Tampereen yliopisto

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REQUIREMENTS AND CAPABILITIES OF OUTCOMES-BASED PROCUREMENT IN THE PUBLIC SECTOR

Master of Science Thesis
Faculty of Management and Business
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ABSTRACT

Kati Loijas: Requirements and capabilities of outcomes-based procurement in the public sector
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In the public sector, there has been identified a growing interest in improving the effectiveness of public procurement. One approach to respond to this interest is to develop public procurement practices towards the utilization of outcomes-based procurement. In addition, it has been recognized that through innovation and co-creation as part of the outcomes-based procurement, there is potential to pursue short-term and long-term outcomes rather than low costs only. However, outcomes-based procurement is not widely implemented and its potential is often not exploited in public procurement.

This master's thesis aims to identify the requirements and capability factors of outcomes-based procurement in order to enable a wider utilization of outcomes-based procurement in the future and thereby deliver value for money in public organizations. In order to capture practical experiences and opinions to enhance understanding of the phenomenon, the study is conducted as a qualitative interview study.

First, the literature review examines previous academic research on procurement practices, outcomes-based procurement and procurement capabilities. Second, the empirical study is conducted by interviewing procurement representatives in public organizations and exploring the findings that emerge from these semi-structured theme interviews. Finally, a synthesis between theory and empiria emerges providing new insight into the phenomenon.

The study identifies three phases of public procurement: preparation, tendering and contract period. Then, the results of the study identify the requirements related to these three phases, such as co-creation and setting of targets and measures during the preparation phase, and measuring and verifying of the achievement of targets during the contract period. Furthermore, the results explain the role of management support, information and knowledge management, and different capabilities in the implementation of outcomes-based procurement.

In addition to ordinary procurement capabilities, the study identifies the capabilities needed to manage outcomes-based procurement. Moreover, the study recognizes that the implementation of outcomes-based procurement requires sensing opportunities and development potential, the ability to seize opportunities in practice, and flexibility to reconfigure resources and processes to support an outcomes-based approach. Thus, the link to dynamic capabilities is also identified.

An interesting and surprising additional finding of the empirical study is the partial application of outcomes-based procurement. In the case of partial outcomes-based procurement, only some elements of outcomes-based procurement is utilized, and for example, co-creation is missing, potentially making the procurement process slightly less time-consuming and laborious.

Keywords: public procurement, outcomes-based procurement, dynamic capabilities

TIIVISTELMÄ

Kati Loijas: Tulosperusteisen hankinnan vaatimukset ja kyvykkyydet julkisella sektorilla
Diplomityö
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Julkisella sektorilla on havaittu kasvavaa kiinnostusta julkisten hankintojen vaikuttavuuden parantamiseen. Yksi tapa vastata tähän kiinnostukseen on kehittää julkisen hankinnan käytäntöjä siten, että niissä hyödynnetään tulosperusteisia hankintoja. Lisäksi on tunnistettu, että innovaatioiden ja yhteiskehittämisen avulla on mahdollista tavoitella lyhyen ja pitkän aikavälin tuloksia pelkkien alhaisten kustannusten sijaan. Tulosperusteisia hankintoja ei kuitenkaan sovelleta laajalti, eikä niiden mahdollisuuksia useinkaan hyödynnetä julkisissa hankinnoissa.

Tämän diplomityön tavoitteena on tunnistaa tulosperusteisten hankintojen vaatimuksia ja tarvittavia kyvykkyyksiä, jotta tulosperusteisia hankintoja olisi mahdollista hyödyntää tulevaisuudessa laajemmin ja siten tuottaa vastinetta rahalle julkisissa organisaatioissa. Käytännön kokemusten ja mielipiteiden hyödyntämiseksi, tutkimus toteutetaan laadullisena haastattelututkimuksena.

Aluksi kirjallisuuskatsauksessa tarkastellaan aiempaa akateemista tutkimustietoa hankintakäytännöistä, tulosperusteisista hankinnoista ja hankinnan kyvykkyyksistä. Seuraavaksi empiirisessä tutkimuksessa haastatellaan julkisten organisaatioiden hankinnasta vastaavia henkilöitä ja tarkastellaan näistä puolistrukturoiduista teemahaastatteluista esiin nousseita havaintoja. Lopuksi syntyy teorian ja empirian välinen synteesi, joka tarjoaa uusia näkemyksiä ilmiöstä.

Tutkimuksessa tunnistetaan julkisten hankintojen kolme vaihetta: valmistelu, kilpailutus ja sopimuskausi. Tutkimuksen tuloksissa yksilöidään näihin kolmeen vaiheeseen erityisesti tulosperusteisissa hankinnoissa liittyvät vaatimukset, kuten valmisteluvaiheen tavoitteiden ja mittareiden asettaminen sekä yhteiskehittäminen ja sopimuskaudella tapahtuva tavoitteiden saavuttamisen mittaaminen ja todentaminen. Lisäksi tutkimustuloksissa selitetään johdon tuen, tietojohtamisen sekä erilaisten kyvykkyyksien merkitys tulosperusteisten hankintojen toteuttamisessa.

Tavanomaisten hankintakyvykkyyksien lisäksi tutkimuksessa yksilöidään kyvykkyyksiä, joita tarvitaan tulosperusteisten hankintojen hallitsemiseen. Lisäksi tutkimuksessa todetaan, että tulosperusteisten hankintojen toteuttaminen edellyttää mahdollisuuksien ja kehityspotentiaalin havaitsemista, kykyä viedä mahdollisuudet käytäntöön, ja joustavuutta prosessien ja resurssien uudelleenjärjestelyyn tarvittaessa. Näin olleen havaitaan myös yhteys dynaamisiin kyvykkyyksiin.

Mielenkiintoinen ja yllättävä empiirisen tutkimuksen lisähavainto on tulosperusteisten hankintojen osittainen soveltaminen. Osittaisessa tulosperusteisessa hankinnassa sovelletaan joitakin tulosperusteisen hankinnan elementtejä, mutta esimerkiksi yhteiskehittäminen puuttuu, mikä mahdollisesti tekee hankintaprosessista vähemmän työlään ja aikaa vievän.

Avainsanat: julkinen hankinta, tulosperusteinen hankinta, dynaamiset kyvykkyydet

PREFACE

This thesis was carried out as part of the Innoprocu project and focused on outcomes-based procurement in a less familiar public procurement context. As the work progressed, my understanding of public procurement in general grew, and I became more familiar with outcomes-based procurement. I also felt that I gained number of insights during the research, which unavoidably merged with my practical experience of private procurement. However, I believe that choosing a research topic outside my comfort zone was a good decision, as it also allowed me to learn more about the topic and made researching more interesting.

First of all, I would like to warmly and with all my heart thank my husband, without whom combining my thesis and full-time work would not have been possible. I would also like to express my special thanks to Associate Professor Aki Jääskeläinen for his guidance, mentoring and support during the research process. All tips and advices were much appreciated. In addition, I would like to thank University Instructor Virpi Sillanpää for her helpful feedback. Finally, I would like to thank my dear daughters and good friends for all their support during the research process.

Tampere, 15.5.2022

Kati Loijas

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1. INTRODUCTION

1.1 Background

One of the core functions of the public sector is to provide services to the population. In Finland, the public sector has approximately 35 billion euros annual spend (Valovirta et al., 2017) and the share of the public sector in the country economy is significant. Although citizens often consider high quality more important than the price, public procurement is highly price oriented.

In the Nordic countries, public services, provided by the municipalities or the state can include wide range of services related to health, social welfare, education, transportation, and infrastructure (Jääskeläinen, 2010). One can say that outcomes of the public services have a considerable impact on citizens' lives, as most of the basic services in society are provided as public services. Such outcomes generated by basic services can be understood, for example, as changes in welfare or employment in the long term.

Both Boyne (2002) and Jääskeläinen (2010) include outcomes in the concept of performance. In addition, Kähkönen & Lintukangas (2017) argue that performance improvement contributes to value creation. Furthermore, Malacina et al. (2022) identify unexploited potential in public procurement as a creator of public value. Thus, public procurement can be said to have potential as an outcomes provider.

According to Valovirta et al. (2017), there is growing interest in evolving procurement methods towards innovative and outcomes-based procurement in the public organizations. However, the concept of outcomes-based procurement is quite new and has not yet been widely applied in practice (Tirronen & Rannisto, 2016).

Although, the success of outcomes-based procurement is measured in terms of benefits and effectiveness for customers, it also benefits the organization providing services (Tirronen, 2020). According to Tirronen (2020), in addition to changes and desired outcomes, outcomes-based procurement can enable better service at lower cost, service innovations, risk transfer from service provider to supplier, and bigger understanding of outcomes and impacts. However, outcomes are difficult to present as a single quantitative measure because they can be multidimensional and qualitative (Rajala et

al., 2018). Therefore, the complex nature of outcomes-based procurement, and the difficulty of verifying outcomes, place many requirements on the procurement process in order to achieve and perceive outcomes. Defining first the need, then the outcomes, and finally the metrics in cooperation with service providers and end-users are required for successful outcomes-based procurement utilization (Tirronen, 2020; Schneider, 2019; Jalonen, 2019; Osbourne, 2018; Koivisto, 2018; Valovirta, 2017; Farr, 2016).

Over the years, procurement theories have evolved from transaction- and price-oriented procurement towards value and outcomes-based procurement. At the same time, processes and practices have evolved, and nowadays there are options to choose appropriate approach for different procurement orientations, categories and cases (Iloranta & Pajunen-Muhonen, 2018, p.88-95). Moreover, increasing digitalization and staying up to date in a dynamic business environment are challenging previous assumptions about what capabilities are needed in procurement organizations (Bals et al., 2019).

However, many procurement organizations still operate in a traditional way, based more on existing practices than on strategic decisions. In addition, in the public sector, procurement is often related only to purchasing activities under public procurement law, such as tendering and contracting. Furthermore, the outcomes-based procurement literature also focuses on purchasing activities, and outcomes-based commissioning is a more commonly used term for the procuring and organizing of public services. However, the procurement process framework includes activities from early preparation to the end of the contract period (Monczka et al. 2002) and could be used more widely for public service procurement. Moreover, competitive advantage in procurement is said to be created by capturing and exploiting opportunities throughout the procurement process (Lee & Rha, 2016; Teece, 2007).

Hence, this study supports the researcher's own motivation to develop a procurement mindset. On the one hand, from order maker towards outcomes provider, and on the other hand, from support function towards capable core function of organizations. In addition, it appears that the performance of public organizations and the outcomes of public services can be improved by developing the dynamic capabilities of organizations.

1.2 Objective and research questions

This research is carried out as part of the Innoprocu research project. The aim of the project is to increase knowledge on the value creation mechanisms of public

procurement. On the other hand, Innoprocu is focusing on the change of public procurement from price-orientation to long-term value creation in society. In addition, Innoprocu aims to increase understanding of how procurement capabilities can promote and support outcomes-based procurement.

The value creation and the pursuit of performance improvement in the procurement can be described by the concept of outcomes-based procurement. However, outcomes-based procurement is a complex phenomenon and its practical applications are not straightforward. Thus, the objective of the thesis is

> *…to explore the requirements, challenges and capabilities of outcomes-based procurement in the public sector.*

To achieve the objective, the objective is divided into three research questions. These research questions are:

RQ1: How can outcomes-based procurement be executed in public procurement?

1a. How can outcomes be defined in public procurement?

1b. What activities are needed in an outcome-based procurement process?

RQ2: What are the challenges in applying outcomes-based procurement?

RQ3: What capabilities are required to apply of the outcomes-based procurement?

Answering these research questions has both academic and practical purposes. This thesis aims to contribute to research on outcomes-based procurement by studying its characteristics, challenges, requirements and necessary capabilities. From a practical perspective, this thesis aims to contribute to utilize outcomes-based procurement more in the future to increase effectiveness of public procurement. Hence, this study focuses on the buyer's perspective in the context of public services in Finland.

1.3 Structure of the thesis

In order to build a narrative, this thesis aims to implement a well-structured documentation. Thus, this thesis is divided into eight chapters as follows:

In **the first chapter**, the background, the research questions, the structure of the thesis and the key concepts are presented. As the key concepts, purchasing, procurement,

outcomes-based procurement, outcomes, capability and dynamic capablities are briefly explained.

The next three chapters discuss the theoretical frameworks that link the capabilities needed to the public procurement activities in order to capture benefits of supply chain. In **the second chapter**, the basic concepts of activities and capabilities in procurement are discussed. In addition, capabilities are enriched by dynamic capabilities. In **the third chapter**, outcomes of public procurement are discussed through the performance of public services and the benefits of public procurement for the buying organization. **The fourth chapter** presents outcomes-based procurement and its requirements, challenges and capability needs.

The fifth chapter focuses on the research methodology and the progress of the research. In **the sixth chapter**, the findings of the empirical study are discussed as a result of the interview study. **The seventh chapter** combines theory and empirical study and synthesizes them to discuss the main findings related to outcomes-based procurement. **The final eighth chapter** summarizes the thesis and provides conclusions on the research findings.

1.4 Key concepts

In this section, the concepts of purchasing, procurement, outcomes-based procurement, outcomes, capability, and dynamic capabilities are introduced as key concepts. In addition, this section also describes how these concepts are understood in the context of this thesis.

Purchasing

Purchasing as a concept is unambiguous and it is often necessary to decide from the context how narrow or broad the concept of purchasing should be considered. At its narrowest, purchasing can be described as an operational activity aimed at delivering goods or services to the users (Iloranta & Pajunen-Muhonen, 2018, p. 49). In a broader context, purchasing also includes partial responsibility for defining the specification of the goods or services required and selecting the supplier (Iloranta & Pajunen-Muhonen, 2018, p. 50).

Procurement

Procurement as a concept is usually used in a broader sense than purchasing, including all the activities required to obtain a product or service from a supplier to a user (Iloranta & Pajunen-Muhonen, 2018, p.50). As Van Weele (2018, p.7) describes through concrete activities, procurement includes make-or-buy decisions, defining needs, supplier selection, procedure development, contracting, operational purchasing, monitoring deliveries, and monitoring and evaluating suppliers until the end of the contract period. The term ‘procurement’ is well established in the field of public procurement and is therefore used systematically in this thesis.

Outcomes-based procurement

Outcomes-based procurement means that an organization is procuring service outcomes rather than transactions, outputs or processes (Tirronen, 2020; Edmistone & Nicholls, 2018; Valovirta et al., 2017; Tirronen & Rannisto, 2016). In addition, outcomes-based procurement is characterized by first defining needs, then outcomes and finally measures in collaboration with service providers and end-users (Tirronen, 2020; Schneider, 2019; Jalonen, 2019; Osbourne, 2018; Koivisto, 2018; Valovirta, 2017; Farr, 2016).

Outcomes

Outcomes in the context of public services can be defined the results of the outputs of a process, depending on the quality of the outputs in terms of effectiveness (Jääskeläinen, 2010). Relevant to the definition of the concept of outcomes is that outcomes include 'impact' that can be positive or negative (Boyne, 2002). Furthermore, Jääskeläinen (2010) relates the concept of outcomes to customer experience and describes outcomes as benefits experienced by customers in comparison to customers’ needs and expectations.

Capability

Capability as a concept is seen as a set of skills and knowledge that enables organizations to succeed (Day, 1994). In addition, according to Day (1994), capability enables activities to be performed in business processes. Furthermore, Kump et al. (2019) state that the purpose of capabilities is to generate value for the company. However, skills, knowledge and competences are related to the individual level

(Tassabehji & Moorhouse, 2008). Whereas, the capabilities are organizational competences (Lintukangas et al., 2016).

Dynamic Capabilities

According to Teece et al. (1997), *"the dynamic capabilities are a firm's ability to integrate, build and reconfigure internal and external competencies to address rapidly changing environments"*. In a procurement context, dynamic capabilities are used to gain visibility of supply markets and opportunities (sensing), agility to react to the changes (seizing) and flexibility to reconfigure assets, strategies and operations (transforming) in order to improve overall performance (Lee & Rha, 2016). Dynamic capabilities are seen as particularly important for business renewal (Kump et al., 2019).

2. ACTIVITIES AND CAPABILITIES IN PROCUREMENT

2.1 Activities of procurement

The roots of purchasing as a function of companies and organizations lead far. Fearon (1965) has argued that industrial purchasing has been an independent function even before 1900 but became a phenomenon in the 20th century. In the 1970s, the focus was principally on materials management and tendering (Monczka et al., 2005, p. 23). At that time, according to Monczka et al. (2005), the purchase price was the main factor in contracts and suppliers were hardly considered from a value perspective. Later, Porter's (1985) value chain model has also been observed in the purchasing field as it shows the material chain as a value adding mechanism (Iloranta & Pajunen-Muhonen, 2018, p.43). However, not until the 1990s purchasing as a function has been seen as a strategic factor influencing companies' results (Ellram & Carr, 1994). In addition, in the 1990s, globalization and international data networks created both the need and the ability for global purchasing activity that contributed to the growth of supply chain management (Monczka et al., 2005, p. 24).

Categorization of the purchasing portfolio and the different purchasing strategies contributed to the development of purchasing from passive to active and the creation of different supplier strategies. One concrete example of this evolution in procurement is the pioneering purchasing portfolio model introduced by Kraljic in 1993, which is still in use today. At almost the same time, in the early 21st century, the importance of purchasing function continued to grow and, alongside other functions of companies, purchasing became more integrated with customer needs, leading to a focus on supplier performance and cooperative approach with suppliers (Monczka et al., 2005, p. 24).

A broader concept than purchasing is procurement, which can be defined as covering all strategic and operative activities related to running and managing of products or services from the supplier to their destination (Iloranta & Pajunen-Muhonen, 2018, p.50; Van Weele, 2018, p.7). The increased importance and effectiveness of procurement has led researchers to create different process models for the systematic execution of procurement activities (Bäckstrand et al., 2019). One of these process models is presented in Figure 1.

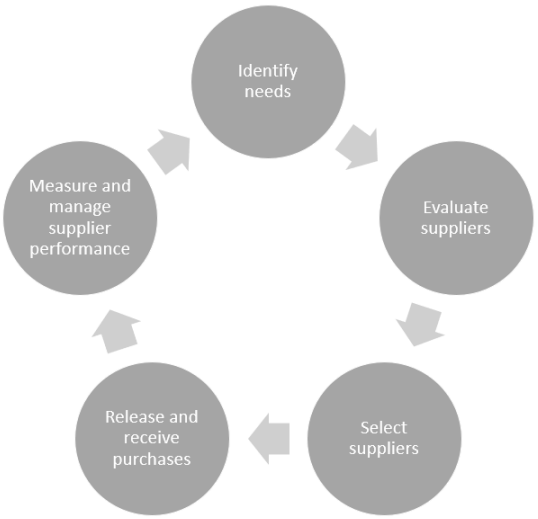

Figure 1. A cyclical process model (Monczka et al. 2002).

