

Master's Thesis

Jorma Vuolle 2017

LAPPEENRANTA UNIVERSITY OF TECHNOLOGY

School of Business

Master's degree program in supply management

*Jorma Vuolle*

**DEVELOPMENT OF THE PUBLIC PROCUREMENT IN  
HEALTH CARE SECTOR**

1<sup>st</sup> Examiner: Professor Jukka Hallikas

2<sup>nd</sup> Examiner: Post-doctoral researcher Mika Immonen

Helsinki 18.4.2017

## **ABSTRACT:**

<b>Author:</b>	Jorma Vuolle
<b>Title:</b>	Development of the public procurement in health care sector
<b>Faculty:</b>	School of Business
<b>Master's program:</b>	Master's degree in Supply Management (MSM)
<b>Year:</b>	2017
<b>Master's Thesis:</b>	Lappeenranta university of technology 86 pages, 10 figures, 3 tables, 1 appendix
<b>Examiner:</b>	Professor Jukka Hallikas Post-doctoral researcher Mika Immonen
<b>Keywords:</b>	Health care sector, public procurement development of public procurement, procurement laws

The public sector has always played a major role in Finnish health care sector and public procurements have been important factor of health care. The entire health care sector in Finland is in front of big changes and it is extremely important, that also public procurements can keep up with the changes and development. Aim of this study is to find out the current state of the public procurements in health care sector and how public procurements could be improved more efficient and workable. The research was conducted as a qualitative study and the the data was collected by interviewing the professionals of the health care and public procurement.

The study showed, that the procurement knowledge in the public procurements is not always as good as required and, that public procurements could be developed to be more efficient and workable. The public procurements will be in the major role also in the future, thus it is important that public procurements can keep up with the development.

## **Tiivistelmä:**

<b>Tekijä:</b>	Jorma Vuolle
<b>Otsikko:</b>	Julkisten hankintojen kehittäminen terveydenhuoltoalalla
<b>Tiedekunta:</b>	School of Business
<b>Koulutusohjelma:</b>	Master's degree in Supply Management (MSM)
<b>Vuosi:</b>	2017
<b>Pro gradu-tutkielma:</b>	Lappeenrannan teknillinen yliopisto 86 sivua, 10 kuvaa, 3 taulukkoa, 1 liite
<b>Tarkastajat:</b>	Professori Jukka Hallikas Tutkijatohtori Mika Immonen
<b>Avainsanat:</b>	Terveydenhuolto, julkiset hankinnat, hankintojen kehittäminen, julkisia hankintoja koskevat lait ja direktiivit,

Julkisella sektorilla on ollut aina Suomen terveydenhuollossa hyvin vahva asema ja julkiset hankinnat ovat tärkeässä roolissa terveydenhuollon järjestämisessä. Koko terveydenhuoltoala Suomessa on suurten muutosten edessä ja onkin tärkeää, että myös julkiset hankinnat pysyvät muutosten ja kehityksen mukana. Tämän tutkimuksen tarkoituksena onkin selvittää terveydenhuoltoalan julkisten hankintojen nykytila, sekä miten julkisia hankintoja voitaisiin kehittää tehokkaammiksi ja toimivammiksi. Tutkimus toteutettiin laadullisena ja tutkimusta varten tietoa kerättiin haastattelemalla terveydenhuoltoalan sekä julkistenhankintojen asiantuntijoita.

Tutkimuksessa selvisi, että osaaminen julkisissa hankinnoissa ei ole aina vaadittavalla tasolla ja, että julkisia hankintoja voitaisiin kehittää tehokkaampaan ja toimivampaan suuntaan. Julkiset hankinnat tulevat olemaan tärkeässä roolissa tulevaisuudessakin ja onkin tärkeää, että julkiset hankinnat pysyvät kehityksen mukana.

## **Acknowledgements**

Writing this thesis has been very instructive and interesting experience and it feels absolutely great when it is finally ready. I would like to thank my supervisor, Professor Jukka Hallikas for his help.

I am also very grateful for all the people who I interviewed. I would like thank you for your time and desire to help me with my master's thesis.

Thank you also all my friends in Lappeenranta. You have made the past years in my life very special and you have helped me throughout my entire studies. I also must thank Sodexo and it staff. The coffee breaks in Sodexo have gave me extra energy many times during my studies.

Finally, I want to thank my parents for their support!

In Helsinki, April 2017

Jorma Vuolle

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## 1. Introduction

Especially cause of the upcoming social and health care and provincial reform in Finland, the public procurement in health care sector is creating lots of conversation. The social and health care sector is mostly funded by government and public procurement plays major role for having working and effective social and healthcare system. The reform will change the entire social and health care sector and it will also have huge effects on public procurement.

In Finland the expenditures in health care sector 2013 were 19,5 billion euros and it was mostly financed by government and municipalities, thus the public procurement plays major role in the social and health care sector. (Terveystieteiden tutkimuskeskus, 2014) The public procurement have also an important role of balancing social equality between social classes and is also enable executing big projects, which are requiring large initial investments. (Yescombe, 2007) In Finland the public procurement in health care sector has improved a lot in the past 10 – 15 years and now it will face an other big turning point and it is crucial that public procurement will keep up with the development.

The development of the technology is probably the single biggest factor to affect public procurements. The new technology has created lots of new ways to execute procurements and new opportunities arise constantly. (Henriksen & Mahnke, 2005) The upcoming reform will also shape the field of the social and health care sector and private sector is becoming more important factor to produce social and health products and services, which will create new challenges and opportunities for procurement units to implement procurements. New technologies and other opportunities to improve public procurement, will make the procurement knowledge as a crucial factor in the future of the public procurements. The people working with procurements are required more and more knowledge and expertise in the future to overcome challenges.

The development of the public procurement, especially in health care sector hasn't be studied too much in the past. The subject is extremely interesting and important

to explore, because of the upcoming reform in the entire sector. The study will focus on the development of the public procurements at the turning point being social and health care sector in Finland.

### 1.1 Research objectives

This study explores how the public procurement in the social and health care sector could be developed. The study is first focusing on the current and future state of the Finnish social and health care sector and how the public procurements are executed and what kind of threats, and opportunities there are. The aim of the study is to find out different ways to improve public procurements overall, and how those could be implemented to improve public procurement in health care sector.

Because the entire social and health care sector is in front of a significant change, the study is to made to understand public procurements and how it can keep up with the development and to be workable and effective also in the future despite the changes. The public procurements will be major factor in health care sector and it is important that different challenges and opportunities are recognized in time. In the study, the objective is to have different perspectives of the study and compare diverse views about to subject to create wide perspective of the topic. The interviewees are selected to bring different opinions and perspectives about the subject.

### 1.2 Research questions

The aim of the study is to figure out, how public procurements in the social and health care sector could be developed to be more effective and modern. The research questions below are compiled to

Main research question

*How public procurement could be developed in the health care sector?*

Sub research questions

*What is the current state of public procurement in health care sector?*

*What kind of problems procurement units face during the procurement process?*

*How public procurement can prepare for the changes in the future?*

### 1.3 Research Scope

The study is focusing on the public procurements in Finnish social and health care sector, but the public procurements are also highly controlled by EU, thus the study also touches on public procurement in EU level. The theoretical part is studying public procurements more widely, but the empirical part is focusing on public procurements specially in health care sector in Finland.

The subject is limited to the social and health care sector because the public procurements are major factor in social and health care sector and the entire sector is in front of big changes, thus the topic is timely and important.

### 1.4 Literature review

The procurement process and supply chain management has been popular subject among researchers, but there are not too many studies about the development of the public procurement in health care sector. Walker, H., & Brammer, S. (2009) have studied the public procurement in health care sector in UK, but their focus was on sustainable procurement. Emiliani, M. L. (2000) and have studied the development of procurement process, but not all the findings are exploitable in the public sector. Wittig, W. A. (2003) has presented in his study the the importance of the public procurement in developed countries and the new technology as a great opportunity to improve the public procurement. He also mentioned how new technology will wide the public procurement more globally. McKee, M., Edwards, N., & Atun, R. (2006) presented in their study the public private partnership as a good way to arrange social and health care services. There are also studies like, Agaba, E. (2007) and

Hunja, R. R. (2003), which are focusing on public procurements are in developing countries. In many studies innovations and public procurement are highly related together. For example, Mowery & Rosenberg, (1979) and Rothwell & Zegveld, (1981) founded out already in the 1970s and 1980s, that public procurements are great way to boost and encourage companies for more innovative direction.

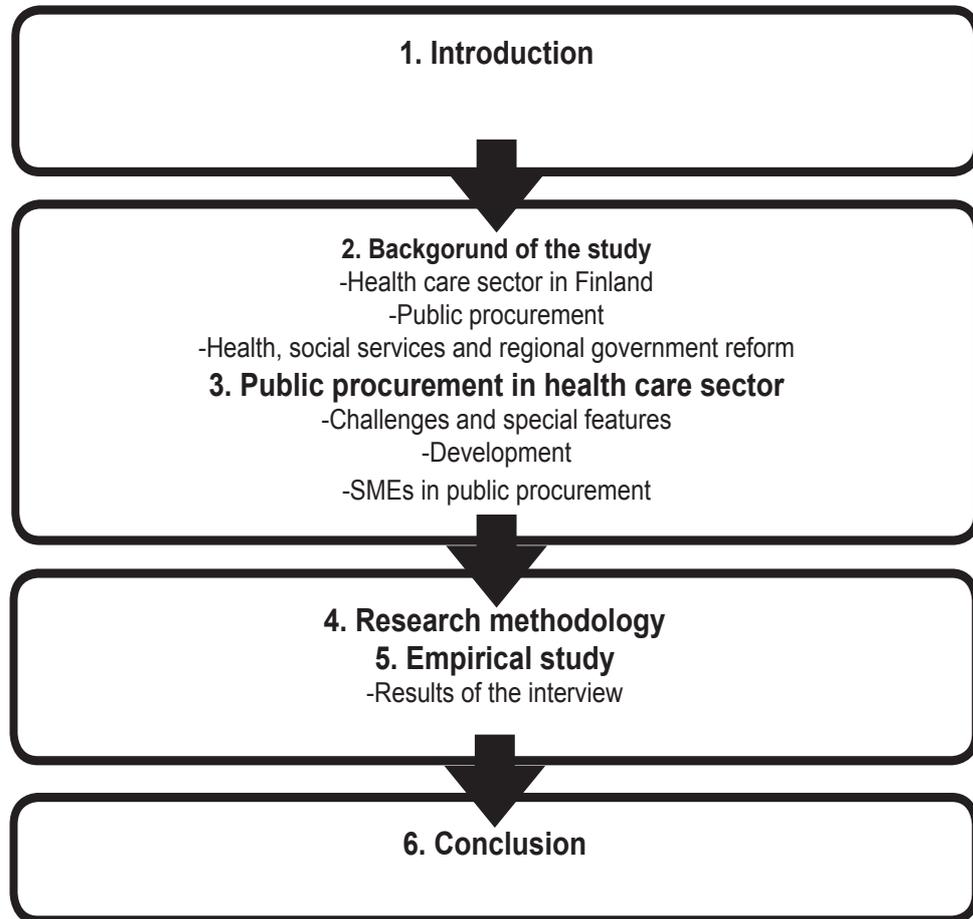
In many countries the public procurement is in major role in health care sector and it is often presented, that public procurement has major role on creating effective and workable social and healthcare sector. The upcoming health, social services and provincial reform in Finland will create major changes in public procurements in the health care sector, thus it will important to have more studies about the subject.

### 1.5 The structure of the study

This study is divided in two parts, theoretical and empirical. The first chapter after introduction presents the theories about the health care sector and public procurement. The study is mostly focusing on health care sector in Finland but it also compares to the overall situation in Europe. The public procurement process and legislation is presented in the second chapter. One major factor of public procurement in the future, is the upcoming social and healthcare reform together with provincial reform, thus these two phenomenon are presented in the study. The third chapter of the study is theoretical part of the development of public procurement and it presents general development perspectives, although the main focus is on developments in health care sector.

The empirical part starts on chapter (4), which is about the research methodology and the reliability and validity of the study. In the fifth chapter, the collected data is compared to the findings of the theoretical part. The findings are based on answers of the interviews and presents different perspectives about the public procurement and how the public procurement could be developed. It also studies the threats and opportunities of public procurement in the future. The final part is conclusion about the development of public procurement in health care sector and it presents development areas and possible solutions for problems. Also the further research

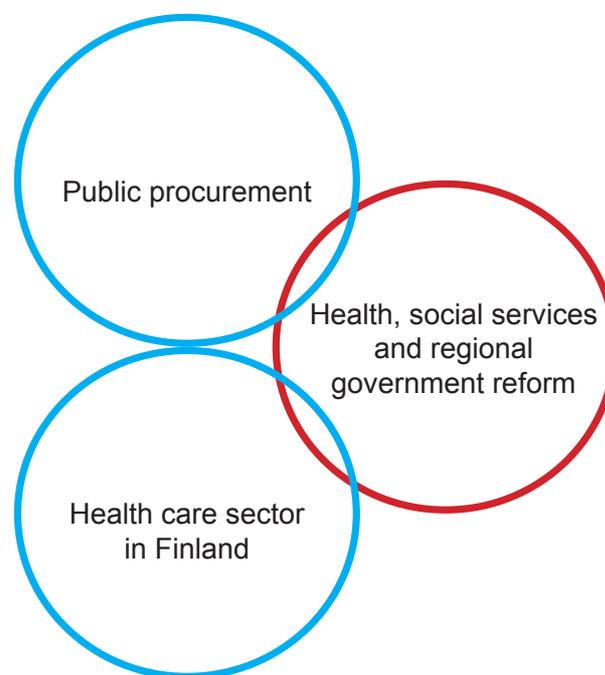
is discussed in the final chapter. The whole structure of the study is presented in the figure 1 below.



*Figure 1 Structure of the study*

## 2. Background of the study

The health care sector in Finland, public procurement process, legislation and the social and health care reform are the main theories supporting this study. These subjects are presented in this chapter, based on previous research. The background theories are crucial factor of understanding and studying the development of the public procurement. The link between the parts of the background is presented in the picture 2 below.

