

Louvain School of Management

**How does the implementation of
complementary services to the
initial product impact the firms
internally, internationally and
across sectors?**

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Theoretical Part

1 Introduction

Nowadays, many companies grow due to innovation. When looking at their sales portfolio, companies have different choices. They can either innovate regarding their products' activities, either innovate regarding their services activities. What we currently see is that many companies innovate, not only with some R&D to have new or better products but also in their sales portfolio through the broadening of their services offering.

Mainly when speaking about manufacturing firms, many of them reinvented themselves as service businesses. A perfect example would be IBM, which moved away from the production of hardware to offer business solutions instead (Neely, 2008). In the last decades, there has been an increase in the importance of services noted in the field of strategy, operation management and marketing (Cusumano, Kahl, & Suarez, 2015). Thanks to these innovations in services, companies became more and more knowledge-based. Similarly, it is argued that the value chain of companies now needs to be viewed from the customer's perspective (Nudurupati, Lascelles, Yip, & Chan, 2013), not only companies need to offer a product, they need to provide an experience. The whole point of this is to make sure the customers get everything they want.

While speaking about this increase of services and this change inside companies passing from manufacturing goods to services providers, we can also see the rise of interest for what is called the "Servitization". This term is more and more evocated since the past few years in the literature (Figure 1) and has great importance in our economy (Vendrell-Herrero & Wilson, 2017).

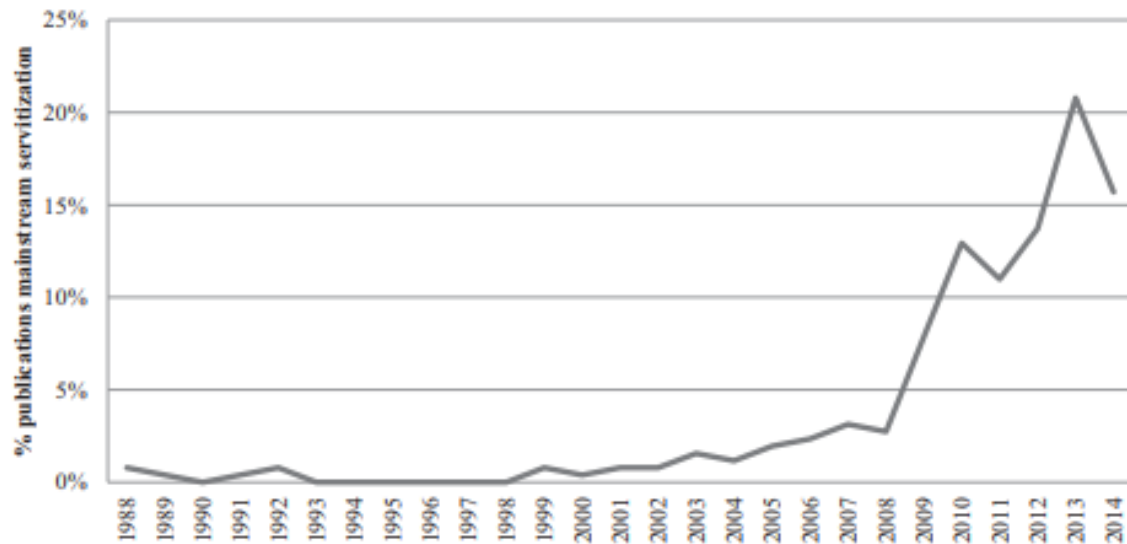


Figure 1: Percentage of yearly publication in mainstream servitization over total publications during 1988-2014 periods (Vendrell-Herrero & Wilson, 2017)

Servitization affects more and more companies and tends to act globally (Levitt, 1993). Consequently, the purpose of this master thesis is first to review the literature related to servitization to understand its multiple facets, how it started, how it evolved during the years and how and why it is implemented in companies. A second approach will try to analyse the internationalisation of product's firms compared to services firms and the difficulties they meet. By doing so, it will allow us to make some hypothesis concerning the internationalisation of servitized firms.

The final objective of this master thesis will, therefore, be to understand the servitization itself. How it affects companies and their customers? What are the advantages and disadvantages of such a servitization? I will also try to figure out how does the servitization work at an international level and if the servitization is going to become generalised in the manufacturing companies?

2 Methodology

This master thesis will be written according to the Louvain School of Management's academic standards and will be divided into two different part, a theoretical one and a practical one. To achieve this, we will proceed as follow:

We will first split the theoretical part into three main parts. A first one devoted to putting the particularities of services into perspective; what are the differences between the products and the services? A second part will be related to the concept of servitization itself. A third part will go through the different reasons why firms start servitization, as well internally as externally. A four and last part will talk about the differences between the services and the products' firms which decided to go internationally. It will, therefore, bring the question to wonder if servitized firms have a disadvantage or an advantage while acting globally.

To answer all these questions and to have an unbiased argumentation regarding the theoretical part of this thesis, we read multiple articles on the topic of servitization during the past two years. The different steps have been overviewed by Professor B. Kamp, working at Orkestra-Institute of Basque Competitiveness as Principal Investigator in the focus area of Business Internationalization and Servitization and who authored several articles and edited multiple books on these subjects (Orkestra. Basque Institute of Competitiveness, 2019). And finally, to complete this theoretical analysis, we interviewed Mr Coreynen, who was writing a PhD on servitization when we interviewed him (Coreynen W. , 2019). A combination of all of this allowed us to have a general overview of the current literature.

The practical part of this thesis will try to answer the same problematic and will be a case-based analysis of the issue addressed in the present report. We will divide this practical part into four different sections. A first one is explaining the research question more in detail. The practical part is the following of the theoretical one, but some changes needed to be done to proceed. A second part will be related to a more profound methodology used during this practical part and the reason why we used this kind of methods. A third part will refer to the different interviews done and a fourth and last part will be used to talk about the mixed results of this practical part but also to discuss the various limitations and what could be done to go further in this research.

All of this practical part will be done thanks to some article in the literature, mainly to prepare a proper methodology. The most crucial part will be written thanks to the multiple interviews that we conducted based on a questionnaire (Questionnaire (English)) and on the website of the different companies we interviewed. This questionnaire, but also the entire practical part, has been reviewed by Professor C. Lejeune, working at UCLouvain and in charge of the International Business program (IB).

3 The distinction between products and services

Before the introduction of the concept of “Servitization”, the literature was speaking about two very distinct things; Products and Services. They each had their distinct sectors subject to their market adjustments and calling for specific policies (Ariu, Mayneris, & Parenti, 2016). According to Baines, Lightfoot, Benedettini, & Kay (2009), a product is typified by a material artefact (e.g. car, boat and plane) and the term “services” usually refer to an offering (e.g. maintenance, repair and insurance), which means that it is an “economic activity that does not result in ownership of a tangible asset” (Baines, Lightfoot, Benedettini, & Kay, 2009). In their research, Lovelock & Gummesson (2004) examined a paradigm explaining that services are something uniquely different from goods due to four specific characteristics; intangibility, heterogeneity, inseparability, and perishability (IHIP) (Figure 2).

Unique Service Features	Resulting Marketing Problems
Intangibility	1. Services cannot be stored.
	2. Cannot protect services through patents.
	3. Cannot readily display or communicate services.
	4. Prices are difficult to set.
Inseparability	1. Consumer involved in production.
	2. Other consumers involved in production.
	3. Centralized mass production of services difficult.
Heterogeneity	1. Standardization and quality control difficult to achieve.
Perishability	1. Services cannot be inventoried.

Figure 2: Service's features (Zeithaml, Parasuraman, & Berry, 1985)

3.1 Intangibility:

Along with all the characteristics that make the distinction between the products and the services, the intangibility is often considered as the more important one and the only one that

is common to all services (Sempels, 2005). To take back the citation of Adam Smith, “the services are an intangible result that does not conduct to the production of an element getting a physical existence”. In 1979, Bateson made a distinction between the physical intangibility (something impalpable that cannot be touched) and the mental intangibility (something that we cannot grasp mentally), and he concluded by saying that the services are both physically and mentally intangible (Lovelock & Gummesson, 2004). It is, therefore, something that isn’t physical, and that can, therefore, not be touched. When facing intangible choices, consumers may modify their behaviour and place considerable reliance on personal information’s sources (Figure 3) (MCDougall, 1990).

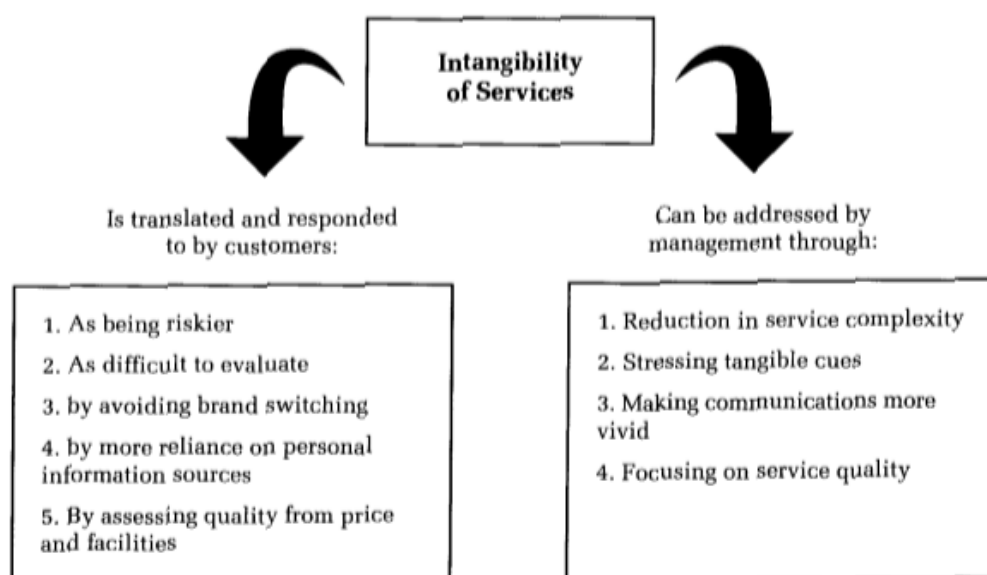


Figure 3: Intangibility of services (MCDougall, 1990)

3.2 Heterogeneity

The heterogeneity means that for a service, it is difficult to have a result stable and uniform. Indeed, we cannot control human factors entirely. In opposition to machines, the attitudes of humans are variable in term of quality. Inside the services, we can easily find heterogeneity in the time, in the quality, in the employees, and the place (Sempels, 2005).

Depending on the client, the expected services will also be different. A service will, therefore, never be precisely the same twice (Lovelock & Gummesson, 2004).

3.3 Inseparability

In opposition to the products that are often created, distributed and sold in different places, the services are most of the time produced and consumed at the same time and place. There is a high consumer involvement needed to make the exchange; there is an interdependence between services providers and customers. Most of the time, the customers explain first which service they want, and once this is defined, the customers become dependent on the service's providers to execute his or her requests to create a fruitful exchange (Sierra & McQuitty, 2005). Another difference is that most of the time, customers buy products when these already exist, but for the services, this is the opposite; once it is purchased, the creation starts (Sempels, 2005).

3.4 Perishability

Since a service is an act, a delivery or a performance, it cannot be stocked as a product could be (Sempels, 2005). The products cannot be saved. For the services companies, it is sometimes challenging to synchronise supply and demand. Sometimes there is too much demand, and sometimes there is too little, but in the service's industry, you cannot store the demand to use it after (Zeithaml, Parasuraman, & Berry, 1985). If a service's company doesn't get any order in months, they won't create anything even though they might know a huge request will be waiting for them right after.

4 Servitization: Beginning

4.1 Introduction

The distinction between products and services is no longer a unique way to see things. It isn't compulsory to draw a simplistic distinction between the two and in many occasions, one is followed by the other even if a part of the production could stay independent (Vandermerwe & Rada, 1988). We started, therefore, to speak about "Servitization". This term has first been captured by the work of Vandermerwe and Rada (1988). They defined this concept by "the increased offering of fuller market packages or 'bundles' of customer-focused combinations of goods, services, support, self-service, and knowledge to add value to core product offerings" (Figure 4) (Vandermerwe & Rada, 1988). Of course, other authors decided to give a different definition to this term, but most of them are broadly in agreement with the previous definition. W. Coreynen, currently doing his PhD on the servitization consider servitization as follow: "Servitization is about the transition of firms moving from basic products or services towards supplies of a more integrated solution, also called hybrid offering or product services for instances" (Coreynen W. , 2019).

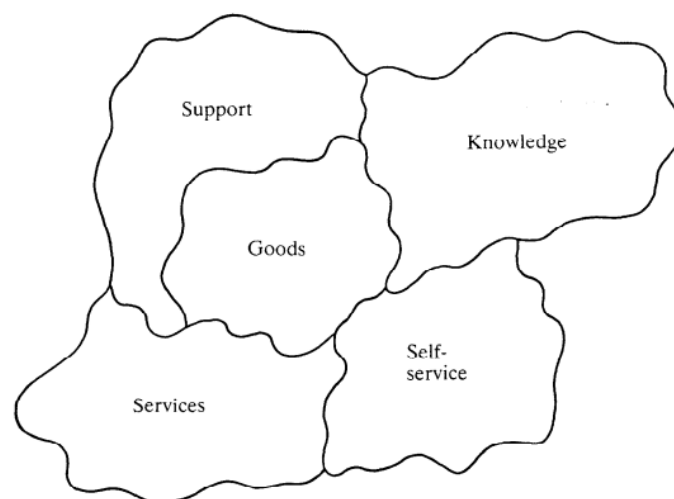


Figure 4: Bundle of servitization (Vandermerwe & Rada, 1988)

4.2 Examples

Many companies are now transiting from products to services by for example, move to “power by the hour” instead of selling engine, proceed to “yield by the field” by selling data on equipment positioning, proceed to “data on demand” by for example, selling an access to movies and music (Neely, 2013). Many cases can be found in the literature. To illustrate the concept and before going into more details, we will give three well-known companies as typical examples (IBM, Rolls-Royce, and Michelin):

1. IBM: In its beginning, IBM started its operations by producing commercial scales and tabulators. They were also producing hardware products, including mainframes, software, servers, and other storage devices. But while doing so, the demand became low, and the sales were disappointing. Even when they tried to launch new computers, they were too many competitors to compete with (Ahamed, Inohara, & Kamoshida, 2013). Therefore, IBM reinvented itself as a service business. They moved away from the production of hardware to offer some business solutions (Neely, 2008). This strategy suited the company perfectly as they are still a reference in the industry.
2. Rolls-Royce: At their beginning, Rolls-Royce was selling four types of “exchange units”; the engine, the time in terms of working hours, the spares parts, and the information. The four combined represented the traditional Rolls-Royce value propositions. That was four different resources available for the consumers (Ng, Parry, Smith, & Briscoe, 2012). But nowadays, Rolls-Royce no longer sells those four “exchange units”. Now they offer a full package, especially in the aircraft sector, where customers can buy “power by the hour”. Rolls-Royce takes all the responsibilities for risk and maintenance, generating revenues by making the engine available for the users (Neely, 2008). They don’t sell a product anymore; they sell a package.
3. Michelin: Michelin is one of the first companies that decided not only to sell tires but to offer all the services around it. They provide a service for maintenance of tires for the truck’s companies. The truck’s companies do not have to pay for the solid

tires anymore, but they pay for the number of kilometres they do with it. This change leads to many advantages. First, the truck's companies do not have to deal with the maintenance or the replacement of tires themselves, which make them gain valuable time. Second, with the knowledge of Michelin, the tires are better used, leading to the utilisation of less fuel. It is, therefore, a gain of money for the companies. Third, companies gain some cash. Indeed, by using this technology, the tires live 2.5 times longer, which means that companies do not have to order some as often as they used to. On the other hand, it also allows Michelin to reduce the costs of producing tires, and it is better for the environment (Buclet, 2005).

Of course, many other companies are also implementing an interesting servitization such as the different one we will discuss in the practical part of this master thesis, but also some companies such as Xerox who moved from selling printers to document management or Atlas Copco who decided to provide air as a service (Coreynen W. , 2019). "Atlas Copco who started moving from selling air compressor to providing machines as a service and ultimately, they want to move to provide air as a service where they don't even sell the machines anymore." (Coreynen W. , 2019).

4.3 Multiple steps to reach servitization

The transformation from a strict distinction between products and goods into the servitization has not been done directly; multiple overlapping stages had been necessary. Indeed, transitioning from a products' manufacturer into a services' provider is a major managerial challenge that cannot be done in one step (Oliva & Kallenberg, 2003). Vandermerwe and Rada (1988) talked about three stages; first "goods or services", then "good and services" and finally "bundle of goods, services, support, knowledge and self-services" where the different barriers became fuzzy and indistinct between those terms, even if each module could be free-standing. But in the work of Oliva & Kallenberg (2003), those steps are described in another way a little bit more precisely, which help to understand how the transition is happening. Depending on the stage they are, the firms are the more dominant:

- Product-related services,

- Entering service market
- Expanding the service offering.

4.3.1 Product-related services

Product-related services happen when a firm decides to extend its business portfolio by additionally deliver non-physical products such as services, in purpose to sell and support its first products (Aurich, Fuchs, & Wagenknecht, 2006). However, these services are most of the time fragmented in the different part of the organisation and are considered as an unprofitable necessity to sell the initial product. To become successful, some firms decided to consolidate the firm's services in a single organisation. They noticed that the services are an essential component of consumer satisfaction indicators (Oliva & Kallenberg, 2003). It results in offering some services that were not previously available to a firm's customers, which means additions or changes in the service concept (Gebauer, Kreml, Fleisch, & Friedli, 2008). All of these services are needed in the utilisation of the product. For example, maintenance, take back agreement, financing scheme, etc. (Tukker, 2004)

4.3.2 Entering service market

The purpose of entering the service market is to identify a profit opportunity within the services and to set up the structures as processes needed to exploit it. To do so, the best method is to run it as a separate business centre, with its profits and losses. It will help to avoid giving away different services to sell some products. It is also complicated for companies since they will first lose money by investing in these services (Oliva & Kallenberg, 2003).

4.3.3 Expanding the service offering

To expand the services, two transitions are needed. First, change the focus of the consumers from transaction-based to relationship-based. To implement this, the services must add some value to the end-users. Second, is to make the users change their focus from product efficacy to production efficiency. It means the products became a part of the offering and are not in the centre of the value chain anymore (Oliva & Kallenberg, 2003). In the end, the firms must no longer be distinguished between products and services. The final objective is to provide a highly individualised solution to the customers (Aurich, Fuchs, & Wagenknecht, 2006).

In multiple markets, it has been proved that products and services could reinforce each other and make each other more valuable. If we take the case of iTunes, it is a complimentary music distribution service that makes iPod, iPhone and other digital media players more appreciated. It allows customers to have access to digital products such as songs and videos. On the opposite, we can see that the hardware product such as the iTouch and the iPhone are necessary to make the iTunes digital media's services valuable (Cusumano, Kahl, & Suarez, 2015). Therefore, the success of Apple can partially be explained by its ability to leverage its tangible resources such as iTunes but also all the users' applications (Anderson, 2012).

4.4 Implications and improvement in firms

As we can see in the research of Davies (2004), servitization adds value to the initial manufactured product. Indeed, by starting with manufacturing products to integrate some systems inside the product; by offering some maintenance and repair service to the product; and by providing all the marketing and external factors needed; we can see that the added value of the initial products expands itself considerably (Figure 5) (Davies, 2004).

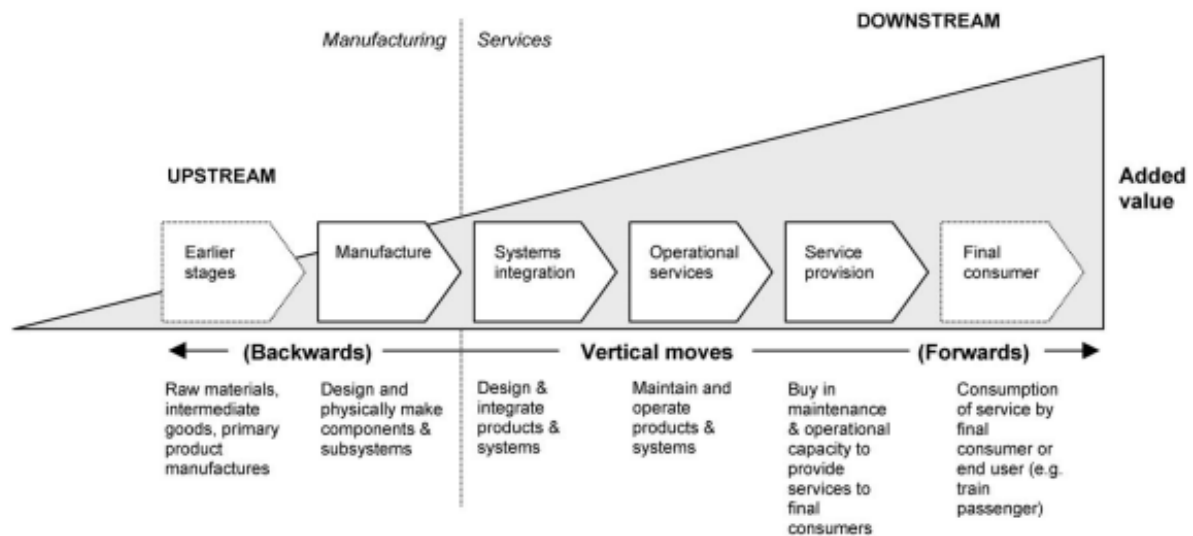


Figure 5: The capital goods value stream (Davies, 2004)

In some more recent researches, servitization can also manifest itself in another way. It can be the result of the addition of functionalities and technologies directly to the product. Afterwards, this can provide a basis to conceive a smart servitized relationship between buyers and suppliers. For example, some manufacturing firms equip their end-products and production machinery with different technologies such as sensors, data processors, robot controllers, cameras and laser scanners. All of this is made to give to these end-products, auto-diagnostic and self-configurative skills (Bannat, et al., 2011). Some authors refer to this as Advanced Manufacturing Technology (AMT) which is defined as “a family of activities that entail the use and coordination of information, automation, computation, software, sensing, and networking, unlocking new ways to manufacture existing products, and to manufacture new products emerging from the deployment of new, advanced, technologies” (Kamp, Ochoa, & Diaz, 2017).

These new technologies will allow the companies to make some connection between machines, between men and machines or between plants. This connection will make the manufacturing firm aware of what they are doing and in what purposes they are doing it. Knowing about that, they will be able to interact with themselves and with their environment (Figure 6). The servitized companies can provide many advantages for consumers such as installation, repair and maintenance, technical support, consultancy, but also IT in an increasing

and customised manner on the customer level differences (Hakanen, Helander, & Valkokari, 2017).

By doing such activities, it will have many impacts on companies. It will help them to lower their prices, to have some customisation, some innovation in their firms, and help them with their environmental consciousness (Jovane, Koren, & Boer, 2003).

Towards a Servitization-Smartization typology

	Servitization	Smartization
Focus on tradables extract value from sales transactions	Servitization of revenue streams: Increasing the turnover % that manufacturing firms reap from services (alongside their product business)	Smartization of products: "Internet of Things" (endowing assets e.g. with sensors and data processors)
Focus on processes and services compensation on the basis of value-in-use	Servitization of business models: Marketing of product-service systems with corresponding payment mode, as per "pay-per-use" or in function of capacity made available	Smartization of industrial operations and relationships: between actors along the value chain, among plants, production assets and from human2machine (establishing connectivity and interoperability)

Figure 6 Interrelations between smartization and servitization (Kamp, Ochoa, & Diaz, 2017)

5 The reasons for the servitization process in companies.

5.1 Introduction

In today's world, we are facing a turbulent environment that takes its origin from saturated markets, and unprecedented and abrupt changes in the market's demands. In the meantime, there is an increasing number of products' variants and smaller lot sizes of products appearing on the market. Some concepts as mass-customisation and individualisation, which try to focus on the needs of the consumers, make traditional firms in difficulty. Moreover, with the globalisation, worldwide competition is amplified and cause continuous pressure on production costs (Bannat, et al., 2011).

Nowadays, one solution is to be able to compete strategically by passing through services as it became a distinctive feature of innovation in manufacturing industries. The integrated product-service offerings can be a mean of differentiation (Lightfoot, Baines, & Smart, 2013) as long as they do not scarify their cost-effectiveness or their product quality (Bannat, et al., 2011). These reasons can be divided into two distinct categories: The external drivers of the companies and the internal ones.

The entry of this new paradigm brought a shift into a new era, which led to a new strategic model. Manufacturing companies have always been seen as creators of material resources. With the entry of this new paradigm, there has been a reconfiguration of the value-creating system and a shift in how we view the consumers. They became co-producers (Normann, 2001). (Figure 7)

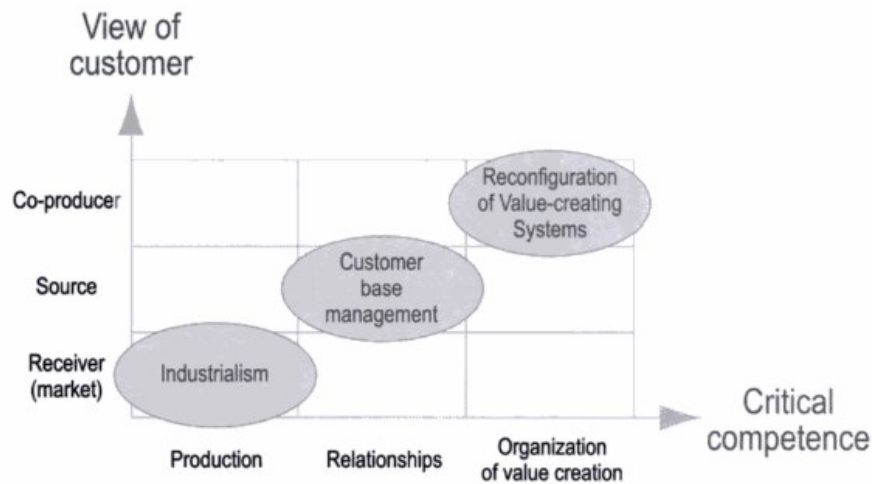


Figure 7: The evolution of strategic paradigms (Normann, 2001)

5.2 External drivers

5.2.1 Technology

New technologies, especially those associated with information and communications technologies, became an essential enabler of servitization (Neely, 2008). Indeed, thanks to technologies, the consumers now have a better bargaining base since they can know the different options they have, everything becomes more and more transparent. The cloud paradigm represents an approach to providing various other services than those proposed before (Sultan, 2014). Nowadays, customers want things more quickly, more customised and more conveniently (Vandermerwe & Rada, 1988). Indeed, consumers' perception has evolved. They don't want some products anymore; they want some solutions (Baines, Lightfoot, Benedettini, & Kay, 2009). This increase in technologies allows manufacturing firms to develop new business models, and to exploit all the information they get (Neely, 2008). The technology enables the firms to catch the user's requirements and to look "beyond the voice of the customers" (Kamp & Parry, 2017).

5.2.2 The demand of the users

It is more and more difficult for firms to understand what consumers want. The implementation of the servitization is, therefore, highly based on the consumers' involvement. The only way for the firms to survive is to create services with and for the consumers (Peillon, 2016). The objective of such services would be to be operationally viable and technologically reachable to be able to respond to the problems of the customers (Iriarte, Hoveskog, Justel, Val, & Halila, 2018). We can distinguish three kinds of consumers, and each of them will seek different propositions (Coreynen, Matthyssens, & Bockhaven, 2017).

- The people who wish “to do it themselves”.
- The people who wish us “to do it with them”.
- The people who wish us “to do it for them”.

The ones that wish to do it themselves will buy the products and then repair and maintain it. However, with the servitization, you can reach the two others (Baines & Lightfoot, 2013). You can reach the people who want things to be done with them by offering them some services. They will do the basics repair and maintain, but they will come for more significant repair and overhaul. You also can reach the ones that wish things to do be done for them. They will be willing for the manufacturer to take care of everything (Raddats, Baines, Burton, Story, & J.Zolkiewski, 2016). This differentiation between users will come from multiple features, mainly performance incentives, revenue payments structured around product usage and long-term contractual agreements (Baines & Lightfoot, 2013).

5.2.3 Environment

By offering some services related to the product, the companies will care about the future of this product; they know that in the end, either the product will come back to them, either they will have to repair it. Knowing about that, the companies will integrate some constraints linked to the life of the product. Longer the product lives, better it is for them. This way of thinking is in total opposition with today's economy, which tries to have products living as less time as possible to be able to sell new products to the consumers. This is called the

planned obsolescence (Buclet, 2005). By trying to have a more conscious product usage, firms will increase their productivity, but they will also reduce their environmental loads (Aurich, Fuchs, & Wagenknecht, 2006). By changing their business models and by having the customers revise their conception of ownership, it will reduce the adverse environmental impact of products.

A typical example is the rented washing machine. Customers don't buy washing machines, but instead, they rent them and pay a fixed fee per washing cycle. The customers will, therefore, try to minimise the number of washes they undertake (Neely, 2012).

5.3 Internal drivers:

Once the link with the consumers made, servitization can offer three main opportunities: financial opportunities, marketing opportunities, and strategic opportunities. But it also has an impact due to the knowledge that you can get from the consumer, the innovation and the practicable grow opportunities.

5.3.1 Marketing opportunities

On the marketing point of view, it will mostly be understood as using the services to sell more products. The service component is well known to positively influence the purchasing decision of the consumers (Mathe & Shapiro, 1993). It is now more understood that customers bond more with people than with products. Having multiple contacts between the customers and the services provider will facilitate relationship marketing. It will develop some customer loyalty, and as a result, the firm will reach the right customers, the most profitable ones (Berry, 1995). The customer management (which refers to build and maintain a close relationship with the customers through active interaction and communications) will become essential in such companies (Zhang & Banerji, 2017) and a long term and profitable relationship will be created with the customers (Hakanen, Helander, & Valkokari, 2017). The new products will, therefore, be modulating with the customers' requirements to reach them and their willing's (Brax &

Visintin, 2017). It is a co-creation with customers and suppliers instead of unidirectional value delivery (Zhang & Banerji, 2017). Moreover, the marketing part is linked to the others; once the marketing benefices are well implemented, the company will be more likely to achieve some financial profits and retain customer loyalty (Zhang & Banerji, 2017).