As the figure shows, the procurement process is presented as a cycle and a continuous process. First, identifying needs naturally includes understanding and describing the user need of the product or service to be procured (Monczka et al., 2005, p. 36). In addition, in the broader context, this phase of the process can include what the purchase or product is intended to achieve and what needs are identified in order to implement the purchase. Second, potential suppliers need to be evaluated. According to Monczka et al. (2005, p. 42-44), the identification of potential suppliers in the market may include inquiries and requests, as well as formal supplier evaluation. Third, depending on the case and the operating environment, the supplier selection may in the private sector be based on tendering or negotiation, but public procurement always requires tendering. Fourth, after selecting the supplier, all the operative actions must be carried out, from the placing the purchase order to the receipt of the purchase. Fifth, the supplier performance management follows. Monczka et al. (2005, p.53) consider the measurement and management of suppliers as a key part of the procurement process and state that continuous measurement is important for verifying performance but also for identifying possibilities for improvement. However, the purpose of measurement, the managerially relevant measurement object and all the measures need to be carefully defined (Jääskeläinen, 2010). In some cases, supplier performance measurement is even more important to do regularly and accurately, for example if the contract includes incentives or sanctions. After the cycle, the process continues for future purchases, again identifying needs (Bäckstrand et al., 2019). In addition, the results of performance measurement have the potential to lead to the development or redesign of needs.

In general, the basic principles of procurement are quite similar between private and public sector procurement in Finland, although the objective, financing and reporting may vary. Whereas the private sector aims to sell goods or services, get financing from income and shareholders, and report to shareholders – the public sector provides public services, get financing mainly from taxation and reports to stakeholders (Wontner et al., 2020). A significant factor distinguishing private and public sector procurement from each other is the supplier selection regulation based on the Finnish Public Procurement Law (1397/2016) (Iloranta & Pajunen-Muhonen, 2018, p.377).

The law-based regulation requires that the contract between the parties have to be finalized at the same time with the request for quotation and the changes are not allowed during the contract period (Iloranta & Pajunen-Muhonen, 2018, p.381). Wontner et al. (2020) supplement that the private sector can keep the contracts confidential and avoid long procedures compared to the public sector where there is transparency in the contracts and contracting can be a long process. Iloranta & Pajunen-Muhonen (2018, p.381) state that due to the regulated contracting process in the public sector, the focus in the context of public procurement should be transferred to the design and planning phase of the procurement process.

One can say that public procurement process has same elements as private procurement process, but the focus and efforts may be at a different phase. According to Patrucco et al. (2017) the public procurement process includes:

- Budget and demand management
- Definition of requirements
- Identification of suppliers
- Planning the request for quotation
- Quotation evaluation and supplier selection
- Negotiation and contracting
- Contract management
- Order management
- Supplier relationship management
- Supplier rating

Overall, all procurement activities, both public and private, need to be carefully planned, designed and monitored at all procurement periods; before, at the time, and after the moment of the contract (Dimitri, 2013). Dividing the procurement process into these three periods is illustrated in Figure 2.

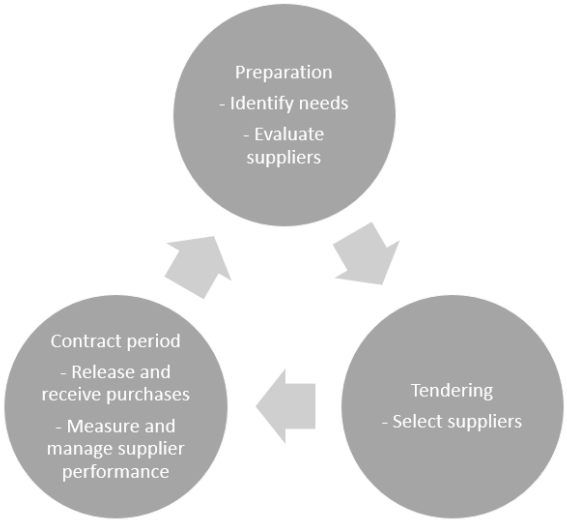

Figure 2. Three-phase cyclical process model (modified from Monczka et al. 2002).

Before the contract is signed, in the preparation period, is defined what is being procured and what options are available. At the time of the contract, tendering and supplier selection is done. After the contract is signed, during the contract period, for example all operative actions, measuring, supplier relationship management and vendor rating is conducted.

In terms of contracts, it is noteworthy that replacing traditional price negotiations and contracts with profit and risk-sharing agreements allows for closer cooperation and longer-term relationships with suppliers (Van Weele, 2018, p.18). According to Kähkönen & Lintukangas (2018), supplier relationship management plays a crucial role in the ability of companies and organizations to create value for their customers. In addition, Kähkönen & Lintukangas (2018) state that modern procurement emphasizes the role of suppliers and supplier development. Similarly, Gelderman & Van Weele (2005) have earlier combined collaborative relationships with suppliers to the concept of sophisticated purchasing. Hence, supplier relationship management and supplier communication should also be considered as essential activity of procurement.

To keep the customer at the focus, it is also important to pay attention to how procurement processes and activities support the organization's objectives and mission. In order to meet end customer expectations, Jääskeläinen & Heikkilä (2019) have summarized purchasing and supply management activities that support the company's customer value creation. It is noteworthy that the summary of Jääskeläinen & Heikkilä (2019) includes only a few internal practices, such as internal service quality, quality focused purchasing and interaction with other functions, but most of the practices listed

focus on supplier relationship management. According to Jääskeläinen & Heikkilä (2019), focusing on performance-based supplier selection, co-management of targets with suppliers, supplier involvement in production and product development, and alignment of objectives and actions between the parties all lead to better customer satisfaction. All procurement value creation practices seem to be equally suitable for both private and public procurement.

The research shows that the development trend in procurement is towards customer value creation, cross-functional activities, and cooperative relationships with suppliers. As a future trend, Mogre et al. (2017) emphasizes sustainable and ethical purchasing, digitalization, and risk management to ensure procurement excellence. Furthermore, Legenvre & Gualandris (2018) highlight the growing importance of ecosystems and value capture through networks and innovative procurement. Ongoing developments and future trends are challenging both current procurement activities and procurement capabilities.

2.2 Capabilities in procurement

Already in 1959 Edith Penrose has identified two different types of capabilities that successful organizations need: operative management skills and entrepreneur skills (Iloranta & Pajunen-Muhonen, 2018, p.139). Penrose's theory is an early framework for a resource-based view that explains the role of internal resource use in companies' competitive advantage, and from which the concept of capability is later derived (Lintukangas et al., 2016). The duty of ordinary capabilities is to generate value to the company (Kump et al., 2019). In addition, Lintukangas et al. (2016) has said that capability can be defined as organizational-level competence.

The resource-based view, as organizational-level competence, harnesses the resources and systems of an organization through practices and capabilities to deliver competitive advantage and operational performance (Kerkfeld & Hartman, 2012). In the context of resource-based view, resources are interpreted as equipment, systems or employees with different skills (Carr & Smeltzer, 2000). Furthermore, Beske (2012) states that the creation of competitive advantage is based on the idea that one or more of these resources are rare, valuable, or difficult to imitate. The focus of the resource-based view seems to be strongly on resource management and control, and its application can lead to competitive advantage in a stable environment.

Since the resource-based view did not provide answers to how companies create competitive advantage in a rapidly changing environment, the dynamic capabilities approach was created (Teece et al., 1997). According to Beske (2012), the competitive situation can change rapidly in dynamic markets if the resource advantage becomes less important or disappears. Therefore, dynamic capabilities have been considered a best practice in the long-term (Eisenhardt & Martin, 2000; Teece, 2007).

The definition of the concept of dynamic capabilities is that *"the dynamic capabilities are the firm's ability to integrate, build and reconfigure internal and external competencies to address rapidly changing environments"* (Teece et al., 1997). Instead of managing resources, the dynamic capabilities approach is the purposeful configuration of resources (Beske, 2012). Eisenhardt & Martin (2000) even argue that the value is specifically in the configurations, more than in the capabilities themselves. In addition, the design of dynamic capabilities is organization specific, and organization needs to have the ability to extend or modify its capabilities to respond to market changes (Beske, 2012). Therefore, it is important to understand the market and how dynamic the operating environment is. If the market is moderably dynamic or very high-velocity, the dynamic capabilities need the different approach (Eisenhardt & Martin, 2000). According to Eisenhardt & Martin (2000), in moderately dynamic market, capabilities can be built on top of existing knowledge, but high-velocity markets may require rapid creation of new knowledge or iterative progress.

Dynamic capabilities are also seen as the routines of organization to manage opportunities and threats (Teece, 2007). In order to make the dynamic capabilities more concrete, Teece (2007) has categorize them into three different categories. These categories are presented in Figure 3.

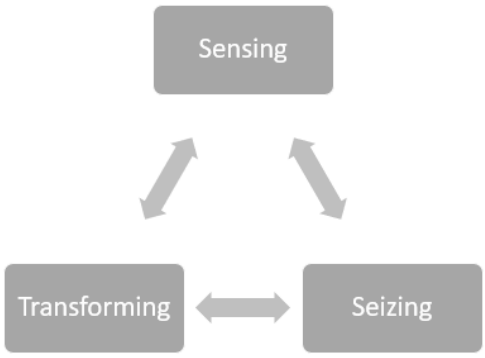

***Figure 3**. Dynamic capability view (Teece, 2007).*

As the figure shows, according to Teece (2007), dynamic capabilities include the ability to sense opportunities and threats, seize opportunities, and manage threats through reconfiguration. Dynamic capabilities can be thought of as the ability to innovate and create new operating models to respond to new opportunities and threats in a changing environment as well as routines to put that ability into practice. Dynamic capabilities are particularly important for business renewal (Kump et al., 2019).

Sensing new opportunities and threats is basically scanning, interpretation and learning (Teece, 2007). According to Teece (2007), identifying and sensing opportunities requires investment in research, understanding customer needs, technological possibilities and evolution of industries and markets. Later, Teece (2014) complements, that sensing includes development, co-development and the assessment of technological opportunities. On the other hand, without access to information or individual competences, there is no ability to sense opportunities (Teece, 2007). Kump et al. (2019) state that reliable and strategically relevant information can be found in the environment if an organization has high sensing capacity. Sensed opportunities can be shaped into new market opportunities and further developed into new business (Teece, 2007; Kump et al. 2019).

Seizing can be explained as the execution of sensed opportunities and capturing value from doing so (Teece et al., 2016). Seizing includes the design of a product or service and its business model that reflects a hypothesis of customer needs (Teece, 2007). Particularly, seizing is about investing in the development of business opportunities that fit the organization itself and provide value to customers, and is done using sophisticated decision-making and investment decision making skills (Teece, 2007). In the other words, seizing means putting market opportunities in practice (Kump et al., 2019).

Transforming (formerly reconfiguration) is about strategic renewal by readjusting resources, processes and organizational structures (Kump et al., 2019). One can say that transforming can be called enabling the execution of sensed opportunities. In addition, transforming is much about continuous renewal that critically depends on the ability of management to lead (Teece, 2014). According to Teece (2007), transforming includes improving, combining, protecting, and reconfiguring a company’s assets and structures in the face of growth and market or technological change. Kump et al. (2019) complements by emphasizing the focus on assignment of responsibilities, allocation of resources and ensuring the required level of knowledge.

In order to exploit dynamic capabilities on a routine basis, the link between dynamic capabilities and procurement needs to be understood. Therefore, the relationship between dynamic capabilities and procurement is presented in Figure 4.

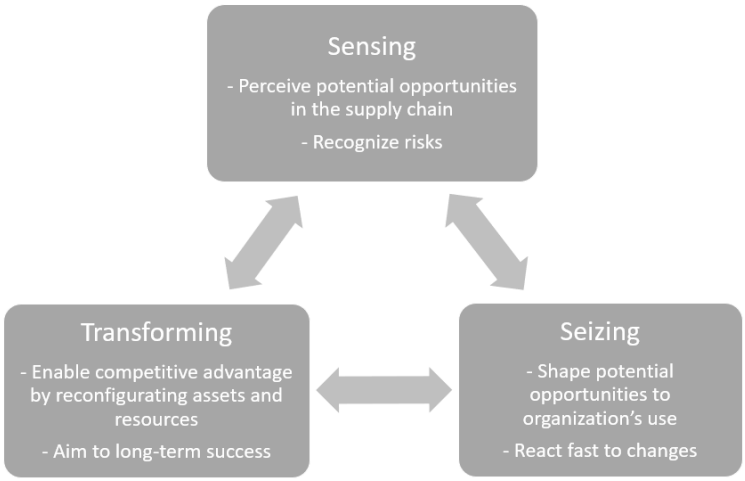

Figure 4. Dynamic capabilities in the context of procurement (Lee & Rha, 2016).

As the figure shows, competitive advantage can be created in procurement by scanning and capturing opportunities, recognizing and reacting to risks at the right time, and flexibly configuring assets and organizational structures into new combinations (Lee & Rha, 2016; Teece, 2007). In addition, visibility into supply markets (sensing), agility to react to changes (seizing) and flexibility to restructure assets, strategies and operations (transforming) not only saves time and money, but also decreases resource needs and/or inventories, support learning, responds to demand changes, and improves overall performance (Lee & Rha, 2016).

Whereas dynamic capabilities are capabilities that are used to modify, change or create ordinary capabilities, ordinary capabilities are capabilities that companies use on a daily basis in the short term (Drnevich & Kriauciunas, 2011; Kump et al., 2019). Well used ordinary capabilities can increase revenues, reduce costs and improve the quality of a company's process or product, and dynamic capabilities can improve these contributions of ordinary capabilities (Drnevich & Kriauciunas, 2011). However, capabilities, dynamic or ordinary, can allow considerable outcomes to be achieved (Teece, 2014).

According to Teece (2014), ordinary capabilities are a combination of skilled employees, facilities, equipment, processes, routines and coordination. Furthermore, capabilities of the organizations are complex patterns of skills and knowledge that have become routines of the organization (Morgan, 2012). In addition, Sako (1999) has argued that *"organizational capabilities are to firms as skills are to individuals"*.

Many studies categorize employee skills. The concept of a skill is defined as an ability gained through practice or knowledge during the career (Carr & Smeltzer, 2000). Tassabehji & Moorhouse (2008) have used categorization of procurement-related skills into basic operative procurement specific skills and advanced general management skills. According to Tassabehji & Moorhouse (2008), procurement specific skills can be further derived into technical skills and procurement process skills, and general managerial skills to interpersonal skills, internal/external enterprise skills and strategic business skills.

As well as capabilities evolve, and should evolve, over time, also skills and competencies need changes over time. Bals et al. (2019) have explored the procurement-related current and future skills and listed the top ten for both, which are presented in Table 1.

Table 1. Current and future top ten skills in procurement (Bals et al., 2019)

Current Competencies	Future Competencies
Analytical skills	Analytical skills
Basic knowledge of role and processes	Automation
Communication skills	Big Data Analytics
Cross-functional abilities and knowledge	Computer Literacy
Interpersonal Communication	eProcurement Technology
Negotiation	Holistic Supply Chain Thinking
Stakeholder Relationship Management	Process Optimization
Strategic Sourcing	Strategic Sourcing
Strategic Thinking	Strategic Thinking
Sustainability	Sustainability

As the table shows, while the importance of digitization has increased, strategic thinking, sustainability and analytical skills have remained the same, the importance of communication and negotiation has surprisingly decreased in the top ten list. Mirroring Tassabehji & Moorhouse (2008) categorization, all categories (technical/procurement process, interpersonal, internal/external enterprise and strategic business skills) are represented in the top ten most important competencies both currently and in the future (Bals et al., 2019). Naturally, different skills and competences are needed at different phases of the procurement process. In addition, both current and future skills and competences are relevant in both public and private procurement. Where public and private procurement differ is in the regulation of the public supplier selection process under public procurement law (Iloranta & Pajunen-Muhonen, 2018, p. 377), which is why public procurement requires specific skills and competences in this area.

In summary, capabilities in general, and in the procurement context, are a combination of resources, processes, skills and the ability to renew. Moreover, procurement capability is organizational-level asset that can create competitive advantage and affect performance (Lintukangas et al., 2016).

3. OUTCOMES OF PUBLIC PROCUREMENT

3.1 Performance of public services

Performance is a multidimensional and complex concept. In the 1990's, performance was mainly defined through financial figures (Jääskeläinen, 2010). Although, the traditional managerial accounting approach of defining performance in terms of income without paying attention to the customers' needs and values has been questioned (Lebas, 1995).

In the early 2000s, more researchers began to include other aspects in the definition of performance, in addition to economic aspects. For instance, Kaplan (2001) published a new performance management system, called Balanced scorecard, for several non-profit organizations. This framework for non-profit organizations was based on the Balanced scorecard for the private sector and emphasized customer's perspective, internal processes, learning and growth in addition to the financial measurements of the previous model.

Also, Boyne (2002) brought experiential metrics such as responsiveness and democratic outcomes alongside economic aspects such as outputs, efficiency, and service outcomes and connected them to the public sector environment. In addition, Van Dooren et al. (2015, p. 2-4) stated that performance can be defined as performance in terms of production, competence/capacity, results, or sustainable results, depending on whether action, achievements, or both matters. In the public sector, these mentioned results can be both outputs and outcomes (Van Dooren et al., 2015, p. 4). The difference between output and outcomes is presented in Figure 5.

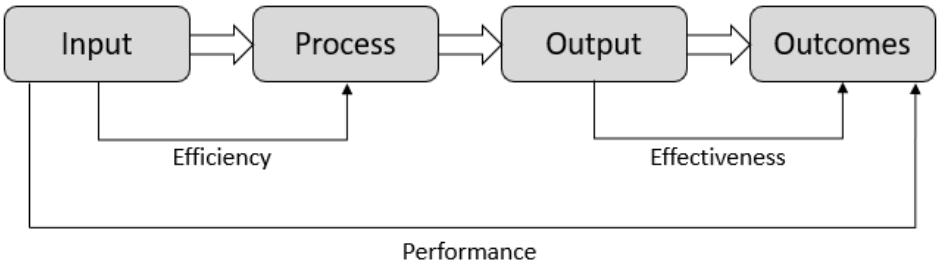

***Figure 5**. The difference between output and outcomes (Jääskeläinen, 2010; Boyne 2002).*

As the figure shows, the simplified difference between outputs and outcomes is that the outcomes are the results of outputs. First, inputs, such as personnel, materials etc., are delivered to the process. Therefore, the inputs affect how efficient the process is. Second, the process transfers inputs into outputs. Thus, outputs, such as availability, delivery etc., are the direct and concrete result of the process. The more effective the outputs are, the more useful they are perceived to be by customers. Hence, the outcomes are the results of the outputs. In addition, Boyne (2002) has defined that where outputs include 'quantity and quality', outcomes include 'impact' that can be positive or negative. Similarly, Jääskeläinen (2010) describes outcomes as benefits experienced by customers compared to customers' needs and expectations. As well as both Boyne (2002) and Jääskeläinen (2010) include outcomes and effectiveness in the concept of performance, also Epstein (2018, p.4) used the same logic and emphasized the impact of outcomes – especially in relation to the public sector.

