ABSTRACT

Kalle Iloranta: Is a Risk Management a Relevant Factor in Public Procurement

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The Finnish public sector is an extensive procurer on a Finnish scale. In the public sector context, the legality of the procurements and securing services to citizens, whereas the efficiency of the public fund usage is essential targets. The potentiality of procurement as a strategic instrument through government or municipalities and cities’ operational units has not been identified, while the fast-growing societal change raises new risks. Overall, the public procurement process is complex, which may lead to the realisation of risks due to a simple error. These risk may concern the procurement process itself or risks to the public organisation, procurement object or even citizens or the state. There is a legal obligation for risk management in public organisations. However, there is a shortcoming in outsourcing services, and contractual risk management procedures, lack of knowledge of risk management and proper procedures, together with project-based employees, and resource scarcity are significant challenges.

This research aims to study the public organisation procurement manuals and guides, describe the risk management of procurements and their necessity. This research aims to gain a comprehensive understanding of the risk management perspective that these guides and manuals contain for this topic and is the risk management presented as a relevant factor in the procurement process. This study is also expected to help to provide better guidance for public procurement risk management.

This research is a qualitative research conducted by a constructivist grounded theory approach. The constructivist grounded theory approach is a straightforward interpretative research approach with flexible guidelines, focusing on the theory or phenomena. Researched material are the procurement manuals or guides from different public sector operators, governmental level, cities and municipalities from public sources due to the public nature of thesis research. The data gathering and formatting procedure for the analysis followed the constructivist grounded theory approach, with coding data with ad hoc codes supported by the theoretical framework through the steps of initial coding, creating concepts and simple categories through coding and wrote memos by comparing them with similar ones, followed by focused coding, integrating codes to develop core categories that are the basis of phenomenon findings.

The findings of this research are the six core categories that are perspectives towards public procurement risk management. These categories are “A comprehensive description of procurement risk management” that set such guidance that the connection should be apparent to those who are not risk management experts. “Risk management is recognised as a key part of procurements”; suggesting that risk management is a crucial part of procurement or that risk management is a continuing process ongoing with public procurement. No description or guidance included. “Recognised risk management”; however, the link between procurement management and risk management as a key part of procurements is not recognised or set clearly in this category. “Supplier as a risk” category considers that possible risks are supplier based issues that may complicate the contract’s implementation between the supplier and a public organisation. “Contract as a risk” category perspective is that the procurement risks are contract-based, meaning that the contract made with the supplier is not desirable, binding the organisation to an unfavourable contract. The collected data also included manuals with “no recognised connection to risk management”, which are handled as the sixth category.

The relevancy of risk management in public procurements is unquestioned through 13 procurement manuals and guides. There is a total lack of risk management as a relevant factor in 6 of the researched manuals. The rest of the material has a shortage in risk management descriptions, or descriptions are interpretive. The research suggests that the public procurement manuals should provide more comprehensive and coherent coverage of all key phases of the procurement process and its complexity.

Keywords: Public Procurement, Risk Management

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Key terms

Risk is an effect of uncertainty on objectives (International Organization for Standardization, 2018).

Risk management is the coordinated activities conducted to direct and control an organisation concerning risk (International Organization for Standardization, 2018).

Public procurement is goods, services, or works procured from outside the organisation by the state, government, municipalities, and associations of municipalities, state-owned corporations, parishes, and other contracting entities as defined in procurement legislation (Ministry of Finance, 2020a).

A supplier is an organisation or a company that produces the subject product or service, which is purchased via the public procurement process.

Supply management is a broad term used to describe the whole systematic management process that includes the knowledge and management of supply markets, survey new supply sources, supplier development and centralization, and cooperative and innovative operations. Supply management is the strategic sourcing process and the operative procurement process of supplying an organisation with external sources' materials and services. (Iloranta & Pajunen-Muhonen, 2018; Schiele, 2019)

A contract is a written agreement between two or more parties that legally obligates them to perform the agreed operation. This research's contract definition is the agreement between the supplier of goods or services and the purchasing public administration operator. By contract, the procurement and possible responsibilities, restrictions, and obligations are agreed upon between them.

The definition of a contracting entity in this research is either part of the procurement contract.
1 INTRODUCTION

The Finnish public sector is an enormous procurer in Finland with an annual value of purchases of approximately 35 billion euros. These public procurements are usually associated with procurement-related regulation, especially with the tendering process regulation. This association is a heavy burden that the regulation creates to the procurement process, which is not a productive perspective, as the core of the public procurements should be related to good procurement and recourses management. (Iloranta & Pajunen-Muhonen, 2018)

The status of the strategic management of public procurement is diverse in Finland. Procurements' real potential as a strategic instrument may not be fully identified in government or municipalities and cities' operational units today. This issue leads to a situation where procurements mainly respond to other activities' needs, while most of the time spent on procurement is spent on routine activities. The actual value of procurements as an organisation's strategic function is still relatively low, and visibility to other public administration units is insufficient. (Ministry of Finance, 2020c)

Due to the social changes, the role of procurements in public administration has been raised to one of Prime Minister Sanna Marin's government program's central positions. The government program includes several sections aiming for the development of public procurements. From a social perspective, public procurements are significant and can encourage the government’s ecological, social and economic goals. (Ministry of Finance, 2020c)

The Ministry of Finance also argues that the amount of unpredictable risks increases. Also, the risks of ever-growing and faster societal change increase procurement-related risks. Therefore, preparedness and risk management must be considered as an essential part of the public procurement agreements. (Ministry of Finance, 2020c) Today the risk management perspective has increasingly become a central part of organisation management. This is due to the external requirements for risk management and the organisation's internal need to structure, quantify, and link various risks. Thus, risk management is part of strategic planning and day-to-day operational management, ensuring the organisation's business success (Kupi, Keränen, & Lanne, 2009).

In private sector companies, business and profit-making are always connected with taking risks, and risk management has focused on protecting the company's value and ensuring future profit sources. The organisation’s risk management development aims to provide results and transparency in achieving its strategic goals and supporting decision-making, for example, in new products, competitors, sales growth, cost savings, and investment. (Kuusela & Ollikainen, 2005) In the public
sector context, profitable activity is not a similar target as in private organisations. However, cost
efficiency and securing the provided services are critical targets. The public sector also has an
ethical and legal obligation to provide services to its citizens and the efficient use of public funds.