5.3.2 Strategic opportunities

To satisfy their customers, companies have to implement servitization; it will allow them to set up barriers to competitors by knowing better what the customers want. It will create some dependencies from the consumers; create a close relationship (Sultan, 2014). By going into the customer's intimacy, it will allow the company to develop a competitive advantage (Rabetino, Kohtamäki, & Gebauer, 2017). Indeed, "if you move from selling products to maintaining a relationship with your customers, you will gain in debt knowledge of your customers, and you will be able to provide some solutions that better fit their needs, so you create more loyal relationships with the customers" (Coreynen W. , 2019).

Servitization is the move away from selling a traditional product to selling a wide range of product/services bundle combinations, contributing to firm sustainability and profitability and hence the competitiveness of nations (Vendrell-Herrero, Parry, Bustinza, & O'Regan, 2014). With the actual global competition, servitization could help to compete with firms in an emerging market using overseas acquisitions (Baines & Lightfoot, 2013). The decision to move into services may help determine which firms will survive and how the industry will evolve (Cusumano, Kahl, & Suarez, 2015).

In their research, Ulaga & Reinartz (2011) found four different resources that the hybrid firms (which combine products and services) have compared to others.

1. Installed base product usage and process data: By doing maintenance and reparation, the firm can collect much information that could help them better understand the customers and create new products that could respond to all of their attempts.

2. Product development and manufacturing assets: The firms can exploit synergies between products and services, which leads to a position where they manage to have a competitive advantage over the direct competitors.
3. Product sales force and distribution network: Having both the products and the services in the same environment help the workers to know what they are dealing with; the suppliers know what kind of buyer they will have to deal with.
4. Field service organisation: Because the products firm invests most of their time in service firms, this place can be used for field service networks and provide after-sales services, but can also be used to visualise some opportunities to create new products and services.

Finally, as explained before, the servitization will help companies to differentiate themselves from competitors and will help them reach targeted consumers, which will result in strategic advantage. Moreover, services are more difficult to imitate, which will have a positive impact on different companies (Gebauer, Friedli, & Fleisch, 2006). In the end, companies move from product-oriented to consumer-oriented (Baines, Lightfoot, Benedettini, & Kay, 2009).

5.3.3 Financial opportunities

On the financial point of view, it is more or less clear. Indeed, by introducing the services into the existing products, it will offer more potential revenue, higher margins, and reduce operational expenses and costs. It will also allow firms to use their assets more efficiently (Rabetino, Kohtamäki, & Gebauer, 2017). Moreover, services are a more stable source of revenue than products (Gebauer & Friedli, 2005), which is essential in an economic turmoil (Brax & Visintin, 2017). Servitization is a way to increase sales revenues for companies, but it is also a way for consumers to reduce some risks by having maintenance and support costs (Neely, 2008). In their research, Kastalli & Looy (2013) demonstrated that products sales and services sales complement each other, having both enable to reach positive effects, the first one positively influences the other, and vice versa.

The ability of the manufacturing business to make economies of scale and economies of scope in products and services will depend on the complementarities between the core product and the additional services. Once this objective reached, the services provider will benefit from an advantageous position in the market, which will allow him to reach more people with less cost and to enable him to grow successfully (Lafuente, Vaillant, & Vendrell-Herrero, 2017). By implementing some services, companies will reduce both operational disruptions and operational costs (Rabetino, Kohtamäki, Lehtonen, & Kostama, 2015). In multiple case studies where the servitization has been implemented, an increase in revenues and margins have been noticed (Penttinen & Palmer, 2007). Various authors have seen that product-related services revenues can reach five or more times the initial retail price of the product over the lifetime of its use (Cusumano, Kahl, & Suarez, 2015).

5.3.4 Knowledge of the consumers

Another great advantage that we need to focus on is the fact that, in the past, some companies misunderstood what consumers needed. Therefore, they could have done the wrong product since the beginning. By introducing some services related to the product and by adding some after-sales services, they could better understand how to improve future product designs. The support revenues from customers may be far higher than the initial product revenue (Goffin & New, 2001). Thanks to this services integration, more and more information will be available to the firms without any human intervention. Everything will be digitalised, and therefore, they won't be any human error in it, which leads to some reliable information that the company can use. The firms will understand "what they are" and "what they are doing" (Bannat, et al., 2011).

Moreover, by expanding their business activities, they will grow new relationships with a more significant level of customer engagement and intimacy (Vandermerwe & Rada, 1988). It will increase the impact of the firm on the consumers in the long term (Lightfoot, Baines, & Smart, 2013). It will be beneficial for companies and customers since there will be a rise in the accessibility and reliability for the customers, which will increase their satisfaction (Penttinen & Palmer, 2007). The relationships are often transactional between consumers and providers; there is an exchange that must be beneficial for both parties involved. The customers are operant resources, active in the co-production. It contributes to economic growth and the critical source

of wealth (Vargo & Lusch, 2004). The vision of the customers is changing; they pass from a passive actor that interacts with the supplier in short sales to an active relationship-oriented actor with a long-term perspective in the interaction (Tuli, Kohli, & Bharadwaj, 2007). By creating some “bundles” between products and services and by having some linkages, information sharing, and legal bonds, the relation between the firm and the customers will grow and be reinforced. It allows the firm to identify some key customer segments to be able to develop specific offerings for each one of them (Penttinen & Palmer, 2007).

Once these crucial assets of knowing the customers and understanding them had been noticed, it became meaningful of putting some investment in the customers’ interface. It became essential to treat the customers as individuals, and the emotional methods became a part of the management (Normann, 2001).

5.3.5 Innovation

By having some products that are smart and connected, it will offer some exponentially expanding opportunities for new functionalities, far greater reliability, much higher product utilisation, and capabilities. It will also make the companies reconsider their supply chain and everything they do internally and externally. By wondering “What business am I in?” they will have the possibility to think differently and to make some new strategic choices (Porter & Heppelmann, 2014).

5.3.6 Growth opportunity

By having products and services linked to each other in the same firm, it will impact the growth positively. The services will offer some new growth possibilities that the product could not have on its own (Kastalli & Looy, 2013). In opposition, it could be assumed that the investment to launch a company into the servitization could cost a lot, but it has been proved in the research of Kastalli & Looy (2013) that economies of scales and economies of scope eventually compensate for these investments. Servitization will also be useful to attract new customers and to enter a new market segment (Rabetino, Kohtamäki, & Gebauer, 2017).

By changing from products and services to customer activities and customer outcomes, it will help the managers to explore opportunities for new services, and therefore, improve the odds of success (Sawhney, Balasubramanian, & Krishnan, 2004).

6 An international point of view

6.1 Internationalisation

Companies that want to go internationally need to choose the kind of entry mode they wish to use; the first question is to ask which degree of control they want. The higher the firm's level of ownership, the higher control they have (Erramilli, 1991). The control in a firm is its ability to influence the various management systems, methods and decisions of the organisation in the foreign market to improve its competitive position and maximise returns on firm-specific assets and skills. Having higher operational control is linked to having greater ownership in the international venture. However, the risks are also likely to be higher. The level of control will be the lowest by doing a licensing and will be the highest by owning a subsidiary (Sanchez-Peinado & Pla-Barber, 2006). Therefore, choosing the level of control is based on a trade-off between risks and returns (Agarwal & Ramaswami, 1992). Depending on this level of control, we can regroup the internationalisation mode in three different topics (Pla-Barber, León-Darder, & Villar, 2001):

- The way that leads to direct investment with total control (Acquisition and Greenfield Investments).
- The mode that leads to direct investment but with shared control. The rest of the control being shared with the partner (Joint Venture).
- The mode where there is not any capital contribution involved and where the control is minimal (Management Contracts and Franchising).

In the mind of many persons, international trade is only associated with the commerce of manufactured goods. However, this strategy is related to the internationalisation of products and also to the internationalisation of services. In today's business, goods and services are two equally important components of world trade (Francois & Hoekman, 2010). In most of the European countries, there has been robust growth in the business in services in the last 15 years. However, the international market tends to be riskier for the services companies that expand internationally. Once they succeeded in their expansion, these firms can grow more than the

one trading goods. (Ariu, 2016). Another argument for starting this international expansion could be that many firms recommend “learning by exporting”, which mean to learn how to go internationally by doing it (Costantini & Melitz, 2008).

6.2 The dichotomy between products and services in their international expansion

In his research, Shostack (1977) explained there was more than one vision of what the service market is. He noticed that the marketing for service was very different from the marketing of products and that a determination of consensus realities should be a priority for the service marketers (Shostack, 1977). Terpstra & Yu (1988) confirmed this hypothesis by saying that the manufacturing industry and the services industry were different for at least two reasons. First, because most of the time, the service firms are less capital intensive than the manufacturing one. Second, because most of the service firms need local production, in opposition, the manufacturing firms can import their product in a foreign country (Terpstra & Yu, 1988).

Moreover, multiple authors tend to say that selling services is more complicated than selling products when it reaches an international point of view. François and Hoekman (2010) are saying that we are still in a “product view of the world” and Borchert, Gootiiz, & Mattoo (2012) add that regarding the internationalisation of services, we observe many “second-generation” restrictions on entry, ownership, and operations. Indeed, many barriers can be easily noticed for the internationalisation of services, such as the restriction of trade in the foreign country, the impact of past or prospective liberalisation and technological changes, the new political economy trade policies and regulation, and the implications of the trade agreements (François & Hoekman, 2010). The tariffs, quotas, local content requirements, and all the concession that have to be made to penetrate the international market are also to be noticed (Jensen & Petersen, 2014). It also can be seen that locals' companies can constitute a barrier for the service offering in some countries; the small local competitors can limit the price charged by the companies (Zarpelon Neto, 2015).

6.3 The link between products and services in their internationalisation

Products and services are often inseparable, which could lead to an exclusive relationship where services must be sold during an extended period (Baines & Lightfoot, 2013). As Rabetino, Kohtamäki, & Gebauer (2017) said in their work, servitization is useful to attract new customers and to enter new market segments. On the other hand, service development often becomes more involved in manufacturing companies than it is in pure service firms. Indeed, the first manufacturing companies have a core product that has traditionally carried most of the value and has been in the company culture since the beginning. Due to this, manufacturing companies may need to do some reconfiguration with the purpose to manage the relationships of having two different business logics; a service-oriented one, and an industrial, product-oriented one. This tension will be a constant challenge in companies (Kindström & Kowalkowski, 2009). A complication that could happen for the servitized firms is that they can't only go on a market and sell what they want; they have to construct a relationship with the customers which is more complicated compared to product development (Kindström & Kowalkowski, 2009).

6.4 Introduction related to the internationalisation of the servitization.

As explained in section 5.3.5, servitization is considered as a model of innovation. In today's world, to reach the market abroad, companies need to improve their efficiency and effectiveness. To answer this need, a solution found is to shift from manufacturing companies to sophisticated integrated solutions; to implement servitization (Di Orio, et al., 2016). As we can see in the work of Mastrogiacomo, Barravecchia, & Franceschini (2019), more and more companies are becoming servitized across the world (Figure 8). This kind of change in firms may increase productivity and home-country market share, and with this increase, firms could appear to be better prepared to compete in international markets.



Figure 8: World map of servitization (Mastrogiacomo, Barravecchia, & Franceschini, 2019)

However, only the most productive firms will be able to enter the export market (Aquilante & Vendrell-Herrero, 2017). In the work of Ariu, Mayneris, & Parenti (2016), some data collected amongst multiple firms showed that servitization might be suitable for the exporting firms and that adding services might boost the demand for goods, allowing firms to charge higher prices without harming the demand of their products.

Up until today, the internationalisation of the servitization is something silent even if this topic is considered as vital to understanding the transformation of many industrial companies. It is an important strategic decision (Bustinza, Vendrell-Herrero, & Baines, 2017). As Ariu (2016) said in his research on the Belgian market, there is only a small share of Belgian firms that simultaneously exports goods and services (less than 10 per cent), although they account for more than 30% of total exports of the country.

Therefore, those explanations make us think that servitized firms should have a better opportunity than the primary firms when they try to penetrate the international market.

7 Discussion

The topic of the internationalisation of the servitization has not been reviewed a lot in the literature. It makes it, therefore, impossible to write an analysis without only making assumptions. In this theoretical part, we spoke a lot about the servitization, how it appeared, and how and why it increased in different companies. All of this was theoretical and allowed us to have an overview of the way it works.

All this analysis leads us to ask ourselves different questions. Especially the issue of the evolution of this servitization. We might wonder if the servitization will expand to various companies, in all sectors or stay focused on a few of them. We could also ask ourselves how the servitization will work at an international level; if it is an advantage or perhaps a break for companies willing to expand their servitization worldwide.

“I think that the baseline is that services will increase and will become more important. One of the enablers for that is technologies because technology is becoming cheaper. In the past, it used to be all about manufacturing technology. These days, it is about information technology and information technology has been known for instance, in service sectors, but we see a huge influx in the manufacturing industries now as well. So, services will become more important thanks to technologies but really depending on the context of the firms; it will turn out that not everybody will be successful in services” (Coreynen W. , 2019).

Servitization should increase on multiple levels, but everybody might not be able to implement it. Various reasons could have an involvement; it could be related to the company dimension, the geographical location or the commodity of the sector (Mastrogiacomo, Barravecchia, & Franceschini, 2019). It could be due to many things, and we will try to understand that in the practical part.

The second part of this thesis, the practical one, will, therefore, try to analyse multiple companies, present on an international level, that implemented some servitization. By examining numerous case studies, it should become possible for us to obtain insights on whether this generated certain new advantages and disadvantages for such companies to compete in their sector but also to reach new industries and maybe even new market at a local or international level. The main questions related to servitization, that will be asked in the

second part of this thesis, will be “How did the company implement its servitization?”; “Why did the company decide to do it, and what were the different steps and advantages of it?”; “Is it an advantage while trying to go internationally?”; “What difficulties or facilities have been encountered during this internationalisation/servitization?”.

Practical Part

1 Problematic and research questions

This practical part will try to follow as much as possible the previous theoretical one. The servitization will be the focus of this part, and this whole part will be conducted by doing interviews in different companies where some servitization is implemented.

In the theoretical part, we talked a lot about the servitization, when and how it appeared in the manufacturing industries and the different reasons why it did. After speaking about all of this, we tried to focus on its internationalisation and on the way servitization could help or not a company to expand at an international level. However, as we explained, it was challenging to gather enough theoretical information to write about this subject as, in the literature, only a few authors spoke about the servitization at an international level.

The focus of this practical part will, therefore, be mostly based on the servitization itself and will try to see if the servitization process in companies broadens what has been found in the literature. Indeed, it is well known that reality is often way different from theory. By doing a practical analysis, our objective is to understand how servitization happens in fact and what are the different impacts for the customers and the companies themselves. We will also try to understand if more and more companies are going to launch some servitization and the reasons why they would or would not.

A second focus will be to wonder how this servitization will affect the internationalisation of companies. However, we are aware that this kind of information might be challenging to get as it requires tremendous knowledge of the companies, not only now but about its the evolution during the past years, in Belgium but also at an international level.

2 Methodology

For this practical part, a strict methodology needed to be applied. Indeed, as (Kallet) said, the methods section of a research paper is one of the most important parts because it helps the reader to understand the validity of the study. The audience can, therefore, judge if the results and conclusions are valid or not, they can judge the quality of the report, and they can evaluate the replicability of it. It is, therefore, essential to describe how the research was done and why different procedures were chosen. To make this methodology as accurate as possible, we used various steps from (Fox & Jennings, 2014) following four key elements:

1. The data collection procedures
2. The study designs
3. The selection of participants
4. The planned data analysis or analytic strategy

2.1 The data collection procedures

To proceed with this practical part, we used some primary data based on a qualitative approach by conducting semi-directive interviews. Indeed, the purpose of this practical part is to explore some new territories, and qualitative analysis is one of the best methods to do so (Lejeune, 2014). By doing these interviews, it helped us to gather reliable and relevant data. The whole objective of these interviews was to use some scientific methodology to answer our initial research question (Kothari, 2004). We decided to use some semi-structured interviews as it gives us more flexibility (Saunders, Lewis, & Thornhill, 2009). First, we wrote a questionnaire: (Questionnaire (English)). Indeed, conducting an interview is something that needs to be done carefully and with sufficient preparation (Qu, 2011). But while conducting these interviews, the objective wasn't to follow it literally. The purpose of this questionnaire was to have a global view of the different questions we wanted to ask but, the real objective was to ask our first question and adapt the other ones depending on the answers received. We sometimes used a different order for the interrogations, and we sometimes skipped some of it as we knew from previous reactions that we would get the same answers as before or no answer

at all. In the end, we were more looking for a sort of dialogue. By conducting the interviews this way, it allows much more space for the interviewees to answer on their terms than with a structured interview, but it keeps some structure to it (Edwards & Holland, 2013). The whole objective was to get as much information as possible from the interviewee while giving a structure to it (Van Campenhoudt, Marquet, & Quivy, 2017).

2.2 The study designs

As said before, to write this practical part, we did some semi-directive interviews. To do so, we needed to have some employees working in a company where there is a lot of servitization implemented, and we also needed some employees who knew about servitization in these firms and the way it works there. While looking for some companies, we noticed that more and more firms have servitization implemented, sometimes without even knowing about it. We, therefore, needed to find some companies where servitization was known. We read multiple internet sources and articles to find some good examples, and then, we tried to reach them via LinkedIn, Facebook, Email, Phone calls, WhatsApp and we used our network to reach our goal. In the end, we managed to do a total of five interviews in the following firms (Figure 9):

- Hilti
- Fokker
- Econocom
- HPE
- SKF

The different interviewees have first been contacted by email or WhatsApp (depending on the contact information we managed to get). In this introduction message, we presented ourselves, and the only thing we asked for was to interview with them to speak about the servitization in their company. As the word servitization is not a common word for all, we described it as the various services offered to the customers around a product sold. By telling this, the objective was to make sure that our contact would understand what we were talking about while not giving too much information so that the interviewees would talk about their point of view. We did not want to have any influence on the interviewees' opinion. In the end,

the five persons we interviewed had a good knowledge of servitization in their company and were able to talk about it with more or fewer details regarding the function they had in the company and how long ago they joined it.

Once we managed to arrange a Skype session, the two first things we asked were if we could record the interview and the language they were more comfortable with, English or French. Two questionnaires had first been written for this, one in English: (Questionnaire (English)) and one in French: (Questionnaire (French)).

After agreeing on this, the interview started. Each discussion lasted around 40 minutes, depending on the available information that the interviewees were able to give us. These interviews have all been transcribed and can be found in the Appendixes.

2.3 The selection of participants

While looking for some participants for our interviews, some criteria were needed. The most important one was to make sure the company we were interviewing had some servitization implemented. Being a new servitized company or an old one didn't have any importance to us. But the company had to have already some servitization applied.

A second important criterion was to make sure the person we would interview could tell us about the servitization itself. It would not have been useful to meet someone from a servitized company if this person didn't know anything about it or was following orders without understanding the process. We, therefore, needed to interview someone with some responsibilities in the company, more precisely, some responsibilities regarding the services offering of the company.

Next to these two main criteria, we were open-minded to the person to interview. Indeed, the age, sex, ethnicity or location would not have any influence on our results.

As all the people we interviewed were still working inside the company when we questioned them, we are aware that bias could occur due to the fact they might not want to criticise the company they are working in.

The number of interviews was not defined in the beginning. We contacted multiple companies and decided on the amount after the interviews. Indeed, after the fifth one, we noticed that we were getting more and more information already collected before. Of course, we always learn something new from each meeting, but the number of further details was getting smaller and smaller.

Name	Company	Position in the company	Duration of the interview	Date of the interview
Dimitri Dierxsens	Hilti	Sales Team Leader	00:38	23/04/2019
Frank Rodfort	Fokker	Management Trainee	00:31	01/05/2019
Carine Lams	Econocom	Global Account Manager	00:43	02/05/2019
Geert Van Leemputten	HPE	Sales and Consumption specialist	00:52	08/05/2019
Laurent Vanhoudenhove	SKF	Managing Director of Industrial Market Benelux	00:51	27/05/2019

Figure 9: List of the interviewee

2.4 The planned data analysis or analytic strategy

While doing the interviews, the same questionnaire was used: (Questionnaire (English)). Even though the question asked were different, we were able to separate the answers in different sections. In the analysis of the results, we decided to group the different information based on four main topics:

- Description of the interviewees and their companies
- Implementation of the servitization
- The generalisation of servitization in manufacturing companies
- The internationalisation of the servitization.

Once all this information had been transcribed for each interviewee, a resume of the five of them was made for each topic. The objective of this discussion was to summarise the different information we got from the various interviewees, to draw some conclusions, and to answer our research question. Accordingly, we used the methodology of Miles & Huberman (1994) (as cited in (Lejeune, 2014)). We first reduced the data; taking only the information needed for our analysis. Second, we presented the data; making a resume of each one of them for each section. Last, we gave a conclusion; gathering information from each interview and putting it together to draw a synthesis of the chapter.

After this analysis, a discussion has been made. The objective of this discussion was to create a critical analysis of all the information gathered in the practical part but also the theoretical one. Doing this allowed us to highlight what this thesis brought new to the literature but also allowed us to write some limitation to what we wrote and some action that could be done to go further in the subject.

3 Analysis and results

3.1 Introduction

In this section, we will present the different interviews that have been made. Each one of them is related to one person using servitization in his company. The names of the companies have already been discussed in the methodology (Figure 9), but we would like to add some more details. There isn't any restriction regarding the size of the company, the age of the company, the industry, or the number of years they have been applying servitization. The interviews were conducted in French or English, depending on what the interviewees were more comfortable with. All these interviews followed the same questionnaire: Questionnaire (English). This entire section will only be based on the interviews themselves and the company website or annual report. All the interviewees have first accepted to be recorded for this master thesis, and a transcript of each one of them can be found in the Appendixes.

3.2 Description of the interviewees and their companies

3.2.1 Introduction

To understand what kind of company we are dealing with, in term of size, sector, target, and range of customer, a short description of each interviewee will be done, followed by a description of the company they are working in and the function they have in it. With this information, it will be easier to understand the business of the company and the type of servitization they could have but also the kind of information the interviewee had access to.

3.2.2 Hilti

The person we interviewed for this master thesis was Dimitri Diercxsens. He started his career at Hilti in 2015 as a sales worker. After that, he specialised himself for the “On Track” program of the company, and he is now the sales leader of a team of 9 salesmen and is responsible for all the Flemish’ electricians (Diercxsens, 2019).

Hilti is one of the leaders in the construction company. The company was founded in 1941 by Martin Hilti and his brother Eugen. The company was founded and is still based in Schaan, Liechtenstein. Nowadays, it is still a familial company, and the Hilti’s family remains at the head of the company. The company has more than 29 000 employees and is present in 120 countries. Last year, they reached 5.5 billion turnovers (Swiss Franc) (Hilti, 2018).

Hilti is mainly developing and producing products for the construction industry and is mostly present at a B2B level even though they also sell at a B2C level. They offer multiple services, systems, and software around their products, which will be more discussed in the following sections. Hilti tries to focus on their relationship with their customers and invest between 300 and 350 million in the Research & Development each year to always be one step ahead in their business (Diercxsens, 2019).

3.2.3 Fokker

The person we interviewed for this master thesis was Frank Rodfort. He has been working for Fokker for one and a half years where he does a management traineeship. While doing this traineeship, he had the opportunity to rotate in different functions, including the service division, which we will discuss more in the following section. (Rodfort, 2019).

Fokker is a Dutch company that has been created by Anthony Fokker in 1912. In 2015, due to bankruptcy, the company was bought by GKN Aerospace, the world’s leading multi-technology tier first aerospace supplier. (Fokker, 2019). With 50 manufacturing locations in 15 countries, they serve over 90% of the world’s aircraft and engine manufacturers (GKN Aerospace, 2019). Fokker has different departments, including one dealing with services, which are interesting regarding servitization (Fokker, 2019). “Abacus” is the name of their program

including products with a range of additional services, not only to ensure availability and reliability but also to focus on the components' improvements (Fokker, 2019).

3.2.4 Econocom

The person we interviewed is called Carine Lams; she is a global account manager at Econocom. She is in charge of offering different solutions to Econocom's clients. She has now been working there for two years but she has been working in various companies before ending up at Econocom (Lams, 2019).

Econocom is a familial company that started almost 40 years ago; they are present in 19 different countries, mostly in Europe. They began as a manufacturing company, only selling products without any services (Lams, 2019). They are now specialised in digital transformation for companies and public administration with a revenue of 2 846M and 10 800 employees; they are one of the top 10 numerical services company (Econocom, 2018).

They help their clients to use the digital transformation to become better. They consider that we are now living in the age of "userisation", an age where people want to share everything without waiting, and where the customer must be in the centre of everything. They base their business on three different axes; equipment, services and financing (Econocom, 2018).

3.2.5 Hewlett Packard Enterprise

The person we interviewed at Hewlett Packard Enterprise was Geert van Leemputten. He has been working in this company for the last 11 years. He is leading a portfolio called "Wait.next" in Belgium and Luxembourg. His role in the company is sales and consumption specialists in IT (Van Leemputten, 2019).

Hewlett Packard Enterprise is a two years old company born from the splitting of Hewlett-Packard (HP). HP was specialised in the PC, printers but also servers, storages, software and selling equipment, HPE took the part of the business related to servers, storage, networking, consulting and financial services. In Belgium, they have around 400 employees.

They now sell multiple things focusing on data such as computer systems as storage, data equipment, facilities for these data equipment, consulting and advisory services and the “GreenLake” offer on which we will focus on the next parts (Van Leemputten, 2019).

HPE considers itself in the acceleration business; they help customers use their technology and their IT environment. They provide solutions to help companies to succeed while using innovation and provide them with the infrastructure needed for their projects (HPE, 2019).

3.2.6 SKF

The person we interviewed in Svenska KullagerFabriken is called Laurent Vanhoudenhove. He joined SKF in 1992, and he is now responsible for all the global activities of SKF in the Benelux (Vanhoudenhove, 2019).

Svenska KullagerFabriken is a Swedish leading global technology provider since 1907. As their name says it in Swedish, they focus their business on the bearing and seal manufacturing. They now have broader expertise and work across technology platforms: bearings and units, seals, mechatronics, services, and lubrication systems. SKF is present in more than 130 countries, and 45 000 employees are working for them (SKF, 2019).

Today, they offer a full range of products, services, and solutions for EOM and manufacturers while they keep increasing their innovation to keep satisfying every customer (SKF, 2019).

3.3 Implementation of the servitization

3.3.1 Introduction

In this part, we will speak about the servitization in each one of these companies. The purpose will be to understand what is done in the company and especially how the servitization happens. As all these companies are present in different sectors, they will all have a different way to implement servitization. Nevertheless, we can group some common idea from some of them. At the end of this section, a summary will be done, and a table regrouping the main servitization argument that we found during these interviews will be added (Figure 11).

3.3.2 Hilti

Hilti has two different systems linked to the servitization, the system “On Track” and the system “Fleet”. Both help the customers having a better experience of Hilti’s products. In general, they offer a more significant service around their product, and in the end, they are more present in a consultancy point of view than on an aggressive selling point of view. The whole point of these systems is to go to the customers to understand their problem and how Hilti can help them to face these issues (Diercxsens, 2019).

3.3.2.1 *Fleet Management*

The Fleet Management services started 16 years ago. The objective of this service is to simplify the financial planning and administration of the customer by charging them a fixed monthly fee, which covers all the tools, including their use, service and repair costs.

There are eight different processes for Hilti to achieve their objective:

1. **Pre-qualification:** Go on the field and look for some challenges.

2. **First meeting with the CEO of the company:** Explaining that Hilti wants to understand every process of the company to help them on a different level; the fixing of tools, the losing of tools, the stealing of tools, the loss of productivity, the life cycle of the tools ...
3. **Analysis of the customer:** Once Hilti understands everything, they can make an analysis to transform all of it in numbers. Numbers are the best way to show that Hilti would be the best solution. To achieve that, many meetings need to be done to talk with everybody in the process.
4. **Demo of the tools:** Hilti will deliver the tools, and the customer can use all of them for one week. During this week, there will be some formation and some following to make sure the customer is employing every device the best way possible.
5. **Price offer:** When the demo occurs, Hilti makes many pictures to be able to show everything to the CEO and to have some examples ready. With all of this, Hilti can offer a price.
6. **Contract signing:** The customer signs the contract
7. **Implementation and formation:** Hilti delivers all the tools and teaches the workers how to use them.
8. **Following:** For four years, the customers use the tools but it doesn't stop there. Hilti offers many services around it. If the devices are inefficient, they give some new ones; if the devices are broken, they replace it; if the devices are stolen, Hilti provides some new ones. All of this is included in Hilti's price.

The real advantage of this kind of services is that, since the beginning, the customer knows how much he will have to pay at the end of the month or at the end of the year, whatever could occur (Diercxsens, 2019).

In comparison with the competitors, where, in case of problems, the customer would need to contact the seller, the seller would have to contact the supplier, the supplier would have to contact the storekeeper, and it goes on. All of this takes time; it can go to three weeks. In this kind of situation, time is money because, without the tools, the construction site cannot evolve. With Hilti, if there is a problem with a device, the customer gets a fixed one in a maximum of 3 days, and Hilti gives him another one in the meantime. With the Fleet management service, the customer doesn't have any concern anymore.

We can see that with this method, the customer can get more productivity, can increase its cost management and have better back-office efficiency.

- **Productivity:** Hilti helps the customers to choose the right mix of tools and to limit tool redundancy, Hilti replaces the devices by the newest version to always be as efficient as possible regarding the latest technologies.
- **Cost Management:** No upfront cost needed to buy the necessary devices, which mean that the customer can preserve his capital for his business. Moreover, it helps the customer to predict the future costs of the company.
- **Back Office Efficiency:** With this method, the customer can reduce administration for purchasing and accounting. There is also no need to stress about the replacement or the stealing of the tools; Hilti does it for them (Hilti, 2018).

