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Special characteristics in productization process of a professional service

Erytispiirteet asiantuntijapalvelun tuotteistusprosessissa

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ABSTRACT

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The importance of the service industry and especially the sector of professional work keeps emphasizing constantly in modern developed countries. These professional services differ significantly from more traditional services and products, which means differentiation also in the productization processes. Especially in previous Finnish literacy, the topic of productization has been focused more on the tradition services, and while some publications have studied the process in the professional services, these publications have been published already in the early 2000s.

The focus in this study is narrowed to concern productizing process of professional services and internal and external factors affecting the process. The study uses combination of Grounded Theory and constructive research methodologies. Used empirical data was gathered in Finnish IT company using semi-structured form and single interviews.

Based on previous literacy, the process of productization follows certain levels, which consist of requirements and by fulfilling these requirements the wanted end product can be achieved. Also in the interviews, the main focus is not in the process practices rather than in different levels of productization and defining these levels precisely. Another significant observation highlights the meaning of internal and external factors affecting the productization process. In professional services, the importance and meaning of an individual is significantly highlighted, which means factors such as egoism, affect the process more than in tradition services. In further researches the possibility of eliminating the human effect in the process could be examined.

TIIVISTELMÄ

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Palvelualan ja erityisesti asiantuntijatyön merkitys kehittyneiden maiden yrityksissä korostuu jatkuvasti. Luonteeltaan asiantuntijapalvelut eroavat merkittävästi perinteisistä mielletyistä palveluista ja tuotteista, jonka vuoksi näiden tuotteistamisprosessit eroavat toisistaan. Aiemmissa julkaisuissa on perehdytty vahvasti varsinkin perinteisten palveluiden tuotteistamiseen sekä asiantuntijapalveluita koskevat julkaisut on julkaistu jo 2000-luvun alussa.

Tässä tutkimuksessa tarkastellaan erityisesti asiantuntijapalvelun tuotteistusprosessia ja siihen vaikuttavia sisäisiä ja ulkoisia tekijöitä. Tutkimusmenetelmänä käytetään sovellettuna Grounded Theory:n sekä konstruktivisen tutkimusmenetelmän yhdistelmää. Haastatteluaineisto kerättiin suomalaisesta IT-alan yrityksestä puolistrukturoidulla yksilöhaastatteluilla.

Erytisesti aiemman suomalaisen kirjallisuuden perusteella tuotteistamisprosessi seurailee tiettyjä tasoja, mitkä rakentuvat ikään kuin vaatimuksista, ja nämä saavuttamalla päästään haluttuun lopputulokseen. Haastatteluiden mukaan pääpaino ei myöskään ollut itse prosessin käytännöissä vaan erilaisissa välivaiheissa ja näiden välivaiheiden vaatimusten määrittelyssä. Toinen merkittävä havainto ovat tuotteistamisprosessiin vaikuttavat ulkoiset ja sisäiset tekijät, jotka haastatteluissa esiintyvät vahvasti. Erytisesti ihmisen ja yksilön toiminta korostuu asiantuntijapalvelun tuottamisessa ja tuotteistamisessa, jolloin erilaiset inhimilliset tekijät, kuten itsekkyyden ja egoistisuus, korostuvat vaikeuttaen tuotteistustyötä. Jatkotutkimuksissa voitaisiin perehtyä näiden inhimillisten tekijöiden eliminoinnin mahdollisuuksiin ja keinoihin.

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1. Introduction

The topic of this study centers around the productization of services and more precisely professional services. Productization of traditional products can be seen as a somewhat part of the production process itself, while due the specific characteristic nature of professional services, the productization process doesn't necessarily come naturally and varies from a traditional products productization process. Since the percentage of services' in Finland's gross domestic product is growing rapidly while traditional sections, such as industry, are decreasing, it is crucial to understand the different productization process which lies in expert services (Elinkeinoelämän Keskusliitto 2018: SVT 2018).

Clemes, Mollenkopf and Burn (2000) highlight that professional services organizations have difficulties and challenges in marketing and communicating their products properly to the customers, fail to calculate the costs and set the price on the right level, while the quality of the services differs between projects and this cannot be controlled sufficiently. The traditional business model that lies in IT-sector and generally on professional services area has been based on selling professionalism, in other words people, by hour. These companies need to start developing longer-running market-driven products instead of individual projects (Guvendiren, Brinkkemper & Jansen 2014, 127). Most of these problems are due the characteristics of expertise service but might be avoided or resolved by productizing the service properly. On the contrary, Sipilä (1995, 26) defines expertise service by its nature, which originates from the creativity and unique expertise of the professional, separating professional services from traditional ones. Turning this customer and case specific service and expertise in to a structured process chain is not simple and needs to be studied thoroughly.

1.1 Background of the study

Expertise service is nor a product or a service, which makes it difficult to explain to a customer. Customer usually has a strong presumption what he gets when he buys a traditional product or a service, such as haircut. It is characteristic for expertise services to be intangible and complex and include highly skilled, professional knowledge with a long development process. Usually customer is also involved in the process (Lehtinen & Niinimäki 2005, 11). While all services require knowledge, skill and creativity, it is the special expertise in the process that defines the service as an expertise service. Sometimes expertise services are called as knowledge intensive

services (Lehtinen & Niinimäki 2005, 9). Since the complexity of these services, the customer might not have total understanding of the service and the producer has difficulties explaining it to him (Sipilä 1995, 29).

In international literacy, the productization is discussed variously, while in the Finnish publications it is presented more limitedly and mainly by few authors, such as Parantainen and Sipilä. What also occurred during the literature review, is that the Finnish's publications are mostly from the early 2000's or earlier, and due the rapid change of development and professional service sector, some of the information might be outdated and needs to be revised with publications with other languages. As in this study, the presence and influence of both Parantainen and Sipilä are present, but their theories are questioned and supported with numerous of other researchers.

1.2 Research questions and objectives

Research objective sets the guidelines for forming the research question, which needs to be limited in a way that the researcher is able to form an entirety of the research problem, what is he studying and from which aspect. The entirety set by the research question shouldn't exceed the scope of the research. As stated in the first chapter, the productization is discussed in the Finnish publications in the early 2000's and mainly by few authors. This was needed to be updated and combined with foreign literature.

Based on the previous literacy, the researcher terminated to study the process of productization. The study goes through theoretical aspect of productization and empirical observations in case organization. The research question is:

“How is the productization process in professional organization and services?”

The main question stays on a general level to understand the process as whole, from where the second research question was chosen to study more deeply the underlying factors and phenomenon in the process. Every process is always affected by internal and external factors, which are not part of the process and wouldn't come up in the first research question. Hence, the other research question is more specific:

“Which are the key factors affecting the productization process?”

These two questions can meet the requirements set for the study by both research objective and problem without limiting any possible aspects out of the study.

