



TEKNILLINEN TIEDEKUNTA

Productization of legal services

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<p>Tiivistelmä</p> <p>Tutkimuksen tavoitteena oli selvittää, miten lakipalvelut voidaan tuotteistaa. Tutkimus kattaa kirjallisuuskatsauksen asiantuntijapalveluiden tuotteistamisesta sekä lakipalveluiden erityispiirteistä. Tutkimuksen tavoitteena on luoda konsepti lakipalvelun tuotteistamiseksi. Tutkimuksen vaiheet ovat: kirjallisuuskatsaus, sääntelykatsaus, kyselytutkimus ja haastattelut. Näiden tulosten perusteella todetaan, mitkä ovat olennaiset seikat lakipalveluiden tuotteistamisessa, mikä on prosessi tuotteistamiseen ja miten luoda onnistuneita ansaintamalleja tuotteistettujen lakipalveluiden ympärille.</p> <p>Kirjallisuuskatsauksessa tunnistetaan useita avainseikkoja lakipalveluiden tuotteistamiseksi. Kirjallisuudessa on jo aiemmin käsitelty prosessia asiantuntijapalvelun tuotteistamiseksi. Tässä tärkeimpinä seikkoina ovat olleet arvonluonnin ymmärtäminen, palvelun rakenteen hahmottaminen sekä palvelun vaiheiden muuttaminen modulaarisemmaksi ja toistettavammaksi. Lakipalveluista tunnistetaan myös erityispiirteitä, mitkä täytyy huomioida niiden tuotteistamisessa. Merkittävimmät seikat liittyvät olemassa olevaan sääntelyyn eli lakeihin, Suomen asianajajaliiton sääntöihin sekä oikeuslaitoksen ja viranomaisen prosesseihin. Tämän vaiheen päälöydökset ovat, että on mahdollista tuotteistaa lakipalvelu ja luoda ansaintamalli tuotteistettujen palveluiden avulla, mutta lakipalveluiden osalta tähän on tiettyjä rajoituksia.</p> <p>Kirjallisuuskatsauksessa tunnistetaan useita avainseikkoja lakipalveluiden tuotteistamiseksi. Kirjallisuudessa on jo aiemmin käsitelty prosessia asiantuntijapalvelun tuotteistamiseksi. Tässä tärkeimpinä seikkoina ovat olleet arvonluonnin ymmärtäminen, palvelun rakenteen hahmottaminen sekä palvelun vaiheiden muuttaminen modulaarisemmaksi ja toistettavammaksi. Lakipalveluista tunnistetaan myös erityispiirteitä, mitkä täytyy huomioida niiden tuotteistamisessa. 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Haastatteluiden perusteella tunnistetaan muita avaintekijöitä lakipalveluiden tuotteistamisessa. Yksi tällainen seikka on, että useat asiakkaat hakevat dokumenttien ja oikeudenkäyntipalvelun lisäksi varmuutta siitä, että asia on hoidettu. Toinen havaittu avaintekijä oli, että eri oikeudenalojen palveluiden välillä on merkittäviä eroja tuotteistamisen mahdollisuuksissa. Haastatteluissa havaittiin myös kaksi olennaista seikkaa, jotka estävät lakipalveluiden tuotteistamista: muutosvastarinta sekä yksityisellä että julkisella puolella ja nykyiset viranomaisprosessit.</p> <p>Näiden vaiheiden perusteella voidaan luoda konsepti lakipalvelun tuotteistamiseen ja automatisointiin. Konsepti johdetaan asiantuntijapalvelun tuotteistamisen konseptista, mutta siinä huomioidaan myös lakipalvelun erityispiirteet. Tämän mallin pääasialliset vaiheet ovat arvonluonnin tunnistaminen, palvelun rakenteen ymmärtäminen, ansaintamallin pohtiminen, skaalattavuuden analysointi, palvelun uudelleenjärjestely modulaarisuuden ja skaalattavuuden lisäämiseksi, sääntelyn analysointi ja lopulta automatisaatio. Malli huomioi automatisointikohteita valittaessa sekä sääntelyn että arvonluonnin näkökulmat.</p> <p>Tutkimuksen tärkein tulos on lakipalveluiden tuotteistamiseen liittyvät merkittävimmät rajoitukset ja esteet. Tämä löydös on merkittävä, koska lakipalvelun tuotteistaminen eroaa asiantuntijapalvelun tuotteistamisesta. Toinen merkittävä tulos on konsepti lakipalvelun tuotteistamiseen. Mallia voidaan käyttää useimmissa lakitoimistoissa liiketoiminnan uudelleenjärjestelyyn ja uusien tuotteistettujen lakipalveluiden ja niihin liittyvien ansaintamallien kehittämiseen. Mallia voidaan käyttää laki- ja asianajotoimistojen lisäksi myös muissa lakipalveluita tarjoavissa yrityksissä. Tutkimus tuotti uutta tietoa aiempan tuotteistamista koskevaan tutkimukseen laajentamalla sitä lakialalle sekä kohdentamalla sitä tietyille maantieteelliselle alueelle. Tutkimuksen tuloksia voidaan käyttää tulevissa lakialaa koskevissa liiketoimintaa ja tuotteistamiseen käsittelevissä tutkimuksissa. Tutkimuksen tuloksia voidaan käyttää myös tutkittaessa asiantuntijapalveluiden tuotteistamista pidemmälle. Osa tuloksista koskee vain Suomea johtuen sääntelyjen eroista eri valtioissa, mutta konsepti lakipalvelun tuotteistamiseen on yleismaailmallinen.</p>			
Muita tietoja			

ABSTRACT

FOR THESIS

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<p>Abstract</p> <p>The goal of my research was to find out how to productize legal services. This study includes analyzing previous literature about productization of expert services and finding out special issues related to legal services. The goal of the study is to create a conceptual model for productization of legal service. The study includes literature review, regulation review, survey and interviews, which all are combined to find out, what is essential in legal services and how to productize them and successfully turn productized services to business models.</p> <p>Several key points were recognized in the literature review. There is a process to productize an expert service. Main points of this process are recognizing the value creation to customer, understanding the service structure and making service phases more repeatable and modular. There were also some special features related to legal services that must be taken account when productizing these services. There were also major issues about earning model in these productized services. Some issues were related to law, others to Finnish bar association rules and others to court processes. Main findings of this review were that it is possible to productize legal services and create an earning model around these services, but in field of legal services there are limitations to that.</p> <p>In the empirical part of the study there are two different methods: survey and interviews. Survey was related to acceptable costs in courts. The results of this survey were that it is currently difficult to create earning model around productized and automatized legal services that are related to litigation as there is no clear line whether these costs are accepted in courts. In interviews several productization experts with background of productizing legal services were interviewed as well as representatives of Ministry of justice, Finnish bar association and Finnish lawyers' association. These interviews revealed some other key points related to productization of legal services. Main points were that some customers are looking for other value than just the documents or litigation, for example certainty and that there are major differences between productability of different fields of law. Two main points for preventing productization and automatization were recognized: reluctance to change processes in private businesses and in courts as well as current court process.</p> <p>It was possible to create conceptual model for productizing and automatizing legal services. The concept derives from model for productizing expert services, but it does also take account special features of legal services. Main phases of the model are recognizing the value created to customer, understanding the services structure, analyzing the earning models, analyzing scalability of service phases, restructuring services in order to make some service phases modular, analyzing the regulation and finally automatizing phases that are suitable for automatization in the viewpoints of regulation and value creation.</p> <p>Most important finding of the study are the main restrictions and limitations for how to productize legal service, as it differs from productizing expert services in general. Other main finding of the study is the conceptual model how to productize legal service. The model can be used in most law firms to restructure their business and create new productized legal services as well as turn them into profitable business. This model can be used in law firms, but also in other firms offering legal services or willing to do so. The study added previous research on productization of expert services by expanding it more in the field of law and specially in certain country. The results of the study can be used in future business and productization studies related to law firms, as well as productization of expert services. The results on limitations and requirements can be directly applied only in Finland, but conceptual model can be used regardless of nation.</p>			

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1. INTRODUCTION

1.1 Background

The amount of services and value added by them has been increasing in developed economies for decades. When a country develops their economy, more advanced technologies are acquired and amount of capital increases while the amount of labour does not increase. In these situations the significance of agriculture and industrial production seems to diminish and the amount of services seem to increase. This has been the case in all developed economies so far and the development has been recognized decades ago. (Kenessey 1987) The service sector has been major source of economic growth in Finland during last three decades. (Valtionvarainministeriö 2018) In the businesses the significance of service operation management has increased during recent years in order to increase profitability and productivity in service firms. The development has been due to increased competition in the service industry, which has led to need to increase productivity and value creation to customer. This way of thinking has been adopted even in law firms in several countries. (Levis 2012) When transforming the thinking to the professional service operation management, the company focuses more on customers, service processes, professionals and skills. (Levis 2012)

In addition to the plain increase in service industry, the production industry is rapidly adopting new service-based business models. Currently two thirds of production companies are selling their products as a service and approximately 30 % of income in product industry come from selling services. (Vendrell-Herrero 2017) This development where manufacturers are offering services based on their products is called “servitization”. (Coreynen 2017)

Automatization using information systems enables are rapidly changing services and their sales. This is comparable for how industrialization changed production of goods at the 1800’s. Digitalization and automatization require brand new customer orientation. Value creation for the customer and service provider is much harder in automatized services. (Baines et. al. 2009) Automatization and information systems enables unprecedented value creation for customer and service provider by making new ways of communication and interaction with customer possible. (Lenka 2016) Digital service

differs from traditional services, digital service might not fulfil all requirements for being classified for service: intangibility, uniqueness, consumption simultaneously with production and impossibility for storing. Automatization and digitalization and how they changes the field of knowledge-intensive services have been analysed widely in the literature earlier. (Ritala *et al.* 2013) Digitalization is also a major driver for servitization and automatization as it enables new goods that can be sold either as services or products, as well as developing new services using already known products. (Coreynen 2017) This study focuses on automatization as digitalization is a wider concept, although it is the main enabler of automatization.

In this research a case company is used in order to gain more information on structure of legal services: service phases, sub processes and service models. Interviews in the case company are necessary in order to understand how legal services are completed and offered, which phases does a typical service include and which are the most common cases. Interviews of the case company support the information on several field-specific questions: which services are the most common in the field of legal services, and which are the largest requirements and obstacles for the productization process. Case company is a new company providing legal services. Case company is currently partner in several automatization project that target automatization of some legal services. Case company plans to cause disruption in the field of legal services.

On legal services customer does in most cases receive a document or advice, customer can benefit legal service after receiving it due to gaining more resources from service. (Chowdhury 2011) Therefore legal services include co-production of services and goods. The product can be divided on two parts: technical and the commercial part. (Tolonen *et al.* 2014) In legal service the commercial part includes service- and product-components. This means that in productization of legal services both parts must be taken account. One goal of the research is to find out, whether it matters on productization if either of components is more significant for customer in specific case types.

There are several providers of legal services in Finland for private persons and companies. Companies offering legal services offer almost always litigating, but beside that several other services like contract drafting, *due diligence*, drafting official documents and providing tax advices. All legal services are not provided by law firms, i.e. accounting firms often offer advices on tax issues. Legal service providers in

Finland can be divided in several sub-categories; this is just one way to illustrate the field in Finland:

- Large attorney companies offering high-end business law only to business customers and extremely wealthy individuals,
- Small and medium-sized attorney companies with several attorneys and assistants offering services to business customers and private persons,
- Small attorney companies with only one or two lawyers and possibly assistants providing services mostly to private persons and mostly providing litigation and family law services,
- Large law firms, this group includes only one company, which is a listed company,
- Large and medium-sized law firms,
- Small law firms,
- Companies providing legal services without being attorney companies or law firms.

Difference between attorney company and law firm is that only attorneys can own attorney companies, but anyone can own law firm. Attorney companies are also under stricter regulation and all advantages of limited liability companies do not apply to them, i.e. all attorneys have personal responsibility to their customers. (Laki asianajajista 496/1958 5 §)

1.2 Research goals

Goal of this research is to recognize how legal services should be productized and automatized. Other goal is to categorize legal services depending on factors that affect productization. First depending on how major parts product and service parts make of legal service. Second way for categorization is how crucial human interaction is for these services: on some cases human presence is imperative, for example when having oral hearing on court.

One more goal of this research is to recognize how productization project should be done when automatizing legal services, this is answered by creating a conceptual model that could be used in law firms. Research questions in this study are:

1. Which are key issues that must be taken account when automatizing legal services?
2. What are limitations and requirements for profitable business models when productizing and automatizing legal services?
3. What is the conceptual process when productizing and/or automatizing legal services?

Case company does have some business goals for this research. Case company aims to know, which are key resources when automatizing legal service. Case company also aims to be able to start new productization projects based on conceptual model. In addition to this, the results of the study might be usable to predict some future development in the field of legal services in different areas of law. These questions will be answered in order to achieve enough depth in the productization analysis, productability of services cannot be analysed without having analysed the services up close.

There are also wider interests in society for this study: legal services will be productized and automatized in the future. This will change the field of legal services and legal administration. One major issue is changing cost structure and the possibilities and extent of automatization in legal services. Public interests for this study are related to legal administration: how pricing models in legal services should change, how much automation should be accepted and how public processes of legal services has to change.

1.3 Implementation of the study

Literature review conducted in chapter 2 will study general theory of productization, value creation in expert services and automatization viewpoint of providing services to customer. In this study expert services are defined as Miles (2005) defined them: knowledge-intensive services are services, which are not based on physical work or natural resources but expertise and knowledge. Literature review will be based on the nature of these services, as well as modern theory about productization.

As legal services are heavily regulated, legal restrictions for automatization and productization of legal service must be analysed with legal methods. Main sources for analysing the regulation in legal services are laws related to litigation and working as an

attorney. Other main source is ethical code of Finnish bar association, the ethical code is binding regulation for attorneys, and acting against it might lead to attorneys losing their license to act as an attorney. Therefore, the ethical code affects the legal services almost as much as laws. These legal issues are analysed together with literature review as they are significant when setting up the questions in the empirical part.

Third chapter of the study consists analysing the existing legal services and conducting interviews related to possibilities of product servitization. This phase also includes creating a survey about acceptable costs in courts, as they are major part of earning model in the field. At this phase existing legal services are analysed. In this phase traditional legal services are analysed as well as new automatized legal services. For analysing possibilities for future productization projects, some legal services that are currently not automatized are also analysed. Legal services are analysed by using framework of productization of legal services created in the literature review. Some productization experts are interviewed in this phase as well.

Chapter 4 includes concept development. At this phase target is to create general concept for productization of legal service. In this phase of literature review, analyses of services and analyses of case company will be combined. Expected results are key points for successful productization of legal service, especially when using digital tools for productization and automatization. At this phase some suggestion to productize some service phases and some services in different legal fields will be made. At conclusion phase these results are combined with case company processes and services. Other goal of this chapter is to create a concept how case company could productize their legal services. Concept includes recommendations on planning productization, organization, governance and maintenance.

Chapter 5 includes conclusions based on earlier chapters. This synthesises the research questions and answers to them, evaluation of the study and review of main results. This chapter also links the results to existing discussion on productization of expert services.

Legal services and providing them varies in every country and in some cases even within a country. Therefore, this study is geographically limited only in Finland, although most results do apply in almost all legal systems. However as national legislation and ethical code of attorneys is also analysed, it is safer to restrict the results

to apply only in Finland. There are two reasons for these differences how legal services are provided:

1. National law. Laws are different in all countries. On most cases no lawyer or attorney has required skills to work on another country due to different laws and regulations on that country. There are some exceptions to that, i.e. when lawyer works with international law or widely harmonized law like EU regulations or IPR-law.
2. National law and regulation on providing legal services. On many cases there are restrictions on who can provide legal services, and at least attorney services are regulated in all 47 CCBE countries. Therefore, in many cases national regulations and ethical codes might restrict on providing legal services, which causes differences between countries.

This study does include harmonized regulation where services can be provided similar ways in different countries, and they are analysed as their own category. This study does also include services based barely on national law. If nothing is mentioned, analysis of services applies to both groups. This study does not include legal services provided by mostly other firms than law firms, for example accounting or technical due diligence. This study does not cover productization of publicly produced legal services like court processes and criminal investigation.

Table 1. Phases of the study

Chapter	Content	Research question
1. Introduction	Background, research questions, overview.	N/A
2. Literature review	Productization, service productization, modularity, special issues when productizing legal services.	Which are key issues that must be taken account when automatizing legal services?
3. Interviews and case study	Research method, analysis on possible earning models, special features of legal services, productability in different fields of law, situation in the case company, benchmarking.	What are limitations and requirements for profitable business models when productizing and automatizing legal services?
4. Productization of automatized legal services on conceptual level	Concept of productization and automatized legal service, concept of automatized and productized legal service.	What is the conceptual process when productizing and/or automatizing legal services?
5. Conclusions	Conclusions, evaluation of results, future possibilities.	All research questions mentioned earlier

2. LITERATURE REVIEW

2.1 Productization in general

2.1.1 Definition and concept of productization

Productization is an old term, it has been used for over 20 years. (Härkönen *et al.* 2015) Productization is widely used term in managerial magazines, seminars and literature. Managers tend to be widely familiar with the term and practises of productization. (Jaakkola 2011, Härkönen *et al.* 2015) In the literature review by Härkönen *et al.* (2015) productization seems to be most commonly defined to be:

“process of analysing a need, defining and combining suitable elements, tangible and intangible, into a product-like object, which is standardised, repeatable and comprehensible”

Although managers seem to see productization through practices, and especially related to three key practises (Jaakkola 2011):

1. Specifying and standardizing the service offering.
2. Tangibilizing and concretizing the service offering and professional expertise.
3. Systemizing and standardizing processes and methods.

Definition of productization in the literature and understanding of concept of productization in the business do not differ a lot. Key points of both definitions are around standardizing processes and products so that products or services might be repeated again with same resources and same results. Other key point is understanding what the company is offering and resources that each different part needs.

In the literature, productization is often divided based on what is productized: productization of products, productization of services, productization of software and productization of technology. Productization of products is the most common subject in the literature, productization of services coming second. (Härkönen *et al.* 2015) This study will mostly focus on productization of services, due to legal service being mainly a service. However, part of the study will focus on productization of products, as legal services do in some cases produce some usable products, like different official document, wills and documents containing information.

Legal service is defined to be knowledge-intensive service. (Valtakoski 2016) Being knowledge-intensive service means that employees' knowledge is a critical resource for the service. (Robertson *et al.* 2003) Wider definition for knowledge-intensive services is that "they are based more on intellectual capabilities and knowledge-based professional services more than on physical activities or natural resources." (Kuula *et al.* 2018) In the earlier research there have been results suggesting that employees in knowledge-intensive services have tendency to oppose codification of their knowledge and productization of the service. (Valtakoski 2016) Earlier typical type of productization in law firms have been reusing knowledge from previous projects. (Valtakoski 2016) This has been common practise in the field of knowledge-intensive services, as the services has been highly customized based on the context and needs of the specific customer the service is tailored for. (Kuula *et al.* 2018)

There are several advantages in productization highlighted in the literature. Productization is seen as a key for combining technological and commercial thinking and due that making it possible for gaining commercial success for technological solutions. Productization is also seen as a tool for making scalability and repeatability of the product possible, especially in the software industry. (Härkönen 2015) These advantages are being able to respond more on customer demand and provide new solutions to the market quickly and effectively. (Hänninen *et al.* 2012 pp. 19-21) In the knowledge-intensive services productization seems to give some advantages that mass production gave earlier in production of goods: repeatability and scalability. (Kuula *et al.* 2018)

Regardless, the exact advantages of productization and productization's effects to profitability is still unclear and requires more research. (Valtakoski 2016) Companies see that productizing new products and services is an opportunity to respond to demand, and trough that gaining profits, growth and/or rise in market share. At some cases productization is used to gain only better position in the markets due to gaining more suitable product portfolio or providing products to strategically important field. (Hänninen *et al.* 2012 s. 19-21)

Advantages of service productization requires a separate review, which will be covered in the next chapter. Value creation in the productization of legal service will be covered partly in the chapter covering service productization in general and partly in chapter analysing legal service and different possibilities for productizing legal service.

Disadvantages of productization are not highlighted in the literature, but some general disadvantages could be stated. One is the work that is required to adopt model of thinking and governing and work required for systemizing operations and keeping the system updated. Other disadvantage or challenge in productization in legal field might be the change in earning model, like Rotko (2017) have analysed in his research. Although this can be seen as something inevitable and therefore not as disadvantage, but a challenge that the whole profession has to overcome. Other challenge in productization is understanding what kind of solution customer needs and how information is transferred from sales to production and other way around. (Hänninen *et al.* 2012 s. 19-21)

These points make it appropriate to analyse productization in law firms in a separate chapter partly outside the scope of service productization. In the next chapter I will discuss about service productization as a concept and introduce some key points in legal services to a context of service productization. In the next chapter I will also start to discuss how automatization can be driving force for productization and how automatization and information technology can be a vital parts in service productization.

2.1.2 Service productization

Service productization is defined as a process that aims to systematize and formalize both the content and process of the service. (Gallouj and Weinstein, 1997 p. 537-556) At some literature service productization is defined as formalized type of service innovation, while innovation is defined to be process developing and introducing a completely new or improved service to a firm's offering. (Valtakoski 2016) Therefore service productization would mean formalized process for developing and introducing a new or improved service to a firm's offering. Wider and more detailed definition is defined by Härkönen *et al.* (2015 p. 70-71):

Productisation is the process of analysing a need, defining and combining suitable elements into a product-like object, which is repeatable and comprehensible. Productisation activities cover those for commercial readiness to enable selling, delivering, using and invoicing. Productisation in the context of services addresses the objects of exchange that are typically abstract and intangible and has a specific role in clarifying the service offering, creating replicability and enhancing understanding of the offering.