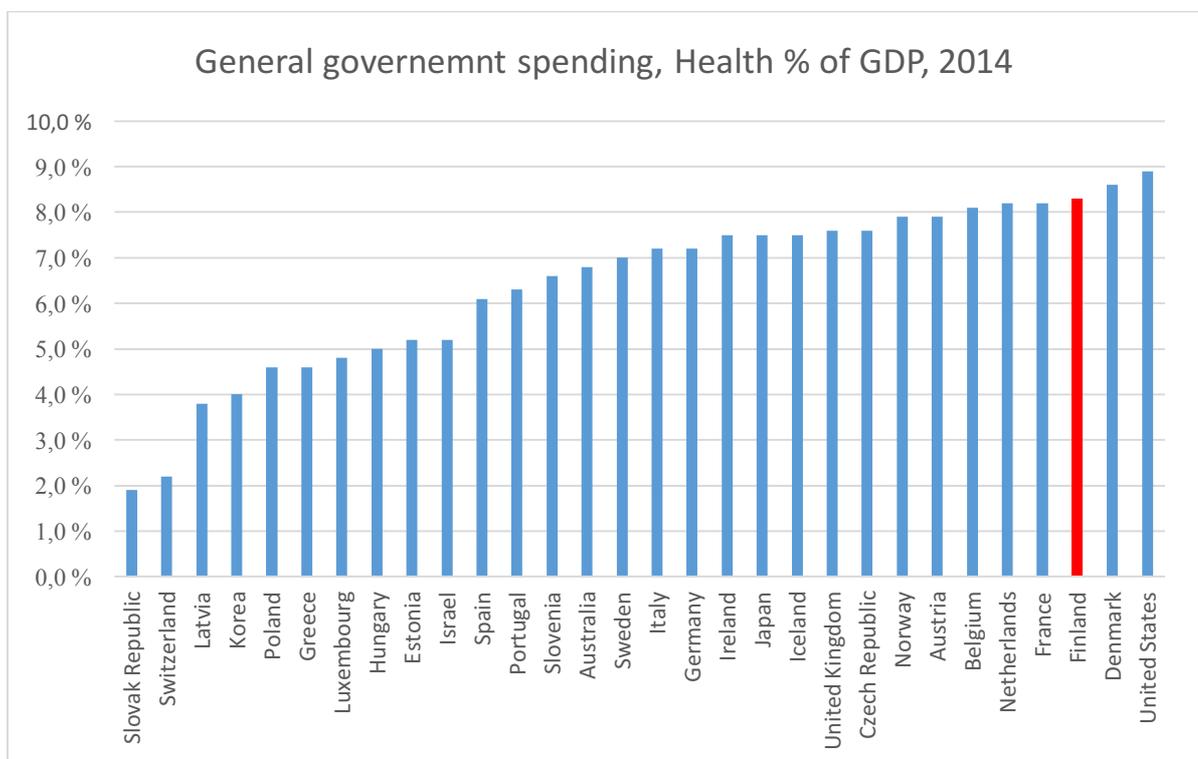


*Figure 2 Background of the study*

### 2.1 Health care sector in Finland

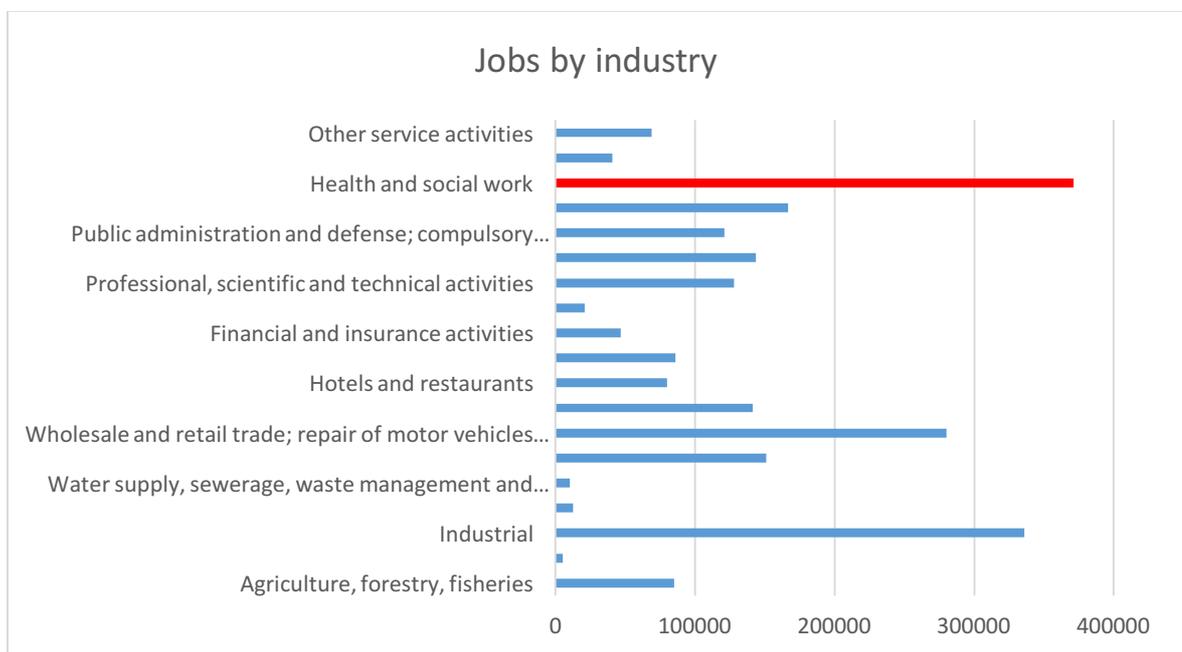
In Finland health care sector expenditure in 2014 were 19,5 billion euros, which is a major part of government budget. The biggest expenditure was specialized health care (6,8 b€) and basic health care (3,8 b€), which create slightly more than half of total costs. The expenditures have increased evenly since 2000, when the expenditures were approximately 12,5 billion euros. (Terveystieteiden tutkimuskeskus, 2014)

The health care sector in Finland is mostly fund by public funding. In 2014 public funding part was 75,6% and the rest 24,4% were fund by private funding. The ratio between public and private funding in Finland is a bit higher than the average (72,4%), in the OECD countries, but compared to Nordic countries the ratio is lowest. Municipalities funded significant part (37,3%) and government 25,0% of health care sector costs. Other major financiers were Social insurance institution (13,3%) and households (19,1%). (Terveydehuollon menot ja rahoitus, 2014) The health care expenditure and Finland's gross domestic product (GDP) ratio in year 2014 was 8,3%, which is third highest of all OECD countries. Only Denmark (8,6%) and United States (8,9%) had higher ration. (OECD, 2016) In Finland the ratio has increased since 2008, which can be explained by the poor development of the economy. (Terveydenhuollon menot ja rahoitus, 2014) The ratios of all OECD countries is presented in the figure 3 below.



**Figure 3** General government spending, Health % of GDP (OECD, 2016)

In the figure 4 below is presenting the distribution of jobs by industry. As an employer, the health care sector is a major factor in Finland. 15% (367 000, 2010) of Finnish workforce is working in health care sector. Most of the jobs (226 000) is provided by public sector and the rest (81 000) by private sector. Compared to the year 1990, jobs in the private sector is over double from 35 000 to 81 000. There is huge different between industries how the public and private jobs are divided. For example, dental care, gynecology and eye nurse is mostly managed by private sector. (Tilastokeskus, 2010)



**Figure 4** Jobs by industry (Tilastokeskus, 2010)

The upcoming social and health services reform may affect jobs in the health care sector and it also may change the ratio of public and private service providers. When government is obliged to arrange health and social services instead of producing, most of the jobs may transfer from public to private.

## 2.2 Public procurement

Public procurement are products, services and works acquisitions, that government, municipalities and state-owned companies make outside the organization. The acquisitions must be performed under the legislation of procurement. The legislation

aims to intensify the use of the public funds. For this reason, most of the procurements are done with open competition and it is important, that all the companies participating to the competition are treated equally. (Työ- ja elinkeinoministeriö, 2016 a)

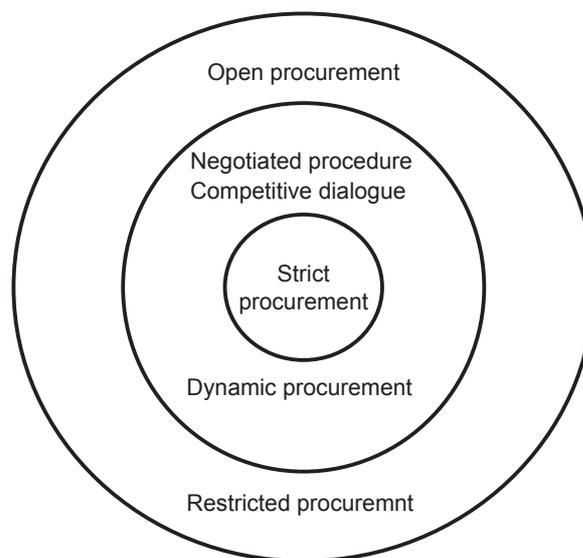
Public procurement is an important factor for working society. Physical and social infrastructures for example highways, electric network, drainage, hospitals and prisons produces by government, are the base for society's productivity and welfare (Satish & Shah, 2009). Public procurement is an important factor of balancing social equality between social classes. It also enables the implementations of significant initial investment requiring projects, which raising capital form private sector is impossible. (Yescombe, 2007)

In Finland public procurement is significant part of governments total budget. In year 2014 the total acquisitions of the units belong to governments budget were 5,99 billion euros (10,9% of total budget) and respectively, the total amount of acquisition in public sector were 33 billion euros. Thus public procurement has huge impact on Finnish national service and product providers. It is also remarkable amount of taxpayers' point of view. Therefor, public procurement operating must be systematic, organized and managed by expertise. (Valtiovarainministeri, 2016a)

Depending on the type of the procurement, the contracting entity must choose the right procedural based on the legislation of procurement. The selection of the procurement procedure is affected by multiple factors, like size, target, deadline, the number of suppliers and the expertise of procurement unit. The most commonly used procedures in public procurement are open or restricted procurement procedures. In some special cases, the procurement unit is able to arrange the negotiated, the competitive dialogue-, dynamic procedure, or direct purchase. The different procedures are explained more in the next chapter. (Julkisten hankintojen neuvontayksikkö, 2017c)

On the open procurement, the procurement unit publishes the procurement notice and all interested suppliers are allowed to make an offer. After that, the procurement

unit can send an invitation to tender for appropriate candidates. Restricted procurement works similar with open procurement, but the procurement unit is capable of restrict the number of suppliers making the offer. Although the procurement notice must be available for all candidates. If there is clear justification in procurement law, the procurement unit can suit negotiated procurement. All willing suppliers may participate and the procurement unit choose bets participants and negotiate an agreement with it or them. The dynamic procedure in procurement means fully electronic procurement, which is open for all suitable suppliers throughout the whole duration of the procurement process. The strict procurement is exception of the normal procurement. The procurement chooses one or multiple supplier, which it negotiates the agreement, without competitive bidding. The use of the different procedures is presented in the figure 5 below. (Julkisten hankintojen neuvontayksikkö, 2017c)



**Figure 5** Use of the public procurement procedures

In Finland the public procurement is based on public procurement act 2007/348 and special industry procurement laws 2007/249 and 698/2011. If public procurement exceeds EU's threshold value it is affected by EU directives 2014/24/EU and 2014/25/EU. These laws and directives aim for more effective use of the public funds, high-quality procurements and to secure equal access for companies to offer services, products and works. (Finlex, 2007a) The Finnish government prepares the

new procurement law based on EU directives 2014/24/EU and 2014/25/EU. The aim is that the new procurement law is in effect in the beginning of year 2017. With new procurement law, the Government aims to simplify the procurement process. The aim is also to improve the participation of SMEs and give municipalities better chance to take in the consideration the quality of the procurement to support the improvement of innovations, sustainability and employment. (Eduskunta, 2016)

The estimated value of the acquisition depends the type of the procurements. There are the national and the EU's threshold value. The procurement, which estimated value exceeds EU's threshold value, must be informed at European level. In Finland the procurements, which exceed the national threshold value are informed in Internet service HILMA, but it is also possible to inform smaller procurement in the same service. In social and healthcare services, the values for national threshold is 400 000€ and for EU threshold 1 000 000€. EU commission check over the threshold values every two years and publish the new values. (Työ- ja elinkeinoministeriö, 2016b) The threshold values are presented in the table 1 below.