3.3.3 Fokker

The name of the servitization system they are using is called “Abacus”. Abacus is the longest-running Component Availability and Maintenance Service in the regional aviation history; supporting more than 250 aircraft, and serving over 20 operators. The Abacus program combines repair management and availability with On-Site stock services that are fully tailored to meet the operators’ specific support needs (Fokker, 2019).

To go more in details, when one of Fokker’s customer has a broken spare part or a spare part, which is not working as it, should be, they can send it to Fokker. Fokker will send them back a new spare part in a minimum delay. In the aviation sector, they need to take into account the wasted time when the plane is on the ground, and they need to minimise it. Indeed, having a plane staying on the ground is a considerable loss of money. The whole concept of Abacus is based on that. The customers don’t have the time to send a broken spare part, wait to have it fixed and sent back to them. They need to have a new spare part as soon as possible, to be able to make the plane flight. Fokker will guarantee that the customer will have a new spare part in less than 24h. In the meantime, they will fix the spare part, and they will keep it until someone else needs one. In the end, the customer never really is the owner of the spare part but is a member of a pool of common stock. Thanks to that, Fokker can easily reach some new clients and add them to the pool. This kind of model is easily transplantable to other companies, Fokker

only needs to modify a little bit the package they are offering and then everything is set up for a new customer. They can also easily spot if there is a problem in their offer and immediately change it for every client (Rodfort, 2019).

With Abacus, the customers have a lot to gain (Fokker, 2019).

- **AOG coverage on-site:** Limit the Aircraft On Ground (AOG), Abacus provides a stock of spare parts to make sure that the plane can start flying as soon as possible.
- **Guaranteed Availability:** Abacus ensures that the spare parts will be delivered on time due to their business implemented in the USA, Europe, Africa, and Asia.
- **Sophisticated Reliability and Quality Monitoring:** Abacus guarantee a wholly-owned repair facility. Their engineers and their advanced reliability monitoring tools allow them to implement preventive maintenance procedures.
- **Predictable Cost:** By using Abacus, you can decide what you invest in and make sure to spend your money efficiently. All of this thanks to the Power-by-the-Hour, Fixed Price, and Time & Material structures.

3.3.4 Econocom

Jean Louis Bouchard, the boss of Econocom, decided that some diversification was needed, and he first implemented some informatics solutions in the company. During the nineties, they thought about a way to centralise all the suppliers in the working space area, and they decided to create the workspace of the future. In this workspace, the customer doesn't have to worry about anything; everything is made to make sure that the users' experience is the best possible. In this kind of workspace of the future, everything is included, smartphones, computers, desktops, etc. There is a catalogue, and the company needs to choose what they want for their employees. Depending on the level and on the job of the employee, he can have access to different tools, different gadgets. Once your profile is defined, you can order everything you need on a platform called "Procurato". Once everything is ordered and shipped to the workspace, the final user will be able to say if he encounters any problem, like broking anything, or willing anything else. Everything will be sent to him in less than 24h without him having to move from his desk. Econocom doesn't fix anything; they work with a swap system; they bring something new every time. There is also a chat box where the customer can ask any

question; someone can help them understand any product they have, can help them install any application needed. Moreover, to make sure the customer experience stays the best along the years, every X year, they will replace every computer or any other tool with a new version (Lams, 2019).

They based this change on the fact that the new generation cares a lot about his working space because they have always been used to technologies in their day-to-day activities and they want to have a pleasant work environment. For them, it is even more important than having a company's car. The companies will offer them this kind of work-environment as they want to keep their talents (Lams, 2019).

For the company, the advantage of this kind of servitization, aside from the user experience, is that they don't have to spend millions in one day to provide some working space areas. Econocom offers a monthly fee that the company will have to pay, so they don't have to pay for everything in the beginning. They also don't have to find different suppliers, everything is provided by the same company, and they don't have to worry about the tools, everything is fixed and replaced by the same company. They don't have to worry about the security; Econocom takes care of that too (Lams, 2019).

3.3.5 HPE

The servitized product sold by HPE is called GreenLake. This service is co-developed in Belgium and the Netherlands. The whole point of GreenLake is to sell the right amount of storage for companies. Instead of selling a certain amount of storage fixed at the beginning of the sale, HPE will make the customer pay for what he is using; they are right-sizing. In IT, you are usually buying more storage than what you need; GreenLake's objective is to prevent the customer from doing that.

They consider they are selling a service in a way that they have a full stock of services around one product. With this, they can satisfy the customer on a bigger scale. Instead of selling a product, HPE sells a connection between the customers and themselves. In the end, 99% of the customers using GreenLake see it as a growing opportunity for their business (Van Leemputten, 2019).

This kind of servitized product has a lot of advantages as it enables the customers to gain some cloud economics. There isn't any upfront investment needed from them since they only pay a variable fee every month. Thanks to this, they can easily spare the money to invest in other projects. But also, it sometimes happens that companies need to increase their storage rapidly and if they didn't buy it before, the IT wouldn't be able to follow. With GreenLake, all of this is analysed, and there is always a 10% buffer capacity ready for the user. As soon as the customer starts using it, that will warn HPE, and they will increase the storage capacity. It will be done in one day even though with some competitors, it would need 150 days before getting the amount of storage required, so there are 149 days gained. In the end, the company doesn't have to worry about anything and HPE provides them with the right amount of storage and make them pay the real price for what they use thanks to the right-sizing. Also, by not buying this storage space, it allows the company to save a lot of money from an energetical point of view, they can avoid paying for some cooling and power energy and all the other cost coming with oversizing (Van Leemputten, 2019).

3.3.6 SKF

In 2000, SKF faced a loss of value because spare parts are stronger than before, which means that the customers will need to buy less of them; there is less and less aftermarket required. Moreover, with the increase in technologies, all the products were less expensive to produce, and while selling them, SKF had to decrease the margin they were able to ask for in the past. They, therefore, decided that some things needed to change. To do so, they created an international team whose purpose was to find some solution for the company. They noticed that creating some new products or more sophisticated ones wasn't enough and that they needed to spread their offer to services. They also noticed that just offering some products to the customers wasn't sufficient anymore and that they needed to provide a partnership instead, and that's how the servitization appeared in their company (Vanhoudenhove, 2019).

While they were offering some rotating shaft in the past, they noticed that next to this, a lot of knowledge was also present in the company. Because if you know about rotating shaft, you know about tightness, about lubrication, about predictive maintenance, condition monitoring, etc. The objective was, therefore, to create a profitable business while staying a

manufacturer, because they kept producing and selling some rotating shaft. To do so, they had to buy some other companies who were more focused on services or other topics that they didn't perform well enough in their original company (Vanhoudenhove, 2019).

Today the service's activities of SKF represents more than 20% of their turnover. When they sign contracts with some new customers, it isn't only a contract; it goes further than that. They now have a business based on OPEX instead of based on the CAPEX; they are renting their products in exchange for a monthly fee based on the customers' production (Vanhoudenhove, 2019).

3.3.7 General findings

After reviewing the implemented servitization in each company, we listed some common findings that we consider as accurate since it has been said by different persons, in different companies, in various industries. A table regrouping this information can be found in Figure 11.

Most of the interviews showed that with servitization, everything is made to facilitate the customers' life. Most of the time, in the past, the customers needed to buy the product, and then the transaction was made; there was no other interaction with the suppliers "The services were provided by other suppliers than the one selling product that we called constructors. Next, to this, we had services companies that were doing maintenance on this product and were selling some installation services." (Lams, 2019). Nowadays, customers don't have to worry about anything anymore. They will buy a service instead of a product and will pay a monthly fee. This fee will include the product itself but also some maintenance, the fixing of the spare parts, the explanation of all the products if needed, the update with new products that could better suits the customers, etc.

Everything is made so that the customer doesn't have to think about anything for the products bought and so that he also doesn't have to think about investing a lot of money to get the products, he will only pay a monthly fee "We are going to measure the daily consumption of the customers. We are going to make an average of that daily consumption and invoice him, at the end of the month, about his consumption throughout that month" (Van Leemputten,

2019), and will be able to keep his initial capital to invest in other projects. There isn't any upfront payment needed. This method will be better for the consumer's accounting, but it also allows them to make some management cost as they don't need a team as big as before to deal with all of this.

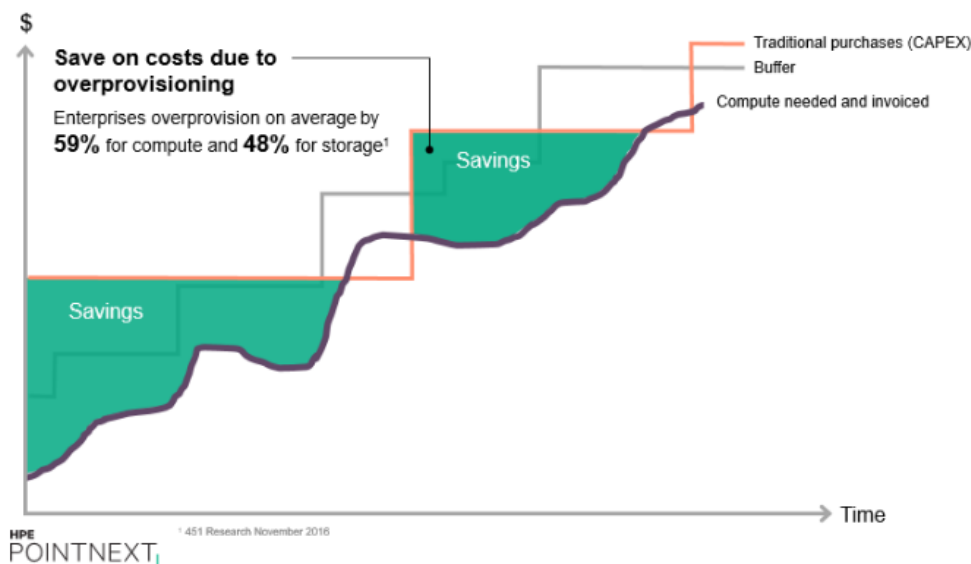
Not only the customer doesn't have to worry about the broken spare parts, about the stolen products or about the end of their life-cycle, but added to that, the supplier (the servitized company) will give him a new spare part in a shorter period than what the customer could hope by any other channel. "In summary, we ensure customer access to a pool of spare parts and minimal answering delay. When we receive a spare part, which seems to be broken, we send back another piece in a previously accepted period" (Rodfort, 2019). This method will also implement some maintenance procedures to avoid having broken products. Thanks to that, the consumer will be able to continue his activities as if nothing happened to his spare parts, to begin with. Instead of waiting one week up to a month or more, the customer will be able to continue his activities just like nothing happened to his materials "Meaning that if a business would come to that customer, and he would need an additional server for certain projects, it took him 92 days. So, three months so that the IT department could give that to the business team. From an IT perspective, that's a barrier" (Van Leemputten, 2019).

With an implemented servitization, the supplier will provide the needed products but only the needed one, most of the time the supplier will right-size the offered products "What we would do from an HPE perspective, we would right-size the capacity, and we would install a buffer capacity which growth together with the capacity that is needed" (Van Leemputten, 2019). Indeed, the customer will pay a fee for "an experience" instead of a product. The supplier will, therefore, give him the right products but won't give him some useless ones that he might have usually bought with another company. It is a good thing for him as he doesn't have any product that he never uses, but that's also a saving regarding other fees such as the energy to run such materials or the space that the products could use which would be lost for other essential matters.

It means that if you see the difference between the orange line here and what they are actually consuming, you can see that everything that's green is a saving. Saving from a manufacturing perspective, savings from a meaningless perspective, saving from an installation perspective, the license does not need to be a bolt at the beginning of the

contract but need to be added accordingly when needed. Rack space is saved, data centres are indeed a lot of money. If you can spare out a certain amount of square meters, it's also a saving (Van Leemputten, 2019)

How HPE GreenLake Flex Capacity benefits IT



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Figure 10: Savings with GreenLake right-sizing (Van Leemputten, 2019)

Another advantage of the servitization is that more and more products are gathered with the same supplier. In a way to please the customer, the supplier will make sure that the customer doesn't have to order from different suppliers, he will provide everything on his own by spreading its range of available products.

Of course, thanks to our knowledge of bearings but also thanks to our knowledge of seals, because when we talk about bearings, we very quickly talk about seals at a certain time. Who talks about sealing, talks very quickly about lubrication, and so we have knowledge about lubrication. Moreover, when we talk about these elements, we talk very quickly about predictive maintenance, again around the rotating shaft involving technologies such as condition monitoring. (Vanhoudenhove, 2019)

It will be a time and cost-saving for the customer as he won't have to look for different suppliers since everything will be at the same place and it will also facilitate their life as they don't have to think about the person in contact for each product. They are in touch with one

person in one company, and this person will make sure everything goes as it should for them “For our customers, if one of their machine breaks, they only have to make a phone call and Hilti does the rest.” (Diercxsens, 2019)

Most of the time, the customer will be helped by the supplier concerning the product he should invest in. The customer will give his opinion and make his choice. But after that, a complete analysis will be done by the supplier to make sure to answer all the customer’s needs and supply the right products. Thanks to this, it will increase the customer’s productivity. He will always have the best tools to do his job. While offering the services to the customer, most of the servitized companies will keep analysing their customers which means they will see what could be improved and they will give the right tools or the right products to make sure the customers become as efficient as possible. “After, [...] we go to the customer to make sure that everything is ok” “There is also another service that we provide, that’s our engineers. We come with our engineers in the field.” (Diercxsens, 2019).

To conclude with the positive impact of the servitization, we can say that instead of selling a product, the supplier will sell an experience. It won’t only be a selling happening anymore; a real connection will be made between the supplier and the customer “There is a connection between the consumers and us, and you can see it from a perspective point of view” (Van Leemputten, 2019). This connection will bring a lot to both companies. It will deliver some trust from the customer to the supplier. The customer might pay more, but he will save a lot of money while not having to worry about these products. He will pay a monthly fee with which he can be sure of what he gets. It will also be beneficial for the supplier as once a contract will be signed, he will be able not only to sell a single product, but he will be able to sell a whole range of products with all the services around it.

Positive impacts of the servitization
The customer doesn’t have to worry about anything for the product that he buys from servitized companies; he only has to pay a monthly fee that includes everything.
The customer doesn’t have to pay everything for the product upfront; he can keep his capital for other investments.
The customer doesn’t have to deal with different suppliers anymore; everything is regrouped with the same supplier.

The customer will get some fixed/new spare parts in a shorter period than by any other channel.
The customers' needs will be right-sized, he won't have or pay for useless products.
Increase of the customer's productivity thanks to adapted products and products fitting their needs.
Creation of a connection between the customer and the supplier.

Figure 11: Positive impacts of the servitization for the customer

3.4 The generalisation of servitization in manufacturing companies

3.4.1 Introduction

In this part, we will first analyse what each interviewee thought about the generalisation of the servitization in their industry but also in business in general. Most of them thought about a possible generalisation of the servitization for some companies but not for all of them.

To complement this, we will also add the disadvantages of the servitization recovered from each interview. Indeed, these disadvantages could be a break for other companies to start implementing servitization.

Furthermore, we will make a summary of the reasons why this expansion might happen, and finally, we will make a summary of all the constraints regarding this expansion and why some companies might not implement any servitization in the coming years.

3.4.2 Hilti

3.4.2.1 *The generalisation of the servitization*

An implemented servitization such as the kind of offer that Hilti is offering isn't accessible to every company. First, the smaller companies can't follow with that; they don't have the required resources. Second, the main competitors like Bosh or Makita have a different objective, a different strategy; they don't have enough people in the fields to do this. They could change their approach, but their main business isn't about the tools. To be able to do that, they need to be in a niche market (Diercxsens, 2019).

3.4.2.2 *The disadvantages of the servitization*

Servitized products take a lot of time to sell because you don't only have a product to sell, you need to sale a whole package, and since it's a significant investment, it takes time to show the customers that it's the best solution for them. Sometimes, the company can end-up by selling a vast package, but sometimes it happens that Hilti does a lot of discussions and then, in the end, there isn't any deal concluded at all.

Another difficulty is to prove that Fleet Management would be the best solution for everybody whatever the size of his company.

The last disadvantage would be the price. Since there are many services included and better quality equipment, all of these combined costs more money than what it would cost with the competitors. Sometimes it is not easy to make people understand that it would be better for them to buy from Hilti (Diercxsens, 2019).

3.4.3 Fokker

3.4.3.1 *The generalisation of the servitization*

The first reason why Fokker started implementing servitization is that it's trendy in the aerospace industry. With the well-known example of Rolls-Royce, "Power by the hour", most of the aerospace companies started launching some services with their products. Once one of them starts something like that, the competitors must follow if they don't want to lose their customers. Nevertheless, some products cannot be servitized, like the aeroplane itself or some product with a very long or very short lifetime. With this, the servitization is irrelevant. In general, the servitization might fit a lot of industry or department into some sector, but it wouldn't be possible to reach everything as some products need to be sold only once without anything around it (Rodfort, 2019).

3.4.3.2 *The disadvantages of the servitization*

One of the main disadvantages of servitization at Fokker is that they need to have a lot of spare parts in case a company asks for it. To stock all of this, they need to use some warehouses, and since it's an aeroplane company, they need to rent those warehouses close to the main airport, and it costs a lot to do so (Rodfort, 2019).

Another disadvantage of this kind of servitization is that this is the kind of situation where you always need to be at the point of the hedge. Everything is moving fast, and one wrong turn could be fatal for the company. This kind of innovation, the servitization, is excellent for a company like Fokker but they have to keep innovating and never stop improving themselves if they want to stay where they are (Rodfort, 2019).

3.4.4 Econocom

3.4.4.1 *The generalisation of the servitization*

For Carine Lams, we will always have to keep some manufacturing companies. A company like Econocom is now more a service company; they don't produce any product anymore. For her, we will always keep some builders that will only sell some products but without any services, maybe with some maintenance only. For them it would be too complicated, there is a lot of thinking behind all of this, and a large organisation is needed. Manufacturing companies like HP or IBM won't want to invest time in this; they would rather spend their time and money in R&D to be more performant and more reliable. This kind of companies and a company like Econocom have a different scope (Lams, 2019).

3.4.5 HPE

3.4.5.1 *The generalisation of the servitization*

More and more competitors are following HPE's example, of course, they don't have the same expertise for the moment, but HPE needs always to update their technologies if they don't want the competitors to catch them. This kind of offer is the future of the storage infrastructure and more and more companies are going to reproduce HPE's model (Van Leemputten, 2019).

3.4.5.2 *The disadvantages of the servitization*

A disadvantage that could be pointed while speaking about servitization in this kind of context would be that the customer doesn't know what he is using anymore. Instead of buying some Gigabyte and knowing the exact amount they purchased, a different measure is used by

HPE: the compute units. With this kind of contract, the customer only knows how much he has to pay, but he doesn't know how much Gigabyte he has with this or how much he pays for the hardware, the installation, the fixing support, the management or anything. Moreover, because of that, he cannot compare HPE with other competitors as they are not working with the same unit of measure (Van Leemputten, 2019).

A disadvantage for HPE while providing GreenLake would be that they always need to be a step ahead of the competitors. In this kind of sector and especially now that everything is servitized, a lot of new things happen, different changes, alternatives, competitors, etc. If HPE miss this kind of opportunity they could lose a lot, it would have a significant impact on their future, so they always need to be at the point of the hedge regarding their R&D and their innovation (Van Leemputten, 2019).

3.4.6 SKF

3.4.6.1 *The generalisation of the servitization*

If we take the railway industry, we can quickly notice that there isn't any train left sold on their own. It is always sold in a whole cycle point of view, which means that it is sold regarding the cost of production but also depending on the energy that the train will cost, on the spare parts that will need to be bought, on the fixing of some of the spare parts, etc. Trains are now sold based on their entire life costs instead of on their production cost; there is some leasing system (Vanhoudenhove, 2019).

To some extent, this is the kind of system that SKF tries to implement in their company and that more and more companies are going to pursue in the future. The technology developed itself a lot in the past few years and thanks to it and thanks to the internet of things; it's becoming more and more logical to do so. We are now reaching the industry 4.0 where the preventive maintenance is made through the clouds; we don't need to go at the client's office to fix their products, we can analyse it and set it from a computer. All of this is possible thanks to new captors, new software, new sensors, and thanks to the decrease in the price of all these technologies. We can easily see some companies like IBM that changed its business model and

went from selling pcs, hardware and software, and doesn't sell any product anymore (Vanhoudenhove, 2019).

3.4.6.2 *The disadvantages of the servitization*

With the servitization, the business models of manufacturing companies changed utterly. Instead of merely buying raw materials, turning them into a final product and sell this final product, they have to think about way more than that, the business model is way more complicated today, and there is some new supply chain needed, it is way more complicated to deal with (Vanhoudenhove, 2019).

With the globalisation, Belgian companies are now competing with Asian companies, which was not the case a few years ago. Also, nowadays, due to servitization, competitors could come from different industries. Companies can change their target now; the new business models are more and more complex than before, and some companies coming from the software industry or the services industry could try to compete with SKF. From a more global point of view, we can say that different companies coming from different sectors could merge unexpectedly, and that could increase the competition even though no one expected it (Vanhoudenhove, 2019).

A dangerous aspect of servitization would be that manufacturing companies could end up useless. For the moment manufacturing companies could turn themselves to servitization and offer the services that customers need along with the products but maybe that with the increase of technologies, the customers will be able to create their products themselves and won't need any manufacturing companies any more (Vanhoudenhove, 2019).

3.4.7 Summary for a generalisation of the servitization

A first and foremost reason to explain the expansion of this servitization would be to explain the impact of two different components: technologies and globalisation.

With the increase of technologies, more and more became affordable for the companies, they can now make some predictive maintenance, they can now have a more complex business model, they can now predict what will happen to their products and how it will happen to them, they can also highly decrease the production's cost of their products. All of this combined had first allowed them to offer different products, more resistant products, more sophisticated products, but also cheaper products. "There is an increase [of the servitization] these last past years linked to technologies linked to the drastic of the cost of these technologies which made it easier for the servitization but also easier for the companies to expand their assets on something bigger than its own machines." (Vanhoudenhove, 2019).

With the globalisation, more and more companies are capable to enter the market which means that the competition becomes higher and higher and comes from levels that weren't expected before "It is important to understand that the competition is way more enhanced, way more developed with the arrival of Asian manufacturer, especially the Chinese one. It wasn't like that a few years ago." (Vanhoudenhove, 2019). Some manufacturing companies were once only able to produce some spare parts that needed to pass by three different companies before being ready to be sold as a final product. Nowadays, one company can do all of it, which means that two companies are no longer needed and that they need to diversify themselves if they don't want to go bankrupt.

These two main arguments had a massive impact on companies. Indeed, with more competition, cheaper products, less second-market possibilities, they must change their business model; otherwise, their lives would be threatened due to the increase of competitors.

To add to this, a second reason to explain this rapid expansion would be that the different companies must react to the competitors' servitization. Once a company starts doing it, it becomes harder to compete with it. Some changes need to be done in the business model "[The competitors] strategy is to go through suppliers while ours is the direct sell [...] But if I [the competitor] do this system, I don't take all the risks, you [the suppliers] take 50% and I take 50%. It is way more complicated since they work with a third person and us, we work with ourselves." (Diercxsens, 2019). Either by also trying some servitization, either by innovating in another way, multiple possibilities are available, but something must be done to stay alive in this changing world.

To go further in this argument, we could say that as companies are growing in different ways due to servitization, they are also increasing from unexpected horizons. Indeed, by

offering some services, a company could overlap another one and take its place. Which means that existing companies could face competitors from everywhere and that they would need to offer some services to be able to compete with them

“Today, due to the entry cost of new competitors, we are going to have competitors who come from all sides and who are not necessarily skf's turnover competitors in the first place, they can come from the world of software, from the world of pure service which does not deliver any products. We have a huge diversity.” (Vanhoudenhove, 2019).

3.4.8 Opinions against the expansion of the servitization

Now that this has been explained, we can also focus on what the interviewees had to say about the reason against this expansion. Most of them thought that, indeed, more and more companies are going to be servitized. As there are many advantages to it, we could expect that more and more companies will try to do the same. The customers are pleased with such offers, and it seems to be a real advantage for the companies we interviewed. Most of them also had some thought about the reasons why their competitors couldn't implement servitization or some disadvantages they had that might prevent companies from performing any servitization.

A first argument would be to talk about the size of the company. As explained before, the servitized companies have to use a way more complicated business process. Instead of only buying raw materials, turning them into a final product and then selling this final product, they have to focus on different levels. Due to servitization, they have to focus on maintenance for the services they offer, on the way to prove to new clients that what they offer would be the best for them, on the internet of things, etc. All of this requires many resources that only big enough companies can implement. The size of the company could, therefore, be an issue to apply the proper servitization “They will try, but they won't be capable as they don't have the selling power to go on the field to the customers.” (Diercxsens, 2019).

More than having the resources to implement servitization, companies also need to have the time to reach this kind of contracts. Indeed, manufacturing companies need to have profit all year long, and instead of selling products all year long they would have to spend a lot of time convincing the customers that a partnership would be the best. Of course, this kind of

business could bring a lot to the company, but it could also end up with nothing. Not every company has the time and human resources to spend in such a methodology “And you know that in the long term if it works, it’s a good thing for you but if it doesn’t work, you lost a lot of your time.” (Diercxsens, 2019).

A second argument could be to say that it could also be a strategic reason. Investing in services cost a lot of money, and some big companies that could afford servitization might prefer to spend their money in Research & Development instead, to be more reliable and more performant, for example. Implement servitization is a strategic move, and not all the companies believe it’s the best one “They are not willing to do that. They want to keep investing in new technologies, in R&D, to make sure that their hardware becomes more and more performant and more and more reliable. That is their corps business, and that is what they do. We have a different scope.” (Lams, 2019).

A third argument could be to say that some products might never be sold in any other way than as simple products. Some products are sold only to be used once or have a way too long life-cycle to be able to be sold with services around it. For the companies selling this kind of products, it would be more challenging to implement any servitization. Most of the time, if they want to apply servitization in their companies, they will do it with some part of their products but not all of them “Some products that we are only selling ones and are then used, don’t fit with the servitization. Or sometimes, some products with a very long life don’t fit with the servitization. If we speak about IDG component, ionic box, they have an unlimited lifetime.” (Rodfort, 2019).

A fourth argument could be that servitized companies always need to be at the edge of technology. Making some changes now isn’t worth it if the company don’t keep innovating all the time. The implementation of servitization is beneficial for a company, but it only works if this innovation keeps being renewed. Indeed, any lack of change could be lethal for such a company “In general, what I mean is that for a service offer to always be attractive to a client, I think the offer must always be up to date.” (Rodfort, 2019).

The last argument that could be considered would be the first-mover advantage. Indeed, more servitization will happen, but some servitization already occurred in some industries. As some companies are now implemented in their sector as servitized companies, they previously invested a lot in services to be as good as possible in what they do. If a competitor would like to follow this lead, they will also have to invest a lot of money while knowing that they might

never reach the initial competitor “We really are in a niche, so our focus is this and nothing else. On the opposite, the competitors have to focus on thousands of other things. For us it’s always less is more.” (Diercxsens, 2019).

Brakes to the servitization
The size of the company might be a break for the servitization
To start being a servitized company, a lot of resources are necessary (no money coming immediately)
Some companies’ strategies are in opposition with servitization
Some products have a too long or too short lifetime to be servitized
The companies always have to work on their innovation; they can never stop.
The first-mover advantage might restraint companies to start servitization

Figure 12: Brakes to the implementation of the servitization

3.5 The internationalisation of the servitization

3.5.1 Introduction

In this chapter, we will review the arguments about the internationalisation of the servitization. The objective is to understand if being servitized is an advantage for internationalisation and if the servitization would work in different countries for the same product.

3.5.2 Hilti

This kind of servitization cannot be implemented in the same way in every country. Indeed, in some African countries, it is too dangerous and then it is not possible to achieve this kind of offer, as there would be too much stealing or problems like that. It is still possible to

perform the fleet management service around the world, but it needs to be presented with some changes like, for example, ask for an up-front payment or offer the fleet management with fewer services than what they usually provide. All of this conceptualisation is based either on previous trial error, either on some business analysis previously done by the company. In some emerging countries, they do not like this kind of services that much and then, to be able to reach them anyway, some changes must occur in the fleet management service. In the end, it is possible to implement it everywhere as long as you adapt your offer to the market.

3.5.3 Fokker

As an airline company, Fokker has to be working at an international level, with some agreements from national authorities, Fokker has a global model. This servitization is applied the same way in Belgium and other countries of the world. Using servitization is a good thing for them at an international level as they manage to reach more customers and to give them some look-a-like packages.

3.5.4 Econocom

In most of the countries, it is possible to offer the same kind of servitization, but indeed, it is not likely to provide the same one everywhere. Some states are not ready for such a servitization due to a different culture or a different maturity. Some companies still want to work with the old methods and are not willing to change that (Lams, 2019).

Being servitized helps to expand the business. Indeed, the customer has many choices about what he will get; he can choose if he wants more or fewer products, which ones, more or fewer services, etc. All of this tends to be suitable for Econocom's expansion as they can fit any requirement from any company. Moreover, as Econocom's customers are often at an international level, once they start working with them in one country, they want to work with them in all of them.

3.5.5 HPE

The way HPE position itself should be the same in different countries, but the way customers perceive it might be different. In the end, GreenLake is a service that HPE is providing, and within this contract, there is potential growth for the company. This kind of offer shouldn't change in any country. Of course, some countries are readier for it than others. This kind of offer works a lot in Belgium, Austria, and France but does not work that well in North America as they are more conservative.

3.5.6 SKF

Most of the time, servitization is something that happens locally. The strategy might be global, but they need to implement it in different ways in different countries due to different cultures and various social organisations. In some states, it was more usual to have some maintenance performed than in others. Moreover, some moves are not possible in every country. For example, in South America, it already happened that SKF made a deal with a customer and to do so, they needed to move the employees from a company to another. Even though the employees were doing the same work and working at the same place, it was for a different company. This kind of action could never happen in Europe with all the trade unions. There is also so differences in the costs; the working force doesn't cost the same in every part of the world, so they cannot do the same servitization in every country neither in every industry, some of them are more into servitization than others only due to the competitors.

