosch (2011). This analysis resulted in a conceptual framework which stated that companies have to innovate *business models* to get the best out of an organization's processes and take part in *business ecosystems*. Organizations also have to co-create with their clients at the level of the business ecosystem (*involving customers*), especially in services where customization is crucial to satisfy customers' needs. Crucial is that the *intermediate relationships* in the ecosystem radiate trust, confidence and vision in order to expand long term bonds. Open services innovation is necessary to arrive at a sustainable competitive advantage and yields more added value than service organizations can attain on their own. In order to maintain their competitive advantage, companies have to keep adapting their business models to changing environments.

These variables were afterwards validated with a case study approach, analysing open innovation initiatives from KLM, Pet Insurances and PatientsLikeMe. The purpose was to reinforce the conceptual framework again, given the input from these cases, clarifying how they improved the framework. This eventually led to a founded answer on the central research question. In practice, open services innovation seems to contain more than what the literature showed. Overall, there are great similarities between the cases and the conceptual model, which proves its empirical value. Nonetheless, the variables are enriched due to the cases. In short, the framework of Chesbrough (2011) can be extended with the fact that everything starts from building a business ecosystem and attaching a company's business model to it, serving a wider common thought (by creating an improved customer experience). Business ecosystems help to create an emotional patent, to enable companies to set industry standards, and to create synergism between the different partners, customers and other stakeholders. Successfully working out such a system can also be done through a venturing department (which was not yet present in Chesbrough's framework). Venturing is a way for companies to scan new growth opportunities which involve to a certain extent other activities than their core business. When working with business ecosystems, a few requirements seem to be in place in order to guarantee its success, namely revising partnerships and involving customers. For the intermediate relationships, constructing these intense relations at an early stage is key in an open innovation approach. It is crucial to go from a purely cost-based discussion to a strategic partnership. On the other hand, involving customers means collaborating with clients from day-one. As a service company, one benefits because they can anticipate the needs of the customer early-on and hence can afford to be more flexible.

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1 Introduction

The main focus of open innovation research has been on manufacturing industries and in particular on 'high technology' industries. Chesbrough's "Open services innovation" (2011) introduces the concept of open innovation into service industries. Question is whether there are other possible approaches to open services innovation than these described by Chesbrough?

During the last couple of years, managing businesses and industries have undergone a huge metamorphosis. This transformation resulted from several global phenomena that caused managers of enterprises to change the way they ran their businesses. One of those phenomena is globalisation: since globalisation has acquired an important place in today's society, the external environment of industries changed and made new demands on how businesses are composed, as argued by Friedman (2005, in Chesbrough, 2011). Companies have to build and take part in networks, involve stakeholders to think about the way things are headed and adapt business models to this new environment. Only enterprises who successfully give shape to this transformation will survive. After all, research shows that a 61-year existence period for an average firm in 1958 was narrowed to 25 years in 1989 and even 18 years now, to survive and thrive, leaders must "create, operate and trade" their business units without losing control of their company (Foster & Kaplan, 2001). This means that companies do not exist as long as before due to intense competition, so in order to survive organizations have to innovate to keep or expand their market position.

A core concept almost always related to dealing with business transformation is innovation. An interesting model of dealing with these challenges is open innovation. After all, to survive as an enterprise in the future it will be necessary to shift from a closed whole to an open system. In short, "open innovation is the use of purposive inflows and outflows of knowledge to accelerate internal innovation, and expand the markets for external use of innovation, respectively" (Chesbrough, Vanhaverbeke, & West, 2006, p. 1). Earlier, businesses invested huge amounts of money in R&D to continue their innovation programmes and keep ahead of competition (to achieve and maintain a competitive advantage). Knowledge of technologies stayed inside the company boundaries and revenues of new products were reinvested in the development of new ones. But due to shifts in enterprises' internal and external environment during the last few decades this way of doing business will eventually turn against the company. Examples of these shifts are the increase of mobile trained workers, more capable universities and their research programmes, diversified knowledge available all over the world, deregulation, an enormous increase in Venture Capital (through which employees can develop an idea or product on their own) and globalisation. Open Innovation offers an answer to successfully deal with these new phenomena. Or as Weedman of P&G puts it: "There are many kinds of competitive advantage. The original view was: I have got it, and you don't.

Then there is the view, that I have got it, you have got it, but I have it cheaper. Then there is I have got it, you have got it, but I got it first. Then there is I have got it, you have got it from me, so I make money when I sell it, and I make money when you sell it." In current and future businesses, this last form is and will be more important as a strategy to survive.

So far, research on open innovation was limited to product-oriented industries and high technological companies in particular. The chief reason for this limitation is that open innovation and cooperation with external partners is insuperable in these branches. Services industries were overlooked and not much is known about how such systems could be introduced in services, which are critical success factors or how business models should be reshaped. This thesis will give an answer to these questions by investigating what is already known today, reflecting on and comparing diverse researches on open services innovation and offering new insights when working out cases where an open innovation approach in services was implemented. The Masterthesis advances the current research because it applies a common method on a new domain and tries to make a critical analysis of recently made studies.

1.1 Definition of the problem

As just explained, not much is known about open services innovation, but the need for opening up the dialogue and conducting more research on this topic could be useful. One of the most recent and influential works on services innovation comes from Chesbrough, who investigated this matter in his book "Open Services Innovation" (2011). He explains the need for building systems around open services innovation in the future. Chesbrough argues that it is becoming more and more difficult for companies to remain competitive and escape the commodity trap. After all, classic businesses are shifting manufacturing to lower-cost countries (keeping only R&D in the home town). Product life span is also shortening due to increased access to knowledge systems (e.g. Internet, open source software, etc.). Chesbrough (2011) puts it as follows: "As new products come to market with increasing frequency and take valuable market share, more and more companies are finding it increasingly challenging to keep up and compete" (p. 1). This combination of shorter product life span and commoditization creates a commodity trap, where it will become difficult for companies to avoid this phenomenon. The idea of the commodity trap is described in D'aveni's book "Beating the commodity trap" (2010, in Chesbrough 2011). The thinking behind this trap is that the innovation programmes set up by companies will no longer be a safeguard for success in the future. Companies have to open up their minds and business systems to keep up with the demands of today's society.

One and perhaps the most important way to escape this commodity trap will be through services innovation. However, not enough is known about how we can innovate in services; that's where this thesis will try to offer a contribution by surveying the different approaches in open services innovation. After all, services are becoming a critical aspect of today's society. Looking at some statistics tells us that nowadays, services play a key role in OECD (Organisation for Economic Co-operation and Development) economies, accounting for over 60% of total economic activity in most OECD countries (OECD, 2000). Future predictions from the Organisation for Economic Co-operation and Development (OECD) tells us that this number is even about to increase as services keep gaining importance for customers. Also the figures of employment and investments in services demonstrate that the service sector dominates the economy (see point 3.3), making it a relevant research subject. Companies will have to think beyond their products and start innovating in services to maintain growth and escape the commodity trap. By doing so, investing in open services innovation can offer a significant competitive advantage for the future.

But innovating in this industry means that firms will have to redefine their business models and embrace a different mind-set besides working with products exclusively. The key concepts for services innovation are summarized in Chesbrough's Open Services Innovation (2011). Chesbrough (2011): "With this new thinking, companies that openly innovate can reach levels of success they have never experienced before in the market of their industry" (p. 4).

Chesbrough (2011) defines four variables that are critical when dealing with services innovation to enable innovation and growth:

- Learn to think of your business as a services business: becoming a service company obliges organizations to change the way they do business with customers and several other stakeholders, to create a new mind-set towards services, adapt their business model and extend networks.
- Co-create with customers: when dealing with services customers become even more important. Successfully involving this important group will deliver tacit knowledge, experience, etc., resulting in a competitive advantage over competitors.
- Extend services innovation outside the organization: in the case of open services innovation this means leveraging the power of specialization and the virtues of scope and scale. The expansion of a network results in the budding of large business ecosystems, which delivers more value than companies can attain on their own as a single company.
- Transform business models with services: create value for a business through services and regain a part of that value for your own company.

Although Chesbrough (2011) already investigated open services innovation and reached a general framework for companies, I think that different approaches are possible in open services innovation. As will become clear, Chesbrough has focused mainly on how product-oriented companies can transform themselves to service-oriented businesses. But what about the case of pure service companies (see definition below)? Do the same concepts and framework also apply to them? Or are different approaches possible? A comparison presses itself forward.

By defining services it becomes possible to clearly set the boundaries of this thesis and gives us a first limitation. After all, dealing with the whole range of services will make this research less profound, making it difficult to generalize for the whole service industry. Therefore knowledge intensive services, similar to the ones investigated by Chesbrough (2011), are the subject of my research. Even more specific I will deal with pure services, which stands for companies whose core activity is delivering services, differing from manufacturing companies because services are immaterial and customer intensive. Pure services are described by Teboul (2006) as a process where we have a customer in and the same customer out, transformed by the experience. As will become clear, these kinds of services offer opportunities for business growth and renewal (Chesbrough, 2011). This also offers the possibility to compare and extend the work done by Chesbrough and other authors. Some examples of knowledge intensive services will be explained later on when we are dealing with real-life cases (like the airline industry, insurances and healthcare).

1.2 Methodology

To successfully search for new approaches in the area of open services innovation a lot of attention is spend at the design of this research. The choices made for tackling the definition of the problem and subsequent limitations will be discussed. Also the different phases of this research are clarified. The research-approach is developed in dialogue with Prof. Dr. Vanhaverbeke, promoter of this thesis.

The main and central research question we can derive from the definition of the problem above will be as follows: *Besides the concepts explained in "Open services innovation", are there other possible approaches to open services innovation?*

1.2.1 Research design and data collecting

This research will be explorative and make only use of qualitative data. Preceding the start of this study a scanning literature study with several publications focusing on open innovation in general, but with different perspectives on the theory, was conducted. This enabled me to

build up a wide base and the necessary knowledge to effectively conduct this research. The thesis itself will consist of a thorough literature study and a practice study. All of the sources used in the literature research are secondary; this means that I've looked for scientific reviews, papers and books from state of the art authors.

To be able to answer the central research question the study will be divided into 6 chapters, all of them answering a division question(s). These questions help to trace the central research question, leading to better theory. After this introduction, chapter two will focus on open innovation in general and give an overview of the research done so far with the most recent publications. Hence, this will lead to an answer on the first question: *What can we learn from the research on open innovation completed so far?* By doing this, the non-informed reader will be up-to-date about open innovation. Another advantage of this introduction is that it will give a solid base for the start of this research on which we can connect open services innovation. The focus will be on concepts which might lead to open innovation in services; non-related parts will not be handled because this might lead the reader to far astray.

The third chapter takes a similar structure as the first one but looks at innovation in services. This is not quite the same as open innovation in manufacturing industries and although research in this area is still limited, some good scientific papers are already available. The chapter will start with a short introduction on services in general and provide some statistics of the importance of services in today's society. The central question for the second chapter will be as follows: *What can we learn from the research on service innovation published so far?*

In chapter four, 2 books introducing open services innovation will be analysed. After a general introduction on open services innovation with input from the two first chapters, I will analyze the book from Chesbrough (2011) on open services innovation that recently was published. Important here will be to discover the main thoughts and concepts leading to an answer on the third subquestion: *Which conclusions can we draw from Chesbrough's "Open services innovation" (2011)?* After a first reading of the book it already became clear that Chesbrough mainly works with examples of companies who changed their business from a product-oriented enterprise to a service-driven one. Interesting in his book is the framework he develops in part 1, followed by some case study examples subdivided in large and small companies.

I defined the fourth question as follows: *'Which conclusions can we draw from Pieplensbosch and Hulzebos' thesis "Duurzaam concurrentievoordeel door open innovatie in de dienstensector" (2011)?'* This could be translated as "Sustainable competitive advantage through open innovation in the service industry." Interesting about this thesis is that

Piepenbosch and Hulzebos start from the same core management problem as Chesbrough (2011), but they follow another direction when working out their research problem. Hence, the resemblances and differences between the two publications could produce some new insights on open services innovation. Piepenbosch and Hulzebos (2011) define the core of their study as follows: "The critical success factors who deliver, in cooperation with other organizations, a sustainable competitive advantage when applying open innovation in services" (p. 5). Unlike Chesbrough, they work only with pure service companies. Another interesting point is that they have not only worked with qualitative data, but also quantitative. The surplus value of their research lies in this quantitative testing of the measure in which the multiple variables and concepts are decisive for a sustainable competitive advantage. The way the research is done by Piepenbosch and Hulzebos can also offer value to this study. The different approach of conducting their research and angle of incidence, compared to Chesbrough (2011), can deliver some useful new insights and information for this study, which will be tested when working out real-life cases.

The last part of the fourth chapter will reflect on the two previous ones. Resemblances and points of difference between existing literature will be discussed. This will probably be one of the most important parts of the thesis since it will try to look for new insights and core concepts. It will provide the opportunity to extend the framework of Chesbrough (2011) with its four key concepts: think of your business as a services business, co-create with your customers, extend services innovation outside your organization and transform your business model with services. This will help the reader to understand which key factors are important for open services innovation, leading to a conceptual framework. These findings will lay the foundation for the fifth chapter where I will work out cases on open services innovation. On the basis of my conclusions in the fourth chapter I can then draft and mark out on which concepts the cases have provide insight in. Hence, the last subquestion for this part will be: *Which resemblances and points of difference can we draw from the previously discussed publications?*

As already mentioned, in the fifth chapter I should find an answer on the question: *How is open services innovation managed in real-life cases?* In this chapter I will try to see how the theoretical aspects found in the previous chapters are applied in a real business environment. Therefore I will work out several cases (selected together with Prof. Dr. Vanhaverbeke), which are representative for the services industry. It's important to get to know the systems behind a core idea. After all, to find a solution for my central research question, it will be crucial to learn to know everything about the complex systems behind innovative ideas. How do companies control their network? Which partners do they select? How do they achieve added value for their customers and themselves? How do organizations try to maintain their competitive advantage? The findings should confirm the concepts found in the conceptual

model and could add some new insights (not derived from the literature), leading to empirical evidence for open innovation in services.

Finally, the last chapter will focus on the main conclusions of my research. All the acquired knowledge should provide a founded answer on the central research question: *Besides the concepts explained in "Open services innovation", are there other possible approaches to open services innovation?* Also, together with some reflective considerations on my thesis, some recommendations for future research will be reached out. Figure 1.1 summarizes these various steps where the literature study for *open innovation* (in general) and *innovation in services* delivers input for the analysis of *open innovation in services*. These three steps will lead to the construction of a *conceptual model* based on the analysis of the literature study. Afterwards, three real-life cases will provide the opportunity to validate the conceptual model and make improvements in order to arrive at the final conclusions and remarks in the last chapter to formulate a founded answer on the central research question.

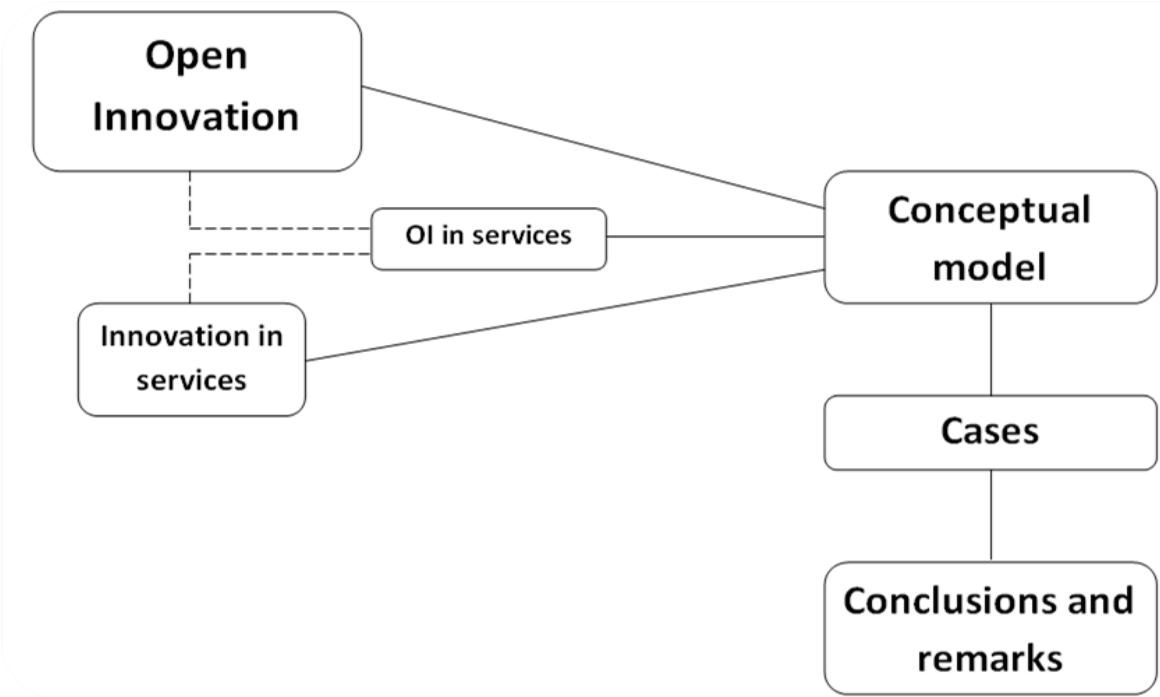


Figure 1.1 Overview structure Masterthesis

Although these subdivisions should guarantee that the research is conducted thoroughly and with the right focus, there are also a few limitations. These limitations contribute to the fact that the study is carried out with much precision. First, the range of services we are surveying in this thesis is limited. Therefore I will focus on pure knowledge intensive services. By defining services it becomes possible to clearly set the boundaries of this thesis. Another limitation consists of the data used: although I tried to guarantee for data triangulation with

using different methods (literature study and cases), the data used are only qualitative. One of the recommendations for future research is to investigate the same problem and outcomes with quantitative data. Nevertheless, because research on this topic is scarce, a case study approach is assumed to be the best way to explore the field. When it comes to generalization, the analysis and combination of different sources and the resulting conclusions make it able to generalize the findings for the whole (pure) services industry. With this method of research and measures taken to guarantee the quality of my research I will be able to conduct the study as thoroughly as possible in order to come to a founded answer on the central research question, and more important, the definition of the problem.

2 What can we learn from the research on open innovation completed so far?

[Open innovation] eagerly seeks external knowledge and ideas, even as it nurtures internal ones. It utilizes valuable ideas from whatever source in advancing a company's own business, and it places the company's own ideas in other companies' businesses. By opening itself up to the world of knowledge that surrounds it, the twenty-first-century corporation can avoid the innovation paradox that plagues so many firms' R&D activities today. In so doing, the company can renew its current business and generate new business. For an innovative company in a world of abundant knowledge, today can be the best of times (Chesbrough, 2003, p. xxxi).

This is how open innovation can be defined in a nutshell. However, there are a lot of concepts behind it. This short definition, given by Chesbrough in his book about open innovation (2003), constitutes the starting point for this thesis. Therefore, the second chapter will give an overview of the research on open innovation carried-out so far by the most recent efforts in this area of study. This will offer a solid base to start this research, from which I can further expand on the topic of open services innovation (chapter 3 and 4). Using the recent developed insights on the definition of the problem, a concise study of open innovation will be conducted, describing the advantages and disadvantages of open innovation, causes and consequences of open innovation, frameworks to be used, adaptations in business models and how companies have build and extended networks.

A first important question we have to answer is what where the main drivers that caused a more open mind-set towards innovation? What are the main reasons that several companies are evolving from closed-innovative companies to open systems that work together and learn from each other? A thorough understanding of the two models (closed and open innovation) is warranted. After all, closed innovation is the most frequently used model in the twentieth century, especially by large firms; which led to significant successes and enabled them to keep their competitive advantage. This model contains an internal Research and Development (R&D) focus and fits nicely with the external climate of doing business in the previous century. As we will see, the knowledge landscape is changing and asks for a shift in businesses' mindsets.

During the last couple of years, businesses, industries and its management have undergone a metamorphosis. This transformation resulted from several global phenomena that caused managers of enterprises to change the way they ran their businesses. One of those phenomena is globalisation. According to Friedman, globalisation has acquired an important place in today's society, changing the external environment of industries and making new

demands on how businesses are composed (2005, in Chesbrough, 2011). Companies have to built and take part in networks, involve stakeholders to think about the way things are headed and adapt business models to this new environment. Some support the notion that this transformation will outperform others who don't evolve.

2.1 Closed Innovation

Closed innovation was the typical model of running a business in the past, as a result of the following external factors. Knowledge was scarce and not available for everyone. That's why companies made huge investments in R&D which led to new innovations. A lot of organizations even established and developed research centers to keep ahead of competition (e.g. Xerox PARC, HP Labs). These innovations made it possible for companies to benefit from the specialised centre and recover their investments. As a result, large firms with extended R&D capabilities and complementary assets could outperform smaller rivals (Teece, 1986). Another important factor is that governments allowed 'legal' monopolies through intellectual property. Consequently, firms were able to keep a competitive advantage for a longer period of time and knowledge stayed inside the company. The result was a golden age for internal R&D (Chesbrough, 2003).

As already mentioned, companies had to build systems internally, so an internal focus was indispensable. Or as Chesbrough puts it in his paper "The Era of Open Innovation" (2003): "In the old model of closed innovation, firms adhered to the following philosophy: successful innovation requires control. ... This approach calls for self-reliance: If you want something done right, you've got to do it yourself" (p. 36). Every business unit was evaluated and transformed from an internal point of view, outsiders were kept away. This gave rise to a new phenomenon called the *not invented here syndrome* (NIH-syndrome): this means that everything developed outside the company is regarded not as good as own products. In Figure 2.1 is shown how industrial R&D (research and development) activities were shaped. Only the best ideas were developed. Knowledge which was not financially valuable or did not fit the firm's strategy was neglected. Figure 2.1 depicts this funnel-perspective. Businesses focused almost exclusively on their current markets and ideas with huge potential for other, unknown markets were abandoned. So, although there were many unused ideas generated internally in the firm, few of them became available outside the walls of these organizations (Chesbrough, 2003).

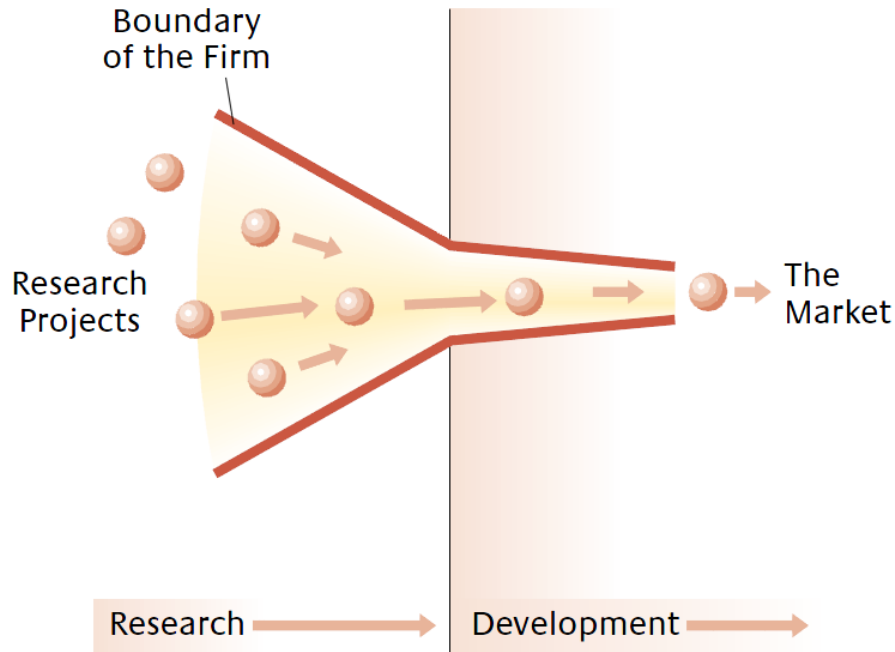


Figure 2.1 Closed innovation model. Adapted from "The Era of Open Innovation" (Chesbrough, 2003).

All these facts resulted in a virtuous cycle within and between companies. Large companies invested heavily in research (and research labs) to create new products and capture a significant portion of the surplus value from new technologies. Firms controlled their knowledge and kept creating new value-added products. The resulting benefits (in the form of profit) were reinvested in new research projects and consequently put forth a virtuous circle. Abundant knowledge was managed as a knowledge bank, in which ideas were kept on the shelf until a downstream business was ready and willing to use them (Chesbrough, 2003). Combined with this knowledge Porter (1979) identified his famous *Five Forces* model (rivalry, buyer power, substitutes, supplier power and entry barriers) which goes hand in hand with the closed innovation model.

2.2 A changing environment

Closed innovation was and is (in a few industries) still a successful business model. But at the end of the twentieth century major shifts in companies' external environment occurred. For example within P&G they realised that the world's innovation landscape had changed, yet they hadn't changed their own innovation model since the late 1980s when they moved from a centralized approach to a globally networked internal model (Huston & Sakkab, 2005). These changes made the closed innovation paradigm vulnerable and broke the virtuous circle. Companies had to adapt their business models in order to survive. In this next part I will discuss the factors which changed the external environment of companies. Enterprises need

to successfully deal with these changed circumstances (mainly as a result of globalisation) to survive, therefore a closer understanding of these phenomena is useful.

2.2.1 Mobility and availability of skilled staff

Thanks to a more globalised world, knowledge is nowadays spread all over the globe. In former days, staff and researchers stayed within a company for their entire career. The employees' resulting experience and professionalism through years of work gave the company a competitive advantage. That's why, in a closed innovation model, businesses invested a lot on training and recruitment. However, nowadays the labour market changed drastically. With the increased mobility of highly trained workers, knowledge gets more widespread. Customers, suppliers and even competitors are looking for knowledge these employees can offer them. After all, rival firms can access their extensive experience and capabilities at a fraction of their true cost by simply hiring away "the best and the brightest" (Chesbrough, 2003). Also the rise of Venture Capital makes it easier for staff to fund their own start-ups. When they see room for a new idea or product they leave the company and start on their own. Not only the labour market has changed, also universities are more capable and conduct high-quality researches. This creates a whole new knowledge platform and companies have to cooperate with universities to get access to this knowledge. These changes causes a threat for companies with a closed innovation model. On the other hand, as we will see later on, it can also offer firms an advantage when they deal with this phenomenon in the right way.

2.2.2 Rise of the Venture Capital Market

In Europe and the U.S., Venture Capital became abundant. Venture Capitalists invest in new products and ideas and expect some of the benefits in return, when these new products and ideas gain market share. Chesbrough (2003): "This large and growing pool of Venture Capital created real hazards for the companies that made significant commitments to internal R&D" (p. 38). As already mentioned above, experienced staff and researchers with a lot of tacit knowledge can leave the company and work out their own ideas with the support of Venture Capital. For that reason, knowledge leaves the company and doesn't stay at the home base for a long time, which means a serious threat for closed innovation systems.

2.2.3 Capability of external suppliers and deregulation

In a closed innovation model, companies' R&D is mainly internally focused, hence the role of suppliers used to be minimal. They often lacked the experience and knowledge to produce the required components at the desired quality. Due to the factors already mentioned above, the supply base has undergone a huge evolution. Suppliers' offerings are often of equal or

superior quality to what a company can achieve internally (Chesbrough, 2003). This offers the ability for firms to get access to the required goods faster, saving costly time and become more flexible than in the case where they had to produce these goods on their own. But it can also mean a threat to businesses because suppliers are available to every company around the globe. Together with the trend of deregulation inside and between countries and continents, companies are almost forced to work together. Governments are seeing the gains of cooperating, markets open up and knowledge is shared all over the world.

2.2.4 Alternative options for abundant knowledge

The tension between the research group's motives and those of the development group lead to a buffer-inventory of ideas sitting on the shelf (Chesbrough, 2003). But thanks to the rise of Venture Capital and the other reasons discussed above, there now exists an outside path to get abundant knowledge and ideas to the market. People get the chance to develop ideas in a start-up and commercialize their ideas. As Chesbrough (2003) explains, "there may be new markets to explore with these ideas, which the established company may be poorly suited to address" (p. 39).

Of course, the aforementioned concepts are just limited here. Other factors might influence and explain the recent shift towards open innovation as well, although the previous discussed reasons are probably the most important ones and were studied repeatedly and thoroughly in former papers. Open Innovation offers an answer to successfully deal with these new phenomena.

2.3 Open Innovation

Due to the changes in today's business environment discussed above, the virtuous circle of closed innovation is no longer valid. This cycle (mentioned earlier) is now broken and new alternative paths have been created. This is shown in Figure 2.2 which gives an overview of the previous two parts. As we can see, companies followed the interior path when they focused on internal R&D and hence created a virtuous cycle. Investments were aimed at the development of new products, which in turn creates increased sales and profits. These increased revenues were then reinvested in the development of new or improved products, resulting in a virtuous cycle.

Due to the shifts in business environments, discussed above, there also exists an outside path besides the interior one, depicted in Figure 2.2. Key engineers can now exit companies fairly easily, with the support of Venture Capital, and start their own enterprise resulting in a knowledge drain for organizations who lose their experienced staff. Hence, companies risk

losing key engineers when they keep moving in their virtuous cycle, making it impossible to develop products outside their core business. On the other side, the new start-ups are further developed, risking to disappear or be taken over by others (acquisitions), but also having the opportunity to become a huge success (resulting in an Initial Public Offering (IPO)). As Chesbrough’s “Era of Open Innovation” (2003) paper summarizes: “The virtuous cycle of innovation was shattered: The company that originally funded a breakthrough did not profit from the investment, and the firm that did reap the benefits, did not reinvest its proceeds to finance the next generation of discoveries” (p. 36). This causes companies to change the way they deal with innovation, they will have to adapt their business models or otherwise risk of losing the battle with competitors. This new way of innovating is called open innovation, a theme where this thesis is all about.

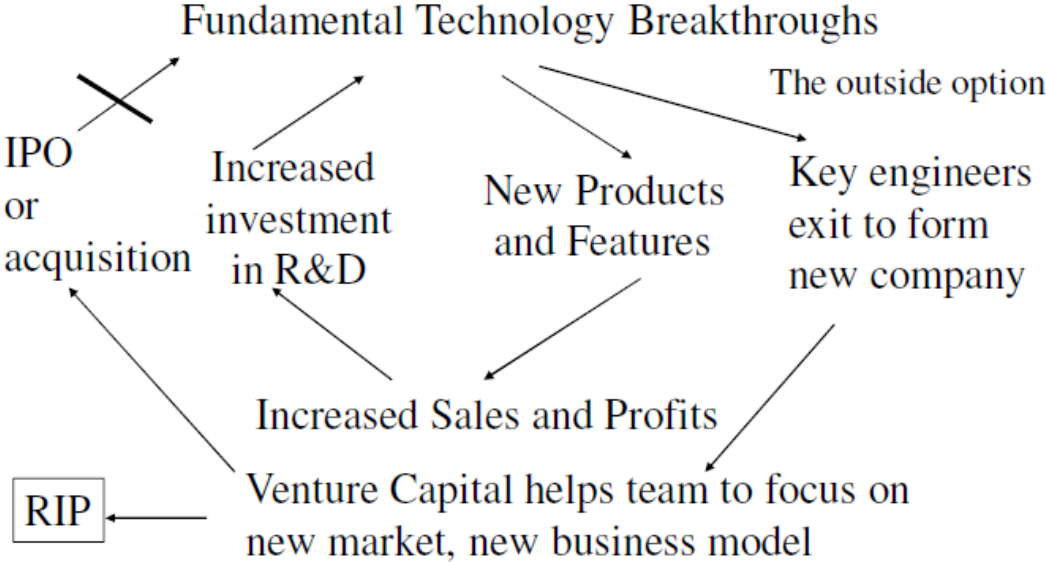


Figure 2.2 Virtuous circle broke. Adapted from “Open Innovation. The New Imperative for Creating and Profiting from Technology” (Chesbrough, 2003).

Open innovation can be defined as “the use of purposive inflows and outflows of knowledge to accelerate internal innovation, and expand the markets for external use of innovation, respectively” (Chesbrough, Vanhaverbeke, & West, 2006, p. 1). After all, today, there is an abundance of knowledge in virtually every field of companies’ environment (Chesbrough, 2003). Universities work together with companies to extend their knowledge. Also the governance, policies, and use of patents changed the rise of doing businesses through multimedia and the internet. So the knowledge monopolies from internal R&D were put to a stop because there exists large value beyond company walls, on the outside. Open innovation offers an answer to all these challenges, where the emphasis lies on creating value together with external sources, whether it is by licensing out internal knowledge or finding the right technology from third parties to introduce in your own value chain. Companies have to

engage themselves beyond their internal R&D processes, towards building access mechanisms to tap into the wealth of external knowledge around them (Chesbrough, 2003). For example, Procter & Gamble’s radical strategy of open innovation now produces more than 35% of the company’s innovations and billions of dollars in revenue (Huston & Sakkab, 2005).

This can be done in multiple ways, the choices for enterprises are very diversified and can depend on specific characteristics of their industry. Companies can chose to start up research programs with universities (through which they gain useful knowledge), they can found collaboration networks on their own or work together with companies and create spin-offs. The construction of these networks and the network perspective on open innovation, calls for an integration of the various theoretical frameworks such as value chain analysis, transaction costs theory, the relational view of the firm and the resource based view (Chesbrough, Vanhaverbeke, & West, 2006). Figure 2.3 explores these different paths of open innovation. We can split up the choices in two parts: inbound of technologies and knowledge to fill the gaps with external technology, and outbound where firms profit from others’ use of their technology. As for the outbound, in the old paradigm the knowledge that wasn’t used was referred to as a cost, but in open innovation this unused capacity becomes an opportunity for revenues and new business platforms. Ideas on the shelf and the internal technology base can be licensed out to companies operating in other markets than yours, or organizations can create spin-offs (or by cooperating with different partners) to explore a totally new market. When we look at the inbound side, companies will try to fill the knowledge gaps with external technologies. They can do this by conducting external research projects (with for example universities as already mentioned above), technology in-licensing or technology acquisition.

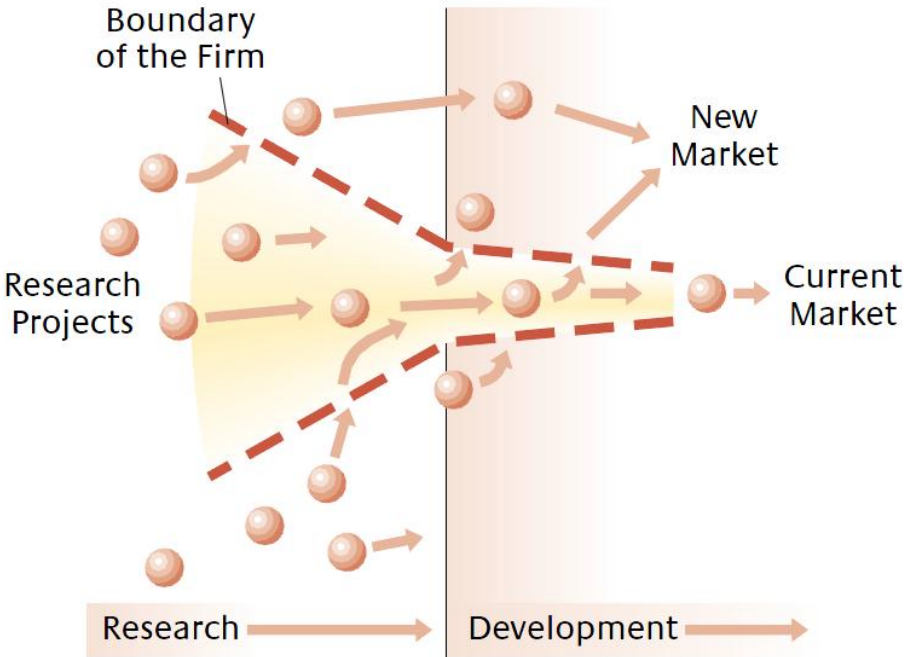


Figure 2.3 Open innovation model. Adapted from “The Era of Open Innovation” (Chesbrough, 2003).