1.3 Research methodology

The aim of the study was to construct a model how professional services are being productized. This research was done by using qualitative methods and more precisely a combination of Grounded Theory and constructive research methodologies. The goal of the constructive method is to find a solution to an existing problem by constructing it from models, diagrams, plans etc (Kasanen, Lukka & Siitonen 1993, 245). The constructive approach usually includes building of the model and testing it which is not done in this research while it focuses more on the first steps which include understanding the situation and innovating possible solutions (Kasanen et al. 1993, 246). To back up constructive methods, Grounded Theory is being used gather and examine the information. In Grounded Theory, the information is coded and categorized based on the topic. These individual pieces are then combined into larger sets which becomes the structure of the study or the theory of the examined subject. (Saaranen-Kauppinen & Puusniekka 2006)

The empirical data was gathered with semi-structured individual interviews where participants were selected inside the case organization based on their professional experience. Semi-structured method was chosen because it is more suited when the issue on hand is complex providing more clarifying answers (Barriball & While 1994, 330). With enough openness in the questionnaire, the semi-structured interview doesn't leave any possible aspect affecting the process unexamined (Galletta & Cross 2013, 1-2).

1.4 Structure of the thesis

The structure of the thesis is based on two sections: firstly, the theory section consists of literature overview and how productization is presented in current literature. In the second, empirical section, the researcher compares the theoretical process to the findings and topics raised in the interviews and considers the differences, functionalities and other factors. The structure is categorized under the main topics which were mentioned in the interviews in purpose to analyze the phenomenon as a whole.

Since some cultural changes can affect the expertise organizations' behavior, this study is limited to concern western business-model. Besides cultural behavior differences, another industry related problem was found, since expertise services are sold often in business-to-

business markets. Due this, the theory also limits markets only to concern b2b-markets and later in the study the term “customer” refers to a business customer.

2. Productization of expertise services

This chapter introduces the common concept of productization in literature. According to Sipilä (1995, 13), when a product or a service is in such a form that it can be duplicated and delivered to a customer as factory-made, the product is in some level of productization. Lehtinen and Niinimäki (2005, 30) describe productization process as service’s determination, designment, development, generation and constant improvement. This process manages to fulfill both producer’s objectives and customer’s expectations about the best possible service available.

Productization is a major part of the organization’s natural growth and further-development, since the problem in expert organizations is that small teams tend to build new prototypes for each new project. This is waste of resources and successfully-done productization can free up those resources for other use while simultaneously clarifying inner procedures inside the organization. Clarification of procedures results to knowledge transferring between employees leading eventually to a situation where specific expertise is no longer focused on one individual expert in the organization but to everyone. Processes and projects becoming more transparent in the organization simultaneously affects the clarification of the strategy positively. Visa versa, the strategy may affect the productization process by defining what kind of customers organization aims to have and on which industry or geographic region it focuses on. (Parantainen 2010, 38; Sipilä 1995, 51; Lehtinen & Niinimäki 2005, 20-22)

To be able to offer a product to a customer, it needs to be productized. The traditional business model that lies in professional services field has been based on selling professionalism, people, by hour. These companies need to start developing longer-running market-driven products instead of individual projects (Guvendiren et al. 2014, 127). According to Sipilä (1995, 50), organizations are no longer able to sell only expertise. No one wants to hire a skilled and expensive data-analysist if the buyer is unsure what the analysist is actually going to analyze and how will this affect his businesses. Like mentioned before, in professional services the customer might be unsure if he needs the service or what kind of service he needs and if the offered service actually fulfills his needs (Sipilä 1995, 29; Eisingerich & Bell 2007, 254).

Transferring to a products-driven business model, the organization has a clearer outcome for the customer and customer knows, that he will receive a complete entirety and that he doesn't need to use multiple suppliers (Parantainen 2010, 38).

Sipilä (1995, 52-53) finds problematic the uncertainty of constant high utilization rate in expertise organizations, since projects come and go, and their predictability is difficult, which leads some periods of the year being extremely busy while other months are less-occupied. Usually expert organizations offer three kind of projects: projects funded by singular customer, multiple customer projects or inner projects. This kind of diversification can ease some of the high and low-ends in these periods. Other possibility is to try to expand the supply portfolio by offering the three kind of services: the problem-services, development services and administrative services. These services tend to have different phased demand, resulting to more equalized balance between different periods.

2.1 Levels of productization

Productization can be layered on different level based on various qualities. Sipilä (1995, 13), Rope (2006, 94-95) and Arzt, Van de Weerd, Brinkkemper & Fieggen (2010, 90-102) have all described situations which can determine the level of productization in a slightly different point of views. These levels are presented as a whole in appendix 1. Sipilä (1995, 13) starts with a four-stage list where at the beginning the focus is more on the organizational level and at the end on the product level. At the beginning the projects consists of independent processes which need to be standardized before advancing toward starndiced product. Arzt et al. (2010, 90-102) divide state of productization in six stages and they have slightly different perspective than Sipilä; they start with independent projects and how these can be transformed into products due combining them based on customer needs and creating standardized components. Rope's (2006, 94-95) listing can be seen somewhere in the middle between Sipilä's and Artz's et al., since while the others to focus more on the process of the productization and how the levels can be seen as somewhat steps of the process, Rope lists down the limits for the projects on how productized they are.

When comparing the actual levels with each other's, Sipilä (1995, 13) skips the first stage, where the "product" actually is a just a custom-made process for the customer's need while Arzt et al. (2010, 90-102) and Rope (2006, 94-95) list this as the base level. When advancing

to the next levels, all of the classifications resemble each other's: step by step service is being shaped to require less and less customizability. Artz et al. (2010, 90-102) do point out that taking these stages directly to a professional service is difficult, since the level of customizability needs to be present in most of the projects at least on some level.

The further the state of productization is, helps it organization to rearrange resources to other tasks. The freed resources could be used to fulfill customer-specific needs (Sipilä 1995, 17). The problem here is that the productization was done in the first place to cut down customization. Ideal would be if these resources could be relocated in different projects where the high-end level experts can focus creating value for customer in more complex and hence, more profitable tasks, while lower-level experts could handle the productized processes.

2.2 The process of productization

The process of productization of expertise service should start with the concept of the possible product by asking several questions: What is the core, actual and augmented product, how is the service process and strategy, what's the need of customization in the service, on which level the productization already is in this service or in the organization in general, how is branding and cost-to-quality positioned from customers' point of view (Lehtinen & Niinimäki 2005, 31). The following chapters go through these questions to give complete understanding of the process itself based on literature.

2.2.1 Service to be productized

Natural start for the productization process is to choose the service that is to be productized. If there are no ready concept for this, according to Sipilä (1995, 13), the process can be started by understanding the opportunities in the market, systematically examining the markets or conceiving an overall, technological research which includes everything else beside the market itself. Suominen, Kantola and Tuominen (2009) approach the process from the contrary point of view than Sipilä, by brainstorming ideas and evaluating their opportunities on the markets. Parantainen (2010, 143) on the other hand, suggests that the process should start with choosing a customer or customer's specific problem. This helps to narrow down the possibilities and helps to steer the process in the right direction. The key is to identify the need of the customer. This can be difficult for the developer since the customer might not recognize this need himself.

For example, something in customers daily routines may require unnecessarily amount of time, but the customer is used to the situation, and takes it as given, rather than identifying situation as a problem (Parantainen 2010, 151). The investigation naturally costs to conduct but the customer is usually involuntary to pay for it. The customer rather wants to pay for finalized solution to his problem, which actually is somewhat inconsistent (Sipilä, 1995, 29).