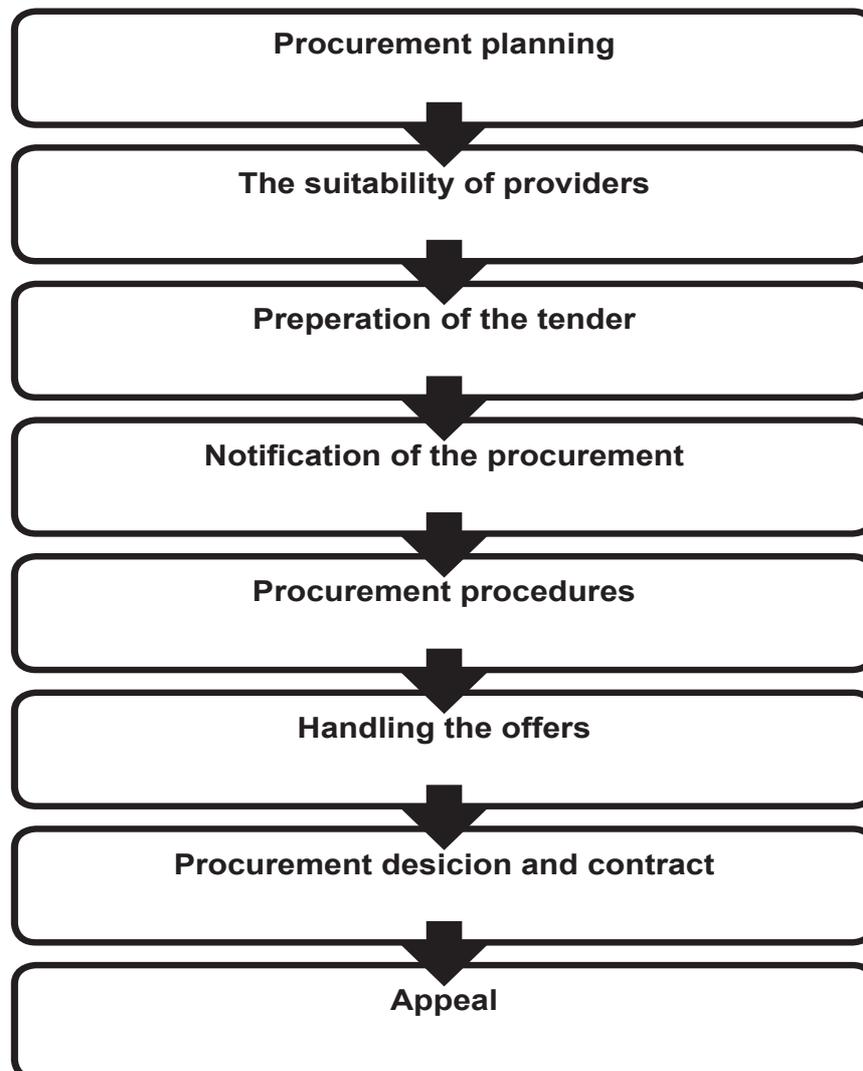
**Table 1** Threshold values (Julkisten hankintojen neuvontayksikkö, 2017b)

	<b>EU threshold value</b>	<b>National threshold value</b>
Product, services and design competitions	135 000 / 209 000 / 418 000 €	60 000 €
Works	5 225 000 €	150 000 €
Social and health care services	1 000 000 €	400 000 €
Special services	-	300 000 €
License Agreement	5 225 000 €	500 000 €

There are different values depending the status of the procurement unit. For example, the threshold values for products, services and design competitions are different for Central government authorities, municipalities and special industries. The procurement laws are applied only if the procurement exceed the national or EU threshold value. (Julkisten hankintojen neuvontayksikkö, 2017b)

## 2.3 Public procurement process

Public procurement process is highly regulated by procurement laws. The process consists of multiple steps and this makes the process usually long lasting. Procurements are mostly operated with open competition and it is important all the participant, depended on size or power, are treated equally. The aim of the high regulation is, that procurements are done professionally, economically and there are no useless procurement actions. The idea is that every procurement tender leads to contract. The public procurement process is presented in the figure 6 below and is based on the rules and advices by the advisory unit of public procurement.



**Figure 6** Public procurement process (Julkisten hankintojen neuvontayksikkö, 2017a)

The first phase of the process is the planning. The estimated value of the procurement is calculated. The estimated value tells, which laws and regulations affect the acquisition or if the value is so low, it can be executed without open competition. Also possibilities of joint procurement are researched. For example, municipalities are able to do procurement as a supply ring. In order that the acquisition can be executed successfully, the need and the supply must be known well. Even though, there are laws and regulations related to public procurement, it is not forced to acquire all the products and services from external actor, but it is possible to execute product and services internally.

When choosing the providers or candidates, the procurement unit is able to set limitations for suppliers. These requirements can be for example related to candidate economical situation, technical performance or professional competence. The procurement unit can find out the information or they can demand certificates from the providers. If candidate can't full fill the requirements, it must be shot down from the competition. In the procurement laws there are both discretionary and mandatory criterion for exclusion.

The procurement unit has lots of power to decide what and how the procurement is executed, what are the requirements and terms. The tender must be drawn written and it has to be clear and unambiguous and there is all the needed and required information about the size, terms and procurement phases. Companies must be able to estimate their interest, suitability and possibilities as a supplier through the tender.

The principle of transparency in public procurement means that, acquisition is informed openly and widely. The procurement unit is obliged to exploit all the completion in the market and ensure that all the information about the procurement is available for candidates. Procurement which exceed the national threshold value are informed in HILMA service. HILMA is free and electronic information channel maintained by Ministry of Employment and Economy. (HILMA Julkiset hankinnat, 2016a) If the public procurement exceeds the EU threshold level it is informed EU-widely. In national procurement, there are no prescribed deadlines, but there should

be a reasonable time for the participants to make the offer. If the procurement is EU-wide, there are given deadlines that procurement unit needs to follow.

The content, character and extent of the tender determine the procedure used in the public procurement. There are also differences between national and EU-wide procurements. In the first instance the public procurement is executed either openly or limited competition. But there are also situations, where procurement laws enable to use the negotiated procedure or design competition.

Handling of the offers is done closed and no information about the handling or results should not be given to the third parties before the decision is made. The procurement unit only handles the offers which are delivered properly. The participant suitability is estimated and the offer is checked to match requirements. After estimation, all the qualified offers are compared and the winner of the tender will decide.

Some cases, the tender can be aborted with real and legitimate reasons, but the aim is that all started tenders are completed. When the tender is completed, the procurement unit will make the procurement decision and present all the factors that contribute to the decision. The procurement decision must be accurate enough, that participants are able to estimate that the decision is done correctly. According to The procurement law 2007/248, subsection 62, the most economically advantageous offer must be selected. The economic criteria can be based on quality, price, technical specifications, ethics, sustainability, operating costs, repairing services or delivery terms etc. (Finlex, 2007b) After the valid decision, a written contract is made between procurement unit and supplier.

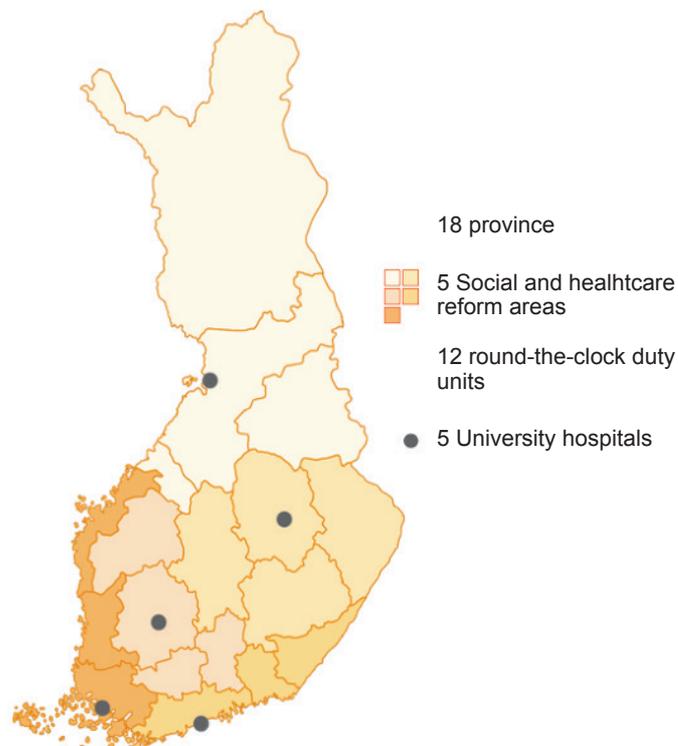
If some participant is dissatisfied to the made decision, in national procurement there is usually 14 days to file a complaint to the Market court. If the Market court states that the procurement is executed incorrectly, it can repeal the decision either entirely or partly. Cases where the threshold value exceed the EU threshold value, the procurement unit can't make the contract if the complaint is made to the market court.

## 2.4 Health, social services and regional government reform

The social and health care expenditures have increased evenly the past years from 12,5 billion euros (2000) to 19,5 billion euros (2014). (Terveydenhuollon menot ja rahoitus, 2014) At the moment the social and health care service expenditures are increasing 2,4% per year and the aim is to reduce the increase down to 0,9%. This will mean that in the year 2030 the social and health care expenditure should be 3b€ lower compared to current. This target is to be achieved by health, social services reform (SOTE). Achieving these goals requires high quality in change leadership during the reform process. (Sote ja maakuntaudistus, 2016a)

There are few major actions that are planned to create savings in the social and health care sector through the reform. At the moment there are approximately 200 different actors, whom arrange social and health care services in Finland. For this reason, the decision making is patchy and the services aren't working efficiently. The big number of actors also increases the difference in services quality and people receive unequal service. (Erhola et al., 2014)

One major reform will the reduction of the number of actors down to 18 social and health care areas presented in the figure 7 below. Alignments by the government, the social and health care area will produce service or it is also possible to use private or third party sector services. In the future the municipality can not be the service producer anymore. This will make the service system much clearer and also easier to manage. The administration eases cause of the reduced number of organizations. With bigger social and health care actors it will be more effective to arrange services without the quality deteriorates. Also the predictability of economy becomes easier when the service needs random variation decreases or even disappear. The equipment and facilities can be designed in bigger sets and there will be less regional duplication of procurement. (Sote- ja maakuntaudistus 2016b)

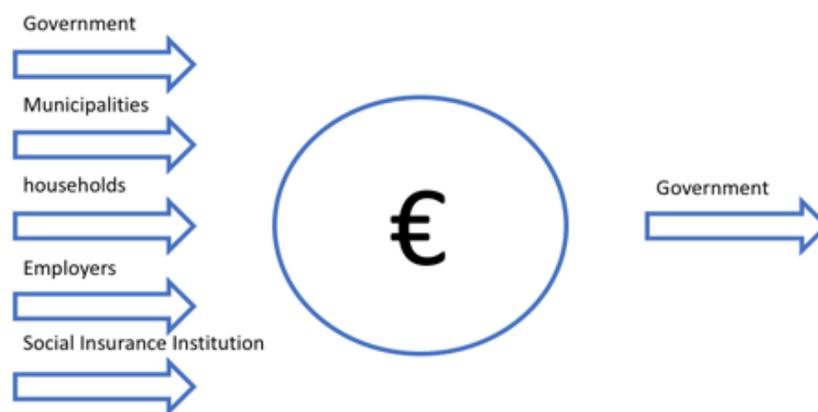


**Figure 7** Regiona government reform (*Sote- ja maakuntauudistus, 2016c*)

The social and health care reform aims to create more discretion compared to current situation. The key difference is that, customers are able to choose service provider from three different options; public, private or third sector provider. This will expand the provision of services. In the current system the discretion has been low, especially in social services. With better and wider arranged services, the customers will be serviced faster and the quality will improve, because of the competition. The reform also offers new possibilities for private companies to provide services, which will diversify the supply of social and health care services. (*Sote- ja maakuntauudistus, 2016c*)

Another big change will focus on the financing of social and health care services. Now the financing is coming from 5 different actors (municipalities, government, households, employers and social insurance institution). In the new system the aim is that 71% of money is collected through taxation, 14% will come from client fees and 12% through insurances. The new model is presented in the figure 8 below. The

idea with the reform is to go towards to the system, where the government will be the prime financer instead of municipalities and households. For example, in Finland the households proportion of the social and health care expenditure is significantly higher than the average in EU. The aim with the new financing model, is to make methods of financing as cost-effective as possible. (Sote ja maakuntaudistus, 2016d)



**Figure 8** New financing model (Sote ja maakuntaudistus, 2016d)

The government has presented timetable how the social and healthcare reform should proceed:

**Autumn 2016:** the government gives the legislative proposal to the parliament.

**Year 2017:** The law will be confirmed

**During the year 2018:** The new social and health care areas start operate by preparing to take social and health care tasks from municipalities and municipality groups.

**Beginning of the year 2019:** The task will transfer from municipalities and municipality groups to the social and health care areas. (Sosiaali- ja terveystieteiden ministeriö, 2015)

### 3. Public procurement in health care sector

In health care sector, the major part of actions is financed by government, thus the public procurement has also a major role in the industry. There are also many special features and requirements for service providers and suppliers. This chapter presents challenges and special features of the health care sector and also different development opportunities to achieve more efficient and better health care services.

#### 3.1 Challenges and special features

This chapter presents the special features of healthcare industries and what kind of barriers and challenges public procurement can face during the procurement process. Public procurements in healthcare sector have differences and special features compared to many other sectors. The structure of the industry and specialization of products and services creates challenges. Also the legislation and code of conduct set limits for operations.

The National institute for Health and Welfare (2012) have mentioned three major differences public procurement have in the healthcare sector compared to other sectors. The first difference is that, at the moment, social and healthcare services are mostly provided by municipalities, which means that they are responsible for the customers about the quality and availability of services. Because the acquisitions are made for the third party, which are actually dependent on the service producers, the procurement units have a special attention about the customer legal status. The third significant difference is the special legislation and norms regarding to service delivery.

In medical technology industry, almost 80% of companies are small or medium sized, which makes the industry structure very fragmentary. The SMEs aren't always able to participate on big tenders, because of the limitations on product range and financing. This weaken competition and causes problems to procurement units in the healthcare sector. (Eucomed, 2007)

Under the Ministry of Social Affairs and health operating national agency Valvira, has studied that procurement units do not pay enough attention to the regularity of the acquired medical equipment. The number of counterfeit goods is a growing problem. Also the number of incident report has increased. In the year 2014 the number of reports increased 19% and it's is expected to increase more in the future. (Valvira, 2015)

One significant factor in healthcare sector is asymmetry of information between healthcare professionals and patients. People are not able to estimate properly the quality of the received product or service. Thus the customers are defining the quality based on the environmental and interpersonal aspects of the healthcare service. (Lewis, 2006) The asymmetry of information also complicates the services providers work to estimate and develop the operations.

One significant threat against open and effective competition is cartels. Cartels are situations where companies, which are normally competing, are acting together for aim to raise prices and gain more profit. Cartels are possible in each industry, but it is more likely to have cartels if there are only few big actors in the industry and there is no or only some new arrivals. The predictable demand or recurring acquisition creates better atmosphere for cartels to born. Also simple and similar products help competitors to agree about prices and especially if there is no or only few substitutes. (OECD, 2009)

There are multiple ways to arrange and execute cartels, but all of them are harmful for competition. According to Organization for Economic Co-operation and Development (OECD) the four basic strategies for cartel are cover bidding, bid suppression, Bid rotation and market allocation. Cover bidding is situation where companies purposely makes too high offer or have terms that purchases cannot accept. This is made to create illusion of real competition. In bid suppression the competitors agree to withdraw from competition, thus the earlier agreed company wins the bidding. Bid rotation means that companies bid in turns. Each competitor is bidding but there is agreement of winner each time. Market allocation is situation, where companies agree for example geographic areas where each one is allow to

compete. To avoid cartels, OECD have created guide for procurement units to help recognize and avoid cartels. (OECD, 2009)

Procurement laws and directives have impacted public procurement in EU since 1970s. There are still multiple actors in the supply chain, who aren't aware enough about the laws and directives. The awareness of actors can create challenges and disadvantages in procurement process. (Gelderman et al. 2006) Of course, sometimes the non-compliance of laws and directives is intentional and the aim is to achieve benefits. Shleifer and Vishny (1993) described corruption "the sale by government officials of property for personal gains." Although, procurement laws and directives aim to prevent corruption possibility of corruption should be taken into consideration in public procurements.