However, the definition of service productization remains unclear, even if it is used more and more widely on research. (Härkönen 2017 p. 937) Most definitions do however see service productization as process for offering product-like services, and this having something to do with managing elements forming the service. (Härkönen 2017, p. 937, Härkönen et. al., 2015 and Jaakkola 2011) Systematization is also seen as a key part of different definitions of service productization. (Härkönen 2017, Jaakkola 2011) Systematization includes mostly documentation and describing working methods, but it does include as well documentation of service blueprint e.g. customer interaction with service and what happens behind that. (Härkönen *et al.* 2017) In this research the productization is analysed mostly on three parts:

- Systematization of previously unsystematised service,
- Structuring legal service on relevant elements,
- Changing the commercial part of value creation from traditional time-based billing for solution based-billing (As researched earlier by Rotko 2017).

As stated earlier, the definition of expert services or knowledge intensive services that is used in this study come from Miles (2005), who defined them: knowledge-intensive services are services, which are not based on physical work or natural resources but expertise and knowledge. Productization of these expert services can provide significant benefit for pricing and value creation. (Baines *et al.* 2009) Service productization and commercialization of this productized service are based on the idea of improving cost-efficiency by reducing operations that consume resources without creating value to the customer.

The process of productizing of the service is defined by Härkönen *et al.* (2015) This process includes analysing a need, defining and combining suitable elements into product-like object, which is standardised, repeatable and comprehensible. The process includes also actions needed to make service to be ready to be used commercially. The elements of productization process that are analysed in this study in the context of legal services are:

- Analysing the need and payment issues as the one needing services is not always the one paying for them in legal services,
- defining different parts of legal expertise and actions required in the service,

- combining these parts to modules that can be standardised at least in some level and repeated,
- earning model and pricing of these services.

Previous literature about the issues of productization in knowledge-intensive services covers the issues around employees resisting against the codification and automatizing their knowledge. (e.g. Valtakoski 2016) These issues are not covered more deeply in this study. There is also literature about management of service productization.

Härkönen *et al.* (2017) have defined which are considered as key elements in service productization in most definitions:

- Customer orientation,
- Clarification and documenting service processes,
- Working methods,
- Service offering,
- Modularization of services,
- Service blueprinting,
- Customer benefits,
- Market potential, volumes and competition,
- Piloting productized services.

These all elements will be analysed when considering how to productize a legal service in general. These elements are covered up more deeply later on this chapter as well as in chapter analysing the productization of legal services and how these elements fit to traditional legal services. Main idea of these elements seem to be understanding the service and making it easier to understand, understand what customer needs and how the organization can offer it and how it is doing the service.

While productizing service, it is required to clarify the service offering and understand which core services are and which are supporting or additional services. (Härkönen *et al.* 2017) One essential part of this productization process is dividing essential part of the service to components, which include all parts, which the service that the customer receives is built. In the other literature this is known as modularisation of service, which means practically understanding different parts of service and how to divide them on separate parts. (Baldwin and Clark 2000, Härkönen *et al.* 2017) When the content of these components is known, it is possible to define the cost structure of these, which

means that it is possible to define more accurately the overall cost of service. Due to this, clarifying and documentation of service process is seen as an essential element in the productization of services. (Härkönen *et al.* 2017 pp. 949)

One of the main points in service productization is customer orientation, this is due to service characteristics. Customer value and customer benefits are also linked to customer orientation. Customer orientation and advantages to customer are defined on many ways in the literature. (Härkönen *et al.* 2017) Customer orientation requires understanding customers business, otherwise it is impossible to know what customer needs and therefore offer solution to that. (Ritala *et al.* 2013) One main point in customer orientation is making service offering clear, transparent and understandable to the customer. This includes also clarifying the customer benefit prior productizing the service. (Jaakkola 2011, Härkönen *et al.* 2017) This is practically done by making the structure of the service understandable by presenting different service elements separately and making tailoring them possible at some cases so that customer understands what he/she is buying and how her/his choices can benefit him/her. (Härkönen *et al.* 2017)

At some literature productization is seen to improve service management and resource usage. This is due to improved understanding of service and service offering. (Härkönen *et al.* 2017, Kwak & Kim 2016) Productizing services is even seen as a key tool for understanding the key capabilities of the company offering knowledge-intensive services. (Ritala *et al.* 2013) Productization seems to help to understand the organization itself better, which is often an advantage on its own.

According to literature, main advantages of service productization are scalability, repeatability and enhanced implementation of the service. (Härkönen *et al.* 2017, Valtakoski *et al.* 2016) In the knowledge-intensive service, like legal service, main advantage is highlighted as codification of knowledge improves repeatability of service on completely new scale, making reuse of knowledge possible. (Valtakoski *et al.* 2016)

There is one precedent on whether completely automated legal service is allowed in Finland or not. The supervisory board of Finnish bar association decided on 11.6.2007 whether it was against good conduct of attorney when attorney automatized making wills and prenuptial agreements. The system was made following way: customer decided what they wanted and then they got a list of possible clauses which they could

include on their order, and then after the payment the system wrote the will or prenuptial agreement. The supervisory board decided that this was against attorneys' code of conduct because the attorney did not ensure that the document was what the customer wanted, and that customer had understood what they really needed. The Helsinki court of appeal handled the appeal and ended in same result: the attorney had acted against the code of conduct when he/she did not ensure that the document was something the customer wanted and needed. (Helsinki court of appeal 31.8.2008 decision number 229) Therefore the lawyer received public admonition due to breaching code of conduct. The judgements were based on the same idea than argument against knowledge codification in general: machine can make mistakes, but human can understand something deeper and has more wholesome understanding and therefore human should always check what the machine had made.

The rationale behind this judgement can be heavily questioned, but it will not help businesses willing to productize and automatize legal services in the future. Therefore, this work will take previously mentioned issues in account. These issues are following:

- It is not allowed to completely automatize legal service,
- the document or advice produced by program must go through lawyer's evaluation before sending to the customer,
- previously mentioned restrictions do not apply when companies offering them are not law companies e.g. companies under Finnish bar associations supervisory board.

Some advantages from service productization are seen to be gained by reducing overlapping work and improve quality. This is gained by defining, clarifying and documenting the service process so that it is understood better within the organization. (Härkönen *et al.* 2017) This applies also to the legal services, especially services produced with several lawyers and/or trainees: if people know what others are doing, the overlapping work is reduced and one's own work can be done better when understanding other parts of the service process. Other advantage of service productization is modularity that enables customisation and increases possible customer choices therefore making the company more able to respond on customer demand as well as making it easier for the customer to understand the product and therefore increasing demand. (Voss & Hsuan 2009) Most businesses see that service

productization makes it easier to sell and buy services as it is easier to understand specified and standardized services. (Jaakkola 2011)

In the small companies offering knowledge-intensive services productization has given several advantages. In the short term productization has changed the services on more customer-oriented, which has increased value created to customer. Other short-term advantage is that their services are concretised, which reduces the work when producing these services. (Valminen & Toivonen 2012) These advantages are in line of findings in the other literature: clarity and more customer-oriented way of providing services. Long-term benefits of the productization seems to be competitive advantage due to customer orientation and efficiency due to scalability and repeatability of productized service. (Valminen & Toivonen 2012) These are also in the line with findings in the other literature. These findings mean that service productization can bring advantages also to small businesses in knowledge-intensive services, which legal services belong. It is also worth noting that in the study conducted by Valminen & Toivonen (2012) one case company was a small law firm, which did gain all advantages mentioned above, and even might have gained more advantages from the productization project than the other case companies. These findings give positive signal that it is possible and beneficial to productize legal services, even in small companies.

Major part of productization is to know technical and commercial structure of the product. Commercial product structure is built up on the parts of product that customer can see, and which customer can possibly influence. Technical product structure builds up by the parts of the product that customer cannot see, but which are in the product or service that customer receives. (Tolonen *et al.* 2014)

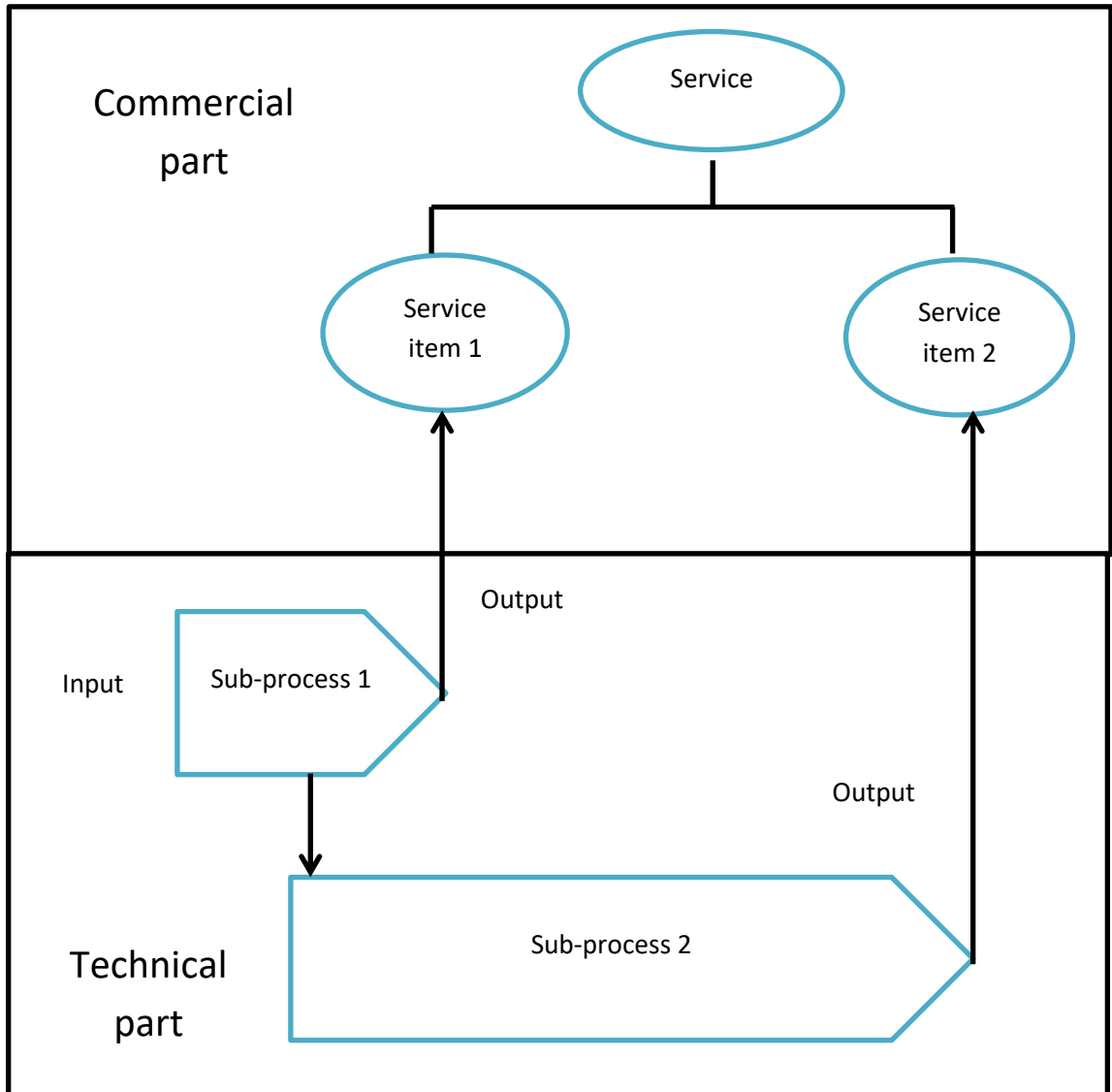


Figure 1. Service productization and dividing service to commercial and technical parts (Modified from Tolonen et al. 2015)

Service can be divided to technical and commercial parts. Service item like assisting customer in a court requires a sub-process that customer cannot see, lawyer coming to the court and assisting customer is only the service item customer sees and what he/she does pay for. Coming to the court to assist a customer does require a preparation process, which is a service sub-process described above. This sub-process can be divided to different tasks as long as tasks can be clearly described (Tolonen et al. 2014)

Legal process is not exception on this, although there might be some blurred lines on process phases due to lawyer learning about specific legal issues during the case as well as lawyer gaining more understanding about customer and their problems. Other issue

that makes the process often unpredictable is the other party: in civil cases lawyer cannot be sure when the other party or their lawyer takes contact and what kind of information they might have. Information from other party often gives completely new issues to the case, which changes the process a lot. Other party's opinion about resolving the case can often change the whole process: legal process aiming for winning the case in court might change to alternative dispute resolution or to settlement negotiations completely unpredictable way. There are less possible variations on criminal and administrative cases due to restricted possibilities for agreement between parties. Naturally variation and uncertainty in the coming process is much lower when there is no other parties, for example in contract drafting or producing different documents or giving legal consulting.

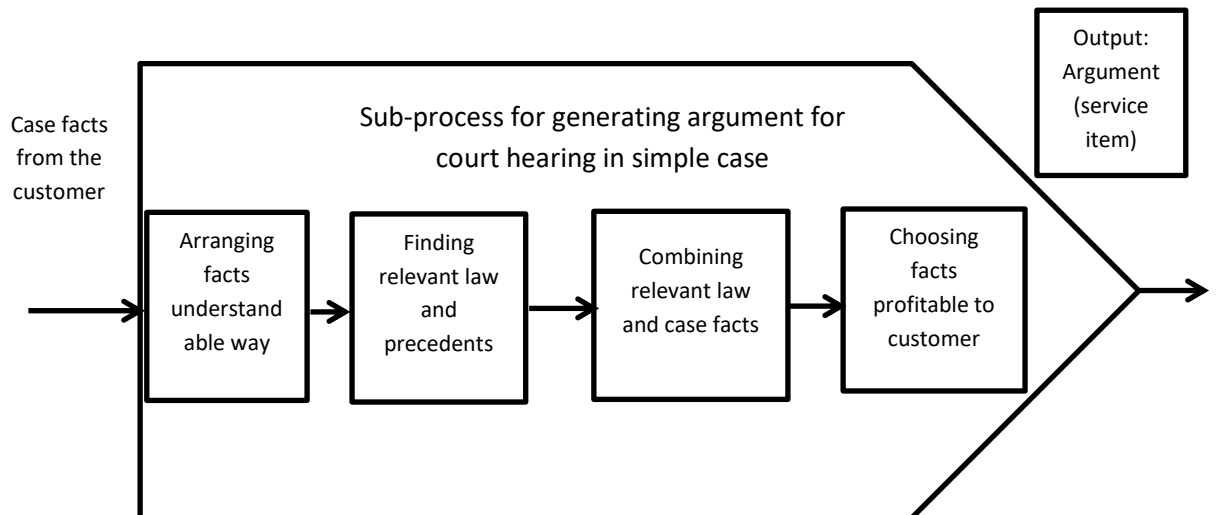


Figure 2. Example of sub-process behind legal service

Both technical and commercial part of service and possibilities to automatize some parts of them will be analysed in this research. In technical part automatization will be analysed as a mean of taking the human component off from some parts of the work, and in commercial part it will be viewed also a part for interaction with the customer.

Productization is always part of business. Productization can increase repeatability and scalability and therefore decrease variable costs. (Härkönen *et al.* 2015) Other advantages are abilities to react faster and more effectively on market demand. (Hänninen *et al.* 2012 s. 19-21) Due to business orientation it is necessary to analyse markets, competition and demand for the product before and during productization. (Härkönen *et al.* 2017)

There are several ways to describe services, some common tools are service blueprint, stakeholder chart, workflow model etc. These ways to describe a service or service process have some things in common, from which the most common are service modules, service schedule and required resources. (Bottcher 2011)

2.2 Modularity in service productization

In the literature, understanding modularity is seen as key issue in productization. Some literature focuses solely on service modularity. (i.e. Iman 2016) Part of the literature suggests that it is not possible to productize service without modularising service and understanding service modularity. (Härkönen *et al.* 2017) Modularity might be vital in legal services as there is lot of uncertainty in several process types as stated in the previous chapter. If service is built up on modules, the service can be changed rapidly during the service if new information or customer's needs demand that.

In the literature, modularity is defined as (Langlois 2002):

A very general set of principles for managing complexity. By breaking up a complex system into discrete pieces – which can then communicate with one another only through standardised interfaces within a standardised architecture – one can eliminate what would otherwise be an unmanageable spaghetti tangle of systemic interconnections.

And the modularization is defined as (Kuula *et al.* 2018):

“a process, product, or service structure where the elements of its design are split up and assigned to modules with well-defined interfaces according to a formal architecture or plan”.

In the service context this means dividing services into sub-systems or phases, where interactions within phases are much larger than between these sub-systems or phases. (Iman 2016) In the literature modularity is divided to several categories: product modularity, process modularity, organizational modularity, knowledge modularity and service modularity. (Iman 2016) This study focuses mostly on knowledge and service modularity, as service process modularity can be under service modularity. Process modularity is often considered as breaking down a business process into sub-processes or modules. (Bask *et al.* 2010) At some cases modularity means combining products

and services together, at some cases it can only refer to dividing service to modules. (Kuula *et al.* 2018) Organizational modularity is not important concept in this study as it refers to organization structure. (Iman 2016)

Modularity in the services gives several advantages: scalability, repeatability and enhanced implementation of the service. (Härkönen *et al.* 2017) Modularity is also seen as a key tool for customization and standardization. (Iman 2016) If the service is designed on modular way, it is possible to change one module to other and keep the scalability of the service. Possibilities to change modules do keep the service customizable at some level compared to service that is completely tailored to customer and built up from scratch every time. But compared to that option, modularity gives huge advantages on scalability. Scalability and repeatability in turn give major advantages on cost-efficiency of the service productization. (Kuula *et al.* 2018) Other advantage of modularity is that it makes the service easier to understand for customers and management. (Härkönen *et al.* 2017)

Modularity might give some advantages for managing services and knowledge. According to literature review, modularity can be a useful tool for managing uncertainty and complexity. (Iman 2016) These advantages are similar than productization's advantages in general: productization seems to help understanding the product or service. (Jaakkola 2011) On the other hand at some cases modularity seems to be challenging to adopt and being uncertain by its nature. (Iman 2016) All things considered modularity seems to be useful tool for making the service more modifiable and scalable as well as understanding the service better, but on the other hand the work needed to implement modularity of services should not be forgotten.

Legal services can be divided to modules and sub-processes as any other service. In legal service many service parts are heavily regulated or structured by law, which makes them easier to define. For example, in court cases there are several phases that must be completed due to specific deadlines, and they are separate service parts, which any might be the last to be completed and lawyers can use only specific amount of time on them if state or insurance company is paying. Therefore, it is quite natural to divide the legal process to modules, as the services are already quite modular in many cases without lawyers even realizing it.

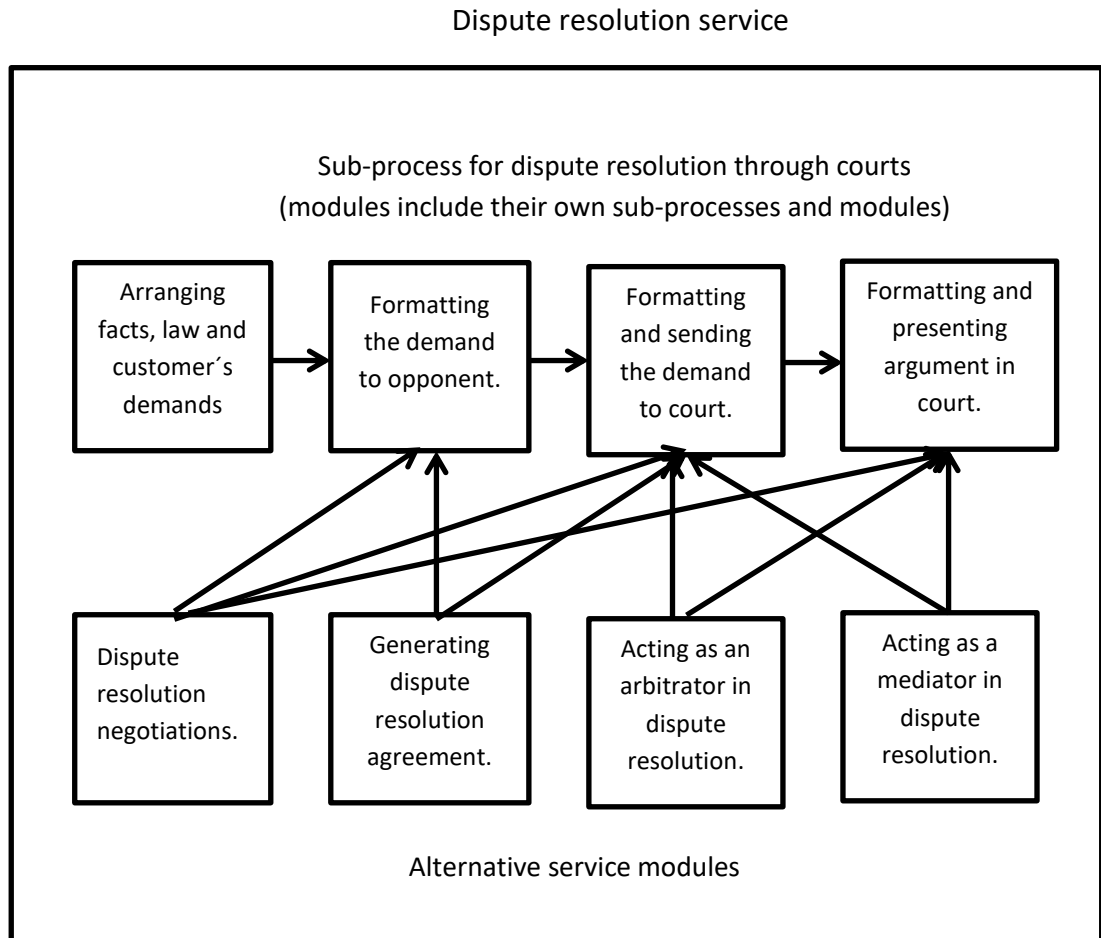


Figure 3. Dividing legal process to modules and other possible modules for the service. Example from dispute resolution process

2.3 Special issue while productizing legal services

Key elements of service productization apply also to productization of legal services.