When the problematic situation is discovered, it is necessary to consider the causes and the reasons, why the problem still exists. There might already be a solution which makes the whole productization process useless. On the other end, the customer might have his own solution to the problem, and even despite the complexity of the backup-solution, the customer might stick with his own solution. The mentality, “don’t fix it, if it isn’t broken”, is still present in companies. It is also good to be cautious while questioning customer’s solution since he might feel his expertise offended. (Parantainen 2010, 159-162)

As the original theory of differentiation was presented already in the 50’s by Smith (1956) in *Journal of Marketing*, this concept is also extensible to modern services: If the service is not the first of its kind or unique, the productization process should include differentiation compared to the other products. The customer maybe can’t put similar products in the right order and might be afraid to make a wrong decision when choosing the product. When the competing products don’t differ from each other’s, the customer tends to make the decision based only on the price. This affects directly the profitability and should be avoided by gathering competitive advantage. The best-case scenario would be, that this advantage would be something rather significant: small improvements in old features do not act so well as a whole new feature (Parantainen 2010, 167-168). According to Robinson, Clarke-Hill & Clarkson (2002), if the core product cannot be differentiated, competitive advantage can be persuaded for example by investing more on the relationship management and making this meaningful for the customer. As seen here, opinions in literacy vary, but the all of them agree that differentiation is important.

2.2.2 Customizability in productization

Like mentioned before, the level of customization is the key differ between a factory-made product and a non-productized service. The problem is, that expertise services require often at least some level of customization. Interaction between customer and producer can be seen as a one of the factors of customization: the more the relationship requires interaction, the more it

requires customization (Lehtinen & Niinimäki 2005, 34; Jaakkola et al. 2009, 19). Since the whole point of productization is to lower the level of customizability, there are luckily solutions to keep the services look more tailored than they actually are.

Customer can buy a product that seems to have a higher-level of customization than it actually has. Parantainen (2010, 92) and Jaakkola et al. (2009, 19-20) introduce the concept, where the final product can be assembled based on customer preferences from various, ready-made modules. This solution seems to have a lot of customization in it, but in reality, all the modules are standardized in advance and the amount of work put in to this “customization” is actually close to zero. The producer doesn’t need to design and send out tenders to the customer, since the customer can choose from ready-made list and still get the feeling of personal service. This model is called mass customization and is highly used, for example, in car industry: while buying a new car, you can choose from a wide range of accessories, which fit your preferences and needs the best. You also pay extra for this “tailoring”, which is actually an excellent example of successfully executed productization. On the contrary, in Jaakkola’s (2011, 228-229) study, eliminating the customization in total is not necessary, or even suggested outcome, for the productization process. According to her research, the increased level of standardization, achieved by productization, allows the organization to offer more time and resources for the customer’s personalizing needs thus creating additional value for the customer for an extra fee.

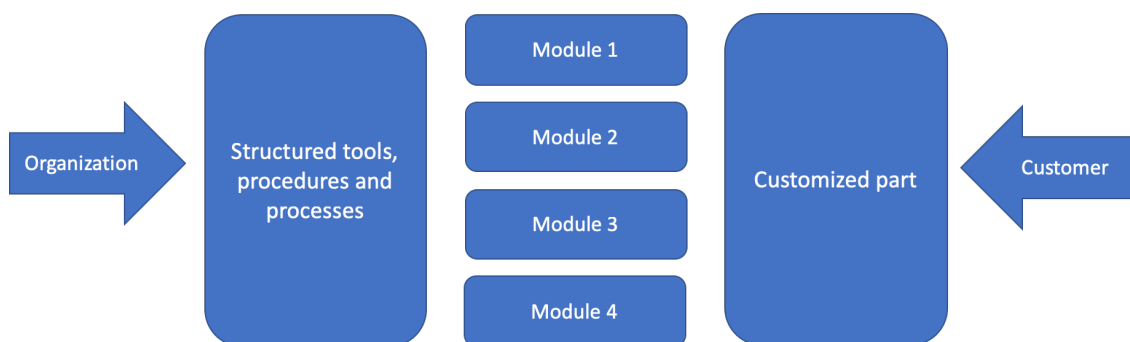


Figure 1. Customizability from both the producer and customer point-of-view (Jaakkola et al. 2011, 20)

In Figure 1, there is an example of the combination, that takes both the standardized services and modules and combines them with the personalized service. Also, the figure shows the different point of views: on the left the organization sees the structured services and tools it can offer while from the right, the customer firstly sees the personalized part and the more structured parts are more behind or “hidden”.

Productization process can be hard to end in expertise services while there is always something to be productized and also further-developed (Lehtinen & Niinimäki 2005, 30; Salo et al. 2014). To find the optimal point, where the productization is done on right level, can be estimated based on the benefits and costs further productization causes. At some point, the costs won't lower anymore, and benefits won't grow fast enough.

Usually further productization happens in the situation, when customer has adapted the product to a part of his daily-use. At this point, the producer should actively collect feedback and possible further-development ideas, to improve the product (Parantainen 2010, 232-233). If there are a lot of different ideas, it might be difficult for the producer to pick the ones, that should be actually fulfill. The productization was done in the first place to reduce customization. First stage can be to cut out those ideas, that require too much work compared to the value they will create for the customer and for the product. Other rule can be to think ideas in a larger scale: could this idea be beneficial to other customers also? If the answer is yes, it could mean that these improvements should be executed (Romero & Molina 2011, 468).

2.2.3 Product description and brochure

Product description is a technical and marketing specification of the product and the development process including facts like the markets, the target groups, customer benefits, product contents and versions, delivery terms, expenses and profit targets. Product description can be used to either inside organization to spread knowledge and support the productization (Sipilä 1995, 35; Tonder 2013, 82-85; Jaakkola 2011, 226; Salo, Simula & Lehtimäki 2014). Product brochure is like product description, but it is mainly used with external parties like when marketing with customers (Jaakkola 2011, 225-226).

Documentation is the key to successful productization, since the product becomes an actual product when everything related to it is listed down and can be overviewed and evaluated afterwards. With the documentation, the service should be able to be transferred to any other specialist of the field without any problems (Jaakkola 2011, 227). Documentation is good to do before, meanwhile and after the productization is being done. Specially after the process is completed, documentation is an excellent way to check, if the productization is done well enough: if something can't be written down, this stage should be re-considered, and possibly re-productized. (Parantainen 2010, 182; 221-223)

Organizations fail to differ their products from one and another. They all use the same praising words which leads to a situation that customer doesn't have anything to lean on while making the decision of purchasing. A good product description goes through the product, stating the differences to rivalry products and unique features it has. Obviously, the product description shouldn't denigrate other products, but it is important to know where to position your own product in comparison to others (Parantainen 2010, 40-43). The description should also state clearly the core product, actual product and augmented product, which all can be used as a part of the differentiation with rivalry products (Jaakkola et al. 2009, 10-11; Robinson et al. 2002).