3.5.7 Summary

Even though the servitization can be thought globally, some local differences always occur. "Normally, the way it should be positioned should be identical. The way customers perceive this might be different" (Van Leemputten, 2019). It can either be due to the perception of people, either be due to some real changes that the company does to adapt itself to the

different countries “There are some industries that are more in advance in this kind of methods due to their competitive environment. It isn’t only to the localisation but also on a competitive condition in a specific market. So, in the end, there are some differences, geographic, social or/and competitive.” (Vanhoudenhove, 2019).

Indeed, the different countries will react differently to the servitization. Some states are already more used to have maintenance included “The example I was giving you of taking back the responsibility of a part of the customers’ maintenance is something already well implemented in South America.” (Vanhoudenhove, 2019), while others are more conservative such as North America “There isn’t a lot of demand in Norther America because they are more conservative in this kind of things.” (Van Leemputten, 2019). The difference in cultures already has a significant impact on the traditional internationalisation of manufacturing companies, but if we try to expend a servitized companies and to expend all the services that are usually sold with the product, it might be difficult.

Moreover, it will not be possible to reach some customers with the same proposal in different countries. It could be due to some stealing that could occur quickly in Africa that could prevent a company from implementing the same servitization. “There are some countries where it is too dangerous, like in Africa” (Diercxsens, 2019). It could be due to the trade union that could prevent some action from being done in Europe the same way they are implemented in other parts of the world “In Europe [...], The trade union would never accept that some people working for Electrabel would be transferred to SKF to do the same job” (Vanhoudenhove, 2019). Each country has its specificities, and you need to adapt your offer to these specificities.

Nevertheless, even if some changes need to occur in the way servitization is implemented around the world, the servitization stays something that can be reproduced everywhere while having a few changes made in the first place “Let’s say that in 90% of the portfolio, we are offering the same solutions in all our countries. But sometimes, yes, in some countries, we offer some solution that we don’t offer in others” (Lams, 2019). We could for example provide more or fewer services such as insurance for the stealing if it is a more or less dangerous country. We could ask the company to pay the fee upfront if we face an insecure country where we could face a lack of payment. All these little changes are easily made once the company has the basis of what they want to offer. When these changes are done, they could broaden their offer globally.

4 Discussion

4.1 Introduction

Now that all the interviews have been reviewed and that an analysis has been made on different topics, it is time to make a personal and critical analysis of the work done. To do so, multiple points need to be reviewed. We will first analyse what has been said before, especially regarding the summary of the interviews; we will talk about the different contribution that this master thesis has accomplished and what is new in comparison with what we saw in the literature. To finish this section, we will present some limitations, and we will explain what could be done to go further in this research.

4.2 Critical analysis

4.2.1 Introduction

This practical part tried to answer multiple questions; all these questions have first been seen in the theoretical part or at least were introduced there. The different topics were all related to servitization and had for objective to broaden the subject around our research question: “How does the implementation of complementary services to the initial product impact the firms internally, internationally and across sectors?”. We wanted to understand how the servitization was implemented in a company with the different steps followed; we wanted to know how the servitization works in a company and if this concept will keep growing in every sector or not. Finally, we wanted to see what was the impact of servitization at an international level.

It is essential to say that the purpose of the practical part was to explore the subject. The objective wasn't to verify some hypothesis made in the theoretical part, but it was to create some reflection and to broaden the topic around servitization (Van Campenhoudt, Marquet, & Quivy, 2017).

Nevertheless, the theoretical part has a lot in common with what we analysed on the field, and some analysis can be made. We will try to create a resume regrouping the information that has been found in the literature and also during some interviews but also the one that we only saw in the literature or only saw on the field. To do so, we will follow the same steps we used in the literature, and we will add to it the information we got from the different interviews by adding some extracts to it. Doing so will allow us to have the same structure as the one we used in the literature part, and it will help us understand what this practical part is offering new.

4.2.2 Reasons for the servitization

4.2.2.1 *External drivers*

One of the main reasons why servitization is more and more spread is that we are living in a changing world with more and more competitors coming from everywhere. The competition and the globalisation made it now essential to find a way to differentiate from the competitors. “The technology developed itself very much these last past years, and we are only in the beginning of it” (Vanhoudenhove, 2019). When we look around the theoretical external reasons why the companies started doing servitization, we can find back the three mains reasons in the practical part too:

- Technology
- The demand of the users
- Environment

First, the fact that technologies were more and more reachable and affordable made this change to the servitization way more accessible. While it was costly before, it is now straightforward to connect all your tools to be able to analyse them all together “It is a system that will help a company to manage all its tools digitally with an application” (Diercxsens, 2019).

Second, it is what the customers want. The new generation of workers has been used to have everything more accessible, and they want to find that back at work “It's in the spirit of the times, what the young generation wants” (Lams, 2019).

Third, we can say that, nowadays, companies are offering all the maintenance and different services around the product, they will try to make sure that this product lives as long as possible. “No one today changes a bearing in their car anymore, whereas a few years ago, I remember my father's car, they had to change the bearings two or three times” (Vanhoudenhove, 2019). We have products living longer and that we don't have to replace all the time.

4.2.2.2 *Internal drivers*

Multiple reasons made servitization happening in various companies, but after interviewing them, we noticed that this servitization offers various internal positive aspects to the company. Those aspects were either known before the servitization was implemented, either discovered while applying it. In the end, those benefits can be grouped in different categories:

- Marketing
- Strategy
- Finance
- Knowledge of the consumers
- **Innovation**
- Growth opportunity

On a marketing point of view, we can easily see that customers create more relationships with people than with products. By connecting with the customers, companies will be able to understand them better, and with this bond, they will be able to offer more products to the customers “The answer is to generate new revenue by extending our relationship with our customers beyond simply delivering a product.” (Vanhoudenhove, 2019).

On a strategic point of view, we see that thanks to servitization, along with this bond that has been created, the company knows its customers. Therefore, the company will understand what their customers need, and they will provide them with it but also with even more, always looking for some improvement. When the customer understands that, he will get used to this comfort and won't want to go to another supplier; this bond will stay “We invest between 300 and 350 million in R&D each year, and so we come back each year with about sixty new products” (Diercxsens, 2019).

In term of finance, it is evident that companies will start servitization only if they know they can make profits out of it. It might sometimes get harder for them to make many contracts as they do not just sell a single product but a range of products with services around it, but once this package is sold, it's a massive income for them and a profit on the long term. "As a sales company, you need to have figures every day. And you know that in the long run, if it falls, so much the better." (Diercxsens, 2019).

Regarding the knowledge of the customers, it's linked to the technologies. Now that technology is way more affordable, you can put captors on everything. With these captors, you can collect data, and this data could help you understand how the different companies work, what are the things that need to be improved, and how to do it. If you manage to understand your customers, realise how they work, what they do, then you can offer them exactly what they need "We offer what the customer needs today. We quantify what he would normally buy" (Van Leemputten, 2019).

Regarding the growth opportunity, the servitization can have a considerable impact. Indeed, the same offer can be spread everywhere. Even though some changes might need to be done, in the end, the offer will be the same everywhere. It will allow a servitized company to grow without many changes. "It is a model that is easily transplantable to new customers if we receive a call for tenders, we can very easily formulate a response to the call for tenders, propose a package to this customer" (Rodfort, 2019).

4.2.2.2.1 Opposition

In comparison with the literature, it has not been said in any of the interviews that servitization was an excellent way to increase the innovation of the company. Indeed, most of the companies we interviewed consider servitization as a form of change. They do have other innovation next to it, but they do not consider servitization as a factor to implement it.

Some new information that we got from the interviews that haven't been said in the literature review is that servitization offers a bond between the customer and the company way bigger than explained before. The customers get so many benefits from it that he will first continue with this supplier, but then he will be willing to expand his relationship and buy more and more with him. Indeed, for the supplier, everything becomes more accessible (Figure 11).

4.2.3 The generalisation of the servitization

As it has only been said in the literature that servitization is going to expand itself, this practical part allows us to add some reasons why it will grow or not. As mentioned before, the two main reasons for this expansion are the globalisation and the technologies. With these two factors increasing, the competition is growing and coming from everywhere. Companies have to diversify if they want to survive. A way to do that is by applying some servitization “We realised that this would no longer be enough and that we had to offer more in terms of partnership and services to our clients, hence the idea of servitization in this case.” (Vanhoudenhove, 2019). Of course, other ways are possible to compete, but the competition is now coming from sectors we would not expect ten years ago. It is, therefore, imperative to diversify the offer.

Even if servitization might be the best solution, there are also multiple reasons why a company couldn't implement servitization. The size of the company is essential; to offer a broad of services around the products, the company needs to be big enough. The strategy of the company matters a lot too; some companies prefer to invest in R&D to make sure to have the best products instead of diversifying with services. It also depends on the sector; in specific industries, it could be possible to follow another company that already started servitization, in others, it might be challenging to have a servitization as good as the competitors having the first-mover advantage. Finally, some product cannot be servitized; if you are selling a product that has a very long or extremely short lifetime, the servitization isn't useful around it (Figure 12).

4.2.4 Internationalisation

As nothing concrete has been said about the internationalisation of the servitization in the literature, we can only add the few information that we got from our interviews. During our interviews, we understood that servitization is not really a factor to go internationally, but it is not a break either. As we know, when trying to go at an international level, some changes always

need to be done to adapt to the new culture. This adaptation also needs to be done with servitized products. It can be easier to reach some countries that are more used for services, but it can also be more complicated to reach more traditional countries.

Nevertheless, the servitization is a package, and with a few changes to adapt to the different cultures or the various industries, this package can easily be exported abroad. Moreover, on a B2B level, it would be possible to reach a customer in all the countries they are working in, and it could help for the internationalisation of this servitization.

4.3 Conclusion

To conclude with this master thesis and to answer the main research question, a lot can be said. After reviewing all the drivers for a company to be servitized and by seeing all the advantages of being the customer of a servitized company, it became clear for us that the servitization is something that belongs to our actual economy, but that will also belong to the future one. As it is only starting for the moment and as a lot of companies start having servitized products, sometimes without even knowing it, we are confident enough to say that this will grow exponentially.

We are living in a world where the customer is in the centre of everything, the saying “the customer is the king” is becoming more and more accurate. Companies will have to do everything they can to reach these customers and servitization is an excellent way to do that. Servitized companies can offer them a service where they do not have to worry about anything, and where they will enjoy their products with all the services and positive aspects around it (Figure 11).

With the increase in technologies, the offered services will be more and more performing, and servitization can only grow thanks to it. That is the reason why we think that, despite some breaks for some companies (Figure 12), the servitization will reach more and more companies in the coming years.

On an international point of view, we saw that companies managed to implement the same kind of servitization all around the world. Some changes need to be made as every culture is different, but in the end, with few modifications, the same package can be sold in every

country. Some states are still against the servitization as they are more conservative, but with time we genuinely believe that servitization will become global.

4.4 Limitation

Way more could be done to understand how servitization is made in different companies. A first limitation would be the number of interviews. Indeed, as explained in the methodology, we stopped doing interviews after five different ones since we were getting some similar information from the various interviewees. Nevertheless, it is always interesting to make more of them. As every person has a different point of view, there are still some hidden information.

Another limitation could occur from the person we interviewed. We had the chance to talk with five different persons working in servitized companies, but none of them was in charge of the implementation of the servitization in his company. Most of the time, it had either started in another country, either they were not in the company at this moment either the decisions were made on a bigger scale than where they are working. By managing to interview the responsible of the servitization, a lot more could be understood.

Another huge obstacle is that most of the time while interviewing a company about the advantages of a servitization, they will try to sell themselves and will try to explain what are the benefits for their customers. Everybody is always influenced when he gives information, and having only current employees might have impacted the interviews.

4.5 To go further

To go further in our research, it could be interesting to interview some competitors of the companies we talked to. Indeed, all the interviews were done in different sectors. As explained before, servitization is a way of differentiation, of innovation, to make sure that the company stays alive and manages to reach more customers. This method worked for the companies we interviewed, but some of their competitors don't use any servitization but still

managed to stay in business. By questioning them, we could understand how they reacted to the servitization of their competitors, what impact it had on them, and what they did to face it.

As explained in the previous chapter, there are some disadvantages to servitization. The companies we interviewed only described a few of them since everything is working just fine for them at the moment. One of the main disadvantages that has been reported by multiple interviewees is that servitization is a new kind of innovation but that, to be able to continue on this track, companies can never rest, they always need to innovate more and more to stay at the edge of the market. Any mistake or oversight might be fatal for the company. Something that could have been interesting to go further in this topic would have been to interview some companies that did not manage to follow with the innovation and that either had to quit the servitization or that went bankrupt due to it.

Something else that could be made to understand the servitization would be to do some interviews with the customers. Indeed, all the conversations have been made with the suppliers offering a servitized product and telling us everything they are offering. Everything was therefore always shining just as everything is perfect. Most of the time, it isn't the case. It would be interesting to have the customers' opinions to understand what is offered and to understand the other surface of this partnership.

A final step that could be done to go further in this research would be to do it in the long term; we could interview a company before and after servitization. By doing so, we would understand the expected results before implementation, how it is implemented, and what are the results obtained.

Bibliography

- Agarwal, S., & Ramaswami, S. N. (1992). Choice of Foreign Market Entry Mode: Impact of Ownership, Location and Internalization Factors. *Journal of International business studies*, 23(1), 1-27.
- Ahamed, Z., Inohara, T., & Kamoshida, K. (2013). The Servitization of Manufacturing: An Empirical Case Study of IBM. *International Journal of Business Administration*, 4(2), 18.
- Anderson, P. C. (2012). *Complementary capabilities in dynamic environments: the evolution of professional services in information technology product firms*. Doctoral dissertation, Massachusetts Institute of Technology.
- Aquilante, T., & Vendrell-Herrero, F. (2017). Servitize to export: Evidence from German SMEs.
- Ariu, A. (2016). Services versus goods trade: a firm-level comparison. *World Economics*, 152(1), pp. 19-41.
- Ariu, A., Mayneris, F., & Parenti, M. (2016). Providing Services to Boost Goods Exports: Theory and Evidence . *ECARES Working Papers*.
- Aurich, J., Fuchs, C., & Wagenknecht, C. (2006). Life cycle oriented design of technical Product-Service Systems. *Journal of Cleaner Production*, 14, 1480-1494.
- Baines, T., & Lightfoot, H. W. (2013). Servitization of the manufacturing firm Exploring the operations practices and technologies that deliver advanced services. *International Journal of Operations & Production Management*, 34(1), 2-35.
- Baines, T., Lightfoot, H. W., Benedettini, O., & Kay, J. (2009). The servitization of manufacturing: A review of literature and reflection on future challenges. *Journal of Manufacturing Technology Management*, 20, 547-567.
- Bannat, A., Bautze, T., Beetz, M., Blume, J., Diepold, K., Ertelt, C., . . . Wallhoff, F. (2011). Artificial cognition in production systems. *IEEE Transactions on Automation Science and Engineering*, 8(1), 148-174.

- Berry, L. L. (1995). Relationship marketing of services - growing interest, emerging perspectives. *Journal of the Academy of marketing science*, 23(4), 236-245.
- Borchert, I., Gootiiz, B., & Mattoo, A. (2012). Policy barriers to international trade in services: evidence from a new database. *The World Bank*.
- Brax, S. A., & Visintin, F. (2017). Meta-model of servitization: The integrative profiling approach. *Industrial Marketing Management*, 60, 17-32.
- Buclet, N. (2005). Concevoir une nouvelle relation à la consommation : l'économie de fonctionnalité . *Annales des mines-Responsabilité et environnement*, 57-65.
- Bustinza, O. F., Vendrell-Herrero, F., & Baines, T. (2017). Service implementation in manufacturing: An organisational transformation perspective. *International Journal of Production Economics*.
- Coreynen, W. (2019). *Essays on servitization*. Antwerp: Doctoral dissertation, University of Antwerp.
- Coreynen, W. (2019, 02 18). Interview - Win Coreynen. (A. Puylaert, Interviewer)
- Coreynen, W., Matthyssens, P., & Bockhaven, W. V. (2017). Boosting servitization through digitization: Pathways and dynamic resource configurations for manufacturers. *Industrial Marketing Management*, 60, 42-53.
- Costantini, J., & Melitz, M. (2008). The dynamics of firm-level adjustment to trade liberalization. *The organization of firms in a global economy*, 4, pp. 107-141.
- Cusumano, M. A., Kahl, S. J., & Suarez, F. F. (2015). Services, Industry Evolution, and the Competitive Strategies of Product Firms. *Strategic management journal*, 36(4), 559-575.
- Davies, A. (2004). Moving Base into High-value Integrated Solutions: A Value. *Industrial and Corporate Change*, 13(5), 727-756.
- Di Orio, G., M. O., Scholze, S., Stokic, D., Barata, J., & Cenedese, C. (2016). A platform to support the product servitization. *Int. J. Adv. Comput. Sci. Appl. IJACSA*, 7.
- Diercxsens, D. (2019, April 23). Interview - Hilti. (A. Puylaert, Interviewer)

- Econocom. (2018, 06 12). *Econocom*. Retrieved from <https://www.econocom.com/en>
- Edwards, R., & Holland, J. (2013). *What is qualitative interview?* Bloomsbury.
- Erramilli, M. K. (1991). The Experience Factor in Foreign Market Entry Behavior of Service Firms. *Journal of international business studies*, 22(3), 479-501.
- Fokker. (2019). *Abacus*.
- Fokker. (2019, 05 26). *Fokker*. Retrieved from Fokker Services: http://www.fokker.com/Fokker_Services
- Fox, B. H., & Jennings, W. G. (2014). How to Write a Methodology and Results Section for Empirical Research. *Journal of Criminal Justice Education*, 25, 137-156.
- Francois, J., & Hoekman, B. (2010). Services trade and policy. *Journal of economic literature*, 48(3), pp. 642-692.
- Francois, J., & Hoekman, B. (2010). Services Trade and Policy. *Journal of economic literature*, 48(3), 642-692.
- Gebauer, H., & Friedli, T. (2005). Behavioural implications of the transition process from products to services. *Journal of Business & Industrial Marketing*, 20(2), 70-80.
- Gebauer, H., Friedli, T., & Fleisch, E. (2006). Success factors for achieving high service revenues in manufacturing companies. *Benchmarking: An International Journal*, 13(3), 374-386.
- Gebauer, H., Krempel, R., Fleisch, E., & Friedli, T. (2008). Innovation of product-related services. *Managing Service Quality: An International Journal*, 18(4), 387-404.
- GKN Aerospace. (2019, 05 26). *GKN Aerospace*. Retrieved from Smart Engine System: <https://www.gknaerospace.com/>
- Goffin, K., & New, C. (2001). Customer support and new product development – an exploratory study. *International Journal of Operations & Production Management*, 21(3), 275-301.
- Hakanen, T., Helander, N., & Valkokari, K. (2017). Servitization in global business-to-business distribution: The central activities of manufacturers. *Industrial Marketing Management*, 63, 167-178.

- Hilti. (2018). *2018 Company Report*.
- HPE. (2019, 06 13). *Hewlett Packard Enterprise*. Retrieved from Hewlett Packard Enterprise: <https://www.hpe.com/us/en/home.html>
- Iriarte, I., Hoveskog, M., Justel, D., Val, E., & Halila, F. (2018). Service design visualization tools for supporting servitization in a machine tool manufacturer. *Industrial Marketing Management*.
- Jensen, P. D., & Petersen, B. (2014). Value creation logics and internationalization of service firms. *International Marketing Review*, 31(6), 557-575.
- Jovane, F., Koren, Y., & Boer, C. R. (2003). Present and future of flexible automation: towards new paradigms. *CIRP Annals-Manufacturing Technology*, 52(2), 543-560.
- Kallet, R. H. (2004). How to Write the Methods Section of a Research Paper. *Respiratory Care*, 10, pp. 1229-1232.
- Kamp, B., & Parry, G. (2017). Servitization and advanced business services as levers for competitiveness. *Industrial Marketing Management*, 60, 11-16.
- Kamp, B., Ochoa, A., & Diaz, J. (2017). Smart servitization within the context of industrial user-supplier relationships: contingencies according to a machine tool manufacturer. *International Journal on Interactive Design and Manufacturing (IJIDeM)*, 11(3), 651-663.
- Kastalli, I. V., & Looy, B. V. (2013). Servitization: Disentangling the impact of service business model innovation on manufacturing firm performance. *Journal of Operations Management*, 31(4), 169-180.
- Kindström, D., & Kowalkowski, C. (2009). Development of industrial service offerings: a process framework. *Journal of service Management*, 20(2), 156-172.
- Kothari, C. R. (2004). *Research methodology: Methods and techniques*. New Age International.
- Lafuente, E., Vaillant, Y., & Vendrell-Herrero, F. (2017). Territorial servitization: Exploring the virtuous circle connecting knowledge-intensive services and new manufacturing businesses. *International Journal of Production Economics*(192), 19-28.
- Lams, C. (2019, 05 02). Econocom - Interview. (A. Puylaert, Interviewer)

- Lejeune, C. (2014, 03 27). *Methode qualitative Partie 1*. Retrieved from Youtube: <https://www.youtube.com/watch?v=fig1rOWYrO8&feature=youtu.be>
- Levitt, T. (1993). The globalization of markets. *Readings in international business: a decision approach*, 249.
- Lightfoot, H., Baines, T., & Smart, P. (2013). The servitization of manufacturing: A systematic literature review of interdependent trends. *International Journal of Operations & Production Management*, 33(11/12), 1408-1434.
- Lovelock, C., & Gummesson, E. (2004). Whither services marketing? *Journal of Service research*, 7(1), 20-41.
- Mastrogiacomo, L., Barravecchia, F., & Franceschini, F. (2019). A worldwide survey on manufacturing servitization. *The International Journal of Advanced Manufacturing Technology*, pp. 1-16.
- Mathe, H., & Shapiro, R. (1993). *Integrating Service Strategy in the Manufacturing Company*. London: Chapman & Hall.
- MCDougall, G. (1990). The intangibility of services: Measurement and Competitive Perspectives. *Journal of Services Marketing*, 4(4), 27-42.
- Neely, A. (2008). Exploring the financial consequences of the servitization of manufacturing. *Operations Management Research*, 1(2), 103-118.
- Neely, A. (2012). Society's grand challenges: what role for services?"
- Neely, A. (2013). Servitization in Germany: An International Comparison. *Cambridge Service Alliance*.
- Ng, I., Parry, G., Smith, L., & Briscoe, R. M. (2012). Transitioning from a goods-dominant to a service-dominant logic: Visualising the value proposition of Rolls-Royce. *Journal of Service*, 23(3), 416-439.
- Normann, R. (2001). *Reframing business: When the Map Changes the Landscape*. Chichester, UK: John Wiley & Sons.
- Nudurupati, S. S., Lascelles, D., Yip, N., & Chan, F. T. (2013). Eight challenges of the servitization. *Proceedings of the Spring Servitization Conference*, 8-14.

- Oliva, R., & Kallenberg, R. (2003). Managing the transition from products to services. *International journal of service industry management*, 14(2), 160-172.
- Orkestra. Basque Institute of Competitiveness. (2019, 07 16). *Bart Kamp*. Retrieved from Orkestra. Basque Institute of Competitiveness: <https://www.orkestra.deusto.es/en/about-orkestra/team/418-bart-kamp-en>
- Peillon, S. (2016). La servicisation des entreprises industrielles. Un changement majeur de business model. *La Revue des Sciences de Gestion*(2), 131-140.
- Penttinen, E., & Palmer, J. (2007). Improving firm positioning through enhanced offerings and buyer-seller relationships. *Industrial Marketing Management*, 36(5), 552-564.
- Pla-Barber, J., León-Darder, F., & Villar, C. (2001). The internationalization of soft-services: entry modes and main determinants in the Spanish hotel industry. *Service Business*, 5(2), 139-154.
- Porter, M. E., & Heppelmann, J. E. (2014). How smart, connected products are transforming competition. *Harvard Business Review*, 92(11), 64-88.
- Qu, S. Q. (2011). The qualitative research interview. *Qualitative research in accounting & management*, 8, 3, 238-264.
- Rabetino, R., Kohtamäki, M., & Gebauer, H. (2017). Strategy map of servitization. *International Journal of Production Economics*, 192, 144-156.
- Rabetino, R., Kohtamäki, M., Lehtonen, H., & Kostama, H. (2015). Developing the concept of life-cycle service offering. *Industrial Marketing Management*, 49, 53-66.
- Raddats, C., Baines, T., Burton, J., Story, V., & J.Zolkiewski. (2016). Motivations for servitization: the impact of product complexity. *International Journal of Operations & Production Management*, 36(5), 572-591.
- Rodfort, F. (2019, May 1). Interview - Fokker. (A. Puylaert, Interviewer)
- Sanchez-Peinado, E., & Pla-Barber, J. (2006). A multidimensional concept of uncertainty and its influence on the entry mode choice: An empirical analysis in the service sector. *International Business Review*, 15(3), 215-232.

- Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students Fifth edition*. Pearson Education Limited.
- Sawhney, M., Balasubramanian, S., & Krishnan, V. V. (2004). Creating Growth with services. *MIT Sloan management review*, 45(2), 34.
- Sempels, C. (2005). *L'intangibilité d'une offre globale de services : conceptualisation, opérationnalisation, variables d'influence et impact sur le niveau de risque perçu*. Docotal dissertation, UCL- Université Catholique de Louvain.
- Shostack, G. L. (1977). Breaking Free from Product Marketing. *Journal of Marketing*, 41(2), 73-80.
- Sierra, J., & McQuitty, S. (2005). Service providers and customers: social exchange theory and service loyalty. *Journal of Services Marketing*, 19(6), 392-400.
- SKF. (2019, 06 14). SKF. Retrieved from SKF: <https://www.skf.com/us/our-company/index.html>
- Sultan, N. (2014). Servitization of the IT industry: The cloud phenomenon. *Strategic Change*. *Strategic Change*, 23(5-6), 375-388.
- Terpstra, V., & Yu, C. M. (1988). Determinants of Foreign Investment of U.S. Advertising Agencies. *Journal of International business studies*, 19(1), 33-46.
- Tukker, A. (2004). Eight types of product-service system: eight ways to sustainability? Experiences from SusProNet. *Business Strategy and the Environment*, 13(4), 246.
- Tuli, K. R., Kohli, A. K., & Bharadwaj, S. G. (2007). Rethinking customer solutions: From product bundles to relational processes. *Journal of Marketing*, 71(3), 1-17.
- Uлага, W., & Reinartz, W. J. (2011). Hybrid Offerings: How Manufacturing Firms Combine Goods and Services Successfully. *Journal of Marketing*, 75(6), 5-23.
- Van Campenhoudt, L., Marquet, J., & Quivy, R. (2017). *Manuel de recherche en sciences sociales* (4 ed.). Paris: Dunod.
- Van Leemputten, G. (2019, 05 08). HPE - Interview. (A. Puylaert, Interviewer)

- Vandermerwe, S., & Rada, J. (1988). Servitization of business: adding value by adding services. *European Management Journal*, 6(4).
- Vanhoudenhove, L. (2019, 05 27). Interview - SKF. (A. Puylaert, Interviewer)
- Vargo, S. L., & Lusch, R. F. (2004). Evolving to a New Dominant Logic for Marketing. *Journal of Marketing*, 66(1), 1-17.
- Vendrell-Herrero, F., & Wilson, J. R. (2017). Servitization for territorial competitiveness: taxonomy and research agenda. *An International Business Journal*, 27(1), 2-11.
- Vendrell-Herrero, F., Parry, G., Bustinza, O., & O'Regan, N. (2014). Servitization as a Driver for Organizational Change. *Strategic Change*, 23(5-6), 279-285.
- Zarpelon Neto, G. P. (2015). What problems manufacturing companies can face when providing services around the world? *ournal of Business & Industrial Marketing*, 30(5), 461-471.
- Zeithaml, V. A., Parasuraman, A., & Berry, L. L. (1985). Problems and Strategies in Services Marketing. *Journal of Marketing*, 49(2), 33-46.
- Zhang, W., & Banerji, S. (2017). Challenges of servitization: A systematic literature review. *Industrial Marketing Management*, 65, 217-227.

Appendices

1 Interview of Win Coreynen

Ok so maybe I will start by doing a quick introduction about myself?

Yes, please

I am working as a researcher at Antwerp Management School and also the Jheronimus academy of data sciences. I am still working on my PDH thesis at the moment. I should submit it in a few months and then I will have my PhD finished. It is all about the topic of servitization. I have been doing research on Servitization for the past four to five years. I have done mainly qualitative research at first, visiting with Belgian companies, mainly product-oriented companies. That either already had some servitization or were interested in moving towards servitization and lately, I have been more focusing on quantitative research where I have two datasets with survey responses from companies from Belgium. And I also look at the relation between the likelihood of firms moving into servitization and other variables such as the intensity of the competition or the degree of exportation. Those are the type of research I am involved in.

Thank you for this introduction. From what I heard, you are not working in a specific company, but could you tell me about the companies you have been working with and the servitization happening inside of them?

I think we can skip through quite quickly in the sense that the most that I visited are described already in the two papers I sent you. So, there were four in the boosting servitization through digitalization article, and then you can find the size of the companies, the type of products that they make, the type of services that they want to move forward to and then in term of levers for successful collect systems papers, there I describe eight cases through which are in the boosting paper, and there are also described the types of companies that I worked within the past. The sectors are quite diverse in the sense that some of them are machine makers, others are office's furniture's builder, others provide security systems, insource for polluters, material components, ... So a wide range of sectors. In term of size, mostly small to medium size companies, so I also talked to two business units in larger size companies.

So, a bit of everything.

Yes, a bit of everything, that's also the advantage of doing quantitative research, you can move to different types of sectors, different types of companies. But we selected them on the criteria's: One they should be moving towards servitization or have already take a concrete step towards servitization, and we also look that they link a lot with digitalisation so especially the boosting servitization one. Then we also look at companies that were really using digital technologies to help them increase their service level.

Ok, thank you. If I can ask you, what is for you the servitization? I know it is quite large, but how would you describe it?

Ok, it is indeed quite a general question, you can find many types of definitions in the literature. For instance, by the literature of Baines, and there are many others. There you can find many different definitions. If you would ask me, for me, servitization is about the transition of firms moving from basic products or services towards supplies of a more integrated solution, also called hybrid offering or product services for instances.