According to Rajala et al. (2018), outcomes can appear at service level, organizational level and community level, and there can be several different types of outcomes, such as

- quantitative and qualitative outcomes,
- subjective and objective outcomes,
- short-term and long-term outcomes,
- outcomes for customers and society,
- positive and negative outcomes,
- intended and unintended outcomes.

What all these different types of outcomes have in common, is that each of them can be used in its own way to describe performance.

Most of the costs incurred in the public services are covered by taxes, and smaller part by service charges. Therefore, it is essential to know how citizens perceive the performance of public services. Since improving performance contributes to value creation (Kähkönen & Lintukangas, 2017), improving performance can also improve the perceived value of public services.

Value can be defined as the relationship between benefits and sacrifices, and is often defined in monetary terms. Many researchers argue that in order to obtain all the potential benefits provided by the suppliers, customer needs to also make some sacrifices (Zeithaml, 1988; Ravald & Grönroos, 1996; Lapierre, 2000; Menon et al. 2005;

Lindgreen et al. 2012). However, value can be more than just monetary value, and is presented in the business context as a set of benefits that can be economic, technical, service, and social (Anderson et al., 2009). Even though, Lindgreen & Wynstra (2005) state that the customers are not homogenous and may perceive different values for the same product or service, it can nevertheless be said that the performance of public services contributes to the value that citizens perceive for their tax money.

One can say that performance is verified by measurement. In addition to traditional measurement, performance measurement can also include qualitative information (Van Dooren et al., 2015, p. 20). In addition, the purpose and need for measurement is derived from the objectives of the organization (Jääskeläinen, 2010). Although, there can be difficulties to define the strategy and outcomes that a non-profit organization is trying to achieve (Kaplan, 2001). Once the purpose is identified, the measurable elements are defined and the actual measurement follows. However, according to Jääskeläinen (2010), several challenges are also identified in defining purpose, choosing what to measure and designing the measure itself. Despite these challenges, it is worth for investing in measurement in the public services, as the measurement is a prerequisite for improving performance.

Nowadays, performance measurement practices in public services often aim at reporting and financial statements (Jääskeläinen & Laihonen, 2014). According to Lebas (1995), organizations should measure the past, the present, future targets, means of achieving targets and verification of achievement. Hence, all of this requires a broader measurement than just measurement for reporting and financial statements. In addition, Greiling (2005) states, that instead of concentrating input factors, such as personnel, material and/or tasks, public sector management should focus on measuring outcomes.

Volden (2019) highlights that public sector performance is focused on three levels: outputs, first-hand impacts on users or organizations, and long-term impacts on society. Although it is argued that public service performance can in principle only be defined in terms of long-term effectiveness (Lönnqvist & Laihonen, 2012), the importance of short-term impacts should not be underestimated. Outcomes are often intangible long-term effects such as changes in citizens' health and well-being (Sillanpää, 2013), that are crucial for society but may not be necessarily easily perceived by citizens. Therefore, the first-hand impacts and outputs, such as availability, location and quality of the service also play an important role in the performance of public services (Jääskeläinen & Lönnqvist, 2011).

One of the key long-term elements of public service performance nowadays is sustainability. The public sector has a great opportunity to steer outcomes of public services in an environmentally friendly, socially responsible and innovative direction through performance indicators (Amann et al., 2014).

The increasing customer orientation and sustainability of public services has made it necessary to re-evaluate the performance priorities of public services and to dynamically compare alternative approaches. According to Marinelli & Antoniou (2020), public service performance can be affected by selecting appropriate procurement procedure and system. Also, due to growing complexity of both strategic objectives and the public service ecosystem, traditional measurement of public sector performance may also need to be re-evaluated. Overall, public service performance is much more than just providing personnel and services, it is providing effective short-term and long-term outcomes for citizens and society.

3.2 Benefits of procurement for the buying organization

In the private sector, depending on the company or organization, approximately 60-80% of the production value comes from different types of purchases (Heikkilä et al., 2013, p. 10; Van Weele, 2018, p. 12; Iloranta & Pajunen-Muhonen, 2018, p. 21). Therefore, the impact of procurement on profit and the “bottom line” of companies is significant (Chen et al. 2004; Hartmann et al. 2012). In addition, all direct material costs are affecting companies’ sales margins and return on assets (Van Weele, 2018, p. 14). Therefore, direct economic impact has raised costs to a significant role in the benefits of private sector procurement. A tool originally developed to calculate the ratio of the return on assets, DuPont model, also works well for representing the financial impact of procurement. The DuPont model is presented in Figure 6.

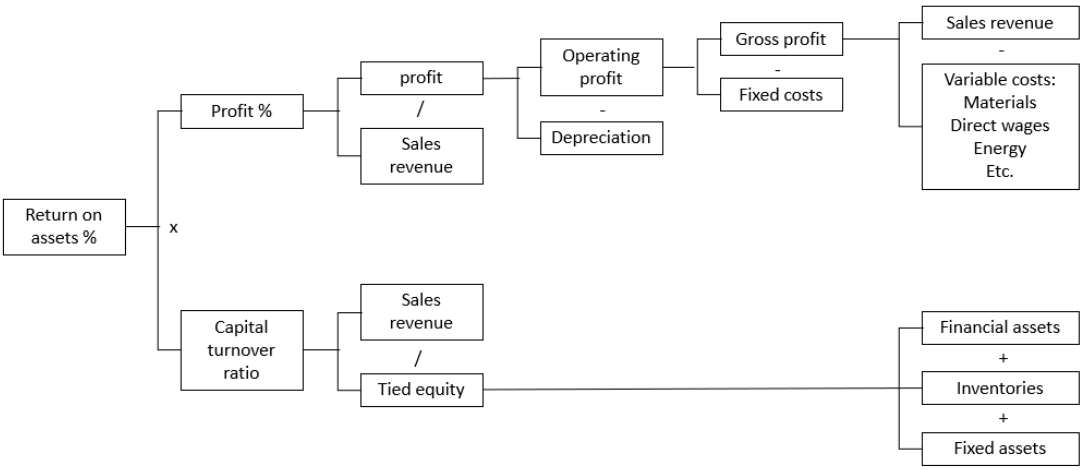

***Figure 6**. The DuPont model (Iloranta & Pajunen-Muhonen, 2018, p. 31).*

As the figure shows, the significant factors for both profit and return on assets are the direct variable costs and all assets related to the tied equity. Consequently, a capable procurement can contribute to the profitability and viability of the company through cost savings and more efficient use of assets. For example, tendering, price negotiations, better quality of materials, well-rotating inventories and good payment terms have all positive and direct impact on the financial figures of companies. DuPont analysis have shown that 2% cost saving can lead to an increased return on net assets of 20% (Van Weele, 2018, p. 13). In addition to direct cost savings, procurement can indirectly improve profitability by enhancing a company's revenue-generating potential through supplier development ideas (Van Weele, 2018, p. 14).

Similarly, measuring costs and cost savings has been a primary focus in public procurement, where the impact of procurement on municipality and state finances is also significant (Patrucco et. al., 2017). As in the private sector, procurement in the public sector often covers for more than 50 per cents of the total costs of public sector (Iloranta & Pajunen-Muhonen, 2018, p. 20). In addition, according to Wontner et al. (2020), public procurement globally represents up to 15-20% of GDP. Therefore, typically and traditionally, the benefits of procurement have been measured through financial and operational performance, focusing primarily on cost-effectiveness, quality, and delivery performance (Jääskeläinen & Heikkilä, 2019). Also, internal and external procurement practices have been developed aiming of buying financial performance (Zimmermann & Foerstl, 2014).

Although low prices and financial benefits are often searched in the public sector, public procurement must also aim for the best value for money when providing services to

citizens and using public money (Patrucco et al., 2016). Value for money thinking is related to how well "tax money" is used and the overall success of an organization's qualitative and quantitative efforts (Tirronen, 2020). According to Meynhardt (2009), in the pursuit of the "common good" it is not appropriate to change everything into a cash flow concept, but to consider as benefits everything that is valued by the public. Thus, along with the financial benefits, also the non-financial benefits have become meaningful (Dimitri, 2013). However, it might be worth considering whether some non-financial benefits could become financial benefits in the long term. Consequently, public procurement objectives are broader strategic goals, such as commercial goals, regulatory goals and socio-economics goals (Patrucco et al., 2017).

The goals of public procurement are most often related to the benefits for the community and citizens. In the pursuit of community and citizen benefits, procurement can also benefit the organization itself. According to Malacina et al. (2022), public procurement provides the following benefits to the buying organization:

- generation and diffusion of innovation,
- well-functioning supplier market,
- sustainable public procurement,
- public procurement process effectiveness.

Public procurement has the potential to support both the generation of innovations for the organization's use and the diffusion of these innovations (Edler & Yeow, 2016). These innovations can be product, process or outcome innovations (Borrás & Edquist, 2013). Besides, Caravella & Crespi (2020) state that low demand for innovation generates low levels of innovation. Thus, by demanding innovation, public procurement can create the demand that supports R&D activities in the market that allow the buying organization to develop its processes and outcomes (Caravella & Crespi, 2020). In the other words, while public procurement can be an important factor in continuous development and implement an innovation policy (Marinelli & Antoniou, 2020), the buying organization itself can also benefit from innovation.

In addition to demand and diffusion of innovations, public procurement can develop supply markets towards well-functioning supply market (Malacina et al., 2022). Healthy competition can lead to cost efficiency, product/service availability and better quality (Uyarra & Flanagan, 2010). In addition, market stability and market growth also help to keep the markets functioning and running for the organization's use (Malacina et al., 2022).

Public procurement also has the opportunity to support an organization in its transfer towards sustainability. By setting criteria and/or requirements for efficiency, life cycle management, good-quality products, or reusable/recyclable materials, public procurement can promote the circular economy, reduce waste and contribute to sustainability (Alhola et al., 2019). According to Alhola et al. (2019), performance-based procurement, market dialogue, and life cycle costing are also effective tools for circular economy and sustainability. Consequently, public procurement can use commercial methods to meet environmental and social responsibilities and achieve environmental and social outcomes (Allen 2021).

In terms of process effectiveness, the benefits of public procurement for the organization are wide. The effectiveness of public procurement is affected by process efficiency, cost certainty, equality, supplier compliance, as well as organizational learning and development of seizing capabilities (Malacina et al., 2022). In the context of process effectiveness, procurement can be seen as a tool to pursue public value. Therefore, different process effectiveness components can be emphasized in the different procurement cases for reaching the most possible effective process. On the one hand, high competition can provide the best effectiveness (Marinelli & Antoniou, 2020). On the other hand, good dynamic capabilities can enable the capture of the benefits of new opportunities and respond agilely to changing demand, and even provide stronger partnership or networking effectiveness (Lee & Rha, 2016). However, designing, executing and monitoring processes are needed before, at the time, and after the contract signing (Dimitri, 2013).

Similarly, private sector procurement can provide benefits to the buying organization by generating or diffusing innovations, developing supply markets, improving sustainability and providing process effectiveness. Private procurement can create notable competitive advantage by improving operational performance, organizational agility, and reconfiguring supply chain processes and assets to respond to market changes (Lee & Rha, 2016). Consequently, by leveraging the role of procurement at the interface of supply markets, both private and public procurement can provide significant benefits to an organization by leveraging the dynamic capabilities of procurement.

Furthermore, according to Tassabehji & Moorhouse (2008), development is turned towards strategic partnerships and supply networks. By leveraging the experience and knowledge of a supplier or service provider early in the procurement process, flexibility, improved solutions, reduced rework and efficient decisions can benefit the buying organization (Marinelli & Antoniou, 2020).

Lindgreen & Wynstra (2005) state, that specially buying services is an interactive process between parties. In addition, Kähkönen & Lintukangas (2012) argue that combining the capabilities of companies and collaboration can create unique value. According to Kähkönen & Lintukangas (2012), there is ongoing shift from value chains to value networks. Therefore, one can say that nowadays procurement, both private and public, operates as an influential link between two or more organizations and even creates influential dynamic networks for future success.

4. OUTCOMES-BASED PROCUREMENT IN PUBLIC ORGANIZATIONS

4.1 Introduction to outcomes-based procurement

The emergence of outcomes-based procurement has been linked to the reform of public administration (Hakari, 2013). The evolution of implementation of public policies and providing public services has started with Public Administration (PA), led to New Public Management (NPM), and thus to New Public Governance (NPG) over the decades (Osbourne, 2010, p. 1-2). The selected differences between PA, NPM and NPG are presented in Table 2.

Table 2. Differences between PA, NPM and NPG (Hakari, 2013)

	PA	NPM	NPG
Emphasis	policy implementation	organization management	negotiation, customer orientation
Mechanisms	hierarchy	traditional contracts	networks, partnership
Tools	bureaucracy and standards	performance management	public-private collaboration

Before the 1980s, Public Administration was focused on policy implementation, guidelines and control, committed to incremental budgeting, and was bureaucratically tied to the rule of law (Osbourne, 2010 p. 3-4). After strong criticism in the late 1970s, New Public Management began to gain a foothold.

New Public Management focused on leadership on public organizations and emphasized input/output control, evaluation and performance management (Osbourne, 2010, p. 4). However, New Public Management started to be criticized in the 21st century for its intraorganizational focus and inability to consider the complexity of design, supply and management of public services, and thus New Public Governance framework was created (Osbourne, 2010, p. 5).

However, according to Hakari (2013), New Public Governance did not replace New Public Management but came to supplement it. New Public Governance is strongly customer oriented and focuses on networking, partnership, co-development, operational environment and public-private collaboration (Osbourne, 2010, p. 10; Hakari, 2013). In addition, the New Public Governance framework sees citizens and service providers as active members who develop services in collaboration with the public organization, and

the role of public organization itself changes towards the coordinator role (Hakari, 2013). Furthermore, traditional hierarchy and markets are replaced by networks with the focus on co-production, outcomes-based approaches and public-private partnerships (Schneider, 2019).

Public-private partnership has been defined as a concept that aims to benefit both sectors by sharing risks and resources (Greve, 2013). Thus, the benefits of public-private partnership have been seen in terms of improved quality, efficiency, cost-effectiveness and risk assessment (Torvinen & Ulkuniemi, 2016). In addition, the Public-Private-People partnership (4P) model has been captured in the context of public procurement to emphasize the end-user role in the procurement process along with the public organization and service provider (Torvinen & Ulkuniemi, 2016).

In order to meet the New Public Governance policy, it has become important to reconsider how to respond to public strategy in a changing environment. Although, outcomes-based approaches embody the ideology of New Public Government, they at the same time are challenging public organization, management, and the whole environment (Tirronen, 2020). However, according to Tirronen (2020), outcomes-based procurement can be used as a mechanism to execute new governance policy in public services. In addition, the most important benefit of outcomes-based procurement is that it enables procurement cases to be executed in the most beneficial way for citizens, i.e., to maximize public value (Tirronen, 2020).

Outcomes-based procurement means that an organization is buying service outcomes instead of transactions, outputs or processes (Tirronen, 2020; Edmistone & Nicholls, 2018; Valovirta et al., 2017; Tirronen & Rannisto, 2016). Focusing on outcomes in procurement leaves freedom to service providers to determine by themselves how to perform the work (Tirronen, 2020; Martin, 2005). Furthermore, there is pursuit to encourage service providers to develop their own work towards the most effective and innovative way of providing the service (Valovirta et al. 2017). To counterbalance the freedom of implementation, payment is typically linked to the outcomes achieved (Valovirta et al., 2017; Farr, 2016). In addition, outcomes-based procurement can be described as the sharing of benefits and risks across organizational boundaries (Valovirta et al. 2017). Consequently, when risks are transferred to the service provider, the service provider can receive a higher return on achieving the targets, supported by a payment mechanism (Valovirta et al. 2017).

In the context of outcomes-based procurement, outcomes can be defined as a result of outputs that have an impact on the well-being and lives of citizens (Bovaird & Davies, 2011). In addition, sustainability, environmental outcomes and safety outcomes are increasingly involved (Selviaridis & Wynstra, 2015). Although, the principles of outcomes-based procurement can be used for a several different purchases, such as products, services or investment projects, it is so far most often used in the context of public services (Valovirta et al. 2017). While general procurement activities can be divided into three periods; before, at the time, and after the moment of contract (Dimitri, 2013), outcomes-based procurement activities can also be divided similarly. The outcomes-based specific procurement activities are illustrated in Figure 7.

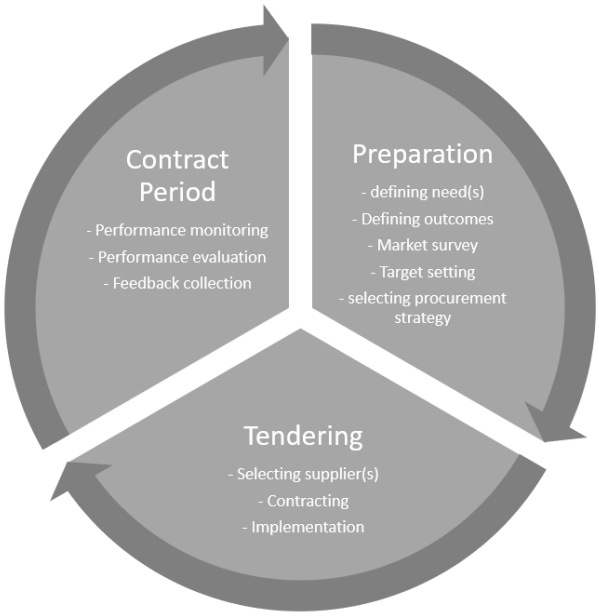

***Figure 7**. Outcomes-based specific procurement activities (Tirronen et al., 2016).*

As the figure shows, the three periods are the preparation, tendering and contract period phases. In the preparation phase, activities starts with defining the need and continue with translating the need into outcomes, market survey, setting target levels for outcomes, developing new solutions, and finally selecting the procurement strategy and method (Koivisto, 2018; Tirronen et al. 2014). In addition, some iteration rounds may be needed during the preparation phase (Tirronen & Rannisto, 2016). Furthermore, the preparation phase can be long, heavy and require special capabilities (Tirronen, 2020; Valovirta et al. 2017; Tirronen & Rannisto, 2016; Bovaird & Davies, 2011). Consequently, it is typical for outcomes-based procurement that some preparation work is done with

stakeholders such as suppliers, service providers, third sector representatives, and/or service users (Koivisto, 2018; Farr, 2016; Tirronen & Rannisto, 2016).