Like product description, product brochure includes the whole productization process, but more from a customer perspective. It should include the content of the delivery precisely so the customer and producer both know what's included in the service (Jaakkola 2011, 225-226; Parantainen 2010, 52). Since brochure is aimed for external parties, it's needed to be considered beforehand, who will be the actual user of the brochure. This is important, since a larger, non-acquainted target group needs differently designed brochure than single, highly acquainted professional. Nowadays, most or all, of the information about the organization and its products is presented on its webpage and personalizing the product brochure might be difficult, since anyone can visit the webpage. By using cookies and personalizing the page based on information gathered of the user, such as the amount of times "help"-button was clicked, the right kind of brochure can be presented to the customer. (Sipilä 1995, 97-99; Ardissono, Goy, Petrone & Segnan 2002, 52-53)

2.2.4 Individualizing the product

Branding is constantly growing part of organizations' images and the naming of products can affect brand a lot. Thinking name for the product is good to start in the beginning of productization process. Especially if the product is something innovative and new, there might be risk that other competitors are developing something similar and may be thinking similar name (Sipilä 1995, 94-96). Besides affecting the whole brand of the organization, the name will create mental images to the customer concerning the product and its features and quality. And it's commonly known that first impressions do matter, and a good name will also stick with the customers' mind better than an average (Coane, Monahan & Termonen 2015, 455-456).

Naming has significant impact whether product will succeed or not. Naturally, an excellent name can't save otherwise poor product, but weak name can affect success of good product negatively. Sometimes organization names are based on the founder's name in one way or other (Like Ford Motor Company, Henry Ford), while others can mean something (Like Facebook) or just be completely made up. Kohli's and Douglas's (1997, 73-74) study supports the theory of successful naming affecting the success of the product positively, because their data indicates that those organizations, who have a process for naming, tend to be both more satisfied with the name and have better success in the markets. Like mentioned in the previous chapter, also Parantainen (2010, 173-177) points out that association often happens rapidly, so while naming the product, one must think with extra caution, since these association can also be negative. For this reason, names based on something real can be complex, since the product might be easily related to that phenomenon. In Irmak, Vallen and Robinson's (2011, 401-402) study, they found out that customers made presumptions based on food's healthiness more based on the name than on the nutritional values provided. According to Parantainen (2010, 173-177), if the producer decides to go with unique name, he can start building the image for the product from zero. This does require a carefully planned and heavy marketing campaign, but at least the risk for negative associations is minimized. While naming the product, you should let your creativity flow freely and just brainstorm with different names. While this process doesn't necessarily mean that you will come up with fabulous name, but it does start the process itself.

Both Kohli et al. (1997, 73-74) and Parantainen (2010, 173-177) start the process of naming with setting the goal and statement for the product and brainstorming with name ideas. In the data of Kohli et al., the average amount of names at the beginning was as high as 46. After this, the process proceeds to evaluating the names based on the chosen statement and other aspects, like associations, and finally Kohli et al. suggest that few names should be sent to Patent and Trademark Office for registration. This eliminates the possibility of some of the names being unaccepted.

Besides the name, the product itself needs legal protection. Since publishing is strongly linked to productization process, creates it possibility to someone to copy the product. If the productization hadn't been done, there wouldn't be an actual product and coping something disorderly is challenging. If product has some sort of advantage over others, it has a potential risk to be copied. Coping can be prevented, for example, with patents and legislations, such as

copyright law. This should be done with co-operation with lawyers specialized with patent law to prevent any further problems that may come (PRH 2015).

2.2.5 Sales as part of productization

Sale situation can determinate the success and continuity of organization, so it is a highly important part of productization. First impressions play a significant role in both ways in the sales process when both the salesperson and customer are making presumptions of each other's causing the process to be difficult (Evans, Kleine, Landry, Crosby 2000, 512). Virtanen, Parviainen and Rollinds (2015, 54) examined the nature and complexity of internal tasks inside the organization and how the level of complexity affects the outcome of the sales situation. Their hypothesis about the higher complexity affecting negatively to the outcome was partly true: in the highest complexity group the effect was statistically significant, while other, lower level groups didn't show variation in between. While most of the expertise services can be seen at the top end of the complexity scale, it is crucial, that the productization is done properly to avoid the problem found in the study.

As a part of sell situation, it can be beneficial to make promises, while these promises give customer something to lean on, and they differ the product from competitors' ones. Naturally as part of the promising process, is the ability to keep those promises is important. In every encounter the customer and producer have, the relationship and its reliability are measured by the number of kept and broke promises (Bitner 1995, 248). All though, if these promises can't be kept, the situation can be saved by fixing the errors promptly. Even though this situation was created by yourself, the capability of solving it may be seen as a positively. (Parantainen 2010, 72-77)

Fully productized service is easier to sell to a customer than a complicated set of processes (Lehtinen & Niinimäki 2005, 30). Even though you are selling a fully productized service, it might be worthwhile to position yourself as the customer: he might have some questions and counterarguments, you wouldn't expect to encounter. These arguments can be anything but usually customers feel that they do have everything already under control or the product is too expensive, and the moment just isn't right for investing. When you have taken the time consider and prepare for them in advance, you can give out totally different, more professional picture of yourself in the actual sale situation. And as mentioned before, this impression can affect a

lot to the actual outcome of you finalizing the sale. (Parantainen 2010, 185; Evans et al. 2000, 512)

References are descriptions of previously conducted projects and can be used as a part of the sales process to present organizations capability in other, similar projects. The way these works, is that the producer has something to show in advance to convince customer that the producer can create additional value to him. What Kumar, Petersen and Leone (2013, 82) found out in their study, is that references play significant role when acquiring new customers. According to the study, organizations should have a catalog of all the references available, since it is important to be able present a variety of capabilities organization has, but the seller should only choose one or two reference, that match with the prospect to obtain the best possible outcome. References act also as a support for productization; they can transform otherwise abstract service to a more concrete service. For example, a consulting service might be harder to explain without references than an auditing service, since consulting is usually more abstract. In addition, references list organization's finished and on-going projects, which leads to a more centered organization. (Sipilä 1995, 88; Parantainen 2010, 52)

2.2.6 Billing

The challenge in pricing of expertise services is, that customer might not have understanding how the service will affect his business and what is the value for him (Simula et al. 2014). In some cases, the customer might compare the cost of the expertise service to his own wage level or to the used time, which in both cases don't reflect the actual value created (Sipilä 1995, 79). The price itself is a complex feature: organization can compete with the price by lowering it, thus making it more tempting to the customer. On the other hand, low price affects directly to profitability and it may create negative assumptions about the quality of the product (Puusa, Reijonen, Juuti & Laukkanen 2014, 133; Jaakkola, Orava & Varjonen 2009, 29). So, while setting price, it should fit the general image or brand of the organization, and it doesn't necessarily matter if the price is, as long as you are able to justify it to the customer. This study doesn't go further in to the theory and practices of pricing itself, since it's not meaningful for the purpose of the study, due the wide definition and case specific aspects, such as branding, affecting the pricing decisions heavily. Instead of, in the following chapters the study examines the billing dilemma, that is present in modern expertise services, and introduces possible solutions.

The cost of single expert depends on his level of expertise. Optimal situation would be that this expert could work in such a way that uses highest level of his know-how and his learning process would be constantly positive. According to Sipilä (1995, 82), this way the service can be the most profitable to produce. This hypothesis can be also explained through opportunity costs theory: If a professional would be able to work in more demanding position than he currently is, creates this a negative cost. The more challenging the service is, the more can be billed from the customer.