## 3.2 Development

The public and private procurement have multiple similar features and public procurement operations can be partly developed with same methods than in the private sector. But the procurement laws and other requirements related to process and working practices force procurement professionals to create new methods to improve purchasing. This chapter presents different methods to help public procurement units to achieve better value for taxpayer's money.

### 3.2.1 Innovations

Innovations are formed and influenced by many factors and are very rarely formed in isolation. Companies interact with other actors to make progress, gain information and knowledge are important factors for innovation processes. (Edquist, 2012) This chapter presents how public procurement can encourage and boost companies towards more innovative activities.

The correlation between public procurements and innovations has been studied by multiple empirical studies already in the 1970s. For example, Mowery & Rosenberg, 1979 and Rothwell & Zegveld, 1981 have studied the potential of public procurement to encourage companies towards more innovative solutions. With well organized

public procurement, the market risk may decrease and learning and economies of scale will increase. Especially in the young technologies the role of the public procurement is important and can easily boost innovations, when companies are able to react fast on new demand. (Geroski, 1990) Even though there are many working experiences of innovations in public procurement, even the spread of successful innovations and approaches has been low in Finland.

Because of the high costs of radical innovations, companies are not able to be as innovative as needed. If government is capable to lower the risks with acquisitions, it can encourage companies to more innovative actions. (Elder & Georghiou, 2007) Aho et al (2006) mentioned four key steps to create more innovative markets; harmonized regulations in EU, set standards for more innovative actions, use of the public procurement to create demand for innovative products and services and promote more innovative friendly culture. The situation where public sector specifies a desired output but let the private sector to achieve requirements with most effective and efficient technologies, is an important advantage, when innovations are supported by public procurement.

Especially in healthcare sector the cooperation between public and private sector is in major role on developing innovations. As mentioned earlier, Edquist (2012) presented that innovations almost always require interaction between different parties and none of innovations is form in isolation. In healthcare industry It is really challenging for companies to be innovative without effective cooperation with procurement units. Without developing communication between parties, the new ideas and ways to implement services are not able to create. Sometimes prejudices, structural, practices related problems and procurement laws create challenges for effective cooperation inside the supply chain. (Saranummi et al. 2005)

The persons working among the procurements in public sector is not always procurement specialist and, thus may decrease the selection of more innovative acquisitions. Instead of just choosing the economically most advantageous product or service, procuring innovative products or services requires special knowledge and extra work from procurement unit. (Halme & Kotilainen, 2008) According to the

survey made by Ministry of Economic Affairs and Employment the companies participating are usually more willing to offer innovative solutions than procurement unit are requiring. Only in 13% of public procurement, there were request for innovative solutions. However, 55% of companies answered that, they were able to offer more innovative solutions than tenders request. (Neimala & Saariketo, 2014)

One aim of the upcoming social and healthcare and provincial reform is to improve the functions of markets. This might also effect positive the innovations in healthcare sector, when the discretion of customers and competition between private and public actors increase. Should also improve the status of small and medium size enterprises (SMEs) in the competitive bidding, which can encourage them to more innovative activities.

### 3.2.2 Benchmarking

Benchmarking is a tool for developing operations. The main idea is to learn better operating methods by observing other actors. It is a working tool for recognizing the need for development and finding solutions for problems. (Camp, 1989) In manufacturing services and business sector, benchmarking commonly used practice to develop the business process. (Saad et al., 2005) But in public sector, and especially in procurement practices the benchmarking is not used as much, even though benchmarking and its applications are also practical in public procurement. Thus it can become an important factor while executing effective and value adding procurements. This chapter presents how the quality of procurement process can be developed by benchmarking.

In public procurement the benchmarking consists of the measurements and comparison of individuals and organizations actions, aim to improve the efficient and quality. Procurement unit need to ask themselves, how can we execute best practices. (Triantafillou, 2007). The practical way to execute benchmarking to improve procurement process is to find the proven action in each areas and find out if there is potential for developing other similar actions. (Chamberland, 2005) Probably one of the simplest way to exploit benchmarking in public procurement, is the comparison of the procurement prices in national level. By exploring the prices

of the chosen products in other similar countries, purchasing units are able to find out if products are overpriced by suppliers. (Tadelis, 2012)

### 3.2.3 Value for money

Value for money (VFM) is often mentioned to be the key principle of public procurement. Bauld & McQuinnes, 2006 mentioned that, VFM should be always used to compare public procurement. Only if the product or service is fully exchangeable or replaceable, the price can be the dominant criteria. This chapter is about value for money and how public purchasers could exploit it to improve procurements.

Value for money means the best combination of costs, quality and sustainability to meet customers need. The main purpose of VFM is to achieve best return and performance for the spent money. In public procurement the value is typically sought with more efficient purchases, better communication with suppliers, better quality of acquisition, faster delivery times and end-user satisfaction. (Diamond, 2015) In public sector the procurement unit try to create value for society, while in the private sector the main target is to create value for shareholders.

The VFM is very wide concept and it is important to understand how it influences procurement. Sometimes procurement unit are at liberty to consider other criteria than the lowest price. Technical capabilities, sustainability and the total costs of acquisition should also affect purchases, but it requires expertise and understanding from procurement unit. (Qiao & Cummings., 2003)

### 3.2.4 Markets and competition

Anderson & Kovacic, 2009 have mentioned two key factors of functioning public procurement market. The first one is to ensure the actors integrity in the markets. For example, corruption and cartels distort and weaken markets. The second factor is to encourage competition among different providers. Functioning markets and

competition affect positively public procurement. This chapter is about the importance of the markets and competition in public procurement.

The communication between purchasers and providers is way for procurement units to ensure the integrity. Continuous communication between actors is an important factor of purchasers to recognize possible cartels and complicate corruption. Also with right communication channels, procurement units are able to inform participants effectively. The quality of the information also affects the quality of the purchases. High quality tenders reduces the misunderstandings and helps the providers to participate only suitable acquisitions. These actions can help to create interest and competition among providers. (Caldewell et al., 2005)

The fair and hard competition is proved to have many benefits. First of all, if the possible participants are able and willing to take part to the competition, the prices will settle right. The costs will decrease and providers are more willing to find more effective and innovative ways to operate. The competition creates also possibility for providers to learn from each others and help them to improve the overall operations. (Anderson et al., 2009)

Public procurements are tended to create conversation about corruption and unfair treatment of the participants. The lack of transparency is probably the biggest reason for suspicions. Especially in the global markets the increased transparency is an important factor for quality public procurement. (Rothery, 2003). With good transparency, the quality of the acquisition decision and the fair and open competition between providers can be proved. The quality of transparency and acquisitions overall are highly related to the expertise of purchasing workforce. People dealing with tenders and purchasing in public sector are not always familiar with procurement laws or code of conduct. Thus the education and orientation of the public sector procurement workforce is an important factor of good transparency.

### 3.2.5 Acquisition knowledge

Public procurement has become much more diverse and it constantly faces challenges like changing environment, new technologies and products, environmental concern and complex national and international trading laws and directives. (Thai, 2001) Thus, the expertise and knowledge of people who act with procurements is a major factor of effective and high quality public procurement.

Finland's Ministry of Finance started a public procurement developed project HANKO in a 2014. The project was focusing on procurement control, planning, tracking and supplier collaboration, which can be seen as a knowledge and social prowess. The operational parts of public procurement, like competitive bidding, ordering and invoicing wasn't part of the project. The main target was to intensify the process and increase productivity. The project was divided in to a four different development areas, which each one had different missions to improve the public procurement. (Valtiovarainministeriö, 2016a)

The four development areas:

1. The control of governments procurement
2. The planning and tracking of the procurements
3. Contract management, supplier collaboration and instruction
4. The development of procurement knowledge

The government and ministries responsibilities in public procurements control need to be defined more specific by creating mutual control scheme for all actors. The planning and control is developed by new mutual planning model. Also new tracking and measurement methods for key figures and meters need to be created for more useful information. The contract management and supplier collaboration is strongly regulated by instruction. To increase productivity and effectiveness, the content of instructions should be reconsidered. The define of the knowledge requirements is in major role of developing the knowledge of the procurement professionals. The

requirements should be designed to meet the challenges of present day and also future. The information about the requirements and knowledge should be shared widely. (Valtiovarainministeriö, 2016a)

The acquisition knowledge consists of multiple factors. The person working with purchases should be familiar with market situation and actors in the market. Also the knowledge about the economics laws and political situation are important for procurement professionals (Thai, 2001). The ability to define the needs precisely is also important, thus the providers are able to meet the needs. Many problems are related to poor preparation and negligently made tenders, which create uncertainty among the providers. It is also lot harder to try to correct mistakes during the process. The continuous communication with providers gives purchasers the better understanding of current market situation and also encourage providers to participate tenders more easily. (Valtiovarainministeriö, 2016b). Although, the procurement professionals cannot be expected to be professional in all different industries, thus the communication between other experts plays major role for successful public procurement. (Thai, 2001)

### 3.2.6 E-Procurement

Technology has created multiple new ways to operate in every business sector. In procurements, the electronic procurement has become a popular mode of operation also in the public sector. E-procurement helps expanding the procurements globally, but it is also very important for domestic procurement. (Guanasekaran et al., 2009)

The new technology enables more effective and better ways to execute procurements. The automation of processes and new electronic ways to inform and communicate, save time, reduce costs. (Henriksen et al., 2005) The e-procurement also improves the procurement monitoring and control. The purchasers are able to inform suppliers better and also handle the offers faster. Thai and Grimm (2000) mentioned that one of the best way improve government procurement, is to utilize the new information technologies. The suppliers will find easier the right tenders and can focus on the right things to avoid misunderstandings and extra work. (Henriksen

et al., 2005) The whole process time from tender to procurement contract reduces and both parties are able to make savings, reduce costs and improve the quality. The electronic monitoring enables more important information about the purchases, which can help procurement units and suppliers to improve the process in the future. (Vaidya et al, 2006)

One popular form of e-procurement is an electronic auction. It is procedure, where suppliers are presenting new lower prices or other requirement changes related to the tender. The e-auction is a part of the procurement procedure, which can be used in the final stage of the competitive bidding. The model is suitable for situation, where the requirements of the procurement object can be defined precisely. The requirements need to be quantitative, for example price, delivery time and maintenance density. A procurement, which requires interpretation and subjective evaluation cannot be executed by e-auction, but it can be part of the procurement process. Subjective evaluation can give the base score for the e-auction and the auction is only targeting for price and other quantitative factors. (Julkisten hankintojen neuvontayksikkö, 2016d) There are multiple different ways to utilize e-procurement, but unfortunately, sometimes it is used just for information sharing electronically and other strategic and tactical benefits are forgotten. (Guanasekarana et al., 2009)

In Europe, the new procurement law about public procurement will force to arrange all the tenders electronically. The aim is to create automated procurement process, where all the steps from information to the contract is made electronically. Narrowly speaking the e-tendering means just the possibility to leave the offer files electronically, but in the future the aim is to make the offer in an electronic system. Another benefit of e-tendering is the provider's possibility to exploit the internal marketing. (Hansel, 2016)

### 3.2.7 Public Private Partnership – PPP

Public Private Partnership is a long-term contractual agreement between public and private sector actors. In public procurement, this means that public sector centralizes the whole acquisition to a private company, that is responsible for

planning, financing, implementation and maintenance. (Grimsey et al., 2002) The variety in partnership models in PPP is very wide and many studies presents just common cooperation between public and private sector actors as a PPP.

In the USA, the PPP have been used for decades, but in the Europe, the UK was the first country to use the method in the beginning of the 1990's. During the 21<sup>st</sup> the PPP has become more popular method to execute public procurement in different sectors. The most popular use of the PPP has been in transport, water and energy industries, but these days the system has become more common also in IT services, waste management, schools and hospitals. (Martimort & Iossa, 2009) In Finland the first major experiment of PPP was the Highway 4 from Järvenpää and Lahti, between years 1997 – 2012. The agreement period was 15 years, which consist of 2,5 years of construction and around 13 years of maintaining. (Liikennevirasto, 2013)

The main advantage with PPP compared to regular public procurement is the lower initial investment, when the costs are divided to whole agreement period. This creates possibilities for larger procurements and also eases public actors to plan long-term budgets. When the procurement is centralized to a single operator, the procurement process is often faster and it can improve the availability of the service. (Grimsey et al., 2002) One typical feature to PPP is that risks are divided more evenly between supplier and provider, than in normal public procurement. (Martimort et al, 2009) The PPP is also mentioned to increase innovation during the process. (Leiringer, 2006)

According to Barlow & Köberle-Gaiser (2011) the use of the PPP to execute healthcare services has been growing trend in the 21<sup>st</sup> century across the Europe. The PPP's multiple different partnership models from outsourcing to fully privatization gives the healthcare sector many possibilities to exploit PPP in public procurement. (Barlow et al, 2011) One major advantage in healthcare sector is mentioned to be the ability to have a full focus on clinical services instead of

managing infrastructure. PPP is also seen as a potential solution for funding problems.

Of course there have been some concerns related to PPP in the health care sector. The long-term and big contracts may hinder the competition, when only few companies are able to bid for them. The complex and long-term contracts are also harder to change and monitor. An other major concern is the lack integration between clinical care models, infrastructure and equipment, which may lead to decreased quality of performance. (Barlow et al., 2009)

In Finland a great example of Private Public Partnership is in year 2000 founded joint replacement hospital COXA. The hospital was build between years 2000 – 2001 and after that, there has been made thousands of joint replacements. Currently, an annual averagely is around 3000 operations. (Tekonivelsairaala COXA, 2016a) The hospital is based on innovative public private partnership and it operates as a limited company. (Rechel et al., 2009) The hospital is owned by both public and private sector. It is providing specialist services and aim meet patients demand for faster access to surgery. The corporate strategy in COXA is based on interests of public and private sector (Vuorenkoski, 2008)

Rechel et al. (2009) presented the key features of the technical and financial solutions for COXA. Many aspects of construction of the hospital were outsourced, but contrarily minimal amount of technical skills were outsourced. The architectural concept was designed to ensure life-cycle sustainability. Financing of COXA was executed by independently sources trough commercial bank. Also all the ICT systems were integrated.