2.3.1 Advantages

This brings us to the advantages of open innovation, advantages which didn't exist when companies mainly focused on internal R&D (so closed innovation). Vanhaverbeke, Van De Vrande and Chesbrough (2008) argue four advantages resulting from open innovation in risk-laden activities, explained by applying a real options approach. First of all companies can benefit from early involvement in new technologies and business opportunities. This gives them a wider knowledge base and firms can trace new promising technological developments at the beginning which give them a head start. Companies can do this by buying minority stakes in (high-tech) start-ups, participate in Venture Capital Funds, crowd sourcing and investing in technology research at universities or research labs. This gives open innovation a huge lead over closed innovation. Vanhaverbeke, Van De Vrande and Chesbrough (2008) argue that "the result is more alpha, in terms of higher return, and lower beta, in terms of robust diversification, enabling the open innovation firm to build a portfolio of projects that will be more resistant to problems in any one part of the business" (p. 253).

Another advantage is that firms can also benefit from a delayed internalisation. Firms have more flexibility when they want to internalise the innovation process and the potential technology breakthrough. Because of this, companies can consider a broader portfolio of entry options at the start and avoid the risks of developing the technology internally. Hence firms can also avoid superfluous costs of internal development and invest money to other, more useful systems (for example collaboration with customers and building networks).

Open innovation also offers the advantage of an early exit. Promising technologies and research projects might not produce the desired estimated results. The new open innovation paradigm gives firms the opportunity to license out technologies, sell knowledge or spin off ventures that are not promising enough or fit within their own core businesses, but might be useful for other industries and markets. In his paper "The Era of Open Innovation" (2003) Chesbrough says that "the closed and open models are adept at weeding out "false positives" (that is, bad ideas that initially look promising), but open innovation also incorporates the ability to rescue "false negatives" (projects that initially seem to lack promise but turn out to be surprisingly valuable)" (p. 37).

A last great advantage of open innovation lies in the extended control until a full exit. Exits usually are difficult decisions for companies and are not self-evident. By venturing technologies, open innovation let companies save money, monitor further developments while delaying the (full) exit and sell or postpone the decision of internalising the technology. Vanhaverbeke, Van De Vrande and Chesbrough (2008) also conclude that "these benefits do not automatically materialize, innovative firms have to learn new skills and routines to develop the full 'real option' potential of open innovation practices" (p. 251).

2.3.2 Challenges

Combined with these advantages there also exist a lot of challenges for companies when trying to successfully integrate an open innovation approach. Firms need to create an open mindset to capture value from the outside. A first important group where this open mindset is critical are the staff and researchers. The additional role of identifying and accessing external knowledge, in addition to generating internal knowledge, changes the career paths of researchers inside R&D firms (Chesbrough, 2003). Thus, a firm should foster a culture in which these knowledge workers are motivated to continuously search for new ideas (Van de Vrande, De Jong, Vanhaverbeke, & De Rochemont, 2008).

Also a new perspective towards Venture Capital is needed. When effectively managed, Venture Capitalists can become an opportunity instead of a threat. It's true that Venture Capital can take away some of a firm's key (research) employees, but they can also deliver value when developing new technologies. Open innovation firms regard companies financed by Venture Capital as "pilot fish" for potential market opportunities (Chesbrough, 2003), because they are operating in a real market and serve as a first indication of a success.

Another challenge is the one of successfully managing Intellectual Property (IP). After all, open innovation means working together and share thoughts and ideas with other firms. So the nature and use of patents changes when compared to the twentieth century. Gans and Stern (2002) found that intellectual property protection provides a valuable asset and also serves to enhance the creation of markets for ideas. Consequently, it allows for cooperation between start-ups and corporations, who might otherwise view innovation purely as a competitive threat.

A last, and perhaps most important challenge, lies in the creation of an internal R&D architecture. Hence, it appears that there is still a crucial role put aside for it. Utilizing internal R&D allows the firm to create a new architecture when the many possible connections within a system are not known (Chesbrough, 2003). A complementary view is that open innovation provides a much broader market for firms' core competencies, enabling them to support other companies' businesses and technologies and hence be more valuable, rather than less so (Chesbrough, Vanhaverbeke, & West, 2006). Developing knowledge together with the partners of the network system as a whole is crucial in a firm's open innovation approach. The business model is a useful framework to link these technical decisions and challenges to economic outcomes (Chesbrough, 2003).

Although open innovation is a very effective way of doing business in this new era, caution is needed when integrating it. After all, outsourcing strategies typically just transfer work to lower-cost providers, but connect and develop (open innovation), by contrast, is about finding good ideas and bringing them in to enhance and capitalize on internal capabilities (Huston &

Sakkab, 2005). Another point of interest lies in the integration of open innovation in small medium enterprises (SMEs). There we see that results show that SMEs are increasingly adapting open innovation practices (Van de Vrande, De Jong, Vanhaverbeke, & De Rochemont, 2008). But the use of this framework in SMEs still needs to be elaborated further.

2.3.3 An open business model

To effectively incorporate open innovation into your company (this means dealing with the changed environment, capturing the most value as possible from the potential advantages of open innovation and tackling the combined challenges), the creation of an effective business model is crucial. After all, when Apple introduced the iPod, it did something far smarter than just enabling people to carry around music wherever they go on a trendy way, they created a whole new business model (Johnson, Clayton, & Kagermann, 2006). In the past, researchers spend a lot attention on studying how business models are constituted and can turn businesses into a success. After all, a technology by itself has no single objective value (Chesbrough, 2003). It is the way how a technology is brought to market and presented to customers that yields returns. Open innovation is at an organisational level and networks are closely related to their environments serving as channels where information is transferred (Hulzebos & Piepenbosch, 2011). Two very important works have dealt with business models for open innovation frameworks: Chesbrough (2006) contributed to the research field with his book "Open Business Models: How to thrive in the new innovation landscape" and Johnson (2010) gave some further detailed insights with his book "Seizing the White Space. Business Model Innovation for Growth and Renewal." The last one - Johnson (2010) - will be dealt with later on in this thesis.

An important new fact which we have to bear in mind for the case of open innovation is that firms can create and capture value from their new technology in three basic ways: through incorporating the technology in their current businesses, through licensing the technology to other firms, or through launching new ventures that exploit the technology in new business arenas (Chesbrough, 2003).

In short, the functions of a business model are as follows (Chesbrough & Rosenbloom, 2002; Chesbrough, 2003):

- 1) Articulate a value proposition: the value created for consumers produced through the technology.
- 2) Identify a market segment: select the consumers for which the technology is useful and has added value.
- 3) Create the structure of the value chain: the value chain is established to create and deliver the offering to the final customer and the position of the firm in this chain.

- 4) Define the cost structure and target margins: given the three first points, the cost structure and target margins define how firms will generate revenues and capture value.
- 5) Develop a value network: look at the position of your firm within the network and try to extend it.

This is comparable to the framework Johnson, Christensen and Kagermann (2006) developed. They say that a successful model has three components: a unique customer value proposition, profit formula, and key resources and processes. After all, business models are essential to unlocking latent value from a technology (Chesbrough, 2006). As a company, one has to open up one's own innovation procedures. Therefore organizations will need to connect and link their business model upon the desired innovation system. Chesbrough (2006) defines a business model framework which helps firms to successfully deal with open innovation. These insights will help us to find an answer to the central research question of this thesis. According to Chesbrough there are six kinds of business models: the type 1 company has an undifferentiated business model, type 2 firms have some differentiation in their business models, the third kind of enterprises develop a segmented business model, type 4 companies have an externally aware business model, the fifth category integrate their innovation process with its business model and last, the type 6 firm business model is able to change, and is changed by, the market. It will be important for a company to identify in which type of framework they are situated and then take important steps towards a more open business model, preferably towards type 6 of Chesbrough's framework.

The type 6 firms (the company's business model is able to change, and is changed by, the market) are the most open ones and will get the maximum out of their open innovation processes. One important attribute of a company with a type 6 business model is its ability to innovate its own business model (Chesbrough, 2006). Firms will have to experiment with business models through Venture Capital or construct spin-offs and joint ventures to explore new ways of doing business. Therefore, the relationship with customers and suppliers becomes a priority and even an integrated part of business models and vice versa, creating an exclusive platform. This platform might open the way to a competitive advantage over competitors. Also external licensing has become a deep rooted part of the genes within the companies' innovation system, overcoming the not-invented-here syndrome. Intellectual Property serves as a strategic asset instead of a financial burden and is managed in a variety of ways. Companies like Apple, Dell, IBM and Procter & Gamble have successfully introduced this type 6 model. These open business models also lead to a more extreme form of open innovation: disruptive innovations. These disruptors create growth by redefining performance, either by bringing a simple, cheap solution to the low end of an established market or by helping "nonconsumers" to solve problems they were facing in their lives (Scott, Johnson, Sinfield, & Altman, 2008).

To summarize a key point for this research, namely the open business models:

“(1) [the open innovation company’s business model] drives the business models of its key suppliers and customers; (2) innovating the company’s business model, which is widely shared across the company, is part of the firm’s innovation task; (3) external partners share technical and financial risks and rewards with the company in the innovation process; (4) IP is managed as a strategic asset, helping the company enter new businesses, align with suppliers and customers, and exit existing businesses; and (5) the management of innovation and Intellectual Property is embedded in every business unit of the company” (Chesbrough, 2006, p.130).

Going deeper into the theory of open business models at this point might lead the reader too far astray, but the insights given above help to form a good basis for understanding and building business models in open services innovation. Together with this new understanding of open business models, another approach towards open innovation and strategy is needed. Indeed, if one were to make strategic sense of innovation communities, ecosystems, networks and their implications for competitive advantage, a new approach to open strategy is needed which balances the tenets of traditional business strategy with the promise of open innovation (Chesbrough & Appleyard, 2007).

3 Introducing services and open services innovation

So far, research on open innovation was limited to product-oriented industries and high technological companies in particular. The chief reason for this limitation is that open innovation and cooperation with external partners is inseparable in these branches. Services industries were overlooked and not much is known about how innovative systems could be introduced in services, which are critical success factors and how business models should be reshaped. According to a report from the university of Cambridge in 2007, service businesses “still need specialists to deal with the increasing complexity but, to extract the full potential of service systems, researchers must seek to understand (1) how to optimally invest in service systems to sustainably improve key performance indicators (customer satisfaction, productivity, regulatory compliance, innovation capabilities) and (2) how to create new service offerings based on improved value propositions or new types of service systems” (p. 6). After all, service innovation seems to occur in a piecemeal way, often driven by chance or crisis according to Uday M., Uday S. and Hiranya (2008). Nevertheless, innovations in services are interesting to look at, because the sector has become one of the dominant economic powers and is looked at as one of the most promising areas for further economic development today (Küpper, 2001). Most of the large economies in the world are even dominated by services, in that services compose more than 50% of their GDP (Uday M., Uday S., & Hiranya, 2008). This thesis will try to give an answer to these questions by investigating what is already known today. It will compare and reflect on diverse research covering open services innovation and offer new insights when working out cases that implemented open innovation initiatives.

3.1 Introduction

As just explained, not much is known about open services innovation, but the need for opening up the dialogue and conducting more research on this topic could be useful. Significantly, with manufacturing slipping to less than 20% of GDP and the role of services rising to more than 70% in some OECD countries, services are seen as playing a principal role in economies, so research in this area is crucial (OECD, 2000). Part 3.3 investigates the importance and relevance of services more deeply, demonstrated with facts and figures. One of the most recent and influential works on services innovation comes from Chesbrough (2011), who investigated this matter in his book “Open Services Innovation”. He explains the need for building systems around open services innovation in the future. Chesbrough argues that it is becoming more and more difficult for companies to remain competitive and escape the commodity trap. After all, classic businesses are shifting manufacturing to lower-cost countries (keeping only R&D in the home town). Product life span is also shortening due to increased access to knowledge systems (e.g. Internet and open source software). Chesbrough (2011) puts it as follows: “As new products come to market with increasing frequency and

take valuable market share, more and more companies are finding it increasingly challenging to keep up and compete" (p. 1). This combination of shorter product life span and commoditization creates a commodity trap, where it will become difficult for companies to avoid this phenomenon. The key idea behind this trap is that the innovation programmes set up by companies will no longer be a safeguard for success in the future. Companies have to open up their minds and business systems to keep up with the demands of today's society.

One and perhaps the most important way to escape this commodity trap will be through services innovation. However, not enough is known about how we can innovate in services; that's where this thesis will try to offer a contribution to the problem by surveying the different approaches in open services innovation. After all, services are becoming a critical aspect of today's society. Companies will have to think beyond their products and start innovating in services to maintain growth and escape the commodity trap. By doing so, investing in open services innovation can offer a significant competitive advantage for the future.

Innovating in this branch means that firms will have to redefine their business models and embrace a totally different mind-set other than working with products exclusively. The key concepts for services innovation are summarized in Chesbrough's Open Services Innovation. With this new thinking, companies that openly innovate can reach levels of success they have never before experienced in the market of their industry (Chesbrough, 2011). Annex 1 concludes this introduction by offering a few insights on what is already known about services and services innovation and how the future will look in this field of research.

3.2 Definition

A first important thing is how services are defined. Like product businesses, there are many different industries in services, going from classic hairdressers or shoeshine boys in the street to huge and complex airline companies. Or as Theodore Levitt states: "There is no such thing as service industries. There are only industries whose service components are greater or less than those of other industries. Everybody is in Service." So the range of services is quite broad. A general definition given in dictionaries expounds services as follows: "A particular type of help or work that is provided by a business to customers, but not one that involves producing goods" (Longman, 2006, p. 1498). By defining services it becomes possible to clearly set the boundaries of this thesis and formulate a first constraint. After all, dealing with the whole range of services will make this research less profound, making it difficult to generalize for the whole service industry. Therefore knowledge intensive services, similar to the ones investigated by Chesbrough (2011), are the subject of my research. Even more specific I will deal with pure services, which stands for companies whose core activity is delivering services, differing from product companies since services are immaterial and

customer intensive. As will become clear, these kinds of services offer opportunities for business growth and renewal (Chesbrough, 2011). This also offers the possibility to compare and extend the work done by Chesbrough and other authors. The shift from product to service is an important one for companies since it obliges you to serve your customers not only when they buy your service, but also afterwards. Therefore organizations need to learn all about their customers to be able to offer them specialized solutions and create more value.

Another important aspect are the characteristics which differentiate services from products and hence influence the management of service businesses. A service can be divided into three factors: a result (what the customer receives), the process, and a relationship (between the customer and the service provider). Xing (n.d., p. 5) says that "a service entails a co-creation model of value creation (not a creation-consumption model) and represents an interaction between providers, customers and other parties and resources" (it is not a solely exchange activity). This leads up to four basic properties according to Tiri, Hommez and Huys (2010). They say that a service is intangible, inseparable, transitory and heterogeneous. The first property speaks for itself, a service isn't tangible, like a bank loan. What is meant by inseparability is that a service arises when it is consumed and isn't produced in advance. It even is transitory because you can't stock them. A service is also heterogeneous because when delivered repeatedly, the form of a service will almost always undergo slight changes as a result of the interaction with customers. These specific properties of services have an influence on the way businesses are run. Pure services, which are subject of my research, are described by Teboul (2006) as a process where there is a customer in and the same customer out, but transformed by the experience.

We find the same concepts used by Küpper (2001). Küpper defines a service innovation as "the result of a change process (the product) or a process itself with products that are marked by a high degree of immateriality and intangibility, the need of synchronous contact between customer and supplier, and the integration of an external factor in combination with the heterogeneity because of a high level of personal input with the focus placed on the operation's internal aspects" (p. 3). So, innovation objects can be new services (product innovation), changes in the development of process of services (process innovation) as well as changes in the organization of services. The main characteristics are summed up by Küpper (2007) where she tried to give an overview of the most important results of several studies (Annex 2: Overview results on service innovation). Uday M., Uday S. and Hiranya (2008) go even further when analysing the service sector; they argue that change in the economy during and after the period 1992-1997 might well be better understood as a shift to the information sector rather than a shift to services per se. Where services and the information economy are closely interrelated, information and communication accounts for the most important applications in service activities.

Consequently, innovative systems which are effective when dealing with products, are no longer effective for service innovation. Therefore, the development of new and improved services will depend on the systems put forth by companies. After all, up until now the innovative systems set up by firms tended to be an unstructured ad-hoc processes based on trial and error, resulting in more failures than successes (Tiri, Hommez, & Huys, 2010).

3.3 Growing importance of services

As already mentioned, services are gaining importance and have become the most important field in today's society. The facts and figures speak for themselves: according to Eurostat the services economy was responsible for almost half of the added value in the total economy (EU-27) in 2006. That's more than double of the share of industry (20.2%) (Eurostat, 2008). Even when manufacturing or agriculture play large roles for a country (like for example in India and China), no economy of any size can really function without a large service sector (Uday M., Uday S., & Hiranya, 2008). In fact, services now dominate, making up about 70% of the aggregate production and employment in the Organization for Economic Cooperation and Development (OECD) nations and contributing about 75% of the GDP in the United States (Berry, Venkatesh, Parish, Cadwallader, & Dotzel, 2006). In Germany, for example, the share of services of the German GNP amounted to 67,9% in 1999 (in 1991 it was only 62,4%) and almost two thirds of all full-time employees work in the service sector, that is equivalent to an increase of 7% in comparison to 1991 (Küpper, 2001). Also in Flanders, out of the 2.25 million employees, more than 900.000 are employed in commercial services and even more than 1.7 million, if one includes non-commercial services like education and healthcare (Tiri, Hommez, & Huys, 2010).

The OECD (2000) also tried to give an overview for the importance of the different service sectors: for example in Canada, in business services, earnings have risen by 3,2% per year during the past five years. Earnings seem to be higher in transport, finance, insurance, real estate categories and storage and communication. Even for investors, services are becoming a focus point and can be derived from the fact that foreign direct investment has shifted towards the services sector. It is not only a result of the growing services economy but largely reflects the non-tradability of many services (Riedl, 2009). To summarize, Annex 3 (Service sector in global economies) gives an overview of the most general statistics of services. Combined with this rising role of services in economic growth and job creation, more attention and responsibility is required from governments to improve services' performance and expansion. Most importantly; this implies reforms to domestic regulation, liberalisation of international trade and investment, and a reorientation of relevant government programmes to meet the needs of service industries more effectively (OECD, 2000). If governments don't pay enough attention to this economic matter it can even limit the constructive effects resulting from the role that services play in today's society.

3.4 Innovation in services

The figures which indicated the importance and growth of services are also reflected in the way businesses evolved during the last decades. The major changes to which firms need to respond are occurring in the information services quadrant, this is where the industrialization and globalization trends have had the largest recent impact (Uday M., Uday S., & Hiranya, 2008). More and more firms recognize the need for offering services to strengthen their power over competitors. Two reasons might contribute to this: the offering of unique services offers the ability for companies to differentiate themselves in the market and it generates extra revenues. Not only firms who are producing products see the importance of innovation in services, also pure service-oriented enterprises need to keep innovating. Service innovation is quite different from product innovation. For labour-intensive, interactive services, the actual providers are part of the customer experience and thus part of the innovation (Berry, Venkatesh, Parish, Cadwallader, & Dotzel, 2006). Also the need for physical presence of stakeholders is quite different from products. That's why this section will report on which systems are already set up towards innovation in the service sector in general. An understanding of these systems will offer the reader the ability to shift focus on the specific analysis of open services innovation in the next chapters.

There is also an emerging need for innovating with services. Tiri, Hommez and Huys (2010) say that the potential margins on services are much higher than those of products because these products became commodities (resulting in huge investments if you still want to offer a differentiated product). A second phenomenon quoted in their paper is that customers want to keep their equipment (products) for a longer time resulting in more extensive use. Because of this, service after purchase becomes more and more important. The last factor is the demand of total cost of ownership from customers which results in intensive involvement of the service provider. Tiri, Hommez and Huys (2010) also define a four-step-approach for the evolution from a product-oriented company to a service-oriented company. This means going from *a product producer* to *an as-needed service-provider* and eventually move towards *a full-line service expert*, ending as *a supplier of integrated solutions*. This is reflected in the fact that service companies do not focus on product or process innovation solely, but also on marketing and organisational focus which allows them to make the shift from *a product producer* to *a supplier of integrated solutions* (Annex 4: Complementary innovation strategies in services, 2004 – 2006).

Bearing this knowledge in mind it is possible to select four innovation strategies (Tiri, Hommez, & Huys, 2010):

- 1) A renewal in the delivery process of a service to make services more efficient.
- 2) Adaptations from the service concept to fulfil (new) customer needs.

- 3) A repositioning of a service to open up a new market segment.
- 4) An extension from the service offerings through new services and as a result addresses new customer (target) groups.

Berry, Venkatesh, Parish, Cadwallader and Dotzel (2006) already created a similar framework for market-creating service innovation. They defined four types of markets creating service innovations: flexible solutions (offers a new core benefit which is consumed apart from where and when they are produced), controllable convenience (creates new markets), comfortable gains (creates a new core benefit consumed at the time and place of production) and respectful access (creates new markets where, this time, production and consumption are inseparable).

Innovation in services is mostly a synergism between a service innovation and other types of - technological and non-technological - innovations. Moreover, these kinds of innovation are usually realised through focusing on one the six building blocks developed by Tiri, Hommez and Huys (2010). Figure 2.1 gives an overview of this framework.



Figure 3.1 Building Blocks through Services Innovation. Adapted from "Innoveren met diensten biedt kansen! Perspectief op diensteninnovatie" (Tiri, Hommez, & Huys, 2010).

The first aspect of this framework is the strategic positioning of a firm. A clear positioning defines how the company can create value for stakeholders. Radical service innovations are mostly a fusion between a pure service and a new technology or earnings model, resulting in building block number two. For example, the recent developments in radio frequency identification (RFID) technology meant a whole new range of pure service innovations for

supermarkets, museums and numerous other service providers linking up with customers. The third and fourth block define the flow of information and the relationship between the firm and their customers, making it probably one of the most important differences in comparison with product innovations. After all, services require a more user-centred approach. Also new possibilities in ICT-infrastructure are becoming more and more a central element in service innovations. New ICT-systems make it possible for companies to manage cost, quality control and service providing in a more efficient way. Küpper (2007) mentions the "reverse product cycle" of Barras. The basis of the model is that "user industries" like the service sector use new technologies developed by other industries and then create their own innovations. The last and sixth building block deals with the changes of the organizational structure and culture (formal and informal). Employees need to get involved because they form the connection between the firm and their customers. For companies operating in the inseparable cells, the quality of employees' interactions with customers is critical (Berry, Venkatesh, Parish, Cadwallader, & Dotzel, 2006). Especially in services where the employee at the "front desk" plays, in addition to the customer, a decisive role in the realisation of the new service (Küpper, 2007). Matters like employee empowerment, motivation and knowledge management are becoming a core concept of the organizations' culture.

Berry, Venkatesh, Parish, Cadwallader and Dotzel (2006) also developed some success drivers comparable to the ones we've seen and enriched the concepts with a few new ideas. They selected a scalable business model, comprehensive customer-experience management, investment in employee performance, continuous operational innovation, brand differentiation, an innovation champion (product champions seem to be an important part of the development of new services (Küpper, 2007)), superior customer benefit, affordability and continuous strategic innovation as best practices of market-creating service innovations. The 2007 Cambridge report argues that some of the perspectives on economic growth and prosperity through service innovation state that resources are frequently accessed using advanced information and communication technologies (ICT) and new globe-spanning business models. The findings of this Cambridge report support the notion that the framework of Tiri, Hommez and Huys (2010) contains the most important facts and points of interest when dealing with services innovation. They even define seven best practices for making services innovation work because, until now, changes in services were mostly based on trial and error. A fact which was also pointed out by Uday M., Uday S., and Hiranya (2008): "New service introduction tends to occur in a piecemeal way, often driven by chance or crisis" (p. 24). The best practices developed by Tiri, Hommez and Huys (2010) are represented in a 7-step framework: defining focus, analysis of the organizations' environment and context, choosing a direction, generating ideas, filtering out the most valuable projects, designing the service and ultimately implementing the new service concepts.

To conclude, Ezell, Ogilvie and Rae (2007) go even further by analysing which key facts are important for service companies to seize their white space. Johnson (2010) defines a firm's white space as "the range of potential activities not defined or addressed by the company's current business model, that is, the opportunities outside its core and beyond its adjacencies that require a different business model to exploit" (p. 7). The case studies conducted in the research of Ezell, Ogilvie and Rae (2007) unveil how services innovations go beyond the traditional modes of innovation and discover the so-called white space in their market. The authors state that; customers are the new reference point, companies need to change who does what. Entrepreneurship is the driving force behind white space innovations. Information technology capabilities are critical because of their potential to productize, while the Internet serves as a key distribution channel.

4 Open Services Innovation

In the first two chapters the focus was on open innovation and services innovation in general. I've tried to point out the main characteristics of both fields by conducting a thorough literature study and including the most important publications up till now. In this chapter and the following chapters these two fields, namely open innovation and innovation in services, will be merged to search for answers in open services innovation. Since there isn't much research completed on the topic of open innovation in services and since scientific sources are scarce, I am going to analyse two publications that worked around this topic, followed by some case studies which will eventually lead to an answer on the central research question. The works which I have selected are published by two state-of-the-art authors with a lot of knowledge and experience in open innovation. The first book I will analyse comes from Chesbrough (2011) that recently was published. Important here will be to discover the main thoughts and concepts. After a first reading of the book, it already became clear that Chesbrough mainly works with examples of companies who changed their business from a product-oriented enterprise to a service-driven one. The most interesting topic in his book is the framework he develops in part 1, accompanied with some clarifying cases subdivided in large and small companies.

In part 1, Chesbrough (2011) defines four critical concepts to enable innovation and growth when dealing with services innovation. The first concept is learning to think of your business as a services business. Becoming a service company obliges organizations to change the way they do business with customers and several other stakeholders, to create a new mind-set towards services, adapt their business model and extend networks. A second main thought is to co-create services and offerings with customers. When dealing with services, these customers become even more important. Successfully involving this important group will deliver tacit knowledge and experience resulting in a competitive advantage over a firms' competitors. The third part of Chesbrough's framework deals with extending services innovation outside organizations. In the case of open services innovation this means leveraging the power of specialization and the virtues of scope and scale. The expansion of a network results in the budding of large business ecosystems, which delivers more value than organizations can attain on their own as a single company. This will probably be the most important part relating to this research. A last key concept is the transformation of business models when dealing with services. The main thought here is to create value for a business through services and regain a part of that value for one's own company. The second part of the book looks at open services innovation in practice. Chesbrough examines innovation in large and smaller organizations and innovation in services-based businesses and developing countries.

In the following part, part 4.2, I will compare Chesbrough's book with the work from Piepenbosch and Hulzebos (2011). Interesting about this thesis is that Piepenbosch and Hulzebos start from the same core management problem as Chesbrough (2011), but they follow another direction when working out their research. The resemblances and differences can produce some new insights. Piepenbosch and Hulzebos (2011) define the core of their study as follows: "The critical success factors who deliver, in cooperation with other organizations, a sustainable competitive advantage when applying open innovation in services" (p. 5). Unlike Chesbrough, they only work with pure service companies. Another interesting point is that they have not used qualitative information, but also implied quantitative data. The surplus value of their research lies in this quantitative testing of the measure in which the multiple variables and concepts are decisive for a sustainable competitive advantage. In short, chapter 1 of their research describes the concepts used and explains the research question in more detail. Going from this perspective they compose a conceptual model. The methodology used is explained in chapter 2, together with the different phases of their study, limitations and quality of the research. Chapter 3 shows the results and analysis of their online inquiry. Finally, chapter 4 ends with conclusions from this explorative study and some recommendations for future research.

The conclusions and insights drafted from the analysis and comparison of these two works will be important when working with real-life cases. These cases will be developed further in the following chapter.

4.1 Which conclusions can we draw from Chesbrough's "Open services innovation" (2011)?

As a starting point for his book, Chesbrough shares the same common view with the two first chapters of this thesis. Nowadays, it is becoming very hard for companies to keep up with the fast pace of change. Product life span is shortening as a result of the increasing flow of information, available technologies and the demand for customized services. This combination of shorter product life span and commoditization creates a commodity trap (which is already explained in the previous chapter), where it will become difficult for companies to avoid this phenomenon. An economy comprised of companies that offer commoditized products will not prosper and will itself confront diminishing returns and prosperity for its citizens (Chesbrough, 2011). Also Johnson (2010) notices this and states that "there comes a time when established product lines fully mature, when process innovation reaches the upper thresholds of efficiency, and when new product development slows" (p. 11). There exists a growth gap between the estimated growth path and that which businesses can deliver. Trying to avoid this, many industries and individual firms are trying to shift and build systems as our economies are oriented around services, a point which I already pointed out in the foregoing

chapter. Chesbrough (2011) puts it as follows: "The route to prosperity in the future for advanced companies and advanced economies lies in services and rethinking business to innovate and build them. Innovating in services is the escape route from the commodity trap and a solution for growth, giving firms a significant competitive advantage" (p. 2).

Open services innovation is more than service innovation. Open innovation in services can develop both improved products and new services for customers and better economics for a business. A striking example here is IBM: the company constructed a services-focused business model that makes it possible for the firm to sustain its innovative service systems and compete on a high level, providing value not only for shareholders, but also for stakeholders in general.

In chapter 1 Chesbrough describes the case for open services innovation where he notices a few rising forces that are transforming the economy around the globe. These forces are already discussed in the first chapter but are worth revising for the case of open innovation in services. First, the spread of useful knowledge around the globe plays a very important role in the transformation of economies. Because it becomes easier for countries with less developed economies to get access to superior technology, the pressure on companies in advanced economies raises. Also the rise of competition from countries like Brazil, China and India creates pressure on established economies, which tend to be stagnating and even declining as a result of today's economic crisis (which doesn't seem to get managed effectively). A great deal of wealth creation has shifted as well, away from the advanced to the developing countries (Chesbrough, 2011). All these factors contribute to a commodity trap (as a result of the three business realities discussed above), where every product is becoming an offering with high quality and are sold on the basis of cost, not value (defined a *commodity*). To summarize (Chesbrough, 2011):

- Manufacturing and business process knowledge and insights are widely distributed which leads to commodities
- Manufacturing of products is moving to areas of the world with very low costs
- Shrinking amount of time a product lasts in the market before a new and improved one takes its place

To get out of this carousel it will take more than just some new policies on a governmental level. After all, macroeconomic initiatives help to create a basis for growth, but the individual firms must take the risk and investments to effectively innovate and eventually create growth. To sustain durable growth in the future, a shift towards a services perspective is needed. Firms can't just rely on building superior products (this will no longer be sufficient to create superior customer experience), it will be inevitable for them to create a platform constructed with partners offering unique applications and services.

Seeing that this thesis focuses on pure services it will be crucial to search for concepts applicable to this specific area. Chesbrough realises that in the beginning of his book he mainly focused on the need for products to be used as platforms and hence leads to the creation of services. For pure services businesses he argues that this thinking is equally valuable and incorporating some degree of “product-ness” in a services business can make the business better able to grow without creating too much complexity (Chesbrough, 2011). What is meant by this will be investigated further, together with some clarifying examples.

The challenges and changes for a company emerging out of their business environment leads to a new thinking for firms. To deal with these new phenomena sufficiently Chesbrough created a 4-step framework which was already introduced in the beginning of this chapter. These four steps must be handled individually as well as one package, because combining these steps provides essential knowledge necessary to move to an open service innovation approach. The importance of the four key concepts and their interdependence are summarized by Chesbrough (2011), and serves as an introduction for the further analysis of the framework:

Rethink your business as a purveyor of experiences to your customers. Invite those customers into your own innovation process, and don't stop there: open up your innovation process more generally to get the best ideas and technologies from others for your own business model, and let others use your innovations in their business models. If you follow the logic of your new approach, chances are that you will innovate your business model as well, redefining the way that you create and capture a portion of value for your business. (p. 27)

4.1.1 Think of your business as a services business

The way companies think about their business is a key concept for the success of a firm. This is often a result of the strategic choices companies make and thus forms a huge difference in the way firms operate and work, leading to growth and success or end up in a failure. The importance of strategy has become an indisputable key point in businesses. This knowledge also lays the foundations for the first concept of Chesbrough's framework. How you relate to your customers, how you construct your business, and the levers you can use to differentiate and create value all can change with a services focus (Chesbrough, 2011). By defining services in the second chapter it already became clear that services ask for a shift in doing business; the task of a service provider is to fulfil customers' needs over a series of interactions and create a lifetime bond with them.

This shift is explained in Chesbrough's definition of businesses. For a product-oriented company, services are situated at the end of a companies' process (value chain), as a part of

the sales deal and maintaining the product once it is purchased. Services (alone) do not contribute and can't lead to a competitive advantage. Services-oriented firms, on the contrary, view that what the customers buy aren't products, but utilities. Or put differently: "A service such as gas or electricity provided for people to use" (Longman, 2006, p. 1825). This is reflected in the value chain of open services demonstrated in Figure 3.1 where inputs, processes and outputs are constructed and adapted by working together with external sources like customers, technologies of other companies and getting involved in networks (platforms).