1.1 RESEARCH BACKGROUND

This study's background is a heritage of my own experiences in my current and previous roles,
where I have worked with procurements, risk management and creating guidelines. According to
Koskinen et al. (2018), there is a lack of risk awareness skills in society, to which a reason is that
the risk awareness skills are included only in some of the curriculums of educational institutions.
Also, the Ministry of Finance published a situational picture of public procurement in Finland
(2020c), where the risk management of public procurement and the development needs of public
services require multidisciplinary procurement expertise, and this lack of procurement expertise is
reflected as a failed procurement and problems in the contractors' services. This gap is also
acknowledged by Kalvet & Lember (2010), who researched the state of risk management in public
procurement for innovations. According to their research, most of the cities were involved in risk
identification, while the risk management requirements were fulfilled with mixed contracting strate-
gies rather than comprehensive risk management methods. Oulasvirta (2017) suggest that there are
shortcomings in municipal risk management practices when compared to normative risk
management models.

In addition to the previous, there is a legal basis for risk management in the public procurement
scope. The public sector legislative obligations, such as the local government act section 39, set the
municipal government responsible for taking care of the municipals' internal control and organising
risk management (410/2015). Furthermore, according to the state budget act section 24b,
government organisations must make appropriate internal control arrangements for their own
activities and those that they are responsible for (423/1988).

1.2 RESEARCH QUESTIONS AND GOALS

There is a legal claim for risk management in public procurements. However, there is a shortcoming
of risk management in public organisations in the Finnish context, especially at outsourcing services
and contractual risks (Oulasvirta, 2017). Alternatively, there is no clear picture or understanding of
risk management and procedures (Koskinen et al., 2018). Especially in public projects in the
Finnish context, project-based employees and resource scarcity are significant procurement
knowledge challenges (Kurvinen, 2016). Therefore, the research idea is to study whether risk management's involvement with public procurements is somehow vaguely, indirectly or in a way that requires much interpretation in the public procurement manuals and guides. This research aims to gain a holistic understanding of the level of risk management instructions and the knowledge that the current public organisation's procurement guidelines and manuals contain for this topic. This study is expected to help to provide better guidance for public procurement risk management. To understand the perspective, this research seeks to answer the following research questions:

- From what perspective procurement manuals describes risk management?
- Is risk management a relevant factor in procurement, according to the manuals?

The material and the literature that this research focuses on are such materials that regulate, guide, or support the employees working with public procurements. The main research focus is limited to the state and municipal level procurement manuals, guides, strategies and regulative. However, it also includes published literature used for education in university courses. All research literature and documents used in this research are from public sources since the thesis's public nature.

1.3 Research Structure and Selected Methodology

This thesis's overall structure and formatting are based on the Tampere University faculty of management and business, administrative sciences guidelines. In the introduction chapter, the subject is presented and defined as well as the research questions. Chapter two presents the study's theoretical framework, and chapter three introduces the used research method and analysis, followed by chapter four, representing the study's analysis and results. The last chapter five sums up the results of this study.

This study is based on a qualitative research methodology, and the research approach used is grounded theory. The grounded theory seeks to explain the basis of the phenomenon and form a new theory. However, the grounded theory can also explain specific phenomena (Corbin, 2017). Grounded theory is a data-driven method in which data collection can take place in many different ways. In the grounded theory, the theory or phenomena construction comes to an end when the collected information no longer produces anything new but reaches its saturation point. (Saaranen-Kauppinen & Puusniekka, 2009) This study's grounded theory approach is a constructivist grounded theory approach by Kathy Charmaz, a straightforward interpretative qualitative research approach with flexible guidelines, focusing on the theory or phenomena that depend on the researcher's view
of the context (Creswell, 2007), even though the original grounded theory developer, Barney Glaser (2007), argues that the constructivist approach is a misnomer. While the grounded theory is a debated methodology and has several approaches, all base processes are similar in every common known grounded theory approach. (Goulding, 2002; Singh & Estefan, 2018)

According to Locke (2012), the Grounded theory is well suited in organisational researches, where the contexts are complex. The selected approach was chosen to provide a comprehensive picture of the guidelines' risk management coverage using multiple sources (Muhaiyuddin, Bakar, & Hussin, 2016).

1.4 PREVIOUS RESEARCH

There are several studies from public procurements and risk management in administrative sciences, both international and in Finland. Risk management has been studied in financial sciences since World War II (Dionne, 2013) and later in administrative sciences, while public procurement studies have increased since the ’80s. Overall, organisation risk management is a quite popular topic for theses today, from both the public sector and private business perspectives.

Kupi, Keränen & Lanne (2009) focused their research on integrating risk management into strategic planning in small and mid-sized enterprises. Moreover, there is research from public sector risk management; for example, Esenberg studied Risk management in the public sector (1992) and Nieminen (2007) Municipal organisation risk management.

There are also several public procurement-related pieces of research made in Finland; for example, Manninen (2016) studied the Competence in the public procurement process and Kurvinen (2016) Perspectives on innovative public procurement management. Along with these, there are several pieces of research areas that are close to the selected topic. For example, Sisko Niiranen (2011) researched procurement risk and internal control in the procurement unit and Hansel Oy, a state-owned procurement organization. Her research focused on finding out the preliminary assumptions based on the literature about what procurement risks and risk management can be and the target entities' experts by interviewing how the target entities' internal control deals with procurement risks. Another interesting research is done by Heli Riutto (2010), Risk management in the procurement of expert services, focusing on municipalities' medical services. The thesis seeks answers to research questions about the risks of procuring medical procurement services and monitoring contracts and how they can be managed or prevented.
Factors explaining the state of municipal risk management is research by Lasse Oulasvirta (2017), studying wide coverage of Finnish municipalities. The research was done after the risk management and internal control obligations in the Municipal Act. The research results indicate that there are still shortcomings in municipal risk management practices compared to normative guidelines of risk management, such as the Coso-erm model (Oulasvirta, 2017).

Manea & Popa (2010) has researched Risk management in the public procurement process from a European Union member state perspective, and more precisely, from a transparency and risk assessment perspective. According to Manea & Popa (2010), risks may realize either because of a simple error in the procurement process or a deliberate deviation from the existing legal regulations. Therefore, there is a necessity for implementing specific risk-avoiding measures and measures aiming to reduce their adverse effects in case of their occurrence. Manea & Popa (2010) suggest several activities be taken into account in order to avoid these risk to realize, from which the couple can be seen as referring to the procurement guidelines. The suggested activities are: “securing the visibility of rules, opportunities, internal procedures, and of results” and ”limiting error occurrence throughout the public procurement process” (Manea & Popa, 2010). Kalvet & Lember (2010) researched risk management in public procurement for innovations in the Baltic Sea and the Nordic area. Kalvet & Lember (2010) suggest that most parts of the cities actively involved in risk identification while the risks were primarily met, preferably with mixed contract strategies than comprehensive risk management.