After careful preparation, the tendering is carried out and supplier(s) are selected, as in any other public procurement tendering process. According to Koivisto (2018), applicable approaches to outcomes-based procurement in Finland include:

- requirements based on performance and functions,
- life cycle cost approach,
- negotiation procedures,
- innovation partnership procedure,
- design contest,
- pre-commercial research and development project,
- fixed price competitive tendering.

In the outcomes-based procurement cases, different partnership-based contract models are often used (Hakari, 2013) and contract periods are typically long (Tirronen & Rannisto, 2016). In addition, the contract should include a clause that allows further development of the solution during the contract period (Koivisto, 2018).

During the contract period, follow-up, measuring and evaluation of performance and outcomes are to be done. According to Koivisto (2018), things to be followed and measured can typically include for example service level, delivery reliability, response time, costs and expenses. On the other hand, measurement objects can be much more challenging, such as measuring the well-being of citizens (Tirronen, 2020). In addition, Koivisto (2018) highlights the importance of clear and accurate co-defined targets and measures in order to enable clear and unquestioned measurement during the contract period. However, measurement can be anyhow difficult and time consuming (Tirronen et al., 2014). According to Tirronen et al. (2014), it is also crucial to understand the mechanisms behind the measures and what is affecting them. Overall, the importance of measurement in public procurement cannot be overemphasized (Patrucco et al., 2017) and in outcomes-based procurement it is even more important when the verification of success lays on measurement and payments are also often related to outcome measures (Farr, 2016). In addition, collecting feedback, analyzing the procurement case as a whole and continuous learning are all belonging to activities of the contract period (Tirronen et al., 2014).

In public procurement, there is not much flexibility in contracts during the contract period, although public procurement aims to add flexibility into long-term service contracts (Valovirta et al., 2017). Therefore, it is essential that outcomes-based procurement have clear targets and change or improvement to be pursued (Tirronen, 2020). The process flow of target setting is illustrated in Figure 8.

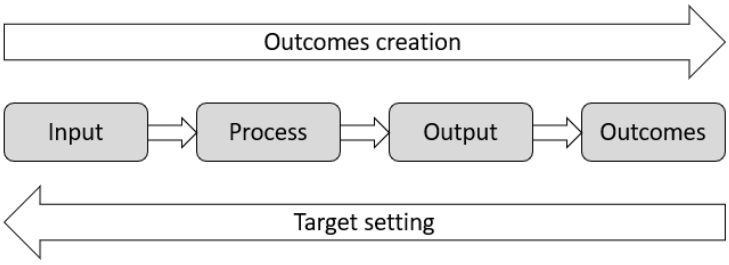

***Figure 8**. Outcomes creation and target setting directions in outcomes-based procurement.*

As the figure shows, outcomes are created as a result of inputs, processes and outputs (Jääskeläinen, 2010; Boyne, 2002). In outcomes-based procurement, the target setting starts with defining what outcomes are wanted to be achieved and what change or improvement is aimed (Tirronen, 2020). After setting the target(s) for the outcomes, appears possibility to define and set a target for the outputs, then for the processes that produce these outputs, and finally for the inputs. In an outcomes-based context, it is typical that the last target setting phases related to process and inputs are the responsibility of the service provider. Overall, it is essential that outcomes and target levels for outcomes are defined in collaboration with all the necessary stakeholders in order to achieve the broadest possible understanding (Farr, 2016).

Measuring outcomes is one of the core elements of outcomes-based procurement (Tirronen, 2020). Therefore, outcomes have to be clearly defined so that measuring outcomes verifies the delivery of public value (Tirronen, 2020; Rajala et al., 2018). Although, it is easier to measure costs and productivity than outcomes (Rajala et al., 2018), measuring outcomes is not impossible (Tirronen, 2020). Thus, both subjective and objective measurement are needed in outcomes-based procurement (Tirronen, 2020). Besides, understanding the baseline and its importance is critical, especially when procuring new solutions (Valovirta et al., 2017).

Payment mechanisms are typically linked to outcome targets (Tirronen, 2020; Valovirta et al., 2017). In Finland, bonus-sanction models and service level agreements are typically used in the outcomes-based procurement cases (Tirronen, 2020). In addition,

payment by results method can also be used (Farr, 2016; Jääskeläinen & Laihonen, 2014; Tirronen et al., 2014). Payment by results means that a supplier or service provider gets payment when a delivery has taken place or outcomes have been reached (Tirronen et al., 2014).

According to Selviaridis & Wynstra (2015), measurement and contracts that include outcomes- or performance-related payments, increase transaction costs and require investment. Therefore, data collected from information systems play a key role but organizations must also be prepared to invest in analyzing and utilizing data and engaging employees in measurement (Tirronen, 2020). Consequently, outcomes-oriented public management as enabler and supporter is relevant.

One can say that outcomes-based procurement is same time creating and utilizing partnerships. The value for money often lies in the experience captured from different sources (Marinelli & Antoniou, 2020), which in many cases means exploiting partnerships. On the other hand, the generation and diffusion of innovation from the supplier base is an essential part of modern public procurement (Edler & Yeow, 2016). In general, the significance of partnerships for the benefits and success of organizations is widely recognized (Marinelli & Antoniou, 2020; Lee & Rha, 2016; Torvinen & Ulkuniemi, 2016; Greve, 2013; Kähkönen & Lintukangas, 2012; Tassabehji & Moorhouse, 2008; Lindgreen & Wynstra, 2005). However, outcomes-based procurement can also create partnerships or even networks. Many preparation phase activities are carried out in cooperation with different actors and stakeholders in the operating environment. Thus, combining the experience and resources of service providers, public organizations and end users is almost essential in outcomes-based procurement. Furthermore, this combination supports partnership building better than traditional public procurement practices. (Tienhaara et al., 2016).

Along with public-private partnership, another concept of cooperation in outcomes-based procurement is co-creation. However, the concept of co-creation is not yet completely settled (Schneider, 2019). Although, Osbourne (2018) has defined it as an interactive and dynamic process between public organization, service providers and citizens to create value for service users and organizations. In addition, according to Jalonen (2019) co-creation is often justified by the involvement of citizens and has already been considered in the Finnish government program. Hence, the definition of co-creation seem to correspond well to the cooperation executed in outcomes-based procurement and may become a more commonly used concept also in the context of public procurement.

In summary, outcomes-based procurement is not a simple approach to public procurement but if successful, it can create the opportunity to deliver public value that traditional public procurement may never achieve. In addition, outcomes can be very far-reaching, as the outcomes of public services can continue to be performed for years after the service delivery (Jääskeläinen & Lönnqvist, 2011). However, opportunities and risks need to be carefully evaluated case by case (Valovirta et al., 2017).

4.2 Requirements

The requirement to utilize outcomes-based procurement springs from the will of public sector to promote effectiveness and expand the use of partnerships, co-creation and outcomes-based approaches in public organizations (Valtionvarainministeriö, 2020; Schneider, 2019; Hakari, 2013). As with any other big transfer or organizational reconfiguration, the use of new approaches in public procurement needs management support. On the other hand, procurement management is always based on an organizational strategy built on the basic idea of the organization's existence (Iloranta & Pajunen-Muhonen, 2018, p. 132). According to Ellram & Carr (1994), procurement strategies and objectives must always be connected to and support the strategies and objectives of the organization. The strategy flow is illustrated in Figure 9.

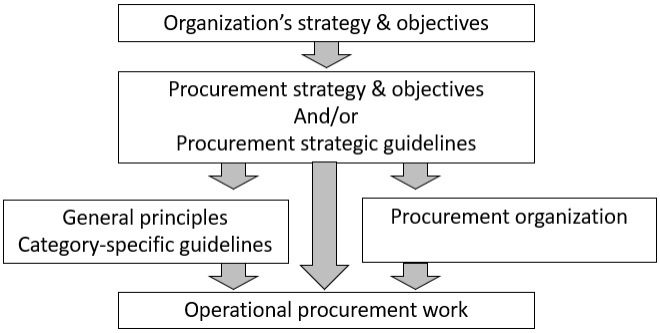

***Figure 9**. The strategy flow in public procurement (Valtionvarainministeriö, 2020).*

As the figure shows, first organization strategy is created, and organization's objectives are set. Next, a strategic procurement strategy, guidelines and objectives are created for the whole organization or at category-level and the procurement organization is defined. Last, operational procurement work is carried out in accordance with the guidelines and the public procurement law. The use of outcomes-based procurement is a strategic decision (Tirronen, 2020). However, procurement does not only need to receive and accept the strategy and objectives set by management but by integrating procurement

function into the strategy planning process of the organization, procurement can participate in strategic planning from an early stage (Monczka, 2005, p. 32).

In addition to management support through strategies and guidelines, utilizing outcomes-based procurement requires resources, platforms and tools that support an outcomes-based approach (Koivisto, 2018; Meehan et al. 2017). At the broadest, all this even requires a change in organizational culture in order to organize technological solutions, efficient processes, relationship networks, and systematic management of the previous to support the implementation of the new approach (Valtionvarainministeriö, 2020).

In addition, implementing an outcomes-based procurement approach requires the ability of organization to innovate and take risks, a positive attitude to change, a willingness to learn and the courage to try something new (Tirronen, 2020; Schneider, 2019). To implement outcomes-based procurement, a dynamic team with relevant knowledge and a good attitude must be formed from the various functions of the organization. In addition, cooperation between public organizations in different locations is also recommended by the Government (Valtionvarainministeriö, 2020). Furthermore, the organization needs to be prepared to reconfigure roles and mode of operation if necessary (Tirronen, 2020).

Once the strategic foundation is in place and the resources and budget are set to implement an outcomes-based approach, it is time to put the customer into the focus and begin to sense opportunities to deliver the best possible outcomes for citizens. Defining first needs, then outcomes, and finally metrics in cooperation with service providers and end-users are required for successful use of outcomes-based procurement (Tirronen, 2020; Schneider, 2019; Jalonen, 2019; Osbourne, 2018; Koivisto, 2018; Valovirta, 2017; Farr, 2016). Furthermore, co-creation requires careful preparation and professional facilitation (Koivisto, 2018; Osbourne, 2018) However, without genuine dialogue and real opportunities for influence, the nature of outcomes-based procurement will not be realized (Tirronen, 2020).

Outcomes-based approach requires the presence and participation of the buying organization also during the contract period. During the contract period, measuring the achievement of objectives and monitoring the methods used are required (Valovirta et al., 2017; Tirronen & Rannisto, 2016). In addition, supplier management and contract management (Valtionvarainministeriö, 2020), as well as data collection and analysis (Selviriadis & Wynstra, 2015) are emphasized. On the other hand, outcomes-based procurement also requires new things from service providers, such as innovativeness and commitment to a long and heavy procurement process compared to traditional

tendering (Tirronen, 2020). Moreover, networking is essential for the continuation of development cooperation throughout the contract period and therefore it is necessary to set up of a steering group consisting of various actors (Schneider, 2019). The contract period also includes a continuous assessment in order to ensure that actions are on the right track.

To meet the requirements of utilizing outcomes-based procurement, a public organization must have enough capacity and capability of resources (Meehan et al., 2017). In particular, the dynamic and innovative nature of the outcomes-based approach places a requirement on the capabilities of public procurement organizations (Edler & Yeow, 2016). Outcomes-based procurement also requires novel procurement expertise, at both individual and organizational levels (Tirronen, 2020; Valtionvarainministeriö, 2020). Overall, successful procurement in a dynamic and innovative environment requires visibility of opportunities and risks, agility to utilize these opportunities and flexibility to adapt resources and activities to meet long-term success (Lee & Rha, 2016).

4.3 Challenges

The first challenge of outcomes-based procurement is to turn public policy objectives into practice (Storsjö & Kachali, 2017). If procurement is not driven by a vision, strategy and objectives linked to the desired outcomes, the national New Public Governance policy targets will never be realized (Tirronen & Rannisto, 2016). In addition, when implementing an outcomes-based approach in an organization, management also faces new challenges in responding to changes in the operating environment and investing in resources and capabilities (Storsjö & Kachali, 2017). Besides, outcomes-based procurement may generate the need to reconfigure strategic and operative activities, for example, and a lack of capabilities in IT systems may appear (Valovirta et al., 2017). Moreover, due to the need for anticipating public sector finances, bonus models have typically not been widely applied in public procurement (Iloranta & Pajunen-Muhonen, 2018, p. 380). Therefore, the new approach can also create new challenges for budgeting (Rajala et al., 2018).

However, the clear and biggest challenge in outcomes-based procurement is measuring outcomes (Tirronen, 2020; Valtionvarainministeriö, 2020; Valovirta et al., 2017; Selviaridis & Wynstra, 2015; Jääskeläinen & Laihonen, 2014; Willis & Bovaird, 2012). The first challenge in measuring outcomes may be defining the desired change. Then, the development challenge does not transfer into targets and requirements (Valovirta et al., 2017). In addition, lack of measurement practices or existing measures, especially in

new solutions, can prevent the use of outcomes-based procurement (Valovirta et al., 2017; Jääskeläinen & Laihonen, 2014). Furthermore, lack of measurement practices or capabilities can lead to a too complex measurement system (Jääskeläinen & Laihonen, 2014).

Due to the complex nature of the outcomes, it is not easy to define and decide what should be aimed and measured. Therefore, it is also possible that things that are easy to measure are selected as measurement targets instead of the relevant ones. According to Selviaridis & Wynstra (2015), the more difficult it is to measure outcomes, the more likely it is that outputs, processes and inputs will be targeted instead of outcomes. If measures are chosen incorrectly, it may happen that "good intentions can make situation worse" (Jalonen, 2019). Therefore, it would be necessary to consider what other outcomes or impacts can occur than the targeted ones (Valovirta et al., 2017).

In the outcomes-based procurement cases, a payment by results or incentive-sanction model is used. Therefore, setting the incentive or sanction or payment criteria correctly is also a major challenge (Valovirta et al., 2017). In addition, separating the effect of a particular supplier's activities from the total outcomes during the contract period can be challenging (attribution challenge) when there are several actors operating together, as in an alliance model (Valtionvarainministeriö, 2020). Moreover, the challenges of data collection and analysis, as well as monitoring arrangements that increase transaction costs, may challenge the willingness of both the buying organization and suppliers to implement an outcomes-based approach (Jalonen, 2019; Valovirta et al. 2017; Selviaridis & Wynstra, 2015).

Challenges related to procurement procedures and methods can be related to weak knowledge of suitable methods or the perception that they are laborious (Valtionvarainministeriö, 2020). In addition, complexity is a challenge for tendering competencies (Valtionvarainministeriö, 2020; Tienhaara et al., 2016). Moreover, the buying organization can be afraid of making mistakes or doing something illegal (Valovirta et al., 2017). Also, suppliers can try to avoid uncertainty and follow well-known practices instead of trying something new (Valovirta et al. ,2017). To address these technical and emotional procurement challenges, it would be important to increase knowledge about outcomes-based procurement and share best practices with different public organizations.

As collaboration and co-development are at the core of outcomes-based procurement, there are also potential challenges in terms of interaction, partnership, roles and

responsibilities (Jalonen, 2019; Schneider, 2019; Tirronen & Rannisto, 2016). Market dialogues and successful facilitation in co-development are crucial in defining outcomes and targets. In addition, general challenges in managing and organizing the process may also come into question (Tirronen & Rannisto, 2016). Moreover, change management may be challenging internally and externally.

In addition to a positive attitude for change and the courage to try something new, buying organizations need skills and capabilities that support outcomes-based procurement. An obvious challenge is if procurement function is seen as simply implementing a juridical tendering process and the capabilities and capacities of procurement function are positioned to support that approach (Meehan et al., 2017). According to Meehan et al. (2017), weak dynamic capabilities can limit the of outcomes-based procurement.

4.4 Necessary capabilities

Implementing outcomes-based procurement requires the ordinary skills and capabilities, but also the specific skills and capabilities that are required by the outcomes-based approach. In the daily operations, public organizations are using operative procurement skills and advanced managerial skills that include strategic business skills and interpersonal skills (Tassabehji & Moorhouse, 2008). In addition, these skills are used on a daily basis in strategic and operative activities (Kump et al., 2019). Furthermore, negotiation skills, communication skills, market survey skills, technical procurement process and methods skills, analytical skills, supply chain management skills and leadership skills are typically needed in public procurement organizations (Bals et al., 2019; van Weele, 2018, p. 73-74).

Ordinary capabilities are related to the performance of administrative or operative functions that are for executing tasks (Teece, 2014). According to Bals et al. (2019), especially the capabilities of information and knowledge management, holistic supply chain thinking, process optimization, partnership, and strategic thinking and sourcing are increasingly important for all procurement organizations in the future. Ordinary capabilities are used in ordinary public procurement processes and cases, but also in more innovative and modern approaches.

When executing outcomes-based procurement, it is extremely important that the organization has the capability to define needs and outcomes and transfer them into measures and targets (Koivisto, 2018; Tirronen et al., 2014). In addition, market research, identification of potential suppliers and market dialogues are typical activities

in the public procurement preparation phase (Patrucco et al., 2017) that requires strategic thinking and strategic sourcing capabilities. Furthermore, the co-creation, typical of outcomes-based procurement, places new demands on partnership and interaction capabilities (Osbourne, 2018).

If holistic thinking and measurement expertise are emphasized in the preparation phase of outcomes-based procurement, the ability to apply procurement law and procurement methods is emphasized in the tendering phase, when the objective and criteria are complex (Valovirta et al., 2017). Furthermore, analytical capabilities, information and knowledge management, as well as project management capabilities are realized during the contract period when performance is monitored and evaluated (Valtionvarainministeriö, 2020; Jääskeläinen & Laihonen, 2014).

However, the use of outcomes-based procurement framework in procurement cases is made in order to respond to new dynamic environment needs and more complex challenges (Hakari, 2013). That dynamic environment and the dynamic nature of outcomes-based procurement place new requirements on public procurement capabilities (Edler & Yeow, 2016). At the same time, the new approach provides new opportunities to develop operations, but requires these novel procurement capabilities to capture opportunities (Tirronen, 2020). Consequently, successful public procurement in a dynamic and innovative environment requires visibility into opportunities and risks, agility to utilize these opportunities and flexibility to adapt resources and activities to meet long-term success (Lee & Rha, 2016). The hypothetical combination of these dynamic capabilities with outcomes-based procurement is presented in Figure 10.