COXA's activity has created innovations and new ways to operate. One of the major new system used in COXA is the automated tracking for joint replacement operations. It tracks all operations effectiveness for one year by using symptom questionnaires. At the moment the system is tracking 20 727 knee and hip joints. The tracking helps physiotherapists and doctors to recognize possible deviation

before big operations needed. This saves money when the useless treatment can be minimized and patient are recovering faster. (Tekonivelsairaala COXA, 2016b)

### 3.2.8 Lean thinking

For decades, lean thinking has been used a lot in the private sector, especially in manufacturing industry. But the application of lean thinking in public sector and in acquisitions has been studied quite a few. Lean is defined as both way of think strategically and tools and techniques and the main idea is to eliminate waste, measure results and continuous improve the business process and eventually create value for customers. The waste in lean is explained as any resource-intensive human activity, which doesn't create value. The tools and techniques in lean are created to serve different situations while implementing lean. (Womack et al., 1996). This chapter presents what benefits public procurement can have of using lean thinking to develop the procurement process.

For example, (Schiele & McCue., 2011), (Waterman & McCue., 2012) and (Radnor & Walley., 2006) have studied how lean thinking could help public sector procurement units to development their procurement process. The studies presented, that lean philosophy and tools can be partly implemented to the public procurement to improve the process and the health care sector has been the most enthusiastic user of lean applications. The more seamless process, better process flow and the better understanding of customers need and demand are possibility to achieve by lean thinking in public procurement. (Radnor et al, 2006) Even though the value stream in public and private sector are different the main targets like, cost savings, better service quality and process efficiency are the same. For that reason, lean thinking can be considered as an essential part of purchasing strategy in public sector The lean is also mentioned to be in significant role to make functions operate the most effective way (Schiele et al, 2011).

One important notice about lean tools and techniques is the utility of the tools and techniques, which are originally created for manufacturing industry. The tools created for manufacturing aren't always appropriate in public procurement. Thus it

might require some special preparations before effective use. Rapid improvement event, value-stream mapping and Six Sigma are mentioned to be the most commonly used tools and techniques in public sector. (Radnor et al, 2006) The value stream mapping is tool that helps organizations to estimate how the time is used in process and, which part creates value and which are so called waste. (Hines & Rich, 1997) Six Sigma is originally concept used in USA by Motorola inc. in the 1980s. The main idea of Six Sigma is to have only 3,4 defects per million opportunities in a process. (Harry & Schroeder, 2005)

Of course there are some problems and barriers implementing lean thinking to public procurement. According to Scorsone (2008), biggest barriers implementing lean tools and techniques to public procurement are both the procurement laws and the management-labor relations. The laws and directives may limit the acquired changes required to use lean thinking effectively. Waterman et al (2012) also mentioned, that it is very hard to find standardized process, which can be used in multiple different public procurement processes. After all, probably the best use for lean in public procurement is to use lean tools, techniques and philosophy on the background to create more effective processes.

The activities inside the hospital can also be seen as a part of the public procurement when examining the whole supply chain management, and lean thinking is also utilized with good experiences in hospitals. Mazzocato et al. (2009) presented in their study, that the most common improvements hospitals achieved by lean thinking were time-savings, cost reductions, decreased staff walking distance, better patient satisfaction, increased process understanding, improved teamwork and staff engagement to collaborate. These improvements are mostly related to the hospital overall function, but the well managed supply chain management has an important role of the achieved improvements affecting the overall action.

### 3.2.9. Summary

The table 2 below summaries the different ways to develop public procurement presented previously.

**Table 2** Summary of development of public procurement

<b>Innovations</b>	Innovations are often related to public procurements and innovations can be boosted by public procurement and create more efficient and better products and services.	Edquist, 2012 Mowery et al., 1979 Rothwell et al, 1981 Geroski, 1990 Elder et al., 2007 Aho, 2006 Saranummi, 2005 Halme et al., 2008 Neiala et al., 2014
<b>Benchmarking</b>	Benchmarking can be used to find best practices from other sectors to execute public procurement.	Niinikoski, 2005 Saad et al., 2005 Triantafillou, 2007 Chamberland, 2005 Tadelis, 2012
<b>Value For Money</b>	Value for money means the best combination of costs, quality and sustainability to meet customers need.	Bauld et al., 2006 Diamond, 2015 Qiao et al., 2003
<b>Markets and competition</b>	Public procurement can affect positively to the markets and increase the competition.	Anderson et al., 2009 Caldwell et al., 2005 Anderson et al., 2009 Rotherty, 2003
<b>Acquisition knowledge</b>	Acquisition knowledge is one of the key factors of developing the public procurement and more and more knowledge is probably required in the future.	Thai, 2001 Valtiovarainministeriö, 2016
<b>E-procurement</b>	E-procurement will be very important factor for creating new ways to execute procurements and made the more efficient.	Guanasekaran, 2009 Henriksen et al., 2005 Thai et al., 2000 Vaidya et el., 2006 Julkisten hankintojen neuvontayksikkö, 2016d

		Hansel, 2016
<b>Public Private Partnership</b>	PPP is a great example of a effective and quite new way to execute public procurement and it has become more popular in the past years.	Grimsey et al., 2002 Martimort et al., 2009 Liikennevirasto, 2013 Leiringer, 2006 Barlow et el., 2011 Tekonivelsairaala COXA, 2016a Rechel et al., 2009 Vuorekoski, 2008
<b>Lean Thinking</b>	Lean thinking is popular tool in manufacturing industry to improve manufacturing process. Now days lean has been implemented in other processes and can be also used in public procurement.	Womack et al., 1996 Schiele et al., 2011 Waterman et al., 2012 Radnor et al., 2006 Hines et al., 1997 Scorsone, 2008 Mazzocato et al., 2009

### 3.3 SMEs in public procurement

SMEs are companies where are fewer than 250 employees and the turnover is less than 50 million euros. In Finland (2011) there are total of 322 232 companies, and 99,8% of those are SMEs. Over half (50,7%) of the total turnover is produced by SMEs and 64,6% of personnel is employed by SMEs. (Tilastokeskus, 2014) Thus the success of SMEs plays important role of public procurements. This chapter deals SMEs challenges and possibilities in public procurement.

SME's plays major in the overall economy, but the role in public procurement isn't as significant it could be. (Vincze et al., 2010). In Finland the amount of total value of procurement contracts done with SME's is 25%, which is average, compared to other countries in Europe. Although, the the number of SME's participating in the public procurement is 50%, which is relatively high compared to the EU's average 28,5%. (Työ ja elinkeinoministeriö, 2014)

Even though SMEs have capabilities to participate competitive bidding and they also see general government as an important customer, the barriers and challenges may prevent them to do so. (Työ ja elinkeinoministeriö, 2014) The biggest problem for SMEs is usually the large size of the contracts. The SMEs can feel their participation is restricted with big tenders, because they are able to participate only parts of the large tenders. (European Commission, 2008) The SMEs are not always aware of upcoming tenders, because there are no requirements for public organizations to advertise low value tenders. (Loader, 2005) Thus the SMEs must follow different information channels to find right tenders to participate. The complicated procurement process also set challenges for small companies to participate competitive biddings. The lack of experience and knowledge are often reasons for SMEs to not to participate. (22) Related to complicated process, many companies are requesting more flexible treatment of complementing incorrect offers. (Työ ja elinkeinoministeriö, 2014)

The position of the SME's is noticed by different actors in the public procurement. The improvement of SME's status in the public procurement is mentioned in Finnish government political structure program and also in EU's new directives, which both aims to create better situation for SME's to compete and participate in public procurement. The new directives for example prevents purchasing units to set unreasonable high turnover limits for participating companies and also guide to deal procurements to smaller parts. (Työ ja elinkeinoministeriö, 2014) The SME's were also asked about the threshold values and most of the companies (80%), mentioned that acquisitions under 50 000€ are most interesting.

Many studies have presented ways to support SMEs for participate and be succeed in public procurement. The better communication between public organizations and providers is an important factor to improve SMEs knowledge about their possibilities in public procurement. (Vincze et al., 2010) Dividing the tenders for smaller parts attracts SMEs to participate and also gives them better opportunities to win the tenders against big companies. (European Commission, 2008) With simplified procurement processes, public organizations are able to reduce the threshold for SMEs to participate competitive biddings. The tenders should be clear and simple and give companies enough information to make decision about the participation.

Also during the competition, all the collected information collected from providers should be justified and unnecessary and repeating information should be avoided. Public organizations should also increase the knowledge about the supplied product and services, to arrange as efficient and unbiased tenders as possible. (Department of Finance, 2011) In some cases for SMEs the solution for better change to compete against bigger companies is collaboration, thus there should be more possibilities for SMEs to participate tenders as a group of companies. (Loader, 2005)

## 4. Research methodology

To study subject with qualitative, requires understanding of the topic and background theories. In this study, the previous researches were studied to create a basic knowledge about the subject and theories. Because the public procurement is highly related to procurement laws, it was also important to know the basic procurement laws and commonly used practices. Through this knowledge, it was possible to collect rational empirical material. This chapter presents the methodologies used in this study.

### 4.1 Research method

In this study the, the used research method is qualitative. In qualitative study, the main focus is on causes and effects of opinions and perspectives. The conclusion is usually based on material collected from interviews or group conversations. The qualitative study answer questions what, why and how and it is descriptive, diagnostic, evaluative and creative. (Metsämuuronen, 2003) The study aims to understand and find out how public procurement could be developed, thus the qualitative analysis is rational choice for research method.

### 4.2 Data collection

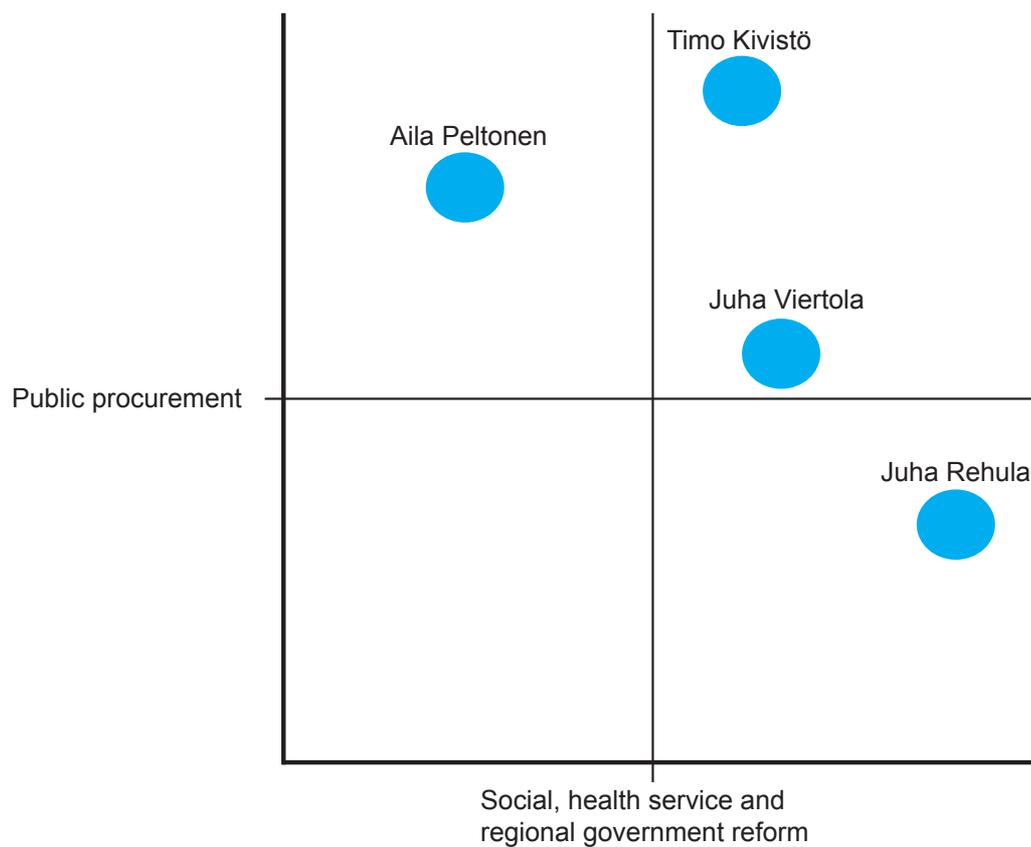
The data for this study is collected by semi-structured theme interviews. This kind of type of interview gives the interviewee possibilities to affect how the interview progresses. There are few themes given and the interview is kind of a free discourse about the previously decided topics or themes.

The interviewed persons presented different perspectives and the aim was to get different point of views to compare. All the interviews were based on same main themes but there were also different sub questions for each interviewee based on their situation and expertise. All the interviews were executed in Finnish. The frame of the interviews is presented in appendix 1.

Interviewees:

- Juha Rehula – Minister of Family Affairs and Social Services
- Aila Peltonen – Procurement Manager, Tuomi Logistiikka, TAYS
- Juha Viertola – CEO of the Pikkujätti, worked earlier as a lawyer, Espoo  
Public procurement
- Timo Kivistö – Timo Kivistö consulting, expert of public procurement in  
healthcare sector

In the figure 9 below is presented the interviewees perspectives about the subject.



**Figure 9** Perspectives of the interviewees

### 4.3 Validity and reliability of the study

Validity is a measure, which indicates how well the used research method measures the studied subject. The validity is good, when target group and asked questions are right. A study is valid when used approaches support the studied subject appearance and research questions. (Hirsjärvi et al., 2009) The validity can be viewed from multiple perspective. The internal validity means how well the analyzing method meets the research material. The external validity is meaningful, when discussing the generalizability of the results of quantitative study and isn't relevant in this study. (Eskola & Suoranta, 2005) The logic validity or face validity requires that the entire study is viewed critically, which means the research is validity checked by researcher itself. (Hardesty & Bearden, 2004) With well executed background studies, the researcher can increase the basic knowledge of the subject, which helps choosing the right research questions and also increases the validity of the study.