Various research focuses on public procurement risk management or research focused on the key factors affecting public procurement. Sharma, Sengupta & Panja (2019) research: Mapping Corruption Risks in Public Procurements study found that several combinations of risk elements were identified that could lead to unfair contracts. The research also suggests practical insights to improve the procurement process and corruption control of the organisation. Sebastian & Davidson (2011) focused on the root causes of contract administration problems. They suggest that by identifying the probable root causes of contract administration issues, the procurement professionals can develop impact minimise or elimination strategies (Sebastian & Davison, 2011). According to Sebastian & Davidson (2011), risk management practices must be integrated into decision-making processes to able a more affordable government.

One of the most exciting research that is closely related to the selected topic is Kristiina Halonen’s (2013) doctoral dissertation, Always a little behind – relying on chance, concerning people risk
management as a strategic management tool carried out by Finnish organisations and occupational health care. The key in Halonen’s dissertation is to demonstrate that the holistic people risk management approach of Finnish organisations is still in its very beginnings. As people risk management is seen in Halonen’s research as a critical part of holistic risk management, and as a vital part of an organisation's strategic management, it has similarities to the perspective of this research, where procurement risk management is also a key part of holistic organisational risk management.
2 THEORETICAL FRAMEWORK

The chapter defines the relevant concepts to this study. These concepts are public procurement, risk management, risk management and legislative obligations to public procurements. These theoretical concepts are presented only to the extent that it is necessary to understand their connection and affects public procurements and public procurement risk management. The risk management and the risk management guidelines ISO 31000 and COSO ERM are commonly used or applied in state and municipal governance (Helsingin Kaupunki, 2019; Ministry of Finance, 2020b; Niiranen, 2011). These are presented as a public actor perspective without an opinion to the concepts themselves. The presented legislative are the ones that affect all or most of the public procurements. The perspective to public procurements in this thesis is more holistic, setting more weight to the risk management perspective than the legislative limitations. The holistic perspective means that there is no separation of public procurements due to the procurement act or other legislation.

2.1 RISK AND RISK MANAGEMENT

The term risk has several definitions in the literature. The risk as a concept is a duplex; on the one hand, it involves opportunity, and on the other hand, it involves danger. In everyday language, the risk is a term used to describe the danger or uncertainty associated with the possibility of an accident or other adverse event or series of events. These unwanted events can affect people, companies and communities, or their values or capital they own. Risk's realisation losses can be monetary value, environmental value, social value or any other value. (Kuusela & Ollikainen, 2005) Usually, we talk about risk when a decision or choice has to be made between different alternative conditions, the consequences of which are uncertain. When talking about risks, the focus is usually on the negative consequences or outcomes of the choices, such as cases where the desired outcome is not achieved. (Krause, 2006) In an organisational view, any event or situation that may affect the organisation's goals can be described as a risk (Hopkin, 2018).

As a concept, risk management covers the coordinated activity that offers a company or organisation an integrated approach to the evaluation, control and monitor the risks to the company or organisation (Hopkin, 2018). The risk management measures aim to prevent the events or situation that affect an organisation’s goals from occurring. The purpose of the risk management measures is to prepare for a possible situation in which an undesirable event could occur and ensure continuity of operation. (Hopkin, 2018) Once an undesirable event has occurred, there may still be opportunities to reduce the event's consequences, but the most effective way is to prevent or be
prepared in advance. The risk management process can be considered to consist of a process continuum; risk assessment, decision making, risk treatment and risk monitoring.

Furthermore, according to the International Organization for Standardization (2018), risk management aims to support the organisation in integrating risk management into key activities and functions. The effectiveness depends on the integration into the organisation governance and decision making. Effective risk management requires support from all stakeholders, especially from top management.

**Risk management standards and guidelines**

The fundamental principle in risk management is that despite the realisation of the risks, the organisation has to be able to continue operations in every circumstance. Effective functional risk management process is a continuous step-by-step process. Traditionally, risk management was a process by which an organisation could reduce hazard threats and the hazards' costs. This traditional risk management process was a narrow process apart from the organisation main functions. Modern risk management is a vital part of organisation management and strategy. (Kuusela & Ollikainen, 2005)

Today organisations risk management usually follows selected risk management standard or a combination of standards (Ilmonen, Kallio, Koskinen, & Rajamäki, 2016). There are several standards on the market, but the overall approach to risk management is very similar in all of these. Previously one of the most established standards was the Australian Standard AS 4360 from 2004, but nowadays, it is superseded by the International Organization for Standardization (ISO) standard 31000, which was established in 2009 and updated in 2018. (Hopkin, 2018; Ilmonen et al., 2016) A framework produced by the Committee of Sponsoring Organizations of the Treadway Committee, COSO ERM, is also a widely used risk management framework. The COSO ERM framework was established in 2004 and updated in 2017. (Committee of Sponsoring Organizations of the Treadway Commission, 2017) According to Hopkin (2018), it is essential to separate the risk management standard and a risk management framework as a concept. A risk management standard sets out the overall approach to successful risk management, including a description of the risk management process and the supporting framework. However, the risk management framework has two different aspects. First, it must support the risk management process. Second, it must ensure that the process's outputs are communicated into the organization and achieve the organisation's anticipated benefits. If the organisation follows the selected standard structure, it must have a framework that includes
the structure, responsibilities, administration, reporting, and communication components of risk management. All of the procedures must be recorded in a risk management manual. (Hopkin, 2018)

In this research, the relevant standards are the ISO31000, the COSO ERM model, and the Institute of Risk Management (IRM). The IRMmodel is relevant to represent the risk management process's development during the last twenty years, while the ISO31000 is relevant since most of the public organisations' risk management are based on it. In contrast, the COSO ERM model is relevant to display the integration of risk management and organisation management. The relevant standards are featured in Table 1. The COSO ERM framework key features are described later in subchapter 2.2.5 Comprehensive risk management.