These key elements are (Härkönen *et al.* 2017):

- Customer orientation, services are produced to meet the needs of customers and service is analysed and described based on customer needs.
- Clarifying the service processes. Productization without knowing the internal process of the company is seen almost impossible. This applies also to the legal services; the structure and modules of the service must be known in order to productize the service and gain the advantages of productization
- Describing and documentation of the work methods. This is required to understand how the service is built and in order to automatize or improve some parts of the service process in the future.

- Defining the service offering. When core, supporting and additional services are analysed and defined, the whole service offering can be clarified. When the service is defined it is possible to replicate the service and therefore make the service faster and more scalable. In the productization of legal services this issue is not on the top in priority scale due to nature of the service: in most cases with private customers customer comes to lawyer with a special need or a problem that needs to be solved.
- Modularization of service. At most cases modularization of service is seen as requirement for service productization. Legal service can be divided to different modules as some services require human by regulation, for example in case where arrival at the court is necessary. (Oikeudenkäymiskaari 4/1734 chapter 15) Dividing the services for modules where human action is necessary and where it is not makes it possible to automatize and improve those modules where human presence and actions are not required.
- Service blueprinting. Service blueprinting is understood at some level in the legal field previous, but there are very few systematic approaches to that. Service blueprinting means describing the interactions between customer and the service process by the viewpoint of customer, while simultaneously describing the back-end process required for service points that customer sees. (Keogh 2009) At legal service it is required to understand what customer sees and how lawyer interacts with customer as customer is often not familiar with legal work and actions the lawyer takes, and these customer interactions must be made understandable to the customer.
- Customers benefit. In the productization customer benefit is seen to be important in order to develop services further to respond the needs of the customer. At legal services customer benefit is not seen as a major point in the service structure due to structure of service demand: customer comes to the lawyer often with clear and defined problem which he/she needs a solution. On the other hand, customer's benefit is seen as the most important point when producing legal service: ethical code of Finnish bar association requires that all service provider under their supervising keep the loyalty and customer's benefit as the core value of their actions when representing their customer. (Finnish bar associations ethical codes 2013 point 3.1)
- Market potential, volumes and competition.

- Piloting productized services. This is an important point when productizing legal service. Piloting is seen increasing success potential of productization processes. This has not been widely used in the legal services in Finland, mostly due that this requires existing customer base, but many Finnish businesses in legal tech and legal design are start-ups, they naturally do not have existing customer base.

One other issue that has to be taken account when productizing legal service is earning model. Earlier research about changing earning model has been done by Rotko (2017), but in this research it is necessary to cover this issues due to commercial necessity. As Rotko (2017) states several times during his thesis, earning model of law firms have traditionally been based on hours worked. In average, this kind of billing represents 87% of all billing in Finland. (Finnish bar association, Finnish associate survey 2017) Other possible billing models for law firms have traditionally been (Finnish bar associations ethical codes 2013, Finnish bar association, Finnish associate survey 2017, code of conduct for European lawyers 2006 and Ylönen 2018):

- Fixed price: Price is fixed by the case type; customer knows the whole price in advance and price will not change regardless work required. In average this represents 9 % of all billing in Finland,
- partly fixed price: price is fixed for specific purposes, if extra work is required; these hours are billed hourly based,
- *pactum de Quota Litis*: case is billed depending on the value of the final conclusion to the client, for example 30 % of what client wins in the case. This kind of billing model represents in average 2 % of all billing in Finland,
- *pactum de palmario*: compensation is paid only if required result is achieved. For example, the case is billed only if it is won.

Time-based billing model does not actually boost productivity or encourage innovation. This is due to all technology and automatization reducing amount of money lawyer can bill from one case due to working less on the case. There are few issues that are preventing other earning models than Time-based billing:

- Cases that state pays are mostly time-based (Valtioneuvoston asetus oikeusavun palkkioperusteista 290/2008 2 §), with the exception of small cases, where there is minimum compensation and in cases related to international protection where compensation is fixed. (Valtioneuvoston asetus oikeusavun palkkioperusteista

290/2008 7 and 7a §) Those small case –compensations are equal to 4-7 hours of work depending on the case, and according to the case company they are used extremely rarely, most often in cases like driving while seriously intoxicated when written procedure is not allowed but the case is completely clear. These minimum or fixed compensations are a small margin of all state-paid court cases. However, to prevent excessive billing and reward from efficiency there is possibility that court decides to cut billing due to using too much time on the case taken account the difficulty and extent of the case. (Oikeusapulaki 257/2002 17 §) In addition to that, in criminal cases prosecutor is required by law to state whether amount billed is relevant taken account difficulty and extent of the case. (Oikeusapulaki 257/2002 18 §) However according to the interviewees and case company this is very rare in cases where maximum bill is not stated by the law and therefore it will probably not boost effectivity due to court and prosecutor being very cautious to blame lawyers from overbilling.

- Information asymmetry: customer knows always more about the case than the lawyer, but in most cases the customer does not know enough: in civil cases the other party might have vital information and in criminal cases prosecutor might bring up new information while pre-trial investigation advances. In order to be able to say a fixed price to the customer lawyer would have to be able to know, how much work the case will take. If there are several parties disagreeing over something or the case is criminal case, it is often impossible to tell the price early enough as new information might multiply the workload. This is much more common with private customers than business customers, in case of business customers many tasks seemed to be more predictable in terms of workload. (See the figure 10 about information flow in different phases of legal service)

Due to these factors, many lawyers are reluctant to offer case fixed payment as an option in several case types. This would be the other option to keep earning levels at same when required work drops. Other possible future development might be that due to less required work in case, lawyers are able to complete more cases and in the viewpoint of customers the services become cheaper and access to justice improves.

State-paid cases are not insignificant amount of cases in the field: median of state paid-portion of all billing is around 20%. (Finnish bar association, Finnish associate survey

2017) In these state-paid cases some might suggest that law firms should automatize services and keep billing state the same amount than previously from the same work. However, there are few problems in this: as the law states clearly that lawyers work can be compensated by time-based work, billing work that has not been done by human is not acceptable. This could lead to courts cutting the payments to lawyers due to part of salaries being unreliable or at worst cases lawyer being punished for fraud or getting public warnings from supervisory board, or even losing their license act as an attorney. Due to all these reasons, doing the work and not automatizing it is much safer option, even if it less effective and it does cost more to state.

State might have possibilities to promote productization, productivity and automation in legal services especially in small and medium-sized attorney companies and law firms. This is due to state paying in several court cases, and if these payments would change to encourage more effective working in the cases, new innovations would probably rise. This could be achieved for example making more cases based on fixed price. Of course, there might cause some quality issues when lawyers would spare their time as much as possible to increase these earning in these cases, which might endanger the service due to customer often not being able to evaluate the quality of the service he/she is receiving.

Quality issues from fixed price set by state emerged in cases about international protection: when the price was set fixed by case customers and courts started to criticize the decreased quality of legal services the client received. (Ministry of justice 11.8.2017) In these cases pricing model might have endangered quality of the services due to lawyers having incentive to spend less and less time in cases and customers being unable to evaluate the quality of service the receive.

Taken account the previously mentioned, there are several special features affecting the productization of the legal service. All key elements described by Härkönen *et al.* (2017) can be applied to productization of legal service. However, legal service has the same issues than other knowledge-intensive services: earning model is often hourly based, which would require a change in earning model prior or during productizing, automatizing process. Other issue is reluctance for codification of knowledge, lawyers and their representative organizations are reluctant to allow codification of lawyers' knowledge and therefore automatizing some parts of the service. This is even punishable in some cases as stated earlier.

However, despite all these challenges there is still room for productization of legal services. Possible changes in earning model are not necessarily required. When legal services are partly automatized legal services become cheaper and lawyers are able to complete more cases. However, this leaves some room for speculation in the market-level: if everyone starts to do things cheaper and more efficiently e.g. spending less time per case but doing more cases, are there enough cases for everyone? When billing is based on hours worked and lawyers are spending less hours per case, this means that services are becoming cheaper.

In classic model of economics this would mean that there will be more demand on legal services as they become cheaper. Elasticity of demand determines whether cheaper prices would mean that increased demand could satisfy the lost income from cheaper price per case. In the practise this could be seen whether there are enough customers for everyone when the automatization starts to increase production or not. Analysing this belongs to economics and therefore it is not analysed deeper in this study focused on the viewpoint of business management. However, it is necessary to analyse other possible billing models when taking account previously mentioned possible developments in pricing and competition.

Other issue was that according to supervisory boards judgements everything should not be done by computer. According to these precedents' human should check at least three things (The supervisory board of Finnish bar association decision on 11.6.2007 and Helsinki court of appeal 31.8.2008 decision number 229):

1. Does the customer understand what he/she is doing e.g. does the customer have legal capacity to do such actions?
2. Does the customer understand what they need e.g. does the given solution solve the problem the customer is seeking answer for?
3. Is the solution produced by the algorithm right?

These issues could be solved with quite light means. All these are covered if lawyer contacts the customer at least once by phone, e-mail or personally to check whether they have legal capacity and whether that they are seeking does respond to their needs. In addition to these, lawyer must check whether the solution given by algorithm is right, which can be done for example by signing the documents produced by algorithm.

If the legal service does only provide information to customer and not anything customer directly uses to enforce their rights later, the first two requirements are not required. (Based on non-interference of supervisory board on several business models that are based on giving customer information about some issues but not producing legal documents). This means that if legal documents are not produced but only information is given, the only requirement is that lawyer checks whether the information is right. This can be done in advance if only information is given, but if documents or solutions that have legal meaning are produced, these must be checked and preferably signed by the lawyer to ensure that code of conduct is followed. Of course, these restrictions apply only to attorneys and others under the supervisory board, but as the case company is under supervisory board on most of their services, this study is focused on providing legal services under this code of conduct.

There are some other challenges than regulation preventing productization and modularization of legal services. One major issue preventing productization is reluctance to adapt new ways of working and the whole legal system being built around work provided on paper and based on hourly billing. Normally ineffectiveness of public sector would not be a problem, but in the legal field the public sector largely defines how large part of services can be automatized. This is due to requirement to interact with public sector to gain legal enforcement or to change enforcement for the customer and legal sector defining interactions in this communication. Due to this, private sector is on some parts dependent on how processes, automatization and information systems will be developed in the public sector and especially in courts.

One other main issue preventing productization was reluctance to adapt to new ways of working and to new technologies. At private sector one reason for this might be the high age of associates: about half of all associates are over 50 years old and over 75 % are over 40 years old. (Finnish bar association, Finnish associate survey 2017) Other reason preventing productization and automatization was reluctance to learn new technologies. This was one issue that came up both on private and public sector.

To summarise these human-related issues preventing productization of legal services: main problems are reluctance to change and reluctance to learn. People at the field of legal services are reluctant to change working methods and reluctant to learn new tools. This would not be an issue with most economic areas, but in legal services the working methods of public sector and especially courts define how the private sector can work.

This is due that there are several points of interaction between processes in private sector and courts.

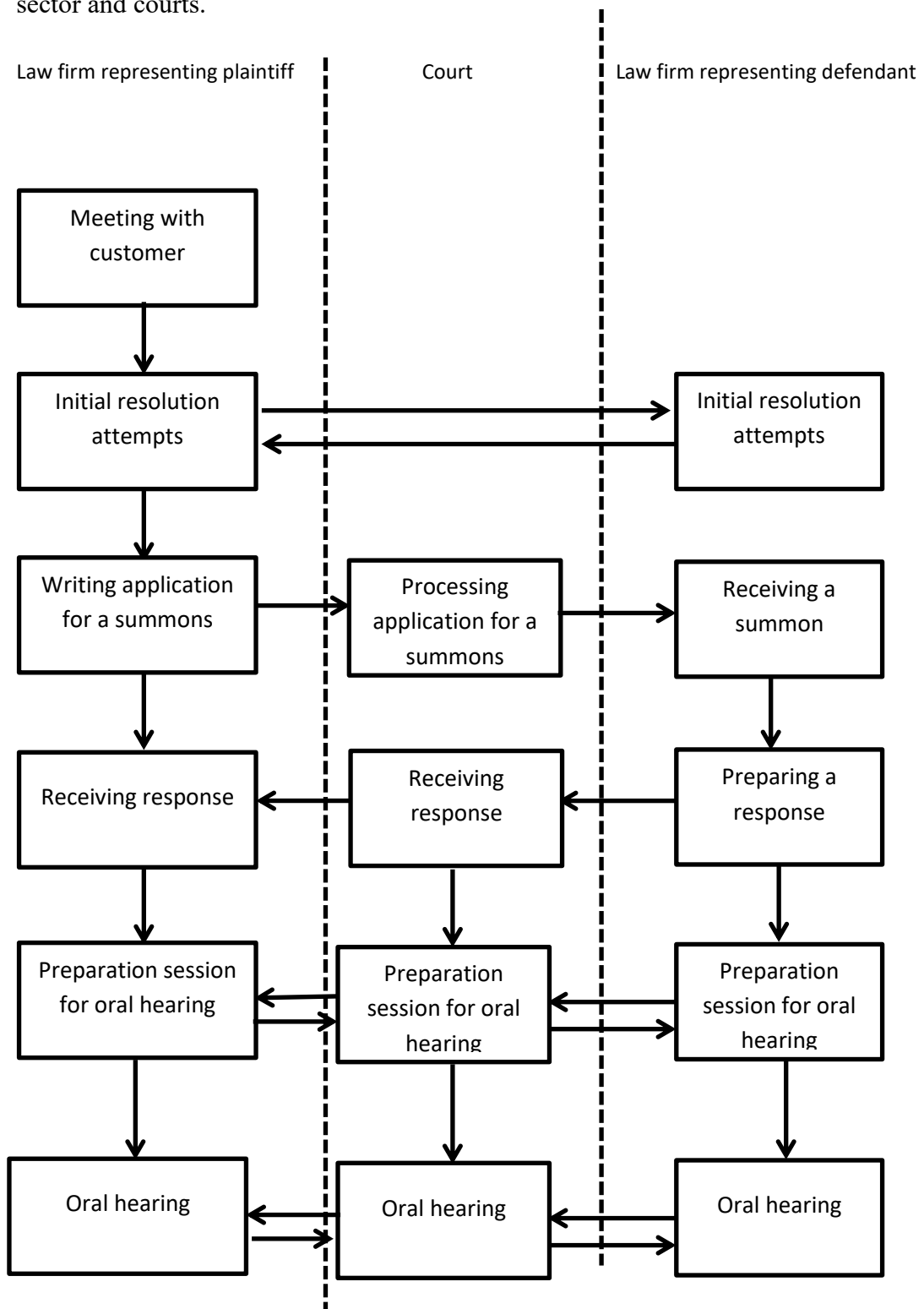


Figure 4. Interaction between processes between law firm and court in civil case

As it can be seen from the graph, there are several linkages between courts and law firms in civil cases. In criminal cases and administrative processes there are some differences, but those processes are based even more on court processes. (Interview of

the case company) Due to these reasons, litigation processes in law firms are restricted to what interactions with courts' processes allow them to develop and change.

2.4 Synthesis: key issues when productizing legal services

Productization seems to give several advantages to the organization using it. Productization means making the product or service more scalable and repeatable. This can give the organization advantages by enabling modularity and tailored solutions as well as more effective usage of different service or product components. One key issue in productization is understanding the technical and commercial product portfolio. Process to productize services productization can be summed up:

- Understanding customer orientation and customer benefits,
- Understanding value creating activities,
- Clarification and documenting service processes,
- Understanding and stating working methods,
- Restructuring services to service modules,
- Piloting productized services.

Service productization is sub-category of productization. Service productization can be used to increase scalability and repeatability. Other advantages from service productization are related to better understanding of the service the organization is offering. This means that customer can understand better what they are buying and how it can be tailored to suit better their needs. Productization does help the organization understand better what they are offering. This helps the organization on several ways: it helps management to understand their portfolio and how to better manage their services. Service productization does also help the organization to understand what they are offering and how-to better tailor it to respond customer's needs and therefore increase the value of what they are selling. Productization does also help to understand modularity of services, which makes changing and tailoring services easier as well as helps to understand the cost structure of the service.

Service productization does help to understand the structure of the service. This enables automatization of some phases, generating savings when need of human work decreases. Especially information systems are seen in the literature as helpful tools when productizing and automatizing services. Service productization does help in

service automatization as it makes the service process clear and cuts it to several modules and phases, which can be automatized using information systems, if there are fitting tools to do that.

Service productization process might vary from case to case, but there are few milestones that must be reached in every service productization project. First of these is that the organization must understand the service. This can be done by analysing the service structure and documenting the service process on relevant way. After this the customer need must be understood, there is no use to tailor service to respond more to customer needs if the customer needs are not known. Customer needs can be discovered for example by a market survey.

When the service structure and customer needs are known, it is possible to start modularising the service. At modularisation service is divided to sub-tasks e.g. modules, where interaction within module is significantly larger than interaction between modules. Service customization can be done by changing these modules in the services. When modularisation is done, it is possible to increase scalability and repeatability by finding out, which actions can be done same time every time the service is produced. When this has been found out, it is possible to codify and repeat some phases in all services which include that module, and therefore save lots of costs. Service productization is not a one-time project: the customer orientation must always be kept in order to keep the competitive advantage gained from productization.

There are some special issues and advantages related to productizing knowledge-intensive services. Knowledge-intensive services were defined as services where physical work or natural resources goods are not in a major role but knowledge of employees. As the service in the knowledge-intensive services has traditionally been highly customized for single customers, productization of services has brought major advantages in the terms of productivity in these services.

According to the literature reviewed, advantages for productization of knowledge-intensive services derive mostly from repeatability and scalability of service, which has previously not been possible due to highly customized service. Possibilities to modify and customize services do not give major advantages in productization of knowledge-intensive services as the services have traditionally been very customizable and flexible to satisfy customer's needs. In the process of productization of knowledge-intensive

service it is more vital than in more productization projects to know how the service is built and understand the possibilities of service modularity.

One major point in achieving scalability and repeatability of knowledge-intensive service is codification of employees' knowledge. This is necessary in order to use the same knowledge while providing services to other customers. There has been research that employees are often strongly opposing the codification of their knowledge, which can be a major managerial problem in the productization process.

Previous research has shown that productization projects can help to achieve major competitive advantages in knowledge-intensive services. There is research about results of productization projects in small businesses offering knowledge-intensive services. These results have shown that productizing knowledge-intensive services can give companies advantages in short and long term. Short-term advantages have been understanding customer needs and company's own service portfolio and structure. Long-term advantages have been competitive advantage due to increased productivity and understanding customer needs. In these studies, the same results and advantages have applied to legal services.

There are several issues related to productizing legal services. These issues are related to:

- Customer base, amount and geographic area,
- large variation in services,
- payment issues in some special cases: state or insurance company paying,
- code of conducts and laws making special requirements for the services,
- customer-related uncertainty in several services.

Demand for legal services varies a lot depending on several things. Some part of variation depends on the area of law: there are more customers in family law than international law in obvious reasons. On the other hand, some regulations are more harmonized than others, which multiplies demand for them due to regulation being same in several countries. Services about the same issue can vary extremely lot too, bankruptcy case can be done within a week or it might take few decades to finish at worst case.

There are some variation issues related to customers and nature of the services as well. At many cases the information from customer or from the opposite party is vital for completing the service, and even in choosing the sub-processes and service modules. If all necessary information is not available in the beginning, it can be impossible to plan the process enough in advance. Variation in the service will probably vary depending on service and customer, it could be assumed that in business law service provided only to single customer with no opposite party, the variation is much smaller than for example in civil dispute with two private persons. These issues will be analysed more by the interviews. Literature review gave some indications that services should be classified by some characteristics, with possible variation in the case being one of them. Some other characteristics that might be relevant for classification could be the customer and field of law: business law services could be very different from litigation and private customers with limited knowledge could be different than companies with their own legal teams.

Other issue which makes legal cases different is the customer and payer. In the viewpoint of productization, hourly-billed services are not optimal as that does not reward efficiency. Large portion of cases measured by number of customers, not by revenue, are cases from private persons that state pays partly or completely. Other major part from cases come from private persons or companies with legal insurance, which means insurance companies are paying the case. Median of portion of insurance-paid billing in all billing is around 20%. (Finnish bar association, Finnish associate survey 2017) If state is paying the case, the payment methods and actions that state pays are strictly regulated by law. In these cases, the only possible billing option is practically time-based billing, which is effectively preventing productization due to making any productivity increase meaning less billing for law companies.