Reliability tells how well and reproducibly the used research method measures the studied subject. The reliability can be estimated with repeated measures and also the measurement error is usually mentioned with reliability. High reliability study can be easily repeated with the same outcomes. To measure reliability, it is important that the research material is easy for the reader to review. (Hirsjärvi et al., 2009)

In this the background study of the subject was done carefully to understand the theories and concept of the subject. The understanding of public procurement process and special features of health care sector were essential for validity of the study. The wide background study created good base for interviews and enabled to choose right questions and themes for the interviews.

The interviewees were chosen to present different perspectives of the subject to achieve wide range of views about the subject. All interviews were based on same in advance chosen themes, but the main focus on each interview were on the expertise of the particular interviewee. Three of the interviews were conducted face to face and one was conducted by skype. All the interviews were executed in Finnish

but the study is made in English, thus it is extremely important to translate answers as precisely as possible to not distort the study. All quotes in the text are also translated from Finnish to English.

## 5. Empirical research

The empirical research of the study is based on interviews and the results of the interviews is presented in this study. The findings of empirical research are also compared to the theoretical research. The aim is to present different perspectives and create a comprehensive review about the subject.

### 5.1 Results of the interview

The interviews in the study were based on four different themes; Public procurement, situation in health care sector, Development of public procurement and future of the public procurement. In this chapter the information from the interviews is compared to the theoretical part of the study. The aim is to find similarities and differences between theoretical and empirical data to create new perspectives about the public procurements. The information is based on the writers own and interviews and there are also some direct quotes in the text. The results of the interviews are presented in different parts, which are based to the themes of the interviews.

### 5.2 Public procurement

The Ministry of Economic Affairs and Employment describes public procurement as acquisitions from outside the organization made by the government, municipalities or state-owned companies. (Työ- ja elinekinoministeriö, 2016a) Timo Kivistö and Juha Viertola mentioned that the main difference between public procurement and common procurement in the companies are the procurement laws and clearly defined procurement process.

*“In public private sector companies are able to ask for offer and after that have a negotiation with the supplier, but in the public sector it must be done the other way round. The negotiation is some kind of technical dialogue where the terms and conditions are agreed and when asked for an offer it will be final.”*

*-Timo Kivistö*

In some cases, the public procurement can appear as a complex and slow process. According to Peltonen, the procurement laws are important to secure the impartial use of the tax moneys, but she also said, that procurement laws are the biggest single problem in the public procurement, due to the laws are too strict and exacting. For example, the new requirements related to eligibility can be very challenging especially for smaller suppliers. The new procurement law should create more freedom for procurements, but Peltonen believes that the new procurements will be tested in the market court. Rehula mentioned, that there will be unavoidably some bureaucracy in the public procurements, but the laws should be shaped to keep up with the natural evolution and development.

Timo Kivistö said, that in private sector the companies are able to negotiate the agreements like price and delivery times with the suppliers. In the public sector, the suppliers made offers and the procurement unit must choose the best offer available. There are not similar capabilities to negotiate about the agreements with suppliers during the process than, in the private sector. Also Aila Peltonen mentioned, the lack of negotiation possibilities as a major problem in the public procurement. He said that normal trading like in the private sector is impossible to execute in public sector. According to Kivistö, it can also be sometimes problematic, when big organizations have multiple competitive bidding in progress almost all the time. They might find it very problematic to maintain the normal customer relationship, because of the limitations of communication between buyers. The procurement units are forced to come out with different ways affect agreements. Kivistö mentioned “target costing” as an example, how procurement unit can affect prices. The procurement unit can set a target cost for acquisition, which forces suppliers to price products or services properly.

With clearly defined process and multiple laws, the non-compliance of the laws and directives stands out in the studies. Gelderman et al. (2006) mentioned that sometimes the people working with the public procurement aren't aware enough about the regulations. This might create challenges and problems in public

procurement process. Both Kivistö and Viertola said that the procurement knowledge isn't always high enough level, but it is going to the better way all the time and there has been lots of development in the past 20 years. Kivistö also mentioned that in big units the procurement knowledge is usually in high level, but the problems are most often in the smaller units, where the people working with procurements aren't educated to manage acquisitions. Of course, in some cases the non-compliance of the laws and directive can be intentional when people try to gain profits (Shelifer et al., 1993), but Kivistö don't see corruption or cartels as major a problem in Finland. Though there is noticeable that the old relation ship with suppliers and employees are attachment to some brands or products may sometimes affect public procurements. But this is comparable to a normal purchasing where marketing and experiences affect the purchase decisions, and it can not be talked as a corruption.

*There probably is this kind of actioc, that some health care workers are pleased with some brand companies solutions and although wholesalers have private label companies products to offer, the brand products will be selected, which is so called primadonna purchasing.”*

*-Timo Kivistö*

According to Peltonen it can be sometimes complexity and challenging to execute procurements, when the customer has clear requirements for example medical equipment and procurement unit wants to serve customer as well as possible, but on the other hand the procurement laws demand to act unbiased.

*“The procurement is made for the customer and the aim is to serve customer as well as possible, but on the other hand there are requirements for tenders, which set certain limitations.”*

*-Aila Peltonen*

Juha Viertola mentioned the problem sometimes with the public procurement is the excessive focus on prices. This occurs, when notice that the purchased product or service isn't working as well as expected and the problem is detected after the

procurement is executed. This happens when the only remarkable factor is the price, and the procurement unit fails to compile the quality requirements. Also the bad communication with procurement unit and the end-user can lead these kind of problems. Timo Kivistö has an other perspective to the price and quality problem. In his opinion the price is the easiest and clearest criteria to choose the supplier, because measuring quality and practicality equally between different products and services is extremely hard. But he also accentuates, that it requires accurate minimum quality requirements. With big purchases it can take a lot of time and communication between parties to create valid quality requirements. With good groundwork, the procurement unit can more likely to make better procurement decisions and contracts and the risk, that the procurement is dealt with in the market court decreases. For this reason, the procurement process might seem bureaucratic and slow.

*“It is intended to notice all suppliers comments to avoid market court and it slows down the procurement process. A procurement director said that, he is now days talking more with the lawyers than suppliers.”*  
*-Timo Kivistö*

The new procurement laws and EU’s directives aims to make the procurement process less complex and the increased threshold values gives procurement units, better change for more efficient acquisitions. (Eduskunta, 2016 & Työ- ja elinkeinoministeriö, 2016b) Timo Kivistö sees these reforms to affect positively to the procurement, when procurement units are able to make bigger acquisitions without competitive bidding and, thus save time and money.

In public procurements in the social and health care sectors, the end user of the product is in many cases the patient, but the acquisition decision is done by other actor. Thus the end user has low possibilities to affect to the product or service used in the treatment. (Terveyden ja hyvinvoinninlaitos, 2012) On the other hand, for the patient it might be difficult to estimate the product or service equally, because there are multiple other, like environmental and interpersonal aspects that might affect to the experience. (Lewis, 2006) Also Timo Kivistö mentioned as a problem in the

health care sector, that the procurement is going for more centralized system, when personnel are accustomed to use particular products and want to use them also in the future. But he also stated that more options are allowed and there are possibilities to have different products for different patient. Thus the patient preferences can be taken into account better.

For many companies, public procurements are good way to improve business and reach better profits. Especially in the health care sector, where big part of acquisitions are public procurements, it is important for companies to have public procurement contracts to maintain quality business. According to interviewees the general attitude towards public procurements is positive, though as mentioned earlier the process is often seen as a slow and bureaucratic. In Finland, where over 99% of all companies all SMEs, the public procurements are also important for them. (Tilastokeskus, 2014). According to Kivistö, the SMEs performance in the public procurement competition, represents the part of the total revenue, thus the situation is quite fine. Some times the SME's can be also part of the public procurement when bigger organizations subcontract products and services from smaller companies. Kivistö and Viertola both believes that there will be more big organizations in the future, when bigger companies are buying smaller ones.

*“Now there has been trend that bigger companies have gone with the money bag and bought everything available.”*

*-Juha Viertola*

The situation with the upcoming reform and the new procurement laws is slightly contradictory. The reform will probably benefit more big organizations, but new procurement laws are made to support SMEs. Viertola, who has worked in Espoo's procurement unit already in the 90's, sees that the situation for smaller companies to perform in the public procurement is easier than in the past. Although, the public procurement requires lots of work but there is no secure for profit. The technology has enable more efficient way to execute procurements, and for this reason, in many cases the SMEs are able to participate tenders with lower risks, when the offer can be done with less work and expertise. Viertola hopes that in the future the process

will be even more technical, because now the electronic procurement is often just downloadable forms and guides. The process should be built to guide suppliers to the right direction and prevent suppliers to make stupid mistakes. This could also help the procurement unit to handle offers more efficient.

Timo Kivistö sees that, in the health care sector, the smaller suppliers are probably performing better in equipment and medical device, than in material procurement. In equipment and medical devices procurement, smaller companies are able to present new products and features to development care activities. Of course it requires SMEs to be active and bring up new products and ideas to achieve status in the markets. Aila Peltonen, sees SMEs as an important factor in the public procurement. She mentioned, that for example in the medical device procurements, the maintenance and other help services are important criteria, and in such situations the locality of the supplier can be a significant factor in the procurement decision. The SME's are often able to offer faster maintenance services and thus have a great chance to perform well in the public procurement.

It is also important to view the procurement more widely and not just the first tier suppliers. For example, a big supplier may have multiple smaller subcontractors, thus they might be part of the public procurement, although the official supplier is the bigger wholesaler. Another fact that is sometimes ignored is the second tier procurement. Instead of examining to which wholesaler the products or services are procured, one should view, what kind of subcontractors the wholesaler has and how much they are used in the procurement processes.

### 5.3 Effects of the health, social services and regional government reform

The social services and regional government reform will be a major factor in public procurement future and for this reason it is presented in its own chapter in the study. It is clear that the reform will change the status of the public procurement, but the size of the changes is difficult to estimate. There are still many questions about the

method of allotment and it creates challenges for companies working within public procurements.

The main idea of the social services and regional reform is to reduce social and health care service expenditures, which are big part of government's total expenditure. According the current plans, the reform will change the financial system of the social and health care sector to more efficient. The multi-channel finance model will be simplified to more centralized model. There also will be changes about the number of actors in the sector when, the whole country is divided to 18 social and health care provinces, which arrange social and health care services. The current model includes approximately 200 small actors around the country. The idea is also to arrange services more by private sector actors and create competition to improve quality and service. (Sote ja maakuntaudistus, 2016a & b) The upcoming reform has created lots of conversation and there are opinions for and against. In Rehula's opinion the reform is necessary, because there is no enough money for old system and it can not keep up with the development. Juha Viertola also said, that it is impossible to say how the new system will operate, but he thinks that some kind of change is necessary, because the current system is to ineffective and expensive for part of the actors.

*"For society there is no alternatives, because the current system managed by municipalities don't work, because all municipalities can not afford to run it, thus something must be done."*

*-Juha Viertola*

Viertola also mentioned that now days the public health care is quite unwieldy and the activities are based on organizations preferences instead of customers. But people are more quality-conscious and want good service, and for this reason the current system in the healthcare sector is not working. In Espoo there is good experiences about efficient public healthcare services, which have also increased the competition between private sector actors.

Timo Kivistö believes that the most significant change due to reform will be the transition of the procurement volume from municipalities to provinces. The provinces will probably create bigger corporation to manage procurement from smaller actors in the market. In Eastern Finland the University Hospital manages centrally the procurements and it is possible that this will be the new way to operate also in other University Hospitals in the future.

As mentioned in the theoretical part, the one goal of the reform is to create discretion for people. The provinces will arrange services but it won't be the producer any more. (Sote- ja maakuntauudistus, 2016b) The discretion have created lots of conversation and common thought is that all the people will go to the private sector service providers and the public sector is not able to meet customer's requirements. Rehula don't see this as a problem and he is convinced that people who are pleased with public sector's services will use them also in the future. The people who are not pleased will probable search a new service provider, which is understandable and also desirable, because it will create health competition between actors and the operations will become more customer-oriented. Timo Kivistö mentioned that, in Espoo there are great experiences about public health care services, which works effectively and it has increased the competition also in the private sector. It supports well Rehula's argument about the people will choose the public operator in the future, although there is possibility to choose private sector operator.

The discretion will also affect on public procurements when there will be new competitive process for private sector actors by the provinces to arrange services. It is clear that some profitable services are easy to arrange by private sector, but there are also social and health care services, which are also impossible to execute reasonably by private sector. One major question going to be, which services will be within the discretion. According to Timo Kivistö, the social and primary services will most likely belong to the discretion. Juha Rehula mentioned that in Finland public sector have strong tradition in health care sector and it will be so in the future also. The purpose of the reform is not to transfer all the services to be produced by private sector and it is clear that public sector will and must produce some services. He also said that, it is also important periodically to shake up the legislation and

examine which direction the development proceeds. One target is also to increase the cooperation between parties and channel functions for parties, which have expertise about the subject. The procurement law gives just the frame for the procurement, but decision-makers should have ability to decide, which functions can be done efficiently independently and, which one are rational to give somebody else to manage.

If the health care services are produced more and more by private sector actors, it will also change the labor markets, when lots of workforce will transfer from public to private sector. There will be probably similar effects what happened with universities in the past, believes Viertola.

*“There can happen the same what happened with the universities. Universities used to be managed by government and now them have become private establishments, which also change the position of the people who worked in the universities and it created a whole new labor market. It can be the same in the health care sector, but in bigger scale.”*

*-Juha Viertola*

Viertola mentioned that, If the reform will be implemented in such way that the public administration is only arranging health services and all the actors will compete, it will mean that there will be much more competition between different actors. It will also mean increase in the number of public procurements. He also pointed out that innovations and economic viability should be taken into account in the public procurement. The procurement unit should have clear target state to be attained, but companies should be resolve how the target state is achieved, thus the companies are more motivated to figure out new and innovative ways to serve customers better.