<table>
<thead>
<tr>
<th>Standard</th>
<th>Description</th>
</tr>
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<tr>
<td>COSO ERM cube</td>
<td>Framework produced by the Committee of Sponsoring Organizations of the Treadway Committee</td>
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Effective and continuous risk management step-by-step process includes several phases. Despite the organisation's operational scale or the risk management process in use, the risk management process's main factors are risk identification, risk analysis, management methods and measures, and monitoring. For example, the risk management process based on ISO 31000 included the following five steps:

1. Identification of significant risks
2. Assessment of the likelihood and severity
3. Development of risk management methods and appropriate method selection
4. Risk management decisions
5. Evaluation of implemented risk management solutions

The company can define the risk profile through the identification, assessment, and risk analysis of risks in the risk management process. Once the risk profile is known accurately, the company can
proceed to the management process's risk management phase. In the processing phase, appropriate risk management methods are developed and selected. Examples of traditional risk management methods are: avoiding, reducing, sharing and transferring or leaving the risk to risk. (Kuusela & Ollikainen, 2005) The ISO 31000 standard provides eight core principles to risk management. The eight-core principles are (International Organization for Standardization, 2018):

1. Risk management is an integral part of all organisational activities

2. A structured and comprehensive approach to risk management contributes to consistent and comparable results.

3. The risk management framework and process are customised and proportionate to the organisation's external and internal context related to its objectives.

4. Appropriate and timely involvement of stakeholders necessary. This results in improved awareness and informed risk management.

5. Risks can emerge, change or disappear as an organisation's external and internal context changes. Risk management anticipates, detects, acknowledges and responds to those changes and events.

6. Risk management explicitly takes into account any limitations and uncertainties associated with such information and expectations. Information should be timely, transparent and available to stakeholders.

7. Human behaviour and culture significantly influence all aspects of risk management.

8. Risk management is improved continuously through learning and experience.

The risk management process representation provided from the two of the most widely used risk management standards that are the Institute of Risk Management's (IRM) model from 2002 in figure 2 and the International Organization of Standardization (ISO) ISO 31000 model in figure 3.
The International Standardization Organization (ISO) published ISO 31000 risk management principles and guidelines in 2009. The ISO 31000 standard risk management process is a widely used model in different industries. Ilmonen et al. (2016) suggest that it is the most referred risk management standard through Finnish corporations. The initial preparation of the ISO31000 was a long process since their objective was to group all of the generally accepted risk management terms and practices as one. As a result, the ISO31000 is the first international risk management standard applicable to every size organisations, and it integrates comprehensive risk managements generally accepted terms, framework and utilisation. (Ilmonen et al., 2016) The risk management process in figure 3 is from the 2018 reviewed version of the ISO 31000 standard. (Hopkin, 2018)
Although the risk management process is shown as a linear process, the process is iterative in action (Hopkin, 2018).

Ministry of Finance published Risk Management Guideline in 2017 for public organisation use. The risk management guidelines follow the ISO 31000 standard. The guideline discusses the importance of risk management as a tool for management and decision-making in general when the primary focus is on the description and implementation of a process based on the SFS-ISO 31000 risk management standard. The Ministry of Finance (2017) suggests that the organisation risk management should be open and comprehensive, meaning that risk awareness and recognition are necessary. It should be taken care of that all of the different level specialists, decision-makers and stakeholders have sufficient knowledge of the risks.

Figure 4 visualises the connection between the organisation core functions and risk management and the management’s main tasks and roles. The achievement of objectives and operative functionality requires a solid foundation and functioning risk management. The top management has a crucial role in developing these functions. (Ministry of Finance, 2017, 13)
Ministry of Finance guides each public organisation to review its risk management processes and make any necessary improvements based on the risk management guideline. (Ministry of Finance, 2017)

Risk assessment

The risk assessment process includes risk identification, risk analysis and risk evaluation. The purpose of risk identification is to identify and prevent all significant risks and their sources that may impede or prevent the organisation's regular operation. The identification makes it possible to list all the risks, the probability and effects of the assessment during the assessment phase. (International Organization for Standardization, 2018)

To measure risk, the risk factors, the probability to be measured, and the adverse effects and possible benefits to be achieved must be defined. The assessment of risks usually bases on the expected outcome of the event's conditional probability multiplied by the consequences of the event if it occurs. (Ayyb, 2014) When a risk event may occur, the overall effects and consequences of a risk event are more important aspects than the extent of the event itself. In the risk analysis phase, the risk matrix is used to describe the magnitude of the risks by comparing the probability of the risk with the risk's overall consequences. Risk analysis provides a comprehensive overview of risk-
specific probabilities and impacts, a picture of the factors influencing the realisation of risk, and a basis for decision-making about what is done or not done for risks. (Hopkin, 2018)

In the first, the risk identification phase, the aim is to identify all significant risks and their sources, areas of impact, events and their causes, and possible consequences. The information is gathered on the risks that endanger operations and the achievement of objectives and those risks that include opportunities if not previously identified. It is significant that the information is relevant and up-to-date. Risk identification should involve a sufficient number of specialists from different areas to ensure coverage. (International Organization for Standardization, 2018)

The second phase of risk assessment is risk analysis. The aim is to understand the identified risks, the nature of risks, and the characteristics, including the level of risk where appropriate. (International Organization for Standardization, 2018) The analysis provides a basis for the risk management decisions, deciding what risks and how they are processed. In the analysis, estimates of probability and impact bases on the subjective views of the participants. It may be difficult to form a clear understanding of the actual level of risk from these subjective views. Therefore, it is essential to document any factors based on opinions or other uncertainties for later decision-making. At this phase, the causes and sources of the risk, their consequences are reviewed, and the probability and impact of the risk are estimated on a pre-defined scale, for example, a four-step scale in Table 2.

<table>
<thead>
<tr>
<th>Probability</th>
<th>Impact</th>
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<tbody>
<tr>
<td>1. Unlikely</td>
<td>1. Minor</td>
</tr>
<tr>
<td>2. Possible</td>
<td>2. Moderate</td>
</tr>
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</table>

The third phase of the risk assessment is risk evaluation. The purpose of the phase is to support decision-making about what risks are necessary to process and prioritise their order. (International Organization for Standardization, 2018) While a single risk might not be significant, it may become significant when combined with another risk. The evaluation should also consider any measures already taken or planned, whether they are sufficient or whether the residual risk is such that other measures should be considered to manage the risk.
Risk treatment and monitoring

After the risk assessment phase, the importance of order for risk management is evaluated, and decisions are needed to respond to the risks to reduce the threats to organisations operations and projects. Appropriate following measures, a target schedule and responsible persons are determined for each risk. A decision is also made as to whether the level of potential residual risk is tolerable or not. The following step is to decide on a proper treatment strategy, which for example are: avoid, transfer, and mitigate. (Rehacek, 2017) Acceptance as a strategy can be used for negative risks or threats and positive risks or opportunities; however, in Finnish public organisations, risks are treated only as a negative matter. Each of these risk response strategies has a varied and unique influence on the risk condition, which means that the strategy should be chosen to match the probability and impact of the risk on the selected targets overall objectives. (Rehacek, 2017) Avoidance and mitigation strategies are usually good strategies for critical risks with high impact. At the same time, transference and acceptance are usually good strategies for less critical threats and risks with a low overall impact.