In these cases, it is worth noticing, as stated earlier, that overbilling from more effective ways of working is not an option due to possible severe consequences for lawyer. The current system is not financially optimal to state as it encourages spending as much time as possible to the case, which lowers the productivity of legal services and causes more costs to state. On the other hand, fixed price might cause some issues for the quality of legal services due to lawyers trying to optimize their earning and customers being unable to understand the quality of service they are receiving.

At some other cases the insurance companies are paying the litigation or necessary other actions. At these cases the earning models of lawyers are more flexible than in state-paid cases. Insurance companies are often willing to pay for “necessary actions”, which are not necessarily billed by time-based billing. (e.g. OP and IF insurance groups litigation insurance for private persons) Insurance companies do at some cases refer to code of Judicial procedure and its provisions about compensating other party’s litigation costs, which states that all necessary costs should be covered. (Oikeudenkäymiskaari 4/1734 21:1 §) In these cases when insurance company is paying, it might be possible to create more effective earning model as long as insurance companies gain a part of the profit.

Chances to create different kind of earning models are still best when dealing with private or business customers that are paying their own costs. In these cases, the customer is willing to save money if possible, and if the lawyer is able to do some part of the service more effectively, it will likely save money from the customer and make some extra profits for lawyer. In these cases, increase of productivity due to different earning models might be possible.

One other special issue of productization of legal services is the code of conducts that are binding for all attorneys and some lawyers. These codes of conducts prevent automatization at some level. These issues can be covered by limiting services on the services where customer contact is not that vital and for lawyer always checking and signing what the computer has done.

These issues combined with reluctance to change noted in the field are slowing down and preventing the productization and automatization of legal services. The reluctance to change was noted in the courts, where old ways of working and old tools, mainly paper, are still strongly used. The reluctance to changes in the court system leads difficulties to change in the private sector as several processes are linked to courts’ processes. On the other hand, several services have nothing to do with the courts, and productization and automatization seems to be advancing in these types of products. Due to this, there is a widening gap between services that are related to public sector and services that has nothing to do with public sector. Businesses providing latter are emphasising productization as an idea and different automatized tools that help working in these services. The competitive advantage of this is recognized even by several associations.

As many law firms are only or mainly providing litigation services, there is starting to be more and more differences between big and small law firms when considering productization and automatization in the ways of working. Big firms can provide more services that can utilize productization and automatization and cover investment costs related to that, but smaller firms are unable or unwilling to invest on something that improves efficiency.

All things considered, productizing legal service will probably be possible at least at some extent and in some services. Productizing legal services will most likely give competitive advantage and therefore generate more profits on the long term. Productization will probably give some more advantages to companies e.g. understanding their own services better or understanding their customers better.

Due to being heavily regulated field, there are several from laws and code of conducts things that must be taken account when productizing legal services. These vary a lot depending on the field of law. Therefore, it is probably necessary to divide the legal services depending on productability and requirements for productability. The possible ways to divide the services depending on requirements for productability will be covered in the interviews.

This chapter aimed to answer the first research question “*Which are key issues that must be taken account when automatizing legal services?*”. This was answered by completing a literature review on service productization literature and by analysing the special features of legal services in general and in Finland. *As expected, most part of the general service productization applies to productization of legal services.* Customer orientation, process recognition and documentation as well as market analysis can be applied to legal services to develop and productize services. *The main issues when productizing legal services were profitability of productization and legal issues preventing or hindering productization.* To summarise all key issues that affect the productability of legal service in the business viewpoint:

- Customers: Are the customers private persons with not a lot of knowledge or persons or companies with a lot knowledge?
- Demand: Are there a lot of small customers or few large customers?
- Extent of the case: how much work the case will take?
- Court processes: Is the case court case or not?

- Value of the case: can there always be a tailored solution or is it necessary to save costs?
- Legal requirements: does the law set some requirements to the service process?

3 Interviews and case study

3.1 Method

3.1.1 Interviews

Interviewees represented three groups:

1. Different interest groups in legal services: ministry of justice, the association of Finnish lawyers represented by their committee of the future and Finnish bar association.
2. People with experience for successfully productizing and automatizing legal services.
3. People with general expertise for productizing and automatizing expert services.

Persons interviewed wanted to keep their identity unknown due to their current employment or different competition clauses from businesses that bought their business idea or their business. As there are not many people succeeded productizing experts' services in Finland not to mention people succeeded in productizing legal services, number of people interviewed cannot be revealed to protect their identity. However, several people from both groups were analysed.

Questions were meant to cover following issues:

1. Which are the main points preventing productization of legal services?
2. How do these issues differ in different fields of law?
3. How automatization and information systems can change the part of service that customer sees?
 - a. How it does have changed?
 - b. How it will change?
4. How does automatization and information systems change the part of service that customer cannot see e.g. how lawyers work?
 - a. How it does have changed?
 - b. How it will change?
5. How law firms can create value using productization and automatization
 - a. For customers?
 - b. For themselves?

- c. For legal administration?
- 6. Which were main points when interviewee productized legal services?
 - a. When deciding business model?
 - b. When taking account how law and rules of Finnish bar association affected the planned productization?
 - c. When deciding customer base?
- 7. Did the productization increase availability of legal service by
 - a. Change price of the service?
 - b. Made the product more available to people?
 - c. Some other way?

If the interviewee were a knowledge-intensive service productization specialist with no legal background, the productization issues were covering following topics:

- 1. What kind of value does expert service productization give to
 - a. Customers?
 - b. Companies providing these services?
- 2. What kind of productized and automatized services customers are likely to use?
- 3. What are the main attributes that companies seek when productizing and automatizing some services?

3.1.2 The survey

As stated earlier, in several cases judges make decision about lawyer's payment. This means that judges must approve the bill so that lawyer gets paid, particularly used in cases where state pays or that judges decides who are going to pay and how much, mostly used in civil cases in courts. Judges have full power to cut the salary of lawyer paid by state or other party, if they found the bill unreasonable or that lawyers are billing from unnecessary actions. (i.e. Oikeudenkäymiskaari 4/1734 21:1 §) Court cases represent 54 % of all billing at the field of associate firms in Finland. (Finnish bar association, Finnish associate survey 2017) Due to this it is necessary to analyse the special issues in court cases not depending on the field of law in the case.

To find out about judges' opinions on productized services in court cases a survey was conducted. This survey was conducted in order to find out on preconditions to productize services related to court cases. As stated in earlier chapters, judges can order

other party to pay reasonable costs that derive from necessary actions. Reasonable and necessary are decided by judge. If the state is payer judge must approve the payment and judges can cut payment if they think lawyer is overbilling. In order to find out which are reasonable and necessary costs in automatized services, a survey was conducted.

Survey had following goals:

- Find out whether compensation from automatized or productized service is demandable at all and therefore does it make sense to productize services related to court cases,
- find out the preconditions to get the compensation from productized or automatized services in different types of legal processes,
- find out whether the payer of the case affects the compensation that might be covered,
- find out how large bills judges are willing to accept from productized or automatized services when comparing to work that would have been required to produce same results by traditional working methods.

Survey was conducted by sending a google forms-survey to three district courts and to two courts of appeal. These courts represent 2/5 of all courts of appeal in Finland and 1/9 of all district courts in Finland, although the district courts represent larger district courts on the scale, so that the judges participating the survey represent more than it could be thought on the number of courts where the survey was conducted. The survey was anonymous, so that it is impossible to know that which court the judge represents or their identity. This survey included several case examples in order to get answers to following questions.

1. Is it acceptable to bill from completely automatized services at all?
2. How are necessary and reasonable costs calculated when legal service is partly automatized in civil case
3. How are necessary and reasonable costs calculated when legal service is partly automatized in criminal case
4. How are necessary and reasonable costs calculated when legal service is partly automatized, and state is paying the price

In the survey the questions were built up on following way: there was a case example, which handled a civil or criminal case. Other party has won the case and was demanding their costs from other party or from the state. One part of legal service was automatized or productized completely or partly, which significantly cut human work required to provide that part of service. Lawyers did however bill from that part that was automatized, in other cases fixed salary based on the service and in other case billed time that would have been spent on the service part without productization or automatization. The judges were asked to respond whether they would accept the costs at whole, partly or not at all. If they wanted, they could also give some legal reasoning for their answer.

There were over 50 respondents to this survey. This was larger portion of judges than expected. Over 15 judges did leave comments about the cases or the survey. As these judges represent district courts and court of appeals as well as different geographic areas and courts where specific types of cases are focused, the results seem to be usable taking account the extent of this study and goals set to this survey. There were major differences between different courts, but due to small number of respondents in some courts, differences between courts cannot be analysed in this study. Therefore, results are shown as responding judges responded as a whole.

In the following page a process for conducting the interviews, survey and case study is shown in a figure.

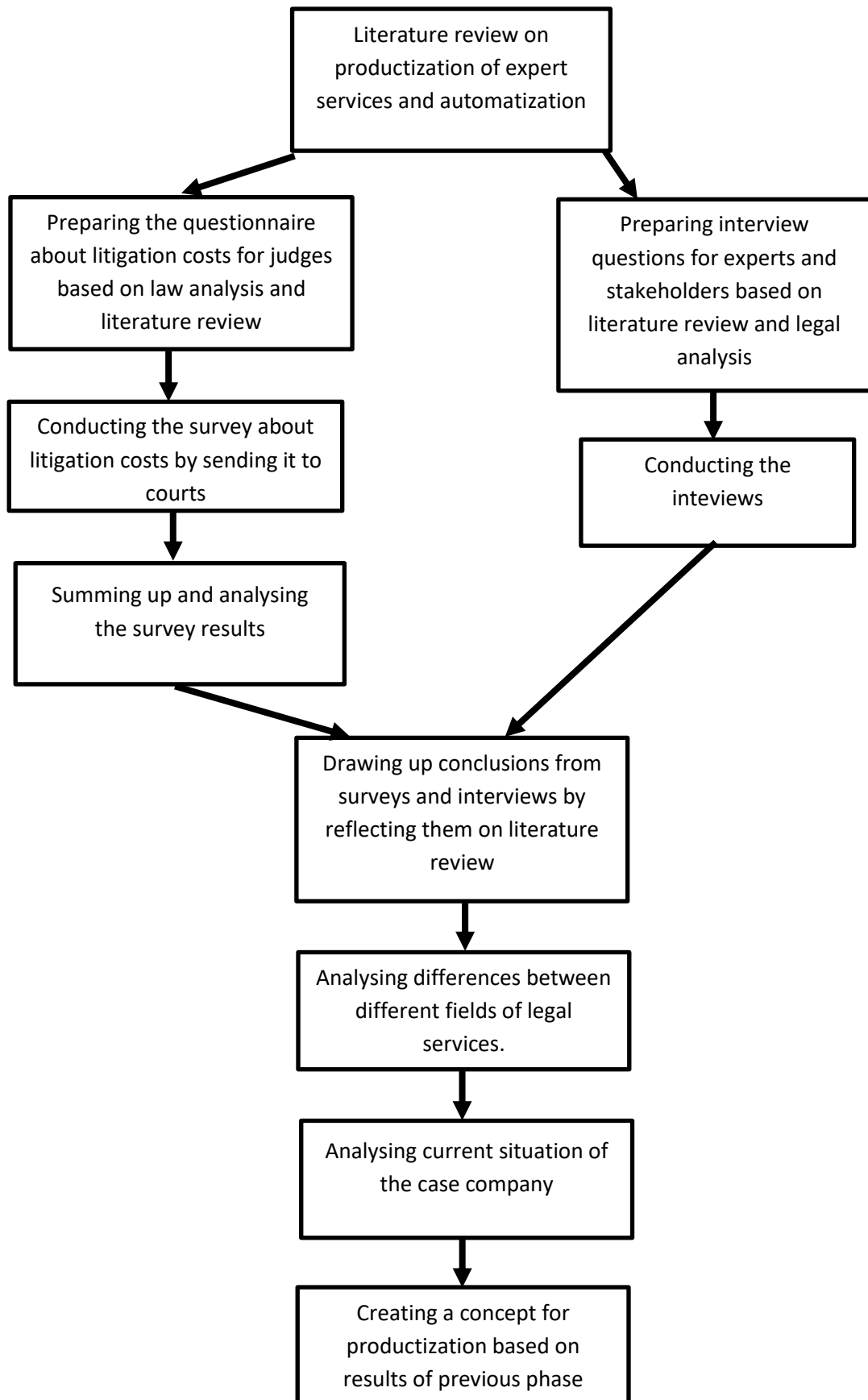


Figure 5. Process description of empirical part

3.2 Interviews

When asked how information systems and automatization has changed the business, many interviewees responded that main effect of the automatization is that searching information and writing documents have been taking giant leaps forward in the past, but there is still much manual work that could be automatized further or otherwise improve productivity. One other main issue preventing productization was reluctance to adapt to new ways of working and to new technologies. (interview of ministry of justice, interviewee of Finnish lawyer's association). All interviewees saw also that there is some reluctance to change service processes, especially in legal services. According to the them, reluctance to change is preventing productization especially in those organizations that are not commercially focused. An example of this are the courts, judges are reluctant to adapt new ways of working and communication with customers and lawyers. (Interviewee from the justice ministry) The reluctance was seen as the main problem for changing, digitalizing and automatizing court processes. (interview of ministry of justice) On private sector some interviewees saw this as a major issue slowing down productization and automatization of legal services. (Interview of expert of productizing legal services)

All interviewees with legal background agreed that the legal process is uncertain and quite open. All interviewees with legal background agreed that there is lot of uncertainty on several service types, which requires that lawyers are ready to change the process and understand how the process can change and be at some level prepared to change the process.

Due to this, these same interviewees with legal background opposed strongly the idea of reusing legal knowledge in other services. This was mostly based on the argument that human can notice things that machines cannot do and due to this machine should not reuse human knowledge on legal services. Same argument against reusing expert knowledge is heard often when discussing on productization of expert service. On most cases employees in knowledge-intensive business are reluctant against reusing and codification of the knowledge, especially when the change is done top to bottom. (Valtakoski *et al.* 2016)

Several topics about the business in general rose up in expert interviews. One key point that rose up was customer orientation. Most of respondents from business-background stated this as the main points of productizing legal service or expert service in general.

Other important point about business process was the fact that it is not common to offer customer extra services while offering a service. This rose up with all interviewees with legal background. Offering additional services happens mostly on high-end business law, which is operated by the largest law firms in Finland. Reasons why additional services are not offered very often vary, but some reasons come from payment arrangements: insurance companies and legal aid paid by state are restricted only to necessary actions to solve the problem which legal aid or insurance covers. On business cases where the company is paying on its own it is typical that customer wants solution for one specific problem and lawyer's services are restricted to as low as possible due to costs.

Increasing tailoring and modifying elements of service might be one possible future of legal services. Several interviewees from legal background stated that demand and market potential do not have to be taken account in business planning as there is often customer surplus and most lawyers interviewed stated that they are able to choose the most profitable customers. On the other hand, when productizing legal service people interviewed saw it necessary to analyse the markets and competition before productizing and automatizing legal service.

One main finding was that the business process seems to be changing. All interviewees with legal background saw that other billing models than time-based billing are becoming more common. Several interviewees also stated the billing process is one of the main reasons preventing legal services being productized or automatized. Interviewees saw it possible to combine fixed payments and time-based billing in case of some parts of the service were to be automatized.

Although these experts had quite sophisticated understanding of business process, systemic approaches with service blueprinting or other modelling tools are rare in the field according to the expert interviews from legal background.

3.3 Questionnaire about acceptable costs in court cases

3.3.1 Results in civil cases

Answers for this survey varied a lot. When options for civil cases were “yes, always”, “not at all” and “yes, partly/depending on the case” judges were divided on these options about with quite large variance. There were not minor differences, but these were not that significant taken account small pool of respondents. Due to these, a clear line about acceptability of these costs cannot be surely stated.

These result do tell that there are not clear opinion about how automatized services should be compensated to lawyer. Some judges stated that they understood that there are costs for new IT-systems and automatization, and therefore some costs should be compensated. Some judges were strict about that time costs should include general costs of the office and therefore only time costs should be billed. Other judges thought that only time costs are real costs of the legal service and therefore they are only one that are necessary and reasonable.

In cases concerning automatized services, judges tend to approve costs related to automated services, and were quite positive on that. Several judges commented that they understand that creating system that automatizes lawyers’ work is costly and future billing should cover these investment costs. Some did also comment that they understood that costs come mostly from developing and implementing such system. Most of judges did also comment that such systems will require judges and lawyers to think billing completely over. Majority of judges that left comments about cost structure in civil cases noted that it is a problem that currently most services by lawyer’s are paid based on time used due to that generating extra costs to everyone. On the other hand, some judges commented that lawyer should not even tell about using automatization in their billing and that they were willing to order the other party to pay the sum based on some hypothetical billing if the results of the lawyer’s work were good enough.

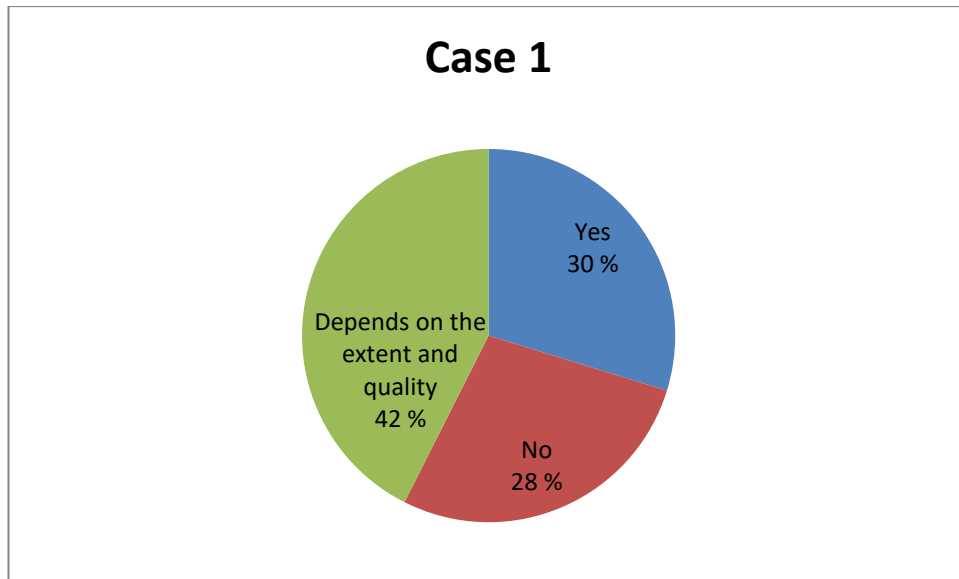


Figure 6. Judges opinions on cost acceptability in automated legal services

In other civil cases where part of the service was productized, judges tend to be more reluctant to accept the bill. Judges stated that if lawyer is just copying parts of the services previously used on other customer, the costs from that part of the service should be cut down close to zero. They based this on the fact that changing the information in previously used documents would not take much time and therefore the billing should not be even close to billing that service would take without productization. In these cases, judges commented that billing should be based on time used, and while reusing some parts of the services, time is not used and therefore it should not be billed.

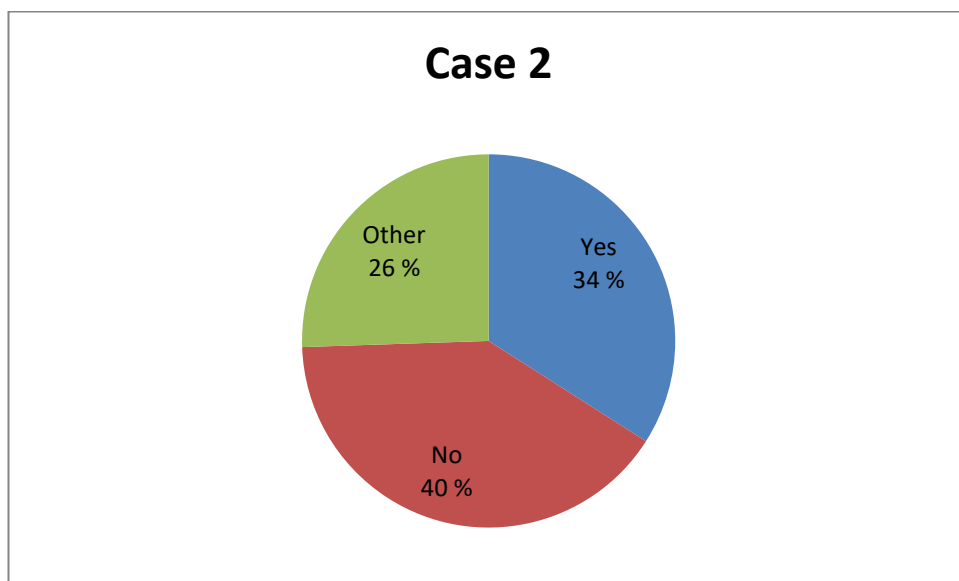


Figure 7. Judges opinions on cost acceptability in productized legal services

On the other hand, large part of judges, around 30 %, agreed that when the work is done well it is acceptable to bill from reusing parts from other services, but they thought that this part of the service should not be billed as high as these parts of the service are usually billed. Some stated that even if it would not take as much time as doing it from the scraps, lawyers would be justified to demand some compensation on the work they have done. Judges required that these productized parts of services were done as well as services doing on scraps, otherwise they would have either cut the bill or demanded improvements for the service, if possible and necessary.