Traditionally, in expertise services the billing model has been following: the customer pays based on hours. In recent years this has been transforming to another direction, since the customers have started to question the unpredictability of this billing model (Jones & Glover 1998, 311). Better solution would be to ask for a fixed price and in addition bill for possible extra hours. The amount of work included in the solution, and the cost of additional hours, can be listed in terms of delivery with each individual customer. However, reality is that in most of the areas of expertise services, the amount of work needed between even similar projects can be widely different and to find a fixed price for this can be seen as rather difficult. In larger organizations, this has been resolved by estimating the average amount of work needed between those projects and setting up a price based on this. While this means taking some sort of risk, the quantity of projects conducted should balance and lower this risk in bigger organizations. From the customer point of view, this billing model is usually seen as positive since this helps while planning expected expenses. (Sipilä 1995, 83-85; Jones et al. 1998, 306-308)

In most projects, customers tend to have constantly some, rather small request beside the actual service, which need to be fixed or solved. Charging for these requests can be extremely difficult, while some may take only few minutes and others several days of work. These can be billed based on some fixed monthly price or by calculating estimates for time used. These estimations are harder to evaluate if the customer relationship is rather young since there are not enough previous cases. One opportunity could be set a fixed fee at the start of the relationship and leave an option to inside the terms of delivery to adjust this amount based on actually used hours after some period. (Parantainen 2010, 61-63)

If the organization isn't big or it's not accustomed to fixed pricing model or the service just cannot be billed with fixed price, there are other options. One option is that customer buys a fixed amount of service from the producer. It doesn't matter if the customer actually uses the

total amount, which might not be the most efficient for the customer, but this creates the opportunity to budget beforehand, which, on the other hand, plays important role while planning the project. Also, the provider can prepare to allocate a certain amount of resources for the project. This billing model is called capacity charge. (Sipilä 1995, 83; Jaakkola et al. 2009, 30; Jones et al. 1998, 305-306)

Another form of capacity charge is ceiling pricing. In this model, at the start of the project there is a fixed price for the final project. This is the price that customer needs to pay at the most. If the project is easier than expected and conducted faster, the customer only pays for the amount of time used. In this model, the customer can budget in advance. Problematic in here is, that the producer might end up using the whole budgeted time, since he has the opportunity. Obviously, this isn't efficient, and customer wouldn't want to pay for this. However, it is characteristic for expertise services, that everything can be done slightly better and better when put more effort in to it. The question is, when this constant development changes from profitable to non-profitable for the customer. (Sipilä 1995, 83; Jaakkola et al. 2009, 30)

2.3 Challenges in productization

As stated above multiple times, the productization process in expertise services has several challenges, that won't occur while productizing a traditional product or a service. Additional challenge is that most of the professional services are unique and different from one and another. In this section the study underlines some of the most common challenges while productizing.

Corsaro and & Snehota (2010, 986-995) go through the concept of interaction and the value it creates to the business. By productizing and cutting this of, the service might lose some value that cannot be predicted beforehand. Interaction between the customer and producer is one the most challenging parts to productize, since interaction needs actual persons. This interaction belongs to the expertise services and cannot be taken out without affecting the service itself. Customer might feel offended, if he expects to receive real interaction and the producer tries to cut this out (Sipilä 1995, 72-73). One way to lessen the amount of interaction, is to catalogue all the products with a fully detailed description and prices where customer is able to choose the additional services he needs (Brocke, Uebernickel & Brenner 2011).

The original designer of the service might not be the best choice to carry out the productization process; he might have a close relationship to the service. Since he has putted a lot of his own effort and time into the service, and he might feel that his unique service cannot be productized. Moreover, the designer is usually technical specialist, who might not have the capability to see the service from others, such as customer's, point of view and despite his expertise in the field of the service, he probably won't have a lot of experience about productization process (Sipilä 1991, 115). On the other hand, the productization specialist and other employers won't have such a personal bond with the service. In the worst scenario, this might affect the quality of the service negatively: the employee isn't such passionate about the service and customers tend to notice this (Andreini, Salo, Wendelin, Pezzotta & Gaiardelli 2015, 260-262).

The goal of the productization is to create a generic product that could be, in theory, sold to everyone. However, one of the features of expertise service is that it will solve the customer's problem. If the service is sold and it won't actually fulfill the customer's needs properly, this is harmful for both customer and producer, since, as stated, expertise service should adapt and fix the problem of the customer. While failing to do so, it loses the status as expertise service and this might affect the organization and its brand negatively (Sipilä 1995, 118-119). This is something to mind while selling the product.

Parantainen (2010, 28) has a more down-to-earth list of the failures productization process might encounter:

1. *Do not hide your expertise*
2. *Do not change your target group constantly*
3. *Believe in the benefits achieved by productization*
4. *Do not fail to ask customer about his needs*
5. *Do not focus on details, which customer doesn't care about*
6. *Do not solve problems, that aren't severe*
7. *Do not underestimate workload and expenses*

The steps in the list can be divided roughly in to two sections: 1., 3. and 7. are more related on the producer side and 2., 4., 5. and 6. more on the customer perspective while all of the steps are linked in the planning phase of the productization. As a conclusion, the customer side needs to be taken into account from the beginning.

3. Interviews: The Methods and the Results

This chapter introduces the methods and findings in the empirical data. The data was collected using qualitative methods which are introduced in the first chapter. This research was conducted in a case organization which is briefly introduced briefly in second chapter. In 3.3 the study reveals the findings in the interviews and compares them to previously revealed literature. Findings are categorized and thus presented under separated subtitles based on the subject to clarify the structure of the text.

3.1 Qualitative methods

This research used qualitative methods to study and explain the behavior of productization process in expertise services. Qualitative method was selected over the quantitative method because quantitative methods tend to give numeric answers about the reality which is separated from the observer while qualitative methods give verbal answers and act with the reality, that is created by people's experiences, and the phenomenon in this study is more linked to people's experiences and habits than in numbers (Philips 1988, 4-5; Bryman & Bell, 2015, 392). Qualitative research also allows communication and open conversation to a certain extent which can be seen appropriate due the nature of the study.

Final method used has some characters from both Grounded Theory and constructivist research methodologies. In constructivist research the base of the study is a real-life situation which needs to be solved. From here this methodology continues to study the phenomenon throughout in an attempt to find and test a solution in practice (Lukka 2000). Grounded Theory-methodology is more based on the evidence which is categorized and coded. This coded data is then reformed into concepts which could form the basis of new theory which researcher compares to the existing theories (Saaranen-Kauppinen & Puusniekka 2006). This research started with a real-life problem, and while it does highlight some problematic factors in the process and fixes to those problems, it does not include invention nor testing of a new productization model. It does go through the evidence and categorizes and compares the findings to the existing theories.

3.2 Case organization and Interviews

The case organization is a major Finnish IT-company working in B2B markets mainly in the Nordic countries, but also all around the world. Basis of this study is a project case started during summer of 2018 when a project's goal was to design, develop and produce a reporting solution to monitor customers databases' performance. Since this solution is not related to any specific field of business, it was seen, that it had potential to re-use solution in other projects. The question arose, who could this be done in best way possible. This case organization should not affect the results of the study when the purpose is to find the best practices and factors affecting the productization process. However, as the qualitative research is always just a description of the phenomenon, the presence of the case organization cannot be completely eliminated (Töttö 2004). But by acknowledging this fact, the researcher can use his own consideration in terms of eliminating the effect and evaluating the generalization of the findings.