The ISO 31000 guideline suggest that the purpose of monitoring and review is to ensure the quality and effectiveness of the selected strategies, their implementation and outcomes, and improve these where necessary. The risk management process monitoring and review should be a continuous process with responsibilities clearly defined. (International Organization for Standardization, 2018) This continuous process's main benefits are that the planned and selected responses are optimised, and possible corrective actions can be made. (Rehacek, 2017)

2.2 Comprehensive Risk Management

Solid risk management ensures the success of projects and procurements. The organisation risk management is one essential part of the organisation's overall management and operational processes and planning and monitoring. The risk management goal is for the organisation to have an up-to-date, correct and sufficiently comprehensive understanding of management and decision-making risks and a clearly defined risk management responsibilities and monitoring system. According to Oulasvirta & Anttiroiko (2017), in the early 2000s, large companies' failures gave rise to a new effort to improve risk management and control in enterprises. The normative management model that encourages organisations to develop comprehensive and systematic risk management. This developed model has been widely promoted to all kinds of private and public organisations. (Oulasvirta & Anttiroiko, 2017) Hopkin (2018, 95) claims that risk management has gained several
significant developments during the past few years. One of these significant upgrades is that the
organisations have chosen to implement this broader perspective to risk management.

The comprehensive approach to risk management is called various terms, such as; holistic,
integrated, and enterprise risk management. The term enterprise risk management (ERM) has
recently become the most widely used term for comprehensive risk management (Hopkin, 2018).
This term describes the comprehensiveness of the risk management that emerges through the whole
organisation, enterprise-wide (Ilmonen et al., 2016, 46).

To gain comprehensive and transparent risk management, the existence of risks must be recognised
and identified. The best knowledge of the possible risks that may face the operational unit is in the
unit itself. These units must ensure that this information is taken to decision-makers, experts, and
stakeholders at the organisation's various levels to have sufficient knowledge of the risks. Risks do
not disappear by ignoring them. The basics that support operations, such as safety management and
continuity planning, should also be in order. In conclusion, one can say that the ultimate key to the
comprehensive risk management model is that the implementation of risk management is necessary
and conducted at every part of the organisation.

COSO ERM Framework

The previously mentioned COSO ERM framework and the ISO 31000 standard are today the most
widely used and referred general standards for risk management. Even though these both focus on
enterprise risk management, they also have similarities and few significant differences. The key
similarities that both models have;

- Organisation objective connected risk management
- Necessary to identify uncertainties affecting the organisation objectivities
- Effective practice of the ERM model requires customisation and adaptation to fit the
  organisation
- Risk management integration to the processes and strategy is necessary
- Risk management responsibilities need to be described through the organisation

The significant difference between the models is that in ISO 31000, the risk is described as an effect
of uncertainty on organisation objectives. In contrast, the COSO ERM risk definition is a purely
negative effect on organisation objectives. (Ilmonen et al., 2016; International Organization for
Standardization, 2018)
Even though the states official documents that refer to some risk management standard refers to the ISO 31000, except the Ministry of Finance Guide to Risk Management, which also refers to the COSO ERM, the COSO ERM model visualises the organisation strategy, operations and risk management unique way. Organisation risk management integration with strategy and performance clarifies enterprise risk management's importance in strategic planning and embedding it through the whole organisation. Risk influences and aligns the strategy and performance across all different departments and operative functions. (Committee of Sponsoring Organizations of the Treadway Commission, 2017) The visualisation of the COSO ERM framework in Figure 4.

The COSO ERM framework is described as a set of principles, which are organised into five interrelated components (Figure 4). The first component is the governance and culture that sets the organisation's risk management perspective, reinforcing the importance of comprehensive risk management and confirming its responsibilities. The organisation culture demonstrates the organisation commitment to ethical values, desired behaviour and the overall understanding of risk in the community. (Committee of Sponsoring Organizations of the Treadway Commission, 2017)

The second component is the strategy and objective-Setting. This component defines that risk management, strategy, and objective-setting work together in the strategic planning process. The organisations' risk appetite is recognised and aligned with strategy and considers the risks while establishing the business objectives. (Committee of Sponsoring Organizations of the Treadway Commission, 2017)

The third component identifies the risks that may impact the operation and objective achievement. These risk needs to be identified and assessed adequately. The identified risks are prioritised, and responses are selected. The fourth component reviews the third components' performance, allowing
the organisation to consider how good the selected risk management measures functioning and make adjustments if needed. (Committee of Sponsoring Organizations of the Treadway Commission, 2017)

The fifth component monitors the substantial changes and enterprise risk management overall. To function effectively, enterprise risk management requires getting and sharing necessary information from the internal and external sources across the whole organisation as a continuous process. (Committee of Sponsoring Organizations of the Treadway Commission, 2017)

**Three lines of defence**

The comprehensive risk management model as an idea is also a key to the three defence line model used commonly in the public sector. Ilmonen et al. (2016) present the Three Lines of Defence model as a solution to ensure the organisation's understanding of the roles and responsibilities of conducting the risk management and the internal audit. The Institute of Internal Auditors presents the Three Lines of Defence model (Figure 5) based on the European Union regulations, Federation of European Risk Management Associations (FERMA) guidance on the 8th EU company law directive, article 41 (FERMA, 2011).