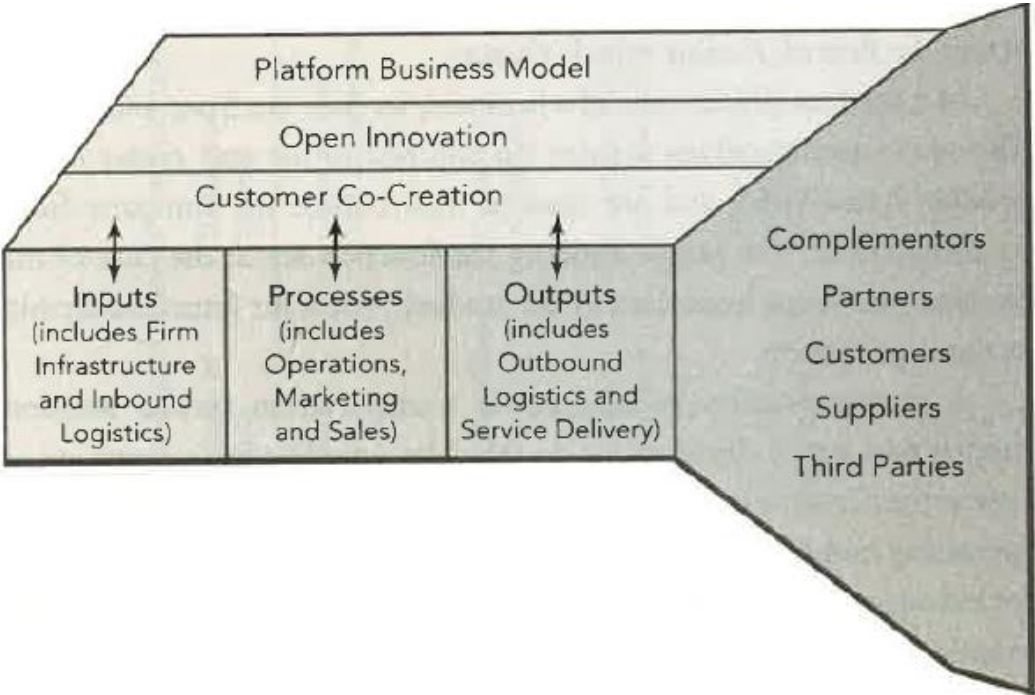


Figure 4.1 Open Services Value Chain. Adapted from "Open Services Innovation. Rethinking Your Business to Grow and Compete in a New Era" (Chesbrough, 2011).

This means that in a services-driven view of a business, services are also front and center and are profit-making activities (Chesbrough, 2011). Bound together with the utility-approach is the management of utilization that often serves as an overlooked method to set up a service-approach in firms. For example, by utilizing an asset more effectively, service providers can offer their customers a better service at a reasonable price while still making profits. Again, Figure 3.1 and the enclosed thinking might seem to apply mainly in product-oriented businesses and how they can shift their focus to services. On the other hand, pure services

also can realise growth from reorganising their business. An example integrating the concepts discussed above is the food industry. Chesbrough demonstrates that people can go to the supermarket, select their preferred food and prepare it at their own taste (product-approach). Alternatively they can go to restaurants or specialized shops where the food is prepared for them and choose from a range of experiences (service-approach). For the product-approach customers take on the integration responsibilities combined with some hidden costs (like preparing and cleaning up). In a service approach the provider is responsible for all these costs, including the hidden ones. In other words, the grocer sells the building blocks (from the customer's view), while the chef sells a total solution (Chesbrough, 2011), resulting in a front and center approach.

According to Irving Wladawsky-Berger, professor Teboul develops a similar view from that of Chesbrough in his book "Service Is Front Stage: Positioning Services for Value Advantage" (2006). Wladawsky, former manager of IBM, describes this in one of his blogs:

Every organization, whether in business, government, health care or education consists of front stage and back stage activities. Services deal with the front stage interactions; manufacturing and production with the back stage operations. People are prominent in front stage activities, providing solutions to problems and focusing on achieving a positive customer experience in a collaboration between the providers and consumers of services. Product excellence and competitive costs are key to back stage activities, which tend to focus on specialization, standardization and automation.

4.1.2 Co-create with your customers

A different mind-set towards customers is also needed when dealing with services and their specific characteristics. For products, suppliers develop specifications to describe the product to potential customers (Chesbrough, 2011). For services, these specifications are much more difficult to develop. Different from products is that it becomes crucial to develop offerings exactly based on customers' needs, where products also try to satisfy customer needs but are offered from a one-size-fits-all point of view. Chesbrough (2011) says that "this change creates a tension between standardization on the one hand, which makes providing the service more cost-effective, and customization on the other hand, which more closely matches the customer's needs but may require different solutions for each customer" (p. 54). To effectively deal with this tension companies need to understand what the customer really wants and mostly occurs as tacit knowledge. Typical about this kind of knowledge is that it can't be transferred from one person to another. Tacit knowledge is the practical knowledge resulting from experiences and is difficult to communicate to others. Understanding this tacit

knowledge (which is different for each customer group and even differs from person to person), and anticipating it can deliver a competitive advantage for businesses.

Companies must develop information streams that carefully track down customers' past behaviours, how their services are used and which shortcomings exist. Clearly companies can do more than just designing ways to watch what customers are doing. To effectively introduce open services innovation in firms, companies must try to lock in customers. Just like for products, clients offer a wealth of information by letting them design and have their say in organization's business activities.

Crucial for companies is to find out and focus on customer experiences. These experience-points form links between the different parts of a service, but are hard to see (a specific tool which helps to understand these links is called *service blueprinting*). By doing this it becomes clear what the customer sees at each step of the process, through which group members can understand the role that others play in the process, and how their piece of the process interacts with the rest of the process (Chesbrough, 2011). This is a way to create a closer bond with customers and other stakeholders which will be difficult to copy for competitors and hence forms a way to escape the commodity trap.

4.1.3 Extend services innovation outside the organization

When dealing with open innovation in services businesses it will be important to, as Chesbrough (2011) found, leverage the power of specialization and the virtues of scope and scale. Through specialization open innovation can deliver both economies of scope and scale to businesses, and on top of that, allows participation from individuals and other companies (and hence realise more than a company can reach as an individual unit). This leads to growing business ecosystems and creating added value for the business.

In Chapter 1 the theory around open innovation was discussed thoroughly, but it will be to short-sighted to just transfer the framework (with the focus on product-oriented businesses) to service economies. Chapter 2 argued that services gained importance only during the last decades and a lot of companies are still making a shift from a product-oriented firm to a more service-oriented one, resulting in a lack of effective innovation practices. So research in this field is still not complete. With this knowledge in mind, Chesbrough (2011) correctly states that most service companies do not have formal R&D organizations and few have set up frameworks to manage their innovation processes. More and more the need for innovating in services is becoming a necessity. Chesbrough (2011) summarizes it as follows: "These innovations require new initiatives that not only improve a currently offered service, but contemplate extensions of that service or even entirely new offerings that could potentially be linked to products, platforms, or something else. ... Open innovation in services rests on a

practical foundation: saving money for the customer while developing greater capability as a provider” (p. 70, 75).

To be able to create this greater capability as a provider, companies have to specialise and focus on core activities (especially for services), so imitation becomes nearly impossible as a result of experience, tacit and market knowledge. Specialized providers learn to know the complexity of markets and imposed rules by governments, gain experience and become more adept in managing these complexities at a lower cost. Also for employees, which gain tacit knowledge and specialise themselves, these firms can offer attractive career paths for employees. If firms can sufficiently specialize in performing a certain activity over time, they can become so efficient at performing this activity (relative to partners doing it themselves) that they can induce the activity to be performed outside partners’ internal operations instead of within those operations (Chesbrough, 2011). This creates a market for open innovation in services and companies can, as a result, reach both economies of scale and scope.

A critical point of view combined with the points discussed above are that although Chesbrough focuses in his book on open services innovation, almost all his concepts were preceded in open (product) innovation in general. Chesbrough doesn’t introduce new concepts for open services innovation but shows that the concepts used in product businesses are also usable in service industries. Considering the specific properties of services, the role of co-creating with customers becomes more valuable and other slight adaptations are mentioned, but radical changes to the open innovation model don’t occur. When giving examples, Chesbrough also starts in most of the cases, from product-oriented firms which shifted their operations and business model towards a more service-oriented one. This doesn’t give an answer to the case when dealing with pure service businesses alone. The conclusion which can be drawn is that the general framework of open innovation is also applicable to services, bearing in mind the specific properties of services, and can offer competitive advantages for companies over their competitors.

4.1.4 Transform your business model with services

Extending services innovation outside your organization alone isn’t enough to sustain a competitive advantage. It becomes much more powerful if these systems are adapted and inserted as a part of firms’ business models. The importance and attention points for business models are already demonstrated in the first chapter, but seem to have a much bigger effect when transforming business models for services, especially the shift from a product to service approach. There are different types of business models according to the kind of service firms provide.

When service providers must purchase a fixed asset to deliver services, there are a number of ways how their investments can be recovered. First they must try to spread the fixed cost of purchasing the asset over more users than any individual customer would be able to bear alone. Another possibility is to redesign the service with the help of customers. Third, firms can try to exploit the information derived from reaching a lot of customers, resulting in a knowledge advantage. A last possibility when working with fixed assets is opening up new markets where the asset is valued at a higher level. The key element is that the provider of the services achieves a higher return on assets due to increased utilization of the service or asset beyond what the customer could have used for herself or himself (Chesbrough, 2011).

Other ways of redesigning business models is by changing the target customer for a particular service, redesigning the value chain, change the way you charge a service and derive money from it (think of Ryanair) or get on a large business ecosystem in order to create sustainable growth. Business models can thus create added value and bring companies to new heights of success, but successful business models can over time also cause sluggishness and result in difficulties adapting to new global and societal developments. Chesbrough hands out some tools to transform business models (for example *mapping* business models), but this discussion is not applicable for this research and is just added as supplemental information.

In real business environments companies give shape to these challenges and innovations by adopting front-end and back-end approaches and consequently can focus more on services. With the back-end view organizations can provide standardized services which can be adapted with little or no trouble and cost for customers. They serve as reusable inputs which can be transformed according to the appropriate situation by the front-end units. This front-end function customizes the service when contacting the customer according to their preferences and requirements. According to Chesbrough (2011) this combination of one-stop shopping on the front end that faces the customer, combined with reconfigurable resources on the back end that process the transactions, can both achieve improved economies of scope and scale relative to the traditional manufacturing company.

Figure 3.2 (see next page) summarizes the concepts seen above and gives an overview of the framework for open services innovation designed by Chesbrough (2011).

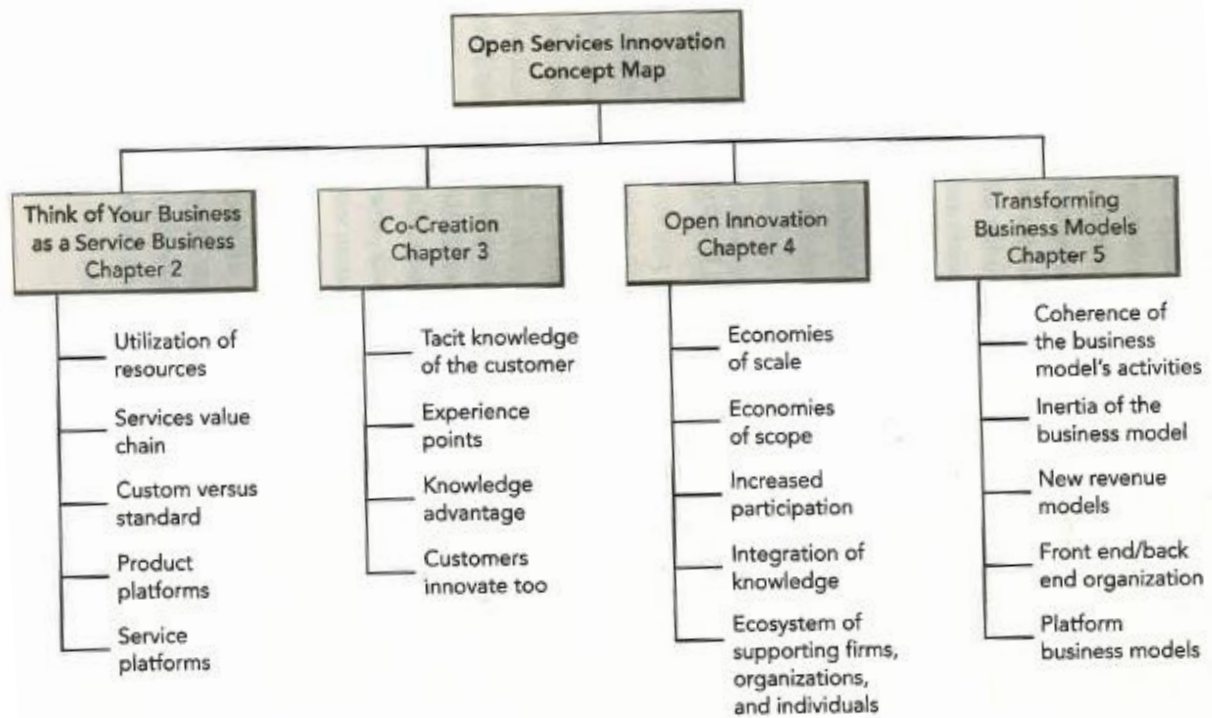


Figure 4.2 Open Services Innovation Concept Map. Adapted from "Open Services Innovation. Rethinking Your Business to Grow and Compete in a New Era" (Chesbrough, 2011).

4.1.5 Conclusion

The second part of Chesbrough's book is dedicated to real-life cases where companies face challenges opposed by their specific business environment. These firms all try to become open and prove that the 4-step framework of Chesbrough has great value. Combined with this proof, a few core principles of open services innovation can be derived together with some criticism on the views which are discussed in his book. Certain critical views are already mentioned when dealing with extending services outside an organization (see part 3.1.3). Another point which isn't always clear is the use of the concept *services innovation* and *open services innovation*. According to me, there are a few differences between these concepts. Chesbrough sometimes uses them at random and because this thesis focuses on open

services innovation, a distinction between both concepts is needed. I have tried to keep them separated with the focus on open business models in the services industry. It is noted that in the second part of his book Chesbrough gives a more precise distinction between them and says that openness in services innovation can lead companies to achieve both economies of scale and scope and the expansion of the services innovation concept to open innovation. Another attention point is the distinction between large and smaller companies or emerging and developing economies, and the influence of governments through for example legislation. Companies need to adapt to their business environments and Chesbrough is aware of these differences applying to open services innovation. There are also several specific challenges according to the size of firms, resulting in different approaches towards (open) services innovations. Even collaboration between large and smaller service companies is possible according to Chesbrough (2011): "Large companies increasingly are interested in collaborative innovation partnerships with smaller firms because a smaller firm's expertise and focus can accelerate the completion time for a larger firm's innovative initiative" (p. 152). Collaboration is a crucial element when building platforms, which will be further discussed below, so co-creation between small and large firms can create synergism and unite the best of the two different worlds in one model.

When taking into account these attention points some general views for the case of open services innovation in pure services businesses can be derived and give a first impression towards a general answer of the central research question. Perhaps the most important conclusion for open services innovation is that firms must try to shift from a fixed cost to variable costs approach. This is logical when we are talking about a shift from products to services, but also within pure services this is possible. When we look at for example KLM, they demonstrate that with an innovative approach this shift is possible for service businesses as well, and hence, lead automatically towards open services innovation and not just services innovation. KLM, together with an engineering start-up and airline equipment supplier, co-created composite equipment (with KLM as a prior client) which met the demanded specifications, regulations and other requirements opposed by the business environment. Normally, KLM would have to buy this equipment from a large supplier, trying to bargain the lowest price as possible; however, with this open (services) innovation mindset, the three parties involved might pay a higher price initially, but can reach sustainable growth over time and thus create open innovation in services as well. Also in the car industry (where several new business models originated) open services innovation is becoming valuable, because for customers, what used to be a large fixed investment in an area where they lacked much relevant expertise, was converted to a variable expense managed by someone far more experienced and knowledgeable (Chesbrough, 2011). As a company it will be important to search for these opportunities and redesign business models and relationships with not only customers, but also with suppliers.

Another critical thread throughout the book is the value of customers and tacit information as a result of experience, which seems to be of greater importance in services. In other words, it is gathering knowledge that takes time, conversation, and the creation of a certain level of trust to elicit (Chesbrough, 2011). In all the cases companies gained experience as a result of servicing certain tasks that otherwise were offered as a single-buy product. With this new source of information organizations were able to anticipate customers' needs and be innovative, not only when improving products, but also optimizing their services. This process is also reflected in pure services companies. KLM was able to extend their customer circle of contact as a result of open services innovation, which meant a competitive advantage for the airline service provider. This broader view of customers' travel needs, from the moment they begin planning a trip to the moment they leave for the airport, through to the time they arrive at their final destination, enables possible new services to be envisioned (Chesbrough, 2011).

Finally, when looking at the level of business models, again a few critical conclusions can be drawn. As already explained when introducing front and back-end systems, services companies can deliver benefits cost-effectively by developing economies of scale in their operations through standardizing many of their processes, and incorporating more knowledge about their customers' prior experiences (Chesbrough, 2011), so customization becomes possible. Changing business models is critical if companies want to get the maximum out of services. Therefore, building and opening up business platforms is crucial for open services innovation. Important is that these platforms are designed for long-term relationships and not, as sometimes in product-oriented firms, for temporary projects. To succeed, strong bonds have to be built with customers and suppliers. Successful, durable platforms contain two very important steps: namely observing customers directly and online. Introducing these points somewhere in a business model will guarantee companies that crucial knowledge is gathered. Another advantage of opening up business models is that it will enable services to learn, share, and improve across the boundaries of what Chesbrough calls vertical silos (where little is shared among the different service domains), so that co-creation in one domain will lead to co-creation in another domain, and so forth (Chesbrough, 2011). Hence, companies can offer customers a complete solution thanks to systems integration with other companies while still making money, leading to a win-win situation for all the different parties involved (as is the case for KLM).

Chesbrough (2011) ends by saying that further research is still desirable: "To close the productivity gap in services for areas like healthcare, we need to stimulate much greater research activity in the university sector towards services innovation. With the emergence of a billion or more new consumers into the global market there exists a genuinely exciting prospect. As these people earn higher wages, their ability and desire to consume will increase. Their time will become more valuable to them. And they will not only want to buy more

products, they will demand the services that wrap around these products. They too will want experiences, not just stuff" (p. 192).

4.2 Which conclusions can we draw from Piepenbosch and Hulzebos' thesis "Durable Competitive Advantage through Open Innovation in the Service Industry" (2011)?

Collaboration has to become a way of life, not an occasional experiment. (Fisher)

With this striking citation Dick Hulzebos and Dave Piepenbosch (2011) commence their master thesis as a completion of their education at the Nyenrode Business University. It also indicates one of their main conclusions according to the interesting research they've done. The reason why their study will be analysed thoroughly is because the authors tried to create an empirical framework for open innovation in pure services economies and the consequences of this framework. The difference with Chesbrough's approach, is that Hulzebos and Piepenbosch worked with quantitative data and tested the gathered information empirically (with statistical programmes), while Chesbrough conducted his research based on a case-study approach. The studies were conducted at the same time (but separately), so no influential effect of the researchers on each other's works was possible. That's why combining and comparing the two researches can deliver some empirical evidence on open innovation in services economies; and hence where the added value of this research lies. These findings will be validated afterwards with case studies in the following chapters.

Hulzebos and Piepenbosch (2011) proceed from the same definition of the problem as Chesbrough. Again, they noticed that there is no empirical evidence for open innovation in services economies. Although services take in a large part of the economic pie, research according to innovation is still in its infancy. The authors conducted a thorough literature study but found no empirical evidence on open services innovation, a conclusion that already became clear when in the first chapters of this research a comparable literature study was conducted. According to Hulzebos and Piepenbosch, although studies are scarce, the importance of services in today's society indicates that services innovation, even in product-oriented industries, are crucial for future economic growth. The goal of their research is aimed at contributing to this research gap. More specific they want to gather insight in which factors are relevant for innovating services in business ecosystems and hence lead towards a sustainable competitive advantage (resulting from open services innovation). This results in a few differences when compared to the work of Chesbrough (2011). First, they only work with pure service industries and organizations; Chesbrough, being more general, also includes companies who shift from a product-oriented firm to a service-driven one. This issue is of critical value for this research which is only looking for success factors in pure services.

Another difference is that the study of Hulzebos and Piepenbosch looks for variables at a business ecosystem level, rather than focusing on the organization as an individual solely. This again is very useful, because implementing open innovation automatically leads to the creation of a business network, where co-operating with several stakeholders is crucial.

4.2.1 Conceptual framework

Defining services, Hulzebos and Piepenbosch use the same concepts as Chesbrough and the definition used in this work. They say, following this definition, that the same principles used in industrial/product innovations don't apply to working with services. Miles (2008) adds that a service is customer-intensive and immaterial, two properties that distinguishes services from products. Den Hertog (2000) and Flikkema and Jansen (2004) say that services innovation is multidimensional and requires a new mix of technological and non-technological properties; they arise at different levels from the interaction and relationship with customers. The search for theories around services innovation is accompanied with a literature study around the aspects of *open innovation*. The same concepts are found in comparison with this research (see Chapter 1), only added with the conclusion that open innovation isn't a continuous trend but a change process towards open innovation which occurs in shocks (Hulzebos & Piepenbosch, 2011). Another conclusion they add and follows from the work of Chesbrough, Vanhaverbeke and West (2006), is that networks are closely related as part of the firm's environment and serves as a channel to transfer knowledge (more than just technical knowledge, like for example commercial knowledge). The more relationships a company can create, the more innovative they will be, as a result of the transfer of multidimensional knowledge.

With the findings of their literature study, combined with some insights from Den Hertog (2000), Hulzebos and Piepenbosch conclude that innovation in services can't be done by a single company, and that cooperation is advisable. Only when companies are working together, they transfer knowledge and hence innovate. Whether or not the same concepts from open product innovation apply to open services innovation will therefore be investigated at the level of business ecosystems. To clarify what is meant by *business ecosystems*, consider the following definition of Moore (1996, in Hulzebos & Piepenbosch, 2011): "The term Business Ecosystem and its plural, Business Ecosystems, refers to intentional communities of economic actors whose individual business activities share in some large measure the fate of the whole community" (p. 13). Moore looks at companies not as individual beings but being part of an ecosystem, enclosing different branches and working towards innovation. Although Chesbrough (2011) seems to look at the level of organizations he also realises that open innovation in services depends on whether or not firms can create platforms. These platforms can be compared with what Hulzebos and Piepenbosch define as business ecosystems. The position of an organization in this business ecosystem and the

ecosystem's resources create a competitive advantage and are difficult to imitate (Hulzebos & Piepenbosch, 2011). When applied to open innovation (which can also be project-bound in a product context) they conclude that both concepts can be united.

Besides open innovation and business ecosystems, Hulzebos and Piepenbosch argue that these two concepts must eventually lead to a *sustainable competitive advantage*. This is defined as a goal variable because every company is striving to attain a competitive advantage in order to secure growth and survive as an organization in the future. A competitive advantage is a strength possessed by an organization which influences the decision-making process of the customer in favour of that organisation (Moenaert, Robben & Gouw, 2009). Two theoretical views try to explain how a competitive advantage is constituted. The Resource Based View (RBV) says that repositioning resources depending on the selected market can lead to a competitive advantage if these resources are superior, non-imitable, irreplaceable and sustainable. Besides the RBV, the Dynamic Capabilities View (DCV) tries to complete the shortcomings of the RBV and says that the capacity of an organisation to adapt, adjust and innovate are core to create a competitive advantage (Hulzebos & Piepenbosch, 2011). A critical remark is that these theories are shaped when dealing with product-oriented environments.

The three concepts discussed above are crucial elements of the conceptual framework (see Figure 3.3) Hulzebos and Piepenbosch (2011) developed. The other variables were selected after the literature study and a first range of interviews. With their findings the authors conducted an online enquiry from which the results were empirically tested. They analysed their data precisely and tried to avoid errors with the assistance of statistical programmes. The way they conducted the research and how new thoughts were raised was confronted in dialogue with experts, all with different backgrounds. According to my point of view, this is done with much attention so I won't go any deeper into the methodology of their research.

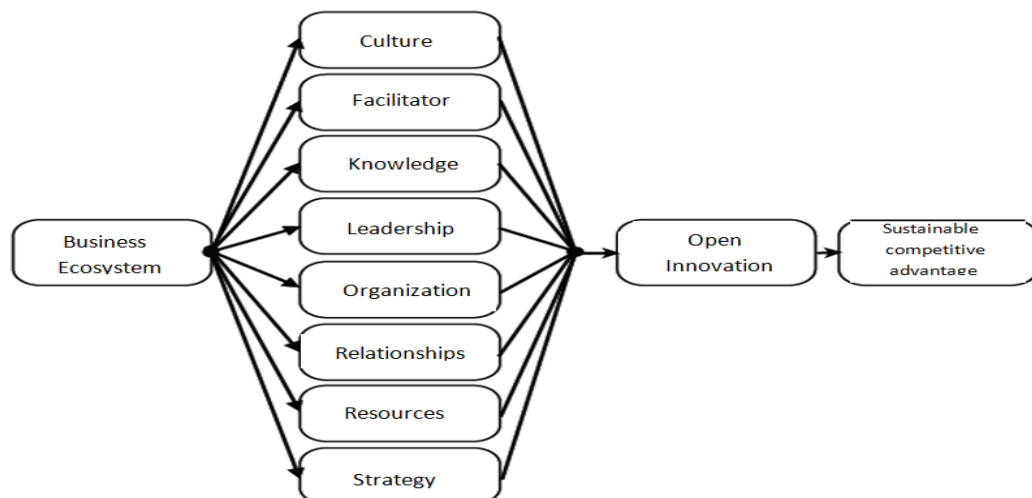


Figure 4.3 Original conceptual model. Adapted from "Duurzaam concurrentievoordeel door Open Innovatie in de Dienstensector: Succesfactoren die leiden tot een Duurzaam Concurrentievoordeel in de Samenwerking met Andere Organisaties" (Hulzebos & Piepenbosch, 2011).

Why the other variables are included in the conceptual framework will be discussed in short below. Interesting is why they were selected and could (potentially) lead to a competitive advantage when co-operating with other firms (open innovation). These variables were chosen because of their potential importance, derived from the literature study. Although this were just assumptions in the original literature, Hulzebos and Piepenbosch include them in their conceptual model, trying to find empirical evidence for these assumptions.

- **Knowledge:** Scientific knowledge can be subdivided in explicit knowledge and tacit knowledge. Companies should use both types of knowledge when innovating and are stored in relations of processes and systems. Tacit knowledge however can only be transferred when having an efficient operating business ecosystem.
- **Relationships:** Firms who are part of a network have both formal and informal relationships. Formal relations are contractual and more open for formal transfer of knowledge. Informal relationships serve as a source for human and social capital.
- **Organization:** The size of an organization is important when working with business ecosystems and innovation. The bigger a company, the more it will depend on open innovation.
- **Strategy:** As Chesbrough and Roosenbloom (2002) argued, a new approach to strategy, namely open strategy, is required which balances the tenets of traditional business strategy with the promise of open innovation. Decisions are made depending on which business model is used. But how is strategy managed in business ecosystems? Should there be a combined strategy? And does this lead to a competitive advantage?
- **Leadership:** Because business ecosystems are huge complex networks Hulzebos and Piepenbosch (2011) argue that efficient leadership of those networks is needed. This kind of (new) leadership should be in contact with today's society and indicate direction to both organizations and society. The type of leadership should be transformational and assumes leaders to hold personal value systems to inspire followers looking beyond their self-interests and create value for the business ecosystem.
- **Culture:** Culture is usually underrated by managers but can have a reasonable impact on the strategy and structure. After all, the way managers and employees think, the way they take decisions, how strategy and other business structures are constituted and the quantity of creativity (coming forth through innovative employees) is the result of cultural assumptions and will influence how the

company is positioned and handled in the open innovative business ecosystem. Especially within services, employees form an important strategic factor.

- **Facilitator:** This variable in the conceptual framework says that knowledge intensive business services, serve as organizations who are facilitator within innovation, because they support a principal in their innovation process. This facilitator role is significant in a network system to create possibilities for every member.
- **Resources:** Companies who combine their resources on a unique manner are able to realise a competitive advantage and this can be extended to the business ecosystem level.

To conclude Hulzebos and Piepenbosch test their assumptions combined with some critical remarks. After all, open innovation doesn't only contain advantages, it also holds some disadvantages. First the question is whether at all open innovation is possible in service economies because the framework originates from a product context. Also, is the knowledge transfer that takes place realistic when dealing with a service approach? This (mostly tacit) knowledge in service companies is like their DNA. Plus, what about intellectual property management which is an important factor in product economies? This doesn't seem to be transferable to services where intellectual property (IP) isn't always applicable. With all the knowledge from the first range of interviews, literature study and critical remarks, Hulzebos and Piepenbosch (2011) formulated their central research question as follows: "*Which critical success factors within a business ecosystem lead to a competitive advantage when applying open innovation in a (pure) services economy?*" (p. 5).

Before analysing the results a few limitations of this research need to be investigated. Hulzebos and Piepenbosch give an interesting new look on open services innovation, but overrating the results would be empirically incorrect. A first limitation is that the research only used data (both qualitative and quantitative) from the service sectors Health & Welfare and Finance, so generalizing the results to all service industries is not possible. Also the interviews might not represent all the voices interacting in today's business environment. The focus was on interviewing and surveying middle management, managers and the board of directors from mature companies. Employees and start-up companies were left out because of time and resource considerations. The response on the online inquiry was also limited. This, of course, imposes some important limitations on their work, but comparing their results with the case-study approach from Chesbrough (2011) makes it possible, according to me, to generalize a few thoughts and hence offer some important insights on open services innovation. Again, this is where the added value of this research lies.

4.2.2 Results

By testing their original conceptual framework on the basis of the acquired information some of the original variables could be excluded because they had no significant effect on the open innovation variable and consequently did not contribute to attaining a sustainable competitive advantage. In other words, there was insufficient correlation between the variables. These variables were *facilitator, leadership, strategy, organization* and *knowledge*. With the improved conceptual framework, a new multiple regression was conducted and the new model showed a better correlation. The data for this new testing was gathered through an online inquiry. Although the response rate was limited (only 68 completed forms), the authors marked the population (which reached the required number of 50 to empirically test data) as representative.

The improved conceptual framework from Hulzebos and Piepenbosch (2011) resulting from the inquiry is inserted below (Figure 3.4). Remark that the four variables (observed endogenously) are somewhat different from the concepts used in the original framework. In short, *personal confidence* stands for personal relationships and serves for structuring these relationships. The *human factor* includes for example diversity, tolerance, respect and passion. Third, the *involvement of clients* serves as a way of innovating through and for customers. *Resources* and the combination of these resources, finally, make it possible to innovate according to the customer's taste. A detailed description of these variables is included in the Appendix (see Annex 5).

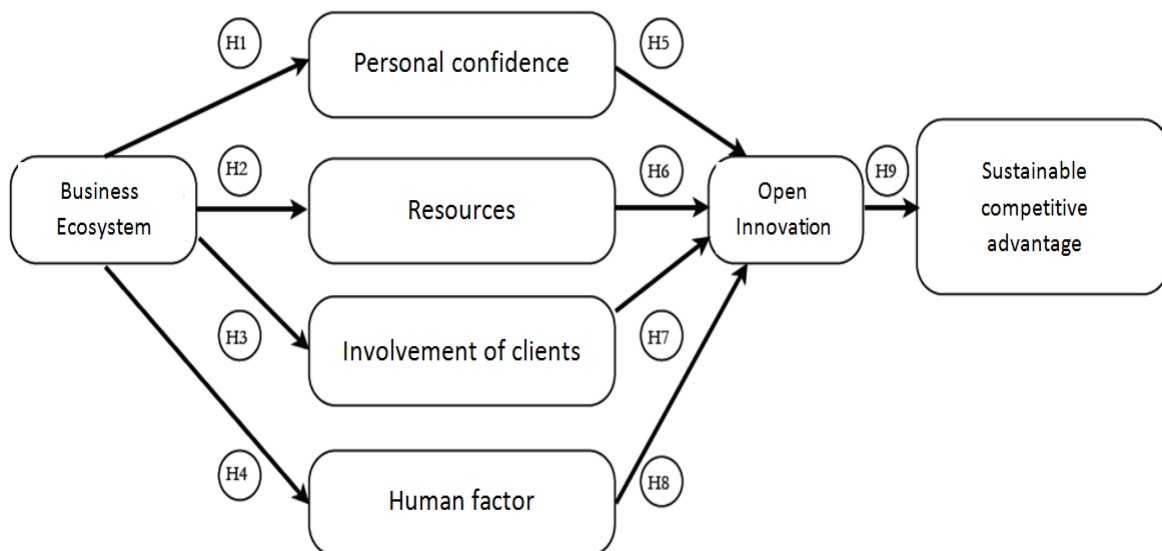


Figure 4.4 Improved conceptual model. Adapted from "Duurzaam concurrentievoordeel door Open Innovatie in de Dienstensector: Succesfactoren die leiden tot een Duurzaam Concurrentievoordeel in de Samenwerking met Andere Organisaties" (Hulzebos & Piepenbosch, 2011).

This improved conceptual framework was tested once again. The results show that there is a positive relationship between a business ecosystem and the four variables which can serve as potential success factors for open services innovation. More specifically, there seemed to be a positive correlation between business ecosystem and each variable separately. When testing the correlation between the four potential success factors and open innovation, Hulzebos and Piepenbosch (2011) found that only *personal confidence* and *involvement of clients* have a positive effect on open innovation; and thus can be defined as success factors when implementing open business models in the service industry to attain a sustainable competitive advantage. After all, it is proved that open innovation has a positive effect on attaining a competitive advantage. Important to notice is that this competitive advantage is only on a short term basis (about 5 years) and companies must keep innovating if they want to maintain their competitive advantage. Ultimately, this leads to the authors' final conceptual model (Figure 3.5).

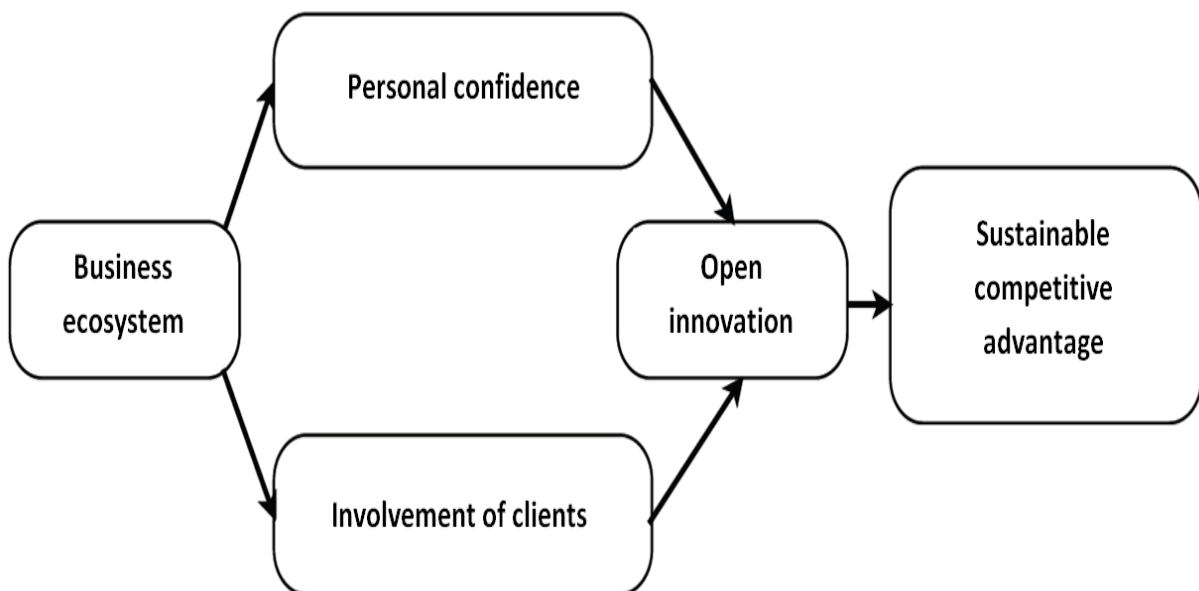


Figure 4.5 Final conceptual model. Adapted from "Duurzaam concurrentievoordeel door Open Innovatie in de Dienstensector: Succesfactoren die leiden tot een Duurzaam Concurrentievoordeel in de Samenwerking met Andere Organisaties" (Hulzebos & Piepenbosch, 2011).