The social, health service and regional government reform is commonly resisted in smaller municipalities. There is fear, that the reform will vanish the services and the distances to social and health care services will increase even more. In Viertola's

opinion, the reform should make the procurement unit form the tenders, thus there will be more requirements for companies to also serve remote areas along with better areas. Also Rehula pointed out, that the production of social and health care service is not just privilege but also responsibility. Thus it will be regulated by procurement laws and also the provinces will have power to affect how the services must be managed in the remote areas. The services in the remote areas could also improve when organizations are forced to development service models. For example, telemedicine will be major factor in future health care and even more patients are probable able to treat through different communication channels. The telemedicine and how it could affect on health care sector is presented more later, in the “future prospects” chapter.

#### 5.4 Development of the public procurement in health care sector

The public procurement health care sector had developed a lot during the last decades. There are more professionals and experienced staff working with procurements and more resources are used to develop the procurement processes. This chapter compares the findings of the theoretical parts to the interviewees opinions and suggestions about the development possibilities in the public procurement.

*“I started working with the health care sector in 1997, it has go much ahead. If we look the Kuopio’s procurement organization, there was procurement manager and secretary, but now the entire organization is around 15 persons. So more resources has placed to health care sector procurement.”*

*-Timo Kivistö*

The Ministry of Finance started the HANKO project in 2014 and one of the four main themes of the project was increasing the procurement knowledge. There should be more demanding requirements for procurements professionals to meet the challenges of the public procurement. (Valtiovarainministeriö, 2016a) Thai (2001) mentioned that, there are multiple factors affecting procurement knowledge. The

persons working with public procurements should be aware of market situations, actors, and also procurement laws and political situations are critical information for procurement professionals. According to Rehula, the most important single factor in the development of the public procurement is the procurement knowledge. There have been efforts to make people more awareness and competence about procurement and lots of progress has been made, but there are still too many examples of bad decision of situations, where preparation goes to the wrong direction, although it is being operated properly. Also Peltonen mentioned, that the level of competence in the public sector is quite varied.

*“In some units the procurements are handled well and there the knowledge is developed in required level. For example, here we have departments, when you know before the process starts, that you will work with person who has enough knowledge and it makes it lot easier to start the process when you don’t have to start from the very beginning.*

*-Aila Peltonen*

The uneven level of competence can cause problems in procurement units and working with different departments can vary widely. For many people, for example doctors and nurses the public procurement are just extra work and it can be challenging to get people interested in procurement trainings. Peltonen said, that there have been procurement trainings for hospital staff, but the participation has been low. In many cases the level of procurement knowledge is highly related to people own desire to learn and work with procurement.

As mentioned earlier, the communication between procurement unit and the experts of the acquired products or services is extremely important for effective and productive public procurement. (Thai, 2001) Peltonen said, that the communication with doctors and nurses is key factor and basis for successful procurements. For effective procurement, the communication between different parties should be continuing and new technology could be used to help creating new communication channels. According to Kivistö, one problem with public procurement in health care

sector is the lack of attention to the patient's opinion. Of course it is hard to find the perfect product for all parties, but Kivistö hopes, that there could be more possibilities to easily acquire personalized products. The dynamic procurement could be one effective way to improve procurement for this direction.

The innovations are commonly connected to the public procurement and it is often mentioned to be effective way to promote innovations. For example, Mowery et al., and Rothwell et al., have studied the innovations in public procurement already in the 70's and 80's and they have found that innovations can be positively boost public procurement actions. Edquist (2012) mentioned that innovations require lots of communication between parties and none of innovations is form in isolation. Timo Kivistö thinks the above-mentioned is a problem in health care sector. Also Peltonen mentioned that the promotion of innovations is relatively low in the health care sector and it is not always clear what kind of innovations should be searched. Boosting innovations by public procurement can be quite difficult, because it requires lots of work of procuring organizations and it isn't always profitable. The procuring organization should push the procurements to be more innovative and work closely with the procurement unit to create new innovations. The organizations may also face problems to communicate and manage customer relationships, because of the limited possibilities to communicate during the procurement process.

*"They were looking suitable chair for blood donation such wasn't ready. Thus the assistant head nurse of the blood donation organization was the "motor" of the innovation and the procurement unit had just marginal role. They tested two supplier and then other supplier was found favor which lead to a purchase relationship."*

*-Timo Kivistö*

Because the new procurement law allows to execute equipment acquisitions worth less than 60 000€ as a direct purchase, Kivistö sees that better way to find more innovative solutions are with smaller acquisitions. There the communication between the organization and the supplier is more simple and the purchasing is lot faster and easier. He also sees that wholesalers and their possibilities to produce

innovative solutions should be used more in the public procurement. The wholesalers usually have a wide range of health care companies in their supply chain and there is lots of potential to create new innovations with the suppliers. In Europe, there are generally two main goals of the innovative public procurement. Either aim is to create more profit or to create more growth companies to boost the overall economy. According to Kivistö, in Finland, it is not always clear which one of the goals is the wanted result.

E-procurements create lots of new possibilities to execute and develop public procurements. Guanasekaran (2009) mentioned that e-procurement has affected especially procurements globally, but it has also been a key factor in the development of domestic procurements. Several applications of the e-procurement help especially SME's. There are new ways to communicate, search and fill the tenders and the information will also be more effective between actors (Henriksen et al., 2005). In Viertola's opinion, the correctly implemented e-procurement will facilitate all actors' work. When the electronic system forces suppliers to give only the right information and the person handling tenders gets the information in the right form, it helps both parties to execute procurement more efficiently and profitably. But according to Kivistö, sometimes the procurement unit doesn't execute e-procurement properly and the old paper forms are just turned into electronic format, it doesn't really contribute to the procurement.

One application of the e-procurement is the dynamic procurement, which means a fully electronic procurement process, and it is open for all suitable suppliers throughout the whole process. (Julkisten hankintojen neuvontayksikkö, 2017c). Timo Kivistö sees this model as a great way to develop the public procurements and wants it to be a common model for multiple sectors. He also believes that dynamic procurements affect positively to the innovations, since companies have better possibilities to offer new and innovative products to the markets.

*“In Finnish Transport Agency, there are good experiments about the dynamic procurement, which differs from the framework contracts so*

*that the markets are open during the whole procurement and new companies are able to join.”*

*-Timo Kivistö*

According to Peltonen, the e-procurement have both good and bad effects. She mentioned the dynamic procurement as a create way to renew procurement in the future. But creating a fully electronic tenders can be very challenging and time consuming and the e-procurement has also tightened the requirements of tenders. She compared the current situation to the situation 2 – 3 years ago, when procurements were executed more manually, which gave more freedom for procurement units. Now days, the e-procurement and also the procurement laws have shaped the public procurements and the possibility of what kind of acquisitions are possible to execute has become narrow. The e-procurement is often mentioned to help especially SMEs, but according to Peltonen the e-procurement can make the process more challenging for small company, if filling the electronic tender requires special expertise.

One major factor of the development of the public procurement is monitoring. Vaidya et al. (2006) mentioned that new technologies creates great possibilities for procurement units for better monitoring and improving the process. There are multiple ways to measure, how well and effective the procurements are executed. One major factor in public procurement is compliance of the agreements. Although the contracts determine the procurement unit to deal with particular supplier, there might be purchases from other suppliers. The non-compliance of the agreements is usually due to lack of knowledge of the procurement staff, but it can sometimes be conscious. Timo Kivistö made his first measures in Espoo around year 2000 and there where at time about 15 000 suppliers and the population was 170 000. At the moment the population is 270 000, but the number of suppliers is decreased to 10 000 suppliers. The range of the suppliers is quite wide, which make it important to follow the compliance of the contracts. In smaller acquisitions the control can remain supplier's responsibility and it might cause extra work for suppliers. An other factor that requires monitoring, is the performance of the products. The procurement units together with organizations should evaluate how well the products performance in

professional usage and which part of the process need new solutions or development. Timo Kivistö mentioned as an example a situation, where procurement unit made survey about the procurement process. The organizations evaluated the actions from 1 to 5 and all actions received grade 3 or less, where discussed between procurement unit and organizations to find solutions for problems. There might be also situation where the procurement unit is working fine, but the contract is bad and there should be monitoring to find where and why the procurement process is working ineffectively. Peltonen said, that at the moment the monitoring in the public procurement, but it should be done more, but there are not enough resources and most of the time is spent on preparing and handling tenders.

In USA and UK, the Public Private Partnership has been quite popular method to execute public procurements and it has become more popular also in other European countries. In the PPP models, the public sector outsources bigger entities for private sector, which means the contracts are long-term and the private sector will be responsible for the whole process. This helps public sector to budget new projects better and it encourages private sector actors to implement projects efficiently. (Grimsey et al., 2002) In Kivistö's opinion, the PPP models is good and functional way to execute public procurements and he hopes that similar models will be used more in the future. In health care sector, these kind of new models, where on company is managing the whole treatment from start to finish is innovative, that should be promoted.

*“COXA as a great example. They discharge the patient and arrange conditions, the patient will not boomerang back to hospital”*

*-Timo Kivistö*

To improve efficient in the health care sector, the actors should be able create new electronic solutions and platforms that could be used in wider area and operations, thus there is no need to build own platform for each operation. These kind of actions requires longer contracts, which enable companies to be innovative and effective. For this reason, Kivistö sees longer contracts as a great way to develop public procurements, but also points out that there need to be real desire to create

something new and innovative, instead of just attaching an actor's old operating model. Aila Peltonen sees longer contracts and more wide procurements as a positive trend. In she's opinion, in the future should be procured more ready entities instead of just product or service.

*"before and even today, a lot of raw material is bought, but in the future it will go more to the direction where the products and services are bought as a turnkey principle."*

*-Aila Peltonen*

Juha Rehula mentioned that now days it is very common that companies are focusing on core competences and other needs are procured from subcontractors. He also believes that more and ore projects will be executed with PPP in the future. He mentioned as an example a mold problem in school.

*"In my home town, which is not the first in this area either, but when we had problems with mold, we use the life cycle model: The building is owned by the builder in certain period of time and municipality is taking care of the teachers and staff. Espoo is the pioneer in this kind of projects and they are very open-minded."*

*-Juha Rehula*

Cause of the new health, social service and regional government reform, the smaller municipalities might try to retain some services in the area with long contracts and the goal is not to create something new. Kivistö mentioned this as one problem, which might be faced in the future, related to longer contracts.

In medical device procurement Timo Kivistä mentioned as an example the model from South Sweden. There a department want to have the newest X-ray devices and the made an agreement with supplier that the supplier is obliged to switch devices if there are new devices in the market. The same kind of benefits could be able to achieve by leasing medical equipment and devices. Especially with cheaper devices with short operating times the leasing can be practical way for hospitals to

procure medical equipment and devices. Leasing can make it easier for hospitals to plan budgets and there is also no need for huge initial investments and also the maintenance costs belongs to suppliers.

Benchmarking in the public procurement is not as popular as it is on the private sector, where it is commonly used to development the processes by finding the best practices used in the industry. In public procurement the benchmarking is not as commonly used, but there are studies that shows the benefits of benchmarking also in the public sector. For example, Tadelis (2012) and Triantafillou (2007) have studied how the benchmarking can be exploited in the public procurement. By comparing processes used in the public sector, the procurement units are able to improve own processes to be more efficient. Also the price comparison can be part of the benchmarking, and it helps procurement units to purchase products and services with “right” prices. Timo Kivistö said that the price comparison in national level is effective way to development procurements, but in Finland the use is quite low.

*“In Finland I haven’t seen clearly that there has been benchmarked prices of the different medical equipment and compared what the prices are in the national levels. In 2002, when we did the benchmarking with three health care district, we find by benchmarking that there clearly overpaying, and there were some kind of cartels.”*

*-Timo Kivistö*

Also comparing the social and health care public procurement processes to other sector’s processes is on way to development processes and many times in the other sector, the procurement is more professional and advanced. According to Kivistö in Finland these kind of benchmarking has been tried to bring up in Finland but the use has been relatively low. But for example some of the shelf filling systems have become more popular in public procurement in the last 10 years. Aila Peltonen agreed and said, that benchmarking is relatively low, but it will increase in the future.

Some ways to operate in the procurements could be also benchmarked from other public or private sector. According to Peltonen, that more effective operating models from private sector should be also used in the public sector. In the public sector the procurement process is not trading, but the main goal is to get the paper work done and execute the procurement properly. There should be more ways to create competition between suppliers and the procurement unit should have more ways to arrange tenders in different situations. Peltonen hopes, that the public procurement will be more like private sector procurement in the future.

Now days while discussing about procurement the theme will usually be lean thinking. As mentioned in the theoretical part, the lean thinking is popular in private sector and especially in manufacturing industry. But researchers like Shiele et al., waterman et al., and Radnor et al., have started study in the 2000s more and more, how lean applications could be used in other industries and in public sector. Even though, the lean was originally created to improve car manufacturing processes, the applications have been used to develop other processes. The main idea of eliminating waste or non-value adding actions can be useful way to improve the whole supply chain. Kivistö mentioned, that lean consulting is popular in Finnish hospitals and there is overall more interest in improving the supply chain and procurement. But the lean used in the hospitals in probably focusing too much on applications used in car manufacturing, where the main focus is on saving capital. But in health care sector the most cost are coming of handling the procurements instead of big stocks. Especially at the moment when the interest rates are extremely low Kivistö does not see point of avoiding and cycling capital as fast as possible.

## 5.5 Future prospects

The future of public procurements in social and health care sector is extremely interesting. The health, social service and regional government reform and continually developing technology will influence extensively on public procurements. Also new telemedicine applications will probably shape the social and health care

services a lot in the future. This chapter presents the future prospects in the health care sector and how the actors should be prepared for upcoming changes.

According to, Viertola, Peltonen and Kivistö, the most significant change will be the telemedicine, which mean new technologies to treat patient through new communication devices. Viertola mentioned the widespread chats in health centers, which able customers to communicate with doctors at home. Also different measures related to the health could be performed at home and the doctor can have real time information about the results. This kind of changes might change the and create new ways execute social and health care services and, thus it will probably also affect on procurements. The procurement units should be aware of the upcoming innovations and possibilities to understand how the use of the different products and services will be changed in the future.