Do you have a good example of servitization? Of a company that did it almost perfectly?

That's difficult to say because the ones that are often referred to in the literature but also in popular media are companies such as Rolls Roy's that moved towards offering power by the hour's services, rather than selling planes engine. You can find examples like Xerox that instead of selling printers, they moved to document management services or copy services. Another example is by Atlas Copco who started moving from selling air compressor to providing machines as a service and ultimately, they want to move to providing air as a service where they don't even sell the machines anymore. So, these are a few famous examples that you can easily find in the literature by Baines, also in the papers by Kolakowski; he did a literature review with many firms in there. The problem is that I think that often times, you find these examples in the literature and the way you speak to people in practice, the reality doesn't really compare with what has been given. For instance, Atlas Copco, they want to move forward in term of servitization, and they provide air as a service as a good example of that, but in fact, the message that I get from inside the company is that these types of services are only offered on a very limited scale at the moment. So only to a particular segment of customers, for instance, in one specific country. So, it is not that this companies have really done the full transition, they are still combining their products business which they have been doing for decades with a new service business where they are really on the front revers. But it is not that the entire company has really made that transition. But I cannot speak for these things example. I only for instance

where Atlas Copco, there is still a huge gap between providing air as a service for everybody compared to the situation where they are today, which is mostly focused on selling machines and not selling air.

For you, they are doing more in papers than in reality?

It is difficult for me to say for everybody because I have not been at Rolls Royce, I have not been at Xerox, I know Atlas Copco a little bit. Also, I haven't been there for a little while. So, let's say that for the theme's examples, it is not always clear how much of their business is generated through these new services.

And for you, what are the drivers for servitization, and why don't they do it entirely?

I think that in term of drivers, you can find many different examples of drivers in the literature and in term of my own research, I also suggest you to look at my paper on internal levers for servitization, there is a table there that shows the reasons why the different companies that I spoke with want to move forward in term of servitization. For instance, for the security system provider, it was because they find that they wanted to have a reason to compete with cheaper security systems manufactured in Asia. They wanted to move to a new service business model where they not only compete on price but compete on walls, for example. For other examples, you will find some in the literature, with Baines papers, they refer to different strategic drivers, financial drivers and marketing drivers. I also refer to those in my papers. For example, in terms of financial drivers, selling services is more profitable than selling products, also selling services is better in terms of economic slowdown because people will stop buying products, but they will still need to maintain services. In term of marketing drivers, if you move from selling products to maintaining a relationship with your customers, you will gain in debt knowledge of your customers, and you will be able to provide some solutions that better fit their needs, so you create more loyal relationships with the customers. In term of strategic drivers, moving into service is not an easy pathway, especially in markets where there is high commoditization. For instance, moving to services has been found more profitable or related to brought than trying to offer the best products or trying to offer the cheapest product.

For you, doing servitization is profitable for the company in term of finance, strategy, marketing, ... Then do you think that in the future, every company will do servitization?

It is a difficult question in the sense that service is becoming more and more important, especially in developed economies. Again there, you can find some papers that refer to

territorial servitization, by Ferrand Vendrell. He speaks about territorial servitization where companies, especially developed economies, are seeing more and more firms moving to servitization because it is a better way to compete with other firms, for instance. Also, there are some other literature themes that say that due to changes in technologies, the society is changing. In the past, from an agricultural society to an industrial society and now with the latest way of the industrial revolution, you have the influence of new information technologies. And now the industrial society is shifting to a more service society where the product itself remains the core, but there are services around it that make it really differentiator towards other less developed economies. So, on the one hand, we will see an increase of the services in firms overall, especially in developed economies. But is it the only way to success in economies? No, it isn't the case at all because for instance, in an environment that is not subject to commoditization, you might also be successful with other strengths like product innovation or process innovation. It doesn't necessarily have to be services. In order to really be successful in services, it really depends on the type of environment that companies are active in. But overall, there will be a trend towards services by most companies.

Ok so if I got you right, there will be more servitization at some point, but there will also be more different strategies. But in total most of the companies will move forward to another level?

Yes, it is a nuanced response to your question. I think that the baseline is that services will increase and will become more important. One of the enablers for that is technologies because technology is becoming cheaper. In the past it used to be all about manufacturing technology, these days, it is about information technology and information technology has been known for instance in service sectors, but we see a huge influx in the manufacturing industries now as well. So, services will become more important thanks to technologies but really depending on the context of the firms; it will turn out that not everybody will be successful in services. For instance, let imagine you are in a company and there is an environment where there is no technological changes, where there is no competition, and where the customers that you have are really loyal, they cannot easily switch to somebody else. For those companies, it is not really interesting to switch to services because they don't have to; they are not in a very changing environment. They can be successful with other business models as well.

When you speak about servitization, from what I heard, all you are saying is positive, it is good the innovation, the marketing, the finance, ... But do you think that there are also some disadvantages about servitization inside a company?

There is also a lot written about that in the literature. But it is a risky strategy for firms in the sense that imagine a very product-oriented firm that has five hundred employees and has an history of over fifty years and there have only being manufacturing standards products for their customers for decades. For them, it is important to move forward servitization. In order to do that successfully, there is a lot of intents that come to do that: They need to invest in a new service development, which is completely different from investing in new product development. They also need to be able to sell those services to the market, which is completely different from selling products to the market. And also, they need to have a firm that supports employees to be more services minded or services oriented rather than just building highly innovative or highly technological products. So, these changes inside an organisation, first they are very expensive because you need to retrain employees or hire new employees. Second, it takes a long time; you need to invest a lot in it as a company. And then it still remains to see if you will be successful in selling services. There are also some papers written about that by Visnik in 2013 but also by Eggert in 2014, by Fanger in 2008. Some of these papers say that firms that venturing to servitization, they see their revenue, growth and profit increase the first few years because they usually have some customers that they know are interested in these services. But then they run into a profitability heardal because then they need to scale up the organisation and really create an organisation that can sell this to a larger base of customers and a lot of them are not very successful in that and they become demotivated. The service paradox written Hugo Kibor by in 2005, is the issue of firms moving away from servitization because they find out that they are not successful in providing services on a large scale to customers and some of them become demotivated and turn away from servitization. So the disadvantages are that it is risky strategy that is very dependent on how successful the company is in transforming the organisation and convincing the customers to move from buying products to buying services. There are many risks associated with that. You can easily find some papers on the topic of deservitization in the literature that will show you some examples of companies that moved away from servitization.

And do you think that those advantages and disadvantages would be the same when a company is going abroad? Would the business rules be different in another country?

I understand this is the main topic of your thesis, and I would love to help you with that, but I am not very familiar with the link between internationalisation and servitization. I would like to move more into that, but I tried to think of some papers that highlighted this issue, but I am not entirely sure. I think I have read once in a paper about product-service systems that some cultures are more used to, for instance, buying foreign services than buying foreign products because, for instance, some countries or some cultures add more values to actually owning a product rather than just using it as in other cultures it switch to being ok to only use a product and not own it. That can be different between products, but I am not entirely sure which ones are more willing to move towards services. But I think that in overall it isn't one that fits all so that if one service work in one country, it will work in another one. To give you an example of IKEA. A few weeks ago, there was an article in the telegraph or in the times or something saying that they were also going to move towards leasing furniture rather than just selling furniture and they will do that by first trying it out in Switzerland for a little while and see if it works there. And if it works there, then they can roll about in other countries as well. So probably firms will build successes in one place and then try to move to other places to see if it is successful there or not. But that probably depends on how well their services fit the local culture and structure. I think there was also an interview with Howard Chill from Starbucks that said that they tried to be in China for years and were very unsuccessful in that. It is not really an example of servitization, but they tried to be successful in China for a long time, and they were unable to do that, and at one point they decided to hire a chief or a vice president from China, and once they did that, it changed a little bit more towards the Chinese culture, and then they only became successful. Just putting American there to sell Starbucks in China didn't work but hiring somebody from China that shared the same values as the company made possible for them to be successful in the way they conduct their business. But in term of servitization and internationalisation, I am not familiar with a lot of examples myself.

Yes, it is kind of complicated because there isn't a lot of articles about the internationalisation of the servitization.

I think you made a really good choice because I think that it is a very interesting topic. If you would be able to find some companies or some cases online that are really successful in country A, and then they try to move to country B and there they are unsuccessful, it would be very interesting to see why what factors made them more or less successful in the other country. I think you chose a very good subject, but as you said, there is not a lot of literature about that. So, I think that this is really interesting what you do.

Thank you. When you are talking about some companies that I could interview, do you have some examples in mind that I could try to contact to be able to have an interview with them?

It is difficult to say at the moment because the one that I spoke to in Belgium, they are mostly active in Belgium. Perhaps some of them sell just across the border to the Netherlands, but that is not really internationalisation. In my network, I can't really think of an example right now. Also, a reason why it is really difficult for me to come up with an example is because I haven't really done quantitative research for the last two years, so I haven't been in touch with some of these companies, so it is less likely that I might be able to find a respondent that could save some time for you.

Ok so you don't know any other company, even if you are not in contact with them, that could contact anyway?

At the moment, no, I can't think of any. But if I were you, I would really try to look at a number of firms online and see whether they are selling products but also having some services around it and then get in contact with some managers. I think that in small to medium-size firms, you are probably more likely to find someone willing to talk with you.

I know that you don't have much time and I already took a lot of it, but if that's fine for you, I would like to ask you one last question.

Yes, that's fine.

Regarding this interview, do you have any advice or topics that you would like to add?

I think that the questions that you asked were still very general, so I think that many of those could be fine in the literature. For your thesis, that would be ok to say that you did an interview with one advisor or expert, that is good for your list. But I think that lots of the details you asked are in the literature. Like a good example of servitization, disadvantages, drivers, ... But I would be very interested in reading the results of the things that you found. As I said the topic that you chose is very interesting, it is very new also. I think you hit a very interesting topic. So, I suggest you move into discussing this with cases as soon as possible.

Yes, I will try to do that.

2 Questionnaire (English)

2.1 Presentation

Before starting this interview, let me introduce myself. After a bachelor's degree in business engineering at the UCL, I started a master's degree in international business (IB). With this master, I had to do one year abroad. I first did a four months exchange in South Africa, and I am currently doing a six months internship in Indonesia.

To finish my studies, I am doing a master thesis linked to servitization. The objective of this thesis would be to understand how the servitization work in a company, what are the link between the different products and services, and what were the various steps to reach this servitization.

To do so, I first did a theoretical part, and I am currently doing a practical part by interviewing multiple companies.

2.2 General

- Could you tell me more about you, your career, and how did you join this company?
- Could you describe your company and how it started/evolved? (number of workers, in which countries they are implanted, age of the company, ...)

2.3 Servitization

- What does the term "Servitization" mean to you?
- What is for you, a successful example of servitization inside a company?
- **Why does your company apply servitization?**
- Has your company always done servitization? (When and how did it happen?)
- What were the different steps to become a servitized company? (**Why these specifics steps?**)

- What are the advantages and disadvantages of the servitization inside your company? (internal drivers and external drivers?)
- Do you think that in the future, all manufacturing companies will implement service inside their business?

2.4 International

- Is your company working internationally?
- Do you apply the same servitization in other countries?
- If yes, what were the different steps? (**Why these steps?**)
- Do you consider that the business rules are different in the countries where your company is implanted? (More oriented products/services, more competitors, ...)
- What were the advantages/disadvantages of the servitization while expanding at an international level?

2.5 Others

- Would you like to add something related to this topic?
- Would you recommend to me another person that I could contact to do some interviews?

3 Questionnaire (French)

3.1 Présentation

Avant de commencer cet interview, laissez-moi me présenter. Après un bac en ingénieur de gestion à l'UCL, j'ai commencé un master en business international. Avec ce master, je devais faire un an à l'étranger. J'ai d'abord fait quatre mois d'échange en Afrique du Sud et je suis actuellement en Indonésie pour un stage de six mois.

Pour finir mes études, je fais un mémoire lié à la servitization. L'objectif de ce mémoire serait de comprendre comment la servitization fonctionne dans une entreprise, quels sont les liens entre les différents produits et services et quels ont été les différentes étapes pour atteindre cette servitization.

Pour ce faire, j'ai d'abord fait une partie théorique et je suis actuellement en train de faire une partie pratique en interviewant différentes entreprises.

3.2 Général

- Pouvez-vous m'en dire plus à propos de vous, votre carrière et comment vous avez rejoint cette entreprise ?
- Pouvez-vous décrire votre compagnie et comment celle-ci a commencé, évolué ?
(Nombre d'employés, pays dans lesquels la société est implantée, âge de l'entreprise)

3.3 Servitization

- Qu'est-ce que le terme "servitization" signifie pour vous ?
- D'après vous, quel serait un bon exemple de servitization dans une entreprise ?
- **Pourquoi votre entreprise fait-elle de la servitization ?**
- Est-ce que votre entreprise a toujours fait de la servitization ? (Quand et comment est-ce que ça s'est passé ?)

- Quelles étaient les différentes étapes pour être une entreprise servitisée ? (Pourquoi ces étapes-là ?)
- Quelles sont les avantages et désavantages de la servitization au sein de votre entreprise ? (Interne et externe)
- Pensez-vous que dans le futur, toutes les sociétés de production implémenteront des services au sein de leur business ?

3.4 International

- Est-ce que votre entreprise est présente à l'international ?
- Est-ce que vous appliquez la même servitization dans d'autres pays ?
- Quelles étaient les différentes étapes ? (Pourquoi ces étapes-là?)
- Est-ce que vous considérez que les règles du business sont différentes dans les autres pays dans lesquels vous êtes implantés ? (Plus orienté produit/services, plus de compétition, ...)
- Quelles étaient les avantages/désavantages de la servitization lors de l'expansion au niveau international ?

3.5 Autre

- Voudriez-vous ajouter quelque chose à cet interview ?
- Me recommanderiez-vous quelqu'un d'autre que je pourrais interviewer pour ce mémoire ?

4 Interview of Dimitri Diercxsens– Hilti

Avant de commencer cet interview, laissez-moi me présenter. Après un bac en ingénieur de gestion à l’UCL, j’ai commencé un master en business international. Avec ce master, je devais faire un an à l’étranger. J’ai d’abord fait quatre mois d’échange en Afrique du Sud et je suis actuellement en Indonésie pour un stage de six mois.

Pour finir mes études, je fais un mémoire lié à la servitization. L’objectif de ce mémoire serait de comprendre comment la servitization fonctionne dans une entreprise, quels sont les liens entre les différents produits et services et quelles ont été les différentes étapes pour atteindre cette servitization.

Pour ce faire, j’ai d’abord fait une partie théorique et je suis actuellement en train de faire une partie pratique en interviewant différentes entreprises.

Est-ce que tu sais me parler de toi, de ta carrière et de comment tu es arrivé chez Hilti ?

Donc moi je voulais absolument faire une carrière en vente et mon père a travaillé chez Hilti auparavant et il disait que si tu veux avoir une bonne formation en vente, va travailler chez Hilti parce qu’ils ont beaucoup d’outils, t’as beaucoup de soutien. J’ai donc commencé chez Hilti en décembre 2015, j’ai été vendeur sur la route pendant un an. Puis j’ai été spécialiste pour un an, justement pour le system on track, qui est tout ce qui a à voir avec la digitalisation des entreprises de construction pour le suivi de tout ce qui est leur partnership. Et puis l’année passée en janvier, janvier 2018, j’ai commencé à être chef d’équipe d’une équipe de vente de neuf personnes et je suis responsable de tous les électriciens en Flandre. Et là j’ai entamé ma deuxième année.

Et est-ce que tu sais un peu me décrire la compagnie Hilti dans les grands chiffres, plus ou moins ce qu’elle fait, dans quels pays elle est implantée et depuis combien de temps elle existe ?

Hilti existe depuis 76 ans, l’année passée c’était la 75eme année. Hilti est encore toujours une boîte familiale, Martin Hilti est toujours à la tête de la boîte dans le trustfund. Et puis il y a un board. On est 29 000 personnes je pense, on est présent dans 120 pays. En Belgique on est 250 et l’année passée, on a atteint pour la première fois les 5.5 milliard de chiffre d’affaire, mais c’est toujours en francs suisses chez Hilti. Hilti est basé au Liechtenstein, pas parce que c’est

un endroit fiscal intéressant mais surtout parce que la famille Hilti vient de là-bas et ils ont gardé ça là-bas. Donc c'est marrant quand tu vas au Liechtenstein, il y a entre 70 et 80% des gens qui travaillent pour Hilti.

Et on utilise également le franc suisse au Liechtenstein du coup ?

Je ne sais pas si au Liechtenstein c'est en francs suisses mais j'imagine car c'est entre le Suisse, l'Allemagne et la France.

Ok ok, merci. Et du coup pour rentrer directement dans le vif du sujet, pour toi, qu'est-ce que signifie le terme Servitization ?

C'est une bonne question car je voulais d'abord te poser la question, qu'est-ce que tu veux exactement dire avec ça ? Hilti est très bon avec tout ce qui va avec les services, qu'est-ce que ça veut dire : Comparé à la concurrence, nous on amène des services que la concurrence n'amène pas. Par exemple si quelqu'un achète une machine chez Hilti, si la machine casse, c'est nous qui allons nous déplacer, c'est nous qui allons chercher la machine, on va la réparer dans les trois jours, la machine sera de retour. Si la machine n'est pas de retour, c'est nous qui prenons en charge la facture de réparation. Du coup chez les concurrents, si la machine disparaît, c'est plus ou moins entre une, deux et trois semaines. Donc ils perdent beaucoup de temps sans machines et donc ils perdent beaucoup de productivité.

Donc pour moi la servitization, si c'est bien ça que je comprends, c'est que nous on apporte un service plus important et surtout notre manière de vente a changé les dernières deux années et on est beaucoup plus dans la consultance que dans la vente agressive. Et grâce à cette vente consultative, on arrive à faire beaucoup plus de ventes.

Et qu'est-ce que c'est exactement une vente consultative dans une société de produit ? C'est vraiment donner du service autour des produits ou c'est plus compliqué que ça ?

Répète un peu ta question

Tu as dit qu'il y avait beaucoup plus de consultance que de ventes de produits pour l'instant et que c'est grâce à ça que le chiffre d'affaire avait augmenté.

Oui, oui. En Belgique, l'année passée, on a fait plus de 10% de croissance. Moi avec mon équipe, j'ai fait plus de 25% de croissance et ça c'est exactement car on a réussi à rentrer de très très gros deals en faisant une approche consultative, aller chez les clients et vraiment

comprendre c'est quoi leurs problèmes et comment nous on peut les solutionner. On a un système FLEET aussi, c'est un système de location de machines. Les gens louent une machine chez Hilti pendant 4 ans et après les 4 ans, les machines reviennent chez Hilti et Hilti livre des nouvelles machines et donc pendant l'analyse, ce qu'on fait c'est qu'on a 8 démarches. Je te les envoie.

Envoi un document

On a huit démarches, la première démarche c'est voir le CEO de la boîte, faire un management meeting. Pendant ce meeting, on essaye de lui faire comprendre qu'on a envie de comprendre tous les processus dans leur entreprise, les réparations, les pertes de machines, le vol de machines, la perte de productivité des machines, la durée de vie de toutes les machines, etc. Et quand on a compris un peu tout ça, on peut lui expliquer que nous on aimerait bien faire une analyse chez eux pour vraiment chiffrer tout ça. Le but c'est vraiment de tout aller chiffrer et puis d'aller montrer en chiffres que c'est plus intéressant de travailler avec Hilti qu'avec la concurrence. Donc point 1, c'est le management meeting, point 2, vraiment aller sur place et faire l'analyse ; l'analyse, on voit plusieurs personnes, on voit de nouveau le CEO, on voit les chefs de projets, on voit les chefs d'équipe, on voit les gars qui travaillent dans le dépôt, on voit tout le monde qui est en contact avec les machines. On voit l'acheteur aussi, on voit différents types de personnes et on essaye de comprendre c'est quoi leurs challenges avec tout ce qui a à voir avec le matériel relevant à Hilti. Après ça on va faire une démonstration, ça veut dire qu'on livre des machines pendant une semaine à l'entreprise et ils testent pendant une semaine la machine. Mais ils ne font pas que tester, on va trois fois sur le chantier. Lundi on va sur le chantier, on dépose les machines, on forme les gens à la machine. Mercredi on retourne sur le chantier, on regarde si tout va bien, s'ils ont les bonnes machines, s'ils ont besoin de machines plus lourdes, plus légères ou quoi que ce soit. Et puis vendredi on va chercher les machines et on fait les derniers feedbacks. Durant ces trois jours on essaye de faire des photos, on essaye de faire des vidéos de ce que les clients disent. Comme ça on a vraiment de bonnes images pour montrer au CEO. La quatrième partie c'est... Je t'envoierai tantôt un screenshot. La toute première partie en fait c'est pré-qualification, puis c'est le management meeting. Pré-qualification c'est voir des gens sur le chantier, comprendre s'ils ont des challenges et quand on a des challenges on va chez le CEO. Puis quand on est chez le CEO, on va mettre tous ces challenges en avant et on va lui vendre l'analyse. Une fois que l'analyse est faite, on fait toutes les démonstrations et à la base de la démonstration, on va aller créer la solution optimale pour le client. Ça veut dire qu'on va aller voir quelles machines ils ont besoin, combien de batteries

ils ont besoin, quels chargeurs ils ont besoin, etc. La sixième partie alors, c'est la présentation au CEO et la décision du CEO. Là on fait de nouveau un management meeting, on fait une présentation Powerpoint, ça nous prend une heure, une heure et demi de présentation et alors on va vraiment aller lui prouver ou aller lui montrer les coûts qu'il a aujourd'hui et lui montrer les coûts qu'il aurait avec Hilti. Après s'il dit oui, c'est l'implémentation et le training de toutes les machines et après c'est le point huit, c'est le suivi, c'est aller chez le client, voir si tout va bien etc.

Et du coup, une fois que le CEO a accepté, vous vendez des machines ? Ce n'est plus un prêt.

Là c'est mis en location pendant 4 ans. En fait on les livre pendant 4 ans et si elle est inefficace, le lendemain ils ont une machine de remplacement pour continuer. Mais je pense si tu vas sur notre site, il y a d'assez bonnes explications de ce que ça veut dire FLEET. En fait ce qu'on essaye vraiment de comprendre pendant cette analyse, c'est quoi qui fait mal chez les clients. Si le client a beaucoup de pertes de machines, si le client a beaucoup de vols de machines, qu'est-ce qu'il se passe quand une machine casse. Je vais t'expliquer en bref c'est quoi le FLEET. Le FLEET ça veut dire une location de machine. Et qu'est-ce qui se passe quand tu as une location de machine, ça veut dire que tu connais tes coûts pour 4 ans. Tu connais exactement ce que ton parc machine va te coûter car si une machine casse, le lendemain t'as une machine de remplacement pour continuer à travailler et tu ne dois pas payer de facture. C'est dans le coût, c'est comme quand tu lease une voiture sauf que c'est sur des machines. La machine disparaît, volée ou oubliée sur le chantier, ce n'est pas important. Il y a une couverture vol, si la machine casse, on va aller la chercher et redéposer mais il y a aussi une machine de réserve qui vient, ce qui veut dire que le lendemain tu sais directement continuer. Pour certains cas spécifiques, on a des lasers, si les lasers tombent et cassent, on annule le contrat et on envoie une nouvelle machine. Ça ce sont les choses les plus pertinentes. Surtout, ce que les CEO trouvent très intéressants, c'est avoir un coût fixe à l'année et de vraiment savoir ce que ça va lui coûter et aussi tous les coûts qu'on ne voit pas. Chez nous une machine casse, ils font un coup de fil et Hilti fait le reste. Chez la concurrence, si une machine casse, ils doivent aller chez le fournisseur, le fournisseur va leur donner une offre, l'acheteur va dire oui ou non, le magasinier va de nouveau chez le fournisseur et il dit oui tu peux réparer, le fournisseur, il envoie au fournisseur de base, par exemple Makita ou Bosh. Makita ou Bosh pour réparer ça prend une, deux ou trois semaines, ça retourne chez le fournisseur, le fournisseur appelle le client pour dire que la machine est là, la machine arrive, le magasinier va chercher la machine,

il se déplace vers le fournisseur, il rentre, il appelle le gars dont la machine est cassée, le gars va chercher la machine et ainsi de suite. Maintenant il a récupéré la machine mais il faut encore faire toute la facturation. Donc le fournisseur envoie la facture à la compta de l'entreprise, la compta va contrôler avec le magasinier si c'est ok, le magasinier va dire oui c'est ok. Au final c'est une charge énorme, en fait ça coûte plus cher en temps de réparer une machine que la réparation même. Ce sont ces choses là qu'on va essayer d'aller prouver durant l'analyse.

Et donc au final l'avantage de chez Hilti c'est vraiment la servitization dans le sens d'offrir une machine avec toute l'offre qu'il y a autour pendant un an au lieu de simplement vendre un produit qui après pourrait casser ou quoi que ce soit ?

C'est pendant 4 ans mais en effet, on va vraiment donner un service où ils n'ont plus de soucis en fait. Si tu travailles avec Hilti en Fleet, tu n'as plus de soucis. D'ailleurs si tu vas sur notre site, si tu vas sur services, ... Je vais t'envoyer le lien

Envoi le lien

Tu vas dans Comment optimiser votre partnership pour réduire vos coûts ? Et là ils expliquent les démarches, il y a une vidéo, pourquoi aller chez Hilti, ... C'est une bonne explication, tu as plein d'infos.

Parfait merci beaucoup. Et du coup la véritable raison pour laquelle Hilti fait de la servitization, c'est vraiment pour être plus compétitif du point de vue des clients ? Ou est-ce qu'il y a une autre raison cachée derrière cette servitization ?

C'est surtout la servitization mais après, les produits sont les meilleurs. Si on compare aux voitures, on est la Bentley des machines. On coûte deux fois plus cher en coûts si les gens vont acheter une machine mais on est aussi meilleur. On va tenir beaucoup plus longtemps, on va forer un trou plus rapidement, il y aura beaucoup moins de tremblements donc ce sera beaucoup plus agréable à forer. Après on est aussi vraiment les leaders du marché, on est les pionniers sur le fait qu'on investit chaque année entre 300 et 350 millions en R&D et donc on revient chaque année avec une soixantaine de nouveautés, ça peut être des machines, ça peut être des enclaves, ça peut être des inserts. Ça peut être de tout. Et puis comment on va vraiment se distinguer de la concurrence, c'est qu'on a aussi « On TRACK » et « on track » c'est un système qui va aider une entreprise à gérer tout son outillage numériquement avec une application. On va pouvoir aller dire où est la machine, qui est responsable, qui est le dernier à l'avoir utilisée et tout ça.

Aujourd'hui on va même pouvoir aller voir où la machine a été vue en dernier lieu avec des tags Bluetooth.

Et ça c'est un service que vous offrez en vendant les machines aux entreprises ?

Voilà et en fait pourquoi on fait ça, c'est pour rentrer chez les boîtes où on n'arrive pas à rentrer en fait, les boîtes avec qui on ne fait pas du business. Grâce à ce service, on arrive à aller chez les big boss parce que c'est quelque chose qui est très actuel aujourd'hui. De un, la digitalisation bah elle est là. De deux, les entreprises perdent énormément de temps pour chercher du matériel. Pour un exemple très concret, une carotteuse, une machine qui va faire des trous de grands diamètres, est une machine qui coûte très cher et donc tout le monde ne l'a pas dans sa camionnette. Donc dès qu'il faut faire des trous, le magasinier, il commence à appeler pour savoir où elle est. Aujourd'hui ce qu'ils font c'est qu'ils ont un bout de papier ou un Excel mais en fait les gars entre eux, ils s'échangent les machines et donc il n'y a plus de suivi car ils n'appellent pas le magasinier pour dire à qui il l'a prêtée. Et quand tu as une boîte avec 50 camionnettes, c'est impossible de retrouver tout ça. Et donc avec l'application, on va pouvoir voir où bien où c'est avec le tag Bluetooth ou suivre tous les scans qui ont été faits. C'est comme ça qu'on se différencie vraiment de la concurrence, on est les seuls à pouvoir amener ça. Ce qu'on voit c'est qu'il y a beaucoup de systèmes ERP qui essayent d'amener le service que nous on amène avec ON TRACK mais ils n'y arrivent pas car eux ce sont des systèmes ERP, ils sont faits pour créer des offres, des facturations, des paiements, ... Et nous c'est vraiment le suivi. Et l'avantage là c'est que ce n'est pas lié à Hilti. On peut aussi mettre des grues, on peut aussi mettre des échelles, on peut mettre des gants, on peut mettre tout ce que l'entreprise a envie de mettre dedans et ça ne doit pas être du matériel Hilti. Et du coup ça nous donne l'opportunité de rencontrer des boss de grosses entreprises qu'on n'arrivait pas à avoir avant, et faire du business avec eux. Et souvent quand on arrive à rentrer ON TRACK, et bien par après, on arrive à rentrer des machines aussi car on leur prouve notre professionnalisme.

Ça c'est vraiment toute la servitization qui est faite dans le service de vente. Si j'ai bien compris, c'est vraiment une manière d'être meilleur que les concurrents à tous points de vue même si le prix est plus cher, que les entreprises aient quand même envie de travailler avec Hilti. Mais est-ce que cette servitization a toujours été faite chez Hilti ? Est-ce que c'était comme ça dès le début ou est ce que c'est quelque chose de nouveau ?

FLEET est là depuis 16 ans et ON TRACK depuis 3 ans.

Et comment est ce que ça a vraiment commencé ? Est-ce que Hilti a décidé en un coup de mettre des services avec leurs produits ou est ce qu'il y a eu plusieurs étapes pour en arriver là ?