So, the reason why their conceptual framework is build up like this is a fusion between a profound literature study on the one hand, and quantitative empirical testing of these variables on the other hand. This leads to their definitive conceptual model (Figure 4.5). The reason why it is constituted like this is also explained in more detail in the next part, since this forms an important added value in the research on open business models in the service economy.

4.2.3 Conclusion

With their research, Hulzebos and Piepenbosch (2011) successfully managed to translate open innovation in product organizations to open innovation in service companies (when being part of a business ecosystem), and reach out some recommendations for success factors in this recent research area. A few main thoughts of their study can be derived and prove to be very valuable in the research on open services innovation.

Interesting to see is why and how the model of Hulzebos and Piepenbosch (2011) is constituted as shown in Figure 4.5. This is completely different from Chesbrough (2011), who based his framework on case studies. Hulzebos and Piepenbosch, on the contrary, first gathered evidence from a thorough literature study. With these findings, they selected a wide range of possible variables which influence the open innovation approach. These findings were afterwards completed or adapted with opinions from experts in the field, with whom an interview was conducted. Going further from this first framework (based on qualitative data), it was tested on the basis of a quantitative study. So the original variables were converted in measurable data, obtained through enquiries. Based on these data, the original variables were removed or reformed and tested again. This eventually resulted in their final conceptual framework (see Figure 4.5), which is empirically proven. This gives us an answer on the question why the framework is build up this way and due to the fact that this is tested, based on quantitative data, it gives another view on open services innovation than that of Chesbrough.

Taking a closer look on the variables, a first crucial factor is that service organizations have to participate in a larger business ecosystem in order to successfully innovate (stand alones don't make a chance). This makes open innovation an interesting tool in service industries. The authors also empirically proved that open innovation in services indeed makes sense. It will be important for companies to search for added value by developing competences and services which require a high measure of specialization to safeguard their competitive advantage (Hulzebos & Piepenbosch, 2011). Nonetheless, Hulzebos and Piepenbosch keep this variable very vague. They indeed provide a definition and clearly describe what they understand from a business ecosystem, but how these are build up and which crucial elements should be included is still very limited. This creates a research gap, since Chesbrough (2011) also stays on the surface when describing this variable in his framework. The following chapter (cases) will try to find an answer on this gap since the build-up of these networks can be investigated in more detail when applying a case study approach.

Second, for my thesis (which is trying to find an answer on which factors influence open services innovation), the results of the authors' research are also very valuable. Hulzebos and Piepenbosch (2011) claim that *personal confidence* is one of the success factors when implementing open innovation. After all, to successfully exchange knowledge within a

business platform (in order to create a dynamic and learning ecosystem), personal confidence (psychological contract) serves as a means to create influence and structure inside the system. Also the *involvement of clients* seems to be of crucial importance. Creating a strong, long-term relationship with customers offers firms useful knowledge, experience and closes the gap between the business ecosystem and their buyers. Finally, Hulzebos and Piepenbosch also show that these success factors pay back their effort and yield profit in the form of a competitive advantage for the ecosystem. Again, these variables can be investigated more deeply when working with case studies and hence open up certain patterns to fully understand what is meant by these variables.

The analysis of Hulzebos and Piepenbosch's thesis also makes clear where the added value of their research lies. In other words, what is the added value of Hulzebos and Piepenbosch (2011) with regard to Chesbrough (2011)? First and for all it is important to notice that Hulzebos and Piepenbosch focused on pure service companies and thus investigated a smaller population of companies (i.e. research field). Their main added value lies in the fact that the conceptual framework of Figure 4.5 is empirically tested on the basis of quantitative data. This also led to some adaptations of the framework Chesbrough established. The main difference lies in the fact how they think about business ecosystems. As already mentioned, Chesbrough realizes the importance of this variable, but provides little detailed information and proof. Hulzebos and Piepenbosch, on the contrary, found that this is a crucial condition when working with open innovation in services and gives their framework added value. Hence, this will be one of the focus points in the cases, since this is not yet fully studied. Another point which adds value with regard to Chesbrough is that Hulzebos and Piepenbosch empirically prove that open innovation in pure services leads to a sustainable competitive advantage and thus makes sense (since there was some debate about this).

Although the results are empirically tested, prudence when generalizing the outcomes is necessary. There are a few important limitations leading to some critical views which are already discussed above (for example a restricted dataset, limited reply on enquiries and interviews which might not represent all the voices interacting in today's business environment). Despite the limitations of their research a few aspects (like success factors) can be generalized for the whole service industry when comparing it with other empirical sources.

All the collected information, on the basis of the literature study conducted in the previous chapters, will be gathered to develop a conceptual framework which will afterwards be tested on the basis of real-life cases. This will be done in the next section and will offer a first impression towards the final answer on the central research question.

4.3 Which resemblances and points of difference can we draw from the previously discussed publications?

The final part of this chapter will reflect on the two preceding ones. The resemblances and points of difference from the previous discussed works will be examined. This approach allows us to extend the framework of Chesbrough (2011) with its four key concepts (think of your business as a services business, co-create with your customers, extend services innovation outside your organization and transform your business model with services) with the empirical evidence from Hulzebos and Pieplensbosch (2011). To successfully understand how business models are built in today's society with all its challenges, the evidence on this topic will be completed with the recent work from Johnson (2010) in the last chapter. Johnson (2010) gives a complete and profound overview of business models in his book "Seizing the White Space". After he developed a four-box business model framework (with customer value proposition, profit formula, key resources and key processes), Johnson distinguishes 3 different kinds of 'white spaces', all requiring other approaches. Finally, his book ends with how business models can deliver added value and how they are implemented in practice. This procedure should lead to an empirically built conceptual framework offering some important insights on open services innovation. The following part of my thesis (cases), will be constituted according to this discussion.

4.3.1 Conceptual framework

The following conceptual framework is the result of a thoroughly conducted literature study applied for open innovation in pure service industries. Hence, this framework doesn't cover service industries which shifted from product businesses to service-driven organizations. This is a first main difference with the framework Chesbrough (2011) constituted, wherein he states that firms need to think of their business as a service business. The focus lies on the difference between services and products, but because we are dealing with pure services, organizations already think and act on behalf of the specific offerings they provide. However, for pure service companies it is advisable to reconsider their value chain and try to shift fixed to variable costs as well, which is subject of the first variable in my conceptual framework: *business models*.

Business models

An example that is already been given is KLM, which, together with an engineering start-up and airline equipment supplier, co-created composite equipment (with KLM as a prior client) to meet the demanded specifications, regulations and other requirements opposed by the business environment. Normally, KLM would have to buy this equipment from a large supplier, trying to bargain the lowest price as possible; however, with this open (services)

innovation mindset, the three parties involved might pay a higher price initially, but can reach sustainable growth over time and thus create open innovation in services as well (doing this automatically leads to the creation of a business ecosystem, which is the second variable of my conceptual framework). So, by reconsidering and improving *business models* (processes) companies can get the best out of their systems and hence serves as the first variable of my conceptual framework.

After all, Chesbrough (2011) states that most service companies do not have formal R&D processes and few have set up frameworks to manage their innovation processes. If firms can sufficiently specialize in performing an activity over time, they can become so efficient at performing an activity that they can induce that activity to be performed outside potential partners' internal operations instead of within their operations. This creates a market for open innovation in services and companies can, as a result, reach both economies of scale and scope. The importance of business models extends and is somehow different to what Hulzebos and Piepenbosch (2011) investigated. Their study looks for variables at a business ecosystem level, rather focusing on the ecosystem than as an individual solely. Nonetheless, business models are a crucial element when introducing an open innovation approach, and to successfully take part in a business ecosystem these models need to be build upon the specific requirements of these platforms. So the firm as an individual needs to deliver a contribution in order to successfully take part in this ecosystem. That's why I've included this variable in the conceptual framework (Figure 4.6).

Business ecosystems

The foregoing facts result in the second variable of my conceptual framework and is closely related to the first one. Companies have to take part in *business ecosystems* if they want to achieve open innovation. The exchange of knowledge and information (tacit as well as other sorts of information streams) is crucial and can lead to a competitive advantage. Like Hulzebos and Piepenbosch (2011) argued, firms can't reach service innovation on their own. After all, only when working together, companies can exchange knowledge and hence innovate. To clarify what is meant by business ecosystems I reconsider the definition of Moore (1996, in Hulzebos & Piepenbosch, 2011): "The term Business Ecosystem and its plural, Business Ecosystems, refers to intentional communities of economic actors whose individual business activities share in some large measure the fate of the whole community" (p. 13). Moore looks at companies not as individual beings but being part of an ecosystem, enclosing different branches and working towards joint innovation. The ecosystem's resources and the position of an organization in this business ecosystem create a competitive advantage and are difficult to imitate (Hulzebos & Piepenbosch, 2011), this is also endorsed by Chesbrough in his book. In order to maintain this competitive advantage, business ecosystems need to evolve and hence, companies need to keep innovating and adapting their business models (creating synergism between the two first variables).

Although Chesbrough (2011) seems to look at the level of organizations he also realises that open innovation in services depend on whether or not firms can create platforms (these platforms can be compared with what Hulzebos and Piepenbosch (2011) define as business ecosystems). Organizations have to institute type 6 business models (see the discussion of Chesbrough (2006) in chapter 1) and let them evolve depending on the status and position within the business ecosystem (e.g. growth phase, maturity stage). Nonetheless, Chesbrough remains at the surface about how networks are established, so it is crucial to gain some more insight in this. The requirement of building an innovative business model (creating platforms) and taking part in a business ecosystem is a symbiosis between what Chesbrough (2006; 2011) proposed and Hulzebos and Piepenbosch investigated. According to me, both concepts are a crucial element when working with an open service innovation approach and successful integration depends upon the interaction of these two concepts.

Both concepts have to be build up according to two main principles (involving customers and intermediate relationships) to successfully implement an open innovation approach. I split from *business models* to these two different variables, which come back together to the variable of *open innovation*.

Involving customers

A third success factor consists of the interaction between service companies and their customers. Collecting information about clients is already deep rooted in business processes, but using this information appropriate still seems to be difficult. Of equal importance is gathering knowledge about customers' preferences and working together with them. Organizations have to co-create with their clients at the level of the business ecosystem. This variable will be named *involving customers*. This certainly applies to pure service companies, where customization is crucial to satisfy customers' needs. To reach that goal, implementing open services innovation, where customers are regarded as partners (not profit objects), is essential. This variable is also subject within the frameworks of Chesbrough (2011) and Hulzebos and Piepenbosch (2011), so we can conclude that involving customers is crucial when setting up open innovation practices in pure service environments.

Successful, durable platforms contain two very important steps: namely observing customers directly and online. So crucial knowledge is gathered and enables services to learn, share, and improve across the boundaries of what Chesbrough calls vertical silos (where little is shared among the different service domains), so that co-creation in one domain will lead to co-creation in another domain, and so forth (Chesbrough, 2011). Hence, companies can offer customers a complete solution thanks to systems integration with other companies while still making money, leading to a win-win situation for all the different parties involved. Although this variable seems to be of crucial importance, both publications remain vague about how deeply rooted these systems should be and how they are build up. The cases in the next

chapter should provide some more insight in this practice (where it is proven that even co-production is possible).

Intermediate relationships

A last variable for successfully implementing open innovation in services consists of the relationships which have to be set up in business ecosystems. These relationships should radiate trust, confidence and vision in order to expand long-term bonds. This variable is also proven to be effective by Hulzebos and Piepenbosch (2011). Chesbrough (2011) doesn't explicitly name these relationships in his conceptual framework, but after a closer look Chesbrough also makes notice of this confidence-culture between partners of business ecosystems. He argues that companies have to create an open mindset and extend services innovation outside their organizations. Hence, firms can reach greater capability. To be able to create this greater capability as a provider, companies have to specialise and focus on core activities (especially for services), so imitation becomes nearly impossible as a result of experience, tacit and market knowledge. According to Chesbrough it is important that platforms are designed for long-term relationships and not, as sometimes in product-oriented firms, for temporary projects. To succeed, strong bonds have to be built with customers and suppliers. Therefore, relations and psychological contracts between business ecosystems' partners are crucial, this variable is defined as *intermediate relationships*. The reason why I named this variable like this is because there is not yet a clearly defined description of this in the literature. The cases should confirm what Hulzebos and Piepenbosch define as personal confidence and give more insight on how *intermediate relationships* are constructed.

Feedback loop

The foregoing success factors all serve to implement a well-functioning open innovation system. These processes will lead to a competitive advantage and is empirically proven by Hulzebos and Piepenbosch (2011), as shown in Figure 4.6. Important to notice is that this competitive advantage is only on a short term basis (about 5 years) and companies must keep innovating if they want to maintain their competitive advantage. So, in order to maintain the competitive advantage, a feedback loop is inserted in my conceptual framework. Companies have to adapt and let their business models evolve as market environments and societies' preferences change. Adapting those business models has in turn an effect on the business ecosystem, forcing service providers to reconsider the framework once again. We can conclude by saying that both, the results from empirical testing (Hulzebos & Piepenbosch, 2011) as well as conclusions from the case-study approach (Chesbrough, 2011), show that open services innovation is necessary in order to arrive within a business ecosystem to a sustainable competitive advantage and yields more added value than service organizations can attain on their own (resulting from just services innovation).

Comparing the results of Hulzebos and Piepenbosch (2011) with the case-study approach from Chesbrough (2011) enabled me to convert some of the limitations of both works and generalize a few thoughts to offer some important insights on open services innovation. Again, this is where the added value of this research lies.

The foregoing discussion is fused together in one figure (Figure 4.6) and shows how all the different components depend on each other and work together to make open business models in service industries possible. After all, service companies have to make this open approach a smoothly working system, where each component serves as a means to create a sustainable competitive advantage. Hence, the benefits of creating such a system also becomes clear. The case in the next part and ultimately, the cases discussed in chapter 5 will deepen this framework, clearly showing how every variable is made up and depends on the other ones. It will also enable me to validate the results found in the literature and improve the conceptual framework shown in Figure 4.6.

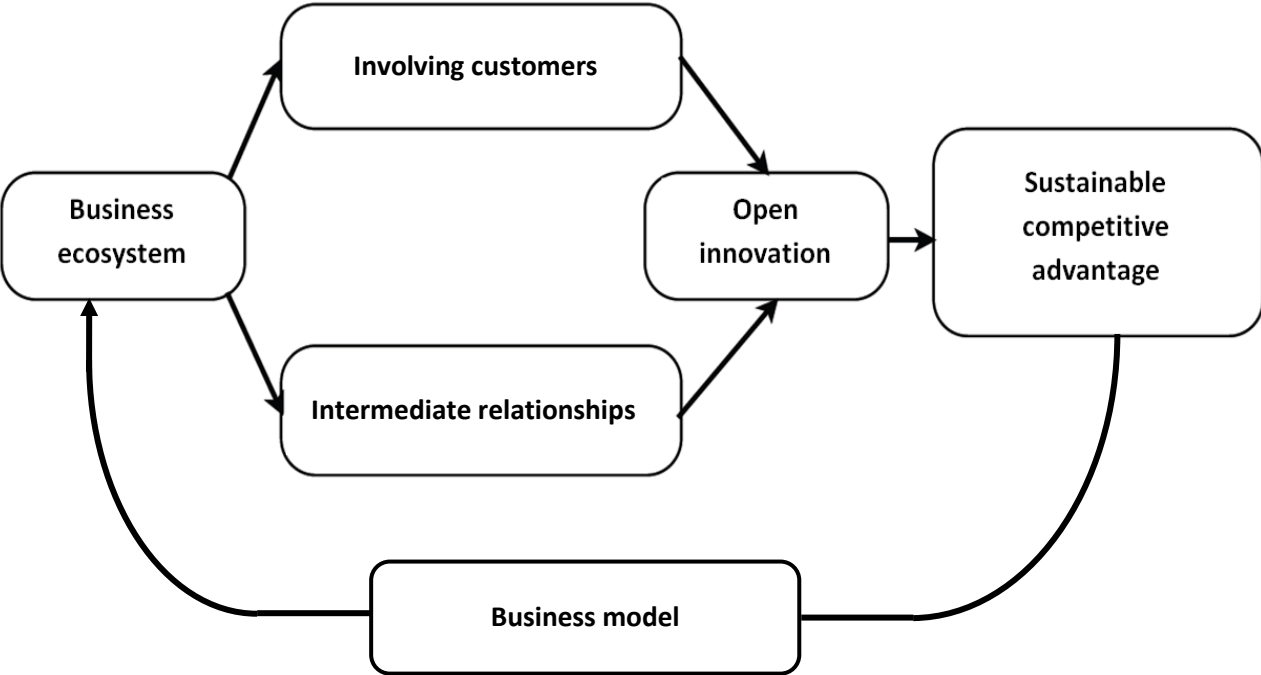


Figure 4.6 Conceptual framework Open Services Innovation

4.3.2 InfoQuest

According to the value constellation perspective, a company should no longer position itself as part of the value chain to add value to the service, but try to co-produce value with other actors in innovative ways by reconfiguring roles and relationships among the value constellation (Xing, n.d., p.28).

As already mentioned, the following chapter will deal with case study examples of open services innovation. The cases will be based upon the empirical evidence investigated in the foregoing parts and the resulting conceptual framework. Xing H. (n.d.) already conducted a case study of open service innovation. Because there wasn't a clear framework available due to the lack of empirical research, Xing's paper is a combination of several facts resulting from an open business model. After a closer analysis of his work, it seems that this specific case fits the foregoing conceptual framework very well and serves as a first prove of the empirical correctness of the framework.

Xing (n.d.) investigated an open service innovation approach in the hotel industry. As one of the oldest businesses where competition is fierce and due to increased demands of critical guests - hotels feel the need to evolve and innovate. To create a sustainable competitive advantage hotels have to offer a complete, qualitative solution for their customers (e.g. superior rooms, swimming pool, trips, fitness, wellness area). Therefore, co-creating with not only customers, but also local businesses and tour operators is crucial. An example of such an open innovation business model is InfoQuest. The service innovation redefines several economic roles (hotels, IT system provider, local businesses, customers) and relationships among them going from a linear model to a netlike model (Xing, n.d.). InfoQuest already successfully introduced an open innovation model into its business processes to guarantee the high quality of their services and deliberately chooses reputable partners including Cisco Systems for networking, Swyx GmbH for Hosted IP-PBX solutions, YIT for technical installations, Microsoft Corporation for server and collaboration solutions, Hafslund for communication and cable infrastructure and HP for hardware solutions (Xing, n.d.). Off course, this open innovation approach is mainly aimed at technical knowledge creation, but experience with this new way of doing businesses might also contribute to the implementation of open services innovation (which isn't the same as open innovation).

InfoQuest developed SaberKnot, an IT-platform, where hotel guests can get access to interactive hotel services, online concierge, mobile office and printers, check online city and transport information, restaurant and shop recommendations, local news and activities or order Digital Video-On-Demand. SaberKnot (aimed at premium hotel markets) works on centralizing every aspect of hotel services for the hotel guests using the system (Xing, n.d.). The business model brings services to the hotel industry that were typically fee-based and turns them to an advertisement-paid model, saving both guests and hotels substantial sums of money (Xing, n.d.).

Combined with this innovative business model (based on advertisement revenues), there arises an integrated business ecosystem consisting of hotels, local businesses, customers, InfoQuest and other potential partners. Xing (n.d.) says that "the hotel and local businesses in the ecosystem share the same target market, which is the inherent connection between

them and the footstone of this new model” (p.25). Hotels can hence offer their guests customized solutions according to their preferences and acquire useful knowledge from their use of the service. Local businesses, in turn, can reach new target groups through an innovative way of advertising. InfoQuest, finally, serves as a service provider offering technical support and creating new applications on the basis of customers’ demands (SaberKnot is the result of a service innovation as defined in chapter 2). This results in a competitive advantage for the individual players and the business ecosystem as a whole.

To conclude, with the review of Xing’s case study analysis, it became clear that the drafted conceptual framework in part 4.3.1 indeed makes sense and all the critical steps towards a sustainable competitive advantage are present: starting from an innovative business model resulting in the creation of a strong business ecosystem which co-creates with customers. The intermediate relationships also seem to be very important in this case. Xing (n.d.) says that “all the economic players have to supervise each other to guarantee all services supplied to customers are of good quality and companies inside the business network and those outside (but having interest to join) will strive to enhance their services, which is forced by relationships with other partners” (p.35). Hence, an open services innovation approach was implemented making it difficult to copycat and leading to a sustainable competitive advantage. In order to maintain their competitive advantage, the business model and ecosystem should be revised and adapted to new market developments (although this wasn’t clearly cited in Xing’s paper).

4.3.3 Summary

The combination of a thorough literature study (chapters 1 and 2), empirical evidence (chapter 3) and a first example of an open services innovation case enabled me to develop an empirical founded conceptual framework for the questions at hand. This discussion and why the model is build up like this is already thoroughly argued on the foregoing pages. The conceptual model considers the framework of Chesbrough (2011), completed with the added value Hulzebos and Piepenbosch (2011) provide. The empirical testing and focus on business ecosystems offered some interesting new views on open innovation in services. So, before going to the case study examples, a short summary is provided with the core concepts, serving as input for the next chapter.

To summarize:

- (1)** Reconsider and improve *business models* to get the best out of an organization’s processes.
- (2)** Companies have to take part in *business ecosystems* if they want to achieve open services innovation. Both the business ecosystem and business models should be adjusted to one another.

(3) Organizations have to co-create with their clients at the level of the business ecosystem (*involving customers*), especially in services where customization is crucial to satisfy customers' needs.

(4) *Intermediate relationships* should radiate trust, confidence and vision in order to expand long term bonds. Hence, firms can attain greater capability.

(5) Open services innovation is necessary in order to arrive within a business ecosystem to a sustainable competitive advantage and yields more added value than service organizations can attain on their own (resulting from just services innovation).

(6) In order to maintain their competitive advantage, companies have to insert a feedback loop and adapt their business models to changing environments.

5 Cases

After constructing the conceptual framework some case studies will be conducted to see whether or not the framework is empirically correct. The build-up of these cases will be based on the conceptual framework, through which a thorough analysis will make room for determining other possible variables and will provide the possibility to discover new viewpoints or to change the predetermined assumptions in the framework. This chapter will start with an analysis of the advantages using case studies and why such an approach is suitable for this thesis. The following parts describes real-life case studies where I will look at the similarities and differences with the conceptual framework. These cases are: "Open services innovation at KLM", "Open services innovation with specialized insurances" and "Open services innovation with PatientsLikeMe". This will lead to the final conclusions and provide an answer on the central research question in the last chapter.

5.1 Opportunities and challenges when working with cases

Yin (2003) defines a case study as an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly defined. Another definition comes from Eisenhardt (1989) who states that building theory from case studies is a research strategy that involves one or more cases to create theoretical constructs, propositions and/or midrange theory from case-based, empirical evidence. Cases can be exploratory, explanatory or descriptive and are used to: provide description, test or generate theory. The focus for the cases conducted in this thesis will be on testing theory and contains exploratory, explanatory and descriptive elements (because the research field on open services innovation is still fluid). This is also the reason why I have chosen to work with a case study approach. Research on open services innovation is still limited and cases offer a perfect means to handle such a restriction.

Case study is a research strategy which focuses on understanding the dynamics present within single settings (Eisenhardt, 1989). The method and advantage behind working with cases can be defined as pattern matching logic (Yin, 2003) where an empirically based pattern is compared with a predicted one. If the patterns coincide, internal validity is strengthened. As Eisenhardt (1989) puts it: "This involves asking what is similar to, what does it contradict, and why. A key to this process is to consider a broad range of literature discussing similar findings and tying together underlying similarities in phenomena normally not associated with each other" (p. 13), which was the focus in the first part of this thesis. Another advantage is that when a relationship is supported, qualitative data often provide a good understanding of the dynamics underlying the relationships - the why of what is happening - and is crucial to establish internal validity. The theory is emergent in the sense

that it is situated in and developed by recognizing patterns of relationships among constructs within and across cases and their underlying logical arguments (Eisenhardt & Graebner, 2007).

When working with a restricted number of cases, I opted to select the ones which represent extreme situations where relationships and processes become transparently observable. In the context of open services innovation this is resembled in cases where internal relations and systems are very obvious and open innovation is deeply imbedded. After all, case studies emphasize the rich, real-world context in which specific phenomena occur (Eisenhardt & Graebner, 2007). In this research I selected multiple case-studies above single cases because they typically provide a stronger base for theory building (Yin, 1994) and enable broader exploration of research questions and theoretical elaboration (Eisenhardt & Graebner, 2007). Hence, implementing cases in this research will allow me to validate the conceptual framework leading to stronger theory, like Eisenhardt (1989) argued as well: "Theory developed from case study research is likely to have important strengths like novelty, testability, and empirical validity, which arise from the intimate linkage with empirical evidence" (p. 18).

5.2 Open services innovation at KLM

A first case deals with KLM Royal Dutch Airlines. KLM, the national carrier of the Netherlands, tries to be different than other airline operators through the use of open innovation. After all, innovation in an airline company is a complex matter, involving many different parties (Chesbrough, 2011). In short, KLM has three interrelated branches. Their main business exists of providing flights for customers; therefore they set up a co-operation with Air France and Delta Airlines. KLM also assists maintenance and engineering services (not only for their own planes, so there is an open mind-set here as well). And last they also provide cargo services to ship items along with passengers (Chesbrough, 2011). KLM's vision starts from the viewpoint of their customers. They want to offer them an entire travel service, not only bringing them from airport A to airport B, but also providing them with hotel offerings, transportation from and to the airport (with for example a broad taxi service network), smart-phone apps and even supply the possibility of lodging a customer's favourite pet in so-called "pet hotels" when they are on holiday. By doing so, KLM does not expect to provide all of the services itself; rather it will orchestrate a suite of service experiences for clients using a network of service suppliers and partners (Chesbrough, 2011) in order to extend their customer circle of contact.

Today, KLM wants to further develop their online business communities (e.g. Club China, Club Africa, and Golf Club). These communities offer business people extra local discounts and

services. Lacking the experience to generate these online communities they will be better off to search for partners that can. All these different initiatives lead to open innovation in the service industry, including learning about the complex systems behind these partnerships and working together with customers. This method should confirm the findings in the previous chapter and even provide some new insights for my conceptual framework.

5.2.1 About KLM

KLM (Dutch abbreviation for Royal Aviation Company) was established on the 7th of October 1919 and performed its first commercial flight in 1920. Due to the company's rapid expansion in the airline industry they set up a whole range of new subsidiaries and alliances with other organizations. KLM also joined SkyTeam (a 15 member airline alliance which enables KLM to offer new worldwide destinations and a better service) to provide their customers with new advantages resulting out of the intense cooperation within the alliance. Examples of some value adding services from their alliance with Skyteam are that KLM can offer travellers new destinations, an improved and unique check-in procedure, elaborated networks (e.g. for reservations) and guaranteeing a high quality level. In the foregoing financial year (i.e. 2010), KLM Group transported over 23 million passengers and almost 491.000 tons of cargo. The revenues for that year were approximately € 8.561 million and the company employed 33.442 workers. KLM's home base and crucial partner for its activities is Schiphol, based in the Netherlands and one of the biggest airports in Europe, serving as an important worldwide hub.

In order to improve their offerings KLM took several initiatives, originating from the following point of view: "[KLM starts from the company's] understanding of the business traveller's need for a hassle-free, seamless travel experience, and, together with their suppliers, formulating a business around that insight" (Chesbrough, 2011, p. 124). On KLM's website these values are reflected in their mission statement and vision which states: "By responding to market opportunities and technological developments, KLM offers customers a contemporary product" (KLM Royal Dutch Airlines, 2012). These not only involve activities directly related to KLM, but also indirectly, like e.g., investments in techniques for improving congestion of air traffic (which also influences the customer experience). The interesting thing about this way of thinking is that KLM needed to build up close relationships with their suppliers. Therefore, the enterprise invested in the Mainport Innovation Fund. Together with carefully selected partners of this fund (like Schiphol or Rabobank) they invest in promising ideas or technologies. The firm, developing the innovative-idea, benefits from KLM and the fund as launching customer and investor. KLM in turn will benefit not only from the expertise of its supplier and increased added value of its communities for their customers, but also from the future potential value increase of this company as it intends to sign an option deal with them (Chesbrough, 2011). The Mainport Innovation Fund invested for example in a company

which developed a new technology to precisely track flight motions from airplanes (not only planes from KLM), which gives airports the opportunity to prevent air congestion by diverting flights to other airports or slow down some planes resulting in less fuel expenditure and shrinking costs (for all suppliers in the value chain). Other research areas are on-flight internet, safety, communication and “cleantech” aviation; all resulting in the improvement of the customer experience.

Actual examples of initiatives following from intensive collaboration with suppliers are KLM Flying Bleu and KLM for business, in order to improve customer experience, and testing sustainable bio-kerosene to reduce the company’s environmental footprint. The first two examples are directly reflected in the service offerings for travellers. With KLM Flying Bleu, loyal customers are rewarded by admitting passengers to new, exclusive services. KLM describes it as follows: “As you travel more and more with us, we reward your loyalty by offering more and more services you can enjoy, to make every trip that much more special. By simply showing your Flying Blue card, you can access countless extra services and make your travels, or even your waiting time at the airport, smoother, easier and more pleasant” (KLM Royal Dutch Airlines, 2012). Also KLM for business is the result of a cleverly contrived co-operation between partners. To meet managers’ specific demands KLM offers them a wide range of services (e.g. Club China, Club Africa), making it easier for managers to efficiently practise their work and arrange meetings. After all, for B2B customers it is often the case that they need more hotel bookings and mostly these are last minute requests. In general, the criteria required when booking for a B2B customer differs from that of a B2C customers, hence this demands another booking technology that contains other options. One specific example is the jet service idea which will be worked out below. In addition, testing sustainable bio-kerosene has an indirect effect on the customer experience. Again, this is the result from intensive collaboration between partners lodged in a coordinated organisation called SkyEnergy.

So, a first conclusion resulting out of this introduction is that the requirement of building a business ecosystem and attune your business model to this ecosystem is crucial. This also creates a community with and between customers. Figure 5.1 shows how KLM tries to create such a community, improve customer experience and learns from what is going on inside travellers’ minds to discover their needs. Customers can get in touch with fellow travellers or even pick a seat next to them. By doing so, business travellers can learn to know other interesting people and talk about for example management practices, or leisure travellers can share a taxi with other individuals discovered via ‘Meet & Seat’, in order to divide the costs. KLM, on the other hand, gathers new insights in travel behaviour, social patterns or certain preferences of passengers resulting from online forums and discussions. In this case, social media is applied to create a learning community with customers.

However, building a business ecosystem alone is not enough, the relationships within the system makes the difference between becoming a success or failure. To effectively organise a business ecosystem it will be important to serve a combined train of thought. This means that every party benefits from entering the business ecosystem and improving the customer experience (which is the main goal of innovating in services). Like KLM, they didn't focus on innovations in their core business alone, but regarded the industry as a whole to improve customer experience. This way the business ecosystem became a strong system with all parties involved benefiting from it.

Meet & Seat
 KLM
 Royal Dutch Airlines

KLM Meet & Seat is a very simple way to connect with fellow travelers on your flight. Because we believe meeting new people is a great way to start a journey of inspiration. All in three easy steps via klm.com

- 1** Share your social profile ...
 After booking your KLM flight, choose which Facebook or LinkedIn profile details you would like to share.
- 2** ... see who will be on board ...
 View the profile details of your fellow passengers to find like minded travelers or potential business partners.
- 3** ... and if you want: pick a seat next to someone interesting.
 Or how about a coffee at the airport or sharing a taxi after your flight.

*Please note that Meet & Seat is available on a limited number of destinations. More will follow before summer 2012.

Like Meet & Seat? Help us make Meet & Seat even better by sharing your ideas via [f /klm](#) or [t @klm](#)

Figure 5.1 Meet & Seat at KLM. Adapted from <http://www.csnblog.nl/with-meet-seat-klm-integrates-social-media-with-air-travel/>.

5.2.2 Open Innovation initiatives¹

In the following part some specific initiatives set up by KLM and their partners will be described in more detail. This way, it will become possible to reflect and compare with the conceptual framework and see if there are new possible approaches. The qualitative data in this section is gathered by Prof. Dr. Vanhaverbeke who conducted an open interview with Ignaas Caryn, director of innovation and venturing at KLM, on the topic of open innovation in services. Caryn opens the interview with an interesting quote: "For innovation in services, you are almost obliged to co-operate these services with other companies. Since for the services

¹ The qualitative data of this section is based on an interview with Ignaas Caryn, director of innovation and venturing at KLM, conducted by Dr. Prof. Vanhaverbeke on the 28th of August 2008.

sector very often the production and consumption process happens at the same time, suppliers and customers are all involved in the experience, creating a service industry. This means that you have to be aware that suppliers deliver the desired quality from the very first moment, so they have to be very well integrated in your innovation process. This is a big difference with the manufacturing industry" (Audiofile KLM, 28th of August 2008). KLM depends on their suppliers (like for example the in-flight service, ground handling) and has to work closely with airports (since they do not own them). Even when KLM wants to develop new, improved seats for their customers, situated at the beginning of the value chain, a lot of different parties are involved. This process with different parties involved continues all along the value chain. Caryn says: "It often means if you innovate one thing in one part of the process, it has an impact on all the processes around it" (Audiofile KLM, 28th of August 2008).

Key to both projects discussed below is that early involvement in the whole innovation process is inevitable, there has to be co-creation from day one with all stakeholders, be it customers, suppliers or employees. Caryn gives an example of open communication between different departments: "[Earlier,] for example the marketing department specified what is the desired service, and then the in-flight department executes. But also there you see that if you let them work together from day one, we get a much better communication but also a much better product than if they did this in separate units" (Audiofile KLM, 28th of August 2008). This is the same for customers or suppliers, hence KLM avoids introducing new services and afterwards concluding that customers were not really that excited because there are other things they valued much more and preferred above the initial offering. In order to make this happen KLM had to introduce a focus towards the outside world because the airline industry was a typical example of an internally focused business (with the resulting *Not Invented Here-syndrome*).

Due to these developments in the airline industry's business environment, nowadays, innovation within KLM has become crucial. Therefore, innovation, which was started by the commercial division by the end of 2005, has moved to become part of the corporate division as from September 2007. Caryn: "So now innovation is part of the division of corporate strategy and business development" (Audiofile KLM, 28th of August 2008). In other words it has changed from being a kind of project or idea organization to an established business – a line business within the company which could be embedded in the company structure – crucial for the company's future.