Some judges did also comment that time-based billing is a problem in these kinds of cases, because reusing parts of services could save costs and therefore increase effectiveness of legal services. Some judges did also note that these kinds of reuses should be rather billed as procedure payments and stated that they would be ready to accept that. On the other hand, during the survey several judges were strictly against these kinds of procedure payments and approved only time-based billing.

These results show that there is not clear line whether automatized or productized costs would be compensated in civil cases. It can be speculated that this question will at some point be addressed by law or there will be precedent by the Supreme Court judgement about this issue. Otherwise there will be major unpredictability in automatizing or productizing legal services related to court cases, which will effectively prevent new business models related to these issues.

3.3.2 Results in criminal cases

In criminal cases the variation was even larger. In these cases, judges tend to approve more automatization and productization as compensation was approved or approved based on the extent of the case more often than in civil cases. Some stated that it was dependent on the complexity and size of the case, others stated that they would cut the compensation but accept it partly and others stated that they would accept it completely. In the case where state is paying the results were quite similar.

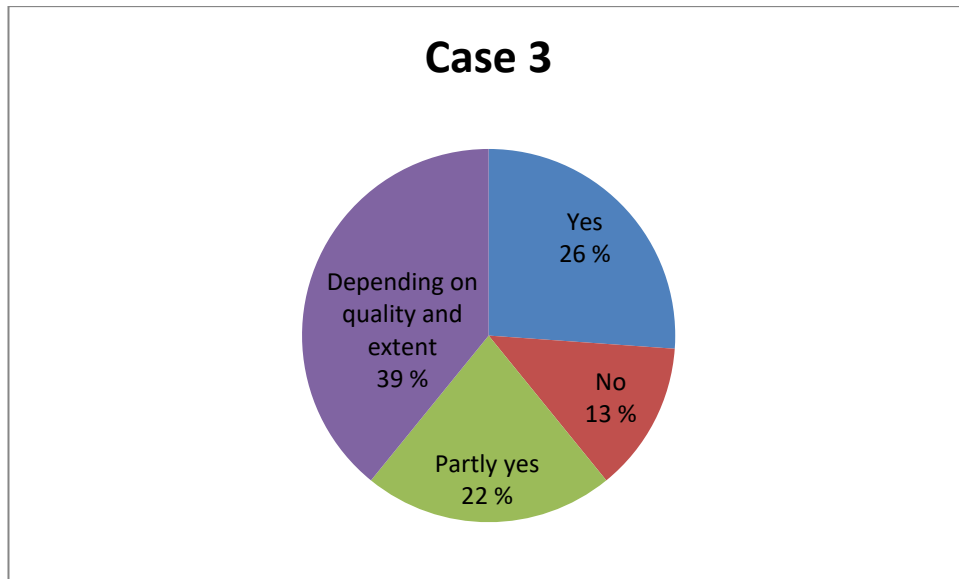


Figure 8. Judges opinions on cost acceptability in productized legal services in criminal cases

Judges tend to approve more automatization and productized services when billing the costs from the state. This is interesting as law does not make it directly possible to compensate these kinds of costs, but judges tend to approve these costs despite literal evaluation of law. An expert in court costs was interviewed to explain the results, and he stated that judges tend to spend state's money easier than private parties'. Other explanations were that law does kind of make it possible to compensate costs that come from automatized service, but this is not clearly stated in the law, and therefore judges seem to be cautious for compensating this especially in civil cases, where parties might appeal about the decision related to court costs.

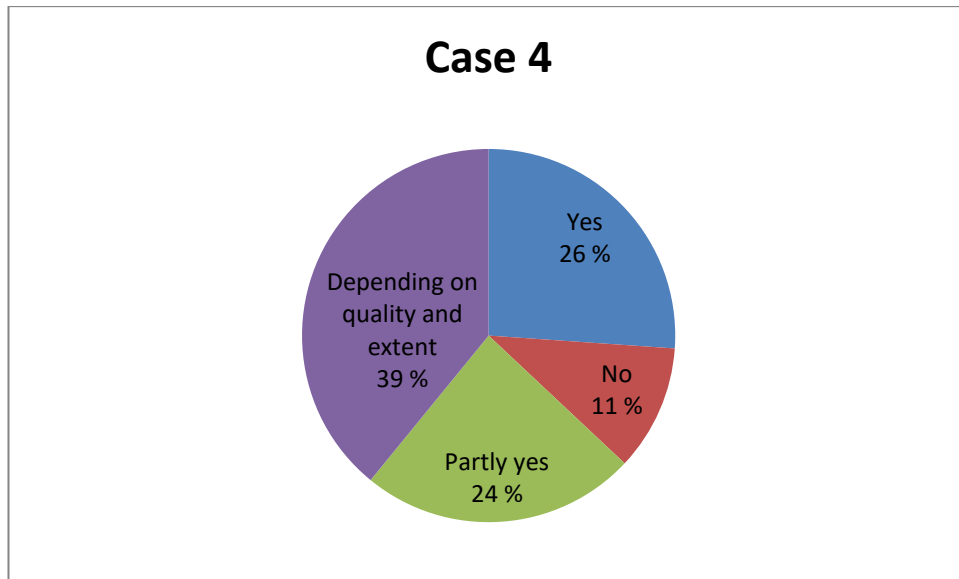


Figure 9. Judges opinions on cost acceptability in productized legal services on criminal cases when state is paying the costs

In criminal cases judges commented that lawyers could spend that sum spending more time on something anyways, so accepting the bill from productized and automatized services was agreeable. Some other judges stated that agreeableness of bill in automated service was dependent on the service as a whole. Other judges stated that especially in criminal cases the billing should be based only on actual time used. Some stated that generating documents automatically in criminal cases should not be possible and it should not be done, but judgements in some simple cases could and should be automatized soon.

On the opposite, others did however agree that documents have value to law firms and they should have reward for increased efficiency, others with agreeing with this viewpoint noted that they could compensate the amount it would have taken to build these up from the scratches. Variation was quite large here, as other approved the payment but large part of judges would have cut the payment or agreed the payment depending on complexity of the productized service.

When the state was paying the bill, judges were stricter on the comments that bill should be based on the time used. They did also state that in case of productized services there is minimum payment based on the case. Other judges even stated that they have noticed that there is a problem about time-based billing as it encourages lawyers to spend more time and waste more state's money on the case. Some judges stated that payment in the cases where state is paying should be based more on tasks

actually done, which would mean that payments would be based on service modules included in the service.

3.3.3 Summary and conclusion of the results

To summarise how judges thought about compensation when legal services related to court cases were productized:

- Judges tend to understand that automatizing legal services do generate costs and require investments, and part of judges were therefore approving billing procedure payments from automatized services.
- On the other hand, part of judges was strictly against billing from automatized or productized services or anything that was not time-based.
- Judges tend to not be that positive on productized service that was not automatized. Large part of judges tends to think that in these cases payment should not be paid at all from productized part of service or the payment should be cut significantly.
- In case of productized services part of judges agreed that improved efficiency from productization was agreeable and effectivity increase from these should be rewarded to law firm.
- Legal system seems to be generally more accepting on productized and automatized services than just productized services. In case of only productized services judges saw that lawyer should not benefit on increased effectivity and time-saving.
- Judges tend to accept costs demands more when state was paying. This was not due to law, because law tends to be stricter in these cases. Expert on court costs speculated that this might be due to judges being more prone to spend state's money than other parties in civil cases.

There were some questions that were left unanswered:

- Is it even possible to bill from service that was automatize? This was disapproved by several judges, so the main question was left unanswered.
- Is it possible to bill from productization e.g. reusing same documents or parts of old documents?

- Who should benefit from the increased effectiveness and how much when legal service is automatized and/or productized?
- How much should be billable when legal service is automatized and/or productized and is it dependent on the time the service would have took without productization and/or automatization?

3.4 Special features of legal services

Currently the most common scaling method in law firms is reusing old document forms or taking relevant part from other documents to reuse them in the other cases. This process is seen very common (Interview of Finnish lawyers' association) However it is very rare that this process is documented or structured, it is currently more like case-to-case –reuse of old services.

One very defining characteristic in legal service is that all legal services are very much linked to written and spoken language. All documents and laws are written language as well as precedents and all other material that can be used as source of law. Several types of procedures in courts are oral: in district courts in civil cases all evidence and statements are stated orally and reading from paper is even forbidden in most cases, this applies also at some in court of appeals, but oral processes are not mandatory on this level if not required. (Oikeudenkäymiskaari 4/1734 6:3 §, Oikeudenkäymiskaari 4/1734 26:14 §) Other processes are either written or oral depending on the process and some other factors. All court cases are done either in Finnish or in Swedish and if one does not know these languages, they must get their own translator (Oikeudenkäymiskaari 4/1734 chapter 4)

When law and legal services are that much linked to language, legal services vary very much in different language areas. Some legal services are provided in other languages either due to international aspects of the service or the practise in that field of law. For example, high-end business law is often done in English even if all customers and lawyers speak Finnish. Language of service is a big issue when speaking about automatization and information systems. Text recognition and understanding of written language are key points when automatizing some legal services. (Interviewee specialized in automatization of legal services)

Other key issue, as discussed on earlier chapters, is how law firms can create value from different types of services. One challenge has been that when legal services are automatized some high-end customers are starting to demand free services due to automatization. (Interview of Finnish bar association) All interviewees with legal background saw that time-based –billing model is facing pressure to change, but the amount of pressure depended heavily on field of law. For example, in business law and special areas in business law i.e. M&A the amount of work is well-known in advance and for customers the time does not matter compared to the result. In these cases, result-based billing is already becoming more common. (Interview of Finnish bar association) On the other hand all interviewees with legal background saw that in several services other pricing models are not feasible: in court cases the spent time is often not dependent on the lawyer, but the costs come from the time spent. The interviewees did also saw major unpredictability in time spent in some areas of law, but mostly depending on customer.

Cost structure in legal services has traditionally been based on hours worked, which is the reason why billing is also based on hours worked. (Interview of Finnish lawyers' association) Billing has often been based on whether the case goes to court or not and is the customer private person or business customer. Hourly billing from business customers tend to be higher, and cases that do not go to court tend to be more expensive to business customers, which is opposite to private customers. Hourly billing has also often been based on who is working: partners' hours are the most expensive and senior associates' hours are more expensive than associates' hours. (Finnish bar association, Finnish associate survey 2017)

Several interviewees saw that cost structure as well as earning models are changing in the future. In the future more costs come from different kind of IT-systems and less from salaries. Interviewees also foresaw that automatization changes earning models so that many services are probably going to be billed as procedure payment instead of time-based billing. (Interview of Finnish bar association, Interview of Finnish lawyers' association and survey conducted to judges) This will be a major change in the field and it will require productization in order to be able to offer services customers want and need and to automatize service phases more effectively.

Legal service does require a lot of input from customer. In most cases the customer does have all relevant information required to produce a service, but lawyer does have

information what does the information customer possesses mean. In case of private customers, the customers do not often know, which information is relevant, or they are reluctant to give that information to lawyer at first. (Interview of case company)

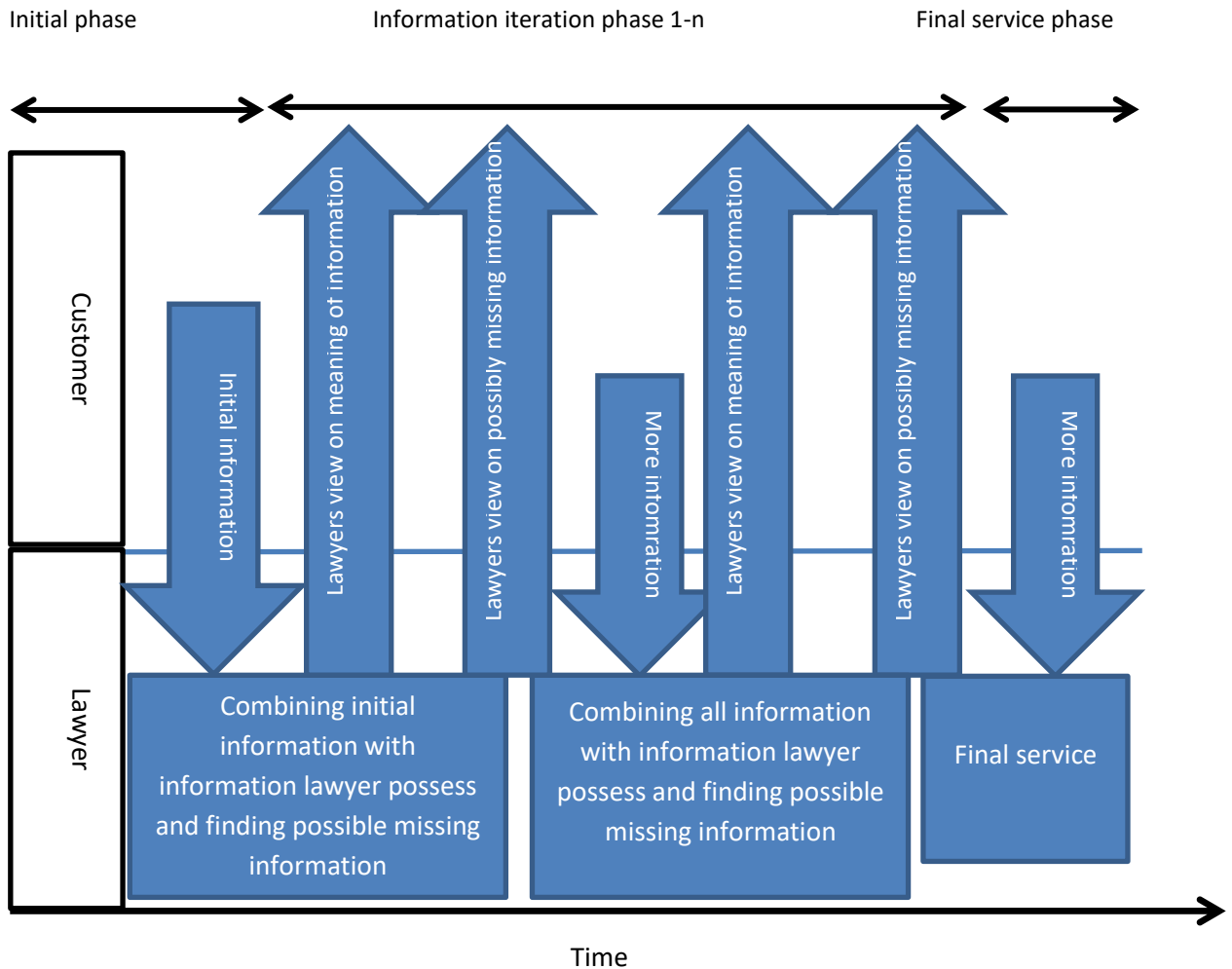


Figure 10. Information and service flow in normal criminal case

On the following figure the service blueprint is described in the most basic case: litigation in civil case. To note on the figure: the second phase can be repeated as many times as necessary. Gaining information from the customer and combining it with the law is iterative process where combining information with laws and regulations might reveal a need for more information. Customer's role in the service is mostly to provide information to the lawyer. Therefore, the customer participation is necessary and unavoidable part to complete the service.

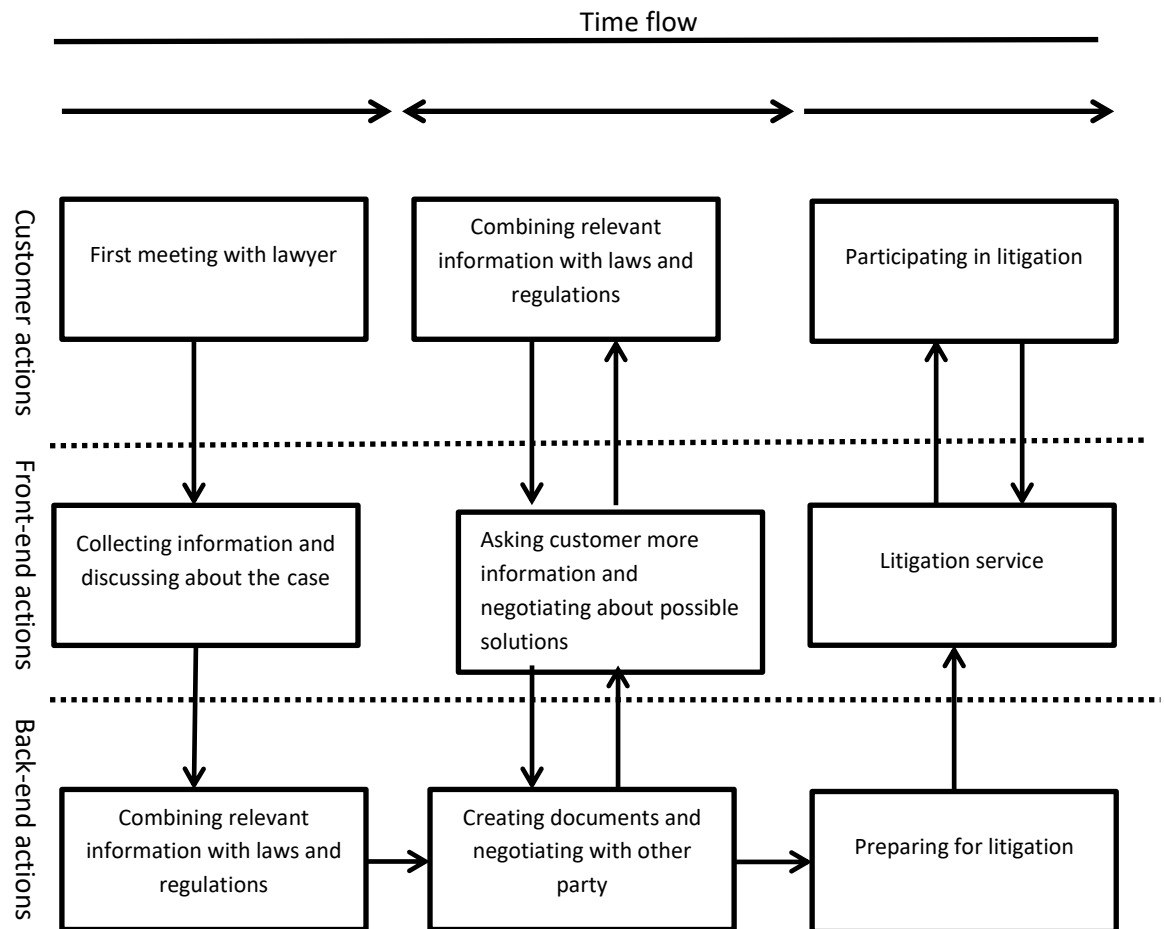


Figure 11. Service blueprint of civil litigation case

As it can be seen from the figure, legal service might be iterative, and the number of iterative rounds affects how the process can be structured. The first phase affects the need of iterations as it includes many actions that are included in the phases two, if the first phase is done with care and it includes enough actions, it reduces length of the other phase. Time boundaries are given only in litigation service phases, but litigation service phase gives deadlines to the whole previous service. Service phases prior litigation can be repeated as many times as necessary and returning to previous service phases is typical. (Interview of the case company)

On the other hand, the need of information cannot be known before the first contact, and if the first phase is made too large, that will lead to possibly unnecessary work and therefore unnecessary costs. Information technology has given some solutions to this problem: first contact is often done with e-mail or phone, which leads to lawyer having

time to find out relevant needed facts before the first meeting. (Interview of expert in productization of legal services)

Service blueprint shows another issue in legal services: customer participation is necessary and even back-end processes cannot be completed without input from customer, although input is given in the front-end process. Service cannot be prepared, and changing service phases is not possible due to required customer input. This is common in all legal services and gives some boundaries to service productization.

3.5 Dividing legal services depending on productability

One point came up from all interviewees: productability of legal service depends completely on which area of law is productized. Interviewees saw also that productability depends heavily on to which kind of customers the services were provided. General opinion was that more international services provided in English were easier to productize due to demand and language issues. Other general opinion was that it is easier to productize services to large business customer who know what they need and want.

Chosen areas of law did either represent fields of law that interviewees spoke a lot when talking about productization or they were some key areas for case company. Major legal fields based on the billing are: criminal cases with 23% of all billing, family law with 24% of all billing and insolvency cases with 9 % of all billing. (Finnish bar association, Finnish associate survey 2017) Productability in these fields are all analysed separately due to their importance in the field.

Case company stated that their key fields in law were business law, environmental law, contract law, tax law, insolvency law and criminal cases. Business law and court cases in general were mentioned often in the interviews when speaking about productability and automatization of legal service. More detailed analysis handled the key areas in the field of legal services as well as key areas for case company.

3.5.1 Business law

Interviewees were quite unanimous on the point that high-end business law is probably the first one to be productized. With high-end business law the interviewees mean large business customers which are buying legal services continuously and are demanding

high-quality services and know the quality of service they are receiving and are willing to pay high prices for that quality. These services are mostly provided in English, which makes automatization of these services much easier. Business law includes all legal services required for large international companies to operate, they can be from different areas of law, but the common thing is that they are needed by large companies for example employment law, environmental law, tax planning, M&A, contract law etc. These services are hard to classify, but in this study all services that are continuously needed by big international companies are classified as high-end business law. In case of smaller company's business law includes all different legal services that are necessary to company to operate correctly and generate profits. In smaller companies these are not needed that often, but these services have one common denominator, they are needed from company's viewpoint "How this will affect my business/ how this can create as much value as possible to my business".