After a brief scout of the organization, two possible candidates were found, who both had several years of experience in terms of productization of expertise services. A has previous experience in other organizations besides the case organization working mainly in sales department contacting and meeting customers while also participating heavily in productization processes inside the organizations. B on the other hand, has been working in case organization for multiple years in the development section of IT-services affecting heavily the protocol of productization process by designing the process. Due the sake of anonymity, the precise titles of these interviewees are not mentioned.

The individual interviews were held with Skype which allowed the possibility recording the sessions and transcribing them later enabling the interviewer to focus and participate on the interview. Interviewer used a semi-structured form, which was sent to the interviewees before the interview. The form can be found as appendix 2. This form gave the guidelines to the conversation, but the interviewer reminded at the start of both interviews that the purpose of the interview is to have an open conversation and not to block any topics related to productization process. Time reserved for both interviews was an hour from which A used the whole time and B around 40 minutes.

The transcription process focused merely on the content itself since that was the only valid concern for the study. The researcher gathered the key points and topics from both of the

interviews and then compared these findings. Interviews took place between December 2018 and January 2019, and the transcription was done after both of the interviews and re-done in March 2019 to make sure that nothing was left out from the scripts.

3.3 Productization process in case organization

Variation of the answers between the interviewees varied between the questions. In some questions both interviewees had the same kind of approach but in some both of them pointed out different aspects. One reason for this kind of behavior can be found in the nature of qualitative research method, and other explaining factor can be found in the different backgrounds of the interviewees. Due the nature of the qualitative research, the questions were left wide and open intentionally to minimize the risk of questions influencing the results. Obviously, without any limitation, the answers could end up not answering the scope of the study. This why, the interviewer used some specifying questions already in the form and during the interview. The answers below were sorted and presented based more on the topic than based on the questions in purpose to both clarity the text and exclude the variation.

3.3.1 Definition of productization

The first question was not only meant to be as an introduction to the topic, but also as a quick look-up to see the big picture of the mindset the interviewee has towards it. Already this question provided differentiation between the both interviewees:

“At the point when we have the idea for the product, even though it is not at a saleable state, but it has platform where to build on” (interviewee B)

“The product can be repeated multiple times with little effort (can be sold most of the times without heavy tailoring) regardless whether it is a service, an intangible product, or a consumable product” (interviewee A)

The participant A also mentioned the price as major factor, since a fixed price itself includes already the details about the costs and the procedures while hour-based billing does not. Later on, both interviewees stated that the product idea needs to have some sort of realistic

possibilities and at least some guidelines how it could be executed before the term “product” can be appropriately used.

A also added, that a “product” needs to have someone who can actually execute it and someone who can correctly present and sell it. This comes back to the fact that the service needs a product description, and A has been using “pitch cards”, which includes answers to basic questions; “what, why and how”, and a peer-review where other same level experts have gone through the process and both understand and agree on the service steps. These cards can be used as material given to the sales line, because they include all the necessary information in short form. Sale person should know the whole offering of the organization and could be able to offer the right service based on the keywords and/or the customer needs.

3.3.2 The process

The second question tried to specify the productization itself in the eyes of the interviewees. Both of the interviewees answered by listing the steps of the productization process rather than actually defining what does the productization itself means to the product. Though, A did mention that after the production process the *“customer can expect to get from the process the same results in the same in the same time period every single time”*. But like stated in the previous chapter, the actual responses varied a lot: A started describing the process from a “industry point-of-view” where the service to-be-productized can be found by investigating the industry and its needs. Through a comprehensive research a needed product can be productized, and which can be the copied and distributed to the whole industry. This approach was also introduced by Sipilä (1995, 13) in chapter 2.2.1.

Participant A does continue by adding that the productization should be taken into account as a whole and also as a part of bigger entirety which professional services usually are. Linking the new service to the existing entirety requires a lot of information and knowledge about it since the usual complex nature of professional services. Furthermore, in a bigger organization the whole service might be conducted by multiple organization lines and connecting all of the lines together for a new service might be difficult. Even though, it might sound easier to productize a completely new product without any existing services to link to, A points out that with an existing customer trying out new services can be easier, since customer has trust in the

provider's capabilities and by already understanding of customer's business the provider can suggest the solution and execution.

“In one case for customer X, I was needed to present two-slide slideshows, based on the same slides as with a customer Y, but only two slides compared to 15 slides with customer Y, before the purchase decision since they (customer X) didn't need any more convincing or proving of myself or of the capability of the firm because I had been working with them previously” (Interviewee A)

So, when it comes to new customer acquisition, the importance of references is strongly emphasized since, stated by A, *“references are the way to sell”*. According to Sipilä (1995, 29) the customers were un-willing to pay for the development phase but the researcher sees it that the relationships between customer and producer have gained value which affects in a way that if customer trusts that the producer and the relationship have the later value to himself, they will allow the development at their cost. This was also stated by A when they highlight the meaning of old relationship and brand valuation in sales process.

Participant B introduced the levels they are using inside their organization line which consisted of four different ones starting from the born of the idea to the death of the product. These levels can be seen more suitable when the idea already exists, and it is under consideration, whether it should be productized or put aside. On the first level the idea needs to go through at least a brief research including at least a product description and marketing and final execution plan before investment can be made. After the first investment, the idea should be expanded quickly to a state where it can be introduced to the potential customers for awareness creation and customer feedback collection. At this point, the invested capital should still be rather marginal since without the interest inside the markets the project can still be shutdown. After the positive interest from the customer, the producer can proceed to the next level where previously internal product descriptions are modified suitable for external use, included also with everything needed for legally binding contracts. What was actually exceptional in this model, that at this point the service itself doesn't even exist, but it does have some guidelines and some sort of plan how it could be executed, before it is introduced to the customers. The main thing for the producer is that it can be, for sure, executed and the schedule for this can be promised. After the sale has completed, the team can actually start “manufacturing” the service. In some cases, B had noticed that these steps were not followed, which actually led to negative results when

the sale process failed due incomplete market research leading to negative yield when investments were made.

When asked about the number of new products inside B's organization line, B answered:

“If limited to only completely new products, I could say that there are only a couple of them annually, but on the contrary, a lot of new features for the existing services are being produced, and these features should also go through the same process”.

This is needed, since it is important that these new features are also mentioned in the product descriptions so both the executing lines and customers are aware of them and problems like above can be avoided.

More interestingly, both of the participants mentioned the levels of the product and/or productization. However, participant B heavily talked about the levels inside specific organization inside the case organization while A was talking more on more general level. B's levels were developed and widely used in every productization situation inside their organization, but the interviewer couldn't find the same steps in A's interview. This highlights the fact that the case organization is rather large, and there are silos between the inner organizations which prevent the free and maximum flow of information. The root cause for the silos could be the egoistic behavior of humans, when people inside the organization choose to maximize one's own position or profit over the organizational goals. This factor and it's affects are described more in chapters 3.3.4 and 3.3.5..