E-enabled aircraft

To show this impact and the complex systems behind setting up ideas, a few initiatives will be illustrated, which will be analysed in more detail afterwards (see section 5.5). One of the nicest projects to mention is the "E-enabled aircraft" because it has an impact on the

operation side as well as on the passenger/customer side. Noticeably, especially for business trips, the demand for Wi-Fi and internet on board is becoming undeniable. Travellers could then choose which movie or CD they want to see and listen to, whenever they want to. With Wi-Fi on board choices are endless, resulting in many more entertainment options (however, now this in-flight program is limited). For business people it also offers an extended space for work on board (where flights today are usually lost time in terms of an organizations' point of view). It also creates new revenue opportunities since tax-free goods can be purchased on board, but collected at the airport of destination. This means that planes don't have to drag along these merchandise, resulting in less weight, less fuel expenditure and lower costs. Also for travellers this would result in improved offerings because they will be able to purchase the required goods and have more choices; now the offers are limited and sometimes not available on board because it demands too much storage space in the airplane.

Also at the operational side an "E-enabled aircraft" offers some interesting new features and advantages. A lot of paperwork could be replaced making the complicated procedures for pilots and cabin crew more precise and easier, communication will improve and aircrafts could be monitored on the ground. This means already preventing potential errors or tracing problems with the aircraft when flying, resulting in quicker maintenance once back on the ground. It can be compared to a continuous MRI scan of the aircraft when it is still in the air, enabling KLM to diagnose, prepare and having people ready in advance, saving precious time. Caryn: "Proactive foster maintenance can be very interesting and it means in the end that you have less spent plants downtime of your airplane, which of course is crucial. If you look at our costs base, it is only when the plane flies that it makes money, when it is on the ground, it is only a cost factor and nothing else" (Audiofile KLM, 28th of August 2008).

In order to make this innovative aircraft happen, and this is the part where co-operation comes in, KLM has to work together with Boeing, for the biggest part, completed with other partners to deliver new technologies. In this specific case, two American companies were involved to create software to connect the work planning of maintenance activities and monitor the health of aircrafts when still flying. Although Boeing was willing to research and develop these new functions, KLM wanted more. For Boeing, these new developments could be transferred across their whole fleet and sold to other airline companies as well (since KLM isn't their only customer). KLM, on the other side, wanted more: the organization wanted to integrate these new functions in their processes (like for example the new revenue opportunities with tax-free goods). Therefore, they had to co-operate with the two American companies in order to make this happen. The advantage of directly integrating the E-enabled functions in their processes means a sustainable competitive advantage for KLM, paying back the effort and costs put in it, making it impossible for other airline companies to just reap the fruits of KLM's investments when wanting to buy away the hardware installations from Boeing.

KLM even included the choice of collecting the purchased tax-free goods at the airport of arrival (where they work together with shops) or let them be delivered at the passenger's home address (where another kind of co-operation and partner is needed). Caryn says that "Besides the delivery of goods you purchased we also need to work with Boeing or Airbus to have this infrastructure on board. Secondly we need to work with Panasonic, who creates in-flight entertainment front-end and you have to work also with shops at the airport or the delivery service that delivers the goods to customers' home" (Audiofile KLM, 28th of August 2008). Nevertheless, this co-operation between a multiple of partners isn't just set up in a few hours signing a lucrative contract; it takes a lot more to succeed. Indeed, Caryn confirms that if you look at KLM 10 years ago, a typical procurement process was in place where they negotiated and selected suppliers based on the lowest price as possible. However nowadays, if KLM wants to have an innovative, long-term bond and need these partners in their innovation process, the procurement process has to be revised. Caryn: "It has to be altered from a purely cost-based discussion to a strategic partnership one" (Audiofile KLM, 28th of August 2008). KLM, for example, sometimes looks at promising start-up companies which might deliver a part of the service. If there is a possible connection between the two companies in terms of an innovative cooperation KLM could take a stake in the start-up making it a strategic partner. This partnership enables KLM to continuously develop and add new services to their portfolio, staying ahead of the competition. After all, competitive advantages in the airline industry don't last longer than about one year.

Derived from their knowledge of E-enabled functions and intense cooperation with their partners, KLM already developed a state of the art self service check-in process becoming the first airline company in the world with this option. If travellers for example missed their connection and need another flight, they can already do this with the self-service check in machine, saving the trouble of waiting lines in the airport. The IP-rights for this technology reside with KLM and the firm is now looking with Accenture to market this service to other airlines. This off course gives away their competitive advantage, but for other airline companies it would take almost one year to implement it, enabling KLM to search and develop other new technologies maintaining their competitive position. By doing so, KLM can set industry standards together with other members of the SkyTeam alliance and take in a very big position in the market. The importance of this strategic advantage is also confirmed by Ignaas Caryn: "If you have about a quarter of the market, which means that if you set a new standard, there is a big chance that others will follow and recognize that KLM has state of the art of (in this case) self-service technology and just buy from us" (Audiofile KLM, 28th of August 2008). This is very important when airports become leading parties in their willingness to introduce ones self-service system for the whole airport (and not for every airline alliance separately). In this case, KLM has state of the art technology and infrastructure and will outperform others, but it also means that they will have to make a trade-off between having a

(short term) competitive advantage and being open enough in sharing the technology with others (even competitors).

Currently, KLM is still developing the E-enabled aircraft with their partners. It is a project which has been running for about two years and will continue to be followed up for the next two years, since demand for these kinds of services still rises.

Business Jet Service

Another example is the business jet project, which is a very complicated business (e.g. contracting small airports or the expensive purchase and maintenance costs of jets). The main idea is to attract business people which are offered a premium jet service. The added value for business managers lies in the fact that they can take off in small airports and don't lose precious time. Also during the flight extra services could be provided which make sure that these managers can work continuously (in the future even make conference calls) and don't suffer wasted time.

Again, for the Business Jet Service idea, KLM looked at the customer experience. In the case of business passengers, KLM discovered that travelling between different destinations causes problems due to narrow connections and other interferences, resulting in offences for the business people. Nowadays, one flight a day is the maximum because they quickly lose 3-4 hours per flight (check-in, collect luggage) to arrive at a destination, take a cab to get to the meeting point, assemble, get back to the airport and once again taking 3 to 4 hours to get home. With the jet service this is practically reduced to the flight time only. Business passengers could even, after a meeting, have lunch and travel along to a next destination in another country, and eventually land where that morning their working day commenced. The business travellers will be less annoyed and hence be more motivated and alert. It's also a win-win situation for their bosses, because more meetings per day can be planned and new deals can be negotiated more accurately and quicker. Caryn: "It is the combination of privacy, speed and less hassle that makes it a valuable service for business travellers within Europe" (Audiofile KLM, 28th of August 2008).

On the other side, the surplus value for KLM lies in the fact that they can charge a premium price or extra fee above the usual business class ticket due to improved offerings. Even more, a whole range of new services comes within reach. As already mentioned, KLM looks for new ways to extent their customer circle of contact. In the case of business jet services this could be transporting business people for small distances, but also make sure they get at their final destination on time by providing taxi services, or by foreseeing lunch stops when landed (so not only in the air), enabling passengers to attend conference calls on board or provide

software to plan their trip as efficient as possible (e.g. the shortest way to get somewhere in time or possible places to spend their spare-time).

Another reason why the business jet project was very interesting for KLM is that it could deliver a competitive advantage for more than 3 years (where with other projects this competitive advantage will only last for about one year). Business jets are a very specific matter and if an airline company orders one today, they won't have it tomorrow. Caryn estimated that when one orders a jet in 2012, it would probably be delivered in 2015, so this means a gap of three years other airline companies will have to bridge, resulting in a competitive advantage of let's say four years.

From the operational point of view, first and foremost, the price of implementing such a service is key. After all, KLM has to purchase business jets since this is not yet part of their product portfolio, which could be a major and risky investment. That is, the success of this new service formula is not yet proven. According to Ignaas Caryn, new opportunities have opened up here as well: "If you look at the price, prices are more affordable now in this market, it is very different than for example 5 or 10 years ago and has to do with new technologies within the business jets that makes them much more efficient and lower cost maintenance than before" (Audiofile KLM, 28th of August 2008). Not only purchase-costs are considerably reduced, so are the maintenance costs, which have dropped remarkable by almost 50% compared to five years ago. Secondly, small airports have to be contracted since they are part of the improved value proposition. KLM does this by trying to offer an integrated solution and helping them implement this new service. For example, a car service (car with professional driver) could be connected upon the business jet services, resulting in a revival or elaboration of the smaller airport which makes it more profitable. This global car service, which is a spin-off from this case, will be discussed below.

So given the frustration of the business traveller in Europe, combined with new evolutions in the business jet industry and reductions in costs, KLM is able to make a nice proposition and charge a 10-20% extra fee on a normal full fare business class ticket over a scheduled airline. Basically, business people can make their own calculation, given the specific firm's environment they have to cope with, and evaluate if the increased speed and efficiency is worth a 20% premium. So by paying only 20% more, business travellers get a customised and better service containing some huge benefits.

The project started in 2006 together with Booz Allen, a consulting company. They helped KLM to work out a business plan, and had already proven their experience and knowledge of networks. This is somehow different than the case of an E-enabled aircraft, where at first sight, more parties were involved. Nonetheless we will see that the business jet service is also a co-development case. In the end, a network with small airports has to be developed and

guided because they often don't have any commercial activities yet. In addition, as previously mentioned, KLM also has to build a car service network since the business jet passengers expect to be transported from their arrival destination as well. Even for maintenance there has to be co-development because this is somehow different to other planes. Caryn: "Setting up such a business jet service involves probably 10 or more other companies who have to do part of the work, which in total creates the customer experience" (Audiofile KLM, 28th of August 2008). This also had its influence on the continuation of the project. After arriving at the final selection stage and having received approval by the Air France-KLM group executive committee, the project ultimately got a red light because the specific demands would divert KLM's attention too much from their core business and specific attention was needed for some other M&A (Merger and Acquisition) activities like the Alitalia case. The service is now ventured and developed by a start-up company outside KLM which was very convinced and eager to develop this business further. Nonetheless it still remains an option for Air France-KLM as a commercial agreement with the start-up where KLM can serve as a sales channel or, when becoming successful, to take a stake in the enterprise. This is comparable with what the venturing department of for example DSM (a manufacturing company) does and copied by KLM to introduce this way of working in a pure service organization.

As a spin-off, resulting from the jet service, KLM is now developing a global car service. In this case KLM works together with a new start-up company, a combined European-American organization, which contracted local car services in cities (airports) around the US, Europe and Asia. On the one hand, the start-up looks at different suppliers of car services and contracts one per city, based on specific requirements. On the other hand, the enterprise also developed a technology to implement this booking service into KLM's booking engines. This co-operation is useful for KLM because, as Caryn says: "There is no global car service company, it is a very fragmented market and if you offer a flight service then it is also nice to offer a car service for the last part of the journey. KLM says that there is still plenty of opportunity before and after flight where we can offer added value services to our customers, so we can extend our customer circle of contact. We have seen that flying from A to B does not bring us the margins anymore that we need to grow. So we have to develop new added value services which do bring in some extra margin" (Audiofile KLM, 28th of August 2008).

So what we see in both cases is that KLM really tries to develop new added value services by revising their value chain, which is a first major lesson to be learned from these cases. Ignaas Caryn summarizes it as follows: "If you look at KLM, let's say 2-3 years ago, we had defined our circle of contact and that was really from the moment you came on the airport until you are at your destination, you have landed, and you left the airport and then you left KLM. Now, we say well there is still plenty of opportunity before and after that where we can offer added value services to our customers, so we can extend our customer circle of contact, offer a whole package and minimize the hassle for our passengers" (Audiofile KLM, 28th of August

2008). The analysis of the KLM case together with the implications for our conceptual model and central research question will be made after a second case, which introduces open services innovation in the insurance and banking industry.

5.3 Open services innovation in specialized insurances

Another example of companies working together on open services innovation are pet and yacht insurances. A simple, innovative idea with perhaps a huge worldwide market since, in the case of pets, they are becoming more and more real members of households and families and in some cases even seen as kids. Pets are no longer seen as animals, but are treated as real human beings. Specialized food, pet hotels and even pet-beauty-parlours indicate the increased importance of our favourite animals in today's society. Walsh (2009) says that bonds with pets offer comfort, affection and a sense of security. Therefore pet insurances could become a breakthrough idea, but one with a lot of challenges when trying to build a framework launching it. First a thorough study is needed on how much money people want to spend on their pets or what kind of insurances they want. If there is a possible market for pet insurances the developers will have to find partners in the form of an insurance company who want to take part in their idea. Convincing them will require a good cooperation, reducing the risk of failure for all parties involved (so creating a win-win proposition for both sides). Once the insurance company is in, a network with veterinary surgeons has to be built up. Then they probably will have to be educated on how to file the insurance claims for determining payments and other requirements. Of course these vets will want something in return; so which added value can you offer them? How much should the monthly premiums the customer has to pay be? Also, there are multiple kinds of dog breeds, some of them having a larger risk on sustaining injuries or dying earlier than other ones. Question is how you are going to classify them and still make sure owners of pets are willing to pay the premiums.

Likewise, a closely related case to the pets insurance case, reconsiders the same start-up and development challenges. This is the case of Yacht Insurances which was the answer on a practical shortage in the range of services provided to customers. At Fortis, they noticed that when buying a yacht, only a private loan over 10 years could be offered, which is not very attractive for people considering buying one. What if there was a personalised proposal available to finance the purchase of a yacht? The same question arises when reconsidering yacht insurances. By investigating these cases I will have a good view of the complexity on which these kind of systems are constituted and which new approaches for open services innovation will come to light.

5.3.1 About the idea

With the changing environment and the increasing demand of customised products in the financial sector, Fortis started a venture (Fortis Venturing) in order to unlock creative ideas. The reason for starting up this venture was to enlarge their product portfolio. For the example of Pet Insurances, this case served as test ground for experimentation in the health-insurance sector. One of the problems when developing new services is that insurance companies want to promote their products and just sell them (from a rational point of view); but in the case of purchasing yachts or taking care of pets, customers create an intense emotional bond which is mostly forgotten by insurers. This is the part where the advantage of venturing comes in and where open innovation pops out. Due to the venture there is space for emotional handling and passion, which is an important trigger for these kind of customers. Just as in the case with KLM, a company has to look at the whole customer experience, not only your own core business. On top of that the developers of pet insurances saw that bringing in emotions in the process, which was obtained by building on tight links with partners, led to a sustainable competitive advantage. This also makes it difficult for competitors to just copy the idea. So, by building a business ecosystem and implementing open innovation in the service industry, it became possible for the insurance sector to be innovative, something which wasn't so obvious in the past due to their rational approach towards businesses (after all, insurers are rational and had difficulties selling products with emotional content).

First, let us consider the case of Yacht Financing and Insurances. It all started with the demand of a customer who wanted to buy a yacht, but found no customised proposal with interesting financing conditions or insurances made to measure. At Fortis Venturing, they found this made-to-measure insurance for yachts an innovative idea, one which allowed them to expand their offerings and reach a new customer group. After all, the World Wealth Report 2011 from Capgemini and Merrill Lynch Global Wealth Management argues that the population of *High Net Worth Individuals* reached the figure of 3,1 million people in Europe (a rise with 6,3 percent in 2010), with a growth in Germany for about 7,2 percent and in Switzerland for almost 9,7 (which were among the highest scores in the world). The questioned millionaires invested the largest part of their capacity in luxury goods like cars, boats and planes. Other investments were art, jewels and houses abroad. This gives rise to new markets to explore for insurance companies. Here, the emotional aspect is that the venture looked at a way to give people who wanted to sail the opportunity to sail. By formulating it this way, they became a sort of *emotional patent* in an environment where intellectual property isn't possible. By fixating on and formulating an emotional message, they can attract these kind of customers, which are, as the study of Capgemini (2011) shows, looking for investment opportunities like luxury boats. Offering them a customized service which wasn't made to measure before, could create a whole new market.

A second case, which was implemented after the one of Yacht Insurances (and is a more detailed example of open services innovation), are Pet Insurances. Again, the idea came from a customer who ran a kennel. The idea behind Pet Insurances is that a dog (pet) is treated and cared for as a human, and therefore a special insurance is created, something that is already the case in America and other countries. In any case, for pet owners, pets respond eagerly to care and attention, offering unconditional love and nonthreatening physical contact in holding and petting – crucial human needs (Walsh, 2009). The reason why this was first developed for dogs is that they need more care than cats, like for example temporary vaccinations or more visits at veterinary surgeons. This is all captured in a fixed price, which is paid like any other premium. The reason why Fortis Venture had to foresee a fixed price is due to the fact that customers want to know how much the insurance will cost them (because pets are still different from humans and people don't want to insure them at any expense). Hence, the insurance is delivered as a sort of package, where customers can choose between three different formulas (gold, silver and bronze), depending on the breed.

To make it more visible, let's consider an example. Important to know is that every dog breed has specific properties, strengths and shortages. Some dogs are also more sensitive to sustain a disease, so premiums for dog insurances have to be based on gender, breed and age. In short, the insurance covers unexpected costs when visiting a veterinary surgeon (except for vaccinations) in case of disease or as a consequence of an accident (e.g. X-rays, scans, intestine research or narcosis). Medical treatments up till the amount of € 3500 are covered. As a dog owner, one has the choice between three different formulas (gold, silver and bronze) and also receives free tips and advice via "*I Care For My Dog*" (included in the service). The golden package for example includes: coverage up till € 3500 of veterinary costs, plus an extra compensation of € 750 when passing away due to disease, € 750 when dying after an accident, € 750 when stolen or lost, € 750 advertisement costs (in case of a runaway dog), € 750 shelter costs and € 2000 holiday cancellation insurance. The bronze package, in turn, only covers a refund of € 1500 with no additional compensations.

Since every dog is unique, the insurance supplier calculates an insurance premium made to measure and based on the dog's qualities (like sex, breed and age). Take for example Bobby, a male dog from a median kind of dog breed which is four years old and was purchased for € 499 (an average amount for young puppies). Bobby is vaccinated with all the required vaccinations and is castrated. He is part of a young household and not used for professional activities like guarding or protection, or dog races (which increases the possibility of sustaining serious injuries). With these criteria, which the dog owner has to fill in himself, a monthly insurance premium is calculated. For Bobby this means a monthly insurance premium of € 14,15 when taking the bronze formula, opting for silver means a premium of € 19,39 and finally, when going for the golden package one has to pay a € 22,68 monthly insurance premium. This can be calculated for more than 50 different dog breeds and is

different for each dog according to their qualities. If we would change for example the age of Bobby, a different monthly premium will have to be paid. Annex 6 and 7 give an example of how such a policy looks like. I included 'Terms and Conditions' of a dog insurance, as well as a 'Claim Form'. Both references are from Petplan, the number one rated Pet Insurance in the United States².

Basically, dog owners can make their own calculation given: the emotional bond with their dog (i.e., how much they want to spend), the costs as a result of the specific properties of a dog breed and the additional coverage payment (when choosing for the gold or silver package). How the different parties, working around this theme, came to this calculation and considerations is explained below, where the challenges of implementing this kind of service are discussed.

5.3.2 Challenges when implementing an Open Innovation approach³

Important to notice is that the following discussion is applicable to both insurance cases (Yacht and Pets), although the focus will be on Pet Insurances since this is a nicer example on open services innovation and also more difficult to implement. After all, every dog breed has specific properties, strengths and shortages. Some dogs are also more sensitive to sustain a disease, so premiums for dog insurances have to be based on gender, breed and age. This is also a first challenge when building up the network of vets. There is a lot of information on dog breeds; the question is how it will be translated into the environment of insurances. Other challenges are tracing customers and reaching dog owners who aren't yet clients of Fortis Insurance. Also assessing compliance of vets and dog owners will have to be reviewed, and how the service (with emotional content) will be launched. In short, the question "How is the framework built up?" has to be answered.

This is reflected in the business model canvas (Figure 5.2) and like the KLM-case, business model innovation is key in this story. The canvas is split up in nine blocks which allows one to create a new business model resulting in business model innovation and an answer on the question of how services with emotional content should be launched. In the case of Pet Insurances, this is worked out and the accompanying steps will be discussed below. The *Value Proposition* and *Revenue Streams* are already discussed in the previous part where an integrated example was elaborated.

² Petplan also works with a gold, silver and bronze formula and is comparable to the service provided by Corona Direct. I included the 'Terms and Conditions' and 'Claim Form' from Petplan since these from Corona Direct were not available in English. Both policies are likely the same, so the terms of the golden formula of Petplan provides an excellent example for this case.

³ The qualitative data of this section is partly based on an interview with Kris Vander Velpen, head of Fortis Venturing, conducted by Dr. Prof. Vanhaverbeke on the 10th of April 2010, and the resulting lecture slides.

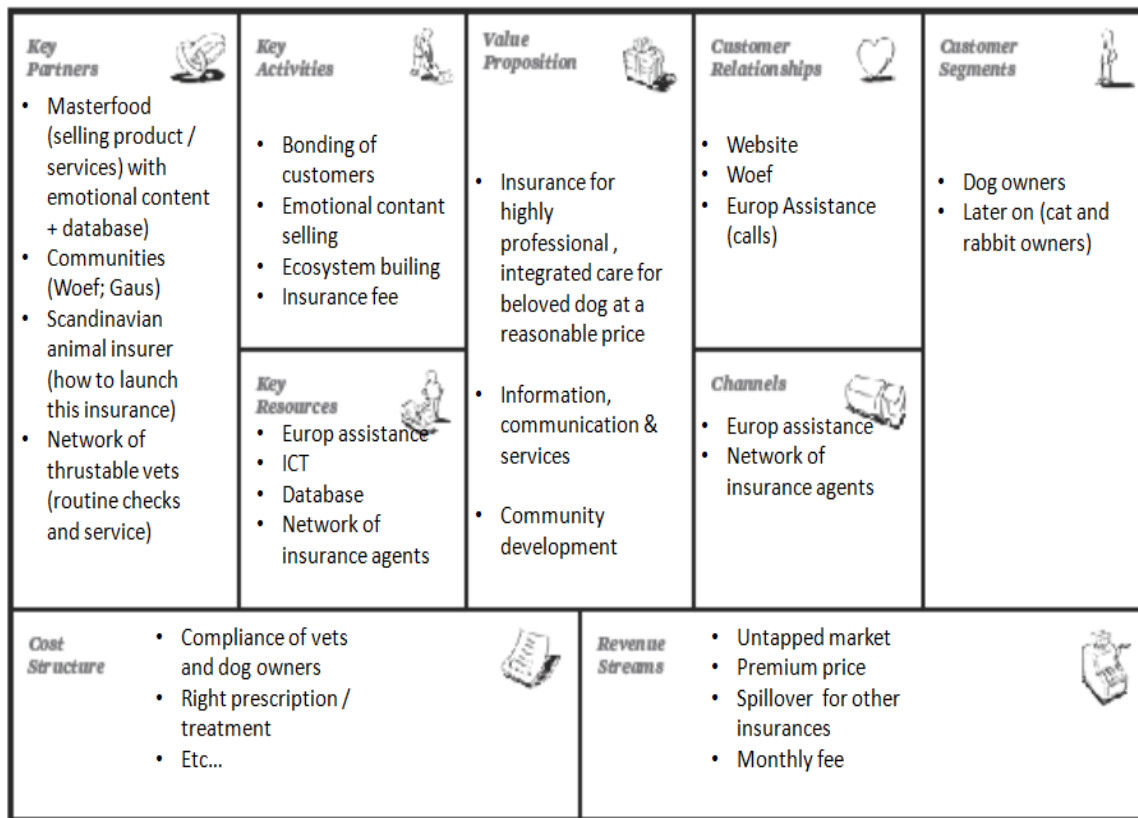


Figure 5.2 Business Model Innovation. Adapted from Prof. Dr. Vanhaverbeke – Pet insurance: Open business model generation in services (lecture slides).

In order to create an emotional bond and have an insight in the trustworthiness of customers the development of a community was determined to be a priority. This community allowed dog owners to learn and talk about their pets, share experiences and stories, but also inform them about diseases. For the designers of the insurances (the service provider), this community enabled them to discover which kind of people were trustworthy (because this specific insurance might also lead to fraud). In short, they gathered different kinds of knowledge (for example disease patterns) and made it able for customers to learn from others, which were sharing their experiences and thoughts. Hence, Pet Insurances also served as a test case for the health insurance line within Fortis (Audiofile Pet Insurances, 10th of April 2010).

In the case of dog insurances, the community was built upon the creation of a website (www.icare-web.be) where dog owners can find lots of information on dogs. Surfers can for example learn how to raise their pets, which kind of behaviour is (un)appropriate, or search for health prescription advice and daily updated news facts. Also tips, tricks and tests or specified background information about dog breeds is present. Even links with for example call centres for reporting lost dogs or sharing thoughts in case of problems and diseases are made available. As well, the website included the possibility for dog owners to register and communicate with other visitors on online forums and social media, a crucial compartment to

gather knowledge and learn about dog owners' needs in order to offer customised services. Hence, the creation of this community created an emotional bond with dog owners which, in turn, find basically everything they want to know and learn about dogs based in one spot. To be more specific, the service provider got an answer on the questions: Who are the dog owners among our customers and how to effectively reach dog owners who aren't clients of Fortis Insurance yet? How to connect and inform dog owners? And how to deliver information and 24/24 services? With the creation of the community Fortis was able to find an answer on these questions and above that also created an emotional bond with them, developing a sustainable competitive advantage. This is reflected in the *Key Activities*, *Customer Relationships* and *Customer Segments* in Figure 5.2.

The creation of this community also made it able to attract partners, which could latch onto this community, learn about dog owners' needs, improve their products, but also market their goods. Like for Pedigree (Masterfoods), which was looking for a service and health component in their product lines, Pet Insurances offered them a unique opportunity. Pedigree, specialised in dog food, wanted to introduce functional food to improve the health of pets (Audiofile Pet Insurances, 10th of April 2010). They were offered a spot on the website (community) to advertise their products, but also learn more about the needs of dogs (through the database of dog owners). In exchange for website access, Pet Insurances got admittance to the knowledge database of Pedigree to gather actuarial knowledge (on diseases, dog breeds, product placement, dog owners) and hence efficiently build up the insurance formulas. Take, for example the product placement. They learned that 75 percent is aimed at women, which usually have a more intense bond with their dogs. So it enabled them to learn about how to sell products with emotional content. The interviewee argued that this is a pure strategic alliance (Audiofile Pet Insurances, 10th of April 2010). Also partnerships with Woef (dog magazine) and Gauss gave proof of the development of a business ecosystem holding advantages for all participants: Woef and Gauss got access to the most dedicated and trustworthy dog owners to collect news, information and new trends and enabled them to exchange information with all the other partners in the business ecosystem. For Pet Insurances it meant an improvement of the insurance formulas and a professionalization of their dog services, plus a broader reach. Also veterinarians can fall back on more income on a regular base, in exchange they offer Pet Insurances reliability and correct prescription behaviour. An ultimate aspect of this open innovation story is that Fortis Venturing also went looking at a big Scandinavian dog insurer, which shared their expertise when launching such a service and information about dog diseases (for particular dog breeds and families). In the business model canvas (Figure 5.2), this is defined as *Key Partners*.

This eventually resulted in up-to-date knowledge, a strong network and partnerships, emotionally bonded customers and the implementation of the customized insurance. Now, dog owners don't have to worry about high costs when visiting veterinary surgeons, they can

choose which amount of money they want to spent on the insurance and are offered a free help and advice channel via “*I Care For My Dog*”. An elaborated example of an insurance for a certain dog breed and the choice between the different formulas is already given above. So, in exchange for a monthly fee based on a fixed package, dog owners receive a highly customized and professional service. This is reflected in the *Cost Structure* (Figure 5.2).

Hence, the combination of resources, knowledge and databases of the insurance company and its partners led to a sustainable competitive advantage and the bonding of clients in a commodity like market. They invested in relational capital to sell services with emotional content, leading to open innovation in the service industry and cross industry innovation (Figure 5.2: *Key Resources*). Just like the KLM-case, business model innovation is key in this story. Due to the fact that pets, and more specific dogs, are involved in the creation of the customised insurance and does not fall within the core business of Fortis (which are human-related financial services), business model innovation is crucial (Audiofile Pet Insurances, 10th of April 2010). Together with constructing a business ecosystem this makes it also hard to copy the idea. If you want to duplicate the business model, insurance companies will have to build similar ecosystems which will take time to construct, making it difficult to outstrip the Pet Insurance offerings. So, just like the KLM-case, the creation of a sustainable competitive advantage lies in the ability of building tight links with partners.

Nowadays, the Pet Insurance appears to be a valuable service. Although Fortis sold it to Corona Direct (Dexia), this was not due to a lack of potential. Fortis intended to add Pet Insurances to their product line, but the enforced fusion with BNP-Paribus (as a result of financial problems) made it impossible to develop the idea further (Audiofile Pet Insurances, 10th of April 2010). Afterwards, it was sold to Corona Direct which made the Pet Insurance their 3rd pillar besides insurances for funerals and cars (based on kilometres driven) and is financially becoming more and more important. Up till now, it is the only insurance company in Belgium to offer this kind of service; their specified knowledge, experience and network of partners makes it difficult for other insurance firms to copy.

A similar story is constructed for the Yacht Insurances, but with fewer partners involved and no need for building a whole new business ecosystem (it isn't that different from their core business). That's why Pet Insurances were more accurate in the open services innovation discussion. In the case of Yachts, partners were applied to search for maintenance staff or harbour space. Vander Velpen says that: “Nowadays, the Yacht Financing and Insurance has undergone some slight differences in comparison with the original model because they gathered more experience and knowledge about customers' needs” (Audiofile Pet Insurances, 10th of April 2010).

5.4 Open services innovation with PatientsLikeMe

Participation is what matters. (Jamie Heywood)

This third case explores another important sector within the service industry: healthcare. The company which will be the subject in this part is named PatientsLikeMe and tries to create an alternate vision for the future of healthcare. In short, PatientsLikeMe offers patients with chronicle diseases like diabetes or Parkinson's a tool to report their moods, which drugs they take or share information on followed cures; a kind of social network for healthcare.

In 1999, a start-up was founded when Stephen Heywood, brother of founder Jamie, was diagnosed with Lou Gehrig's disease (ALS), when he was only 29 years old. This disease paralyzes almost every bodily function, except the mind. Jamie, third brother Ben and a small team of high educated researchers, started a laboratory to search for cures or drugs to lighten the burden. Unfortunately they didn't find a treatment and in 2006 Stephen passed away. But due to their developed experience the Heywoods discovered a completely new business model to disrupt the business of chronic care.

Due to their research experience for ALS and other chronic diseases the founders of PatientsLikeMe noticed that people with these kind of diseases haven't got a good way of talking with fellow patients. The social network of PatientsLikeMe provides social, emotional and medical benefits which can't be provided by doctors alone, enabling patients to communicate and learn about their disease; like which treatments are used by other people who have the same disease in the same range, which habits do they follow or how do they feel about themselves.

Another problem closely related to the one of missing communication between patients is the lack of focus on improving life quality for patients. Currently, the main focus is still on finding medical breakthroughs to fully cure diseases, neglecting the fact that some diseases are also helped with finding medicines to improve life quality. Like for example Jamie Heywood, he noticed that although his brother Stephen was diagnosed with a leaf-threatening disease, he continued to live his life as he wanted and even got married and became a father. Therefore, on PatientsLikeMe.com patients can report their mood and quality of life knowing that psychological effects can actually improve one's well-being.

On the other side of the value chain, the company also offers some important benefits for pharmaceutical organizations. Before, these organizations had to pay doctors thousands of dollars per year for gathering information on how patients were responding to drugs and treatments. What PatientsLikeMe does is turning individual stories into data pharmaceutical organizations are looking for and which weren't available before. They collect up-to-date and

precise information of patients already following the cure, self-report the data and avoid making expensive studies or clinical trials by providing data which was hard to gather before. Above, PatientsLikeMe is not only overturning the measuring market, but also drives down the costs.

A last and fourth problem which PatientsLikeMe tackles due to their business model is that patients are not given adequate information about their current status, kept in the dark about cutting-edge research on new treatments and consequently their regimen isn't continually adapted to achieve that outcome (Innosight, 2012). Thanks to PatientsLikeMe, members of the social network can now receive this up-to-date information, since research is changing at an ever increasing pace. What PatientsLikeMe does is innovating the business model and putting the patient central, where they should be. Before, the healthcare system was too much focused on making money for all the different contributors in the systems, making use of expensive treatments, researches and trials.

5.4.1 About PatientsLikeMe

*Given my status, what is the best outcome I can expect
to achieve and how do I get there?*

This expression forms the bottom line of PatientsLikeMe and every aspect of the company is looked at with the emphasis on patients. It also stresses a major gap in today's health care system because adequate information is not always available and treatments are not always customised to a person's specific condition. The answer is different for each diagnosed person, because people have different dreams, want to write other stories and live their own life. How PatientsLikeMe is helping patients to find an answer on this question through their innovative business model will be explained in the next section (part 5.4.2).

First, let's consider the background story of the company. After all, PatientsLikeMe has already undergone a rich history. As mentioned before, in 1999, at the age of 29, Stephen Heywood was diagnosed with Lou Gehrig's disease (ALS). ALS is a chronic disease characterized by muscle atrophy and is a progressive, fatal, neurodegenerative disorder. Most of the patients die after 2 or 3 years. Although life expectancy for Stephen was short, being a closely related family, the Heywoods began researching and exploring ideas to extend and improve Stephen's life. Unfortunately, Stephen passed away in 2006, two years after PatientsLikeMe was co-founded by his brothers James and Benjamin Heywood, assisted by a good friend of the family, Jeff Cole. On their website the founders state that "Inspired by Stephen's experiences, the co-founders and team conceptualized and built a health data-sharing platform we believe can transform the way patients manage their own conditions, change the way industry conducts research and improve patient care" (PatientsLikeMe, 2012). The inspiring story was also captured in a documentary "So much, so fast" (2006) which

reproduces the intense battle from Stephen. Also the persistence of his brothers in the search for new drugs against ALS is admirable. This persistence is not only a mark from the close emotional bond the three brothers have, but also a characteristic of good entrepreneurs which enabled them to establish PatientsLikeMe and reinvent the traditional healthcare system.

PatientsLikeMe is a for-profit company and makes money through partnerships, but their mission is not solely based on making profits. They share a much more common goal and follow four core values. These core values are: placing patients on the first place, emphasizing on openness, promoting transparency and developing a “wow-experience”. Their business model is also based on these principles aligning patients and industry expectations through partnerships aimed at data-sharing, envisioning a future where patients benefit from collective experience exchange and providing a place to share, find and learn. This policy is also reflected in Figure 5.3 and gives an overview of what people can expect when linking up and becoming a member of the online community. A more detailed look on which benefits patients can expect will be provided below. The potential market reach is huge, since the market of chronic care accounts for more than 60 percent of healthcare costs in the U.S. alone (Innosight, 2012). Also in the Netherlands for example, more than 1,5 million people suffer from a chronic disease and almost 30% of them are diagnosed with multiple chronic disorders (Heijmans, Rijken, Schellevis, & Van Den Bos, 2003).