![Figure 5 Three lines of defence](image)

The Three Lines of Defence model is used in the public sector, for example, in organisations under the Ministry of Interior and The City of Helsinki. In the public procurement risk management focus, it is critical to understand the comprehensive risk management idea and position procurement risk management into it. The first line of defence is the operating units, which also own the risks and are
responsible for proper risk management processes. The unit that is implementing a procurement is responsible that its risk management processes align with the organisation and legislation. The second line of defence and risk management specialists responsibility is to assist when needed, while the best essential substance knowledge for concrete risks are in the substance. The third line of defence is the internal audit that monitors risk management's efficiency and functionality in general. (Ilmonen et al., 2016)

2.3 PUBLIC PROCUREMENTS

Procurement as a concept means the management of a company's external resources so that the availability of all necessary products and services are secured on the best possible terms. Organisations need products and services to run and maintain their operations, both the core functions and support functions. (S. Nieminen, 2016) Good procurement management promotes its competitiveness from a business perspective, which means cost-efficiency and added value for the customer throughout the supply chain. As procurement can be counted practically all activities, that an organization receives an invoice from an external actor. (S. Nieminen, 2016)

The concept of public procurement means the purchases and acquisitions made by some public organisation. Such purchases can include leasing, rental, purchase, and different kinds of option contracts of goods, services, and construction and concession contracts. The act on public procurement and concessions 348/2007 directs the public procurements and only applies to arrangements that meet the definition of a public contract or a concession. Public procurements are separated from other procurements by the contracting entities referred to in the act. The act applies when the estimated value of the procurement made by the contracting entity exceeds the threshold value specified by the act.

The act on public procurement and concession contracts guides the public procurements within the limits of the act, and it is not considered a public procurement if it is not within those limits. For example, the act does not apply to confidential procurements or the implementation of which requires special security measures based on the Act on Public Defense and Security Procurement 1531/2011, or the procurement value is under the minimum level set by the act. These limitations are designed more or less in terms of public tendering but not in the perspective of procurement risks and procurement risk management. Even though the procurement value set below the act's limits, that does not mean that it is risk-free procurement, nor does the confidentiality.
The general procurement process has five common main risks: demand fluctuation, incomplete price information, unreliable returns, uncertain lead time and disruption risks (Hong, Lee, & Zhang, 2018). However, the public procurement processes are complex (Manea & Popa, 2010), and there is a shortage of resources (Niiranen, 2011; Preda & Simion, 2019; Sebastian & Davison, 2011). Together, these factors create a situation where risks may turn into certainty either because of a simple error in the procurement process or because of a deliberate deviation from the existing legal obligations. Therefore, it is necessary to implement specific risk mitigation measures and measures to reduce their possible occurrence's adverse effects (Manea & Popa, 2010).

2.4 LEGISLATION AND PROCUREMENT REGULATIONS

The Finnish public government, both the state and municipal levels, is guided by the act on public procurements. In the aspect of risk management, the Finnish state and municipal level public government is guided primarily by the local government act and the state budget act. Other legislative and regulatory guides the public procurements, depending on the procurement topic or target. This kind of legislation presented here acts on the openness of governments activities, data protection act, trade secret act and information management in public administrations. This chapter presents the legislation that is commonly applied to public procurements and risk management in public organisations. These legislations are only presented in the scope of public procurements and procurement risk management, and that is relevant to the thesis topic in general.

Depending on the procurement target act on public defence and security procurements, and the act on procurement and concessions for water and energy supply, transport, and postal services guide the procurements. However, these two acts principally concern only specific areas of water and energy supply and the state defence, which are not relevant to the thesis topic and are not reviewed in this chapter.

Act on public procurement and concession contracts

The act on public procurement and concession contracts 1397/2016 guides the Finnish public government, both the state and municipal level authorities public procurements. The act requires any public contracting entities, state, municipals and associations of municipalities, state- or public owned enterprises and any other procuring entity that has received public support more than half of the contract value to tender their procurements within limits provided by the act. This procurement act sets out the rules also for the tendering processes for public procurements. The regulation for
public procurements aims for more efficient use of public funds and open tendering with equal tender treatment. (Kuuttiniemi & Lehtomäki, 2017)

The act aims to increase public funds' efficiency, promote high-quality, innovative and sustainable procurement, and ensure equal opportunities for companies and other entities to provide products and services in public procurement tenders. The act requires that all contracting entities endeavour to organise their procurement activities so that procurement can be carried out economically, qualitatively and systematically as possible, taking advantage of existing competitive conditions and considering environmental and social considerations. To reduce the administrative burden of procurement, contracting entities can use framework arrangements and joint procurement or other opportunities for cooperation in public procurement tenders. (GP 108/2016) The procurement organising should be arranged so that small and medium-sized enterprises and other entities have equal access to tenders with other tenderers, and the procurement must be carried out as appropriate entities. This means that it is prohibited to split the procurements into smaller procurement groups. The procurement must be assessed as a whole, and similar procurements must be taken into account from the whole organisation. Adequate transparency and non-discrimination must be taken into account in procurement below the national legal thresholds concerning the size and the scope of the contract. (GP 108/2016; Kuuttiniemi & Lehtomäki, 2017)

**Act on the openness of government activities**

The act on the openness of government activities provides for individuals the right of access to public documents of public authorities and also the public official's duty of confidentiality, the confidentiality of documents and other restrictions necessary for the protection of public and private interests in access to information, as well as the obligations of public authorities to implement the purpose of this act. The purpose of the rights of access to public authorities information provided by this act is to achieve transparency in public authorities' activities and enable individuals and communities to observe the use of public power and funds and to form and express their opinions and influence public authorities freely. The act provides everyone access to the public government's documents if they are not provided as secret documents by this act or another act. (621/1999) The provided access concerns both natural and legal persons.

The act on the openness of government activities also regulates the exceptions to the public access principle, the confidentiality aspects for the public government's documents. The act sets that a matter or document which is so provided by this act or another, or if an authority has ordered it to
kept secret by law or if the document or a matter contains information which is professional secrecy must be kept secret. The act set the public government matters and documents that are confidential unless otherwise is specified. The key contexts for the confidentiality are state security or relations to foreign states, that national defence interests, the prevention or prosecution of criminal offences, nature protection, ensuring the states, autonomous community, private corporations, judicial proceedings or data protection and important personal interests of an individual such as health-, medical- or pastoral care, taxation or prison care. (621/1999; GP 30/1998) Act section 24 sets the public government confidential documents and matters. The section has 32 subsections, from which subsections seven and eight are ones that require confidential information protective measures.

7) documents concerning the security arrangements for persons, buildings, installations, structures and information and communication systems and affecting their implementation, unless it is evident that the provision of information concerning them does not jeopardise the realisation of the purpose of the security arrangements

8) documents concerning preparedness for accidents or emergencies, civil protection or investigations according to the safety investigation act if disclosure of them would harm or jeopardise the safety or its development, implementation of civil protection or emergency preparedness, jeopardise safety investigation or its purpose for the purpose of an investigation or would infringe the rights of the victims of an accident, incident or exceptional occurrence or their memory or relatives

Data protection act and GDPR

The data protection act 1050/2018 fulfils the European Union general data protection regulation (GDPR) 2016/679. The data protection act is not meant to be an independent and comprehensive rule for individual personal information protection, but the intended use is a parallel application with the GDPR (HE 9/2018). Together these two acts form a comprehensive set of rules for the processing and protection of personal data.