3.3.3 Transformation of the process

As stated in the theory, the process of productization keeps transforming constantly and also the participants had noticed that the process transformation does follow certain trends but neither of the interviewees didn't specify many changes in the process itself but they both brought out the facts about the end product and how it keeps changing. B has noticed that *“the product is seen as such thing that it is needed to be sold, which emphasizes the meaning of marketing material”*. Participant A started with the fact, that previously the customer was running the project and they bought the developers outside but the main trend today is that most of the expertise services, like platforms, are now sold “as a service” (PaaS, Platform as a

Service) including the platform and all of the services needed for customer's purposes. Even though these services are often bought as whole, different services inside the entirety need to be separated from each other and if wanted, to be sold as so. This is needed for different customer purposes, so the producer doesn't need to tailor the existing service, but they already have a group of services that combined fills the needs. Besides, it is normal that the needs of the customer might change rapidly to which producer can answer by offering the services as continuous services which can be bought without any predefined time period. Both of the interviewees mentioned about these changes.

B also pointed out, that now customers tend to obtain more and more knowledge and they have specific guidelines what do they need and want. Based on the theory, previously, especially in expertise services, the customers didn't know exactly what they were buying. This change could be explained due to the internet and self-study since huge amounts of information are accessible also to those who are not expert in that certain area. On the other hand, organizations tend to outsource everything and focus on their core competences which could mean that the knowledge about these outsourced areas can be very limited. In previous study conducted by Jaakkola (2011, 224), she claimed that the customers were still unsure what they were actually getting in return when buying a professional service which is in contrary to this study's findings.

3.3.4 The human behavior in productization

Everything involving humans is affected by the human behavior and according to participant A, productization process is heavily dependent on this factor. In the interview, A used the term "human factor". On theory, term "human factor" is often used alongside with the term "ergonomics" meaning the theory of designing of products and process so the negative human affect is minimized (Sandom & Harvey 2004, 1-3). In some sources, this term also is used more as to describe the non-logical and imperfect behavior of humans, like in HSE (2019). Based on context, the interviewee A used this term to describe the behavioral errors in the productization process and in this thesis, the term "human factor" is used to describe situations mentioned above. One alternative could have been the term "human error" but this is used more, when actions are unintentionally whereas in this case, the actions are intentional but not most rational in organization perspective.

“Professional consultants all have an ego, and they all think that they themselves are very clever and right. The difference to my old organization X (which was not expertise organization) is big since they just don’t behave so egoistic.” (Interviewee A)

According to A, in professional organizations the role of an individual is highlighted compared to a less-professional organization since the level of expertise means naturally irreplaceability and high value for the organization. As a consequence, the problems related to individuals and their behavior affect the organization more when the level of expertise rises since while in traditional organizations the organization lines are competing each other, for example about the funding, in expertise organizations it is the individuals who are competing each other’s. Controlling a whole organization line and its factual goals can be seen as an easier task than trying to control individuals and trying to match their objectives to the company’s objectives.

Some of the problems are naturally caused by the money, because in most cases the salaries in expertise organizations are based on commission and this affects the productization process in many ways. Because part of the salary is based on profit targets, can this lead to selfish behavior such as take possession of projects and tasks to yourself while other expert or organization line could do them better. This kind of action harms the productization process because seldom the productization can be done by one person only: it needs the expert with the idea, peer-experts, sales staff, juridical experts etc. Obviously, by trying to do all by yourself leads to worse outcome but with a badly designed bonus system and wrong gauges in the scorecard, the system itself encourages individuals to prefer this kind of behavior in hope of larger pay check.

“Everyone loves to be praised, since it just feels so good” (interviewee A)

The “human factor problems” in productization process are usually somehow related to egoistic behavior of the individuals and A points out, that this isn’t always caused by the financial compensation but rather by the need to need to feel valued and appreciated. As observed above, the successful productization process needs many experts in different fields of profession and as the number of participants rises, it comes more difficult to give credit to each individual. This is problematic because experts tend to value their own work high and expect to be rewarded and/or valued, and without the proper given credit afterwards, the interest to participate in future projects might lower. Furthermore, these situations might create tension between individuals and lead to cases where the best in their work are left out due their

incapability to co-operate and share the glory. A doesn't want to make any generalization but participant has noticed that highly technical experts sometimes lack the understanding of the human factor in projects.

More deeply studying of these human factors would mean throughout understanding of psychology which is out of the scope of this study. More important for this study is to highlight the fact that according to A's interview, these factors affect highly the productization process but in literature, the human affect was left almost completely mentioned. This could be the next research topic.

3.3.5 Organizational silos in productization

Silos in organizations mean that the different organization lines tend to work more as an independent organization inside the main organization failing to cooperate with each other. While organization needs to have different teams to be able to deliver services, unnecessary silos temper the overall success of the organization (Serrat 2017, 711-712). Participant A sees, that in professional organizations the overall strategy and structure of the organization is harder to define than in more traditional organizations. Basically, this means, that in professional organization silos are more present than in traditional organizations.

“It is much more native in (non-expertise) organizations to work together for the productization process because organization's profit is dependent on it, but in expertise organizations, like consulting firms, each service line is accountable”. (interviewee A)

In productization process silos can cause various problems. Firstly, A states, that every service line prefers to have the revenue to themselves which means that the whole process is kept inside the own organization line even though there could be other lines who have better competences. This usually leads to the situation where the service line does still need help from another, but they still keep the service to themselves causing frustration inside the other. A's solution to this would a separate neutral unit which is responsible of all the productization process. This would solve the possession problem, and share the project to the best units available, but B sees a problem in this while this could lead to situations where productization unit keeps pushing more and more new products to the manufacturing units but fails to follow how do they succeed in practice.

According to both participants the solution would be to manage these silos correctly: to be able to define the lines and their areas of expertise correctly without overlapping. But as stated many times, this just isn't said and done.

3.3.6 Results' validity, reliability, implications

In a qualitative research, the full validity can never be accomplished for example due social construction: it is not appropriate to try to find only one truth. Both interviewees' have their own social and professional background so questions presented in the interview are being interpret on different basis which can affect the answers. Results and conclusions stated in this study were done in objective way using good scientific methods which adds the validity of the study.

In this study, the topic can be described more as professional than as personal. In most cases, this should mean better reliability for the answers since the interviewees' answers are not related closely to their personal life. Also, this topic and answers are not related in any way to their performance or other factors in their jobs, so interviewees have no motivation to not be honest in their answers. The conciseness of interviews causes problems when evaluating the reliability: in the interviews some points were mentioned by both interviewees but most of the factors were only introduced by one interviewee. As in Grounded Theory – research methodology, the goal is to gather new information as long as there is no more new information available (saturation), the scope of this research never exceeded that point. However, factors brought up by the interviewees can be seen as at least their subjective interpretation of the topic and as stated earlier, due their professional background and due the fact that they do not have motivation to twist their answers, a reasoned presumption can be made that the reliability is maintained.

Implications of the results is affected by the fact that this research only used two interviewees, which both work in the same organization. This could be easily better by interviewing more experts in different organizations and positions. Nonetheless, as discussed above, findings in the interviews can be seen as valid so further research should bring up same findings but also new ones. For these reasons, the results of the study can be generalized to a certain extent.

4. Discussion and conclusions

In this study the aim was to figure out the best practices and special factors in the process of productization of professional service. Research was done by familiarizing the current theoretical literature that was available both in Finnish and in English and conducting interviews in a Finnish case-organization during winter 18/19. In this chapter, the study presents further discussion and conclusions which are not already mentioned in chapter 3. Firstly, the study answers to the research questions:

“How is the productization process in professional organization and services?”