PatientsLikeMe is a **free online community** where thousands of patients with life-changing conditions share real-world experiences.

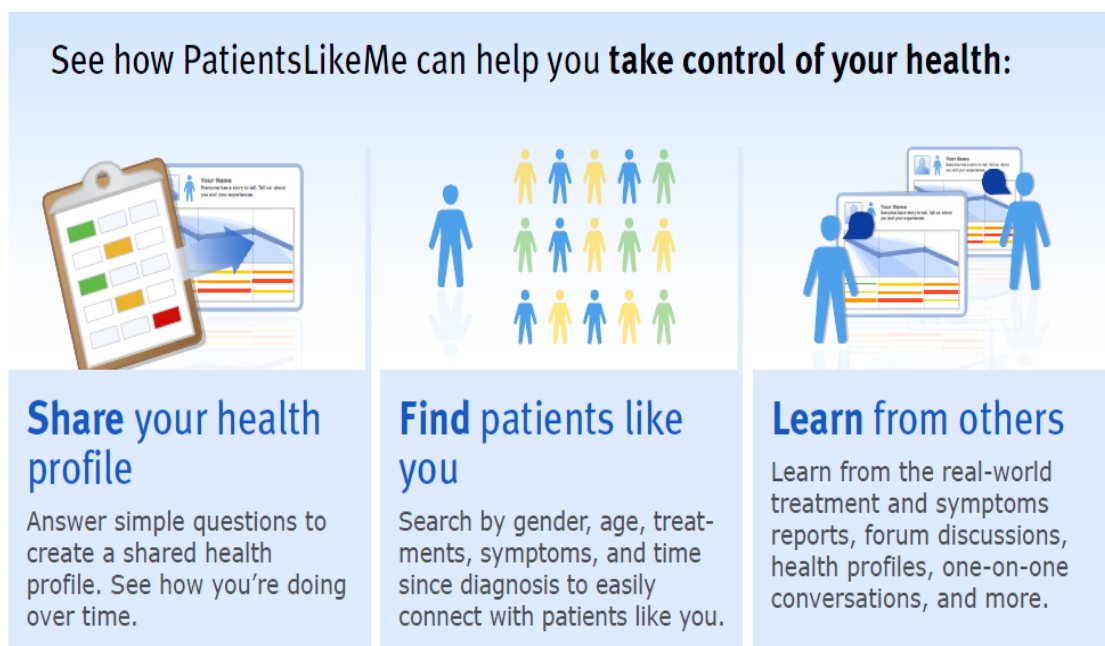


Figure 5.3 PatientsLikeMe Customer Experience. Adapted from www.patientslikeme.com.

However nowadays, the healthcare system is a closed entity and most healthcare data is inaccessible as a result of privacy regulations. Owing to this, currently, research is slow and costly. Moreover, once developed a new improved treatment, it takes years to implement. As already mentioned, also desired information isn't always made available for patients when taking decisions about which cure they want to follow. Online web-based networks only reaches small communities, neglecting the real pain group and are made up of poor data gathering systems. Moreover, what we see is that also the value chain before reaching patients is still traditionally organised, with organizations paying doctors or clinical trials to provide feedback, and conducting expensive research projects with little attention for patients' opinions. In short, four core problems still exist (which are already discussed above):

- People suffering chronic diseases haven't got a good way of talking with fellow patients, and keep no timeline or illness history record.
- Currently, research is mainly aimed at full recovery treatments, saddling people up with a lack of focus on improving life quality for life-threatening diagnosed patients.
- Organizations have to pay doctors thousands of dollars per year for gathering information on how patients are responding to drugs and treatments.
- Patients are not given adequate information about their current status, kept in the dark about cutting-edge research on new treatments and consequently their regimen isn't continually adapted to achieve that outcome (Innosight, 2012).

What PatientsLikeMe does is opening up the healthcare system by enabling thousands of like-minded people to share data on how they feel or value a certain treatment or drug and learn about what's working for others. Hence, people can also improve their dialogue with the doctor in attendance, or even switch to one of his colleagues if discussions about certain treatments aren't what they should be. Indirectly, patients also help to refine treatments by giving feedback and sharing data, resulting in new improved drugs, contributing to one's own advantage and that of thousands of other fellow-sufferers. The website takes the shared information from patients and sells it to their partners, which are companies developing or selling products to patients, like for example drugs, equipment, devices, insurances or other medical services. By selling data to companies they engage their partners to converse about patients' needs and understand the medical value of their products in the real world, tackling the second and third core problem. PatientsLikeMe also conducts own researches.

Now, let's continue on Figure 5.3 and have a closer look on what patients can expect when logging on to the website. There indeed exist many other sites offering patients a platform to communicate and support each other, but what distinguishes PatientsLikeMe is the quantification of data and the way they are displayed, making use of specific tools to make it actionable. On their website the following description is provided: "PatientsLikeMe prompts members to quantify many elements of their lives: how long and to what extent they feel a

pain, discomfort or improvement, how much of what kind of medication or other intervention they use and the impact of treatment in quantifiable terms” (PatientsLikeMe, 2012). So, patients can report their mood (ranging from very bad to very good) and quality of life (divided into social, mental and physical condition). These data are afterwards collected and shown in graphs, charts or tables. This enables PatientsLikeMe to create a community and tackle the first and last of the four core problems.

The creation of this community and the acquired experience out of this platform building with patients and partners made it possible for PatientsLikeMe to expand the website. Going back to the building of a single ALS/MND community (completed with Primary Lateral Sclerosis (PLS) and Progressive Muscular Atrophy (PMA)) in 2005, PatientsLikeMe included other chronic disorders. For example Parkinson’s disease, Multiple Sclerosis, HIV/AIDS, Mood conditions (including depression, anxiety, bi-polar, obsessive-compulsive disorder and post-traumatic stress disorder), Multiple System Atrophy (MSA), Progressive Supranuclear Palsy (PSP), Devic’s Neuromyelitis Optica (NMO), Fibromyalgia/Chronic Fatigue/ME, Epilepsy, and Organ Transplants (PatientsLikeMe, 2012). In the future, still other diseases are planned to be added to the online community, extending the patients network which now already consists of more than 144.000 people sharing about 1000 conditions.

To give a concrete example of the benefits for patients let’s consider a person who has just been diagnosed with a terminal illness, and an estimated life expectancy of five years. He or she makes an account on PatientsLikeMe and logs on to the website. There the patient will find other fellow-sufferers with an equal disorder being already in year three, four or five of that disease. With the offered tools for quantifying symptoms, interventions and results, people can now compare feedback and effect much more easy. Hence, patients in year five can help to improve and even extend life quality of people in their first years by giving tips about which drugs cause which effect, communicate on forums or just giving support, making themselves feel better also. After all, every step or improvement these people can advice to help others in their life fight is equal to helping themselves. The recently diagnosed patients, in turn, help to provide and gather data, aiding future diagnosed persons and enabling companies to conduct researches at a more detailed and precise manner. So in short, patients can track symptoms and treatments to keep record of the progression of their disorder.

5.4.2 Open Innovation approach and challenges

Unlike the 2 previous cases (KLM and specialized insurances), which where examples of co-development, the case of PatientsLikeMe represents a co-production story. The reason why I implemented this kind of case is to see whether there are any differences with the previous ones; and to make this research as profound as possible (to make it more generalized

afterwards). After all, co-production is more decentralized making customers even more part of the experience.

Again, very striking in this case is the way how PatientsLikeMe changed a commodity like market, by innovating and implementing a new business model. Although the health care system kept making huge steps and improvements in their search for better medication and more effective treatments, the way the system was organised and some of the core problems still kept existing. Research was slow and expensive, feedback from users was indirectly via clinical trials, and doctors were paid thousands of dollars to provide data on drugs and treatments. What PatientsLikeMe did was turning around the value chain and placing patients in the middle point, enabling them to give signals what could be better and what the real-life effects of medication were. Through their new business model, the company was able to tackle the four core problems effectively. In short, these challenges, which are already thoroughly discussed above, were to provide people suffering a chronic disorder a platform to communicate with fellow patients and offering adequate information about their current status or new treatments, focusing research on improving life quality for life-threatening diagnosed patients and reduce research costs for drug companies. This was done by both inviting patients to give feedback about their status and at the same time providing some benefits which weren't available for them before. Again, how they tackled these problems, which are the benefits for both patients and production companies, is already discussed above where the business model was explained thoroughly.

However, a new business model idea, solving some major problems in the traditional health care system alone is not enough; you have to make it work too. This is where the questions come in of whether or not one is operating in a competitive market and how money is raised. Also, which partners will be involved, and since this is a case of open innovation, how is the business ecosystem build up. First, if we take a look at the market, potential market reach is huge. The health care market is one of the major drivers of economic activities all over the world, and in the U.S. alone the market of chronic care accounts for more than 60 percent of healthcare costs (Innosight, 2012).

Second, looking at the profit formula, consisting of the revenue model and cost structure, PatientsLikeMe reduces costs by providing a platform (offering a service), and selling the gathered knowledge (outsourcing instead of doing all the research by themselves). Because the website is free to members, in the beginning, they needed funding by private sources to create an online community. Nonetheless, charging a fixed fee for patients wasn't an option. Also traditional advertising like on other social network sites was not possible since their new business concept had no room for favouring certain drugs or companies, because the website was there to communicate on all kinds of drugs and treatments. So it should be against their policy and values to start an advertising war between companies in the medicine industry on

their website. Moreover, they state on their website that: "Every partnership we develop must bring us closer to aligning patient and industry interests. Our end goal is improved patient care and quality of life" (PatientsLikeMe, 2012). What PatientsLikeMe did instead was reversing the situation and selling data to pharmaceutical companies, healthcare providers and research institutes to become revenue streams. Currently, research is arduous and limited by people participating in clinical trials. What PatientsLikeMe distinguishes is that the company can offer healthcare providers a whole new view, with more diversified populations, and a combination of new real-life data and results. Combining the emergent knowledge database of PatientsLikeMe with own data and clinical trial results provides new insights, making research more accurate and quicker. This in turn results in improved offerings for patients, which were at the beginning of this whole process. So patients actually form the key to a new, improved healthcare system area, where PatientsLikeMe provides a platform to make sure their voice is heard and pharmaceutical companies can conduct more adequate research, resulting in a win-win situation for all the players involved.

Nonetheless, this information and data has to be provided in a good way, so they have to make sure partners can do something with their data. Together with the value added services for patients, this is a point where PatientsLikeMe makes the difference. Therefore, the firm developed some tools to collect and range data. In short, Figure 5.4 and Figure 5.5 show what PatientsLikeMe actually does. Due to their education and experience in research for chronic diseases (like ALS), the founders of PatientsLikeMe were able to develop a technology which enables them to range all different kinds of data and draw some clear lines between different diseases and disorders, as shown in Figure 5.4. These outcomes are then used for own research or selling the collected knowledge. A recent example from one of their researches is their epilepsy survey (published in April 2011). This was based on some of the conclusions they draw using one of their online tools.

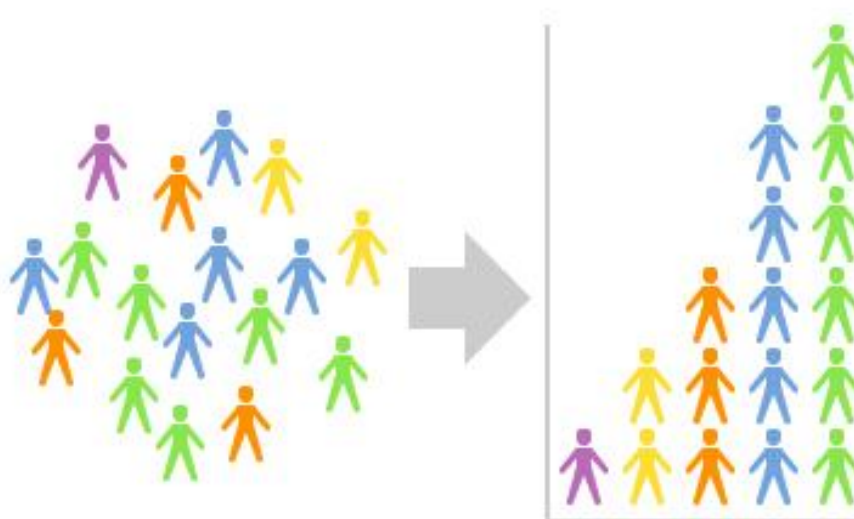


Figure 5.4 Gathering knowledge within PatientsLikeMe. Adapted from www.patientslikeme.com.

Although lot of pharmaceutical companies want to team up with PatientsLikeMe, partners are carefully selected. For example, in January 2010 PatientsLikeMe partnered with the pharmaceutical company UCB to add patients with epilepsy to their community and two months later, in March 2010, they partnered with Novartis to launch a community for people which had undergone organ transplants. Key to these kinds of relationships is that partners share the same vision and values and want to help improving the health care system, extending and improving life quality of patients.

In turn of payments, partners receive a lot of benefits. They do not only acquire access to the knowledge database of PatientsLikeMe, the data report also brings them into direct contact with patients and vice versa patients get connected with the people who are developing new medicines and treatments. By doing so, a huge amount of inefficiency and superfluous intermediaries are left out, making the system more effective, quicker and better. Above, PatientsLikeMe also introduced the ability for partners to request for customised services like keyword monitoring, organising focus groups, conducting online surveys and recruiting people for attendant clinical trials. So over the years they not only provided and ranged data, they also developed a lot of value added services via their online communities to attract partners. Taken altogether, for pharmaceutical companies, a partnership results in new insights provided by both PatientsLikeMe and own research, based on more accurate and real-life data, resulting in quicker development processes. In Figure 5.5, this process is shown.



Figure 5.5 Benefits for partners. Adapted from www.patientslikeme.com.

To summarize, PatientsLikeMe created new added value by letting members take part in a unique community, share information and on the other side of the value chain enabling partners to collect high-value data creating new research possibilities. As a consequence, they opened up the traditional, sluggish healthcare system. Striking about this case is that people are willing to share personal information with others and hence empower the community feeling. This leads to co-production and formed the basis of a new business model, serving a higher good and working together on an improved situation for all the players involved.

5.5 Analysis of the open services innovation cases⁴

In order to come up with some properties of open services innovation the questions are: how were these initiatives and ideas elaborated, which parties were involved, how were they selected, and in what way is it managed? Therefore, this last part of chapter five contains an analysis of the cases discussed above. By analysing these cases thoroughly we should find affirmation for the empirical value of our conceptual model, and above all how these cases can ameliorate the framework.

One thing for sure (a core understanding in all cases): to keep innovating, companies will have to appeal to their white space because natural growth out of their core business has become nearly impossible. This means that they not only have to focus on this core business, but also need to co-operate and co-create with other organizations and customers, making open innovation inevitable. Often this requires taking part in a bigger, common good, resulting in benefits for all enclosed parties. This enterprise co-creation consists of the systematic development of networks, where companies and stakeholders work together to create value by engaging in platforms, designed to enable mutually valuable interactions and experiences. Below, I will discuss the main conclusions which can be drawn out of the cases to come to a consistent view on open services innovation and its advantages.

5.5.1 Creating a business ecosystem

Something that was very striking across all cases was the creation of a business ecosystem, a network. The importance of this network is according to me a bit underestimated in the literature on open services innovation. For services, success depends on the creation of this ecosystem and an analysis of each case separately proves my point. First let's consider why the creation of such a business ecosystem is so important and what are the benefits of investing in the development of networks. Afterwards, I will discuss how these networks should be build-up with the lessons learned from our cases.

- **KLM**

According to Ignaas Caryn it is important for innovation to set the industry standards and is a first aspect which returns from our conceptual model. This is only possible when you create a strong business ecosystem. Caryn: "Especially the merger with Air France but also with, among other things the SkyTeam alliances, make it possible to create new industry standards because you have a very big position in the market. So you have about a quarter of the market, which means that if you set a new standard,

⁴ The quotations in this part are retrieved from interviews with Ignaas Caryn, director of innovation and venturing at KLM, and Kris Vander Velpen, head of Fortis Venturing, conducted by Prof. Dr. Vanhaverbeke.

there is a big chance that others will follow. If they recognize KLM has state of the art systems of for example self-service technology, they will say “we won’t develop it ourselves anymore, we will just buy from them” (Audiofile KLM, 28th of August 2008). So the creation of a business ecosystem strengthens the market position of the company and the network as a whole.

- **Specialized Insurances**

Just like the KLM-case, working with pets (dogs) was new for the Fortis Venturing department, and forced them to co-operate with different parties. Therefore they had to adapt their business model (become more open and adapting their insurance policy), and connect this upon the construction of a business ecosystem. Building this ecosystem enabled them to retrieve crucial information from their partners in exchange of offering some additional benefits (like product placement, new knowledge and insights about dog owners). In this specific case, the ecosystem was build through developing an online community where dog owners could share their thoughts with others and the different partners involved. Again, the creation of a community (business ecosystem) with partners and customers enabled Fortis Venturing to become a main player in the market, making it difficult for competitors to compete.

- **PatientsLikeMe**

PatientsLikeMe illustrates all aspects of building communities and enterprise co-creation: co-creation of value, working together to create new experiences and interactions and engaging in platforms. For PatientsLikeMe, constructing a business ecosystem is enabling communities to build something better together with them, and not just letting the community build something on its own. In this case, transparency is a core value of building networks. A nice example of the effectiveness of such a business ecosystem was the response on a cure presented in a small clinical study. It was argued that lithium drastically slowed the process of ALS, causing a huge discussion. As a consequence, 10% of the users with ALS of PatientsLikeMe started using lithium. Due to the online tools and the information of patients, PatientsLikeMe found that lithium had no effect at all in the real world, making the study worthless. PatientsLikeMe presented their findings and contributed in the search for better drugs. This not only indicates how PatientsLikeMe takes advantage of the valuable information from users, but also how patients contribute to, share and receive real-life data; creating value (by delivering input) for pharmaceutical companies and hence, creating a strong business ecosystem where every stakeholder benefits.

So, in general, the creation of a strong business ecosystem enables companies to capture a strong market position. Above, building tight links with partners and customers leads to a

sustainable competitive advantage since this makes it hard for other firms to compete. If they want to keep ahead and maintain a sustainable competitive advantage, networks have to be further developed in order to keep innovating, which was also clear in the three cases. So the importance of these kind of networks is enormous. Without them, service companies can't compete at the same level with firms who do have them, doomed to lose the battle. This forms a first requirement when implementing an open service innovation approach. This way open business models in the service industry enables companies to shorten the time to go to the market because service providers can rely on the business ecosystem and its partners, which already possess the required competences and infrastructure. It also allows for co-operation and combine the experiences that will enhance the chance of success and reduce the risk of failure.

So proof of the benefits when constructing a business ecosystem is already reflected in the business case examples. However, the question how these networks should be build up is not yet dealt with. To effectively create an open services innovation system we have to ask questions like whether there are any special requirements, which kind of partnerships have to be instituted and what about customer relationships? From our cases, comparable to what we found in the conceptual framework, it makes sense to conclude that the relations with partners should be revised and customers intensively involved. Although a few new elements, which are not yet deeply researched in today's literature, seem to be of crucial importance when setting up an open services innovation system. Below these elements are further discussed.

5.5.2 Revising partnership relations

- **KLM**

For the "E-enabled aircraft", KLM had to work together with Boeing (equipment and installations on the planes), Panasonic (in-flight entertainment) and other companies (some of them providing software, others delivering programmes for the health monitoring of the aircraft). Crucial in this co-operation is that both companies must go from a purely cost-based discussion to a strategic partnership. This was also one of the implications in our conceptual model. Caryn: "Every item that is supplied by another company really has to become a kind of eco-system which we manage in a structural way, so this means that these companies are partners in doing business and you have to create different kinds of relationships with them than you had in the past" (Audiofile KLM, 28th of August 2008). So, better communication between partners over the value chain is a necessary condition to move ahead in innovation and is something we already concluded from the literature. Yet, as became clear from the KLM-case, this goes even further: early involvement is the key of open innovation processes.

Innovation really has to be co-creation from day one, be it with customers, suppliers (external) or employees (so within KLM internally also).

Interviewee Ignaas Caryn also analysed how these partnerships were set up and what the future will look like. Since open services innovation is still new, question is whether there will be an integrated infrastructure in the future. Caryn said this was impossible to do at the beginning because it would cause a lot of discussion between the different departments: "If they all have to use the same platform then it would take 5 years to come to a common decision and by then the projects would probably be abandoned" (Audiofile KLM, 28th of August 2008). Although nowadays they have three different platforms, it seems to be the only way to get things done and keep up the pace of advancement, in order to come to a sustainable advantage. So there isn't any proof yet if it is possible to build one integrated system. Nonetheless, companies have to restructure their enterprise in platforms to reopen the firm and become an open innovation company; nowadays innovation is too much part of the division of corporate strategy and business development.

- **Specialized Insurances**

The last variable of the conceptual framework, namely "intermediate relationships", is also in this case self-evident. Moreover, according to the interviewee, Kris Vander Velpen, this leads to "an emotional patent and stipulates how the business ecosystem is managed" (Audiofile Pet Insurances, 10th of April 2010). When relationships are strong and knowledge is shared smoothly it will become hard for competitors to copycat the concept resulting in a sustainable competitive advantage. This is also the path drawn in the conceptual model, leading eventually towards a competitive advantage.

- **PatientsLikeMe**

As already stated, PatientsLikeMe is looking for partnerships in a whole range of companies, centred around pharmaceutical activities and exploring new ways of measuring and improving healthcare data. In this case, finding and establishing partnerships was not so self-evident. In their search for partners, PatientsLikeMe discovered that some of the industry is still ignoring the rich data on their online community, making it hard to attract new partners. This resulted from deeply rooted systems in the healthcare system where all of the actors involved make money, and the fact that there were also a lot of other possible communication channels for patients where they could attract data from (like Facebook, blogs). Also doctors fear of losing their jobs since a lot of information is provided on the online community. However, this is a contradiction since PatientsLikeMe will even ameliorate the

communication between patient and doctor: patients will learn from PatientsLikeMe and can afterwards confer with their personal doctor on possible treatments. After all, doctors still know their patients the best and can judge whether or not a new treatment is realistic, given the physical condition of the patient. Therefore, the founders of PatientsLikeMe still have to put a lot of energy in improving and praising their business model and its added value. Something they had to adjust already was paying more attention to relationships with pharmaceutical partners (which provide the revenue streams). Therefore they had to establish and offer more value-adding services like clinical trial recruitment (Innosight, 2012), something which was not yet there from the start.

Also the terms and conditions on which relationships with partners are build have evolved over time. Partners have to get along with the specific policy of PatientsLikeMe (core values), in order to guarantee privacy to patients. This not only creates mutual trust between the patients and PatientsLikeMe, but also between PatientsLikeMe and their partners and partners and patients. This leads to an improved rendering of service and release of data.

So confidence and relationships are crucial when making these kinds of business ecosystems work. As a company, one has to revise these relationships when implementing an open innovation approach going from a purely cost-based discussion to a real partnership.

5.4.3 Involvement of customers

Another link with the conceptual model is co-creation with customers. In the two first cases co-development with customers is subject. PatientsLikeMe, on the contrary, is an example of a co-production story, where patients deliver the input. Without them the business model has no value.

- **KLM**

In the case of KLM this was double: co-creation with individual customers (B2C), but also with businesses (B2B). Caryn argued that it became inevitable to work with the outside world. For example KLM created both: 'KLM in touch' which dealt with individual customers (B2C) as well as Club Africa where online business communities are involved (B2B). For the elaboration of Club Africa they learned from the experiences with Club China and involved customers already from day one. One of the advantages of involving customers early is that they become shareholders of the process and will become very excited (empowerment and buy-in). So it should become more structural than just to start a project on an ad hoc basis. Key for this co-creation

is to translate needs towards concrete projects or services; as this seemed to be difficult in the past.

In the past, this was too much of a misinterpretation of customer's needs. KLM listened to the needs of passengers, but did the translation itself. Take for example the telephone-on-board during the '90s. For KLM, this was a huge investment to foresee airplanes with telephones, but after the implementation nobody used them. That's why nowadays, KLM checks every step in the development process with passengers and really involves them from day one, making it an interactive and continuous cooperation. Caryn concludes for co-creation with customers that it helps "avoiding the disasters of developing the wrong things and really making your customers advocates of new services" (Audiofile KLM, 28th of August 2008).

The question is whether or not these different co-creation platforms (KLM in touch, KLM Bleu, KLM Business) will become part of an integrated structure. Today this is not yet an option since it keeps the different platforms flexible and speedy. If they all have to use a same platform it would take much more time to come to a common decision. Although with more experience of implementing this approach when working together with customers, could in the future possibly give rise of an integrated structure, enabling KLM to become even more efficient and continuously keep innovating their services.

- **Specialized Insurances**

The experiences and stories from dog owners did not only guaranteed Pet Insurances they were trustworthy, but also made it possible to offer customized services depending on the varying properties of dogs (e.g. age, breed or gender). In short, co-creation with customers offers the ability to map - in this case - the dog owners' needs and anticipate on this knowledge. This resulted for example in a fixed premium and the choice between three different formulas in package-form, which is somehow different from classic (human) insurances.

- **PatientsLikeMe**

In this case, sharing healthcare experiences and outcomes is crucial. If patients are given the ability to share real-world data, collaboration becomes possible. Because this is on a global scale, new treatments can be discovered and changes appear. So by bringing people together a wider purpose is supported; research becomes quicker and more flexible, providing a solution for a broken healthcare system.

Therefore, PatientsLikeMe had to gain their trust and provide a safe and confidential online community. The company noticed that online champions have a huge potential influence across multiple channels. This means the engagement of some people (in this case patients) which can attract other patients to join the community. As a result, PatientsLikeMe puts a lot of effort listening to customers in order to improve the website, creating a better world for patients (which is the main goal of the company). So it really is an interaction between trying to give patients an answer on the question "Given my status, what is the best outcome I can expect to achieve and how do I get there?" and attracting and selecting important information and data provided by patients.

5.5.4 Venturing

Something which hasn't been talked about in the literature is venturing. Venturing is a way for companies to research new growth opportunities which involve to a certain extent other activities than their core business, so a different approach is desirable to succeed. For manufacturing companies, this is an already deeply rooted phenomenon. On the other side, the services industry hasn't got much experience in venturing up till now, since these kind of businesses didn't had to cope with commoditized markets (maturity phase) and exploring new growth opportunities. Therefore, it was an interesting exercise to see how these case examples worked around venturing and which advantages it offered them. For PatientsLikeMe, which was a start-up company and is now still in its growth phase, the service offerings are still part of their core business, so venturing is not yet applicable to them.

- **KLM**

KLM indeed makes use of venturing as a possible solution to do something about new growth opportunities because there are differences between managing the core business and new services. In this particular case, KLM mostly operated as a launching customer for start-ups, but they saw that this sometimes flowed into lost opportunity because these start-ups build their brand on KLM (and afterwards sold the new offerings to other airline companies for a lower price than it cost KLM). Caryn: "It became clear quite actually that venturing could be very interesting to us because in the end it's the same thing as for industrial companies in the sense that you have your core business and you have your new business and the core business has to be handled differently from the new business" (Audiofile KLM, 28th of August 2008). Therefore, they looked at DSM and Philips (both manufacturing companies) to implement a fixed venture board structure. The difference between those manufacturing companies and KLM as a service provider is that KLM doesn't have a research department, so there's not the handover from research to the venturing or

the incubator. Service companies always have to build systems involving a number of other parties.

Venturing was a way to improve the innovative power of KLM. It also helped to overcome the fact that if innovations were put back into the line business to soon, it became very difficult to mature these new services. This was the case with Club China and Africa and was different from other marketing activities, so important decisions for these online communities were mostly postponed, making it slow and unable to grow. Venturing also enabled KLM to discover more ideas from the outside, where before more than 80% was coming from the inside. The added value of venturing is that it brings KLM in direct contact with not only suppliers and customers, but also with universities, incubators and local authorities, providing 50% of the new innovations today.

- **Specialized Insurances**

Also for Pet Insurances the project was further developed by the venturing department of Fortis. These new kind of insurances required a different approach than traditional insurances because of dog owners' specific needs and the creation of a completely new community. In this case, an advantage of venturing was that Fortis could easily abandon the project and sell it when financial problems aroused (Audiofile Pet Insurances, 10th of April 2010).

5.5.5 Business Model Innovation – Customer Experience

Another (new) element not yet mentioned in the conceptual framework is business model innovation. This was also one of the conclusions from the case dealing with KLM and hence seems to be of importance for open services innovation. In the end, improving and innovating core services aren't that difficult and mostly don't require attracting new partners. For business model innovation the service company moves outside their core business and is forced to attract new information streams. Johnson (2011) defines business model innovation as "to innovate something more core than the core, to innovate the very theory of the business itself" (p.13). This is done by selecting partners creating a business ecosystem and wondering whether or not the service company will have the same position in the value chain in the future as today (so anticipating on how business industries and own offerings will change and evolve).

In his book "Seizing the white space. Business model innovation for growth and renewal" Johnson (2010) focuses on how companies can achieve business model innovation in order to grow. He designed a four-box business model, consisting of developing: a customer value

proposition, profit formula, key resources and key processes. All these steps were also closely analysed in the cases and follow almost automatically when innovating in services. Johnson (2010) even argued three areas to create growth: the white-space-within, the white-space-beyond and the white-space-between. For KLM, this was a clear example of scanning their white-space-within and stands for, as Johnson describes it, "to achieve transformational growth or renewal within your existing market by delivering new customer value propositions, wrapped in appropriate business models, to address these new jobs" (p.55). The cases of Dog Insurance and PatientsLikeMe go even further, unlocking even more opportunities to serve entirely new customer groups and create new markets. This is seizing the white-space-beyond (Johnson, 2010). Seizing the white-space-beyond can be described as reaching potential customers which are now non-consumers, through developing new business models. This occurs when large groups of potential consumers are denied access to a market because offerings are too expensive or just not attainable. According to Johnson (2010) of crucial importance when innovating business models is that "a failure to consider how all the elements of the business model work together can doom a new initiative trying to democratize its offering" (p.86). The thorough analysis of the cases above gave some insight in how business models can be build up effectively, overseeing all challenges.

So far for the comparison with the theory of business model innovation. The question now is how the case-studies contributed to this theory, bearing in mind that we are dealing with the service industry. A reflexive pattern and important to notice about business model innovation and business ecosystem creation is that all the partners serve a common goal (or range of thoughts), which is a prerequisite (developing a unique customer value proposition). For Pet Insurances they build an ecosystem around dog experience and how to improve this experience and the overall health of dogs, similar to extending and improving the customer experience within the KLM-case. The interviewee, Kris Vander Velpen, described this as "selling services with an emotional component" (Audiofile Pet Insurances, 10th of April 2010). To effectively sell the emotional content, the creation of a business ecosystem and community is crucial, where close bonds with partners and customers are constituted. This also leads to an "emotional patent" in an environment where intellectual property isn't applicable. This "emotional patent" is situated in the relationships within the ecosystem's partners and customers, making it hard for competitors to duplicate.

Also for the case of PatientsLikeMe a bigger, common goal is served. Placing patients centrally, the company wants to create a community together with people and partners to improve life expectancy and conditions for persons with chronic disorders, providing an alternate vision for the future of healthcare. Again, the reason why PatientsLikeMe became a success was the fact that they, as one of the first companies in the healthcare system, tried to understand how patients felt and what they expected, establishing an emotional bond,

eventually resulting in an “emotional patent”. What they see is that people really stick to this online community, helping to establish a sustainable competitive advantage.

More than manufacturing products, services seem to have an emotional aspect. Customers expect this emotional sympathizing and ask for customised services. Moreover, it has an influence on every relationship, every partnership and each action a firm takes within their business ecosystem. In order to extend their customer circle of contact, service companies have to govern every aspect of this phenomenon. So, before building a community and selecting partners, organizations have to know what this wider common thought is creating a value-added customer experience and based on that establishing partner and customer relationships. This is something which has, according to me, not yet been investigated and is missing in the literature around open services innovation. Having a coordinating influence on each part of the conceptual framework, the emotional aspect is something which has to be understood fully.

Hence, we can conclude that the conceptual model indeed makes sense and is, just like KLM, completed with business model innovation and its accompanying implications. All these aspects have led to an open services innovation approach and in turn resulted in a sustainable competitive advantage. In order to maintain this sustainable competitive advantage, both interviewees (Ignaas Caryn and Kris Vander Velpen) hammered at the fact that continuous innovation is required, combined with evolving business models (so we come full circle as in the conceptual model of Figure 4.6).

It is also possible to come to a more concrete view of the connection between the different parts I’ve just discussed. Everything starts from building a business ecosystem and attaching a company’s business model to it. Successfully working out such a system can be done through a venturing department when developing services outside a firm’s core business. When working with business ecosystems, a few requirements seem to be in place in order to guarantee its success. These are revising partnerships, involving customers and serving a common goal (so creating an improved customer experience). In the last chapter, this analysis of the three cases will be compared to our original conceptual model, where similarities will be acknowledged and new aspects discussed; in order to improve the conceptual model and finally arrive at a final framework, enabling to answer the central research question.

6 Conclusions

The final chapter consists of two parts. First I will provide feedback for the cases in comparison with the conceptual model. This has already been discussed shortly, but has to be elaborated on further. The purpose is to analyse the framework again, given the input from the cases, and see how they can change or ameliorate the framework. Hence, this will lead to added value for the literature concerning open services innovation, resulting from the cases.

This should also enable me to formulate a founded answer on the central research question: *Besides the concepts explained in "Open services innovation", are there other possible approaches to open services innovation?* Finally, this thesis will conclude with some reflections and recommendations for future research.

6.1 Reconsidering the conceptual framework

First, let's reconsider the conceptual framework developed in chapter 4. In short, service companies have to innovate and open up their business models. This enables them to create a business ecosystem. Two conditions for constructing a successful business ecosystem are involving customers and revising relations with partners and stakeholders (defined intermediate relationships). Doing so, there will be an open innovation approach resulting in a sustainable advantage, not only for the company as an individual, but for the network as a whole. Below, I will analyse this framework again, given the input from the cases, and see how they change or ameliorate the framework.