The EU's general data protection regulation imposes detailed requirements on businesses and organisations to collect, store and manage personal information. It applies to European organisations that process individuals' personal data in the European Union area and the non-EU organisations that target people living in the European Union. Albeit the GDPR is a directly applicable act, it has some space for national decision making. The GDPR sets certain obligations
on member States, such as regulating certain matters concerning the national supervisory authority. Also, member states need to combine personal data protection under the GDPR with other rights, such as freedom of expression. (HE 9/2018)

The general data protection regulation is based on Article 8 of the Charter of Fundamental Rights of the European Union and Article 16 of the Treaty on the Functioning of the European Union, which provides that everyone has the right to protect citizens personal data concerning him. It is European Union citizens fundamental right to protect the natural persons concerning the processing of personal data. Therefore, the principles and rules on the protection of natural persons regarding the processing of personal data, regardless of their nationality or residence, should respect their fundamental rights and freedoms and the right to the protection of personal data. (2016/679)

These acts define the personal data that is to be protected and how the data should be protected. Also, there are strict limitations to who, in what position and especially why can the data be processed. For personal data can be identified any personal information from which a person could be identified. Such personal data includes their name, address, social security number, income, cultural profile, internet protocol (IP) address, passport number and all data held by a hospital or doctor that identifies a person for health purposes. (1050/2018; European Union, 2020)

**Act on information management in public administration**

The act on information management in public administration 906/2019 provides public administration's general obligations in information management and information systems usage. The act regulates planning and describing information management, information security, security classification, data sets, and information management. The act on information management in public administration also applies in certain respects to private individuals and organisations when their activities are subject to the act on the openness of governments activities. The act also concerns those public entities outside the public administrations when their activities are subject to the act on the openness of government activities. (HE 284/2018) The essential purposes for the act are to ensure equal, coherent and high-quality management of the data and secure data processing, enable safe and efficient data utilisation so that the authority can fulfil its tasks and its services to the customers under good, efficient and high-quality administration and also to promote the information system and resources interoperability. (906/2019)
The act obligates the public administration to have an information management unit prescribed to maintain an up-to-date information management model that describes the operating environment." The information management model is maintained to design and implement the management of services, consideration and datasets, implement the rights and restrictions relating to access to information, decrease multiple collections of information, and implement the interoperability of information systems and information pools and to maintain information security (906/2019)." The act rules the information management model's minimum information, such as operating processes, meaning and connections of processes, archiving, and information security.

State budget act

The State budget act 423/1988 aims to provide the submission dates for the governments' revenue statement drafts and other related proposals and justify the income and expenditure estimates. The act also sets the obligation of organisations to plan their activities and finances. (GP 108/1987) According to act section 24b, government organisations must make appropriate internal control arrangements for their own activities and those they are responsible for. Section 24 b also sets that organisation management is responsible for arranging proper internal control. (423/1988) The Ministry of Finance (2020) describes the linkage of proper risk management and the state budget act as the risk management identifies, assesses, and manages the factors that threaten the achievement of internal control objectives, which are that the activities are by the law, the funds are safeguarded, the activities are correct, practical and sufficient information on the finances and organisation performance is generated. Risk management and internal control objectives are the same. (Ministry of Finance, 2020b)

Local government act

Where the state budget act obligates the government organisations, the local government act 410/2015 obligates the government municipalities administration in general. The local government act regulates municipal council and operations, influencing and participating possibilities of municipal residents and state administration and finance. The act aims to support municipal activities, financial sustainability and planning and promote the state residents well-being and the vitality of the municipal area and organise municipal services for its residents in a socially and environmentally sustainable way. (410/2015)
The current local government act sets clear obligations to internal control and risk management. The current act section 39 sets the municipal government responsible for taking care of the municipals' internal control and organising risk management. Section 47 obligates the municipal to ensure by corporate governance that the subsidiaries have organisational instructions that include organising the internal control of the organisation and risk management. Section 67 obligates that every municipal corporation has a board of directors supervising and directing the operation. The board is also responsible for the corporations' operations, management, internal control and risk management. For the auditor roles, chapter 123 sets the auditor obligation is to inspect that the municipal's internal audit and risk management are set correctly. (410/2015)

**Occupational safety and health act**

The act of occupational safety and health (738/2002) aims to improve working conditions and environment to maintain employee working capacity and prevent occupational accidents and hazards.

Act section 8 regulates the employers' general obligations and sets the employer's general duty to exercise care. Employers must take care of employees' safety and health while at work by taking the necessary measures to ensure it. For this purpose, employers shall consider the work, working conditions and other aspects of the work environment and the employees' capacities. (738/2002)

Employers must design and choose the measures necessary to improve the working conditions, decide the measures' extent, and put them into practice. Therefore, the occupational safety and health act (738/2002) obligates that the following principles must be observed as far as possible.

1. preventing the creation of hazards and risk factors
2. eliminating the hazards and risk factors or, if this is not possible, selecting a less hazardous or harmful alternative
3. adopting safety measures that have a general impact before individual measures
4. taking account of technological developments and other available means

**A risk management perspective on legislation**

The obligation for risk management in public government and especially to public procurements is not as straightforward matter. The legislation affects the private organisation and its risk management probably a lot less than to the public organisation, depending on its objectivity. There
are some direct references in legislation for a public organisation, such as the local government act that obligates municipal-level organisation to have internal control and risk management, state budget act obligates state-level organisations. As public government activities concern many different parties' rights and well-being, such as organisations, citizens, partners and society, the risk management implementation is set by the legislation. Public government and organisations are legislator representatives, and they are expected to comply with the legislation.

From a public procurement perspective, the public procurement act is the first one that is discussed. In contrast, the procurement subject might be a more critical factor from public procurement risk management perspective. Naturally, the threats to security procurements and other procurement that includes classified information have priorities in risk management, and other legislative obligates procurement to comply within.