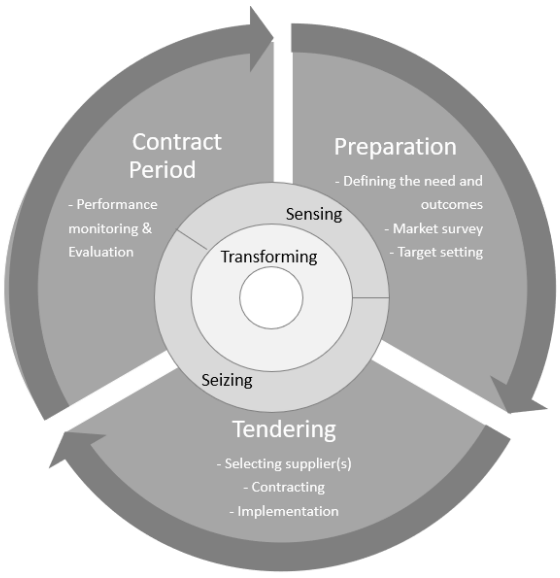

***Figure 10**. The hypothesis of dynamic capabilities in outcomes-based procurement.*

The figure presents how dynamic capabilities can hypothetically be combined with outcomes-based procurement. As the figure shows, sensing opportunities and recognizing risks occurs when operating with markets, suppliers, service providers, customers, end-users, and other stakeholders during the preparation and contract period. It is essential for outcomes-based procurement that potential opportunities are identified and captured in order to reach the best possible outcomes. Besides, shaping opportunities for the use of organizations, seizing, occurs when planning how to capture opportunities, creating tendering documentation and contract, and executing the contract with the service provider. Moreover, transformation can be linked to the project or organization management when assets and resources are flexibly reconfigured in order to capture value from the opportunities. Transforming can occur at any phase of the procurement process, or even at the strategic level before any outcomes-based procurement process is started.

Although Teece (2007) argues that it is difficult to develop and implement processes, practices and guidelines to support sensing, seizing and transforming, dynamic capabilities are strongly linked to the successful implementation of outcomes-based procurement in an organization over the long-term. According to Lee & Rha (2016), dynamic capabilities can create knowledge for innovations and development through organizational learning. In addition, visibility into supply markets and opportunities (sensing), agility to react to changes (seizing) and flexibility to reconfigure assets, strategies and operations (transforming) improve overall performance (Lee & Rha, 2016). All in all, dynamic capabilities are particularly important for renewal (Kump et al., 2019).

Hence, utilizing developing and advanced capabilities requires competence management from public organizations (Valtionvarainministeriö, 2020). According to a report by the Valtionvarainministeriö (2020), digitalization, sustainability and networking environment also require new skills and capabilities and therefore increase the training needs of public procurement. In addition, change management skills are needed in a changing and dynamic environment.

5. RESEARCH METHODOLOGY AND PROCESS

Research is the collection and interpretation of information to find out things in a systematic way in order to increase knowledge. In addition, research methodology is how the research should be done. Furthermore, a research method is the procedure used to gather and analyze data. (Saunders et al., 2019, p. 4-5).

According to Saunders et al. (2019, p. 131), the researcher needs to be aware of his or her own philosophical position and explore how to translate it into research practice. In this thesis the researcher's interpretivist philosophy is transformed into research practices that follow the researcher's desire to understand and explain the world around us, which is well supporting the objective of the research to provide new understanding as a contribution. Next, this chapter introduces the context of the research, presents and justifies chosen research approach and strategy, discusses empirical data gathering and analyzing method, and describes the research process.

5.1 Research context

This study is carried out as part of the Innoprocu research project. The Innoprocu project is a four-year research project funded by the Academy of Finland to advance the current understanding of the value and value-creating mechanisms of public procurement. In addition, Innoprocu is focusing on to study public procurement change from a price-centric mindset towards long-term value creation for society. Furthermore, outcomes-based procurement has been seen as one of the potential instruments for long-term value creation, rather than the traditional input-based resource purchasing. Therefore, the Innoprocu project also aims to increase understanding of how procurement capabilities can promote and support the use of outcomes-based procurement in the public sector.

The theoretical basis of Innoprocu is based on the operations and supply management literature, complemented by the resource-based view theory and its extensions, such as dynamic capabilities. The same theoretical basis is also used in this thesis. As a theoretical basis for this thesis, first activities, capabilities, outcomes and benefits of public procurement and procurement generally are studied. Then, a deeper dive into the theory of outcomes-based procurement is made by examining the requirements, challenges and capabilities needed to apply outcomes-based procurement.

The empirical part of the study is carried out by focusing on the experiences, opinions and views of people with experience of outcomes-based procurement in the public sector. As outcomes-based procurement in Finland seems to be strongly linked to the social and welfare service sector so far, the context of this study is also strongly social and welfare related. However, the infrastructure service area is also represented in the empirical data of the study.

5.2 Research approach and strategy

In order to address the purpose of the Innoprocu research project and to answer the research questions of the thesis, this study is conducted as a mono-method qualitative research. Qualitative research aims to gain an in-depth understanding of a situation, rather than often testing theory as quantitative research does (Carson et al., 2001, p. 68). According to Carson et al. (2001, p. 70), qualitative methods work better when you want to answer the questions "how" and "why", whereas quantitative methods should be used when you want to answer the questions "what" and "how many". In this thesis, the aim is to gain a better and deeper understanding of the requirements, challenges, and capabilities required to use outcomes-based procurement in the public sector and to use empirical experiences to enhance this understanding. Therefore, a qualitative research approach is considered appropriate for this study. In addition, according to Saunders et al. (2019, p. 179), many qualitative studies aim to enrich theory (Saunders et al., 2019, p. 179), which is also the case in this thesis.

After selecting the research approach and formulating the research questions, it is necessary to limit the research area and decide on a more detailed research strategy (Baxter & Jack, 2008). This study is limited to Finnish public organizations from a procurement perspective and the research strategy is chosen to support the objective of the thesis.

The research strategy can be called as a plan how the researcher implements to answer the research questions (Saunders et al., 2019, p. 189). The choice of an appropriate research strategy is guided by the research questions and objectives, how they link to the research approach, and practical boundaries such as the extent of existing knowledge, the amount of resources available and access to potential participants and other sources of data (Saunders, et al., 2019, p. 190).

When a qualitative research uses only one data collection technique, such as a semi-structured interview, it is called a mono-method qualitative research (Saunders et al.,

2019, p. 179). In addition, qualitative research is said to be a central strategy for exploring how interviewees experience and describe their world, activities, experiences and opinions (Brinkmann & Kvale, 2018, p. 9). Consequently, the research strategy chosen for this thesis is interview study.

Interview research is chosen as the research strategy for this thesis in order to gain access to the interviewees' own experiences of the phenomenon under study, as described in their own words. The experience-based research strategy has been considered a good approach when there is not yet much relevant research or practical application (Kallinen & Kinnunen, n.d.). On the other hand, interview research is well suited to gathering experiences without any activities related to the organizations under study.

5.3 Data gathering and analysis

Baxter & Jack (2008) have described research data gathering as gathering pieces to a puzzle, where each piece of data enhances and complements the researcher's understanding of the phenomenon. For the qualitative research purposes, Gummesson (1993) has identified five different data gathering methods such as existing materials (books, articles, reports etc.), questionnaire surveys, qualitative interviews, observation and action science. In this thesis, in addition to use of scientific articles, publications and transcripts of previous interviews as the existing material, the research interview is used as the data gathering method.

The research interview has been described as a purposeful conversation between two or more persons (Saunders et al., 2019, p. 434). According to Brinkmann & Kvale (2018, p.9), the interview is an effective way to provide information about a human situation. Furthermore, interviews can be conducted in a structured, semi-structured or unstructured manner, depending on how precisely it is considered necessary to follow pre-designed questions (Saunders et al., 2019, p. 437). Whereas in a structured interview the questions are strictly followed, in a semi-structured interview the topic is discussed around the theme with key questions (Saunders et al., 2019, p. 437). Moreover, unstructured interviews do not have questions, but instead have an informal discussion on the topic (Saunders et al., 2019, p. 438).

As the research is based on an interpretivist philosophy, followed a qualitative approach and the research strategy chosen is an interview study in organizations that already have experience of the phenomenon, the discussion in the interview is not wanted to be too

limited. On the other hand, it is desired that the interview is supported with key questions in order to ensure that all topics considered important are addressed in the interview. Consequently, a semi-structured interview is the clear choice for the interview structure of this exploratory study.

Once decisions are taken on the research approach, strategy and data gathering method, data gathering is started. The data gathering flow is illustrated in Figure 11.

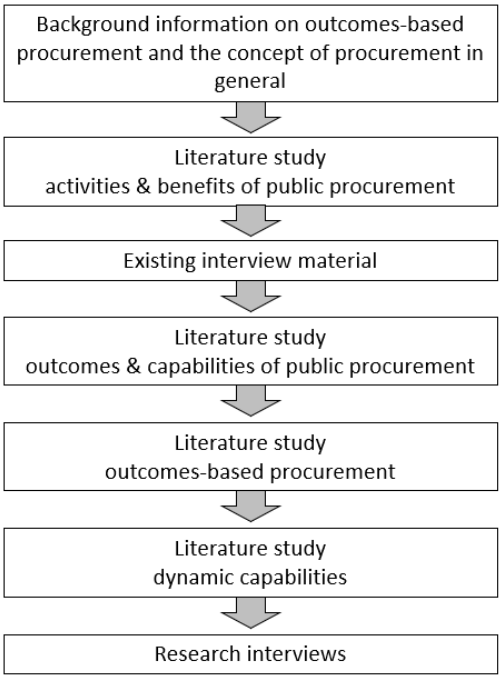

***Figure 11**. Data gathering flow.*

As the figure shows, the data gathering is started by collecting background information on the main concepts in order to decide what to study and draft a preliminary structure for the thesis. First, the literature study is related to the activities and benefits of public procurement. After a review of the activities and benefits of public procurement, the transcripts of a research interview carried out earlier in the Innoprocu project is examined. Thereafter, the outcomes and ordinary capabilities of public procurement is studied, which leads naturally to the next section, which examines outcomes-based procurement. During the study of outcomes-based procurement, it seems that ordinary skills and capabilities may not be enough to successfully implement outcomes-based procurement. Thus, a literature review on dynamic capabilities is included. Finally, a research interview is planned and executed. Additionally, the research interview questions are developed considering both the literature framework and the research questions.

As the figure 11 also shows, in addition to the literature, this thesis uses existing material from the first research interviews with public procurement organizations in the Innoprocu project, conducted by another researcher. However, it has been necessary to analyze the existing interview material in order to use it appropriately.

First, in processing the existing interview material, relevant information to background knowledge, understanding of the subject matter and the study is collected from this previous empirical study into an excel spreadsheet. Second, the data collected in the excel spreadsheet is used to explore the topic. Later, when formulating the results, this earlier interview material is revisited and the relevant and interesting findings in light of the research of this study are extracted and used in the results.

Previous research interviews are also used as a source of interview samples. A non-probability sampling of the thesis was carried out by selecting those organizations and interviewees that appeared to have the most previous experience of outcomes-based procurement. Limiting the interviewees to those with previous experience is justified in order to find out the user experiences and opinions related to the framework.

Hence, the interviewees are selected from the Finnish public organizations that are expected to have some experience with outcomes-based procurement. For further use, the interviewees are coded as presented in Table 3.

Table 3. Interviewee coding.

Interviewee code	Interviewee role	Organization	Sector	Time
A1	Development Director	Large municipality	Social and welfare services	February 2022
A2	Director	Large municipality	Social and welfare services	March 2022
A3	Procurement Manager	Large municipality	Social and welfare services	March 2022
A4	Manager	Large municipality	Infra services	March 2022
B1	Procurement Director	Regional welfare organization	Social and welfare services	March 2022
B2	Manager	Regional welfare organization	Social and welfare services	March 2022

As the table shows, six persons are interviewed for the study. Before the interviews, seven people were contacted, but one refused to be interviewed. After the first interview, it is felt that key questions should be compacted and reorganized. These compacted and reorganized interview questions are presented as part of the research interview frame in the Appendix 1 (in Finnish).

Interviewees are contacted by e-mail and interviews, and interviews are conducted as one-to-one sessions, lasting 1-1,5 hours, via Teams. Thereafter, the interviews are recorded and then transcribed for empirical data analysis.

Qualitative analysis can be defined as the process of capsulizing and refining data (Kallinen & Kinnunen, n.d.). In addition, the analytical examination of the data and the interpretation of the findings are essential in qualitative analysis (Kallinen & Kinnunen, n.d.). Furthermore, qualitative data is typically analyzed by processing and structuring the data according to the theoretical background of the study and the research questions (Anttila, 2014).

Qualitative content analysis is a suitable method for analyzing data when the focus is mainly on the content of the data, rather than, for example, linguistic expression (Kallinen & Kinnunen, n.d.). Qualitative content analysis aim to express the essence of content by dividing the data into categories and classes (Anttila, 2014). In addition, qualitative content analysis is characterized by the use of categorization and coding to organize and summarize the data into a clear format in order to draw conclusions (Kallinen & Kinnunen, n.d.). As this analysis method fits well with the research strategy of the thesis, the qualitative content analysis approach is followed in the analysis of the interview data in the thesis.

The qualitative analysis of the data is started by carefully reading the transcribed interview data. The first step in structuring the data is taken by noting the key findings from the transcripts. Key findings are initially considered to be a wide range of findings, such as recurrence, surprising deviance, relevance to the research questions and interesting comments. While an approach is planned to be strongly theory-driven categorization following the research questions, special attention is also paid to interesting stories and examples.

Following these finding notes, the relevant data is collected from the transcriptions into an excel spreadsheet. Collecting the data into excel is done first by categorizing the data according to the interview questions generated from the theoretical background, in order to find differences and similarities between the interviewees. Differences and similarities are identified by reading answers to one interview question at a time and color-coding similarities, as well as unique answers.

While this processing provides good information on the level of similar answers and gains understanding, it is soon realized that it is not yet very helpful in finding answers to the research questions. Therefore, the data is copied into a new excel tab and the data is reprocessed by rearranging the answers according to the research questions.

Once the answers are recategorized according to the research questions, the data is capsulized and the unnecessary data is discarded. However, in order not to lose the

information provided by the data, summarization should be done by gradually moving from concrete expressions towards more general concepts (Kallinen & Kinnunen, n.d.), which is also considered in this analysis. Therefore, the data is first organized according to the themes of the theory and then the interview responses are related to the coherent and divergent perceptions. Conclusions are started to be constructed as the data are processed during the analysis. Finally, however, the conclusions are structured on the basis of existing theory into a reportable form and the results are reported.

5.4 Research process

The research process is started in October 2021 with the selection of the topic, the research plan, and a pre-understanding of the context and phenomenon. Very soon after that, the existing material of the Innoprocu project is taken under research and the process progresses towards the study itself. The rough research process is illustrated in Figure 12.

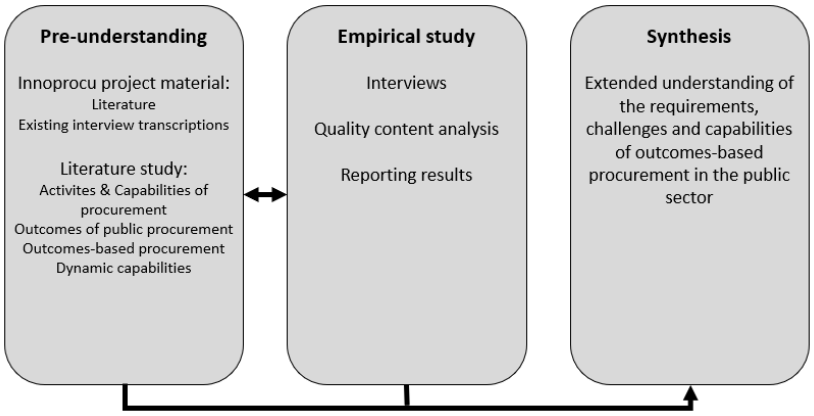

Figure 12. *A rough research process.*

As the figure shows, after reading the Innoprocu material, a pre-understanding is gained by examining the literature on procurement in general, public procurement and outcomes of public procurement. Following these frameworks, the concept of outcomes-based procurement is studied. In addition, the activities, benefits, requirements and challenges of outcomes-based procurement are explored. During the literature study, it is noted that ordinary capabilities may not be sufficient when talking about outcomes-based procurement, and the literature review is extended to dynamic capabilities and their relationship to outcomes-based procurement. Moreover, the theory chapters of the thesis is written as the literature study progresses.

Based on the findings of the literature study, a research interview is planned in January 2022, the interviewees are selected and an interview question frame is created. Then, interviews are conducted in February-March 2022. Next, qualitative content analysis is used to analyze the interview data. Finally, the results of the empirical study are written in April 2022.

Finally, after the literature review and empirical study, it is become time for synthesis. Thus, the requirements, challenges and necessary capabilities are brought together from both the theory and the empirical study in order to answer the research questions. At this phase, the discussion and conclusions are written. Finally, at the end of April / early May, the thesis is finalised and fine-tuned in order to ensure a flowing narrative.

6. RESULTS

6.1 Overview

This chapter presents the results derived from the interview data. First, in subsection 6.1, the benefits that emerged from both the previous material and the empirical part of the thesis are presented. After that, it is moved on to discuss only the results of the interview study in this thesis. Second, in subsection 6.2, perceptions of what is required to implement outcomes-based procurement and the related activities are discussed. Then, in subsection 6.3, the challenges of outcomes-based procurement as perceived by the interviewees are presented. At fourth, in subsection 6.4, the identified capabilities needed to implement outcomes-based procurement are discussed. Finally, in subsection 6.5, the major results in relation to the research questions are presented as a summary.

However, the first interesting findings from the research interviews is how outcomes as a word, and as concept, is understood. In Finnish, results and outcomes can be translated into the same word (“tulos”), which is a strongly economic vibe word, as described by one interviewee. On the other hand, when outcomes is a very familiar concept to someone, the same Finnish word “tulos” is understood much more widely. This difference is well reflected in the way it is commented by two interviewees:

> *“The word “tulos” is the same as euros in the big picture.” (B2)*

> *“What is “tulos"? It is often understood as an improvement in productivity or money or saving money. But “tulos” can be much more than that, it can be, for example, better services for customers, improved customer satisfaction, even changes in people's ability to function, a balance in the care of the long-term illnesses and so on.” (B1)*

As these comments show, the implementation of outcomes-based procurement must be accompanied by a simultaneous increase in awareness of the diversity of outcomes. Moreover, when talking about outcomes-based procurement, it is important to ensure that outcomes are understood in a broader sense than just in terms of money or lower costs. In this way, the specific benefits of the outcomes-based approach and the role of procurement in capturing them can also be expected to be clearer.

6.2 Benefits of outcomes-based procurement

This subsection presents first briefly the most relevant result of the previous Innoprocu research interview for this thesis, which is related to the benefits of public procurement. For this previous study, 17 interviews were conducted, focusing on 10 different procurement cases. However, these cases are not discussed in detail in this thesis, as these previous interviews were not conducted as part of this thesis. In addition, the content of the previous research interview has also focused on the value of public procurement and benefits of public procurement for the procuring organization in general. However, it is noteworthy that this previous research interview has not only focused on outcomes-based procurement, but has also discussed traditional approaches. Further, this subsection further presents the benefits that specially emerged in relation to outcomes-based procurement during this study.