Peltonen's opinion is that the procurement law should be shaped to the more permissive direction. The new laws set too strict limits for procurements, which make it hard to procure effectively and equally. Also the whole health care sector is quite rigid and outmoded, which affects a lot also in procurements and Peltola believes, that the whole sector will change in the future and there will be new operating models in the public procurement. Juha Rehula said the bounds of the health care sector will affect public procurements in the future. Especially for SMEs it is crucial, how bureaucratic the procurement will be and is there possibilities to participate tenders independently or as a subcontractor if the administrative burden is too heavy.

Rehulas point of view of the future is, that the health care sector is now developing uncontrollably and it is important that the development is guided to the right direction. For example, the telemedicine mentioned by Viertola and Kivistö will be a major factor in future health care. Rehula mentioned, that one major aim of the health, social services and regional government reform will be to control the development.

One part of the development will be the public procurement and how it is executed to keep it up with the development. The public procurement is going to change a lot in the future and, thus it crucial that government and procurement unit are prepared well for the changes. It will be interesting to see what direction the reform will shape the health care sector.

Probably in the future, there will be bigger organizations with longer contracts, which will execute a treatment from start to the end. Most likely there will also be wider range of operators to choose the service provider, which will increase the competition between providers. Rehula believes that the private and public sector will do more cooperation in the future, because there will be more private sector actors in the public health care sector. This will create new challenges but also possibilities for the public procurement. Timo Kivistö believes, that the procurement volume in the municipalities will decrease dramatically in the future, and the procurements will be executed more by the provinces. This will probably lead also for bigger procurements, which may increase the competition between large companies. PIKKUJÄTTI is quite big operator and Viertola mentioned that, although at the moment PIKKUJÄTTI is not participating tenders, there might be interesting new big acquisitions in the future, which PIKKUJÄTTI will take part. But the tenders can cover a wide social and health care entirety and for PIKKUJÄTTI it could mean that, the offer must be made together with other actors in the industry. The fact that procurements will be bigger in the future creates a discrepancy with new procurements laws, which are partly made to support SMEs. Rehula mentioned that the new laws and the aim of the health, social services and regional government reform are to ensure smaller actors operation unaltered also in the future. But it is clear that the field of public procurement will change significantly and there must be generated new ways to execute public procurements to create unbiased possibilities to all suppliers. There is also possibility that the whole field of the industry in the public procurement of the health care sector will change dramatically in the future. There might be few big organizations, which are handling or the procurements with procurement units. The bigger companies will then have multiple SME's as a subcontractor and thus be able to participate multiple tenders and offer wide range

of product and services. Also the balance of the power will be changed if the public procurements are changing above-mentioned direction.

All interviewees think the acquisition knowledge is very important factor in the continually improving public procurement. According to Rehula, especially when actions are outsourced and the service production will be more diverse, the need of the expertise in the procurement units is certainly not going reduce. Also the bigger procurements in the future will require more knowledge of the procurement units. Although according to Viertola, in the health care sector there is no cross border trade in the health care sector in Finland and it is quite low generally in the Europe also. If the cross border trade will increase in the future, it will require new kind of knowledge. The importance of knowledge will also increase when procurement units are generating new ways to exploit technology and e-procurement. New methods will require also more expertise from suppliers to fill the tenders. Thus it is extremely important to continually train people working with procurements to keep up with the development.

## 5.6 Summary of interviews

The themes discoursed in the interviews were: public procurements, the current state of the public procurement in health care sector, development of public procurement and the future. This chapter gathers together the results of the interviews. The most important results of the interviews are presented in the table 3 below.

**Table 3** Results of the interviews

<b>Public procurement</b>	<ul style="list-style-type: none"> <li>- Lack of negotiation compared to private procurement</li> <li>- Procurement laws and directives</li> <li>- Strict process</li> <li>- Challenging to serve are parties</li> <li>- Threshold values</li> <li>- Important way to improve business for many companies</li> </ul>
<b>Health and social reform</b>	<ul style="list-style-type: none"> <li>- Major factor in the future of the health care sector</li> <li>- Aim to reduce expenditures</li> <li>- Cut down the number of actors</li> <li>- Discretion</li> <li>- Aim to improve the services</li> <li>- Cooperation between public and private sector</li> <li>- Aim to manage the uncontrolled development</li> </ul>
<b>Development</b>	<ul style="list-style-type: none"> <li>- Procurement knowledge is extremely important</li> <li>- Uneven level of competence</li> <li>- More innovations</li> <li>- E-procurements major factor in development</li> <li>- more resources</li> <li>- Public Private Partnership</li> <li>- Benchmarking</li> </ul>
<b>Future</b>	<ul style="list-style-type: none"> <li>- Very interesting – big changes</li> <li>- More permissive procurement laws</li> <li>- Control of the development</li> <li>- SME's role</li> </ul>

## 6. Discussion and conclusion

The main target of the study was to research the public procurement in health care sector and how it can be developed and what are the future prospects. This chapter gathers together the findings of the study and presents how well research questions was answered in the study. Also the further research questions and problems are presented.

### 6.1 Summary of the findings

The study was focusing on the development of the public procurement in social and health care sector in Finland. The study is based on the theoretic data of the development and public procurement and empirical data were collected from theme interviews of the public procurement and health care professionals. The data collected from interviews was compared to the theoretic data and the aim was to find similarities and effective methods to help public procurement to be more sustainable and effective. The study is based on main research questions and sub questions, which were choose to support and give comprehensive answer for the main research question. The summary of each research question is presented next.

The sub research questions are presented first:

*“What is the current state of public procurement in health care sector?”*

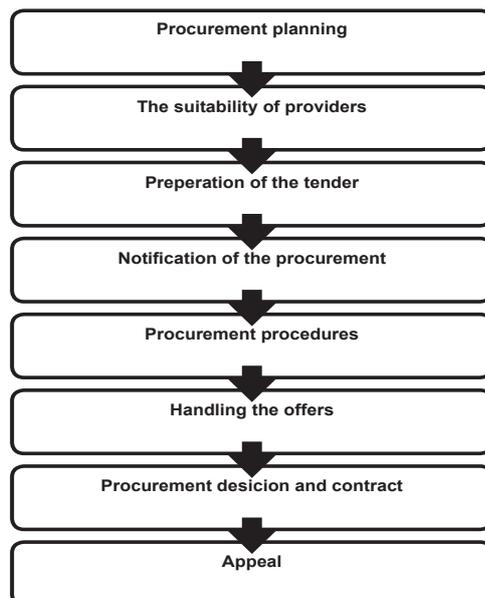
The current state of the public procurement in the social and health care sector is very interesting and challenging. The upcoming major reform in the social and health care sector will create lots of uncertainty. The social and health care sector is also major factor in Finland’s economy. It is big part of the budget and it also employ a lot of people.

The public procurements have progressed a lot in the past 15 years and there are more experts working with procurements now days. But the requirements of the public procurement are certainly not going to decrease in the future and

procurement units should be well prepared for the changes. The expenditures in the health care sector have increased quite fast in the last years and the decrease of the expenditures have been governments aim, thus also the public procurements are under the radar. The e-procurement is also big part of the current public procurement and there are already some requirements in the procurement law to execute public procurements electronically. The new procurement laws will increase the threshold values of the procurements and it will give procurement units more possibilities to execute more direct purchases and intensify procurements. The public procurements are going to the more permissive way.

*“What kind of problems procurement units face during the procurement process?”*

The procurement process is slowly, long and bureaucratic process and it cause different problems for the procurement units. The laws and regulations restrictive procurements unit’s possibilities to be as effective as possible and there is not usually possibility to make direct purchases. In the long process the procurement unit may face problems in multiple phases. The figure 9 below presents the procurement process.



**Figure 10** Procurement process

Alone making the tender in right form and to be strict enough create challenges for procurement units. And especially in bigger tenders it is extremely important that tenders are made very precisely, that after the procurement decision it will be secure. There are cases where public procurements are taken in to the market court after the decision and it will cause lots of extra work and harm for all parties. For successful procurements it is very important, that there is good communication between procurement unit and the final user. This is sometimes find problematic, when the final users are not familiar with the public procurements and they might feel the procurements are just extra work and do not have interest to co-operate.

*“How public procurement can prepare for the changes in the future?”*

As mentioned, the entire social and health care sector is in front of the big change and it is important to be prepared for the changes. The one key factor of preparing chasing is the procurement knowledge. There should be lots of expertise and knowledge in the procurement units to be able to react fast to the changes. Also the implementation of new technology is important to keep up with the development. The e-procurement and telemedicine will affect a lot to the health care sector in the future and for that reason, the procurement units should be aware of new opportunities to execute procurements. The new procurement laws should also take into consideration the procurement units and help to execute procurements more effective and successfully.

The main research question:

*How public procurement could be development in the health care sector in Finland?*

There are multiple ways to improve public procurements. The process can be simplified and intensify and it could be make easier for companies to participate tenders. The procurement knowledge will be one of key factors in developing the public procurement and there need to be more focus on the development of the procurement knowledge in all the parties. Increasing the knowledge requires

training and also the own interest of the people who are working with the procurements. It is especially important to make the final users interest about the procurements to improve the process.

The e-procurement and other new technologies should be also exploit better. For example, in some cases the e-procurement means just electronically tender forms instead of paper version and it is improving hardly any the procurements. Dynamic procurements are great example of e-procurement, that creates new opportunities and possibilities for both companies and procurement units. In private procurement and other public sector have also good practices, that could be benchmarked to improve public procurement in social and health care sector. Public private partnership is one great example of a different way to execute public procurement.

In every developing process the monitoring is important factor and in public procurement the monitoring of the procurements should be done more to ensure the success of the procurements. The suitability of the product or service in daily use is an example to be monitored by procurement unit. Also the total costs of the public procurements and the compliance of the contracts are important factor to monitor in public procurement.

The public procurements are often mentioned to be create way to improve innovations and procurements units should be more activity to boost and create possibilities for companies to be more innovative. The innovations also require lots of desire of the end user and the procurement unit to encourage suppliers to be innovative. The communication between different parties is also affecting a lot to the process and new technology should be used more to improve the communication between different parties.

## 6.2 Discussion of the conclusion

Probably the most important result from the study is that, the public procurement in the social and health care sector in Finland is not in such high level as it should be. The procurement knowledge in the procurement units is not always as high as

needed and executing public procurements effectively can cause problems. The problem was often highlighted by the interviewees and it was also mentioned in the previous studies to be problem in the public procurements. Although the procurement knowledge has increased in the past 15 years and there are more experts working with the procurements, there still appear problems when the level of knowledge is varied to much in the supply chain. Thus more resources should be targeted to the procurement training in the whole supply chain to create more knowledge.

Another major result was the importance of the e-procurement. The e-procurement and other new technologies were often mentioned to be major factor in developing the public procurements. With the e-procurement procurements units are able to execute tenders more effectively and it can also create better possibilities for companies to participate tenders. The e-procurement will also create new methods to execute procurements.

The development and changes in the entire social and health care sector must be also mentioned to be major factor in the development of the public procurement. The entire sector is developing and it is important that the development is not unmanageable and the public procurements can keep up with the changes. The upcoming reform in the social and health care sector will be important factor and also the development of the technology in the health care will create new challenges, but also opportunities.

Especially the interviewees highlighted the lack of resources and the complexity of the procurement process as a retardant factor in the development of the public procurement. There are not enough resources to develop the public procurements and most of the time goes to handling and creating different compulsory forms. There is no enough time to monitor public procurements or generate new effective ways to improve the public procurement process. Also the new procurement laws make procurement process even tighter, which can reduce the interest of the suppliers to participate tenders.

The role of the SME's is major in Finland's overall economy and they have always been important factor in the public procurement as well. The new procurement laws were partly planned to strengthen SME's position in the public procurements, but on the other hand the upcoming reform will probably increase the size of the procurements, which may affect negatively SME's desire and possibilities to participate tenders. In some procurements the locality can play major role, thus the SME's will be needed also in the future to execute procurements successfully, thus it is important to also create better chances for them to perform well in the developing social and health care sector.

### 6.3 Limitations of the results

The empirical part of the study is based on four different interviews from people of different perspectives. To increase the reliability of the study, there could be more interviews to have more opinions and perspectives to compare with the theoretical data. Although the interviewees were chosen to presents different perspectives and each one had their own field of expertise. The empirical part of the study was focus on the development of the public procurement in Finland but the theoretic data results are mostly from studies made to deal the subject in other EU countries. The public procurements in health care sector is not studied that much, which also created own challenges to create wide range of theoretic data. Also the upcoming health, social and regional government reform cause it own problems, because all the theoretic and empirical data about the subject are just plans and thoughts and there is no certainty how the reform is going to be realized in the future. Thus the reform might be executed different as presented in the study.

### 6.4 Further research questions

This study is based on the development of the public procurement in social and health care sector, but it could be also expanded in the future to study the opportunities to improve public procurements also in the other sectors. Can there be find similarities between different sectors and what are the major differences in public procurement practices.

The health, social services and regional government reform create lots of new opportunities to study the subject in the future. How the reform has changed the public procurements or how the reform has affect the companies balance of power, is there only big companies participating public procurement and what is the role of the SME's.

Also the comparison between private and public procurement could be interesting subject to study. How public procurement could be improved to be more like private sector and what workable methods could be implemented from private procurement to the public procurement. The possible scenario, that there are only few bigger organizations in the future, which have lots of smaller ones as a subcontractor, creates interesting possibilities for public procurement to execute procurements. It would be interesting to study, how the new situation could be exploited to have more effective public procurements.

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# APPENDIX 1

## Themes of the interviews

### 1. Public procurement

- Special features
- Procurement laws
- Difference between private procurement
- Procurement knowledge

### 2. Public procurement in health care sector

- SME's in public procurement
- Ethics
- Corruption and cartels
- Attitudes towards public procurement
- Who works with public procurement in health care sector?

### 3. Development of public procurement

- Problems and barriers
- Development proposals
  - E-procurement
  - New models
  - Innovations
  - PPP
  - Lean
- Big vs Small

### 4. Future

- New technology
- How to prepare for the changes
- New laws

### 5. SOTE (Social and health care reform)