Il y a 16 ans je n'ai aucune idée mais il y a d'office eu des stratégies, il y a d'office eu des boîtes externes qui sont venu réfléchir, avec des consultants. Mais je n'ai aucune idée, c'était il y a 16 ans, je ne sais vraiment pas te dire. Mais ça existe depuis 16 ans. ON TRACK, ça existe depuis 3 ans et ça à nouveau, c'était avec des consultants externes. Ce sont les clients FLEET qui sont venus chez nous et qui on dit que le FLEET c'était très bien après quatre ans on doit vous rendre vos machines et on a aucune idée d'où elles sont, est ce que vous avez une solution pour ça ? Et c'est comme ça qu'on a commencé à réfléchir et c'est comme ça que ON TRACK a été développé chez Hilti. Ça a sûrement été aidé avec des boîtes externes, des consultants, ça c'est sûr. Enfin en fait ce n'est pas sûr, je n'en sais rien. Mais ce que je sais c'est que maintenant c'est la digitalisation et avec Hilti on est toujours one step ahead et du coup voilà. Et il y a encore des services qu'on livre, ce sont nos ingénieurs. On vient avec nos ingénieurs sur le chantier, on fait des calculs, et ça c'est quelque chose que la concurrence fait aussi mais nous on est très réactifs, on arrive assez vite avec ça alors qu'avec la concurrence ça peut prendre du temps. Grâce à ça on a une force de vente qui est impressionnante de 120 personnes et on a une dizaine d'ingénieurs qui peuvent aller sur le terrain.

Tout ça c'est vraiment des avantages que je vois chez Hilti, au niveau de la servitization. Mais est-ce que à ce niveau-là, est-ce qu'il y a aussi des désavantages à offrir des services aux clients ? Ou est ce qu'il n'y a que des avantages ?

Ça prend du temps de vendre quand tu lances une analyse. L'année passée on a terminé un deal chez un client pour 700 machines, ça a prit un an. En tant que boîte de vente, il faut avoir du chiffre tous les jours. Et tu sais qu'au long terme, si ça tombe tant mieux. Mais si ça ne tombe pas, t'as perdu vraiment beaucoup de temps. Enfin tu n'as pas perdu du temps parce que tu apprends toujours quelque chose mais tu as investi beaucoup de temps dans quelque chose qui ne t'apporte pas d'argent, ce n'est pas facile, on ne gagne pas toujours.

Donc le seul désavantage c'est vraiment une question de temps ?

Oui parce que moi je ne vois pas vraiment de désavantage. Enfin le désavantage c'est le temps mais c'est aussi de convaincre nos vendeurs que c'est la meilleure solution pour tous les clients. Pour eux ce n'est pas toujours clair que c'est vraiment la meilleure solution pour tous les clients.

Ils disent non un petit client ce n'est pas très intéressant, ça va lui revenir deux fois plus cher. Car le FLEET c'est encore plus cher que l'achat, si une machine coûte 1000€, en FLEET elle coûte 1300€ à la fin des 4 années. Et donc ça ils ont du mal à faire comprendre chez les petits clients. Mais après on n'a pas envie qu'ils se focalisent trop sur les petits clients. Mais quand même, les convaincre que FLEET est la meilleure solution ce n'est pas toujours facile. Et puis après on a toujours plein d'autres choses. Dans le service d'ingénierie, on fait plein de formations, de conseils techniques, ça aussi ce sont des services qu'on fournit et c'est compliqué de les vendre. La concurrence fait souvent ça gratuitement, nous on veut faire ça payant car c'est une meilleure qualité et les faire payer ça, c'est compliqué.

Si c'est vraiment bien d'offrir tout ça, est-ce que tu penses que dans le futur, toutes les sociétés, donc toute la concurrence ou toutes les sociétés dans un autre domaine, est ce que tout le monde finira par implémenter des services autour des produits ?

Ils vont essayer mais ils ne sont pas capables car ils n'ont pas la frappe de vente qui peut aller sur le terrain chez les clients.

Donc la servitization serait plus pour des grosses organisations que pour des plus petites entreprises ?

D'office il n'y a aucune petite entreprise en fait. Les concurrents ce sont toutes des grosses boîtes, c'est Bosh, c'est Makita, ... C'est juste que leur stratégie est de passer par des fournisseurs alors que notre stratégie c'est la vente directe. Et vu qu'avec la vente directe on est capable de toucher les clients différemment, on ne touche pas spécialement plus de clients parce que dans un revendeur, il y a une centaine de clients qui passent par jour. Il y a plein de revendeurs en Belgique et nous on voit 8 clients par jour, on est 120 vendeurs donc on voit 1000 clients, il doit y en avoir 500 qui passent en ligne et 500 qui appellent le service client et donc en Belgique on a 2000 clients par jour. Et je pense que quand tu passes par un revendeur tu peux en avoir beaucoup plus par contre, en passant par un revendeur, tu ne sais pas s'il va vendre du Bosh, du Makita, ... Tu ne sais pas ce qui va être mis en avant et nous on peut vraiment aller découvrir les besoins chez le client, comprendre c'est quoi ses processus, ce qui ne va pas. Et tant que les autres n'ont pas une frappe de vente sur le terrain qui est beaucoup plus grosse, ça va être compliqué pour eux de déjà convaincre les clients à le faire, ça ce n'est déjà pas facile. Et deux, mettre tout la logistique en place pour savoir donner ces services, ce qui est très compliqué quand tu repasses par un revendeur car le vendeur doit tout organiser, il doit vouloir organiser et il doit aller chez Makita, chez Bosh, et dire qu'il veut faire ce système-

là, est ce que vous êtes d'accord ? Mais si je fais ce système-là, je ne prends pas tout le risque, vous prenez 50% de risque et moi je prends 50% de risque, ... C'est beaucoup plus compliqué car ils travaillent avec des troisièmes personnes et nous on travaille qu'avec nous-mêmes.

Et du coup est-ce qu'ils ne risquent pas à un moment de changer leur stratégie et également de travailler uniquement avec eux-mêmes pour ne plus utiliser de fournisseurs ?

Je ne sais pas mais ça m'étonnerait. En fait quand tu regardes, Makita, Bosh, De Halte, ... Ce n'est pas les machines leur corps business, souvent c'est un side business qu'ils ont développé en plus. Bosh c'est gigantesque, Makita c'est huge. C'est des boites qui sont beaucoup plus importantes en termes de chiffres d'affaire, en termes de livraison de produit que Hilti. Nous on est beaucoup plus niché et donc nous notre focus c'est ça et pas autre chose. Alors qu'eux ils doivent se focaliser sur mille et une choses. C'est toujours « Less is more ».

Donc au final, c'est une stratégie différente.

Oui

Au début de l'entretien, tu m'as dit que Hilti était présent dans 120 pays si je me souviens bien. Est-ce qu'il y a de la servitization dans les 120 pays. Est-ce que ces services se font uniquement en Belgique ou est-ce que dans tous les pays c'est pareil ?

Ça ne se fait pas dans tous les pays mais ça se fait dans la plupart des pays. Il y a des pays où c'est trop dangereux comme en Afrique et tout ça. Dans certains pays d'Afrique, ce n'est pas possible, c'est trop dangereux.

Il y a certains pays où on considère que le business est un peu différent et qu'on ne peut donc pas offrir un certain service ?

Exactement. Ou le service, le FLEET, est fait différemment, ils doivent payer tout en une fois. Par exemple ils reçoivent le service après-vente mais pas le service anti-vol car en Afrique il y a plus souvent du vol qu'en Belgique. Tout ça c'est basé sur des recherches qui ont été faites ou ça a été fait par trial error, ils ont lancé et ça n'a pas marché ou ils faisaient trop de pertes et donc ils ont arrêté. Mais tous ces détails-là je ne les ai pas. Je sais juste qu'on ne le fait pas dans tous les pays.

Et la seule raison ce serait parce que vraiment, il y a des règles de business différentes dans des pays plus dangereux que d'autres ou est ce qu'il y a d'autres raisons ?

Oui, dangereux ou des emerging market et donc quand on lance Hilti, le FLEET, tu n'as pas directement un capital qui rentre, donc dans les marchés qui se lancent, ils doivent d'abord faire du business avant. On ne sait pas directement mettre le FLEET en place.

Merci beaucoup. J'arrive maintenant à la fin de l'interview. Est-ce que par rapport à tout ça, est ce qu'il y a quelque chose que t'aimerais bien rajouter ?

Non mais traverse le site internet : Service. Et là il y a plein d'infos sur tout ce qui est services et sur ce qu'on fournit et si t'as des questions à propos de ça, tu peux toujours m'envoyer un mail. Je pense que c'est une bonne base. Nous c'est vraiment comme ça qu'on se différencie, c'est par nos services.

Ok ok, merci beaucoup en tous cas. Et une dernière question, est-ce que tu me recommanderais quelqu'un à interviewer pour vraiment parler de la servitization ? Que ce soit quelqu'un qui connaît vraiment ça bien chez Hilti ou bien dans une autre compagnie ou tu sais qu'il y a de la servitization ?

Je pourrais voir chez Hilti. Je peux essayer de voir avec un des product manager. Je vais leur envoyer un mail et je te dis quoi.

Parfait un grand merci en tous cas. Merci beaucoup pour ton temps et pour avoir fait cet interview avec moi.

Si tu as des questions, envoie-moi un mail.

Parfait merci beaucoup.

Allé, bonne chance. Fais ça bien et profite bien là-bas.

5 Interview of Frank Rodfort – Fokker

Avant de commencer cet interview, laissez-moi me présenter. Après un bac en ingénieur de gestion à l'UCL, j'ai commencé un master en business international. Avec ce master, je devais faire un an à l'étranger. J'ai d'abord fait quatre mois d'échange en Afrique du Sud et je suis actuellement en Indonésie pour un stage de six mois.

Pour finir mes études, je fais un mémoire lié à la servitization. L'objectif de ce mémoire serait de comprendre comment la servitization fonctionne dans une entreprise, quels sont les liens entre les différents produits et services et quelles ont été les différentes étapes pour atteindre cette servitization.

Pour ce faire, j'ai d'abord fait une partie théorique et je suis actuellement en train de faire une partie pratique en interviewant différentes entreprises.

Pour commencer, est-ce que tu sais me parler un peu de toi et de l'entreprise dans laquelle tu travailles et comment tu es arrivé là-bas ?

Je travaille pour une société hollandaise appelée Fokker, c'est le nom du fondateur. En 2015 elle a été rachetée par le géant de l'aéronautique : GKN Aerospace, reconnue comme le numéro un ou le numéro deux d'airspace supply, en aérostructure, mais aussi des services dont on va bientôt parler. Moi je travaille pour Fokker depuis maintenant un an et demi, donc je suis dans le début de ma carrière chez Fokker. Avant ça j'étais ingénieur aéronautique chez Airbus, donc j'ai commencé ma carrière en tant que design engineer purement aéronautique en Allemagne à Brême, donc tout le temps chez Airbus. J'ai fini mes études en aéronautique en Angleterre en 2016 donc je suis encore dans les premières années de ma carrière et là je m'oriente plutôt vers le management. Je suis en deuxième année du management traineeship. Avec ça j'ai été exposé à plusieurs postes dans Fokker. Deux dans leur division force sales et force thermique dont je vais te parler et la troisième, je travaille actuellement pour Fokker Helmer. Donc Helmer c'est le business de Fokker qui produit les câblages aéronautiques, donc toutes les installations électriques, les avions de ligne et les private jets. On les produit ici en Chine, on les produit en Turquie et on va bientôt commencer à les produire en Inde. On est en phase d'ouverture de notre toute dernière zone de production en Inde, dans le sud-ouest de l'Inde. Simplement pour diviser les tarifs horaires de production. Mon rôle ici chez Fokker c'est de gérer la transition de production entre la Chine et l'Inde.

Et donc j'imagine que Fokker c'est une grosse entreprise qui est présente dans de nombreux pays ?

Exactement oui, GKN Aerospace qui a racheté Fokker est présente dans des dizaines de pays dans le monde mais avec une grande présence en Europe, en Europe du nord mais aussi en Scandinavie ; une grande présence aux Etats-Unis mais aussi dans l'Asie Pacifique. L'Asie Pacifique c'est un très très gros marché pour tout ce qui est services et maintenance aéronautique. On a un site de maintenance relativement important à Singapour. Quand je dis relativement important, il faut savoir qu'avec des géants comme Lufthansa et Cathay Pacific qui ont des hangars beaucoup plus grands que nous, mais on a aussi une certaine expertise dans ces niveaux-là. Je travaille pour Fokker airboy donc je ne travaille plus pour Fokker sales mais j'ai été exposé à leur business, ça fait toujours partie de notre portefeuille de sociétés donc voilà pourquoi je voulais t'en parler. J'étais relativement content en lisant la phase théorique de ton mémoire et de voir qu'un des premiers services dont tu parlais c'était justement power by the hour par Rolls Royce, ça c'est évidemment un peu la référence dans le monde aéronautique.

Oui effectivement, c'est un des exemples les plus connus de servitization au final.

Oui exactement, c'est d'après moi un peu les pionniers dans l'âme de la servitization, du moins dans l'aviation.

Du coup en parlant justement du mot servitization, c'est quoi pour toi la servitization, qu'est-ce que ça signifie ?

Donc je ne connaissais pas du tout le terme avant que Juliette ne m'envoie un message en disant qu'elle avait un ami qui étudiait la servitization mais je pense que le mot est assez facile à comprendre. Pour moi ça signifie une offre commerciale qui n'est pas juste centrée sur un produit et qui offre aussi des avantages aux clients mais aussi des avantages aux services providers. J'ai envie de dire, c'est un environnement où les deux parties ont intérêt à regarder l'écosystème autour du produit et pas simplement le produit en lui-même.

Oui c'est exactement ça, au final c'est un win-win du côté des clients mais également du côté des producteurs.

Mais du coup, pour toi, qu'est ce que c'est un bon exemple de servitization ? Tu parlais de Rolls Royce, j'imagine que c'est peut-être ça le meilleur exemple pour toi ?

Oui oui, Rolls Royce mais je pense aussi dans le consumer secteur, je pense qu'il y a énormément d'exemples de servitization, abonnements téléphones et tout mais aussi dans l'industrie de production dans laquelle je travaille, on a aussi beaucoup de services agreements. On propose des machines de découpes, de marquages de câbles. Là on a des SLA, Services Level Agreement donc on paye un tarif fixe et on nous garantit une certaine availability des machines.

Donc ça c'est une servitization que vous-même vous achetez et non que vous fournissez ?

Oui ça c'est une servitization que nous-mêmes on achète mais je pense que ce n'est pas l'exemple sur lequel j'ai envie de me focaliser aujourd'hui. Aussi donc Fokker Services propose un availability services. Je vais t'envoyer la documentation après, tu pourras la lire à ton aise. En gros on a un service qui s'appelle abacus. Abacus c'est un peu le flagship product. En gros on garantit à l'opérateur un accès à un pool de pièces détachées et un délai maximum de réponse. Quand on reçoit une pièce détachée qui est défectueuse, on revoit un servable unit dans un délai agréé.

Et du coup quelles sont les raisons pour lesquelles Fokker fait de la servitization ?

Evidemment il y a plusieurs raisons, c'est devenu très à la mode en aviation comme je l'avais dit. C'était assez innovant dans ce secteur là mais ça a été introduit à une époque où l'aéronautique se tournait fort vers la servitization. C'est aussi pour Fokker une façon de lisser la courbe de demander dans les workshops, et de mieux planifier notre travail.

Donc c'est plus pour l'entreprise en tant que telle que pour trouver des clients ?

Oui, enfin non, c'est aussi une raison marketing, c'est ce que demandent les clients en aviation. En aviation il faut minimiser le temps. Quand tu penses que le coût mensuel d'un avion de ligne c'est plus ou moins 10% du Donc ça fait cher le coût mensuel.

Effectivement. Mais du coup dans l'aviation, toutes les entreprises font une sorte de servitization ?

Je pense que si on regarde l'offre, je pense qu'en ce qui concerne les composantes, la plupart offrent de la servitization. Donc moteurs, IDG, asionique donc toutes les composantes électriques. Donc tous les MRO, ou la plupart offrent des services de servitization. En ce qui concerne l'avion en lui-même, la structure, ça ce n'est pas servitizé pour la plupart mais si on regarde les composantes, je pense que oui.

Ok donc toutes les composantes sont servitizées mais pas le produit global.

Pas l'avion en lui-même non. L'avion en lui-même est le plus souvent « leased ». Je pense qu'ici dans les dernières années, on a passé le cap des 50% des avions commerciaux dans le monde sont « leased ».

Ah oui donc vraiment tout le monde s'y met maintenant.

Oui

Et du coup, comment cette transition s'est passée chez Fokker ? Est-ce qu'à un moment ils se sont juste dit « Ah bah maintenant on va faire de la servitization ? » Ou est ce que tu connais les étapes qu'il y a eus ?

Je ne connais pas tous les détails. Fokker produisait des avions jusqu'en 96. En 96 Fokker a fait faillite et a dû diversifier son portefeuille et la servitization faisait partie de la diversification du portefeuille de Fokker. Donc on ne vendait plus d'avions et donc on a dû augmenter notre portefeuille de services aéronautiques. Pour ça on a servitizé les composantes pour les avions de Fokker mais du coup on a aussi appliqué le même modèle aux composantes de Bombardier de ATR, pour Boeing et aussi pour Airbus en partie. On a vraiment étendu notre offre et je pense que le modèle qu'on appliquait à Fokker a été relativement facilement applicable sur les autres avions.

Et du coup maintenant, ça se fait vraiment dans toutes les structures de la compagnie ?

Non c'est toujours uniquement Fokker services qui fait de la servitization, c'est la branche de Fokker qui s'occupe de l'entretien des composantes des avions. Les parties de Fokker qui font de la production pure n'ont pas de servitization.

Ok. Et du coup c'est quoi les raisons pour lesquelles on ne fait pas de la servitization dans tout ? Ou plutôt est-ce que tu penses qu'il y a aussi des désavantages à la servitization ? Et est-ce que c'est pour ça qu'on ne fait pas ça partout ?

Certains produits qu'on vend une fois et qui sont ensuite consommés ne se prêtent pas à la servitization. Ou alors des composantes à très très longue durée de vie ne se prêtent pas à la servitization. Si on parle de composantes IDG, des boîtes ioniques qui ont vraiment une durée de vie illimitée mais aussi une meantime between removal qui est limitée. Par contre, toutes les deux ou trois milles heures de vols, certaines composantes doivent être inspectées, retirées de

l'avion donc ce sont vraiment des composantes à durée de vie limitée. Ce qui se passe vraiment une fois arrivé dans le hangar, c'est inspecté par l'ouvrier de l'airline. Si la composante doit être remplacée, il la met dans une caisse, il l'envoie vers nous et parfois dans les 24h, ils ont à nouveau les composantes prêtes à l'emploi dans le hangar. Nous, entre-temps on entretient la composante qui a été retirée, on la répare, on la met dans notre stock prête à être expédiée à l'opérateur d'origine ou à un autre opérateur. L'opérateur n'est jamais vraiment propriétaire de la composante mais il participe à un pool, à un stock commun. Il a accès à un stock commun de composantes. Mais par exemple dans le business dans lequel je travaille actuellement, dans la production pure, ici il n'y a pas vraiment d'intérêt à faire de la servitization.

Et du coup dans les services donc là où vous offrez de la servitization, les avantages tu disais que c'était surtout le lissage, il y avait aussi des avantages marketing et également que tout le monde le faisait et que du coup c'était une innovation un peu obligatoire, est-ce qu'il y a d'autres avantages ou désavantages ?

Dans les désavantages il y a le fait qu'on a un énorme hangar, un warehouse près de Amsterdam où on entrepose tout ce stock, je pense que ça c'est un désavantage. Le stock doit souvent être tenu dans des endroits où le loyer est assez cher, près des aéroports etc. En avantages, c'est qu'on touche une large gamme de clients. Théoriquement, on pourrait vendre nos services à tous les opérateurs de ces avions. C'est un modèle qui est facilement transplantable à de nouveaux clients, si on reçoit un appel d'offre, on peut très facilement formuler une réponse à l'appel d'offre, proposer un package à ce client-là. Donc un modèle qui est facilement transplantable je pense que c'est un gros avantage.

Et du coup le seul désavantage ce serait d'avoir la servitization ce serait d'avoir un grand stock permanent ?

C'est un des seuls désavantages auxquels je pense maintenant, oui. Mais il y en a certainement d'autres mais pour l'instant je n'en ai pas d'autre en tête. Je crois que c'est aussi en terme de business management. Si on peut proposer un modèle à tous nos clients, on peut aussi très facilement monitorer la performance, les KPI sont applicables à tous les clients, à tous les products lines et on peut très facilement identifier les problèmes dans le business. C'est une simplification du business et du business monitor qui devient plus facile, je pense.

Avec tout ça, ça nous fait beaucoup d'avantages. Mais du coup est-ce que tu penses que dans le futur il y aura de la servitization partout ? Donc que toutes les entreprises de

produits feront de la servitization ? Si j'ai bien compris, dans la servitization, c'est déjà plus ou moins le cas. Mais est-ce que dans le futur, tu penses que toutes les manufacturing companies feront ça ?

Je ne pense pas. Je pense que les opérations aériennes se prêtent très bien à la servitization mais je pense que le supply site, donc tout ce qui a à voir avec la livraison d'avion, ça se prête mal à la servitization.

Du coup dans ces domaines-là, ça ne pourrait pas s'adapter à une servitization future. Ça va rester des produits qu'on vend et qu'une fois vendus ce serait fini ?

Je pense oui. Pour renforcer mon point, aujourd'hui je te parle du operational side qui se prête très bien à la servitization.

Mais du coup Fokker, c'est vraiment une entreprise qui est au niveau international, mais est-ce que cette servitization et cette offre que vous proposez, est-ce que c'est quelque chose qui se fait uniquement dans certains pays ou est-ce que ça se fait partout ? Est-ce que ça se fait différemment dans certains pays ?

Je pense que c'est un modèle global car on expédie les pièces détachées depuis la Hollande. La Hollande reste le point central de la distribution. Après, il faut que le site en Hollande soit approuvé par les autorités compétentes dans les pays où les avions sont exploités. Donc Fokker est approuvé par la CAA, on a aussi une certification FAA des Etats-Unis et la plupart des pays où nos opérateurs opèrent, leurs avions ont des accords bilatéraux avec FAA ou la CAA pour dire que les composantes que nous on envoie et qu'on répare, peuvent être utilisées dans leurs avions. Donc grâce aux accords bilatéraux, ça fait de notre modèle un modèle global.

Et du coup au final ce sera la même offre partout ? Peu importe que ce soit en Afrique, en Europe, ce sera le même type d'offre ?

Globalement oui. Par exemple on a beaucoup de clients en Asie Pacifique, beaucoup de dénivelés aux vols donc nous on leur propose des petits avions qui seront bien dans ce sens-là. En Australie aussi, en Amérique du Sud, certains en Afrique, donc un peu partout.

Et est-ce que ça a un avantage de faire une servitization comme ça globalisée dans le monde entier ?

Je pense que s'il n'y a pas de restriction supplémentaire, je pense que ça donne un accès à une clientèle plus grande et plus diversifiée. Donc pour moi c'est positif oui.

Donc là j'arrive plus ou moins à la fin de mon questionnaire. Mais est-ce qu'il y a quelque chose que tu aimerais bien rajouter concernant toute la servitization et tout ce dont on vient de parler maintenant ?

Si je regarde Fokker en particulier, je pense qu'il faut qu'ils doivent regarder leur business modèle et continuer à le mettre à jour et proposer une gamme de produits à la pointe de la demande car pour l'instant ils ont beaucoup de stock qui est relaté à de vieux avions qui parfois commencent à ne plus être en service. Et donc il faudrait vraiment mettre à jour le stock. En général ce que je veux dire c'est que pour qu'une offre de la servitization soit toujours attrayante pour un client, je pense que l'offre doit être toujours à jour.

Donc pour toi ce serait une innovation qui est bien mais il faut toujours continuer à innover et il ne faut pas se reposer sur ses acquis ?

Exactement oui, très bien dit

Parfait, merci beaucoup pour tout ça.

6 Interview of Carine Lams – Econocom

Avant de commencer cet interview, laissez-moi me présenter. Après un bac en ingénieur de gestion à l'UCL, j'ai commencé un master en business international. Avec ce master, je devais faire un an à l'étranger. J'ai d'abord fait quatre mois d'échange en Afrique du Sud et je suis actuellement en Indonésie pour un stage de six mois.

Pour finir mes études, je fais un mémoire lié à la servitization. L'objectif de ce mémoire serait de comprendre comment la servitization fonctionne dans une entreprise, quels sont les liens entre les différents produits et services et quelles ont été les différentes étapes pour atteindre cette servitization.

Pour ce faire, j'ai d'abord fait une partie théorique et je suis actuellement en train de faire une partie pratique en interviewant différentes entreprises.

D'accord. Et donc j'ai bien compris que vous recherchez des entreprises qui proposent des services autour des solutions proposées c'est ça ?

Exactement.

Je pense que Econocom est une société qui cadre exactement dans ce que vous recherchez. Nous quand on a commencé, donc Econocom est une société qui a commencé il y a plus ou moins 40 ans. C'est une société familiale qui a grandi bien sûr à travers les années et surtout à travers des acquisitions. Aujourd'hui nous sommes présents dans 19 pays à travers l'Europe essentiellement. Nous avons commencé justement dans les années 80. Nous avons commencé justement avec tout simplement les produits parce que dans ces années-là, il n'y avait pas vraiment de services. Les services étaient fournis en général par d'autres fournisseurs que ceux qui vendaient les produits qu'on appelait les constructeurs et puis à côté de ça, on avait les sociétés de services qui faisaient par exemple de la maintenance sur ce produit ou qui proposaient des services d'installation. Ou les clients finaux avaient souvent chez eux, en interne, beaucoup de départements de division, de ressources qui faisaient même la maintenance, qui faisaient eux-mêmes l'installation des pcs, etc. Donc voilà ça c'était un petit peu comment ça se passait par le passé. Après, Jean-Louis Bouchard, le patron d'Econocom s'est dit qu'il fallait faire de la diversification et donc il a commencé à proposer des solutions informatiques. Mais donc à l'époque, c'était tout simplement des pcs, des serveurs, tout ce qui était très classique au niveau

du matériel. Et comme on avait déjà notre leasing et notre financement, on pouvait aussi financer les émissions proposées. Donc ça c'était les années 80, là on augmente. Et fin des années nonante on a commencé à se poser la question de comment est-ce que..., au lieu de tout simplement fournir un pc ou un desktop ou un laptop ou n'importe quoi. Comment est-ce qu'on pourrait être un "single point of contact" ou un fournisseur global pour, dans ce cas-ci, l'espace de travail. Et donc, nous ce qu'on propose ici, maintenant chez Econocom, c'est ce qu'on appelle l'espace de travail du futur. Tout ça consiste en le fait que le client ne doit se soucier de rien au niveau du poste de travail. Et tout se fait à partir de ce que nous trouvons le plus important, c'est-à-dire l'expérience de l'utilisateur. Donc les "user's experiences" est pour nous le plus important. Parce qu'il faut savoir qu'à travers les années tout a évolué jusqu'à la génération actuelle, à savoir votre génération. Cette génération-là tient énormément d'importance à son espace de travail, à sa façon de travailler parce que vous êtes déjà très gâtés au niveau de la technologie que vous avez chez vous à la maison ou que vous vous offrez personnellement. Donc, des entreprises veulent attirer des talents ou bien garder ses talents. C'est clair que l'espace de travail et l'"user experience" sera énormément importante. Plus même qu'aujourd'hui une voiture de société par exemple parce que les jeunes se déplacent plus facilement en métro et tiennent plus d'importance aux gadgets et aux façons de travailler.

Donc on a commencé par créer une plateforme qui permet, tout d'abord, de sourcer la fourniture que l'entreprise met à disposition. Et donc ça peut être des laptops, des desktops, des téléphones mobiles, de smartphones, des tablettes, tous les accessoires qui vont avec. Et en fait, ce catalogue est partiellement construit par les entreprises et en fonction de qui vous êtes, de quel grade vous avez, de quel métier vous faites, est ce que vous êtes plutôt commercial?, est ce que vous êtes plutôt financier?, est ce que vous devez avoir une extrême mobilité? ou est ce que vous allez plutôt travailler dans une agence bancaire et vous n'allez pas beaucoup bouger? Enfin tout ça, ça a voir avec le profil que vous avez. Et en fonction de ce profil, vous allez pouvoir choisir dans un catalogue et vous allez pouvoir constituer votre espace de travail. Cet espace de travail, vous allez pouvoir le commander à travers un portail que nous avons construit et ce portail s'appelle porcurato. Ce portail ne servira pas qu'à ça, il servira aussi, tout au long du life cycle de l'espace de travail, à l'utilisateur final, de rapporter des problèmes autour de cet espace de travail. Par exemple, mon téléphone est tombé, mon écran est cassé, je veux qu'on vienne me le changer. J'ai un problème avec mon disque dur, ... Donc ce portail va aussi permettre de rapporter des problèmes autour de l'espace de travail vis-à-vis d'econocom. Et donc nous allons recevoir ces informations et nous allons tout mettre en œuvre pour rétablir l'espace de travail

dans les 24h ou dans les 8h en fonction des contrats que nous avons avec les clients et comme ça le collaborateur n'aura qu'un délai minimal. Nous ne travaillons pas avec des services de réparation, nous ne travaillons qu'avec des SWAP. Avec des SWAP, on échange le matériel, on prend le matériel défectueux et on remet un nouveau portable, un nouveau smartphone, une nouvelle tablette. Nous estimons que si on veut continuer à avoir une bonne expérience de l'utilisateur final, on ne doit pas commencer à bricoler sur place et donc on remet tout de suite un nouvel appareil. On peut faire ça parce que nous faisons des installations sur du zero touch deployment. Et ça ça veut dire que tout l'espace de travail de l'utilisateur final est préparé chez nous. C'est-à-dire que nous avons des moyens et des méthodes qui nous permettent d'installer des boutons et applications. Grâce à ça, une fois que l'utilisateur reçoit sa tablette, son pc, il n'a plus qu'à se connecter au réseau et toutes les applications viennent en fonction de l'utilisateur. Et ces applications sont disponibles sur tous les appareils avec lesquels on va travailler. Que ce soit un portable, un pc ou que ce soit autre chose. Et ça on appelle ça le "zero touch deployment". Et ça ça permet aussi, comme je l'expliquais tout à l'heure, de faire des SWAP. Donc si sur place il y a un appareil défectueux, on donne un autre appareil via le zero touch deployment. Et tout ça donne directement, pour les utilisateurs finaux, une bonne "user experience". A travers ce portail de procuato, il y aussi moyen de poster des questions donc il y a un chatbox intégré et donc à chaque fois que l'utilisateur a une question sur son environnement de travail, sur comment fonctionnent certaines choses, sur windows 10, ... Il peut poser la question à Econocom et nous avons des collaborateurs qui répondent immédiatement aux questions posées. Une fois que tout ce poste de travail est installé, que l'utilisateur est bien content, etc. Nous avons aussi du "recycle management". Nous allons donc tenir à l'œil la durée de vie du bel environnement de travail. Donc nous allons donc veiller à ce que par exemple, après 3 ans et neuf mois nous allons prévenir l'utilisateur qu'il est temps pour lui de commander un nouveau laptop par exemple ou un nouveau device. Parce que justement elle vient à échéance, il vient en fin de vie et en fin de vie nous récupérons le matériel et nous le revendons sur des marchés de seconde main via des brokers etc. Et c'est là que nous réalisons une partie de notre marge. Parce que vous avez bien compris qu'il y a une valeur résiduelle sur ces appareils et c'est là que nous, nous prenons notre bénéfice, sur cette valeur résiduelle. Parce qu'évidemment comme nos solutions et nos solutions de financement, nous proposons tout ce matériel et tout ce que ce travail, tout cet espace de travail. Nous le proposons à nos clients qui sont finalement des banques, des grandes firmes pharmaceutiques. Si je parle de mes clients j'ai des clients comme GSK, j'ai des clients comme KBC, j'ai des clients comme Master Card. Donc ce sont de grosses sociétés mais qui n'ont pas tellement envie de dépenser des millions et des

millions d'euros dès le jour un. Si par exemple ils ont 10 000 utilisateurs qu'ils doivent s'équiper d'un espace de travail moderne, d'un espace de travail du futur, ça va coûter des millions et des millions. Par contre, comme nous, on a des propositions de leasing, on en a 6-7 différentes donc on trouve toujours une solution de financement qui convient aux clients. Eh bien, nous offrons ce poste de travail à un prix par mois par utilisateurs par service. Donc on achète le matériel, on l'utilise et on paye par mois par utilisateur. Donc ça c'est évidemment un énorme service. En plus des services dont je vous parlais déjà, les services de maintenance, les services de réparation, les services de fournitures. C'est un énorme plus que nous avons et que souvent nos concurrents fournissent aussi mais eux ils doivent aller se trouver des solutions chez des partenaires, chez des banques, ... Alors que chez nous c'est inhérent, ça fait partie de notre portfolio standard.