In previous interview, interviewees have been asked about the benefits of public procurement. After summarizing the answers, these benefits are categorized into three groups according to where they are directed. As the result of the analysis, the grouped answers are presented in Table 4.

Table 4. The benefits of public procurement.

The benefits of public procurement		
Social benefits	Direct customer benefits	Financial benefits
equality, non-discrimination, anti-corruption	good and appropriate services for citizens	cost efficiency, cost effectiveness
social aspects, transparency, sustainability	speed in responding to service needs	value for tax money
localism aspects, revitalising the municipality	quality and flexibility of the services	open and transparent use of tax money
increasing knowledge, development of activities	customer satisfaction	benefits to customers by lower taxes/better services
pursuit of the social good	pursuit of well-being	pursuit of value for money

As the table shows, the benefits of public procurement are divided into social benefits, direct customer benefits and financial benefits. First, social benefits include benefits for the society such as law, transparency, social and local related aspects. In addition, interviewees see as the benefit of public procurement the development of activities and increasing knowledge in society and its organizations. Furthermore, the pursuit of all social benefits are grouped together under the common term "social good". Then, this is followed by direct customer benefits such appropriateness, quality, speed and flexibility of services, and customer satisfaction. Furthermore, the pursuit of all direct customer benefits are grouped together under the common term "well-being". Last, the financial

benefits are listed in terms of costs and money in the short-term and in the long-term. Therefore, all financial benefits are grouped together under the term “value for money”.

Just as outcomes-based procurement brings new dimensions to public procurement activities, the benefits of public procurement gain new dimensions when outcomes-based procurement is executed. Although, the above mentioned social good, well-being and value for money remain common benefits of public procurement also in case of outcomes-based procurement, additional benefits are identified in this study. In the empirical study of this thesis, the implementation of outcomes-based procurement is said to bring the following benefits:

- puts top-level strategy into practice,
- encourages customer focus,
- encourages better service delivery,
- enables inventive solutions,
- brings interest, motivation, challenge and opportunity for service providers to develop their business,
- a win-win opportunity for supplier and customer,
- clear procurement objectives,
- opportunity to move from reactive to proactive activities using analytics and analytical capabilities.

The above list shows that both customers and service providers are important when considering the benefits of public procurement. One can say that the benefits of outcomes-based procurement extend throughout the whole supply chain. These benefits are described in the answers, for example, as follows:

> *“I see it in the way that it encourages better services and more customer-oriented services and also brings interest and challenge for the provider. I also see it as a good thing if both the customer and the producer benefit from it.” (B1)*

> *“Outcomes-based procurement better enables these inventive solutions.” (A1)*

In addition to the benefits to the whole supply chain, the potential benefits to the buying organization are also considered important. Outcomes-based procurement forces to think about clear objectives for procurement and to find ways to measure effectiveness and achievement of objectives. Therefore, through more comprehensive measurement and accumulating data, an organization can be able to develop its activities towards more

proactive. The potential for a more proactive approach is for example reflected in the following answer:

> *“Analytics could accumulate that kind of background information and understanding, and we would already be a little bit ahead in analysing changes in services or markets or customers.” (A3)*

Outcomes-based procurement refers to the pursuit of long-term effectiveness, but elements of outcomes-based procurement can also be used to achieve short-term benefits. What matters is, how implementation of the procurement is aligned with the organization's strategy, and this is where outcomes-based procurement can also be useful. Interviewees have said, for example, that:

> *“Outcomes-based procurement can be a way to implement the changes we want to achieve through our strategy.” (B1)*

> *“When I link outcomes not only to effectiveness but also to productivity, we did it in such a way that we set impact targets separately and then financial targets separately, and that has also been quite guiding. We have had quite good experiences with this.” (A1)*

In general, the results of the interviews suggest that outcomes-based procurement can deliver some benefits that would be difficult to achieve with traditional resource-based procurement. However, some requirements for the implementation of outcomes-based procurement are identified.

6.3 Requirements of outcomes-based procurement

Outcomes-based procurement has some specific benefits, but the concept also has some requirements. The first requirement is that procurement must be suitable for an outcomes-based approach. When asked what kinds of procurement cases are suitable for outcomes-based procurement, all interviewees say that many different kinds of service procurements are suitable. However, it can be seen that there is some difference in answers depending on the interviewee's view of when procurement is considered to be an outcomes-based procurement.

Interviewees, who see outcomes-based procurement as always including innovativeness and co-creation, also perceive suitability in terms of the significance of the procurement and the clarity of the long-term purpose of the procurement. Such as:

> *“It (outcomes-based procurement) is often best suited to strategic, perhaps larger, procurements where there is a clear target for a change in operations or a clear target to improve the health of the population or something like that.” (B1)*

> *“The clearer the target of the procurement is, the better you can define the outcomes, the more suitable it (outcomes-based procurement) is.” (A2)*

> *“More for larger purchases, where the procuring organization has the opportunity to commit more resources than usual. Those where clear targets can be set for the services, and in a way that serves the strategic targets of the procuring organization. The most successful ones are perhaps those where there are many actors involved.” (A1)*

On the other hand, interviewees who also see the slightly lighter procurement cases as outcomes-based procurement, for example without co-creation, and think that the outcomes-based approach is mainly about money and the bonus-sanction model, do not mention long-term effectiveness or the size of the procurement.

However, even those interviewees who talk about outcomes-based procurement in its pure format, mention that procurement cases can contain individual elements of outcomes-based procurement, even if they are not considered as pure outcomes-based procurement cases. As can be seen, for example, in this answer:

> *“In every procurement case we have at least a some of this outcomes-based approach, so at least the target of the procurement must be defined.” (A3)*

The analysis of the research interview data does not provide a clear conclusion as to whether it can be said that there are different levels of outcomes-based procurement. However, it is clear that an outcomes-based approach and outcomes-based elements can also be used in procurement cases that do not fully meet the definition of outcomes-based procurement and do not, for example, include co-creation with service providers and/or customers.

As mentioned by interviewees, outcomes-based procurement is one way of implementing the strategy. On the other hand, the strategy gives direction and helps to prioritise actions. Hence, this generates requirement that both the organization's strategy and the organization's procurement strategy should give direction to the procurement organization towards outcomes-based procurement when approriate. Without top management support, it can be difficult, for example, to get the necessary resources

required for the procurement lifecycle. The importance of management support is described in one answer as follows:

> *"The commitment of top management has helped us to get it into our strategy that we talk about effective procurement. It took us a long time, but we managed to make it part of our city-level strategy, and make procurement a real part of our management. There has to be pretty strong support if you want to make those (outcomes-based procurement cases)." (A1)*

As outcomes-based procurement is time-consuming and laborious, adequate resources are an essential. So essential, that the issue of resources came up in all interviews. In addition to adequate resources, tools and practical guidance are needed to support the activities. As one interviewee describes what is needed:

> *"Clear instructions for practitioners on what it (outcomes-based procurement) is. It has to be part of their work, that they get orientation and training on how to do it. There is a need for an outcomes-based procurement tool. If there is at least some pictures, procurement cycles, or processes, you are always able to see that here are these steps, it helps the practical worker." (A1)*

Based on the analysis, it is clear that the approach and resources for implementing outcomes-based procurement need to be different from those for traditional procurement. At the stage when outcomes-based procurement is not yet part of the daily work of an organization, it seems clear that there is a need for interest and courage to try something new. On the other hand, a permissive culture helps in case of doing things for the first time or in case of a mistake. Interviewees describe it this way:

> *"We had a good group of people who were enthusiastic about it and we tried all sorts of things quite boldly." (A2)*

> *"I think you need some kind of culture, a permissive and venturing culture." (A3)*

Organizations that have decided to develop their organizational structure and processes to meet evolving needs, have implemented changes such as:

- set up a purchasing services team involved throughout the contract lifecycle
- utilizing different roles in the procurement team, such as project manager, contract management manager, contract lifecycle management and control team etc.
- co-developed and trained across organizational boundaries

- introduced new processes and guidelines, such as production method analysis and a “knowledge bank”.

In the analysis, this leads to the idea that the introduction of outcomes-based procurement of public services requires at least an examination of whether the existing organizational structure, processes and practices need to be developed or whether they are conducive to the implementation of a new approach.

When it is asked about roles needed in the procurement team in case of outcomes-based procurement, the answers are quite similar. According to the interviewees, the procurement team always need a substance person, a procurement specialist, a procurement lawyer and a financial person. In addition, an information and knowledge management person, a service design person, an innovative person and a facilitator(s) are also mentioned, especially in the context of outcomes-based procurement. In particular, the role of information and knowledge management is highlighted in many different contexts during the interviews. Moreover, in a large municipality, there is also the possibility of using the strategic procurement unit of the municipality as a sparring partner for this type of procurement cases.

Based on the interviews, a few actions emerge as the main process requirements for outcomes-based procurement. These process related requirements are illustrated as process steps in Figure 14.

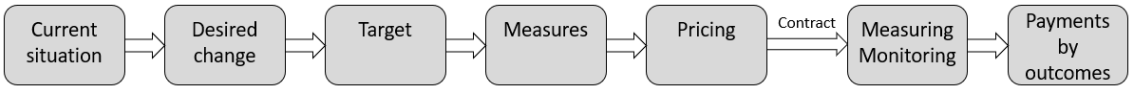

***Figure 11**. Outcomes-based specified process steps.*

As the figure shows, outcomes-based procurement requires an initial understanding of the current situation and the desired change. As one interviewee says:

> *“And then if you understand what you want to achieve, then you come to what the current situation is.” (B1)*

Once the desired change is understood, the target is set. The target is possible to set, for example, to have both impact targets and financial targets. However, when setting a target, it is good to look at the big picture and consider what other things the target may affect. As described in the answers about the target setting as follows:

“It is also possible to set the targets wrong, and ignore all the cause-and-effect relationships. If you set a target in this way, it may also have some undesirable effects.” (A1)

“There must be a great understanding of what we want and how to integrate it into the wholeness” (A4)

“We will better achieve the targets set for procurement and the targets set for service, if there are targets set and some measures linked to the monitoring of these targets.” (A3)

Once the target is clear, measures are established to measure the achievement of the target. Measures and their target levels are considered to play an important role in outcomes-based procurement. In addition, the target levels of the measures need to be realistic. As can be seen from the following answer:

“Then comes this target level thinking. And also, realism would be quite important. When we started to set targets for case x, the management very suddenly came up with the idea that customer satisfaction must be at the top. So, at first the targets were set at a utopian level, when they come from the imagination. But then we started to look at the reality and started to think about what is actually possible.” (B1)

Once the objectives and measures are clear, the plan is to link them to payments. As is well known, the theory of outcomes-based procurement is linked to the concept of payments by results. According to the interviewees, the bonus-sanction model is the most commonly used method of linking measures and payments together. In addition, as the service provided is often linked to the salaries of the service providers’ employees, it is seen as difficult to link all payments to outcomes. Thus, a so-called hybrid model is preferred, as described in the answer as follows:

“I see that in social services it can be quite challenging just to pay for outcomes. That is why, we now usually have a hybrid model, where there are the normal payments and then perhaps some service, or product, that is rewarded for good success. Then, perhaps, it works better with these bonus-sanction models. That kind of pure outcomes-based payment, we are probably still a little far from that, or that it does not necessarily fit so well.” (A3)

The part of the process associated with outcomes-based procurement, but difficult to place explicitly into the process chain, is co-creation. Co-creation does not yet seem to have been implemented on a large scale, but when it is used, it seems to allow a number of stakeholders to work together very early in the process. The analysis results that co-creation with both customers and service providers improves commitment of the parties involved and enriches outcomes. In addition, engaging in co-creation is considered as requiring a completely new “mode of the co-creation” from the buying organization. This new mode has even been described as a mental change. Moreover, co-creation is seen as a crucial requirement if the New Public Governance policy is to be implemented. As stated by the interviewee:

> *“Outcomes-based procurement without co-creation is then more like a New Public Management” (A1)*

Outcomes-based procurement is characterized by long or even indefinite contract periods. Therefore, several interviewees raise the need, or the requirement, for contracts. According to interviewees, contracts should include the possibility to flexibly modify contract clauses, e.g., in terms of measures or target levels, or even the service itself, if practice or customer needs change so much that clauses of the contract need to be updated or even removed during the contract period. As one interviewee says in relation to services:

> *“If there is the long contract, the service must also be able to respond to changes that may occur during the contract period.” (A4)*

After the contract is signed, regular monitoring and measurements are carried out over the contract lifecycle, and payments are made in accordance with the agreed pricing principles. In addition, the contract period steering and control teams have been considered a very good approach to follow-up. Furthermore, a regular and clear operating model creates a structure for cooperation. Interviewees describe the monitoring of the contract period, for example, as follows:

> *“In the case of outcomes-based procurement, performance is also monitored more closely during the contract period” (B2)*

> *“We have a steering and monitoring group as part of the procurement team, and there are monitoring coordinators. They work with the service providers (during the contract period).” (A1)*

In summary, the implementation of outcomes-based procurement requires processes and capabilities at both individual and organizational levels that are appropriate for outcomes-based procurement. On the one hand, the organization is required to have willingness to implement the New Public Governance policy and have the organizational structure, strategy, guidance and resources to support it. On the other hand, individuals are required to recognize opportunities, put outcomes-based procurement into practice, as well as have the willingness, capabilities and commitment to do so.

6.4 Challenges in applying outcomes-based procurement

One can say that the challenges of outcomes-based procurement also appear at the organizational and individual level. The first challenge at the organizational level is to create a framework for putting the policy into practice. As outcomes-based procurement requires a new kind of effort and input, previous organizational structure, tools, processes or capabilities may not support the new approach. In addition, outcomes-based procurement often involves resource issues. Moreover, even budgeting becomes more challenging if payment by results is introduced. Furthermore, it can be argued that unless a strategic and organizational foundations are in place, the capabilities and willingness of individuals may not be harnessed.

One special area that can be considered as important, but currently challenging, can be identified from many of the interviews – is the information and knowledge management. Information and knowledge management is identified as an important area of expertise, that emerge both in the preparation phase and during the contract period. Without the use of information and knowledge management, setting targets, defining measures, creating a payment system and measuring during the contract period can be a real challenge for the procurement organization. As described in the answers:

> *“information and knowledge management needs to go a little further” (A3)*

> *“..to be able to have more information and better control how procurement is carried out and how it might be best delivered (the service) in the future.” (B2)*

When the outcomes-based procurement process is not yet established in daily use, process challenges can be occurred at all phases; before, at the time of contract and during the contract period. In the preparation phase, setting targets and target levels, and how to identify target potential, is perceived as a challenge. As one interviewee describes the uncertainty surrounding the setting of target levels:

> *"Is it set correctly, is it good for us, good for the service provider? Is it expensive or is it optimal? And then if you commit to something like this, and then along the way you realise that we could actually get better, but now we are stuck with this." (A4)*

While understanding the current situation and setting targets is perceived as challenging, measurement and setting measures, is perceived as even more challenging. Measuring the achievement of results is mentioned as the most challenging step of the process by the interviewees. In particular, the measurement of perceived or preventive impacts is highlighted above others when describing the difficulty of measurement. As follows:

> *"Some kind of perceived or preventive impact, measuring it. It is terribly challenging." (A3)*

However, pricing is not much less challenging than measurement. Outcomes are often generated over a long time and pure payment by results can easily create such a financial challenge for a service provider that it is not even considered feasible to use such a method. However, methods that are slightly less strict than pure payment by results, such as bonus-sanction models, also have their own challenges, e.g. in setting bonus and sanction levels. Moreover, linking pricing to the success of service can even be perceived as so challenging that the pricing model is not used, as described by one interviewee:

> *"When it is written in the procurement contract that sanction models and incentive models can be used during the contract period, but then they are not used, it also illustrates the difficulty of linking the pricing to incentive." (B1)*

Because of the challenge of defining targets, measures and pricing, many interviewees recommend that the contract should be flexible. Flexibility in the contract can allow for adjustments to targets, measures or, for example, bonus levels during the contract period. However, building flexibility into public procurement contracts is not straightforward. In addition, implementing changes during the contract period in co-operation with the service providers can be challenging, and changes themselves can cause challenges in terms of monitoring and follow up. As follows:

> *"It should somehow be included in the contract that these targets can be changed, which creates its own challenges for monitoring, as long-term monitoring cannot be carried out." (A2)*

The monitoring and follow up during the contract period again faces the same measurement challenges as in the discussion on the preparation phase. On the other hand, sometimes the measurement challenges during the contract period are not related to the measurement itself, but more to the data available. As described in the answer:

> *"That is, if you do not get information during the contract period, there is no possibility of follow-up." (B2)*

Interestingly, co-creation is not mentioned as a challenge at any point in the interviews. However, some potential challenges related to service providers are identified. For example, not all service providers are familiar with outcomes-based procurement, or are able/willing to innovate.

In addition, a reluctance to try something new can also be challenge for a procurement organization. Interest and enthusiasm is still perceived as personalised. On the other hand, it is also often a question of a lack of expertise in outcomes-based procurement.

Furthermore, organizational support and individual capabilities for the challenges of executing outcomes-based procurement even seem to be a kind of "chicken or egg" paradox. If an organization does not have the individual capacity to implement outcomes-based procurement, it may not necessarily move towards outcomes-based procurement. On the other hand, if an organization's strategy and policies do not guide people towards outcomes-based procurement, individuals' ability to implement outcomes-based procurement will not develop.

6.5 Capabilities required in outcomes-based procurement

Implementing outcomes-based procurement requires the ordinary skills and capabilities, but also the specific skills and capabilities required by an outcomes-based approach. In addition, some aspects of dynamic capabilities are emerged from the interviews.

Substance expertise is needed in all service procurement cases. In addition to substance expertise, interviewees mention fairly similar common skills and capabilities needed in procurement. Those ordinary skills and capabilities, identified from the interview responses and structured on the basis of the literature, are summarized in Table 5.

Table 5. Ordinary skills and capabilities of public procurement.

Ordinary skills & capabilities of public procurement		
Technical	Strategic	Interpersonal
procurement skills	strategic thinking capabilities	negotiation skills
procurement law skills	market expertise capabilities	interaction skills
contract management capabilities	leadership skills	cooperation skills

As the table shows, first technical procurement skills and capabilities are needed. In the preparation phase of the procurement, procurement skills such as preparing tendering material, setting selection criteria, selecting and using the approriate procurement method etc. are used. In addition, expertise of procurement law is considered an important skill for the success of an organization. Moreover, especially during the contract period, contract management and interpretation capabilities are seen as relevant.