In high-end business law many services are done only to fulfil customer's internal needs with no other parties. In these cases, productability is quite high as those kinds of services are provided to several customers and they include a lot of similar service processes and sub-phases. At these services there are still lot of work that could be automatized: spell checking in these companies is still mostly done by interns, as well as searching information and translating documents. These are all phases that could be automatized, and all interviewees agreed that these will be automatized at least on some level in the near future. However, most interviewees saw these possibilities for productization on business law only in large law firms, which produce these services continuously and produced services are quite similar.

In small and medium-sized law firm there are some issues, which makes productizing business law services harder. In small and medium –sized law firms business law cases tend to be rarer. (Interview of the case company and interview of the Finnish lawyers' association.) Therefore, reusing the knowledge might be hard or impossible due to lack of similar cases. Other issue in the small and medium-sized law firms was that business customers are demanding more tailored and personal service, which makes productizing and automatizing some parts of the service even harder. On the other hand, business cases are largest cases on with lawyers are dealing with, therefore keeping these cases tailored and customized on the single customer might not be a bad idea as long as it keeps the service quality as high as possible. In small and medium-sized firms it was

seen to be more important to create value to each business customers individually due to business customers being key customer segment to several law firms. (interview of the case company)

Productizing and automatizing business law services has also created some problems to lawyers. In large law firms high-end business customers are demanding some services to be done free, as the services are highly automatized and productized. (Interview of the Finnish bar association). Other issue was that in many cases high-end business customers are even demanding that some services are automatized and are comparing law firms depending on which services they are offering and how effectively they can produce those services. (Interview of the Finnish bar association)

Based on these interviews, there is large gap between high end –business law and business law services produced by small and medium –sized law firms. In small and medium –sized companies customers are demanding more individual and personalized services. Despite this, there might be room to productize and automatize some service modules in the case company, especially in contract drafting and communications with different parties.

In the following figure the service in the business law is described. As customers often ask for something specific from the lawyer, they often actually want wider service including other things than just the service they asked for and understanding their needs that they are unable or unwilling to communicate to lawyers. This is common with high-end –customers who are using services a lot and are paying for the value that law firms can offer to them, not just for a specific service they ask for.

One other special feature in high-end business law is that there are no clear starts and ends, just ongoing service, which might include several ongoing sub-processes with their own deadlines and goals. All these services are however built around same value-creation goals and continuation and contents of these services depends in most cases about how the overall value creation in the service is seen. This means for example that some services might be stopped in order to gain more advances on other services. Due to this, all high-end business law services cannot be seen as processes but more like activities reaching for the same goal. This includes services to all customers that are continuously using business law services.

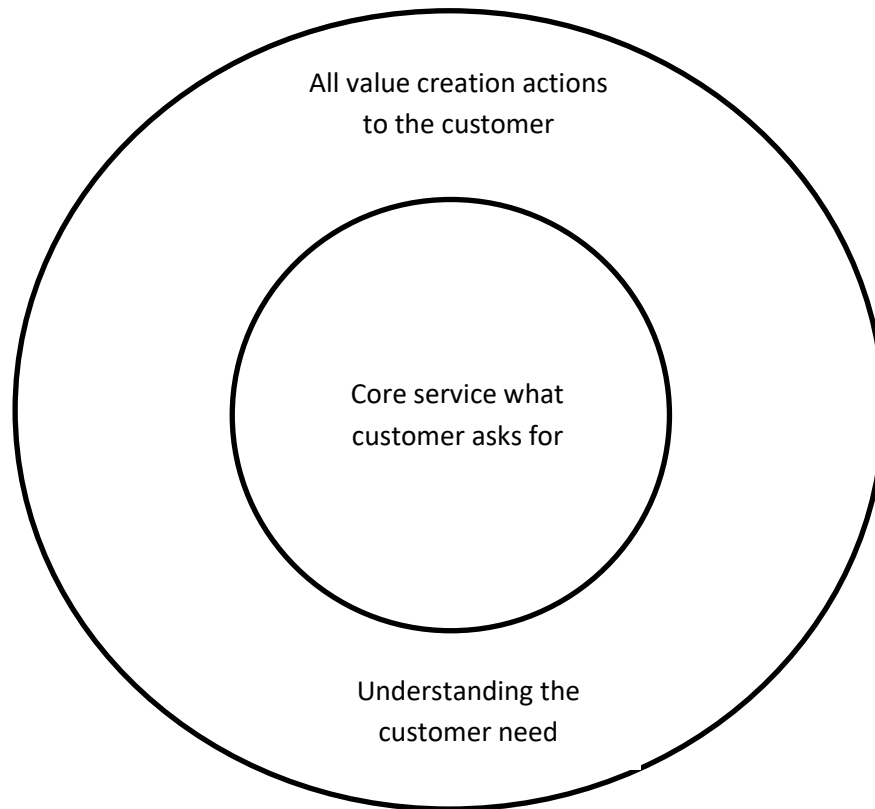


Figure 12. Services in business law

3.5.2 Insolvency cases

In insolvency law there are two types of customers: private persons and companies. In case of private persons insolvency law is often debt restructuring. In the case of company insolvency is often bankruptcy or debt restructuring. Case company described their work process on these cases, some processes were always similar:

1. Getting case either directly from customer or from the court in case of private debt restructuring.
2. Getting all debt information from creditors.
3. Calculating the value of property.
4. Dividing debtors based on their privileges.
5. Taking some special parts of property away to some specific creditors.
6. Calculating how debts should be paid to different creditors.

On these 6 work phases some could be automatized. Calculations part was mentioned to be very time-consuming and it was done mostly by hand on spreadsheet due to several

decision-making rules that apply to the planning of debt payment. Collecting information from debtor and creditors were seen hard to automatize as there is a risk for all parties being dishonest when reporting sums, and therefore human work was needed to check out if the credits and property were real and reported correctly.

However, despite these problems, the insolvency cases are often easily computable due to their very exact nature. Most parts of the actions are regulated very strictly, and lawyers do not have to make decisions how to calculate specific sums in insolvency case. Legal skills are often needed only when evaluating relevancy and amounts of debt from different creditors as legal regulation around these issues is not that exact. The calculations part in these cases is however quite computable, and therefore it should be easy to automatize. There are several applications and programs to do that already.

However, productizing more sub-processes around this should be possible: it does not require law degree to fill all creditors and debts to a system by the hand, as only thing requiring legal skills is analysing the relevancy of debts when creditors have reported them to the lawyer. In these insolvency cases a productization project was started in case company. It aims to automatize collecting the debt and property information and calculating the payment plan when lawyer has checked the validity of information.

The following figure will describe the general idea of insolvency services. Arrows indicate need to pass information on someone or from service phase to another. Boxes with continuous lines means actions where insolvency-related skills are needed, and actions are not repeatable but more like case-specific. Boxes with not-continuous lines mean service phases where series of actions are required, but these actions are repeatable and automatable as they are either based on calculations or they are similar in every case.

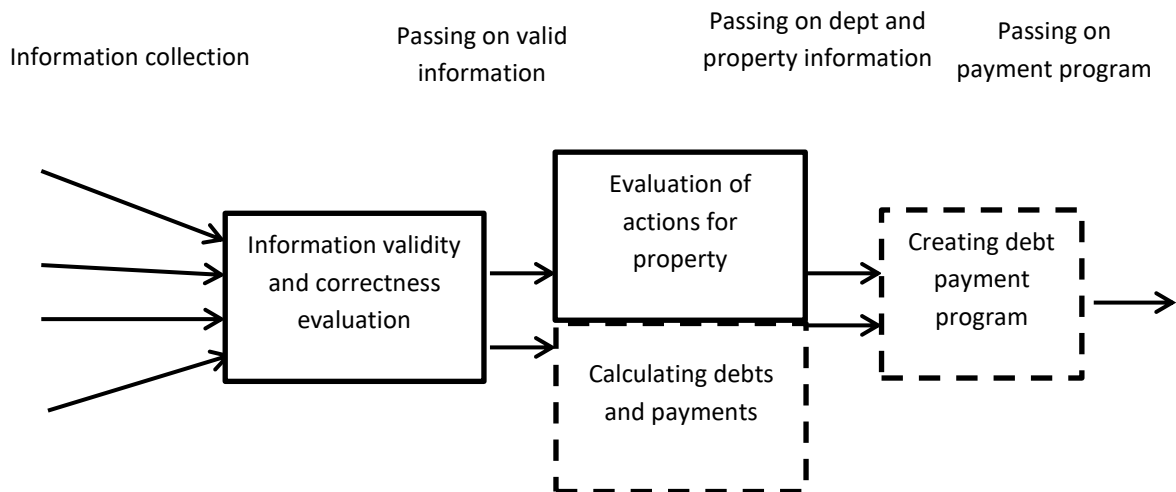


Figure 13. Service structure in insolvency case

3.5.3 Criminal cases

According to the case company, typical features in criminal cases are that they are based more on evidence and legal significance of evidence than understanding the different rules of law. This is due to principles that all that is criminalized must be stated in law clearly, “no crime without law” or “*nullum crimen sine lege*”. (Rautio *et al.* 2004 chap. I.7) Due to this there are rarely problems whether the action was crime or not. The problems arise whether the action happened at all or whether actions fulfil all requirements to be defined as a crime. (Interview of the case company)

A sub-group of criminal cases are where criminalized actions are based on some other law for example in criminal code paragraph stating about false accounting, the criminal code refers that actions that are against the law that regulates accounting are punishable under criminal code. (Rikoslaki 39/1889 30:9 §) In these cases the law in the alleged crime is more complicated and might require more advanced legal reasoning. (Interview of the case company) Due to this, these more specific criminal law services will not be further discussed in this study, as they are a specific type of criminal cases that require a different skillset and are much more tailored and larger.

Criminal cases have some special features in legal services, which make productizing them bit harder. One of them is that presence is often necessary or required. Other is that all or most of the work can be lost if the last service phase is not completed or it is completed with low quality. In court hearing lawyer must be present or the service is

completely or partially useless to the customer. This is due to process regulation that states that only things presented in court can be taken account at the case, and these things must be presented orally if there are no exceptions available for that. (Laki oikeudenkäynnistä rikosasioissa 689/1997 chapter 6) Therefore the service cannot be properly delivered without success at the final service phases. All results from previous service modules aim to provide a successful service at the last service phase.

The presence requirement applies in several services phases. The first one is hearing. The lawyer cannot help the client in the hearing very much, if they are not personally present in the hearing making sure that the client remembers to bring up right issues and that they do not tell about the issues that could be harmful to their interests. Other important part in the service in hearing is to make sure all important things stated by the customer are written up in the hearing records correctly and with necessary accuracy and that no important issues are missing from the hearing records. Sometimes it is also necessary to prepare the client for the hearing, as they need to know what to bring up and what not in the hearing. (Interview of the case company) From this on, all service phases are written except the last part, oral hearing in the court.

There might be preparation hearing if the case is complex or large, but this is not used in large majority of criminal cases. Lawyer must also be present in oral hearing as they are bringing up important issues for their client and trying to make things against their client questionable. The necessity of lawyers' presence depends a lot who they are representing. If they are representing the defendant, it is extremely important to be present in the oral hearing as they are making questions beneficial to their client alone and bringing up important things for their client.

Same applies if prosecutor is not leading the case; the lawyer is only one bringing up important and beneficial issues for their client. If the prosecutor does lead the case, then the lawyers work is not that important as prosecutor should bring up issues beneficial and necessary for the plaintiff. In this situation lawyers' work is mostly to bring up things prosecutor does not bring up for some reason and possibly present some civil demands of their client that the prosecutor is not demanding, or present the demands if plaintiff wants to present these civil demands by themselves. (interview of the case company)

In the oral hearing there are few more issues: the length of court hearing is highly unpredictable. The number of evidence and complexity of issues handled in the court might give some hints, but there is still large variation depending on the prosecutor and lawyers. The amount of argument stated about documents used in evidence can vary, and questions stated to witnesses might vary much more. For these reasons the length of court case is quite unpredictable, as well as the issues relevant in the hearing. One can never know which things the other lawyers or prosecutor lifts up from the large amount of facts related to case.

Due to these issues, oral hearing in the court is always a tailored service. Same things cannot be re-used as the hearing will always be different. Therefore, that is the most knowledge-intensive service law firms can provide, with not much space for productization. Some structuration can be done at some limits. There are different litigation strategies depending on the case, and these strategies might have some common features. Due this being much lawyer-dependent and core skills in the field, the productization for these services will not be introduced during this study. Studies of productization and structuring the litigation services might be conducted later on, but currently there are much more easily usable productization opportunities.

All service phases between hearing in court and in criminal investigation are document-based. There are several options and possibilities for productization and automatization. Preparing the response is often very similar to all other responses, especially when law in the case is clear but the evidence is unclear. The productization of this legal documentation is quite easy as there are several combinations of forms and phrases that are used in all cases or in all cases with same type.

There might be some productability possibilities in the evidence management too, as that is present during the whole process and having evidence and their meaning structured during the whole case might be beneficial. Productization might apply also in the hearing preparations, at least in a form of some kind of case-specific checklists or to-do –list so that lawyer would not have to invent the wheel all over again in every case.

In the criminal process the process depends heavily whether the service is provided to plaintiff or to defendant. Often the service requires much more work when one is working for the defendant. Other major issue is whether the case is led by a prosecutor

or by the injured party. If the prosecutor is leading the case, the work required in the case is much smaller when representing the plaintiff. (interview of the case company)
These all services are quite different, due to this, they are presented as flowcharts. As collecting information is present in all process phases, it is introduced as its own process phase that is ongoing during the whole service process in criminal cases.

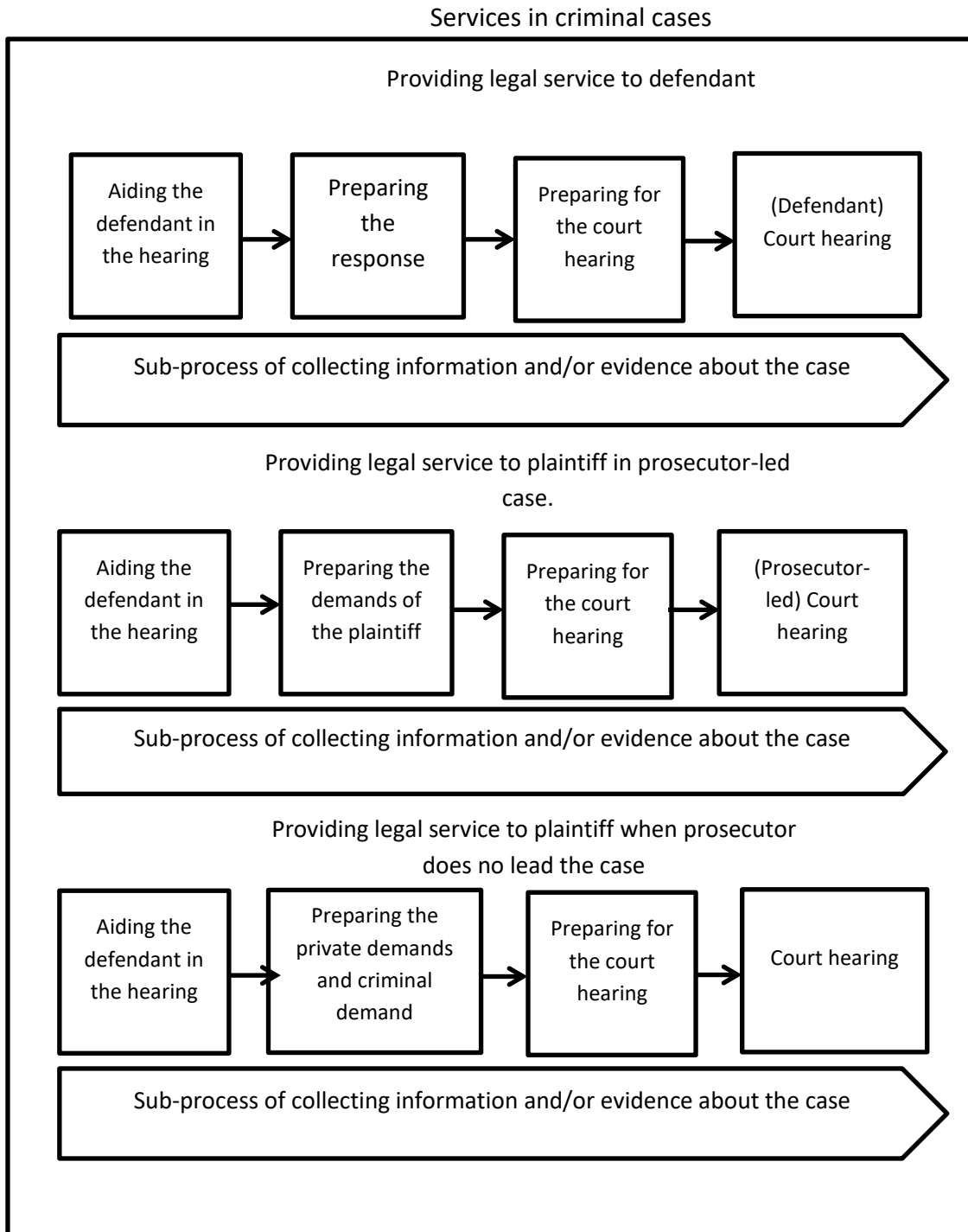


Figure 14. Service process in criminal cases. (Based on billing information of the case company in criminal cases and the interviews of the case company)

As we can see from the figure there are some common services sub-processes in all criminal cases. Most common part of the service to be left out the service is aiding the client in hearing. Many people will go to hearing without lawyer, even if that might not be beneficial to them.

3.5.4 Family law

As stated earlier, family law is one major source of income in many law firms. Family law covers usually legal issues regarding to marriage, child custody, inheritance and divorce. (Finnish bar association, Finnish associate survey 2017) This definition is however not official and family law can cover different fields of law depending on the speaker or researcher. Some add inheritance tax issues to family law, and some leave other fields of law out or include different fields of law in. This study focuses more on family law excluding litigation as litigation in civil cases can be classified their own fields of services. Family law excluding litigation is extremely document-based. There are wills, prenuptial agreements, listing ownings after death “*perukirjoitus*” and dividing ownings after divorce.

All processes mentioned above are mostly document-based. (interview of the case company). Prenuptial agreements and wills are on most cases almost identical in contents; just the names of parties are changed. In most cases they do not require legal knowledge at all, they could be automatized completely, and people could do those documents without help. (interview of the case company) The internet is full of different fillable forms for prenuptial agreements and wills, and almost all of them are good enough to satisfy needs of the common customer that comes to law firms wanting basic prenuptial agreement or will.

Despite all these reasons the family law services are still major part of law firms’ income (Finnish bar association, Finnish associate survey 2017) Directly evaluating this means that people are paying on knowledge and skills that they have themselves or they could acquire, and therefore they do not actually need the service. However, when interviewing lawyers, they stated that customers are not paying on legal knowledge, they are paying for certainty.

Divorce and dividing ownings after death are largest issues normal people face on their lives. On these cases they want legal documents to be right to gain some predictability and avoid very expensive consequences. There are some specific requirements for these documents to have legal effect: for example, both will and prenuptial agreements require two witnesses without own interest and prenuptial agreements must be registered to magistrates and there must be specific requirements for place and time when signing the documents and about the presence of the witnesses. Due to all these

requirements, normal people might have uncertainty whether their documents are legally binding, and they are willing to pay for lawyers to make sure that their documents are legally binding. (interview of the case company)

Due to document-based nature of these family-law –services, they are quite productable and highly automatable. As stated above, the internet is full of different highly automatized legal services that offer prenuptial agreements and fills if the customer just fills in few boxes and pays the transaction online. Some services offer only those documents, some offer registration and making sure the legal certainty of the documents. Due to reason that customers want legal certainty, productization of these services should focus more on how to provide the certainty with as repeatable way as possible.

There are also more complex family- and inheritance –law cases. In these cases, there are larger possessions or there are connections to other fields of law like property law, tax law or business law. In these cases, family law services are like business law services provided to small businesses: the most important issue is how value can be created to single customer in that service. (See more at chapter 3.4.1 Business law) Due to rarity and complexity of these cases, the service has to be tailored to each customer individually, and productization possibilities are very few. In addition to these, in these complex value creation cases customers tend to demand more individual services and not automatized service. (Interview of the case company, Interview of the Finnish lawyers' association) Productization and automatization can however create some extra value to these services according to some interviewees: when productization and automatization reduce routine work from lawyers, they will likely have more time to meet with the customer and provide them more personal services. (The interview of Finnish bar association)

There are also some family law cases that are not based completely on documents between two parties. One major group of these services are services related to child custody. If custody cannot be agreed on between parents, the case will be more like litigation in civil case. In these cases, there are not many features that are common with other fields of family and inheritance law. Productization of these services should be analysed with the productability of civil litigation services. The only special features in these services are that both parties bear their own costs and that costs are not significant

issue in the litigation. Other important issue to note is that these cases are often based on same legal arguments just with different facts. (Interview of the case company)

When child custody case is against state the case is a bit different. The court in these cases is administrative court, when in custody litigation between the parents the court is district court. In administrative court the process is mainly written, and all parties state their opinions and evidence through written procedure. The oral process will be done only if it is necessary (Hallintolainkäyttölaki 586/1996 36 §) Due to these reasons, the productability might be bit easier in these cases than child custody case between parents. However, in child custody cases there are common features with criminal cases: they both are quite simple in the evaluation of law but highly evidence-based. (Interview of the case company). Due to this, productability is quite restricted as evidence, their meaning and their significance are very case-specific. However similar solutions to productize the service partly exists than in criminal cases: writing down important legal issues related to case and stating different kind of evidences that might prove it and then just copy- and paste these legal clauses in the written response. (See figure 17)

One special service in family law where lawyer is often needed relates to death. When listing ownings of the deceased after death "*perukirjoitus*" the service is extremely formalized. In these cases, lawyer has to give instructions to heirs or widow or some other close to deceased how to list all the possessions, heirs, debts and some other things. Lawyer does not need to make the major work themselves, they do mostly have to take care that listing ownings fulfils all processual requirements for this legal action. This service is mainly built up from communicating with the person collecting the information and then creating the list of ownings and debts. (Interview of the case company) This could be productized even further by unifying communications and automatizing the creation of the list used by inheritance dividend and inheritance taxation "*perukirja*".