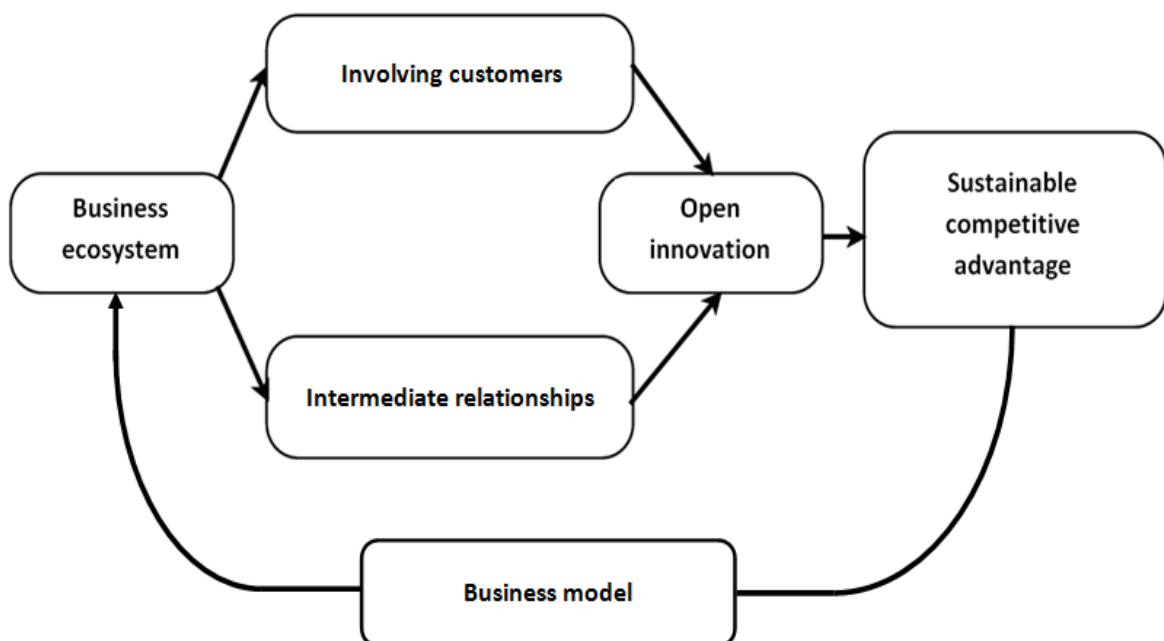


Figure 6.1 Conceptual framework Open Services Innovation

6.1.1 Business models

By reconsidering and improving *business models* (processes) companies can get the best out of their systems and hence this serves as the first variable of my conceptual framework. After all, Chesbrough (2011) states that most service companies do not have formal R&D processes and few have set up frameworks to manage their innovation processes. If service providers can sufficiently specialize in performing an activity over time, they can become more efficient at performing the activity (relative to partners doing it internally). This creates a market for open innovation in services and companies can, as a result, reach both economies of scale and scope. Business models are a crucial element when introducing an open innovation approach, and to successfully take part in a business ecosystem (which is the second variable) these models need to be build upon the specific requirements of these platforms. So the firm as an individual needs to deliver a contribution in order to successfully take part in this ecosystem. That's why business models are connected with business ecosystems in Figure 6.1.

Although both variables (business models and business ecosystems) are very closely related, a few requirements for business models in specific can be derived from the cases. Something which was not yet mentioned in the conceptual framework is business model innovation. Improving and innovating core services aren't that difficult and mostly don't require attracting new partners. For business model innovation the service company moves outside their core business and is forced to attract new information streams. This is done by selecting partners creating a business ecosystem and wondering whether or not the service company will have the same position in the value chain in the future as today (so anticipating on how business industries and own offerings will change and evolve). I, again, refer to the framework Johnson (2011) constituted to effectively innovate business models.

A reflexive pattern in the cases and an important point to notice about business model innovation and business ecosystem creation is that all the partners serve a common goal (or range of thoughts), which is a prerequisite. Johnson (2010) contributes to this by stating that "it's critical when searching for unfilled jobs-to-be-done to realize that you must think not only about the functional aspects of a job but also about its social and emotional aspects – which together make up the experience that customers desire in accomplishing the job" (p.119). This is especially the case when dealing with services. For Pet Insurances they build an ecosystem around dog experience and how to improve the overall health of dogs; similar to extending and improving the customer experience within the KLM-case where they aim to diminish the annoyances of passengers when travelling. Also for the case of PatientsLikeMe a bigger, common goal is served. Placing patients centrally, the company wants to create a community together with people and partners to improve life expectancy and conditions for persons with chronic disorders, providing an alternate vision for the future of healthcare. PatientsLikeMe tries to understand how patients feel and what they expect, establishing an

emotional bond, eventually resulting in an “emotional patent”. So it is really important to sell services while bearing in mind the emotional component. This can only be done when building a business ecosystem. That’s why service companies taking an open innovation approach have to install this common goal and make it part of their business model, adapting processes and systems upon this goal.

According to me, this aspect is not always explicitly mentioned in the open services innovation literature. After all, services usually have an emotional aspect for customers, something which is different from material products like for example fabric softener. Consequently, service companies have to focus on this emotional aspect, adapting their business model to effectively come to business model innovation. When neglecting this, companies can’t build business ecosystems, making open services innovation impossible. So, the first variable (business models) is further specified and elaborated. Before, the literature talked about opening up business models, but remained vague. Following out of the cases we see that, before building a community and selecting partners, organizations have to know what this wider common thought is creating a value-added customer experience and based on that establishing partner and customer relationships. Having a coordinating influence on each part of the conceptual framework, the emotional aspect is something which has to be understood fully.

6.1.2 Business ecosystems

To effectively sell the emotional content, the creation of a business ecosystem and community is crucial, where close bonds with partners and customers are constituted. This also leads to an “emotional patent” in an environment where intellectual property isn’t self-evident. This “emotional patent” is situated in the relationships with the ecosystem’s partners and customers, making it hard for competitors to duplicate. Again, this elaborates today’s literature. The exchange of knowledge and information (tacit as well as other sorts of information streams) is crucial and can lead to a competitive advantage. Companies should act as being part of a whole and not as individual beings, and learn to overcome the influence of the existing core business when exploring the company’s white space (Johnson, 2010). In order to maintain this competitive advantage, business ecosystems need to evolve and hence, companies need to keep innovating and adapting their business models (creating synergism between the two first variables).

The creation of a business ecosystem not only creates an “emotional patent”, but also strengthens the market position of the company and the network as a whole. As a consequence, it become possible to set the industry standards as we saw in the three cases. For KLM, due to their strong market position, their innovations set the industry standards and other airline companies had to follow. Also with Pet Insurances and PatientsLikeMe, they were

able to set new industry standards, making it hard for other companies to compete. This is only possible when you create a strong business ecosystem. More than ever, building an ecosystem enabled them to retrieve crucial information from their partners in exchange of offering some additional benefits, as was demonstrated in the Pet Insurances case with product placement, new knowledge and insights about dog owners was gathered (reconsider the discussion of Figure 5.2).

Chesbrough (2011) also argued that collaboration is a crucial element when building platforms. Allowing co-creation between small and large firms can create synergism and unite the better of the two different worlds in one. This is also the case in the previously discussed case studies. KLM works together with small start-ups, both benefiting from the collaboration. Even with specialized insurances and PatientsLikeMe, small and bigger companies seem to work together effectively. This means, service companies have to carefully elaborate on which partners they select. Smaller companies are also more willing to take part in such collaboration, being more open to create strong bonds (see also 6.1.4, intermediate relationships), whereas this should be more difficult between two large companies.

Nonetheless, the creation of a business ecosystem alone is not sufficient, according to the proof found in the case studies, these networks also have to fulfil some requirements. This is a missing component in today's literature, where authors, like for example Hulzebos and Piepenbosch focused on the term business ecosystem, but didn't really explain them. These requirements are sustaining a common-goal, involving customers and establishing close intermediate relationships. The first requirement (common-goal) is already explained above. It's important that every stakeholder in the network recognizes this common-goal and systems are worked out according to a specific order to attain this goal. Involving customers and establishing intermediate relationships are explained below, since these form a crucial element when working with an open innovation approach. This is the reason why in Figure 6.1 I split from *business models* to these two different variables, which come back together to the variable of *open innovation*. Chesbrough (2011) paid to little attention to the use of customers and relationship building (Figure 6.1) when building a business ecosystem. The case studies provided an answer on this.

Hence, for the variable *business ecosystems* in the conceptual framework, this can be ameliorated and further elaborated according to what we found in the literature. It seems that a business ecosystem helps to create an emotional patent, enables companies to set industry standards and creates synergism between the different partners, customers and other stakeholders.

6.1.3 Involving customers

According to our conceptual framework, a business ecosystem should include an intense collaboration with customers. This is something Chesbrough (2011) and Hulzebos and Piepenbosch (2011) also argued. I already discussed that when involving customers, crucial knowledge is gathered and this in turn enables services to learn, share, and improve across the boundaries of what Chesbrough calls vertical silos (where little is shared among the different service domains). So that co-creation in one domain will lead to co-creation in another domain, and so forth (Chesbrough, 2011). Hence, companies can offer customers a complete solution thanks to systems integration with other companies while still making money, leading to a win-win situation for all the different parties involved (as is the case for KLM). Organizations have to co-create with their clients at the level of the business ecosystem.

The added value the case study examples provide is that this variable even seems to be more important than first thought. In all three cases, customers were involved from day one, making innovations quicker. Johnson (2010) corresponds to this and states that “a needs-based analysis is the wrong approach to conceiving of transformative, growth-generating customer value propositions. To become truly customer-centric, you must stop asking your customers “What do you need?” and start asking them “What are you trying to get done?” (p.116). Like KLM, the company checks every step in the development process with passengers and really involved them from day one, making it an interactive and continuous cooperation. One of the advantages of involving customers early is that they become shareholders of the process and will feel empowered in the change, which creates customer buy-in. So it should become more structural than just start a project on an ad hoc basis. Key for this co-creation is to translate needs towards concrete projects or services (or jobs-to-be-done (Johnson, 2010); as this seemed to be difficult in the past (e.g. the failure of the on-board-telephone). It helps to avoid the disasters of developing the wrong things and really making your customers advocates of new services. Also for Pet Insurances, co-creation offered the ability to map dog owners’ needs. This resulted in a fixed premium and the choice between three different formulas in package-form, which is a slightly different approach than other insurances. So, this was really co-development which is deeply rooted in the business ecosystem and processes.

However, the involvement of clients can even go further. The case of PatientsLikeMe is an example of a co-production story with customers, where patients deliver the input. Without them, the business model has no value. Of crucial importance for PatientsLikeMe was to gain patients’ trust and provide a safe confidential online community. The company noticed that online champions were valuable here, since they have a huge potential influence across multiple channels.

In short, the case study examples reinforce one aspect that has already been discussed in the literature. Involving customers is crucial for setting up an open innovation approach in services, making the business ecosystem work effectively. Moreover, these cases contribute to the literature by revealing that this co-development, and more extremely co-production, really has to be done in an early stage to improve results. So service companies collaborating with clients from day one benefit because they can anticipate the needs of the customer early-on and hence can afford to be more flexible to customer needs, in comparison with firms that have not done so. Not involving customers also makes the business ecosystem less efficient, doomed to blow over.

6.1.4 Intermediate relationships

Of equal importance when building ecosystems are the intermediate relationships that are set up between partners, customers and stakeholders. These relationships should radiate trust, confidence and vision in order to expand long term bonds. This variable is also proven to be effective by Hulzebos and Piepenbosch (2011). According to Chesbrough it is important that platforms are designed for long-term relationships and not, as sometimes in product-oriented firms, for temporary projects. To succeed, strong bonds have to be built with customers and suppliers. Therefore, relations and psychological contracts between business ecosystems' partners are crucial. This variable was defined as *intermediate relationships*, and is also depicted in Figure 6.1. The reason why I named this variable like this is because there is not yet a clearly defined description of this in the literature. The cases should confirm what Hulzebos and Piepenbosch defined as personal confidence and give more insight into how *intermediate relationships* are constructed.

Consequently, the cases gave proof of these intermediate relationships and which points serve as critical success factors. Like for KLM, it was crucial to go from a purely cost-based discussion to a strategic partnership. Caryn: "Every item that is supplied by another company really has to become a kind of eco-system which we manage in a structural way, so this means that these companies are partners in doing business and you have to create different kinds of relationships with them than you had in the past" (Audiofile KLM, 28th of August 2008). Again, establishing these systems at an early stage is a key part of the open innovation process.

The intermediate relationships lead to "an emotional patent" and stipulate how the business ecosystem is managed. When relationships are strong and knowledge is shared smoothly it will become hard for competitors to copycat the concept resulting in a sustainable competitive advantage. For PatientsLikeMe, finding and establishing partnerships was not so self-evident. This really gave insight in how companies can attract partners and create a business ecosystem. PatientsLikeMe discovered that some of the industry is still ignoring the rich data

on their online community, making it hard to attract new partners. Therefore, they really had to invest in the relationships with (pharmaceutical) partners by offering more value-adding services like clinical trial recruitment. Also for Specialized Insurances, as a company, one has to make sure there are potential gains for every party involved. This can be done by drafting a common-goal to relate each player within the business ecosystem to one other. Going back to the example of PatientsLikeMe, this not only created mutual trust between the patients and PatientsLikeMe, but also between PatientsLikeMe and their partners and partners and patients. In the case of KLM and Pet Insurance, it has also led to an improved rendering of service and release of data.

So this is, again, comparable to what Hulzebos and Piepenbosch (2011) define as personal confidence and also Chesbrough (2011) discussed. Nonetheless, these cases made this variable more visible (i.e. which points are crucial in these relationships), creating a really close bond and different from earlier partnerships in business industries.

6.1.5 Venturing

Something that became clear in the cases and which hasn't been talked about in the literature is venturing. Venturing is a way for companies to scan new growth opportunities which involve to a certain extent other activities than their core business, so a different approach is desirable to succeed. For manufacturing companies, this is an already deeply rooted phenomenon. On the other hand, the services industry doesn't have much experience in venturing up till now, since these kind of businesses didn't have to cope with commoditized markets (maturity phase) and exploring new growth opportunities. Therefore, it was an interesting exercise to see how the case examples worked around venturing and which advantages it offered them.

Since there are differences between managing the core business and new services, KLM used venturing as a possible solution to do something about new growth opportunities. KLM looked at DSM and Philips (both manufacturing companies) to implement a fixed venture board structure. The difference between those manufacturing companies and KLM as a service provider is that KLM doesn't have a research department, so there's not the handover from research to the venturing or the incubator. Service companies always have to build systems involving a number of other parties. Venturing was a way to improve the innovative power of KLM. It also helped to overcome the fact that if innovations were put back into the line business to soon, it became very difficult to mature these new services. Venturing enabled KLM to discover more ideas from the outside, where before more than 80% was coming from the inside. The added value of venturing is that it brings KLM in direct contact with not only suppliers and customers, but also with universities, incubators and local authorities, providing 50% of the new innovations today. Also for Pet Insurances the project was further developed

by the venturing department of Fortis. These new kind of insurances required a different approach than traditional insurances because of dog owners' specific needs and the creation of a completely new community.

Since venturing is still new for service companies, this approach has to be investigated further. Hence, this will be one of the recommendations for future research. Question is whether in the future open innovation initiatives will become an integrated structure, as was the case for Pet Insurances (resulting from Fortis Venturing). Within KLM, they are also considering the implementation of a permanent venture board. This could possibly open up new ways of innovating in services, making it easier to attract partners and generate new ideas.

To round up, the original conceptual model still contains the same variables, but a few new elements have arisen when analysing real-life cases. So in practice, open services innovation seems to contain more than what the literature showed. Overall, there are great similarities between the cases and the conceptual model, which proves its empirical value. Nonetheless, the variables are improved and enriched due to the cases. The purpose was to analyse the framework again, given the input from the cases, clarifying how they improved the conceptual model. Hence, this discussion leads to added value for the literature concerning open services innovation. Relating to Figure 6.1, the cases also gave a more concrete view of the connection between the different parts I've just discussed. Everything starts from building a business ecosystem and attaching a company's business model to it. Successfully working out such a system can also be done through a venturing department when developing services outside a firm's core business. When working with business ecosystems, a few requirements seem to be in place in order to guarantee its success. These are revising partnerships, involving customers and serving a common goal (creating an improved customer experience). This way open business models in the service industry enables companies to shorten the time to go to the market because service providers can rely on the business ecosystem and its partners, which already possess the required competences and infrastructure. It also allows for co-operation and combine the experiences that will enhance the chance of success and reduce the risk of failure.

6.2 Final conclusion for the central research question

The foregoing discussion also enables me to formulate a founded answer on the central research question: *Besides the concepts explained in "Open services innovation", are there other possible approaches to open services innovation?* Now, I am able to give a positive answer on this question, because for open services innovation, there is more than what Chesbrough wrote down in his book and his resulting framework. As already said, Chesbrough

also takes into account organizations that shift from a product approach to a service-driven one. Therefore, the first concept in Chesbrough's framework (learn to think of your business as a services business), is not applicable. This thesis focuses on pure service companies, and as I will argue, differs slightly from Chesbrough's framework.

Relating to *business models*, Chesbrough (2011) correctly states that most service companies do not have formal R&D processes and few have set up frameworks to manage their innovation processes. If firms can sufficiently specialize in performing an activity over time, they can become so efficient at performing an activity (relative to partners doing it themselves) that they can induce that activity to be performed outside partners' internal operations instead of within those operations. This creates a market for open innovation in services and companies can, as a result, reach both economies of scale and scope. The importance of business models extends and is somehow different to what Hulzebos and Piepenbosch (2011) investigated. Their study looks for variables at a business ecosystem level, rather focusing on the ecosystem than as an individual solely. Nonetheless, business models are a crucial element when introducing an open innovation approach, and to successfully take part in a business ecosystem these models need to be built upon the specific requirements of these platforms. So the firm as an individual needs to deliver a contribution in order to successfully take part in this ecosystem. Chesbrough also pays a lot of attention to business models, but focused, according to me, mainly on companies switching manufacturing activities to a service approach. Therefore, Chesbrough quotes repeatedly that companies have to open up business models. Conversely, for the kind of services investigated in this research (pure service industries), more is required than just opening up business models. Since services contain a certain emotional content, services have to pay attention to this emotional content (formulating a common goal). The framework of Chesbrough can thus be extended with the knowledge that, before building a community and selecting partners, organizations have to know what this wider common thought is creating a value-added customer experience and based on that establishing partner and customer relationships, made possible by business model innovation. Having a coordinating influence on each part of the conceptual framework, the emotional aspect is something which has to be understood fully.

When considering *business ecosystems and networks*, Chesbrough (2011) remains at the surface, although this forms the core for open innovation in services (far more important than in manufacturing industries). This also became clear when analysing the real-life cases. Although Chesbrough seems to look at the level of organizations, he also realises that open innovation in services depends on whether or not firms can create platforms. Organizations have to institute type 6 business models (see the discussion of Chesbrough (2006)) and let them evolve depending on the status and position within the business ecosystem (e.g. growth phase, maturity stage). Nonetheless, Chesbrough does not thoroughly elaborate on how

networks are established, so it was crucial to gain some more insight in this. As argued above, business ecosystems help to create an emotional patent, to enable companies to set industry standards, and to create synergism between the different partners, customers and other stakeholders. This leads to a strong market position, proving the benefits of implementing an open services innovation approach. The emotional patent, setting industry standards and creating synergism are also the three concepts which explain more precisely how the variable of business ecosystems (extend services innovation outside your organization) in the framework of Chesbrough (2011) is build up. The importance of this network is according to me a bit underestimated in Chesbrough's framework on open services innovation. For services, success depends on the creation of this ecosystem.

For *intermediate relationships*, Chesbrough (2011) doesn't explicitly name these relationships in his conceptual framework, but after a closer look Chesbrough also makes notice of this confidence culture between partners of business ecosystems. Chesbrough (2011) argues that companies have to create an open mindset and extend services innovation outside their organizations. Hence, firms can reach greater capability. This is quite similar to what I found in the cases. When relationships are strong and knowledge is shared smoothly it will become hard for competitors to copycat the concept resulting in a sustainable competitive advantage. The intermediate relationships lead to "an emotional patent" and stipulate how the business ecosystem is managed. Constructing these intense relations at an early stage is key in an open innovation approach. It is crucial to go from a purely cost-based discussion to a strategic partnership.

Lastly, relating to the *involvement of customers*, the case study materials also provide a lot of similarities with what Chesbrough (2011) described. Involving customers is crucial for setting up an open innovation approach in services, making the business ecosystem work. The framework of Chesbrough can be completed by revealing that this co-development, and more extremely co-production, really has to be done at an early stage to improve results. So service companies collaborating with clients from day-one benefit because they can anticipate the needs of the customer early-on and hence can afford to be more flexible to customer needs, in comparison with firms that have not done so. Not involving customers also makes the business ecosystem less efficient, doomed to fall apart.

Another, new element that came forward out of the cases was *venturing*. This is not yet present in Chesbrough's framework and is not explicitly mentioned in his book. Venturing is a way for companies to scan new growth opportunities which involve to a certain extent other activities than their core business, so a different approach is desirable to succeed. The services industry hasn't got much experience in venturing up till now, since these kinds of businesses didn't have to cope with commoditized markets (maturity phase) and exploring new growth opportunities. Therefore, it was an interesting exercise to see how the case

examples worked around venturing and which advantages it offered them. Since venturing is still new for service companies, this approach has to be investigated further.

Hence, the points discussed in part 6.1 have led to some new, finishing thoughts on the framework discussed by Chesbrough. Part 6.1 and 6.2 serve as the final and main conclusion of this thesis and helped to answer the central research question in a positive manner. As a consequence, this thesis has helped to make a critical reflection on today's literature, completed with some value adding views resulting from the cases.

6.3 Reflections and recommendations for future research

Ultimately, this thesis will conclude with some reflections and recommendations for future research. As already argued, this thesis is one of the first explorative investigations on open innovation in services and offers some extending ideas on how the initial theories of Chesbrough (2011) and Hulzebos and Piepenbosch (2011) can be strengthened. In the first chapter I already mentioned the limitations of this research: the range of services we surveyed in this thesis is limited and by clearly defining services it became possible to set the boundaries of this thesis. These limitations contribute to the aim to carry out this study with much precision. In accordance with the recommendations made by Hulzebos and Piepenbosch (2011), this thesis offers an added value to the research on open services innovation. The recommendations in their paper argued that research has to be deepened when dealing with the relations inside business ecosystems: search for new relevant success factors, which variables influence the business ecosystem to obtain a sustainable competitive advantage and how these business ecosystems are coordinated. With the comparing literature study analysis and the case study approach in this thesis, these questions are now answered. Nonetheless, this is still just an explorative study (eye-opener) on open innovation in services. That's why I reach out some recommendations for future research, which are according to me crucial to fully understand open services innovation and strengthen the theoretical foundation of this discussion.

A first recommendation is to develop a more *quantitative research* of the open services innovation approach. This was one of the limitations talked about for this thesis: although I tried to guarantee for data triangulation with using different methods (literature study and cases), the data used are only qualitative. With the variables defined in this thesis, literature on open services innovation has become wider and more readily available. It would be interesting to test these findings on a quantitative basis, like Hulzebos and Piepenbosch (2011) did, focusing on the new elements.

Secondly, since *venturing* is still new for service companies, this approach has to be investigated further. There remains the question of whether open innovation initiatives will become a fixed structure in the future, as was the case for Pet Insurances. Within KLM, they are also considering the implementation of a permanent venturing board. This could possibly open up new ways of innovating in services, making it easier to attract partners and generate new ideas.

The last recommendation for future research is to study how the future of open services innovation will look like. One question remaining is whether or not these different co-creation platforms will become part of an integrated structure. Since nowadays, open innovation seems to result from unique projects. However, open services innovation is still new, so the question remains whether there will be an integrated infrastructure into the future. Initially KLM had said this was impossible to do because it would cause a lot of discussion and tension between different departments. Up till now, this seems to be the only way to get things done and keep up the pace of advancement, in order to obtain a sustainable advantage. So, more research is needed to prove if it is possible to build just one integrated system.

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Annex 1: History and future outlook of service research

To assist the many new students of service in quickly gaining a broad brush overview, the history and emergence of service research has been characterized in six periods:

- **Pre 1980: *Crawling Out*** period is when service marketing and service operations become distinct from product marketing and operations, in part as conventional service economics reports categorize more of the economy as value derived from service activities.
- **1980-1985: *Scurrying About*** period with more services research published moving beyond goods and products but literature was still mostly conceptual. A core group of academics and business practitioners develops.
- **1985-1992: *Walking Erect*** period with increasing number of scholars of service, and explosive growth in the literature including service research journals, dissertations and textbooks. Academic events, centres and pioneers in Europe as well as US emerged.
- **1993-2000: *Making Tools*** period with more quantitative research - measurement, statistics, and decision support modelling; broadening, deepening and sharpening of the research; continued globalisation and multi-disciplinary research and expanding topic areas including; service design and delivery, service experiences, service quality and customer satisfaction, service recovery and technology infusion, service computing, service supply chains and eSourcing (sometimes called service value chain).
- **2000-Now: *Creating Language*** period with nearly a dozen models of service emerging, and the concept of a service system beginning to take hold to unite the many perspectives. The field is expanding rapidly with an expansion of literature worldwide and increasing numbers of conferences and centres worldwide with IBM and industries' Service Science, Management and Engineering (SSME) Initiative seeking to strengthen the industry, academic, government ties. The service-dominant logic view is gradually replacing the traditional view of service versus product, with a view of service as value co-creation that involves both things and actions, as well as information and other resources.
- **The Future: *Building Communities*** will require an inclusive multi-disciplinary approach to service performance, with science, management, engineering and design being supporting academic disciplines and T-Shaped (deep and broad) professionals being adaptive innovators to link and unite these disciplines, and create measurable impact from service innovations for business and society.

Source: *Succeeding through Service Innovation: Developing a Service Perspective on Economic Growth and Prosperity. (2007), p.18.*

Annex 2: Overview results on service innovation

General aspects:

- Service innovations can be imitated faster.¹⁷
- In the services sector less research and development (R&D) is done. Because of that R&D seems to be a less useful indicator for the service innovation.¹⁸

➤ Success aspects:

- The human relations strategy clearly has a stronger influence on the success of new services than on new tangible products.¹⁹
- New services that do not fit to the marketing knowledge of the firm increase the co-ordination problems to a high degree.²⁰
- The product benefit realized by the consumer has a clearly lower effect on the success of new services than on the success of new tangible products.²¹

➤ Development aspects:

- Technology plays a less important role in the design and development of intangible products.²²
- Development activities as concept tests or market tests are (nearly) not existent.²³
- Differences in innovation barriers: lack of educated staff as the lack of information given by customers are more often preventing innovations in services than in manufactured goods. Organizational problems are a more serious problem in the service sector.²⁴

➤ Financial aspects:

- In the services sector a significant lower share of the turnover is spent on innovation activities.²⁵
- The investment in fixed assets has a stronger meaning for services than for manufactured products.²⁶
- There are distinct differences in the allocation of innovation costs. E.g., 1/20th of the product innovation expenses for services are paid for patents and licenses, while these costs account for almost 1/5th of all expenses for tangible products.²⁷

Source: *Service Innovation – A review of the state of the art. (2001), p.4.*

Annex 3: Service sector in global economies

In recent years service industries have become a fast growing sector in world economies as measured by traditional economic measurement methods (see Service-Dominant Logic in the Glossary, for an alternative view). Services now account for more than 50 percent of the labour force in Brazil, Russia, Japan and Germany, as well as 75 percent of the labour force in the United States and the United Kingdom. Figure 3 shows the value of services to economies compared to that of industry, construction and agriculture.

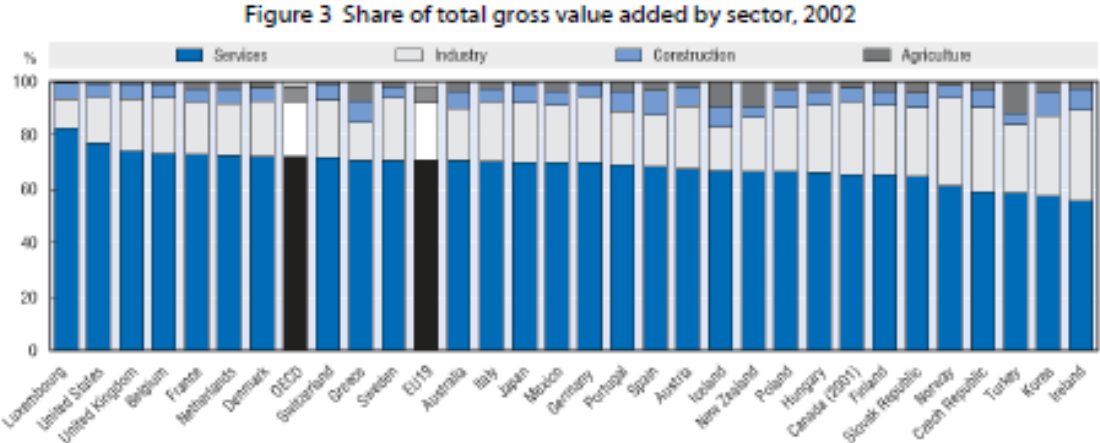
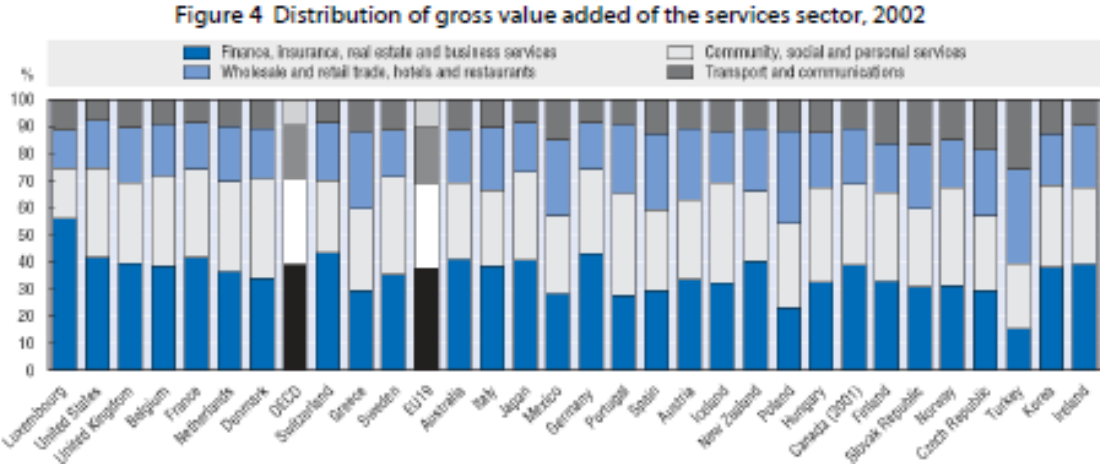


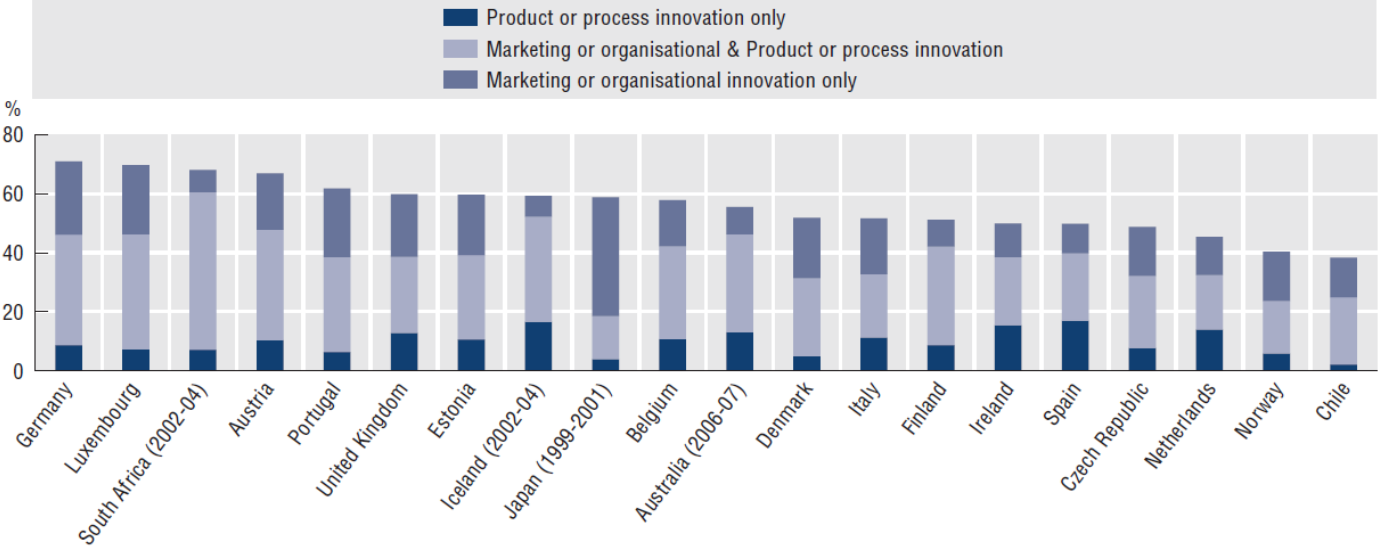
Figure 4 indicates the gross added value of service sector industries within OECD countries, by 2002 services accounted for about 72% of value added and manufacturing for about 17%. OECD reports show that the gap has widened steadily in recent years as demand for services has risen. Belgium, France, Switzerland, the United Kingdom and the United States mainly reflect a high share of value added in finance, insurance, real estate and business services, and a large community, social and personal services sector. The construction sector is also relatively small in most OECD countries, accounting for about 5.5% of OECD value added. Wholesale and retail trade, restaurants and hotels is a more important economic sector and is often large in countries with a strong tourism industry (e.g. Greece, Portugal and Spain).



Source: *OECD Science, Technology and Industry Scoreboard 2005 – Towards a knowledge-based economy. (2005), p.168-169.*

Annex 4: Complementary innovation strategies in services, 2004 – 2006

Complementary innovation strategies in services, 2004-06
As a percentage of all services firms



Source: OECD, Innovation microdata project based on CIS-2006, June 2009 and national data sources. (2009).

Annex 5: Detailed description of the observed endogenous variables

Personal confidence

Sharing information

Vision delivers clarity

Confidence is crucial

Dynamic learning systems lead to results

Focus accelerates

Management of knowledge is necessary

Personal relations are core

Stakeholders are key

Influence helps to structure

A psychological contract stimulates

ICT supports

Capital is secondary

Subsidies are stimulus

Human factor

Passion is necessary

Respect is desirable

Dialogue is important

Inspiration is a determining factor

Not everything must to succeed

Cooperation is essential

Commitment is important

Company size is important

Interests can suffocate

Information is crucial

Diversity is indispensable

Tolerance gives understanding

Involvement of clients

Involvement in an early stage

Talent is indispensable

Bureaucracy tempers

Interactions deliver knowledge

Risk indicates direction

The process supports

Performance is the result

Incentives give wrong signals

Influence helps to structure

Social media is indispensable

Resources

Selection procedure is decisive

Regular employees are core

Contracts store everything

Pivot origin spontaneously

Patents are crucial

Motive are incentives

Formal relationships are necessary

Temporary employees have no meaning

Legislation works stimulating

The number of employees are decisive

All knowledge is described

Source: *Duurzaam concurrentievoordeel door Open Innovatie in de Dienstensector: Succesfactoren die leiden tot een Duurzaam Concurrentievoordeel in de Samenwerking met Andere Organisaties. (2011), p.47-48.*

Annex 6: General Terms and Conditions Dog Insurance



AGCS Marine Insurance Company, a member of the Allianz Group
33 West Monroe Street, Suite 1700, Chicago IL 60603
Administered by Felch Insurance Services, LLC
For questions concerning your policy, call 1-866-467-3875.