Second, the public procurement always includes strategic work. Procurement requires knowledge of what products and services are available on the market, and which suppliers can provide them. In addition, leading suppliers and teams can be seen as a necessary skill in public procurement. Moreover, strategic thinking capabilities are important in a procurement organization for example in managing procurement cycles, allocating resources, selecting the procurement method and further, making supplier related decisions.

Third, a range of interpersonal skills are needed in a procurement organization, both for internal and external interactions. Negotiation skills, interaction skills and cooperation skills are used both within the own organization and when working with suppliers and other stakeholders. Thus, importance of interaction skills and dialogue in supplier cooperation is emphasised by almost all interviewees.

When asked whether specific capabilities are needed for outcomes-based procurement, it become obvious that new or advanced skills and capabilities are needed. As described by one interviewee:

“Absolutely needed. And there are far too few of these people.” (A2)

The outcomes-based specific skills and capabilites from interviews are again divided into three different categories, as are the gategories of ordinary capabilities. These gategorized skills and capabilities are presented in Table 6.

Table 6. Outcomes-based specific skills and capabilities of public procurement.

Outcomes-based spesific skills & capabilities of public procurement		
Technical	Strategic	Interpersonal
target setting skills	innovative thinking capabilities	co-creation skills
measurement skills	lifecycle thinking capabilities	facilitation skills
monitoring skills	tool&practice creation skills	ability to work in the network
analytical skills	ability to learn from the best practices	resilience to change

As the table shows, the outcomes-based specific technical skills are strongly linked to the activities typical of outcomes-based procurement. Technical procurement skills related to target setting, measurement, monitoring and analytics are considered crucial for the success of outcomes-based procurement.

One of the concepts linked to outcomes-based procurement, and the necessary skills derived from it, is service design competences. However, the concept of service design is only mentioned in one interview. Therefore, it differs from the other interviews. However, the link between service design and co-creation and service innovation is interesting. Thus, service design competences can also be included in the outcomes-specific skills and capabilities.

In addition to outcomes-specific skills and capabilities, strategic skills and capabilities are extended from strategic thinking capabilities to innovative and lifecycle thinking capabilities. In addition, it also appears that team members need to have capability to create tools and practices for outcomes-based procurement. Moreover, the ability to learn from best practices, and also to share best practices, is considered important. Furthermore, the use and sharing of best practices is also said to help expand the implementation of outcomes-based procurement.

Information and knowledge management and leading by knowledge is widely emphasized in the interviews. One can say that information and knowledge management capabilities include all the techcnical skills listed in Table 6. On the other hand, leading by knowledge can be considered as a strategic capability that includes a wide range of strategic thinking. However information and knowledge management is classified, all

interviewees who have conducted outcomes-based procurement consider its role important and hope that information and knowledge management capabilities will grow in the future. As one interviewee describes the emphasis on the importance of information and knowledge management:

> *"Information and knowledge management is emphasised, because you can not just tender and then have an contract and that is it. You have to monitor the achievement of targets." (A1)*

In the supply network context, the concept of performance management has also been linked to strategic capabilities in procurement by one interviewee. As follows:

> *"It is a bit like managing our own operations, when we do target-oriented work, set development targets, so then we do a kind of performance management. And I think that in procurement it could be looked in such a broad way." (B1)*

Last, among the outcomes-specific skills and capabilities, interpersonal skills and capabilities are extended to include the ability to work in networks. In co-creation with suppliers and customers, outcomes-based procurement requires set of development skills, as well as facilitation skills. In addition, the ability to work in a network is also required, and is even more important if a multi-provider strategy is implemented. Furthermore, as outcomes-based procurement is new in public procurement, change resilience is seen as a necessary organizational capability.

The resilience to change and the ability to adapt to new approaches are discussed in many interviews. The reason for this can be seen in the comment:

> *"If you do not buy inputs, in social services, this is always something new." (A2)*

It is known, that not all people adapt quickly to new approaches. Thus, one can say that change management is needed in organizations. Change management is not an outcomes-based procurement related competence, but a necessary competence when implementing a new and complex approach. Therefore, change management skills also matter, as follows:

> *"Change management is very challenging and difficult. There are all sorts of technological solutions to all sorts of problems, but changing the way people work – that is the hard part." (A4)*

It must also be remembered that new skills and capabilities are also needed in the supply network. Service providers are involved in both innovation and target setting, and co-creation is often new to them too. As one interviewee summarized:

> *"Outcomes-based procurement as a process requires more skills, not only from purchasers but also from service providers" (A1)*

Based on the findings of the literature review, dynamic capabilities seems to be needed to implement outcomes-based procurement. Therefore, the interviews also ask about dynamic capabilities and the results discuss how these dynamic capabilities are perceived to be linked to outcomes-based procurement. The manifestation of dynamic capabilities in outcomes-based procurement is summarized in Table 7.

Table 7. The manifestation of dynamic capabilities in outcomes-based procurement.

The manifestation of dynamic capabilities in outcomes-based procurement		
Sensing	Seizing	Transforming
monitoring market opportunities	supplier and customer cooperation	making strategic choises
monitoring customer needs	cross-funtional collaboration	reconfiguring assets and competences
benchmarking the best practices	contract formulation	ensuring available tools & processes
analyzing previous data	contract interpretation	learning from experience

As the table shows, dynamic capabilities are divided into sensing, seizing, and transforming. First, sensing opportunities takes place both during the preparation phase and during the contract period. Based on the interviews, one can say that sensing opportunities and development needs can provide visibility not only into the supply markets but also into customer needs and the best practices in the sector. When asked where opportunities are sensed, one interviewee answers:

> *"When we talk about a product, a physical product, then we follow the market very closely and how products develop. Then again, services, they are perhaps more driven by the customer needs and our desire to develop the service." (A4)*

In the preparation phase, market monitoring, as well as various market studies and surveys, are seen as a good way of sensing the opportunities offered by the market. In addition, benchmarking, talking to other actors in the sector, and dialogue with stakeholders are mentioned as good ways of sensing. Moreover, opportunities and development needs from previous contract periods can be identified through analytics.

Furthermore, it is also considered necessary to sense opportunities that are not linked to a specific procurement case, as follows:

> *"There should be analysis and pro-activity and a bigger picture dialogue that is not linked to specific procurements." (A3)*

During the contract period, sensing seems to be mainly reflected in the customer base. Sensing of development needs is said to take place naturally through customer care and steering group activities. However, continuous cooperation with the service providers enables them to sense new opportunities during the contract period. As follows:

> *"We have regular provider meetings and then we do strategic work with these providers, have discussions and exchange ideas. It is kind of a continuous communication." (B1)*

Then, the seizing opportunities can be seen as taking place at all stages of the procurement process, at the preparation phase, at the tendering phase and during the contract period. In addition, seizing opportunities is strongly linked to communication with suppliers and within the procurement organization.

In the preparation phase, seizing can take place in collaboration with suppliers through co-creation. In addition, other cross-functional collaboration is also seen as important in the context of seizing. On the other hand, procurement preparation can be completed through an analysis of alternatives, taking into account new opportunities and development needs.

In the tendering phase, seizing is related to the way the contract is formulated. When the contract is designed to be flexible, it allows new opportunities to be identified and implemented also during the contract period.

In the contract period, seizing is much about how the contract is followed and interpreted. Failure to follow the terms of the contract will result in a lack in seizing. In addition, if flexibility is built into the contract, new opportunities can be identified and introduced during the contract period. However, sometimes new opportunities that emerge during the contract period can only be introduced in the next annual plan if the opportunity has a budgetary impact. As follows:

> *"We have to look at it in the next year's budget if it is an additional (financial) need. Or if it is possible to implement it in such a way that the existing resources are allocated differently, then there is an opportunity to act immediately. For example,*

through service restructuring, we have been able to make savings and we have not had to go looking for additional funding for something, but we have done it in a new way. So it is possible, but whenever additional resources are involved, it is always a matter of considering whether they can be included in the annual plan for the following year." (A1)

Last, it is not easy to link transforming to the different phases of procurement. In the context of outcomes-based procurement, transforming seems to be more about adapting practices to fit the purpose and building a culture that supports experimentation with new practices. On the other hand, transforming is about ensuring that the tools, processes and data are available to implement outcomes-based procurement. In addition, transforming is about making strategic choises, as follows:

"Not all procurements can be outcomes-based procurement. Strategic choices have to be made, and investments have to be made, where change needs to be made." (B1)

"This requires that you understand the importance of procurement and that the information and knowledge management is in a certain level. Of course, this requires more resources, and reflection and work. Of course, if there is not even some centralized procurement expertise, so it does not give a lot of time then, and there are no tools to start developing a new way." (A3)

However, transforming is also about reconfiguring resources. Reconfiguring resources can be linked to the procurement preparation phase and can take place both within the buying organization and the supplier, for example in terms of co-creation. In addition, motivating the buying organization, suppliers and even customers to co-create can be considered as part of the transforming in the preparation phase. Anyhow, cross-organizational transforming is challenging, such as:

"Cases that go beyond organizational boundaries, as it were outside of line organizations, require a lot of resources and discussions and joint work, they are always the most difficult." (A1)

Transforming during the contract period can be about learning from experience and mistakes. Based on experiences during the contract period, an agile reconfiguration of assets and competences may help ensure achieving the targets. Thus, the need for agile reconfiguration is described as follows:

> *“Market change, city needs change, customer needs change, and market changes are so difficult to predict.” (A2)*

Sensing, seizing and transforming in relation to the requirements and capabilities of outcomes-based procurement is interesting. Although sensing seems to be mainly done by individuals, the analysis does not conclude that sensing capability is an individual’s capability. Similarly, while sensing would seem to require procurement processes and transforming would seem to occur at the organizational level, neither process capability nor organizational capability can be straightforwardly concluded.

In summary, the execution of outcomes-based procurement requires ordinary, outcomes-based specific and dynamic capabilities. In the outcomes-based procurement cases, ordinary skills and capabilities are complemented by outcomes-specific skills and capabilities. The most important outcomes-based specific capabilities are related to information and knowledge management and working in networks. In addition, dynamic capabilities are needed to enable an outcomes-based approach to procurement.

6.6 Summary of the results

The main findings from the analysis of the research interview are summarized in this section. The summary is structured in such a way that the column on the left shows the themes of the research questions and the table shows how they manifest themselves in the procurement process, in the procurement organization and at the individual level. The above three categories are based on the researcher's perception of the content analysis of the research interviews. During the content analysis, the requirements, challenges and capabilities of outcomes-based procurement seemed to emerge systematically, either in relation to the procurement process, the procurement organisation or the individuals. In addition, the findings in the table are selected based on their importance, but also on their prevalence. Thus, the summary is presented in Table 8.

Table 8. Summary of the results.

	for the procurement process	for the procurement organization	for individuals
Requirements	specify desired change	enable permissive culture	be inspired
	define a clear target	support by strategy	have courage to try something new
	define clear measures	support by management	get the competence
	plan payment by outcomes	ensure resources	commit
	implement co-creation	create tools	collaborate with suppliers/customers
	measure and monitor	describe a process	recognize opportunities
	create a (flexible) contract		put opportunities into practice
Challenges	setting a target	putting policy into practice	identifying opportunities
	defining measures	ensuring capacity	identifying development needs
	creating payment mechanism	resourcing	utilizing available data
	ensuring information availability	budgeting	implementing outcomes-based procurement
	measuring (specially preventive impact)		
Capabilities	co-creation capabilities	development capabilities	information and knowledge management capabilities
	contract management capabilities	ability to learn from experiences	substance competence
	performance management capabilities	ability to ensure assets	technical procurement skills
	supplier management capabilities	change resilience	interpersonal skills
		ability to adapt new approachies	innovation & development capabilities

7. DISCUSSION AND CONCLUSIONS

7.1 Results in relation to the literature

The objective of the thesis was to explore the requirements, challenges, and capabilities of outcomes-based procurement in the public sector. To answer the research questions, first a literature study was conducted, followed by research interviews and analysis of the results. Next, the answers to the research questions are discussed one by one, in order to create a synthesis between theory and the interview research. Finally, the link between the use of dynamic capabilities in outcomes-based procurement that emerged during the study is presented.

Executing outcomes-based procurement in public procurement (RQ1)

In the context of public services, outcomes can be defined as the results of process outputs, depending on the quality of the outputs in terms of effectiveness (Jääskeläinen, 2010). In addition, in the context of outcomes-based procurement, outcomes can be defined as the results of outputs that have an impact on the well-being and lives of citizens (Bovaird & Davies, 2011). Relevant to the definition of the concept of outcomes is that outcomes include 'impact' that can be positive or negative (Boyne, 2002). Additionally, the interview study showed that outcomes can be qualitative or quantitative, short-term or long-term, subjective or objective, and also otherwise supportive of the theory. Moreover, interviewees noted that the impact can even be preventive.

According to the theory, with the reform of public administration, citizens and service providers have started to be seen as development partners of public organizations (Hakari, 2013) and co-creation networks, outcomes-based approaches and public-private partnerships have come alongside traditional approaches (Schneider, 2019). However, theoretical research on outcomes-based procurement is still quite limited, and empirical research confirms that its practical application is also not yet very widespread.

The implementation of new approaches typically requires management support, and outcomes-based procurement is no exception. In general, the procurement strategy and strategic guidelines must be connected to the strategy of the organization (Ellram & Carr, 1993). In addition, the utilization of outcomes-based procurement is, to a large extent, a strategic decision (Tirronen, 2020). However, theoretical research seems to focus more on the characteristics and implementation of outcomes-based procurement than on this

strategic foundation that an organization should have. Moreover, the empirical study even used the expression *"it took a long time to get these into the strategy of the city" (A1)* was used. Thus, the question arises, would more outcomes-based procurement be implemented if the initiative to implement it came from the management to the performing organization - not vice versa.

Another critical requirement that emerged during the study is related to the main perceived challenge of outcomes-based procurement. The main challenge, based on both theory and empirical evidence, is measuring the achievement of objectives and outcomes. Many studies describe measuring outcomes as the most obvious and biggest challenge (Tirronen, 2020; Valtionvarainministeriö, 2020; Valovirta et al., 2017; Seviaridis & Wynstra, 2015; Jääskeläinen & Laihonen, 2014; Willis & Bovaird, 2012). Similarly, all interviewees perceive measuring as a challenge. Thus, the literature review highlighted some studies that support the practice of measurement. However, the empirical study identified the need to enhance information and knowledge management skills and role as a requirement for the utilization of outcomes-based procurement. Furthermore, improving information and knowledge management may improve not only the access to data, but also its use.

According to the theory, the execution of outcomes-based procurement always includes activities related to defining what the targeted outcomes are, what the change or improvement aimed is, how to verify the achievement of the target, and how to pay for the outcomes (Tirronen, 2020). In addition, outcomes-based procurement always includes co-creation that Osbourne (2018) has defined as an interactive and dynamic process between public organization, service providers and citizens to create value for service users and organizations.

However, what the theory does not seem to include, is the partial application of outcomes-based procurement. Instead, in the literature, outcomes-based procurement is only implemented as such. Nevertheless, partial application emerged interestingly in the empirical study. As a contribution, Table 9 interprets a simplified partial application.

Table 9. Partial application of outcomes-based procurement.

	not at all / partially / fully applied outcomes-based procurement		
	traditional procurement	partial outcomes-based procurement	outcomes-based procurement
procured	transactions, outputs	transactions & outcomes	outcomes
target defined	no	yes	yes
co-creation	no	no	yes
payment by	transactions, outputs	transactions + bonus-sanction model	outcomes

In the “traditional procurement” column of the table, on the left, table shows the situation in the case of basic transaction-based public procurement. Then, in the “outcomes-based procurement” column on the right, table shows the situation in the case of pure outcomes-based procurement. In the middle, in the “partial outcomes-based procurement” column is the situation in the case when some elements of outcomes-based procurement are used to complement transaction-based procurement. This partially applied version was called a hybrid model in one of the interviews of the empirical study. The term “hybrid model” seems to describe well a combination of traditional and outcomes-based procurement.

Partially implemented outcomes-based procurement can be defined as traditional transaction-based procurement with added outcomes-based elements. These added elements can be, for example, more specific targets or a bonus model linked to customer satisfaction. However, payments are still mainly transaction-based. Moreover, in the case of partial outcomes-based procurement, co-creation does not occur. Thus, partially implemented outcomes-based procurement is not as time-consuming and laborious as pure outcomes-based procurement.

Regarding the activities required specifically for outcomes-based procurement, the empirical study enriched the understanding that emerged during the literature review. During the literature review, the understanding was built that defining measures and measurement are the most critical activities of outcomes-based procurement, and their importance did not diminish in the empirical study. However, after the empirical study, the understanding had increased that other definitions in the preparation phase, in addition to measures, are also critical. This understanding generated the conclusion that the process cycle should be presented at a more detailed level so that the critical activities are not over-generalized. To summarize, Figure 12 presents a broader picture of the outcomes-based specific activities in the three procurement phases.

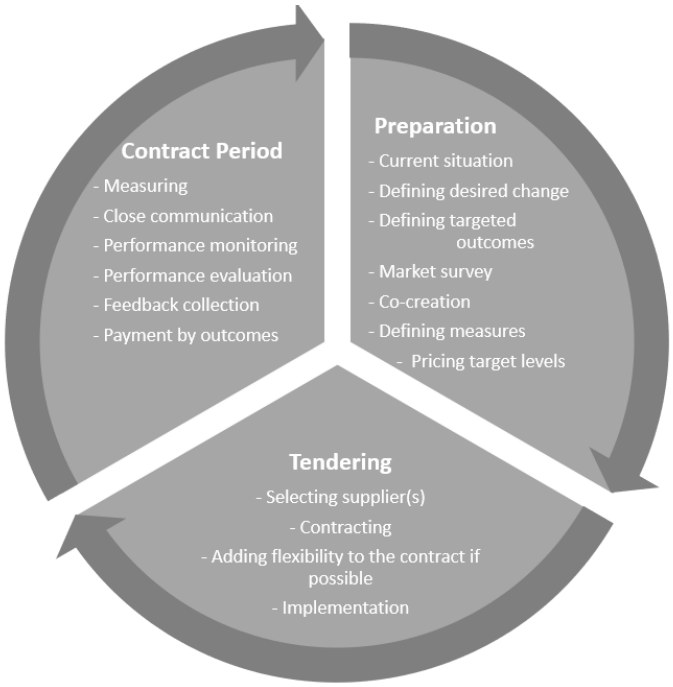

***Figure 12**. Outcomes-based specific procurement activities (modified from Tirronen et al., 2014).*

In the figure, the outcomes-based purchasing activities have been supplemented by the requirements highlighted in the empirical study and categorized according to the three phases of the procurement process used in the thesis. In the preparation phase, the empirical study emphasized the need to understand the current situation and the desired change, describe the desired outcomes, define the metrics and price the target levels. In addition, the preparation phase includes market survey and appropriate definitions will be made through co-creation with service providers or even customers.