When productizing and automatizing these document-based family law –services, it is necessary to remember the legal restrictions on that. As stated earlier, if lawyer is under the supervisory board and code of conduct, which they are if they do litigation, they have some personal responsibilities even in simple, document-based services. As stated by supervisory board and Helsinki court of appeal, lawyer must at least to make sure

that service buyer is able to do such legal actions, they know what they are doing and if the document they are asking for actually suits their needs.

Due to these requirements, customer contact is always necessary in these cases, even if the automated solutions would perfectly suit customer's needs. The contact requires at least more than fillable boxes, and at least e-mail –contact is required. This does not however require lawyer's work, and it can be done by lower-paid assistant. The minimized service does then require fillable form online, contact from assistant and assistant taking care that all formal requirements are met. Lawyer does only have to make a good form once, that legal knowledge can then reused infinite times.

In the next figure, a typical document-based family law case is described. The arrows describe information flow, boxes with solid lines actions that require personal actions from lawyer, boxes with the dotted line describe actions that can be automatized and boxes with two lines describe customer actions.

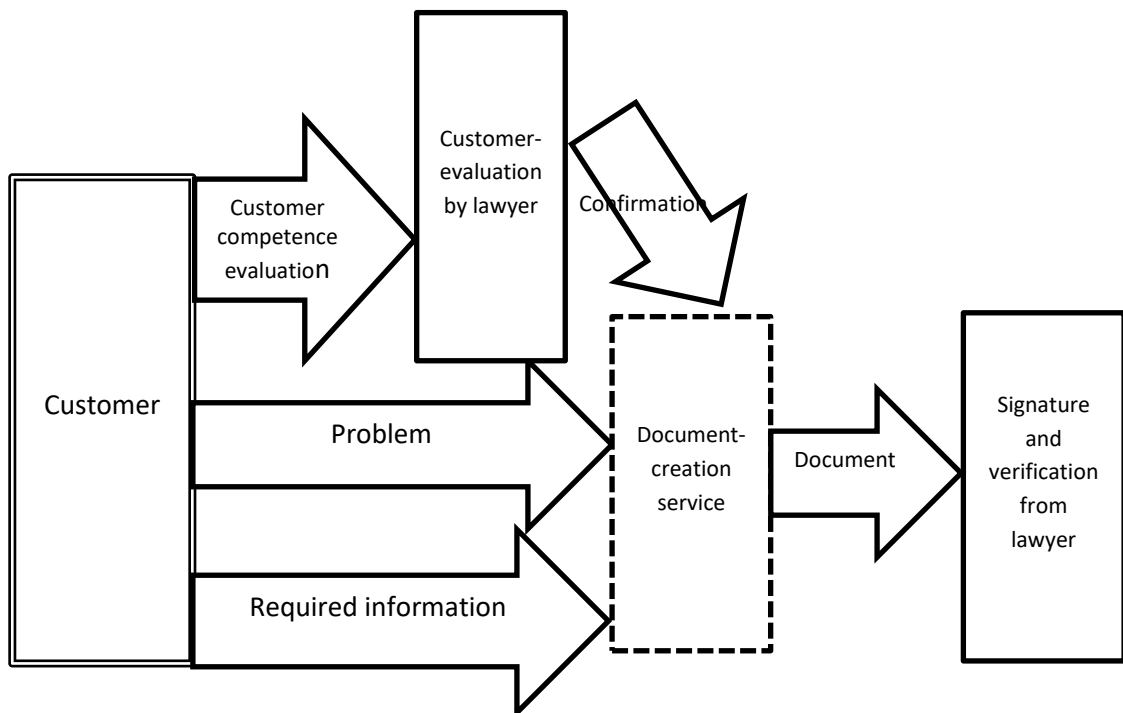


Figure 15. Service process in document-based family law services

As it can be seen from the graph, the automated service requires actions from the lawyers before it can be started, because otherwise there is always a risk for completing service that cannot be billed. On the other hand, if the cost from automated service is

low or non-existent, service phases verification, signature and customer-evaluation by lawyer can be combined to only one action. This would probably save some time from lawyer and enhance possibilities for more rapid service productization.

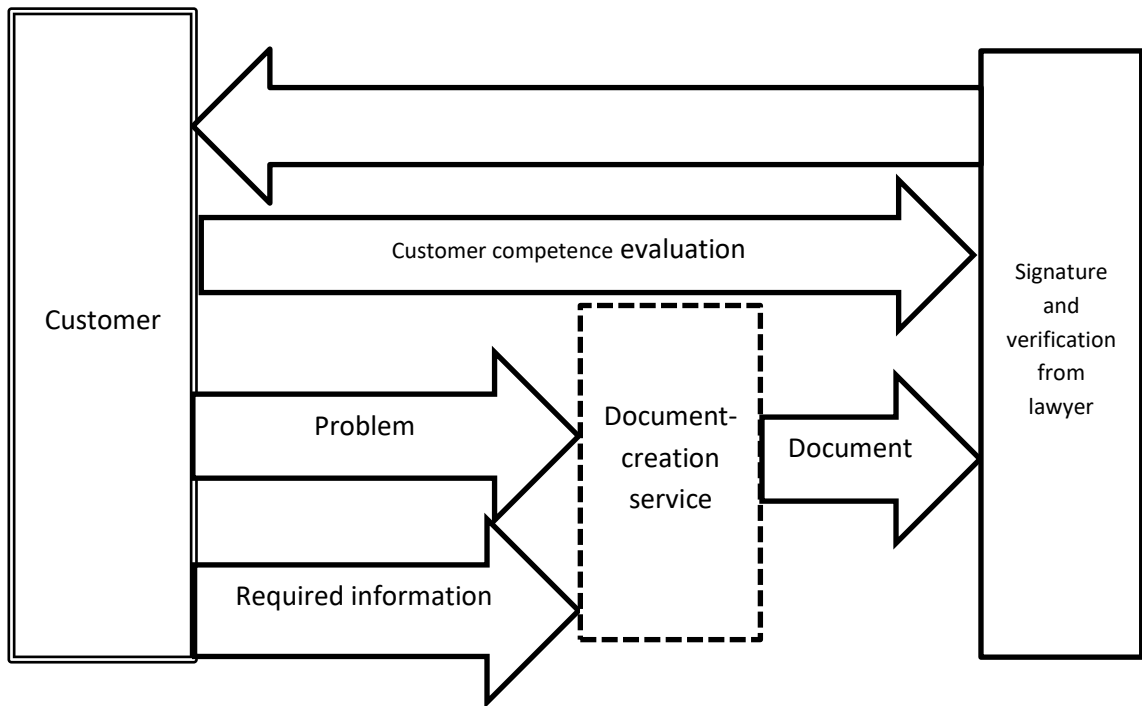


Figure 16. Document-based family law service where all actions required from lawyer all combined to same service phase

While litigating in family law –services, the process is a bit different. Then customer is actively participating on the case and lawyer and customer are interacting in the case. The process is almost identical to civil litigation process (see figures 15 and 16) with the difference that both parties are responsible for their own costs. (Oikeudenkäymiskaari 21:2 §)

3.6 Current situation in the case company

During this study, the case company started to structure and document their process of reusing old knowledge. The case company started to collect parts of documents that come and, in several cases, and fill the critical part of those documents with options, where lawyer can choose which is relevant for the case. As these documents were all stored logical way, the company believed to achieve major time savings due to not needing to write everything all over every time. The following example is a document

form for defending the client in self-defence cases, document includes the basic description of self-defence and there are mentioned several things that might prove that actions were self-defence. Lawyer then just fills the clients name and chooses which facts apply to case, not needing to write all the basics all over again. This is one example of how to productize some parts of the legal services: knowledge is re-used, process is quite structured as documents are always on the same place and they are used on the same way and these are used on all cases this legal reasoning applies.

This process structuring the knowledge required in criminal cases is still ongoing. The process is however structured: in all criminal cases lawyers do first check whether the legal clauses needed do already exists and whether they suit their needs. If either condition is not met, actions are taken. If the clauses do not exist, the lawyer creates them alongside when creating new clauses from scraps. If the clauses do not suit their needs in that specific case, either a new clause is created, or existing clause is modified to suit their future needs in similar cases. This process is estimated to save major amounts of time especially in small criminal cases, where drafting a response or demands to the court can take up to 40 % of time spent to the whole case. If time saved would be just 10 % using these methods, several percent of time used would be saved in every criminal case, which would in longer terms create major savings to the customers, lawyers and to the legal system. If these repeatable tasks would be automatized, time saved would be even more significant.

Productization could be taken even further if collecting these pieces of legal reasoning from new documents were formalized and processes about creating these sheets would be formalized and documented. Other possible future development could be making using these even easier by using information systems, which would do copy-pasting and filling right names in without lawyering requiring to work. This would release the lawyer to focus on actual issues where legal knowledge is needed.

NIMI on toiminut hätävarjelussa. Hän on pyrkinyt suojaamaan koskemattomuuttaan välittömästi uhkaavalta oikeudettomalta hyökkäykseltä. NIMI on aloittanut puolustautumisen, kun hyökkäys on jo alkanut. NIMI ei ole voinut tilanteen alkaessa arvioida sitä, miten häneen kohdistunut hyökkäys tulee etenemään. Hän on tilanteessa ollut käytännössä yksin

- useampaa henkilöä vastaan
- itseään selkeästi fyysisesti isokokoisempaa hyökkääjää vastaan
- terä-/ampuma-aseella/astalolla varustautunutta hyökkääjää vastaan
- Tyhjä

NIMI on pyrkinyt käyttämään puolustautuessaan niin vähän väkivaltaa kuin tilanteessa on ollut mahdollista. Tämän puolesta puhuu se,

- että vammat ovat olleet hyvin vähäisiä
- että tilanne on loppunut nopeasti
- että NIMI on paennut tilanteesta heti kyettyään

Figure 17 an example of productized service from case company. In Finnish

The other thing where case company has started to emphasize ideas of productization is understanding the needs and how to create value to customers. As stated earlier in the chapter 3.5.4 concerning the needs of customers in family law, the customer is paying for certainty and that they feel that their problem is solved well. Due to these reasons found during the study, the case company has divided their family law services to three groups:

1. Complex issues, where it is necessary to further think about value creation to customer and spend time finding out the best possible solution to customer.
2. Normal cases where customer does not want the legal certainty in their family law issues. In these cases, the service phases related to document creation are productized and in the near future automatized so that time spent to them can be minimized. The other part of the service is built up from connections to customer so that they feel that someone is taking care of their issue and that they got the certainty they are paying for.

3. Cases where customers only want document drafts as cheap as possible so that they can take care of the procedure themselves. In these cases, the case company is creating a contract drafting application on the web. Due to requirements of the code of conduct, the service will include a small personal contact from assistant to take care all regulatory issues for providing such service.

In case of insolvency law, the other productization project has started during the study. Currently the case company is doing private persons debt restructuring using assistant that uses spreadsheets to manually calculate everything. This might take from dozens of minutes to several hours just to complete all calculations necessary to complete in the debt restructuring. Algorithms are able to complete this work in just few seconds with larger certainty than humans. (Preliminary tests of algorithm created to some product phases) The legal skills in this process are related more on evaluating debt existence, creditor group dividend and debt amounts. Large part of the process is also communication with creditors and debtor. (Interview of the case company)

As these preliminary tests have shown, in this case automatization can increase legal certainty and decrease the costs that come from the service. As long as legal evaluation of debt sums and their existence is done by a lawyer, there are not major issues preventing the productization of these services. This productization project is still ongoing when this study is being finished, and some parts of the communication with creditor and debtor is added to this productization and automatization project. The same concept could improve legal services in other insolvency cases too as they are based strictly on law and calculating is major part of the service if measured by time usage of each phases. These calculations are quite simple after all numbers and information is filled in, and it can be done by an algorithm with few seconds. This applies to debt restructuring for companies and bankruptcy cases.

3.7 Benchmarking successful productization projects

There are several different automatized legal tools that can be found online. There are websites that offer wills “just for 19.90e”, which are not offered by law firms. There are also websites by law firms that offer wills with a bit different concept: on those sites the will is ordered online, *followed by a contact from lawyer*, and after that the will is delivered. (Look i.e. Associate company Rantanen & Huovinen 2018:

<https://www.verkkoasiakirja.com/testamentti/> or law firm Lakipalvelu kevytjuridiikka Oy
<https://www.kevytjuridiikka.fi/asiakirjat/testamentti?>)

Price of these services is around 100 euros, which means they are significantly more expensive than those provided by non-law –firms. This is most likely due to that law firms under the code of conduct are required to take contact personally, which makes the costs for providing services significantly higher. On the other hand, these services might generate more value because they are more tailored to customer and lawyer actually checks that customer needs what they said they want. This is a combination of automatization and customization that suits well those customers who do not want or need their service to be tailored for their needs from the start.

These partly automatized and productized services require a bit more from the customer: customer needs to have some idea what they need for that they can use the services. On those cheaper services even more is required from the customer, as there is no lawyer to help, customer needs to know almost exactly what they need for service being useful.

On the other hand, when customer knows almost exactly what they need, they are probably capable for doing that on their own, but the service might respond to a need for certainty. Services by law firms offer more certainty with greater price, but there might be differences how much different people are willing to pay for certainty in their legal issues, which makes demand for those completely automated services, which practically just copy-paste what customer fills in the boxes to a form for will.

Other typical partly automatized legal services are prenuptial agreements. Several companies offer them over the internet. There seems to be two different kinds of service concepts provided by law firms. Other are offering just the document and customer is responsible for legal process on themselves. (See i.e. Kevytjuridiikka <https://www.kevytjuridiikka.fi/asiakirjat/avioehtosopimus?> and lakiasiaintoimisto Nislaw <http://www.avioehto.info/tilaa-avioehto/>). Other service provider offers also the legal process, which includes witnesses and registration at some locations (see i.e. Aavia Oy [http://www.aavia.fi/avioehto/?](http://www.aavia.fi/avioehto/)) The first group does also often offer help and advices for successful process to get effective prenuptial agreement and to get it registered. These service providers are not however offering any actual services for registration, just a list of information that is needed at the registration process. As it was

with wills, all these services provided by law firms include a phone or e-mail connection with the customer, as it is often requirement to fulfil the needed quality for services. There are also some free services providing these documents, but these include only fillable documents. (See i.e. <https://sopimustieto.fi/sopimuskone/aLJRdQ/D6gyLz>) These services do often provide some legal services free but are offering other services for compensation. Free services are then part of their earning model. With these free services, no human-human interaction is including, but creating the document and asking the information is completely automatized.

At some interviews it was stated that being under the code of conduct of Finnish bar association means that there are some quality checks. (Interview of Finnish lawyers' association) This means that customers are able to know what kind of quality they are getting when they are buying services from providers that are under the code of conduct. On the other hand, this is highly related to certainty where customer might gain some value, some customers are willing to pay for certainty and they are probably also willing to pay for higher quality of service as they will know that their legal risks are low.

It was stated at some interviews that competition in legal services might come in low-end services and these services might be provided by non-lawyers, due to less restricting regulation. (Interview of Finnish lawyers' association and interview of expert productizing legal services) Although this is one possible development, there are still different ways that lawyers can create value to customers.

There are also some programs for restructuring debts for private persons that can be found online. Most of them are calculators that can include all relevant things in restructuring and then generate payment program. (see i.e. Knowledge partners Oy <http://www.knowledgepartners.fi/uploads/7/8/7/4/78742482/velkajarjestelija.pdf>) In these programs lawyers are responsible for checking the validity of debts and other relevant information, but the calculation is completely automatized. These projects are automatizing part of the human work, but there is one major thing that was now automatized in these products: communicating with creditors and debtors and collecting and structuring the information. These are still done by the lawyer, even if lawyers' skills are needed only to check the validity of information.

In the high end –business law which is mainly done in English, there are several different programs. (see i.e. Kira Inc <https://kirasystems.com/>) These programs automatize tasks that were previously done by junior lawyers or interns. (Interview of Finnish lawyer’s association) These programs are highly advanced, which enables automatization of several service phases but requires productization, which also helps to further productize the service offered to customers. In these cases, starting to use these requires but also helps productization. On the other hand, the one who offers these programs has productized some parts of legal services and at the same time automatized it. The one who start to use these automatized tools are productizing their own services in order to fit automatized service phases to it.

For litigation cases there exists several different programs that aim to reduce the human work required for the task. However these are mostly in English and not directly suitable to Finland (See i.e. Capterra inc <https://www.capterra.com/legal-case-management-software/>) Same thing than in business law applies here: as there are software solutions that allow human work to be reduced, it is possible for law firms to clear their offering to the customer, but they do also have to understand their service in order to be able to automatize some parts of it.

There was one thing in common between these third-party programs and productization. These third-party programs that only automatize one part of the service do not directly productize anything. However, starting to use them forces to understand own service in advance to know what will be automatized. Using these services also forces the law firm to think their offering and earning models as part of the work is automatized and their hourly billing from that service is cut down. Due to this, these programs make it possible to productize some services, as starting to use them requires at least some level or productization. Of course, more planned production makes it possible to utilize these programs even further.

There are also some projects where a single need for legal is responded by a productized legal service. The previous productized services were some examples of these, but there are some productized and automatized legal services that are created to fulfil a single need. One example of this is Trademarknow-service. (See Trademarknow-website <https://www.trademarknow.com/>) The service was created to cut down manual labour required to check whether a similar trademark exists somewhere in the Europe or in the US. Service compares to-be-registered trademark to

already registered trademarks in the US and Europe, and warns if there are too similar trademarks, which might prevent registration. The service also shows other relevant information like in which classes the trademark is already registered and where there are pending registrations.

Trademarknow is a productized service that is offered to anyone willing to pay for it. This is an example of productized legal service, that is offered as a module or part of others' legal services, but the service is completed by someone else. This study has focused on productization of law firms own legal services that have already been offered to customer and automatization of parts of these productized services. Trademarknow is however a good example how part of legal service can be productized and automatized so well that it can be offered to others just to include it to their own service processes.

3.8 Synthesis: how to create a profitable business model when automatizing legal services

The goal of this chapter was to answer research question “*What are limitations and requirements for profitable business models when productizing and automatizing legal services?*” The survey conducted to judges showed that there are some limitations for business models when services are automatized and productivity increases: the benefits from increased productivity might not go to the law firm but the party paying for the litigation. General opinion in the court is currently that billing should be based on time used and not results generated for customer. Some judges tend to approve that increasing productivity is an investment and it should pay off as well as that results matter more to the process than time spent. However, the variation in the cases was so large that the expected return for business models built around automatized services might be smaller than in traditional services. *Therefore, the earning model and services where productivity and automatization are used should be chosen with great care.*

When analysing the structure of legal services and interaction with customer, few key issues rose up. First one was that traditionally the costs structure of law firms has been based mostly on salaries and earning model has been based on hours worked. If the linkage of hourly costs and hourly billing is cut off, the business model and use of capital might have to be redesigned. The other major point was that in many services, the customer interaction is essential as customer has large parts of required inputs to the

process: information. *Due to this, the customer interaction part of the service needs to be designed with care when rethinking the services.*

Possibilities for productization and automatization differed largely in different fields of law. Other fields of law were more suitable than the others. Main limitations were that in some fields of law the major part of the value created is that customer gets the feeling that everything is going well, which often requires human interaction. Other fields of law are more linked to court processes, which sets several requirements for the service. On some fields there are practically no limitations.

To summarise the main limitations and requirements for profitable business models built around productized, automatized and digitalized legal services:

Limitations:

- Cost compensation in courts in several cases,
- finish bar association rules,
- differences in different fields of law,
- human interaction being part of value creation,
- court processes being linked to law firms' services processes.

Requirements:

- Customer orientation: how to get all necessary inputs from the customer effectively,
- payer analysis: who pays and who makes decisions about billing
- value creation analysis: how does the service increase customer value
- interface analysis: how is the service linked to services by other actors in the field.

4 Productization of automated legal service on conceptual level

4.1 Concept for productization of automated legal service

This chapter aims to answer the last research question: what is the conceptual process when productizing and/or automating legal services? This is done by synthesising the results of previous chapters and creating a concept for productization by listing necessary steps and prerequisites. The concept is not just for productization but for automatization as well, and the concept takes account the profitability of business model.

In the chapter three the productization for knowledge-intensive service was defined as well as main challenges when productizing legal services. The key elements for the productization were:

- Customer orientation,
- Clarification and documenting service processes,
- Working methods,
- Service offering,
- Modularization of services,
- Service blueprinting,
- Customer benefits,
- Market potential, volumes and competition,
- Piloting productized services.