Qu'est-ce que nous avons d'autres comme services ? Quand je parlais de l'achat, on dit à l'utilisateur final, attention il est temps de commander un nouveau PC. Mais ce que nous faisons aussi, c'est du "Financial asset management" et de l'"operational asset management". Le "financial asset management" c'est justement de savoir à quel moment le poste de travail vaut combien. Donc c'est-à-dire, il a été amorti pour autant et donc il vaut aujourd'hui autant. Après deux ans, il vaudra autant, après trois ans il vaudra autant... On fait aussi un asset management opérationnel, c'est-à-dire imaginons qu'un pc a été swapé, donc a été échangé par un autre, et bien nous allons savoir que monsieur X a eu un problème avec un PC après Y mois et qu'il a été changé par un autre PC et que donc tous ces numéros de séries nous les tenons à jour, en détails pour le client. Parce que je peux vous assurer que faire de l'asset management, du reporting, sur le cycle de vie de chacun des appareils, c'est un réel challenge pour les sociétés et donc ce n'est vraiment pas évident de faire cela. Et donc c'est vraiment un soulagement pour nos gros clients que nous tenions tout ça à jour. Ce que nous faisons aussi, c'est tout mettre à jour avec les patches de sécurité, que l'espace de travail soit toujours nickel au niveau de ce qui est sécurité, tous les besoins de la sécurité. Nous pouvons aussi assurer toute cette évolution sur le poste de travail, nous ne le mettons pas simplement là en leur disant de se débrouiller, toute la durée de vie du poste de travail nous le prenons en main de A à Z. Et voilà je pense que ça c'est un peu ce que je peux vous raconter au niveau du poste de travail "the workplace of the futur". Il faut savoir que nous avons dans plusieurs domaines, une solution. On a aussi des infrastructures sur le net, cloud, private cloud, hybrid cloud, etc. Et là c'est nouveau, on peut proposer des ressources, des services mais en tant que par utilisation de nouveau. Le client ne doit plus acheter des systèmes de serveurs, ne doit plus acheter des systèmes de stockage.

Aujourd'hui le hardware est proposé dans le cloud et on le paye par mois, par utilisation. Si le deuxième mois, vous dites que vous n'en avez plus besoin et bien ok, on l'enlève. Avant vous deviez tout acheter et si d'un coup vous en aviez moins besoin, tant pis, c'était trop tard. Aujourd'hui tout est beaucoup plus flexible. Voilà ça c'était un petit peu econocom et le portefeuille, je pourrais encore en parler beaucoup plus longuement mais est-ce que vous avez des questions ?

Oui, ça répond déjà à pas mal de mes questions. Mais je ne suis pas sûr que vous l'ayez dit au tout début, mais c'est quoi exactement votre poste dans la société Econocom ?

Moi je suis commerciale, je suis account manager global donc c'est-à-dire que je propose toutes les solutions que Econocom a dans son portefeuille à mes clients finaux et il faut savoir que pour chaque solution dont je vous parle, nous avons des sales specialists. Donc par exemple pour le poste de travail, j'ai un sales specialist, pour l'infrastructure digitale, j'ai un sales specialist, pour les plans cafétaria, j'ai un sales specialist. Donc les plans cafétaria, ce sont des plans que les sociétés ont au niveau des ressources humaines, au lieu d'avoir un budget comme ça, et bien les sociétés mettent des plans cafétaria à disposition des utilisateurs finaux, des employés et ces employés, ils reçoivent chacun un budget et ils peuvent commander du matériel à disposition d'un plan cafétaria. Ça peut être des écrans, ça peut être des iPhones, ça peut être des Macs, ça peut être de tout. Ici on vient de réaliser un plan cafétaria pour la Deutsche Bank, qui a plus ou moins 500 employés et 200 de ces employés ont commandé quelque chose à travers ce plan cafétaria. Et là aussi, nous fournissons tous les services, la vente, le transport jusqu'à l'utilisateur final, ... Donc nous fournissons vraiment tous les services autour du plan cafétaria.

Pour être sûr que j'ai bien compris, vous vous êtes dans une entreprise de B2B et l'objectif c'est vraiment d'offrir la meilleure expérience pour le consommateur au niveau de son entreprise et de son espace de travail, c'est bien ça ?

C'est-à-dire que l'utilisateur final c'est l'employé de la société donc si moi je travaille pour KBC, l'utilisateur final, c'est effectivement moi. Mais quand on parle par exemple d'un plan cafétaria, on parle d'un employé qui achète des choses pour chez lui, pour à la maison.

Et un peu plus tôt, vous avez expliqué comment vous en êtes arrivé là. Donc vous avez commencé comme une société de produits, puis vous avez commencé avec certaines parties à vendre des services autour de ces produits. Mais est-ce qu'il y a eu différentes

étapes pour en arriver là ? Ou est-ce que du jour au lendemain vous avez décidé que ça, ça et ça, on va en faire des services ou bien est ce qu'il y a plusieurs étapes là derrière ?

Il y avait sûrement plusieurs étapes mais le problème c'est que moi-même je ne suis pas depuis longtemps chez Econocom, ça fait un an et demi donc moi je suis arrivée que tout était déjà en place.

Et par contre, quand vous expliquiez tout ça, vous disiez qu'il y avait énormément d'avantages à proposer un service comme celui-ci. Mais est-ce que là derrière, il y a également des désavantages à tout ça ?

Moi je ne pense pas, car on est vraiment dans l'air du temps. Avant, les gens achetaient un service pour un certain temps et puis s'en débarrassaient. On est dans l'air du temps. C'est un peu dans l'air du temps, de ce que les jeunes souhaitent aussi. Aujourd'hui en achetant pour utiliser et puis quand on n'en a plus besoin, on arrête. On est très très flexible. Au bout de deux ans, le client a d'un coup un besoin pressant pour changer son poste de travail parce qu'il a absolument besoin de la nouvelle technologie, de collaboration ou de n'importe quoi. Et bien nous on peut très bien dire OK, pas de problèmes, au lieu d'attendre 4 ans, on achète le matériel après deux ans et on fait refresh. On lui revend de l'autre matériel plus nouveau avec la toute dernière technologie. Imaginons qu'aujourd'hui un client a des pcs qui ont deux ans, des pcs qui ont 5 ans, et qu'il se dit qu'il ne sait pas comment il va faire pour qu'à un certain moment, tout le monde soit à niveau, que tout le monde dispose d'un poste de travail à jour. Et bien pas de problème, nous on fait un sales and refresh, on rachète tout le parc du client, le matériel qui a cinq ans, celui qui a deux ans, celui qui a un an, ... Et on remet tout à jour pour tous les utilisateurs finaux.

Du coup dans ce que vous dites, si je comprends bien, le fait d'avoir de la servitization dans votre entreprise est très bénéfique mais du coup est-ce que vous pensez que dans le futur, toutes les entreprises de produits offriront un service autour de celui-ci ?

Je ne pense pas. Je pense que l'on gardera toujours des sociétés de produits. Nous, Econocom, on est une société de services, on vend des produits mais on ne les construit pas nous-même. On ne construit rien. Nous on achète les produits et on les revend chez les clients avec tous les services que je vous ai expliqués. Mais à mon idée, on restera toujours avec un concept de constructeurs également. Donc les constructeurs ne vont jamais offrir tous les services que nous offrons, jamais. Ils continueront à offrir les services de maintenance, que nous achetons

d'ailleurs chez les constructeurs. Quand un appareil HP ou un iPhone est cassé, nous, on doit aussi pouvoir se retourner chez le constructeur final, on doit aussi dire si un appareil est défectueux et sous garantie pour en recevoir un nouveau. Là il y a quand même un lien entre le constructeur et l'utilisateur final. Mais le constructeur n'offrira jamais tous les services dont je viens de vous parler. Car c'est vraiment compliqué, c'est complexe, pour mettre une organisation de services telle que je vous l'ai décrite, ce n'est pas facile, ça demande beaucoup de rigueur et beaucoup de ressources spécialisées. Et le constructeur n'est pas spécialement à la recherche de ça. Par exemple un IBM, un HP, ils ne sont pas désireux de faire ça. Eux, ils veulent continuer d'investir dans la nouvelle technologie, du R&D, pour que leur hardware devienne de plus en plus performant et de plus en plus fiable. Ça c'est leur corps business et ça c'est ce qu'eux ils font et voilà. On a des scopes différents.

Ok donc pour vous, il y aura toujours certaines sociétés qui se concentreront uniquement sur faire des produits sans offrir de services autour ?

Oui ou alors des services minimaux comme je vous expliquais, juste garantir que lorsque l'appareil est défectueux, et bien que l'appareil soit réparé ou échangé.

Ok merci. Et au début de l'interview, si je me souviens bien, vous avez dit que vous étiez présents dans 19 pays différents. Est-ce que vous proposez le même genre de services dans chacun des pays ou est-ce qu'il y a des règles de business différentes dans certains pays ?

Disons que pour 90% du portefeuille, on propose les mêmes solutions dans tous nos pays. Mais des fois oui, dans certains pays, on a des solutions qu'on n'offre pas dans d'autres pays. Ça arrive.

Et vous savez me dire quelles sont les raisons ? Est-ce que c'est le pays qui est moins prêt à tout ça ou bien est-ce que c'est de votre côté ?

C'est par exemple la culture qui est encore fort différente, c'est surtout des différences culturelles, des différences que les gens n'ont pas la même maturité sur certains aspects ou sur certaines façons de faire. Même je sens la différence entre certaines sociétés ici en Belgique, il y a des sociétés qui travaillent encore de la vieille façon. C'est-à-dire qu'ils achètent leurs PCs chez HP, ils les font livrer, ils les installent eux-mêmes, quand il y a un problème, l'utilisateur final téléphone à un helpdesk en interne chez le client lui-même. Il y a des clients qui font encore tout eux-mêmes et tout ce qu'ils achètent, c'est le produit. Et les services sont produits en interne par la société même. Mais ça n'est sûrement pas la façon la plus optimale car c'est

très coûteux, parce que même si vous faites un helpdesk 24/7, imaginons combien de gens vous devez avoir pour une seule société pour pouvoir couvrir le 24/7. Tandis que nous on propose du 24/7, et bien on a une équipe pour 25 clients dont le TCE est tout à fait différent si on est un client unique et qu'on veut tout faire soi-même et on veut tout faire en interne et bien on a déjà besoin de 12 ressources rien que pour fournir le 24/7. Ça veut dire que vous devez payer 10 personnes en full time pour juste assurer votre helpdesk. Ce n'est pas très optimisé.

Oui bien sûr. Et maintenant que vous êtes une entreprise servitivée, est ce que vous pensez que c'est quelque chose qui aide à se développer plus facilement ? Que ce soit au niveau d'autres entreprises ou plus à l'international ? Ou bien est ce que c'est pareil qu'une entreprise de produits ?

Je pense qu'on a plus d'opportunités pour mieux se positionner parce que chez nous le client il peut acheter la chaîne complète. S'il veut que les produits, il peut acheter les produits. S'il veut une partie des services, il peut acheter une partie des services, s'il veut la totalité, il peut acheter la totalité. Donc on n'oblige pas à tout acheter mais on a toutes les possibilités. Et c'est d'ailleurs aussi la raison pour laquelle les constructeurs ne travaillent quasiment plus jamais en direct. C'est-à-dire qu'ils ne vendent plus leurs produits à des clients finaux. Ils vendent leurs produits à des intégrateurs comme Econocom, comme didata, ... Tout ça ce sont des intégrateurs qui achètent leurs produits chez les constructeurs pour finalement les offrir aux clients finaux avec beaucoup ou peu de services.

Et est-ce que ça a des avantages à pouvoir être au niveau international avec tous vos services ? Par exemple le fait d'être dans plusieurs pays différents et de pouvoir proposer les mêmes services tout autour, est ce que ça a certains avantages dans la société ?

Parfois on commence un projet en Belgique et on voit que ça a un succès et alors on commence à vendre la même chose dans d'autres pays. Comme par exemple Mazda. On a commencé en Belgique et puis on a pu aller en Italie, en Allemagne, au Danemark et ça va continuer à s'étendre.

Donc là avec des services comme ça, c'est vraiment plus facile pour s'étendre dans d'autres pays ?

Oui, parce que les sociétés travaillent à l'international. Pour des raisons de coûts, de standardisation, et des raisons d'optimisation. Ils veulent aussi travailler plutôt avec un fournisseur qui fournit les mêmes services partout et où c'est facile et clair plutôt que d'aller

chercher des fournisseurs différents dans chacun des pays. Rien que rechercher les solutions, trouver les fournisseurs, comparer les fournisseurs, ... Si une société doit faire ça dans chaque pays où elle est présente, c'est du travail donc des coûts. Donc si on peut sélectionner un fournisseur qui peut travailler à l'international, et qui travaille de manière conforme dans chaque pays et bien ça facilite les choses. Ça réduit les coûts.

Et comment vous feriez, par exemple, si vous fournissez une entreprise qui est à l'international, donc qui est dans certains pays dans lesquels vous travaillez mais également dans d'autres pays. Est-ce que vous seriez prêts à vous étendre dans d'autres pays ?

C'est-à-dire que nous imaginons qu'il y a un ou deux pays qu'on ne couvre pas, on va essayer de trouver un partenaire sur place avec lequel on va travailler, avec lequel on va faire un contrat de sous-contractant comme ça ça nous permettra de couvrir ce pays-là aussi. Mais ça c'est à évaluer pays par pays. Il y a des pays que clairement on ne fera pas, il ne faut pas nous demander de travailler en Russie ou en Chine.

Ca répond déjà à énormément de mes questions, j'arrive déjà à la fin et j'ai eu toutes les informations que je voulais mais est ce que vous avez quelque chose à rajouter par rapport à tout ça ?

Non pas spécialement, j'espère que vous avez une bonne impression de Econocom et peut-être que comme vous êtes étudiant dans le commerce, peut-être que un jour vous serez amené à choisir un fournisseur et j'espère que vous penserez encore à Econocom.

Bien sûr. Et une toute dernière question, est-ce que vous avez quelqu'un d'autre à me conseiller pour faire un interview, une entreprise qui fait également de la servitization ?

Oui oui, par exemple Proximus ou Dimension Data ou Ridelman. Ce sont trois sociétés qui sont intéressantes à contacter.

Parfait un grand merci.

7 Interview of Geert van Leputten – HPE

Before starting this interview, let me introduce myself. After a bachelor's degree in business engineering at the UCL, I started a master's degree in international business (IB). With this master, I had to do one year abroad. I first did a four months exchange in South Africa, and I am currently doing a six months internship in Indonesia.

To finish my studies, I am doing a master thesis linked to servitization. The objective of this thesis would be to understand how the servitization work in a company, what are the link between the different products and services, and what were the various steps to reach this servitization.

To do so, I first did a theoretical part, and I am currently doing a practical part by interviewing multiple companies.

To start, maybe can I ask you to talk about you and how you started working in this company?

My name is Geert van Leemputten, working for Hewlett Packard for the last 11 years. I am currently working for the service organisation in the part called wait.next and we have a sales solution and a portfolio, and it regards to consumption based offering which we call Greenlake, and I am leading that in Belgium and Luxembourg for that specific portfolio.

Could you describe your company a little bit? Like the big numbers where they are present and so on.

Well, let me get back the question to you, what do you know about HPE?

For the moment, I don't know much. I received a document from your college describing everything about greenlake, and I looked into it a little bit on the internet, and I know that they are offering some IT solution, but I don't know much more about it.

So HPE is actually a pretty young company, we are two years old, but we are a split-off of Hewlett Packard so about two or three years ago, we were working for Hewlett Packard. You know it from the PC, from the printers but we were also very present in the data sectors selling servers, selling storages, selling equipment. But besides that, we also have a sourcing department, and we had a department focusing on software. Two years ago, our global corporate

management decided to have a more focus-oriented approach on data centre and data centre services. So, what happened is that first, we did a split between everything concerning pcs, laptop, printers and the rest of the company. So that was the first split, and that was also the birth of Hewlett Packard Enterprise. Afterwards, there were some additional split-offs. The first one was the split-off of our sourcing department that merged with a company called CSC and then formed together with the new company DXC. Then, we split off our software division, and that merged together with Suse to become a new company called micro-focus, and today, HPE is a company. In Belgium, we are about 350 to 400 people, mainly salespeople and delivery people. Our revenue in Belgium is about 1 billion euros on a yearly basis. So it isn't super big, but we have a good market share and what we are doing is that we are focusing on data centred. Which means that we are selling compute system as storages, we are selling data equipment, and we are selling services to maintain data equipment, we are selling advise research, we are selling consulting services and we are also, for the past eight years, selling conceptional under the name Greenlake.

And when you are saying that the company split, do you mean that some part of the company left?

Like mentioned, the software department completely disappeared, so it was a complete split off of Hewlett Packard Enterprise and moved to a new company that was called micro-focus.

Ok ok, so those companies are two different entities now.

Yes, those companies are two totally different things. There is no connexion at all between HPE, micro-focus or DXC. We are totally separated from each others.

Maybe I can immediately go to the subject. For you, what does the term servitization means?

Well, to be honest, I never heard about the name or the concept of servitization. I had to look it up, and I saw a definition of it, and then I realised that it was close to what we are selling from a consumption perspective. But I would like to know from you because you did your thesis' theory on it as you mentioned. How do you see this?

It's kind of difficult to explain because everybody has a different opinion on it, but basically, it's instead of simply selling products to someone, you will sell the products with some services around it. An in total, it will be more services than a product, but you still

sell a product. In total it's a win-win situation for the seller and the buyer because with all the services, the customer will have a better product or at least a better experience and the seller will be capable to have bigger margin on the product. So everybody will win about it. You will also consume less product in the end because you will use it in a better way, so it's also better for the environment.

Ok ok. So, what we actually are doing with our Greenlake solution. I will try to show you a presentation. Do you see it?

Yes, I see a powerpoint presentation with a slide of Greenlake.

Perfect. This presentation was given yesterday, so it's very hot. What I will try to do is that I will try to introduce you to the concept of our consumption-based solution, which we call Greenlake. Don't ask me why this name was chosen; it's marketing that chose it. In general, what we see is that by 2020, and I actually believe more 2025, there will be higher demand as a service component of data services. Over here, I received all the questions from the consumers, can you provide this to me as a service? Because they see for instance the rise of AWS, amazon web service, google cloud coming up, and they want to make sure that they have a solution that competes with it but keeps data, for privacy reasons, for compliance reasons, for security reasons. They want to have a comparable model, but they want to keep it in their own data centre. You can see a lot of additional demand coming in that field. What you need to know is that we actually developed this solution about nine years ago. It was co-developed in Belgium and the Netherlands and today, just to give you an idea on the size, we have more than 2.5 billion on a global scale. It has been rapidly growing over the past five to six years. We are more than a thousand contracts and only last year; we did more than 150 new consumers sign. It means that the 2.5 billion is in total the revenue, what Greenlake brings to HPE because we present it as a service to the additional product and the product completed with the services is in total 2.5 billion actively on the contract. So, it's quite impressive. The thing is also something that we really see when we are offering services, when you sell a product, you can be happy about the product, or you can not be happy about a product. The functionalities around it, you can find it yourself. We are selling services, meaning that we have a full stock of services around that product, meaning that we can satisfy or consumer much more. There is a connection between the consumers and us, and you can see it from a perspective point of view. 99% of the customers who signed up are growing like hell. They see the benefits of this model, and they are happy about it. Only one per cent left the model to go out. Just to give you an idea of some

advantages, why would a consumer go for Greenlake. What I hope to explain is cloud economics, meaning that it's an on-premise cloud model.

There is no in front investment needed, no capital or provision. What I mean is that typically in IT, if you would buy a certain capacity, you would always buy more capacity than what you actually need today. Why? Because for a perspective point of view, you would have more data, more database on your system. So, you buy access to capacity at the beginning of the contract. You will buy more, and you will consume while you grow up. Now the problem is that if you do not use that capacity, which you paid for, it cost you a lot of money. What we now do with our model is that we right size. We start with our customers, and we say, ok, let's start with a capacity which is much smaller than the capacity that you need. We will add a buffer capacity. A buffer capacity which is normally 10% of what the customers actually needs, and we will invoice you according to your needs, according to your actual consumption. We are going to measure the daily consumption of the customers. We are going to make an average of that daily consumption and invoice him, at the end of the month, about his consumption throughout that month. Clear?

Yeah, so instead of paying for a whole package for, let's say 100, if they only use 30, they will pay for 30.

Correct. If they consume it on average. Perhaps I can go to this slide. This is how the model work. We see this as computer data consumers' need. This would be a normal model, an investment. You would buy an infrastructure with services, the red line. But what you need is the orange line. The capacity you need at a certain moment in time is this and what you would buy is this. You would buy it because of what you will need in the next few months. You can see that the capacity growth and a certain moment in time, you cross both lines. It means that a certain moment, there is a peak and it goes above this capacity, which is not very good because your business is demanding more IT resource and you as an IT department, you cannot follow maybe because your procurement process is too long. The fact that there is a steep increase in capacity that may be an issue. So, the moment between the point where we say, ok, we are going to launch a certain campaign, until the moment of the installation, that may be too long. We see that as an issue, and our model works it out. How do we see this? Firstly, we see that with some research, especially with computers, 60% of the capacity sold is actually not used. It means that if you have 100 physical servers, only 40 are actually used. 60% of the servers are simply standing in the data servers consuming power, consuming cooling, but they are no work

on there. Same thing about the storage, so that's 50% of the storage. Meaning that if you would buy 200 terabytes of storage, then 100 terabytes would be used, and the other 100 terabytes would not be used at all. We see extreme excess, for example, in the finance world where only 10% of the capacity is actually used. What we would do from an HPE perspective, we would right-size the capacity, and we would install a buffer capacity which growth together with the capacity that is needed. It means that to be able to do this, to make sure that there is always a bucket capacity, we need to monitor, on a daily basis, the use of the storage. On this way, our model differentiates from our competitors. We actually monitor the capacity, we measure the capacity, and we invoice the customers accordingly. Our competitors, they are actually providing a lease to the customers. They ask a certain investment, and they are amortising this investment throughout 48 or 60 months. We differ there, of course, we have a commitment level, but we make sure that we invoice our customers according to consumption, just like we would do in public labs. It means that if you see the difference between the orange line here and what they are actually consuming, you can see that everything that's green is a saving. Saving from a manufacturer perspective, savings from a meaningless perspective, saving from an installation perspective, the license does not need to be a bolt at the beginning of the contract but need to be added accordingly when needed. Rack space is saved, the data centre is indeed a lot of money. If you can spare out a certain amount of square meters, it's also a saving. These are things which are tangible, we can find it. But you also miss opportunities because like a mentioned, you come to a point where you see a peak, but the storage cannot follow. So, you have a moment where your capacity shortage and that's a missed opportunity. That means that you lose money. It's a point where you can quantify the loss of revenue for a company when it can follow the demand, the agenda of a company. So that's something we can do as well. The other thing that we ask from an HPE perspective is a commitment level. A commitment level is variable, but we see that as a percentage of what the requests are. Let's suppose that he would request at a certain moment in time are 100. Then, we would say that, for example, 80% of what he requests to HPE is the commitment level. So, we will always send an invoice of minimum 80. If he consumes 81, 82, 84, 95 or even 100, he will be invoiced accordingly. If he wants more capacity, perfect, then he goes and talks to his buffet capacity because his buffer capacity is sold. We will invoice his buffer capacity as well. If then he wants to drop back to, for instance, 80% of his request capacity, we will invoice him again according to his consumption between the buffer capacity line which is over here, going up. The commitment line, over here. Our consumers receive full flexibility in consumption, which is now a line going nicely up. It is most likely that the consumer will go up for a certain peak and then goes down and stays down

for a while. Then he will pay for what he is using there. If he is going down, for instance, here, we will invoice him the commitment level. Clear?

Yes, really.

And this is differently shown on this slide, but it gives you the same idea. This is how we start; we start with what he needs, right-sizing, 100. We add the buffer capacity on top, which means that everything that is installed is 110. And then we define what we want to commit to work with, 80%, 70%, 60% of the requested capacity, which means that the variable part, meaning the difference between what he commits and what is actually requested become bigger. If he requests more flexibility, of course, the prices go up. That's basically the concept that we propose.

So, the advantages are that the clients pay only for what they are really using, right?

Yes. So, here is a real case of a customer that had a universalising structure, meaning that every utilisation of servers was lower than 45%. So, he has low servers, less than 45 of those servers were actually using the space of the servers, meaning that 55% were simply collecting dust, but he paid for them. It took 92 days to provision, meaning that if a business would come to that customer, and he would need an additional server for certain projects, it took him 92 days. So, 3 months so that the IT department could give that to the business team. From an IT perspective, that's a barrier. You can imagine that if you need to upfront invests incapacity, there are things costing an enormous amount of money. For a project of 1 million, even for Belgium, is quite small. So, if you do a project of 3, 4, 5 million, that's a lot of money. So, if you pay to HPE or to one of our competitors, the money is gone so you cannot use the money for something else. Large capital means that it has a large impact on your balance and on your cash flow. You have an increase of cost of ownership, meaning that you don't have to only add the infrastructure as such, you need to look at the energy, you need to look at the data centre, the cooling, etc. This is all the additional cost that comes to an oversized infrastructure. All these elements need to be taken into account. And of course, if you buy an infrastructure, for the next 4 to 5 years. This means that at a certain moment, a refreshing possibility or a revolutionary product comes into the market, you couldn't immediately re-invest in that model. You would probably simply sit out with your old infrastructure, but it's possible that you have some risk, you are in a lockdown position. What we actually do is that we are selling a service, and this is how we proceed. If you buy Greenlake as a service, it is less expensive than simply invest in infrastructure and buying some support with it. The thing is that when you buy a service, you need to take certain

things into account, for example, the TCO ratio, what normally would be over provision, the net present value and the time to market, the time to value. From the other side, when you have to take into account from a service perspective, which means that this stuff are already in our model, is the cash flow. I often see consumers saying that they have cash issue but that they are a solvable company but that they cannot always layout large capital raise. So, they cannot really invest large amounts. They have liquidity issues, which means that let's say, as a service model, keeping their cash for a project, that's something that is important. What we show to people is that the investment that they need to start this kind of project is a lot smaller because they pay monthly instead of paying for a capacity that they will use for five years. These are elements which are a value that we provide. We also put away some risk. This slide gives you an actual idea of a bank in the UK. Here we started quantifying the benefits which both for HPE and that bank. Let's take the second one: the benefits from non-provisioning. We quantify in fact what he would normally buy if he would over-provision. That means like explained in the beginning of our discussion that our model is right-sizing, we offer what the customer needs today. We quantify what he would normally buy, what he would invest in a certain infrastructure. He would invest an amount of 1.5 million. The time of market: normally he would 150 days to the provision to capacity, and that's a lot. Because the user if using a buffer capacity, he can remove the time of 150 days to 1 day. Meaning that 149 days are gained. We calculated the gain of 149 days on the revenue that he can generate with the buffer capacity. It comes up to 50 000 euros, or if you would do a similar repeat order, he would gain 5.2 million euros. This a lot of money and it can help the customers to defend their business cases towards the board. These elements are perfectly calculated by architects and consultants. You don't have to take our words for it; we asked a consulting company to do an investigation about why customers would use Greenlake, and you see that 55% increase towards the market. It comes from 90 to 25 days to 1 day. The time to market is faster; the customers can become more agile, faster. Investments are savings from not spending into the capacity but for right-sizing instead. Of course, IT resources savings, cooling, power, etc. I have a document showing this; I can send it to you if you want.

Yes, you could send it to me after, it would be perfect. When you are saying all these advantages, do you think there are also some disadvantages to offering some services with the products?