The tendering phase of outcomes-based procurement was complemented in the empirical study only by an emphasis on building flexibility in contracts. In addition to helping to respond to possible changes, flexibility in contracts also reduces the risk of a definition failing in the preparation phase.

During the contract period, again the previous theoretically defined activities are still valid, but some elements highlighted in the empirical research have been added. Therefore, measuring, close communication with the providers and payment by outcomes are mentioned as outcomes-based procurement activities.

It is noteworthy that all these elements, which are also recognizable in the literature, were initially considered in the literature review of the thesis only as parts of the process,

which can be grouped under more general terms where appropriate. However, their emphasis in empirical research may reflect the challenges of these activities.

Challenges in applying outcomes-based procurement (RQ2)

The organizational and process challenges related to outcomes-based procurement are quite similar in theory and in empirical study. First, the challenge is to turn public policy objectives into practice and to invest in resources and capabilities (Storsjö & Kachali, 2017). In addition, implementing a new approach can create new challenges for budgeting (Rajala et al., 2018) and lack in capabilities of IT systems can appear (Valovirta et al., 2017). Similarly, as a result of empirical research, policy implementation, resourcing and budgeting are seen as challenges.

Second, the major process challenges based on the theories start with desired change that does not subsequently transfer into targets and measures, and end with measuring the achievement of these targets. (Valovirta et al., 2017). Empirical study identifies exactly the same challenges of describing the current situation, defining the desired change, setting a target and creating measures to measure the achievement of targets and outcomes. In addition, the empirical study highlights the lack of data from previous contract periods. Thus, identifying the current situation and setting a development target may sometimes even be impossible when the baseline is not known. However, it is possible that, if information and knowledge management in the public sector improves, better data will be available in the future, even for procurements that were not previously outcomes-based.

Third, both the literature review and the empirical study identify challenges related to individuals. Both technical and emotional challenges have been identified in theory. Technical challenges are related to the complex procedures and methods of outcomes-based procurement and the competences involved (Valtionvarainministeriö, 2020). In addition, uncertainty avoidance and fear of making mistakes are argued to be emotional challenges in implementing outcomes-based procurement (Valovirta et al., 2017). Again, the empirical study results to a similar conclusion that there are emotional and technical challenges in executing outcomes-based procurement in organizations. Thus, it seems that systematic training, clear processes and tools for implementation, support and sparring - and encouragement to try something new - would be necessary. However, it seems that if outcomes-based procurement or its partial implementation is not embedded in the daily activities of an organization, its use as a value for money provider risks fading.

Furthermore, weak dynamic capabilities of the organization have be seen limiting the potential of outcomes-based procurement (Meehan et al., 2017).

Capabilities required in applying outcomes-based procurement (RQ3)

The capabilities related to outcomes-based procurement can be divided into ordinary skills and capabilities, outcomes-specific skills and capabilities and dynamic capabilities. Ordinary skills and capabilities used in the daily operations of public organizations are divided into operative procurement skills, strategic business skills and interpersonal skills (Tassabehji & Moorhouse, 2008). Similarly, empirical research can identify technical operational skills, strategic skills and interpersonal skills that are needed to for all public procurement activities.

In addition to the above, the outcomes-based approach introduces more advanced skills and capabilities needed for outcomes-based procurement. Thus, it is argued that it is very important for an organization to have the ability to define needs and outcomes and transfer them into targets and measures (Koivisto, 2018; Tirronen et al., 2014). Based on the theory, analytical capabilities, information and knowledge management capabilities as well as project management capabilities takes place when performance is monitored and evaluated (Valtionvarainministeriö, 2020; Jääskeläinen & Laihonen, 2014). In addition, co-creation places new demands on partnership and interaction capabilities (Osbourne, 2018).

All theoretically necessary capabilities are also recognized in the results of empirical study. However, there may be a slight difference in focus. Empirical study highlights the information and knowledge management, and appreciates innovative and lifecycle thinking, change resilience, the ability to adapt to new approaches and technical skills to execute outcomes-based procurement.

In addition to outcomes-specific capabilities, dynamic capabilities and their link to the outcomes-based procurement are of interest. According to Teece et al. (1997), *"the dynamic capabilities are the firm's ability to integrate, build and reconfigure internal and external competencies to address the rapidly changing environments"*. In the procurement context, dynamic capabilities are used to gain visibility of supply markets and opportunities (sensing), agility to execute changes (seizing) and flexibility to reconfigure assets, strategies and operations (transforming) (Lee & Rha, 2016). In addition, dynamic capabilities are seen as particularly important for business renewal (Kump et al., 2019).

Already during the literature review, the hypothesis emerged that the use of dynamic capabilities is linked to the need for outcomes-based procurement. The existing literature identified that outcomes-based procurement requires visibility of opportunities and development potential, the ability to transfer opportunities into practice, and flexibility to reconfigure resources and processes where they do not already support outcomes-based activities. In addition, the empirical study identifies the need to sense opportunities and development potential from the market and customers, to put these opportunities and development potential into practice, and to reconfigure assets to support an outcomes-based approach. Therefore, the link with dynamic capabilities seems to exist. Thus, the contribution of the empirical study, the link between the use of dynamic capabilities and outcomes-based procurement is visualized. This visualized link is presented in Figure 13.

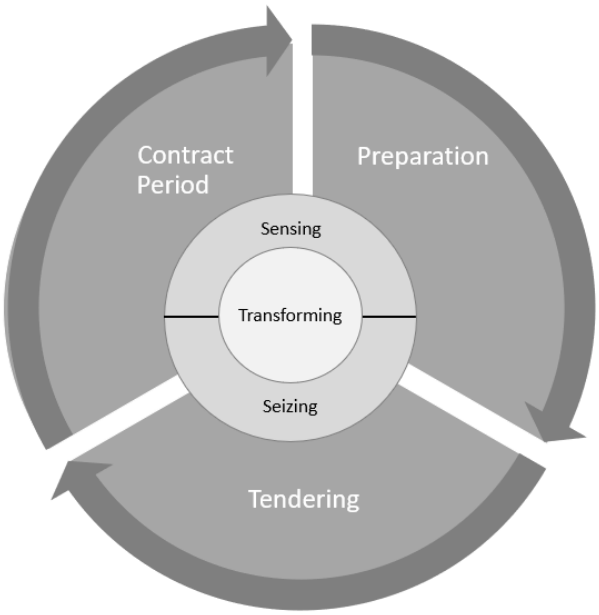

***Figure 13**. The use of dynamic capabilities in outcomes-based procurement.*

As the figure shows, sensing opportunities occurs during the preparation phase and during the contract period when operating with suppliers, service providers, customers, end users and/or other stakeholders. In addition, based on the results of the empirical study, sensing can also be executed through benchmarking and cooperating with other public organizations. Furthermore, sensing opportunities can be thought to be particularly important when finding new ways to improve outcomes and being open to innovative solutions, which is typical of outcomes-based procurement.

Then, seizing opportunities occurs when the sensed opportunities are put into practice. Therefore, seizing includes preparing how to capture benefits of opportunities, creating

the tendering documentation and contract, and executing and interpreting the contract. Thus, seizing occurs in all three phases of procurement.

Transforming can also occur at any phase of the procurement process, or even in the strategy creation before any outcomes-based procurement cases are executed. Based on the empirical study, in organizations implementing outcomes-based procurement, the organizational structure has been adapted to support the contract life cycle, management supports the implementation of outcomes-based procurement and concrete tools have been produced to support operational activities. Thus, the empirical findings support the hypothesis that there may be a need to reconfigure assets once an outcomes-based approach is implemented.

In summary, the complexity of outcomes-based procurement places high demands on capabilities. The implementation of outcomes-based procurement requires both ordinary procurement capabilities, outcomes-specific capabilities and dynamic capabilities.

7.2 Concluding remarks

According to Valovirta et al. (2017), there has been a growing interest in evolving procurement methods towards innovative and outcomes-based procurement. However, outcomes-based procurement has not yet been widely implemented and its potential has not often been exploited. Research on this topic was therefore considered necessary.

The purpose of this thesis was to study the requirements, challenges and capabilities related to outcomes-based procurement in the Finnish public sector. In addition, the aim of this exploratory study was to achieve a better and deeper understanding of the phenomenon. Therefore, the main research questions were formulated in order to achieve this objective. Furthermore, based on the research questions, a qualitative interview study was chosen as the research strategy, the study was conducted as a semi-structured interview and the data was analyzed using qualitative content analysis.

The theoretical basis was based on the operations and supply management literature, where the activities, benefits and capabilities of procurement were discussed. In addition, the theoretical base was complemented by theories of dynamic capabilities. Thus, at the end of the literature review, the cyclical process model of procurement (Monczka et al., 2002), and the dynamic capability view (Teece, 2007) emerged as important theories.

The main contribution of the study was an extended understanding of the requirements and challenges of outcomes-based procurement, and the related capabilities. The

outcomes-based procurement process seemed to require the definition of the desired change, a clear target, appropriate measures, incentive payment mechanism, and co-creation before the contract. After contract signing, it appeared that systematic monitoring and measurement, as well as payments by outcomes, were needed. In addition, it was also found that the organization needs a strategy, organizational structure, tools and resources to support the execution of outcomes-based procurement. Moreover, it was also found that individuals are required to be able to identify opportunities, put outcomes-based procurement into practice and have the willingness and ability to do so. Further, the results showed that the main challenges are mainly related to the execution of the above-mentioned requirements. Furthermore, the main capabilities identified were related to setting targets, measuring, collecting and using data, and working in networks. In addition, dynamic capabilities were considered as an important enabler for outcomes-based procurement.

7.3 Managerial implications

From a practical point of view, the aim of this thesis was to contribute to the future use of outcomes-based procurement to increase effectiveness of public procurement. By studying the practices, requirements and necessary capabilities of outcomes-based procurement, it is possible to increase the understanding of how outcomes-based procurement can be implemented in practice in public organizations. In addition, a wider use of outcomes-based procurement can increase the role of public procurement as an enabler of public administration objectives and strategies.

It has been found that executing outcomes-based procurement always includes activities related to defining what the targeted outcomes are, what change or improvement is aimed, how to verify the achievement of target, and how to pay for outcomes (Tirronen, 2020). In addition, outcomes-based procurement always includes co-creation (Osbourne, 2018). By complementing the literature with practical experiences and perceived challenges, research findings can increasingly be reflected in the context of public organizations when considering the potential of outcomes-based procurement.

When the requirements for outcomes-based procurement, such as the strategic foundation, processes, tools and necessary capabilities, are clearly presented, public procurement can be helped to develop its activities, competences and capabilities to support outcomes-based procurement. It was found that outcomes-based procurement requires a procurement organisation to have outcomes-specific skills in addition to the ordinary procurement skills. Moreover, the empirical study found that information and

knowledge management capabilities was identified as an important requirement. Furthermore, it also appeared that a procurement organisation may need dynamic capabilities to enable a outcomes-based approach to procurement.

A surprising finding of the study, partial outcomes-based procurement, is also interesting in its managerial implications. For example, in the case of partial outcomes-based procurement, co-creation is missing, which is potentially making the procurement process a little less time-consuming and laborious. In this thesis, partial outcomes-based procurement was defined as traditional transaction-based procurement with added outcomes-based elements, such as more specific targets or a bonus model linked to customer satisfaction. Thus, partial outcomes-based procurement may have practical application potential due to its lightness, compared to pure outcomes-based procurement. Moreover, partial application could work as a more convenient first step towards outcomes-based procurement.

7.4 Assessment of the research

The interview study worked well as a research strategy to increase understanding through practical experience. In addition, the comprehensive theoretical part at the beginning of the thesis was intended not only to present the framework to the reader, but also to justify the interview questions used to collect empirical data. Moreover, in order to increase the credibility of the analyses and interpretations, all methodological choices were presented and justified in the methodology section and described in detail. Furthermore, the results were reported transparently.

According to Anttila (2014), research validity refers to the ability of the chosen research method, data and process to investigate the phenomenon under study. In qualitative research, the relationship between theoretical conclusions and empirical data must be logical in order for the research to be valid (Anttila, 2014). In this thesis, the research methods were chosen to provide the best possible answers to the research questions. In addition, the interviewees were selected and the interview questions were carefully and appropriately designed to collect success stories and empirical views on the phenomenon. However, in a qualitative study with only a few interviewees, generalizability was not very good, but the results were useful for increasing the understanding and use of outcomes-based procurement.

Although qualitative research is primarily assessed on the basis of its validity, it is also necessary to assess the reliability of the study (Anttila, 2014). Reliability refers to the

ability of the research method, data gathering methods and analyzes to achieve reproducible results (Anttila, 2014). According to Baxter & Jack (2008), the researcher should compare empirical results with the facts of the published literature and existing data to fully understand the findings and thus make the results more reliable. In this thesis, the challenge of reproducibility in qualitative research was reduced by making the interview questions understandable and unambiguous, reporting the results in an observable way, and comparing the empirical results with the literature.

Overall, the validity and reliability of the study as a whole was ensured by a systematic and transparent description of how the study was conducted. In addition, the reporting of the results was complemented by citations from the interviewees in order to provide context for the interpretations.

7.5 Future research suggestions

As stated earlier, the purpose of this study was exploratory. In addition, the study aimed to contribute to a better and deeper understanding of the requirements, challenges and capabilities of outcomes-based procurement in the public sector. Thus, the study provides a broader understanding of the requirements, challenges and capabilities needed for outcomes-based procurement in the three procurement phases. However, the study is limited by the relatively small number of research interviews. Therefore, in order to validate the study, it would be beneficial to extend the research to other procurement contexts or other public procurement organizations.

From a theoretical point of view, it would be worth exploring outcomes-based specific capabilities in more detail. In addition, the implementation of outcomes-based procurement in general, and the interesting additional finding of the link between dynamic capabilities and specific phases of outcomes-based procurement are areas of further research interest due to the little research on them so far. Furthermore, from a theoretical point of view, it could be interesting to study how the strategies of municipalities and welfare regions consider the potential of outcomes-based procurement or effective procurement to realize the innovation potential of public procurement.

For practitioners, adding information and knowledge management to the context of outcomes-based procurement in the future research could be seen as useful. On several occasions, interviewees expressed the need to improve information and knowledge management capabilities and the use of information and knowledge management in public procurement, and in particular in outcomes-based procurement. In addition, co-

creation as a relatively new concept and exploring its practical applications could be useful for public organizations. Moreover, further research into the concept of co-creation could contribute to a wider implementation of outcomes-based procurement. Furthermore, a surprising additional finding, the execution of partial outcomes-based procurement, could be considered as a potential topic for further research.

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APPENDIX 1: FRAME OF THE RESEARCH INTERVIEW IN THE ORIGINAL LANGUAGE

Haastateltavan tausta

1. Kertoisitko aluksi hieman taustastasi, työkokemuksestasi julkisissa hankinnoissa ja työnkuvastasi?

Mahdollisuudet ja esteet

2. Onko tulosperusteisuus hankinnan toimintatapana tuttu?
3. Oletko ollut mukana hankinnassa, jossa tuottaja voi päättää toteutustavan, kunhan (tulos)tavoite täyttyy? Onko käytetty tuloksiin perustuvia kannustin-sanktio -malleja hankinnoissa?
    I. Jos kyllä, pystyisitkö antamaan esimerkin millaiset ovat toimivia tai ei-toimivia käytäntöjä?
4. Minkälaisiin hankintoihin tulosperusteisuus mielestäsi soveltuu parhaiten? Millainen tuote/palvelu/ratkaisu?
    I. minkälaisia hyötyjä tulosperusteisella hankinnalla voidaan saavuttaa?
5. Minkälaisilla mittareilla tuottajia seurataan? Onko niissä tuloksiin liittyviä elementtejä, kuten esim. asiakastyytyväisyysmittauksia?
6. Mikä / mitkä hankintamenettelyt ovat mielestäsi mahdollisia tulosperusteisessa hankinnassa?
    I. Onko jokin toisia paremmin soveltuva menettely?
7. Mikä on mielestäsi haasteellisinta tulosperusteisessa hankinnassa? Mikä estää sen käyttöönottoa?
8. Liittyykö tulosperusteisen hankinnan käyttöön mielestäsi riskejä? Millaisia?

9. Miten huomioitte tai tunnistatte asiakastarpeissa, toimittajamarkkinassa tai muussa toimintaympäristössä tapahtuvia muutoksia?
10. Kuinka viette edellä kuvatut muutokset tai muutostarpeet käytäntöön hankinnan eri vaiheissa?
11. Miten organisaationne kykenee mukautumaan muutostarpeisiin ja uudistamaan osaamistaan tarvittaessa?

Kyvykkyydet ja osaaminen

Maailman muuttuessa (ympäristöasiat, kestävä kehitys, digitalisaatio..) uusiakin osaamistarpeita saattaa tulla eteen. Seuraavissa kysymyksissä / vastauksissa voi miettiä sekä nykytilannetta että tulevaisuutta.

Siirrytään seuraavaksi tarkastelemaan tarkemmin sitä, minkälaista osaamista tarvitsisitte, jos organisaationne olisi tekemässä tulosperusteista hankintaa:

12. Millaisia tehtäviä ja/tai osaamista tarvitaan ennen tulosperusteisen tarjouspyynnön julkaisua?
    I. Esim. hankinnan tarjouspyynnön määrittelyssä, mahdollisten tuottajien kartoituksessa, hankintamenettelyn valinnassa jne.
    II. Liittyykö tarpeiden tunnistamiseen ja tarjouspyynnön laatimiseen jotain erityistä nimenomaan tulosperusteisessa hankinnassa?
13. Millaisia tehtäviä ja/tai osaamista tarvitaan tarjousten vertailussa ja päätöksenteossa?
    I. Esim. kun laaditaan sopimus ja käynnistetään yhteistyö.
    II. Tarvitaanko jotain erilaista osaamista tai erilaisia tehtäviä verrattuna tavalliseen kilpailutukseen?
14. Millaisia tehtäviä ja/tai osaamista tarvitaan sopimuskaudella?
    I. Esim. kun mitataan suoriutumista tai seurataan tavoitteen täyttymistä?
    II. Liittyykö toimittajasuhteen hallintaan jotain erilaista kuin suoriteperusteisessa hankinnassa?

15. Mikä on mielestäsi kaikkein tärkeintä osaamista tulosperusteisessa hankinnassa?
    I. Tarvittaisiinko jotain erityistä osaamista, jotta tulosperusteisuuden käyttäminen voisi lisääntyä?
16. Miten hankintatiimi tulisi muodostaa? Keitä siihen kannattaisi ottaa mukaan?
17. Onko jotain muuta, joka edistäisi tulosperusteisen hankinnan käyttämistä laajemmin julkisissa hankinnoissa?