When productizing legal services, some key points rose up:

- Customers: Are the customers private persons with not a lot of knowledge or persons or companies with a lot knowledge?
- Demand: Are there a lot of small customers or few large customers?
- Extent of the case: how much work the case will take?
- Court processes: Is the case court case or not?
- Value of the case: can there always be a tailored solution or is it necessary to save costs?
- Legal requirements: does the law set some requirements to the service process?

These key points must be taken account in the productization process. In chapter 3 some limitations and requirements for the productization were discovered:

Limitations:

- Cost compensation in courts in several cases,
- Finnish bar association rules,
- differences between different fields of law,
- human interaction being part of value creation,
- court processes being linked to law firms' services processes.

Necessary steps:

- Changing mindset to customer orientation: how to get all necessary inputs from the customer effectively,
- payer analysis: who pays and who makes decisions about billing
- value creation analysis: how does the service increase customer value
- interface analysis: how is the service linked to services by other actors in the field.

When combining these, a model for productization can be formed. The model is built around typical service productization model, but it also takes account special features of legal services and automatization. The process itself does not take account the differences between different fields of law, but those differences can be taken account in some processes phases.

Table 2. Productization of automatized legal service

No	Phase	Goal	Things to consider	Questions to ask
1	Value recognition	Understand the customer need and value created to customer.	Typical customer. Reason to use services.	What does the customer want from the service? How does my service benefit the customer?
2	Service process analysis	Recognise and analyse core service. Recognise and analyse complementary and additional services.	Essential parts in service. Possible extra sales. Aligning customer needs. Services produced effectively together.	What actions are done when completing the legal service? What part of the service is absolutely necessary to customer? What more can we offer in order to increase customer's value
3	Service documentation	Document the service process.	Service description model. The most suitable	What do we do every time when we complete this service?

			model for all services.	
4	Service structuring	Structure your services, make similar services follow the same formula every time they are completed. Make several service paths depending whether the additional and supporting services are taken. Follow how resources are used in different service phases.	Describing the path and contents of parts. Modularity of processes. Optional service paths.	How can we ensure that previous experience is taken account in the services? How does additional services fit the process? Where are we with each service process?
5	Process restructuring	Restructure processes more effective if needed or possible.	Laws and regulation. Processes linked to others organizations' processes.	Can this be done some other way? Could this be more effective?
6	Service phase analysis	Collect information about different service phases and sub-processes.	Measurements. Value creation. Additional value to other processes or company.	How much time is spent on different service phases? What actions different phases require? How much skills different phases require? How similar those phases are when repeating them in same service or in different service? What value does that phase create to customer?
7	Scalability and automation potential analysis	Analyse the repeatability of some service phases.	Repeatability on human viewpoint. Repeatability on machine viewpoint. Need of expertise in different sub-tasks. Similarities between services.	Can some knowledge or created products from other services be reused in later services? Does reuse affect how the value is created to customer? How does repeatability affect the cost structure? Do laws and regulations affect repeatability?
8	Value creation analysis	Analyse your own value creation	Earning model. Alternative earning models. Competition. Customer needs. Markets.	Is it beneficial to increase effectiveness in your current earning model? Is it beneficial to change earning model if effectiveness is increased? Can you gain competitive advantage by changing your earning model? Can you increase your own value by some other ways now when you understand your service?
9	Knowledge-intensity analysis	Analyse the knowledge-needs of the service phase.	Routine. Similarity. Scale.	Is it necessary that lawyer does this task? What is the difficult part in this phase?
10	Technology level analysis	Analyse the current technology and possible technologies.	AI. Apps to support lawyers.	What is the current level of technology? Could computer do this

			Key issue database.	task?
11	Value creation check	Analyse whether human work creates value to the customer.	Customer needs. Assurance.	How much value does certainty give?
12	Legality check	Analyse whether laws and regulations are affecting the automatization.	Laws. Code of conduct.	What is the law affecting this service? Does code of conduct have anything to do?

When productizing legal service, the process must start with understanding the customer need and value that customer seeks from the service. In the research three different values came up: certainty that everything is going as planned, problem-solving and expert that listens their concerns. (Interview of Finnish lawyers' association) The service must respond to these needs; the structure of services can be planned later on.

The next phase in the productization of legal service is understanding the process. Which sub-processes form the service process and which sub-tasks are included to service process. In order to generate more value and advance in productization, the process has to be documented and requirements for different service phases understood and documented. When the process and value creation are both clear, it is possible to analyse which process parts will create value for the customer and how.

When service process and value creation are both clear, the next phase is analysing whether some tasks are repeated similar ways in different services. If there are some process phases that are repeated similarly every time, the next phase would be thinking, whether it is possible to reuse some work done earlier in later service phases. If reusing the knowledge is possible that should be structured and documented. When considering whether the process part can reuse old knowledge or not, its knowledge-intensity and value should be considered, as well as complexity of the issue at hand. Other issue when considering reusing knowledge is whether the service is completed often. If the service is not completed often, it might be considerable to build it up from the scratch each time.

When the service is documented and analysed and reusing the knowledge of previous services is considered, law firm must rethink their earning model. If the earning model is time-based billing, the firm has several things to consider: does it generate benefits to decrease time used pro case? This can generate benefits if the saved time can be billed as some kind of procedure costs. Otherwise it seems not economically beneficial to improve effectiveness: every customer creates some other costs than lawyers' salary

like administrative costs, and if every customer is billed less but saved time is used on other customers, the costs increase but the billing stays at the same level. Due to these reasons the law firms must think new value creation models for themselves in order to gain benefits for productization. When considering about the earning models, laws and regulations must be taken account.

When automatizing legal services, all the previous mentioned requirements apply. Productization of the service is necessary in order to automatize some service phases. When the productization process is done, there are documents about the service process and repeatability of some service processes. When the repeatability is understood and need of human work is known, it is possible to automatize some service phases, where human work is not necessary. While doing this, the value to the customer has to be considered: does the human work in some process phases create value to the customer. If not, the phase can be automatized. The human work can create value to the customer if the customer need is to talk to their problems or gain certainty that everything is going as planned. When considering automatization of legal service, the applying laws and regulations must be taken account.

A detailed roadmap how to productize and later automatize legal service can be created. This list applies only on one service process at the time, for example dispute resolution service, and not to all services provided or not to all services provided in the same field of law.

Completing this process on to step 8 or 9 means productizing legal services. At that phase the law firm has thought their services, what can create value to the customer and what can create value to them. In addition to this, they had thought about the process and described what they actually do when providing a specific legal service. And maybe the most important: all this has been documented. When this process is completed, it is possible to change and rethink service process and still maintain the customer value or even increase it. When restructuring services, it is possible to reuse knowledge from previous services and combine some service phases on different service processes.

To complete the productization process, it is necessary to plan the process and have a person assigned to do it. Without it there might be some difficulties to complete the process on time and with enough attention. Due to this, the productization process should be also planned well and preferably documented.

If all phases in the list above are completed, legal service is productized and partly automatized. This requires even more planning and attention due to need to cooperate with technology service providers and required understanding on more than just their own service. This process requires at least some understanding on technology and what is it capable of.

The model stated above answers the question “*What is the conceptual process when productizing and/or automatizing legal services?*” as it defines one process to productize legal service and in addition to that it describes the process required for automatizing the productized legal service. The 11-step process described above can be used in all legal services to productize them at some level. That process can be used in all law firms for productization, but for automatization consulting outside organization might be necessary.

4.2 Evaluation the concept

The main result of the concept creation was modifying general productization concept so that it takes account main factors and challenges preventing productization and automatization of legal services. The other results consider necessary steps to productize legal services and the effects of productization on business process. When evaluating the key points affecting the concept some main points rose up:

- Lawyers are quite resistant to adopt new technologies,
- lawyers are extremely resistant to change their business models,
- there is room for new business models, but existing business models are not willing to change,
- there are trends that are forcing the trade to change, and these results are helping for the change, but the change will be slow.

These same points rose up in interview with the future committee of the association of Finnish lawyers, who saw these main issues in the future and development of the field.

Overall the results are showing that law firms that utilize productization might and probably will be winners in the future. However, they first must find a business model that better suits productized services, as the current business models in many fields of law are not supporting productization. As the state plays major role in several fields of law and even sets the framework for business models, the role of state is crucial when

productized services start to emerge in some fields. On some other fields of law, especially in the business law, the productization and new business models are already possible.

The concept for productization is usable for all law firms, but the part about automatization requires more expertise on productization and IT than regular law firm has. The concept is quite general, and it can be used in most companies that work in the expert service field, but it also takes account special features of legal services. The concept takes also account different alternative business models how law firm can change their business in order to take up most from productizing their services.

4.3 Synthesis: a concept for productization of automated legal service

This chapter aimed to answer to the third research questions. “*What is the conceptual process when productizing and/or automatizing legal services?*” This chapter presented a 12 -step process to productize legal services. These steps can be presented shortly:

1. Value recognition
2. Service process analysis
3. Service documentation
4. Service structuring
5. Process restructuring
6. Service phase analysis
7. Scalability and automation potential analysis
8. Value creation analysis
9. Knowledge-intensity analysis
10. Technology level analysis
11. Value creation check
12. Legality check

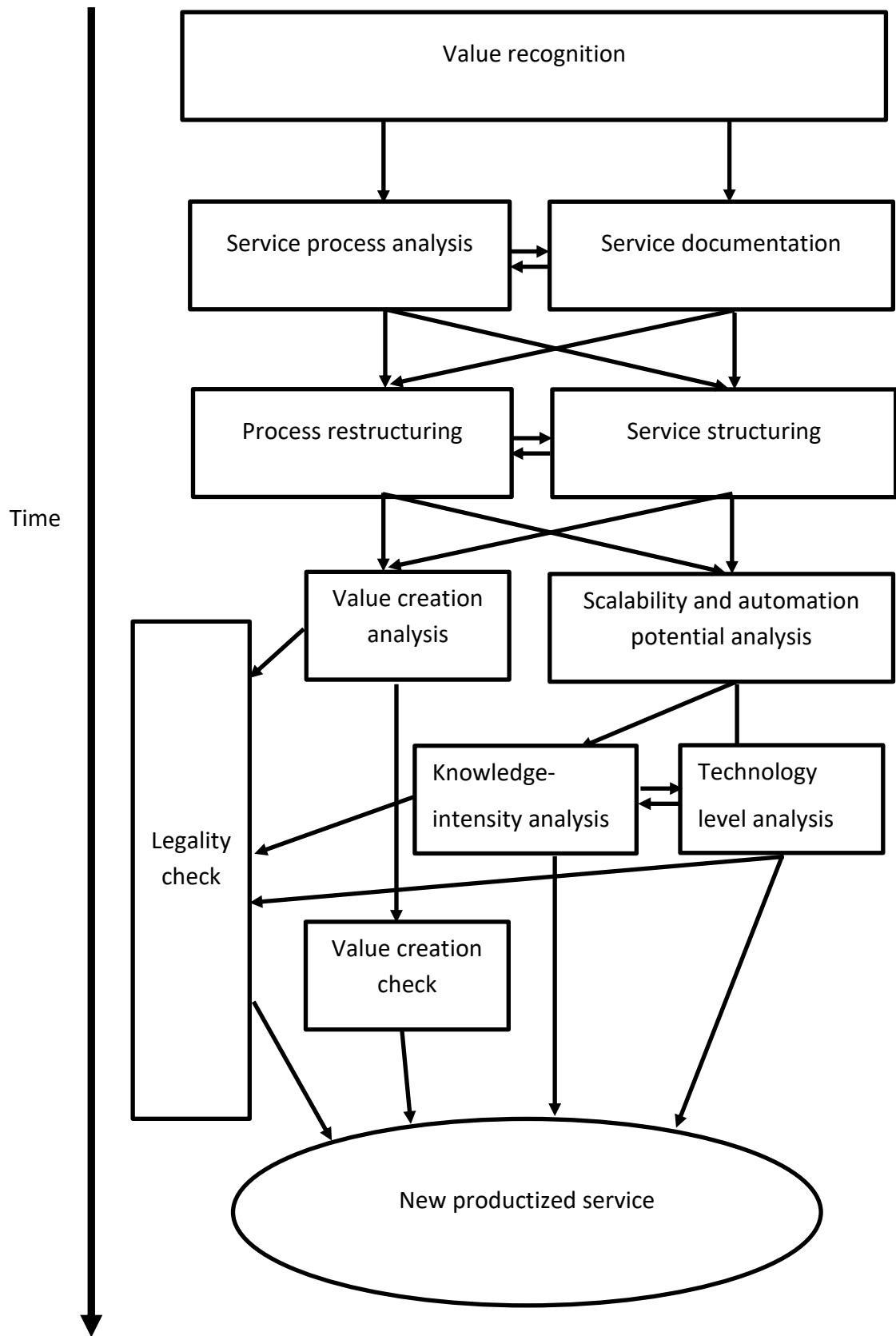


Figure 18. A roadmap to productize a legal service

This model takes account literature about productization and models created by earlier research, but also takes account special requirements and limitations for legal services. These limitations and requirements can be summed up:

Limitations:

- Cost compensation in courts in several cases,
- Finnish bar association rules,
- differences between different fields of law,
- human interaction being part of value creation,
- court processes being linked to law firms' services processes.

Requirements:

- Customer orientation: how to get all necessary inputs from the customer effectively,
- payer analysis: who pays and who makes decisions about billing
- value creation analysis: how does the service increase customer value
- interface analysis: how is the service linked to services by other actors in the field.

The process is naturally different in all firms, but the concept and general guidelines can be stated on more conceptual level. This concept takes account productization process as well as special requirements and limitations in the field and therefore answers the research question.

5 Conclusion

5.1 Contributions

The main contribution of this work was that it proved that productization and automatization of legal services is possible regardless of all the restrictions. Scientific contribution of this work is that it expanded the service productization studies to a quite new field, legal services, as well as it formed ground for future studies regarding productization and automatization of legal services. For businesses in legal services this work made several contributions: it conceptualized a process for productizing a legal service, it listed all major restrictions and challenges that might come up while productizing legal services and most importantly it gave information about new business models that are needed to utilize productized and automatized legal services. For other stakeholders this study revealed some issues that need to be changed in order to enable productization and further value creation for customers and lawyers. Largest single stakeholder is the legislator as it makes decision on large parts of lawyers' earnings. This study is the first study about productizing legal services in Finland, but it might give room for more and therefore change the business environment and the business at the long term.

First research question was "*Which are key issues that must be taken account when automatizing legal services?*" These issues differ much on different fields of law and in different legal services. Therefore, these issues must be taken account every time when analysing the productability of the service. Several issues are forcing the service to be tailored to the customer each time. On the other hand, other issues are forcing to cut down the service costs as low as possible. All these issues must be considered before starting the productization process. To synthesise how these issues affect productability:

Table 3. Issues affecting productability of legal services

	Increase productability	Decrease productability
Customers	Customers with high knowledge (?) Customers with low knowledge (?)	Customers with high knowledge (?) Customers with low knowledge (?)
Demand	High demand	Low demand
Extent of the case	Small	Large
Value of the case	Small	Large
Legal requirements	Not much requirements	Much and accurate requirements
Court processes	Small link or no link to court processes	Strong link to court processes

Second research question was “*What are limitations and requirements for profitable business models when productizing and automatizing legal services?*” These limitations and restrictions can be listed as:

Limitations:

- Cost compensation in courts in several cases,
- finish bar association rules,
- differences in different fields of law,
- human interaction being part of value creation,
- court processes being linked to law firms’ services processes.

Requirements:

- Customer orientation: how to get all necessary inputs from the customer effectively,
- payer analysis: who pays and who makes decisions about billing
- value creation analysis: how does the service increase customer value
- interface analysis: how is the service linked to services by other actors in the field.

Third research question was “*What is the conceptual process when productizing and/or automatizing legal services?*” A 12 -step conceptual process can be stated to be:

1. Value recognition
2. Service process analysis
3. Service documentation
4. Service structuring
5. Process restructuring
6. Service phase analysis
7. Scalability and automation potential analysis
8. Value creation analysis
9. Knowledge-intensity analysis
10. Technology level analysis
11. Value creation check
12. Legality check

To synthesis the findings of the study: it is possible to productize legal service as well as almost any service. There are some features in legal services that give special requirements and restrictions to productization of legal service. Some of them come from regulation, other from processes that are always linked to other service providers processes etc. Due to this, productability must always be evaluated service-by-service.

Other finding was that productization opportunities differ very much in different fields of law and different legal services within a field of law. There were several issues affecting productability, which are listed on table below. These issues should always be recognized and evaluated before starting the productization process. After these are known, it possibly to decide on what extent productization process should be completed: is the goal to find the customer value in highly tailored services or to find repeatability on more often completed basic services? More issues on the positive side means more possibilities to repeatability and scalability, more on negative side require more tailored solution to fulfil the customer need.

Productizing legal services can bring several advantages to companies offering those services. These advantages are same than in most knowledge-intensive services. These competitive advantages derive from three reasons: customer understanding, understanding own services and repeatability/scalability.

Productization increases customer understanding as it forces the company to think how they actually create value to the customer. When they understand how they can create value to the customer, it is possible to improve the services to better respond to the demand. When more value is created to the customer, it is possible that customer is willing to pay more or choose that service over others, as it creates more value to him/her.

When own services and own value creation are understood, it is possible to change services. Own earning model or other value-creating activities can be redesigned in order increase value gained from providing services. This redesigning is already taking place in earning models: traditional hourly-based billing is under pressure to change due to changes in customer need and changes in offered services. On the other hand, on some cases legislation and courts are restricting the changes on earning models.

Third advantage is repeatability and scalability. In legal services, as well as any other services, time costs money. And if something has not to be completed every time all over again, it can save time. If some knowledge or work from previous services can be reused, it is possible to gain significant time-savings over the time. When time is saved the costs are also saved. The problems in the legal fields are that compensations are often linked to costs: costs come from time and billing is often time-based. Due to this, there have not been incentives to increase effectiveness. This is one major thing slowing down the productization in the legal field.

Other major thing to be taken account when developing the productization in legal services is the public sector. As courts and administration are both part of the public sector and unavoidable parts of several legal services, they have a strong influence on how the services can be developed. Courts has a major role in the legal services, all litigation services are linked to the court processes, and the court processes set several limitations and requirements for these services processes. Due to this, the legal field should actively take part to the development of court processes and IT-systems used by courts in order to increase effectiveness in the whole field.

As earning models and processes are linked to the public sector, some keys for the productization are in the hands of the state. One key issue where state has major role is the earning models in services where state somehow regulates the costs and earning models. In these services the viewpoint to productization was divided and unclear and it

seems that current compensation on legal costs does not give any incentives to increase productivity, which could be done by productizing legal services. Due to this, it might be necessary that state takes a standing in legal costs and even gives some regulation about compensations systems that could give incentives to increase productivity in legal services.

Other way how state could affect the productization of legal services is due to court processes. If court processes that involve private legal service processes are improved, it is possible to gain some benefits from increased effectiveness in legal services. This should be done in cooperation with private sector. Other issue that can affect the court processes are IT-systems, that can ease communication in legal services and therefore change processes in private services if communication and processes in courts are more automated and services can be developed keeping that in mind.

As public sector strongly affects only some legal services, that might lead to more divided legal services. In private sector providing non-court –services to business customers productization and automatization might and probably will take place due to competition. In private sector with business customers, competition might increase effectiveness. This might not take place in services that are related to public sector due to previously mentioned issues in earning models and court processes. This might lead to increasing differences between services, if state will not take active role in developing their processes and give incentives to increase productivity in cost compensation.

To synthesise the results and value given by this study: the results of this study give some new viewpoint to productization of legal services especially in Finland. The study describes the typical service processes and value creation models in most common legal services. The study does also describe some issues enhancing and preventing productization of legal services. The main value given by this study is finding out and describing issues that has to be taken account when productizing legal services as well as describing the process how to take account these issues when starting a productization process. This study can be used to guide productization process in a law firm as well as a study of needed future developments in order to improve the effectiveness and productivity in legal services.

5.2 Evaluation of the research

When evaluating the reliability of survey and interviews, several issues must be taken account. When evaluating the survey, the over-time reliability is probably quite high as the number of responding judges was quite high and there are not many factors that might change the results in a short time. In the interviews the reliability risk was higher, but as individual interview was not given much weight in the results, besides the future committee's interview. Due to this, the reliability risk for the results is quite small. As the future committee consisted 8 persons who answered questions, the reliability was increased compared to normal interviews, but over-time reliability might be lower as their discussions might have altered their answers and opinions. However, I consider the over-time reliability acceptable. Internal consistency of the survey is probably quite high: as all the responses were evaluated and there was no very inconsistent answer from the other, the internal consistency is very likely high. The interrater reliability does not form a problem in this study as the interviews were quite clear as the viewpoint of the research questions.

The validity of this study is another point. Did the questions and interviews measure the things they were designed to measure. In the case of survey, the validity can be questioned. However, as the results of the survey were that there is variation in the judges' opinions on productized and automatized legal services, the validity of questions is enough to make that kind of conclusion. In the case of interviews, the validity risk is higher. Some productization experts did not understand the legal points well enough and lawyers were not familiar with the concept of productization. As the interviews were designed to reduce problems arising from these and unclear and clearly misunderstood answers were cut out, the validity of the results can be considered high.

5.3 Further development

There were three main points that can be studied further in the future research:

1. Effects of different business models in law firms.
2. Results of productization projects in law firms.
3. Payback and return of investment in productization and automatization projects in law firms.

All these studies can be built around existing theory, but they would expand it to new fields and probably reveal more special features related to legal business. These studies

would be mainly case studies at the first phase and in the future research their results could be evaluated in quantitative studies.

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