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index of policy provisions

gold

pet health insurance policy
terms and conditions



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I. Definitions Used Throughout This Policy

Some words or phrases in the policy have been defined below. Defined words or phrases are printed in bold type and have the following meanings, unless a different meaning is described in a particular coverage or endorsement.

You, Your	The Named Insured as shown on the Declarations Page .
We, Us, Our	The company providing this insurance, or the company's designated representative.
Pet, Your Pet	Any pet named and described on the Declarations Page and for which a premium has been paid.
Clinical Sign(s)	Changes in your pet's normal healthy state, its bodily functions or behavior.
Co-pay	The percentage of your claim for which you are liable before any applicable deductible is applied.
Congenital Defects or Abnormalities	Any condition(s) or disorder(s) that is present at and existing from the birth of your pet .
Declarations Page	A written document comprising part of this policy which identifies the Named Insured, the policy number, the insured pet , the coverage options selected and the maximum annual benefits provided.
Deductible(s)	The fixed amount per illness or injury per policy period that will be deducted from any benefit payment made to you , after any co-pay amount has been deducted, for which you are liable prior to receiving any claims settlement.
Exclusion(s)	Any situation, event or medical condition not covered by this policy
Illness(es)	Any change to the normal healthy state of your pet , a sickness, disease or medical condition (except mental or emotional disorders) not caused by an accident.
Injury(ies)	Physical harm or damage arising from normal activity or an accident. Cruciate ligament conditions are specifically defined as not resulting from an injury .
Maximum Annual Benefit	The most we pay during the policy period as shown on each policy coverage of the Declarations Page .
Medical Condition(s)	All clinical sign(s) and symptoms resulting from the same diagnostic classification or disease process, regardless of the number of incidents or areas of the body affected.
Medically Necessary	Any treatment which is directly and materially related to a covered illness or injury , as certified by your primary veterinarian (vet) .
Policy Period(s)	The one (1) year period from the effective date of this policy as set forth on the Declarations Page .
Pre-existing Condition(s)	A medical condition which first occurred or showed clinical sign(s) or symptoms before the effective date of this policy or which occurred or showed clinical sign(s) or symptoms during the policy waiting period.
Preventive Care	Any treatment , service or procedure, including but not limited to physical examinations, medications, surgeries, inoculations or laboratory procedures, for the purpose of prevention of illness or injury or for the promotion of general health, where there has been no injury or illness .
Primary Vet	Any properly licensed vet within the US, and its territories including Puerto Rico that is a member of the American Veterinary Medical Association, acting within the scope of his/her license, and to whom you have not been referred for additional or specialized treatment .
Reasonable Cost(s)	The fees regularly charged and incurred for a given treatment or procedure by the treating veterinary facility.
Referral Vet	Any licensed vet who you visit, or to whom your Primary Vet refers your pet for additional or specialized treatment who is accredited in their field of expertise.
Select Breeds	Certain breeds of dog to which special policy conditions apply. If a dog is a select breed, it is noted on the Declarations Page under breed classification.
Specialist Vet	A vet who is certified by a recognized veterinary specialty organization.
Specialized Treatment(s)	Any veterinary treatment administered by a specialist vet or at a specialist or referral veterinary facility, after hours veterinary facility, or accredited school/college of veterinary medicine.
Terms and Conditions	All provisions of this policy and incorporated application and Declarations Page .
Treatment(s)	Any veterinary care and prescribed medications administered by your primary vet in treating your pet's injury or illness .

II. Insuring Agreement

Upon your payment of the premium when due, and in reliance of the statements you made in the application (a completed copy of which is attached hereto and made a part hereof), we will provide coverage as specifically described in this policy for your covered pet as shown on the Declarations Page.

The only pet covered by this policy is the pet listed on the Declarations Page. A covered pet is referred to as pet or your pet in this policy. We will pay for reasonable cost(s) paid by you for the treatment of your pet during the policy period, for a covered illness or injury. Except if stated to the contrary all benefits are subject to all the terms, conditions and limitations as stated herein and as shown on the Declarations Page.

III. Insured Coverages and Benefits

We will provide the coverages to you as set forth in the numbered paragraphs below subject to the following:

1. Waiting period.
2. Co-pay(s).
3. Deductible(s).
4. Exclusions.
5. Limits of Insurance.
6. Other terms, conditions and limitations in this policy and the Declarations Page.

1. VETERINARY FEES

We will pay the reasonable cost(s) of any medically necessary treatment your pet has received during the policy period for a covered illness or injury, up to the maximum annual benefit for this coverage part as specified on your Declarations Page. The illness or injury and veterinary treatments must take place within the policy period.

We will pay for veterinary consultations provided by a licensed vet accredited in behavioral therapy. The consultation must be to diagnose and treat behavioral problems where an underlying medical condition is the cause of your pet's behavioral issues. The maximum annual benefit for behavioral therapy is \$1,000. This benefit amount is part of, and not in addition to, your annual limit of coverage for vet fees. Coverage does not apply to obedience training.

2. ADVERTISING AND REWARD

We will pay for the cost of advertising or offering a reward if your pet is stolen or strays during the policy period. This coverage is limited to the maximum annual benefit as specified on your Declarations Page. There is no co-pay or deductible applied to this coverage.

As soon as you discover your pet is missing, you must:

- a. Notify the police and ask for a reference or case number and written confirmation of your report.
- b. Notify the five veterinary clinics and pet shelters closest to the area where your pet was last seen.
- c. Notify us and request pre-approval of any reward before you advertise it.
- d. Complete and send us a completed claim form along with all receipts for advertising and reward.

EXCLUSIONS APPLYING TO ADVERTISING AND REWARD

We will not pay any benefits for:

- a. Any reward that we have not agreed to before you advertise it.
- b. Any reward not supported by a signed receipt giving the full name and address of the person who found your pet.
- c. Any reward paid to any person living with you, related to you, employed or known by you.
- d. Any reward resulting from your neglect or deliberate concealment of your pet.

3. BOARDING KENNEL AND CATTERY FEES

We will pay for the reasonable cost(s) of boarding your pet at a licensed kennel or cattery or for the cost of a certified pet sitter to look after your pet, up to the maximum annual benefit for this coverage part as shown on the Declarations Page, while you are in a hospital as a result of your own sickness, disease, or bodily injury, during the policy period. There is no co-pay or deductible applied to this coverage.

As soon as you have any such sickness, disease, or bodily injury of your own you must:

- a. Have incurred the medical condition(s) or been diagnosed and reported the medical condition(s) during the policy period.
 - b. Submit a claim form completed by your doctor and by the owner of the boarding kennel or cattery. Or by the pet sitter who looked after your pet.
 - c. Submit the original invoice from the kennel or cattery. Or written confirmation from the pet sitter including proof of payment.
- EXCLUSIONS APPLYING TO BOARDING KENNEL AND CATTERY FEES**
We will not pay any benefits if:
- a. You are admitted to a hospital for less than ninety-six (96) hours.
 - b. You are treated in a care setting other than a hospital.
 - c. You are admitted to a hospital because of an injury or illness, which first occurred or manifested itself before your pet was covered under this policy.
 - d. You are pregnant or giving birth.
 - e. You are receiving any treatment that is not related to an injury or illness.
 - f. You are admitted to a hospital for the treatment of alcohol abuse, drug abuse, suicide attempt, or self-inflicted injuries.

4. LOSS DUE TO THEFT OR STRAYING

We will pay the price you paid for your pet, up to the maximum annual benefit for this coverage part as shown on the Declarations Page, if your pet is stolen or goes missing during the policy period and is not found. There is no co-pay or deductible applied to this coverage. If you did not pay for your pet or have no formal proof of how much you paid in the form of an original receipt, we will pay you the lesser of the current local humane society adoption fee for the species of pet named on the Declarations Page, or \$150.

As soon as you discover your pet is missing, you must:

- a. Notify the police and ask for a reference number and written confirmation of your report.
- b. Notify the five veterinary clinics and pet shelters closest to the area where the pet was last seen.
- c. Complete and send us a claim form. This must include the original receipt for the price you paid for the pet if your pet has not been found within 30 days.

If your pet is found or returns to you, you must repay the full amount we have paid you under this coverage part.

EXCLUSIONS APPLYING TO LOSS DUE TO THEFT OR STRAYING

We will not pay any benefits if:

- a. you, or the person looking after your pet, freely parts with your pet even if tricked into doing so.

5. DEATH FROM INJURY OR ILLNESS

We will pay you the price you paid for your pet, if it dies or has to be put to sleep by a vet during the policy period, as a result of an injury or illness up to the Maximum Annual Benefit for this coverage part as specified on your Declarations Page. There is no co-pay or deductible applied to this coverage. If you did not pay for your pet or have no formal proof of how much you paid in the form of an original receipt, we will pay you the lesser of the current local humane society adoption fee for the species of pet named on the Declarations Page, or \$150.

EXCLUSIONS APPLYING TO DEATH FROM INJURY OR ILLNESS

We will not pay any benefits for:

- a. Any amount if your pet's death results from any illness first occurring or showing signs before the effective date of this policy.
- b. Any amount if your pet's death results from any illness first occurring or showing clinical sign(s) during the first fourteen (14) days beginning on of the effective date of this policy.
- c. Any amount if your pet's death results from any injury that occurred within twenty-four (24) hours of the effective date of this policy.
- d. Any amount if your pet's death results from an injury or illness that is a pre-existing condition.
- e. Any amount if a vet is not able to verify the death or sign the death claim form.
- f. Any amount if your pet was put to sleep at your request and was

not suggested by your primary vet.

- g. Any amount arising from a death from illness for any dog age eight (8) years or older, select breeds age five (5) years or older, or any cat age ten (10) years or older.

6. VACATION CANCELLATION

We will pay for any travel and accommodation costs you cannot recover, up to the Maximum Annual Benefit as shown on the Declarations Page, if you have to cancel or cut short a vacation during the policy period because your pet is injured or shows the first clinical sign(s) of an illness while you are away or up to seven (7) days before you leave, and as a result requires immediate life-saving veterinary treatment.

There is no co-pay or deductible applied to this coverage.

EXCLUSIONS APPLYING TO VACATION CANCELLATION

We will not pay any benefits for:

- a. Any costs relating to a vacation you booked less than 28 days before you were due to leave.
- b. Any costs resulting from an injury or illness that is excluded from coverage, or that showed clinical sign(s) or symptoms within the waiting period of the policy.
- c. Any cost of cancellation insurance.

IV. Co-pay and Deductibles

For each illness or injury that is treated during the policy period and that is not related to any other illness or injury during the same policy year, you will pay an amount of co-pay and a deductible as stated on your Declarations Page.

The co-pay percentage will be deducted from the total of all costs for a covered illness or injury. Once the co-pay has been applied, the deductible will be applied to the remaining amount.

The deductible will be applied separately to each separate medical condition. When the treatment dates of an illness or injury fall into two or more policy periods you will be required to pay a deductible for each policy period.

As an example, if you have a covered claim of \$1,000 to which a 10% co-pay and \$50 deductible apply, first the 10% co-pay is applied and \$100 is deducted from the covered amount. Then the \$50 deductible is applied and taken off the covered amount. This means that out of the original \$1,000, we will reimburse you a total amount of \$850.

In addition to the application of the deductible and co-pay, there are total limits on our insurance per policy period as set forth on the Declarations Page as Maximum Annual Benefits. (See also Section VI. Limits of Insurance.)

A twenty (20) % co-pay as stated on your Declarations Page will automatically apply to covered claims in the event that:

- a. Your pet receives specialized treatment (except if treated by your primary vet).
- b. You take your pet to an emergency care veterinary facility (except for a life-saving emergency consultation).
- c. You take your pet to an after hours veterinary facility (except for a life-saving emergency consultation).
- d. You take your pet to an accredited school/college of veterinary medicine (except for a life-saving emergency consultation).

V. General Exclusions

The following general exclusions apply to your policy and coverage parts. We will NOT pay costs you incur for your pet in the following categories:

- a. Any matter not set forth in Section III. Insured Coverages and Benefits.
- b. Expenses beyond the Limits of Insurance as described in Section VI. No. 1.
- c. Any cost for treating an illness or injury incurred while the policy is not in force.
- d. The portion of the cost of treating an illness or injury that is greater than the reasonable cost(s) for treating such illness or injury.
- e. The cost of any treatment for pre-existing conditions as follows:
 - (1) Any injury that happened or any illness that first showed clinical sign(s) or symptoms before the effective date of this

policy. Or for any illness that first showed clinical sign(s) during the first fourteen (14) days beginning on the effective date of this policy. Or for any injury that occurred during the first twenty four (24) hours beginning on the effective date of this policy.

- (2) Any injury or illness that is the same as, or has the same diagnosis, clinical sign(s) or symptoms as any injury, illness or clinical sign(s) your pet had prior to the effective date of this policy. Or for any illness that is the same as, or has the same diagnosis or clinical sign(s) or symptoms as any illness your pet had during the first fourteen (14) days beginning on the effective date of the policy. Or for any injury that is the same as, or has the same diagnosis, clinical sign(s) or symptoms as any injury that occurred to your pet during the first twenty four (24) hours beginning on the effective date of your policy.
- (3) Any injury or illness that is caused by, relates to or results from any injury, illness or clinical sign(s) or symptom your pet had prior to the effective date of your policy. Or for any illness that is caused by, relates to or results from any illness or clinical sign(s) or symptom your pet had during the first fourteen (14) days beginning on the effective date of your policy. Or for any injury that is caused by, relates to or results from any injury that occurred to your pet during the first twenty four (24) hours beginning on the effective date of your policy. No matter where the injury, illness, clinical sign(s) or symptoms are noticed or occur on your pet's body. (See also Section VII. General Conditions, No. 2, WAITING PERIOD.)

Except for on-going medical conditions that were diagnosed after the effective date of the first policy period where continuous coverage with a pet insurance policy administered by Fetch Insurance Services, LLC, was maintained thereafter.

- f. Congenital defects or abnormalities where clinical sign(s) or symptoms were apparent prior to the effective date of the policy or that became apparent during the Waiting Period.
- g. Dental treatment unless:
 - (1) Your pet has had its teeth checked by a vet in the twelve (12) months prior to the effective date of coverage.
 - (2) Any treatment that was recommended as a result of a veterinary check was carried out.Otherwise we will not pay for any claim that results from or is in any way related to your failure to follow your primary vet's recommendation.
- h. Food prescribed by a vet to prevent or treat illness unless the food is used to dissolve existing bladder stones and crystals in urine. We will only pay for the food for a period of up to six (6) months of treatment. After six (6) months of treatment we reserve the right to request a urine sample from your pet to determine whether further treatment is needed.
- i. Any illness contracted outside the U.S. or Canada that the pet would not have normally contracted in the U.S. or Canada.
- j. Costs arising out of or related to:
 - (1) Breeding.
 - (2) Pregnancy.
 - (3) Whelping or nursing.Except costs of any complications arising from these procedures.
- k. Bathing your pet unless your primary vet certifies that it was medically necessary. Only a primary vet or a member of a veterinary clinic staff could bathe your pet.
- l. The cost of renting:
 - (1) A swimming pool
 - (2) A hydro-therapy pool, or
 - (3) Any other pool or hydro-therapy equipment.
- m. Any of the following methods of treatment not given by a vet:
 - (1) Holistic.
 - (2) Homeopathic.
 - (3) Acupuncture.
 - (4) Chiropractic.
 - (5) Hydrotherapy.

- n. Experimental surgical or medical procedures and treatments that are experimental.
- o. Cloned pets or cloning procedures, whether or not deemed experimental or for research.
- p. Organ transplants not deemed medically necessary or not first approved by us.
- q. Behavioral problems and treatment (unless stated in Section III. Insured Coverages and Benefits, No.1).
- r. Any amount as a result of:
 - (1) Obedience or training classes, including puppy classes.
 - (2) Training, correctional devices, or preventive products.
 - (3) The treatment of coprophagia or other eating disorders.
- s. Grooming or grooming supplies.
- t. Treatments or preventive treatments for parasites or conditions related to parasites (internal or external) unless there is no preventive medication for the parasite including but not limited to:
 - (1) Heartworms.
 - (2) Fleas.
 - (3) Ticks.
 - (4) Roundworms.
 - (5) Tapeworms.
 - (6) Hookworms.
- u. Elective or specialty procedures which are not deemed medically necessary, including but not limited to:
 - (1) Docking of tails.
 - (2) Removal of dewclaws.
 - (3) Removal of eyelashes.
 - (4) Cropping of ears.
 - (5) Spaying or neutering.
 - (6) Cosmetic dentistry.
- v. Time and travel expenses to a primary vet's or referral vet's premises or hospital.
- w. Costs for illness or injury that arise out of:
 - (1) Racing.
 - (2) Coursing.
 - (3) Commercial guarding.
 - (4) Organized fighting.
 - (5) Any other occupational, professional or business uses of your pet.
- x. Costs arising from any intentional injury or abuse (including persistent neglect) of your pet, by you or a member of your household.
- y. Any costs that arise from an injury or illness in which you were advised by a primary vet to take preventive measures and did not do so.
- z. House calls, unless a vet certifies them essential in an emergency.
- aa. Extra costs for treating your pet outside of usual surgery hours. Unless your primary vet certifies that an emergency life-saving consultation is needed.
- bb. The costs of having your pet put to sleep (unless suggested by your primary vet), cremated or otherwise disposed of. The destruction of a pet deemed dangerous is not covered.
- cc. The cost of any form of housing which includes cages - rented or bought.
- dd. Any expenses if other General Conditions set forth in Section VII, or conditions applicable to you and set forth in Other Terms and Conditions, Section VIII, have not been met.
- ee. Any amount as a result of:
 - (1) Earthquake.
 - (2) Tornado.
 - (3) Named Storm.
 - (4) Windstorm.
 - (5) Flood.
 - (6) Other natural disaster.
 - (7) Invasion.
 - (8) War.
 - (9) Revolt.
 - (10) Rebellion or terrorist acts.
- ff. (1) Revolution, military or usurped power.
- gg. (2) Governmental seizure.
- hh. (3) Quarantine.
- ii. (4) Other action related to public safety or health.
- ff. We will not pay for the treatment, death or humane destruction directly or indirectly
 - (1) caused by,
 - (2) happening through,
 - (3) as a result of,
 - (4) or contributed to or by
 Avian Influenza or any mutant variation.
- gg. Any costs for an animal less than six (6) weeks old.
- hh. Any treatment associated with damage or rupture of cruciate ligaments, or defects of the patella during the first six (6) months that the policy is in effect. Except coverage is given if a certificate of health stating that your pet has been examined and does not have any pre-existing conditions relating to the cruciates or patellas is provided by your primary vet during the first 30 days beginning on the effective date of the policy.
- ii. If your pet has received treatment for a cruciate injury to one leg then the other leg is automatically excluded from coverage for a period of twelve (12) months from the date of treatment.
- jj. The cost of boarding your pet at a veterinary facility. Hospitalization is a covered expense provided that it is associated with treating a covered injury or illness.

VI. Limits of Insurance

1. Regardless of the number of claims made or covered illnesses or injuries that occur during the policy period, our total limit of insurance for each policy period for all covered costs shall not exceed the amount shown on the Declarations Page under Maximum Annual Benefit. This limitation shall apply to the pet which this insurance applies, and is listed on the Declarations Page.
2. All benefits under this policy shall cease when this policy terminates.

VII. General Conditions

1. ELIGIBILITY

This Policy is issued in consideration of:

- a. Your completed application, a copy of which is attached hereto and made a part hereof.
- b. Our completed Declarations Page containing your policy choices and other information, a copy of which is attached hereto and made a part hereof.
- c. Your payment of premium in the amounts and at the times as stated on your Declarations Page.

2. WAITING PERIOD

There is a fourteen (14) day waiting period beginning on the effective date of this policy during which we will not cover any illness of your pet. The waiting period will not apply to any renewal of this policy if continuous coverage is maintained. Coverage for injury of your pet will begin twenty four (24) hours after the effective date of this policy. (See also Section V. General Exclusions, a, pre-existing condition exclusion.) Conditions that occur during the waiting period are excluded from your policy as pre-existing conditions.

3. YOUR DUTIES AFTER LOSS

- If your pet suffers an illness or injury that may be covered by this policy, you must:
- a. Visit a veterinary clinic within forty eight (48) hours after first noticing clinical sign(s) or symptoms relating to an illness or injury.
 - b. Complete and send to us a claim form describing the illness or injury as soon as practicable but no later than ninety (90) days after end of the policy period. This form must list the following information:
 - (1) Your name.
 - (2) The description of your pet.
 - (3) The policy number.

Both you and the attending primary vet must sign the form.

c. Provide us with copies of the following:

- (1) Invoices from your primary vet.
- (2) Proof of payment from your primary vet.
- (3) Invoices and proof of payment from Referral Vets (if any).

These invoices must show:

- (1) The type and nature of treatment.
- (2) The fees charged.
- (3) The reason for treatment.

d. Provide us with copies of invoices and proof of payment for prescribed medications.

e. Otherwise cooperate with us in the investigation of any claim which includes providing a complete medical history for your pet. (See also Section VII, General Conditions, Nos. 8 and 9).

Failure to comply with these conditions may result in a claim not being covered.

4. PAYMENT OF LOSS

Once you have provided the written notice and other specified information to us, we will determine whether the illness or injury is covered by this policy. We will compute any applicable co-pay and deductible. We will then make our reimbursement to you within thirty (30) days from our receipt of all required information. With our reimbursement, we will supply a statement showing the basis for our reimbursement. This will include the effect of the co-pay and deductible calculations and of any Maximum Annual Benefits, if applicable.

5. AGE OF YOUR PET

- a. If you do not know the exact date of birth of your pet, we will use the average of the estimates of your pet's age as referenced in your pet's medical records from the veterinary clinics and shelters.
- b. If you are renewing a policy for a dog age eight (8) or older than five (5) for certain select breeds, you must follow your primary vet's advice with regards to senior wellness testing.

6. CONDITION OF YOUR PET

In the original application for this insurance, you represented that your pet described on the Declarations Page was in good health, free of illness or injury as of the effective date of this policy, except for those medical conditions that you disclosed in your application. In order to assess a claim we require full medical records from your current primary vet and any other vet who has treated your pet.

7. CARE FOR YOUR PET

- a. In order for your policy to remain valid you must take care of your pet and arrange and pay for your pet to have the following:
 - (1) An annual health check.
 - (2) An annual dental exam.
 - (3) Any treatment normally suggested by a primary vet to prevent illness or injury.
- b. If your pet has not been examined by a primary vet within the twelve (12) months prior to the effective date of the policy you must arrange to have your pet examined at your own expense within the first 30 days after the effective date of the policy. The examination will be used as the basis for determining any pre-existing conditions.
- c. To be afforded coverage for the diseases listed below, you must keep your pet vaccinated at your expense, as recommended by your primary vet. We will not pay any claims that result from or are related to any illness that is listed below that a vet-recommended vaccine would have prevented.
 - (1) Canine distemper.
 - (2) Canine adenovirus 2 (canine viral hepatitis).
 - (3) Canine parainfluenza.
 - (4) Canine parvovirus.
 - (5) Leptospirosis.
 - (6) Rabies.

d. You must take your pet to be examined and treated by a primary vet as soon as possible and within forty eight (48) hours after your pet first shows clinical sign(s) or symptoms of an injury or illness.

8. CONCEALMENT, MISREPRESENTATION OR FRAUD

This policy is void in any case of fraud by you at any time as it relates to this policy. It is also void if you at any time intentionally conceal, misrepresent or exaggerate a material fact concerning:

- a. this policy.
- b. your pet, or
- c. a claim under this policy.

9. COOPERATION, INFORMATION AND EXAMINATION

You agree that any primary vet (or referral vet) has your permission to release any information we may ask for about your pet. You further agree that we have the right to have your pet examined by a primary vet of our choosing at our own expense. In the event of any disagreement in the diagnosis of your pet's condition(s) or treatment(s) between you and our primary vet, an independent primary vet mutually agreed upon by both primary vets will be appointed. Written agreement signed by any two of these three will be binding subject to our mutual agreement. The costs incurred by the independent primary vet are shared equally by both you and us.

10. TRANSFER OF YOUR RIGHTS AND DUTIES

Assignment of this policy will not be valid unless we give our written consent.

11. CHANGING YOUR LEVEL OF COVERAGE

You are entitled to apply for a downgrade of your pet's coverage at any time during the policy period. This request must be made in writing. The request will become effective on the first day of the month following approval. If you choose to downgrade your level of coverage, then any injury or illness first diagnosed or treated before the change was made will be subject to the maximum annual benefit in place at the time the condition was first diagnosed or treated.

You may apply for an upgrade of your coverage once per policy period. This request must be in writing and will become effective on the first day of the month following approval. Upgrades are subject to re-underwriting. Exclusions may be applied. If you choose to upgrade your level of coverage, then any illness or injury first diagnosed or treated before the change was made will be subject to the Maximum Annual Benefit in place at the time the condition was first diagnosed or treated.

A new Declarations Page or a Change Endorsement indicating your new level of coverage will be issued on approval. Any exclusion(s) already on the policy will carry over. New deductible and co-pay amounts may apply when coverage is changed.

VIII. Other Terms and Conditions

1. LEGAL ACTIONS

No one may bring a legal action against us until there has been full compliance with all the terms of this policy. No action at law or in equity shall be brought to recover on this policy prior to the expiration of sixty (60) days after written proof of loss has been furnished in accordance with the requirements of this policy. You will have three (3) years from the time written proof of loss is required to be furnished to take legal action against us with respect to recovery of a claim under this policy.

2. APPRAISAL

If the benefit amount cannot be agreed, you and/or we have the right to select a competent and impartial primary vet (appraiser). The two (2) appraisers will select a primary vet as umpire. If they cannot agree, they may request that selection be made by a judge of a court having jurisdiction. The appraisers will state separately the amount of the benefit. If they fail to agree, they will submit their differences to the umpire. Written agreement signed by any two of these three will be binding subject to our mutual agreement. Each party will:

- a. Pay its chosen appraiser.
- b. Bear the other expenses of the appraisal and umpire equally.

The appraisal shall be completed within sixty (60) days of the selection of the participants.

3. OUR RIGHT TO RECOVER PAYMENT

- a. If we make a payment under this policy and you have the right to recover damages from another for the same transaction or condition, we shall be subrogated to that right. You agree to cooperate with us in our subrogation effort.
- b. If there is other valid coverage, not with us, providing benefits for the same loss and of which we have not been given written notice prior to the condition or commencement of loss, we may assert a right of contribution. You agree to assist us in our effort to obtain contribution.

4. ENTIRE POLICY

This policy, the Declarations Page, your application, and any endorsements contain all the agreements between you and us. The terms may not be changed or waived except by an endorsement issued by us and made a part of this policy.

5. CONFORMITY TO STATE STATUTES

When this policy's provisions are in conflict with the statutes of the state in which this policy is issued, the provisions are amended to conform to such statutes.

6. CANCELLATION AND NONRENEWAL

- a. You may cancel this policy at any time by returning it to us or by notifying us in writing of the effective date of the future cancellation. If you notify us within the first thirty (30) days from the effective date shown on the Declarations Page, and you have not submitted any claim against this policy, we will refund the entire premium. After thirty (30) days, we will return the pro rata premium.
- b. We may cancel this policy (or any renewal of this policy) if you fail to pay the premium when due. In such a case, a written notice will be sent to you at your address shown on the Declarations Page, providing at least fifteen (15) days notice of our intent to cancel. Otherwise, we may cancel this policy by providing you at least thirty (30) days written notice. We will return the pro rata portion of the premium less ten percent (10%) based upon the date of termination of this policy.
- c. We may cancel the policy (or any renewal of this policy) due to the following:
 - (1) A loss of or substantial decrease in reinsurance.
 - (2) Your material failure to comply with policy terms and conditions.
 - (3) A substantial change in the condition, factor or loss experience material to insurability (except that a material change in the covered pet's health does not constitute a change that would provide grounds for cancellation of the policy).
 - (4) If you fail to send us relevant information in respect to a claim.
 - (5) You materially misrepresent or exaggerate relevant information pertaining to this policy or a claim.
- d. We may elect not to renew this policy on the expiration date (or any of the reasons stated in VII.6.c above). We may do so by mailing to you at your address shown on the Declarations Page, written notice at least sixty (60) days prior to the expiration date. A decision to not renew a policy will not be made based on a pet's medical history or claims activity.

- e. We will automatically renew your policy at expiration, unless you are otherwise notified of nonrenewal. We may change the premium, co-pay amounts, deductibles and policy terms and conditions at renewal. You will be notified of all changes in writing.
- f. In the event of cancellation, we will promptly return to you the unearned portion of any premium paid. Cancellation shall be without prejudice to any claim occurring prior to the effective date of cancellation.

7. PROMOTIONAL OFFERS

Each Named Insured may receive from time to time certain promotional offers. These offers include but are not limited to gift cards, coupons, gift certificates, items of merchandise, and similar promotional items. But in no event will promotional items exceed a value of \$25.00.

8. LIBERALIZATION

If we adopt any revision which would broaden the coverage under this policy within sixty (60) days prior to or during the policy period, with no adjustment of premium, the broadened coverage will immediately apply to this policy.

9. CLAIM FORMS AND PROOF OF LOSS

Failure to furnish proof within the time required shall not invalidate nor reduce any claim if it was not reasonably possible to give proof within such time, given that such proof is furnished as soon thereafter as reasonably possible.

10. UNPAID PREMIUMS

Upon the payment of a claim under this policy, any premium that is due and unpaid or covered by any note or written order may be deducted from the claim.

In Witness Whereof, the Issuing Company has caused this policy to be signed officially below.


Julie Garrison, Secretary


Arthur E. Moosmann, President

AGCS Marine Insurance Company

Annex 7: Claim form Dog Insurance

Petplan Claim Form

Step-by-Step Instructions

1 When you download a claim form from your policyholder account, parts 1 and 2 are pre-filled with your policy information for your convenience and to assist with processing. Please ensure your details are correct.

2 Please bring this form to the veterinary clinic(s) where your pet is being/was treated and ask for their help in completing part 3 of this form. Please ask the treating veterinarian to put his or her initials in the space provided. While our claim forms don't need a specific diagnosis, we DO require that the "Diagnosis/Details of Illness/Injury" field have some details of what your pet has been treated for — please ensure this box is completed.

3 You MUST sign your claim form before we can process your claim request. Please remember to sign your form!

You can send your claim by fax, email or regular mail. Remember to include all supporting invoices, proof of payment and two years (if applicable) of medical history for your pet. Please note that missing information or an unsigned claim form can potentially delay the assessment of your claim.

CLAIM FORM FOR VETERINARY FEES Petplan

(PLEASE COMPLETE SECTIONS CLEARLY IN BLOCK CAPITALS USING BLUE OR BLACK INK)

For directions on how to complete this form, refer to the **How Do I File A Claim?** sheet. Please contact us with any questions.

1 PART 1 – ABOUT YOU

Policy number: **A B C 1 2 3 4 5 6 7 – 0 1**

Policyholder name: **Jane Doe** Address: **123 Main St.**
 Daytime phone: **123-456-7890** City: **Anytown**
 Email: **janedoe@company.com** State: **Anywhere** Zip: **12345**

2 PART 2 – ABOUT YOUR PET (ONLY ONE PET PER CLAIM FORM)

Pet's name: **Eddie** Breed: **Mixed Breed Small (up to 22lb)** Color: **Tan**
 Type of pet: Dog Cat Male Female Pet's date of birth: **05/01/2003**

3 PART 3 – ABOUT THE ILLNESS OR INJURY (HAVE YOUR VETERINARY CLINIC(S) HELP YOU COMPLETE THIS SECTION)

Is this claim for an accident or an illness? Accident Illness
 Did death/euthanasia result from this illness/injury? Y N
 Is this a continuation of a previous claim? Y N

Diagnosis/Details of Illness/Injury	Treatment Date(s)	Hospital/Clinic(s)	Emergency/Referral Specialist	Vet's Initials	Invoice Amount
RIGHT FRACTURED RADIUS	01/21/2011	ABC VET HOSPITAL	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	BD	9137.82
			<input type="checkbox"/> Y <input type="checkbox"/> N		
			<input type="checkbox"/> Y <input type="checkbox"/> N		
			<input type="checkbox"/> Y <input type="checkbox"/> N		

ONE CONDITION PER CLAIM FORM

Any additional notes should be attached to this claim sheet and clearly labeled with pet's full name and policy number.

Please note that, when assessing claims, we require at least two years medical history for your pet. This history **MUST** include notes from doctor's exams. If you have not already done so, please download a Medical Record Release Form from gopetplan.com/account and give a copy to all veterinary offices that have treated your pet.

4 PART 4 – DECLARATION

I have checked the information on this claim form and confirm that it is correct to the best of my knowledge and ability. I authorize Petplan to obtain information from any veterinarian or veterinary facility concerning the pet named in this form.

Signature: *Jane Doe* Date: *1/21/2011*

ANTIFRAUD WARNING - ANY PERSON WHO KNOWINGLY AND WITH INTENT TO DEFAUD ANY INSURANCE COMPANY OR OTHER PERSON FILES AN APPLICATION FOR INSURANCE OR STATEMENT OF CLAIM CONTAINING ANY MATERIALLY FALSE INFORMATION OR CONCEALS FOR THE PURPOSE OF MISLEADING INFORMATION CONCERNING ANY FACT MATERIAL THERETO, COMPLETS A FRAUDULENT INSURANCE ACT WHICH IS A CRIME AND SUBJECTS SUCH PERSON TO CRIMINAL AND (WH SUBSTANTIAL) CIVIL PENALTIES.

FAX

Fax claims to: 866.599.4654

.....
No cover sheet necessary
 See *How Do I File a Claim?* sheet for other ways to submit your claim.

6 454203 850599

We will try to process your claim as quickly as we can but claim forms that are incomplete or that are missing invoices or documentation can severely delay processing of your claim. Please note it is your responsibility to provide us with medical records upon request in order to fully process your claim.

PCFV-1 01/09 Serviced by Fetch Insurance Services LLC, 1 International Plaza, Suite 140, Philadelphia, PA 19113 • Tel: 1.866.967.3675

For fastest processing, please fax your completed form and all supporting materials to 1-866-599-4654.

email: claims@gopetplan.com mail: 1 International Plaza, Suite 140 Philadelphia, PA 19113

Source: *Petplan Claim Form. Step-by-Step Instructions. (2012)*, via: <http://www.gopetplan.com/how-to-file-a-claim>

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Open Business Models in the Service Industry

Richting: **Master in de toegepaste economische wetenschappen: innovatie en ondernemerschap**

Jaar: **2012**

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Voor akkoord,

Verdonck, Thomas

Datum: **28/05/2012**

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Voor akkoord,

Verdonck, Thomas

Datum: **29/05/2012**