In previous literacy, the productization process consists of components and including all of these components to your process should give you a rather good end result. Sipilä (1995, 13), Kantola et al. (2009) and Parantainen (2010, 143) all had different approaches to inventing the “product” but they all listed this step as one of the first to be done. In the interviews the market interest and marketing plans were emphasized, and B highlighted that the product should be prepared for delivery without any unnecessary delays. Before the sale the product needs detailed description, how it could be done, which means the documentation and the product description (Sipilä 1995, 35; Tonder 2013, 82-85; Jaakkola 2011, 226; Salo et al. 2014). Final step before the sales and start of manufacturing is all the necessary legal work, which should be done in co-operation with the legal professionals (PRH 2015). Once the manufacturing starts, it is important to collect feedback and act based on it and constantly evaluate this particular service to others provided and how they interact with each other (Parantainen 2010, 232-233; Romero & Molina 2011, 468). If the aim is just to answer the research question based on the theory and interviews, the process/levels could be something like:

1. *Invent idea for the product*
 - *If doesn't come up naturally can be sometimes found by investigating the industry and its needs*
2. *Check the facts*
 - *Market research*
 - *Execution plan (and confirm that it can be done)*
 - *Marketing plan*
3. *Find the customer, and confirm the interest*
4. *Check the paperwork*
 - *Legality, contracts etc.*

5. *Seal the deal with customer*
6. *Start manufacturing*
7. *Keep the service going*
 - *Collect feedback*

Obviously, the list above is very stripped-down view on the issue but considering the points stated before, the researcher sees that the focus is in the components, not in the process itself. In the interviews, the results did not focus on the methods but on the levels the product needs to achieve before it can proceed in the process. This could mean that in professional organizations the best practices are more as given, and more important is that there is interest in the markets. The market interest and capability of handling the project were the factors that were brought up in the interviews affecting the success of the process.

In the interviews the focus was more on the customer-based thinking: “what does they need/want?”. The levels presented in the interview aimed to shorten the time it takes for the product to reach customers and while this can be a tactic to battle competitors, can it also be a customer-orientated action helping their business without any unnecessary delays.

One point which also raised in the interviews was that now the productization process aims to sell the product as a service. Even though most of the “products” in expertise organizations portfolio have been services, the trend is to sell everything as a service like introduced in 4.3. Actually, this also has a customer-orientated aspect when customer is not obligated to buy the service or product to a predefined time period but has a possibility to pay and use it any amount of time which is suitable to their businesses.

As a conclusion and as an answer to the first research question, the process itself doesn't play that big of a role in expertise services but rather the factors. The second research question tried to reveal these:

“Which are the key factors affecting the productization process?”

While the first question was supposed to focus more on the process, it also gave answers about the factors behind the process as these two can be inseparable from each other's. Based on the literacy, the researcher expected to get answers focusing mainly in factors like the market research and product description since these were talked a lot. And while some of these practical factors, like market interest and execution plan, came up, the more interesting and surprising

were the “human factors”. As a bit of an over-generalization, the first research question gives answer that in expertise organization, the practical process of productization itself is adopted and finalized. This means that the problems are linked in these external factors.

Mainly these human factors are causing negative effects on the process: people persuading more on their own goals rather than company’s, not working together, silos in the organization etc. Based on interviews, these phenomena tend to be more problematic in expertise organization where the role of an individual is higher than in regular organizations. In technical processes the main attention has traditional been on the practices while the meaning of the subject, the executor, has been left out. In this research, the purpose of this highlighted in the interviews. The researcher sees that this could be caused due the fact that over the years the practical process has been examined and redefined completely and yet still, sometimes the process has failed. Since the factors has to be looked outside the process, it has brought up these new external factors. Problematic in these factors are, that they are no more related to business which basically means that examining these more deeply does require knowledge on psychology and human behavior which, at least according to the interview, lacks from technical experts. In further studies, they could be conducted in co-operation with experts who have the psychological expertise and with business experts.

4.1 Further topics

The researcher has come to the conclusion, that at this point, the process of productization has been examined widely meaning that further studies do not present that much of new information. But in the process of making this study, the researcher faced external factors affecting the process of productization significantly. The research did not present clear solutions how to reduce the existence of these factors nor the effect these factors have on productization process. This could be topic further studies focus on. On one hand, these factors probably affect also other areas of businesses besides productization process so examining them independently could provide some answers. But on the other hand, trying to eliminate and fix these phenomena from one point of view could cause unexpected issues from another point of view. This is the same as incentives; properly set they can encourage workers to perform harder but sometimes they lead to un-wanted behavior. All in all, this seems rather interesting topic to focus on in the future.

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APPENDICES

Appendix 1. Levels of Productization In Literacy

Sipilä (1995, 13) starts with a four-stage list where at the beginning the focus is more on the organizational level and at the end on the product level:

1. Productization of inner processes
 - a. Processes inside the organization have been organized and standardized
2. Services with a product support
 - a. A service which is sold with product support, such as softwares
3. Productized service
 - a. Processes and procedures have been standardized as far as it is possible
4. Duplicatable product
 - a. Service is in such a form that its features resemble as closely as possible a physical product's features and this service can be duplicated and distributed

Arzt et al. (2010, 90-102) divide state of productization in six stages and they have slightly different perspective than Sipilä;

1. Stage 1 – Independent projects: firm's portfolio consists of independent projects specific for each customers' needs and each varies from one and other with specs, budget etc.
2. Stage 2 – Reuse across projects: in this stage, the amount of custom based projects is still larger than standard projects although projects start to re-use same components between them.
3. Stage 3 – product recognition: Company starts to recognize similarities between individual customer needs and solutions offered to the customers turn to use more standardized parts than customized ones.
4. Stage 4 – product basis: Offered solutions to customers begin to form a structured entirety, that can be customized, developed and produced. Company needs to gather information about the market requirements and needs for the planned product
5. Stage 5 – standardized product platform: This is a next step stage from stage 4: the product has been announced to the markets. At this point, the product is a set of features that can be efficiently be customized, developed and produced.
6. In stage 6 the company decides to go with a customizable product, where this is offered only to specific customers, or with a standard product, where solution is offered as a complete model to everyone.

Rope's (2006, 94-95) listing can be seen somewhere in the middle between Sipilä's and Artz's et al.:

1. Unique, non-structured product, where each case is a customer specific project, which is not even supposed to be replicated. Level of customization is 90-100 %.
2. Tailored product, which includes only minimum of structured parts, while most of the product is tailored for customer needs. Level of customization is 50-90 %.
3. Applied product, consisting mostly of different structured parts, which combination is selected based on customer needs. Level of customization is 10-50 %.

Package product or shelf product, which is sold as entirety every time without nearly any customization. Level of customization is 0-10 %.

Appendix 2. Survey Form

- What is a “product”, how would you define it?
- And how about productization, how would you define it? Is your opinion different than *name of the case organization*?
 - When a product is productized?
- If you do have experience history-wise, has the process of productization changed during the years?
- If we go into the productization process itself, is there a specific way that you tend to follow/Case organization follows?
 - How this productization can be seen in products?
 - Has the products original nature/purpose/scope changed during the process?
 - After productization, how does it affect the further steps (e.g. sales)?
- During the years in your career you have probably learned to know a lot of different people, customers etc.
 - Has this affected the productization process; new customer versus old customer?