It depends, I am a sales guy, so I need to sell my solution towards the customers, so I emphasise the advantages, and I am not going to emphasise any disadvantage that I see because for me

there are none. But of course, for the customers, there is less visibility in pricing, they have no idea. I can show you an example if you look at this one. We don't calculate in servers, we no longer say that the customer needs six servers or 12, we define a unit of measure in which we are going to use this unit of measure to define the capacity. For this case, we defined in compute units. Here you can see that has a start capacity of 11 939 compute unit need. That's what he needs. So, the customer needs to be aware that he needs to stop thinking about needing an additional server; he needs to consume more compute units, more Gigabytes. As soon as he increases on that aspect, we come to pricing. What you can see here is that we price compute units and for one compute unit, that consumer is going to receive an invoice of 70 euros per month. This contains everything. Just to give you an idea what is in there, the hardware is in there, the installation is in there, the fixing support is in there, the management is in there, etc. This is what they get. It's very high level because if you look at this, this is 70 pages long description of the services that the customer can expect from us. If I could say a disadvantage for the customers but an advantage for us: If he needs to compare 70 compute unit with another vendor, that's difficult. That might be a disadvantage, but he sees more and more demand coming from public labs where they always express the price per gigabyte per month. The way we present things to customers is changing enormously, not only from a financial perspective but also what we offer to the customers. We don't offer any storage box anymore, we offer gigabyte, compute units, ... We will invoice him accordingly.

And is there some disadvantage for you for your company, by doing this kind of offers?

Not really, the biggest disadvantage that we could have is not focusing on consumption models, the reason why is because the market is changing rapidly and with companies like EWS, Microsoft and Google, ... If we miss that change, providing an alternative, we might have huge issues in our future. I really think that if we don't focus on these models, we will be in deep problems for the future. A disadvantage of HPE would be not to focus on that. That's a very important part.

I guess that of course, for you, there are more advantages than disadvantages, but then, do you think that in the future, all your competitors will do the same? They will also stop selling a capacity but fix themselves on the client. Or are you the only one going to do that?

I can't comment on what my competitors are going to do, but I see, if I look at the announcement that they do, there are more and more competitors following our example. I am not saying that

they are as far as we are because we have been doing this for the past nine years and our solution is simply more in advance than the one of Dell or Lenovo. But I am not saying that they won't be able to catch us, but I think we need to constantly evolve for our customers, see what they are missing and look for some solutions. But our competitors are also positioning like that.

I guess that before offering this kind of products, you were first offering some cloud capacity like your competitors before that or did you immediately start like that?

We are a company that sells infrastructure, so we are not selling cloud services. So, nine years ago, we started implementing this solution, and we are still doing this, so they were no in-between. Today we are still positioning simply the box, we have a lot of people asking for as a service as a model, and we are offering as a service model to our customers.

And this kind of services, do you sell it also outside of Belgium and the Netherlands?

Yes, this is a global portfolio. The 2.5 billion which is in the other slide. This is a global scales.

And do you work with the same methods in Belgium and in other countries? Or is it sometimes different from the different market?

What do you mean by methods?

For example, here, you are telling me that you are offering exactly what the customers need in the cloud, this is more a service than a product, so the servitization thing. Do you sell it the same way in Belgium and other countries? Sometimes the market rules are different in other countries, and they don't appreciate the services the same way in Belgium and outside of Europe.

Normally, the way it should be positioned should be identical. The way customers perceive this might be different. It is depending on the countries. If you take a telecommunication provider, you will see these costs, and he will perceive this cost differently than someone else like a bank. From a financial perspective, even in Belgium, a customer can perceive this solution in many different ways, but the positioning should be the same. This is a service; we offer a service contract that scope with your current needs and that will grow with the time according to your organic growth or acquisition growth. As soon as you grow, we will grow together with you. If you consume less, we will invoice you less. That's a concept, and with this concept, the positioning should be identical all over the world. The way customers see this, that's a different story. We see a huge demand in many countries, but for example, there isn't a lot of demand in

Norther America because they are more conservative in this kind of things. We see a lot of beverage in Belgium, Austria, France, ...

Ok. I think I asked you all the question that I really needed, but would you like to add something?

Yeah, I would like to ask you some questions, what do you think about the presentation?

I am not very familiar with the storage in general, but I really believe in this kind of project because for me what you are presenting here is exactly what my master thesis is about. For me, you are not selling only the storage product, you are really adapting yourself to the client, and I think that for me, that's the future. In each interview that I do, I really think that most of the companies that are already doing some servitization are kind of the leader in the market and I think there is a reason for that and that's because it's the future. At some point, I think that more companies will start offering more and more services because that's what the customer want.

Who else did you interview?

I interviewed Hilti, Fokker, Econocom.

Ok, ok, thanks. I will try to send you my presentation and the powerpoint I showed you.

Perfect thank you very much.

Would it be possible that when you finalise your document, could you provide me with a copy of it?

Yes, of course, no problem.

Very good

8 Interview of Laurent Vanhousdenhove – SKF

Avant de commencer cet interview, laissez moi me présenter. Après un bac en ingénieur de gestion à l'UCL, j'ai commencé un master en business international. Avec ce master, je devais faire un an à l'étranger. J'ai d'abord fait quatre mois d'échange en Afrique du Sud et je suis actuellement en Indonésie pour un stage de six mois.

Pour finir mes études, je fais un mémoire lié à la servitization. L'objectif de ce mémoire serait de comprendre comment la servitization fonctionne dans une entreprise, quels sont les liens entre les différents produits et services et quels ont été les différentes étapes pour atteindre cette servitization.

Pour ce faire, j'ai d'abord fait une partie théorique et je suis actuellement en train de faire une partie pratique en interviewant différentes entreprises.

Pour commencer, pouvez-vous peut-être m'en dire plus à propos de vous, votre carrière et comment vous avez rejoint cette entreprise ?

Je suis rentré chez jfk en 92 après avoir terminé mes études d'ingénieur civil puis j'ai fait un baccalauréat de deux ans en économie à la KUL. Et voilà je suis tellement bien que j'y suis toujours. J'ai commencé comme application engineer donc on va dire ingénieur en bureau d'étude pendant deux ans. Puis je suis très vite passé sur la vente, pour ce qu'on appelle les clients OEM et on en parlera avec le principe de servitization donc je suppose que OEM tu connais ?

Euh ce sont les initiales de quelque chose ?

OEM, original equipment manufacture.

Ca me dit quelque chose mais sur le moment je ne vois pas exactement.

Un OEM dans le monde industriel c'est un fabricant d'une machine ou d'un asset particulier. Des gens comme catterpillar sont des OEM pour tout ce qui est machine, GI pour des éoliennes, ... Donc voilà, j'ai commencé ma carrière en étant responsable d'une série d'OEM. Très vite au niveau international où j'ai été manager pour catterpillar, donc j'étais responsable pour l'entièreté des business qu'skf faisait avec catterpillar au niveau du monde. J'ai fait ça environ jusqu'aux années 2000. Et là skf s'est rendu compte, finalement c'est quelque chose qui s'est

passé dans les années 2000, une prise de conscience un peu plus précise que simplement être leader dans un produit ne suffisait plus et qu'il fallait commencer à étendre son offre avec une série de services. Après chaque société peut définir, d'après son business modèle, ce qu'il entend par services. SKF a fait la même démarche. Il faut savoir que skf est leader mondial dans les roulements d'un point de vue qualitatif et autre et de nouveau dans les années 2000, on s'est rendu compte que ça n'allait plus suffire et qu'on devait offrir plus en termes de partenariat et de services vis-à-vis de nos clients, d'où l'idée de servitization dans ce cas. Sachant que notre principe est de dire qu'on offre aux clients des roulements mais en réalité on a une connaissance qui est beaucoup plus large que ça. Pas simplement des roulements mais une connaissance globale autour de ce qu'on peut appeler le rotating shaft si pas dire la machine tournante complète mais certainement le rotating shaft. Bien sûr grâce à nos connaissances en termes de roulement mais également grâce à nos connaissances en termes d'étanchéité car quand on parle de roulement, on parle très vite d'étanchéité à un certain moment. Qui parle d'étanchéité, on parle très vite de lubrification et du coup on a une connaissance autour de la lubrification. Et quand on parle de ces éléments-là, on parle très très vite de maintenance prédictive, de nouveau autour du rotating shaft impliquant des technologies telles que condition monitoring. Tu m'arrêtes si il y a des termes qui te sont un peu moins familiers hein, moi je baigne là-dedans mais je ne sais pas si ça va pour toi.

Pour l'instant ça va.

Et donc voilà, on a construit et bâti dans les années 2000. Moi j'ai fait partie d'un groupe de 12 au niveau mondial pour y réfléchir. Comment est ce qu'on peut construire un business profitable par lui-même mais également compatible avec nos produits car on reste un manufacturier et on continue à produire des roulements et à les vendre, mais comment est-ce qu'on peut y ajouter une série d'activités de services ? Et ça, autour de la machine tournante. Et on a commencé à construire et c'est quelque chose qu'on a développé à travers des acquisitions d'autres sociétés et autres mais même dans le modèle même, on l'a étendu et on continue à l'étendre, une série d'activités, de services, pour l'amélioration de l'efficacité, de l'optimisation, de l'asset étant la machine tournante. Voilà, vu qu'on est toujours en train de parler de ma carrière, j'ai participé à ce groupe là pendant environ 6 mois, un an, pour 'l'implémentation puis on m'a demandé de reprendre la responsabilité pour l'implémentation propre au niveau du bénélux avec des responsabilités sur certains domaines européens. Et après, je ne vais pas raconter tout parce que ça devient un petit peu plus complexe mais de fil en aiguilles, j'ai la gestion globale des activités skf sur le bénélux aujourd'hui, incluant un centre de recherche de logistiques, nos activités de

ventes en roulements mais également nos activités de ventes de services. Voilà, ça c'est pour le CV et pour l'introduction sur la servitization je crois.

Oui, ça répond en effet déjà à certaines des questions. Du coup, pourquoi exactement skf a décidé de se lancer dans la servitization ? Parce que de ce que vous m'avez dit, c'est vraiment pour offrir plus car vous avez énormément de connaissances, et pour savoir appliquer tout le business que vous avez. Est-ce qu'il y a d'autres raisons pour lesquelles vous avez décidé de vous lancer dans la servitization ?

Je pense que les raisons sont les mêmes que dans les autres sociétés et autant que je m'en souviens, le terme même de servitization est apparu dans les années 80 donc ce n'est pas quelque chose de si récent que ça. Et après ça a vraiment accéléré à partir des années 2000. La raison elle est très simple, prenons le cas du roulement mais quelque part on peut l'étendre à d'autres sociétés, je veux dire de type industriel tel que des Bosh, des GE, etc. Quand tu vois ce qu'on offre, on offre un roulement. Qu'est-ce qu'on a fait ces dernières années. D'un, on a mis en place des augmentations de la productivité, ce qui fait que le coût unitaire d'un roulement pour une certaine power density a clairement diminué. Ce qui veut dire qu'au final on satisfait évidemment aux besoins de nos clients ce qui engendre une perte de revenus. Ça c'est de un. De deux, la mise en place de roulements qualitatifs a permis d'augmenter la durée de vie de ces machines dans les roulements. C'est-à-dire une perte de revenu également pour ce qui est spare part et after market. Donc on a ce double effet qui fait que c'est normal qu'on doive faire ça pour garder la loyauté et rester des partenaires de nos clients. On a, et par l'augmentation de la durée de vie de nos roulements et par la réduction du coût et donc du prix de nos roulements, on a vu venir une chute de revenus dans la société qu'on peut facilement estimer dans les 30%. Bien sûr ce n'est pas arrivé en un jour mais c'est de l'ordre de 30%. Donc dans une société qu'est-ce qu'on fait ? Qu'est-ce qu'on fait pour concurrencer ce genre de pertes liées à ces phénomènes ? Eh bien la réponse c'est la servitization. C'est-à-dire que la réponse c'est la génération de nouveaux revenus par l'extension de notre relation avec nos clients au-delà de simplement la livraison d'un produit. Et de là, ce sera en effet à travers ces services.

Vous dites qu'à un certain moment vous vous êtes rendu compte que vous aviez une perte de 30% et que vous avez voulu faire de la servitization. Comment est-ce que cette servitization est apparue dans votre entreprise ? J'imagine que du jour au lendemain vous n'avez pas eu une réunion et avez décidé de faire de la servitization donc quelles ont été les différentes étapes ?

Comme je le dis, ce sont des étapes et des évolutions basées sur une prise de conscience assez précoce par ce qu'en 86 pour être précis, on a racheté une société qui s'appelait palomar à San Diego qui était spécialisée en tout ce qui était conditional monitoring. Skf a commencé à vendre des systèmes d'analyse vibratoire sans être dans la vente de services, on était toujours dans la vente de produits. Très rapidement, on s'est rendu compte qu'on voulait offrir autre chose que simplement des roulements. Ca c'est une première chose. Depuis, je n'ai pas la date exacte mais ça doit dater des années 80, on a développé les produits de maintenance, qui étaient toute une série de produits d'outillages pour l'aide du montage correct, du démontage correct des roulements, des systèmes, ... Également là aussi, c'était un aspect de vouloir se différencier par rapport à nos concurrents. Skf a très vite investi dans tous ce qui était lubrification en en tribologie. Je ne sais pas si le terme tribologie te parle, et bien c'est la science du contact de surface métallique en lubrification, donc c'est ce qu'il se passe entre ces deux surfaces. Et le roulement ce n'est rien d'autre que ça, ce qu'il se passe entre les éléments lents et les deux bagues, bague intérieure et bague extérieure. Skf s'est très vite développé dans ce genre de choses-là. La réflexion qui s'est fait autour des années 2000, c'est de dire que cette perte de revenu allait s'accélérer. Et là on a regardé ce qu'on avait dans la maison comme connaissances, ce qui est déjà beaucoup plus large que simplement les roulements. Et je ne vais pas le répéter mais nous avions une connaissance autour de la lubrification et autre et on a essayé d'imaginer comment on pouvait en faire un business en le structurant. Et en effet, début des années 2000, on est vraiment sorti avec un business unit particulière qui a alors très vite été intégrée dans les différentes unités locales pour rendre et pour développer les services autour du rotating shaft chez nos clients. Et comme je l'ai dit, cette philosophie s'est traduite en stratégie lorsque on s'est rendu compte assez vite que ça fonctionnait. Et donc on a commencé à avoir une politique d'acquisition au niveau mondiale dans différents domaines. Que ce soit produits, on a acquis des sociétés comme Vogel et Linpol Industrial qui étaient déjà les leaders services mondiaux en systèmes de lubrification. On a acquis toutes une série de sociétés spécialisée dans l'étanchéité aéronautique. Et puis on a fait toute une série d'acquisitions de sociétés de services basées autour de la machine tournante, ce qu'on appelle aussi le physical asset management. Avec des sociétés spécialisées en stratégie de maintenance, des sociétés spécialisées en alignement, en hardware, software, mais vraiment services, etc. Et ça dans le monde entier. Ce qui fait qu'aujourd'hui, ces activités services pèsent environ un petit 20% de notre chiffre d'affaire. Donc non, ce n'est pas overnight et ce sont des évolutions lentes mais avec des milestones importants sur les vingt dernières années.

Et du coup, maintenant que cette servitization est implémentée, comment est ce qu'elle se passe réellement entre vous et vos clients ?

Elle se passe de la manière qu'on signe des contrats qui sont des contrats qui vont beaucoup plus loin qu'un simple traditionnels fournisseurs-clients où on fournit un robot. Je dirais même qu'on a des business modèles basés plus sur l'opex que sur le capex. Ce qui veut dire qu'au lieu d'acheter un roulement, il vont nous le louer et on va être payé sur un fee qui peut être un fee mensuel basé sur leurs propre production en terme de tonnes ou autre. Ce qui leur permet à eux, de ne plus déboursier le capex, le capital d'achat de roulement de base mais d'avoir un flux financier qui est en parallèle avec leurs flux financier propres et qui leur permet de générer un revenu stable dans le temps. Donc ce sont des changements de business model qui sont complètement différents et qui dérivent en effet de cette idée de servitization. Alors nous, évidemment, on reste dans un composant mécanique qui est dans le roulement mais si tu réfléchis à ça dans le ferroviaire, aujourd'hui, aucun train n'est vendu sans avoir une approche de cycle complet dans laquelle la valeur d'achat du train en lui-même correspond à 5 à 10% de la valeur mais sur la durée de vie du train, le coût total, il est surtout dû au cout énergétique, au remplacement de pièces, à la maintenance de ces pièces, etc. Et des sociétés comme AD France ou siemens qui sont dans ce secteur, vendent aujourd'hui des trains sur la durée de vie du train. Ils sont déjà dans l'opex. Ils ne vendent pas simplement un train et puis ils s'en vont. Ils vendent un train, ils le gardent peut-être même en termes de propriété propre pour eux, ils ont un système de leasing dans laquelle eux sont impliquées et dans la responsabilité de la maintenance et tout ça. Et au final le client final paye un fee au niveau mensuel. Voilà, ce sont des choses dans lesquelles nous allons aussi. Maintenant, à partir du moment où on ne délivre pas un asset complet chez un client mais seulement une partie de cet asset, c'est plus compliqué à mettre en œuvre. Concrètement, c'est logique et on le fait chez certains clients. A côté de ça forcément, s'ajoute la technologie, et ça ça s'est développé très fort ces dernières années et on en est encore qu'au prévis avec tout ce qui tourne autour de l'internet of things et l'industrie 4.0 où on arrive à de la maintenance préventive via cloud et on fait ça chez nos clients par exemple. Dans le Benelux, on a un contrat avec Electrabel et c'est nous qui assurons la maintenance préventive de leurs parcs éoliens sur la Belgique et on fait ça en remoote, donc c'est-à-dire qu'on ne doit pas monter en haut pour mesurer tout ça. Tout ça est possible grâce au développement technologique incroyable lié à la technologie des capteurs, des senseurs et des softwares qui sont associés et également le coût de tout ça qui a clairement diminué là où il y a quelques années on pouvait se permettre de faire ce genre de choses uniquement pour des machines

critiques parce que le coût pour des machines non critiques était simplement trop important. Donc c'est clair qu'il y a une augmentation ces dernières années qui est liée à la technologie et à la réduction drastique du coût de ces technologies qui facilite cet aspect de servitization et qui facilite également la possibilité du client de l'élargir sur des assets plus larges que simplement ces machines. On est vraiment au prévis de tout ça, ça va exploser et c'est occupé à exploser.

Et d'après vous, quelles sont les principaux avantages de la servitization ? Vous avez parlé de l'internet of things, de pouvoir réparer les choses à l'avance, pouvoir améliorer les processus, quels serait d'après vous les principaux avantages de la servitization ?

Un, l'avantage premier que j'ai déjà évoqué au tout début qui reste tout à fait valable, c'est-à-dire une perte de revenu financier par la vente du corps business qui est encore le roulement pour nous et je le répète, ce n'est pas fini et ce ne sera surement pas fini, c'est l'augmentation de la durée de vie des composants qui fait qu'il y a un marché de l'after market qui diminue et qui diminue. Pour donner un exemple du quotidien, prenons la voiture. Plus personne aujourd'hui ne change un roulement dans sa voiture alors qu'il y a quelques années, je me souviens la voiture de mon père il fallait changer deux trois fois les roulements. La durée de vie du roulement aujourd'hui est supérieure à celle de la voiture même. Ce qui veut dire qu'on le vend une fois au constructeur et après le marché de rechange est quasiment inexistant. Il y a une chute de revenue générée par ça et aussi du au fait que la technologie du roulement permet de diminuer le prix de la fabrication du roulement et donc même à la vente il y a un revenu qui est moins grand. Donc il faut continuer de trouver des revenus alternatifs. De deux, il faut bien se rendre compte que la concurrence est beaucoup plus accrue, beaucoup plus développée avec l'arrivée de fabricants d'Asie principalement Chinois, ce qui n'était pas le cas il y a quelques années. Et se battre simplement sur un produit qualitatif, ça ne suffit plus car on tombe un peu dans le marché de la commodité et donc c'est clair que le future pour nous c'est de signer des contrats de partenariat avec nos clients industriels où on offre autre chose que simplement nos roulements, on offre une prise de responsabilité de la maintenance avec des garanties de KPI et de réalisation de performance sur leurs outils de productions. Ça veut dire que le client va nous payer un fee au niveau mensuel et que ce sera notre responsabilité de faire en sorte que l'uptime qu'on lui garanti soit réellement là. Et s'il faut remplacer un roulement là-dedans, eh bien c'est nous qui remplacerons ce roulement et on ne facturera plus le roulement qui aura été remplacé vu que le client aura payé un fee au départ. Donc c'est vraiment un changement de business model qui est drivé par les changements du marché et le souhait de continuer à générer des revenus. C'est exactement ce que IBM a fait, IBM qui était le leader sur les pcs et tout ça

et puis qui a switché sur le hardware, software et aujourd'hui ils ne fabriquent plus rien. Ils sont devenus une pure société de services. On voit ce genre de mêmes évolutions chez nous. Et donc le service qui a d'abord été utilisé pour aider la vente du produit corp pourrait même devenir le corp business d'ici quelques années.

Et du coup, est ce que vous voyez des désavantages à cette servitization ? Vous êtes un peu obligé de la faire on va dire mais est ce que vous y voyez des désavantages ?

Je ne sais pas si je dois appeler ça des désavantages mais c'est évident que la value chain de ces business model est beaucoup plus complexe que celles du business model basé sur le manufacturing d'un produit. Pour simplifier ça, si on reste dans le modèle standard, on achète nos matières premières, on a des usines de productions qui ajoutent de la valeur ajoutée, on a une opération de marketing qui s'occupe de la vente et puis on le livre et on reçoit notre argent et cet argent on l'envoie dans une usine et ça nous permet de racheter des matières premières et voilà, on ferme la boucle avec évidemment quelques profits pour nos actionnaires. Quand on regarde le marché du service, c'est beaucoup plus complexe car c'est beaucoup plus intensif en termes de personnes, c'est beaucoup plus intensif en diversité de technologies utilisées et autres et c'est beaucoup plus compliqué en terme de financement car quand vous êtes payé sur un fee mensuel, et que vous avez dû investir au préalable dans différents systèmes, dans des roulements même et que vous n'envoyez pas de factures pour financer tout ça et bien il y a tout un aspect de financement qui est également important. Donc finalement je n'appelle pas ça un désavantage mais on a un business model et une value chain propre à la société qui est beaucoup plus complexe.

Et du coup c'est plus complexe mais il y a de plus en plus de sociétés qui se tournent vers la servitization. Est-ce que vous pensez que dans le futur, il y aura de plus en plus et au final presque toutes les manufacturing companies qui vont se tourner vers la servitization ?

Tout va dépendre de la concurrence mais également de la technologie. Je reprends le cas du roulement et on est peut-être dans le cas de la science-fiction ici, et encore. On est une société de 40 000 personnes et on a environ 23 000 personnes qui travaillent vraiment dans nos usines et nos usines sont à haut capital. Si tu regardes les technologies comme le 3D printing, qui ne dit pas que demain, le client final sera capable d'imprimer lui-même le roulement final au moment où il en aura besoin simplement en poussant sur un bouton sur son imprimante 3D. Et si ça se passe, et bien tout le business model d'aujourd'hui de SKF qui est basé sur des

productions dans des usines dans des zones géographiques bien particulières avec des gens et des chaînes serait complètement disrupté par le fait que l'utilisateur lui-même fabriquera son roulement lui-même au moment où il en aura besoin avec sa machine chez lui. Il y a des machines 3D aujourd'hui qui font des chaussures. Alors ce ne sont pas encore les plus belles chaussures et ce n'est pas encore tout à fait au point mais on pourrait imaginer qu'on puisse changer de chaussure tous les samedi soir en faisant notre dessin nous-même. Quel est alors l'avenir des sociétés qui fabriquent des chaussures aujourd'hui et de leur valeur chaîne ? Tout ça risque de disparaître. Si on prend l'énergie, il nous faut des centrales nucléaires ou des centrales au gaz qui sont des investissements lourds avec des sociétés particulières qui font ça. Si tout le monde est capable demain de produire sa propre énergie dans sa maison, que ce soit en photovoltaïque ou avec un système éolien et autre. Et je pense qu'on y arrive, le problème aujourd'hui étant plus le stockage de cette électricité mais bon je pense qu'il y aura des solutions pour stocker ça avec des batteries qui sont de plus en plus performantes. Ça pourrait prendre quelques années mais bientôt on n'aura plus besoin d'énergie, on n'aura plus besoin d'edf ou de luminus vu qu'on produira simplement l'électricité nous-même. Ces sociétés doivent réinventer leur propre business model et dans beaucoup de cas, ça passe par la servitization, par la recherche de moyen de survivre sur base de leur corps business, de leurs connaissances. Et de nouveau, ça ne se fait pas overnight, ça se fait pas à pas et de manières progressives. Bien sûr, j'ai donné quelques exemples ici et je ne suis pas sûr que ça arrivera, je ne suis pas gourou mais ça ne me semble pas illusoire.

Oui effectivement, c'est une manière de voir les choses que je n'avais pas encore entendus avant, c'est très intéressant. Si j'ai bien compris, votre entreprise est présente dans de nombreux pays, est-ce que vous expérimentez la servitization de la même manière dans chacun de ces pays ou est-ce que vous vous adaptez ?

La servitization est souvent très locale. La stratégie en elle-même peut être globale et même intégrée mais la mise en application est différente d'un pays à l'autre ou d'un continent à l'autre. Pourquoi ? Pour des raisons de cultures ou d'organisation sociale. L'exemple que je donnais de reprendre la responsabilité de toute une partie de la maintenance chez des clients et bien c'est quelque chose qui est très très fort implémenté en Amérique du Sud, skf a repris, dans des papeteries ou autre, ce sont des discussions très commerciales et ça peut se faire très vite avec des entreprises de 50, 100, 200 employés qui sont transférés chez skf. Et ça se met en place et on avance. C'est quasiment impossible de faire ça en Europe pour la simple raison que nous avons des syndicats. Les syndicats n'accepteront jamais que des gens qui travaillent chez

electrabel soient transférés chez skf pour faire le même boulot. Bien sur on le fait d'une autre manière mais il n'y a pas d'intégrations complètes qui se font. Donc oui, c'est différent d'un pays à l'autre en fonction des coûts, il y a des pays où la main d'œuvre n'est tellement pas chère que on peut se permettre d'attendre que les choses cassent pour les remplacer. Dans nos pays, vu le niveau du coût de la main d'œuvre, c'est essentiel d'investir dans l'internet of things et autre. Donc c'est clair que ça dépend d'un pays à l'autre, ça dépend également d'une industrie à l'autre, il y a des industries qui sont plus avancées dans ce genre de démarches là que d'autres dû à leur environnement concurrentiel donc ce n'est pas uniquement lié à un endroit géographique mais aussi dû à une position concurrentielle dans un marché spécifique donc oui il y a des différences qu'elles soient géographiques, de type social ou concurrentielles.

Et est-ce que vous considérez que maintenant que votre entreprise est servitisée, est ce que c'est plus facile ou plus difficile de s'étendre dans d'autres pays ?

Dans notre cas, ce n'est pas tellement valable vu qu'on est une société internationale depuis une centaine d'années et qu'on était installé dans quasiment tous les pays donc dans notre cas on était déjà présent à l'international. Après, on vient avec des business model qui changent, la question est plutôt de savoir si, sur base de l'emprunte qu'on a déjà dans un pays, comment est ce qu'on implémente ces nouvelles stratégies. On n'a pas une stratégie d'expansion géographique nécessaire vu qu'elle est déjà là.

Effectivement. Donc là j'arrive au bout de mon interview, est ce que vous avez quelque chose à ajouter par rapport à la servitization et tout ce dont on vient de parler ?

Non non, je pense que j'en ai dit déjà beaucoup. Selon ma connaissance, j'ai lu pas mal de bouquin qui parlent de ça, beaucoup de gens pensent que la servitization est un phénomène qui se passe aujourd'hui, moi je n'y crois pas, je pense que ça a commencé dans les années 80 mais qu'il y a une phase de lancement beaucoup plus lente liée au cout de la technologie associée mais qui certainement depuis la crise de 2009, s'est amplifiée, accouplée avec ce boom exponentiel de la technologie et de la réduction exponentielle qui y sont liées. Je crois que ça c'est la grande différence avec la servitization des années 80. Les principes sont globalement les mêmes mais les potentiels de mise en place sont clairement plus abordables.

Donc dans le futur, vous pensez que ça va être de plus en plus abordable si vous pensez que la technologie augmente.

Oui, le risque de je dirais avant la crise, chez skf, on était presque les seuls sur ce marché donc on avait un avantage compétitif. Aujourd'hui, lié au cout d'entrée de nouveaux concurrents, on va avoir des concurrents qui sortent de tous les côtés et qui ne sont pas forcément au départ des concurrents au roulement de skf, ils peuvent venir du monde du software, du monde du service pure qui ne livre aucun produit. On a une énorme diversité. Et même dans le servitization, on a une concurrence qui est de plus en plus forte. On est allé dans la servitization pour s'échapper d'une perte de revenu et d'un marché qui devenait de plus en plus concurrentiel par rapport à notre produit de base, le roulement. Et on est aujourd'hui dans un monde où l'aspect service et partenariat qu'on a développé et qu'on veut développer est soumis à une concurrence qui est de plus en plus forte et qui, je le répète, ne vient pas forcément de nos concurrents historiques dans notre domaine ce qui rend la complexité et les opportunités d'acquisitions beaucoup plus évidents. Et moi je crois qu'en effet, avec la facilité du mouvement du capital, on va assister à des regroupements de sociétés aujourd'hui qui ont l'air peut être d'être dans des domaines qui ont l'air différents et dont on ne voit pas vraiment la valeur à ce qu'elles s'unissent ou autre mais ça va venir. Et si je peux de nouveau donner un exemple là-dessus, qui est très connu, c'est Tesla. Ils ne se voient pas comme une société de fabrication de voitures, ils se disent une société qui veut favoriser le déplacement des gens. Donc je pense qu'on aura de plus en plus ce genre de réalité.

Un grand merci d'avoir accepté cet interview, ce fut vraiment intéressant pour moi.