2.5 THE THEORETICAL APPROACH OF THIS STUDY

Various methods can approach the topic of this study, for example, Heli Riutto (2010) thesis research, a case study approach to study the implementation of risk management in certain subject cases, risk management in the procurement of expert services. However, Oulasvirta (2017) research, factors explaining the state of municipal risk management, indicate that there are still shortcomings in municipal risk management practices compared to normative guidelines of risk management, such as the Coso-erm model, and especially outsourced services were highlighted as poorly covered area (Oulasvirta, 2017). There is variance between public administration units implementing comprehensive risk management in Finland and the Baltic Sea, and the Nordic area (Kalvet & Lember, 2010; Oulasvirta, 2017). There is also variance between cities in risk identification (Kalvet & Lember, 2010).

The Ministry of Finance argues that the state of strategic management of public procurement is diverse in Finland. The strategic potential of procurement is not entirely identified in public administration units, which leads them to operate insufficiently. (Ministry of Finance, 2020c) Also, the risks of fast societal change increasing procurement-related risks. Therefore, preparedness and risk management must be considered as an essential part of the public procurement agreements. (Ministry of Finance, 2020c)

The complexity of the public procurement process is a significant factor, where the procurement risks may realise by a simple error in the procurement process or a deliberate deviation from the
existing legal regulations. It is necessary to implement risk-avoiding measures and measures aiming to reduce their adverse effects in case of their occurrence. (Manea & Popa, 2010). Furthermore, the risk management practices must be integrated into decision-making processes (Sebastian & Davison, 2011). It is suggested that the error occurrence should be limited through the public procurement process by securing the visibility of rules and internal procedures (Manea & Popa, 2010).
3 IMPLEMENTATION OF THE RESEARCH

The objective of science is to uncover truths, understand and explain reality, extend man's knowledge and understanding of the universe's form and contents. For science itself, there is no simple definition. One description for science can be; "a complex network of different interlocking activities with multiple practical and theoretical aims and a great variety of methods." (Juuti & Puusa, 2020; Sloman, 1976) Criteria such as objectivity, criticality, systematicity, independence and impartiality have been considered science hallmarks. Scientific research is rationalist observation and argumentation (Alasuutari, 1999). Aaron Sloman (1976) described one of the interpretative aims of science to construct theories to explain known impossibilities, laws and correlations. These constructed theories answer the question, "Why?". According to Sloman, one possible summary for science could be: "A major aim of science is to find out what sorts of things are and are not possible in the world, and to explain how and why." (Sloman, 1976)

The methodology for this study is qualitative research. Qualitative research is a way of learning and understanding social reality. Qualitative research is an expansive and evolving methodological field that includes a wide range of approaches to research and different perspectives on the nature of research itself. Qualitative research is an umbrella term for a wide array of research practices and products. The different qualitative research approaches can be used across the disciplines to study a wide array of topics. These research approaches are often used to describe, explain or explore phenomena. (Leavy, 2014) According to Anu Puusa and Pauli Juuti (2020), standard quantitative research data is brought to numerical form, whereas qualitative research data is mainly different kinds of texts. The quantitative research objectives are usually expressed using testable hypotheses when the qualitative objectives are often descriptive. The main objective of this research is to gain a comprehensive understanding of the level of risk management instructions and the knowledge that the current public organisation's procurement guidelines and manuals contain. Also, the results are expected to support providing more comprehensive guidance for public procurement risk management.

When the main difference between quantitative- and qualitative research methods are simplified, the quantitative research methods answer the numerical questions; "Is risk management reviewed in the literature?" and "How many sources reviews the risk management?". The qualitative research method is a suitable method for this study since it focuses on the subject in an explorative way; "How the literature reviews the risk management?". Qualitative research begins with an assumption of the research problem. Researchers use a suitable qualitative approach to collect the data in its
natural environment and a data analysis that is inductive and establishes a theme or pattern to study this problem. (Creswell, 2007) Inductivity in research design means that the whole research process formulates and shapes through the research until the researcher can build their conclusions and critically evaluate their work. While working with the research analysing the data, the researcher relies on the theory someway. Analysing the data might affect the research's theoretical framework so that the original framework adjustment is needed. (Juuti & Puusa, 2020)

3.1 GROUNDED THEORY AS A RESEARCH STRATEGY

Virtanen and Stenvall (2014) suggest that methodological research solutions should be considered from new perspectives when researching today's complex public organisations. As a result, methodological solutions should also be marked by pragmatic thinking that recognises the issues of everyday life in organisations and requires presence. Virtanen & Stenvall (2014) claim that a suitable research method in such research is a case study. However, since there is variance in the implementation of comprehensive risk management between public organisations in Finland (Oulasvirta, 2017), and the complexity of the public procurement process urges for better guidance (Manea & Popa, 2010). This study aims to generate a perspective of the current situation how the public procurement manuals in Finnish public organisation describe risk management and its necessity. To able to describe the perspective, grounded theory was chosen as a suitable research method; even though the grounded theory is not only a method, it is a research approach and strategy used to review the material.

The strategy of this study is two-part. First, the theoretical framework is based on a literature review and utilizes printed and electronic works and articles as sources. The theoretical framework is divided into three main topics: risk management, public procurement, and legislation affecting public procurements. This information gathered in the literature review is used later to support identifying keywords and contexts.

The second part is conducting the grounded theory research, which includes four main phases;

1. Gathering and formatting textual data for the analysis
2. Initial coding, coding data with ad hoc codes supported by the theoretical framework. Creating concepts and simple categories through coding and wrote memos by comparing them with similar ones
3. Focused coding, integrating codes to develop core categories
Grounded theory is a qualitative research method developed by two researchers with different backgrounds Barney Glaser and Anselm Strauss. Anselm Strauss's background was in the Chicago School of Sociology, and Barney Glaser background was in Columbia University. They were interested in differences in two different directions, the mainstream of sociological research and ethnography practices at the time. The mainstream of sociological research focused on empirical testing of the grand or middle-range theories. Thus, they were not interested in how these theories were developed when the 1960's ethnography research practices provided detailed descriptions of scopes, such as situations and institutions. However, there were no theoretical models or analyses in an ethnography of why things happened in the first place and the consequences of these happenings. (Creswell, 2007; Flick, 2018) The grounded theory aims forward from the description, and the purpose is to generate or discover a theory of a process or some other action. Furthermore, the key is that this theory emerges from the data gathered through analysis. (Creswell, 2007; Howard-Payne, 2016) According to Juliet Corbin (2017), the grounded theory can be used to explain specific phenomena; that is what this research is all about, trying to find the way that the selected material describes the issue.

The term grounded theory is commonly used to describe three grounded theory purposes. The first of these purposes is to label a specific theory or phenomena developed by analysing empirical material. Second, it describes a specific research approach, and third, a specific research process and attitude towards conducting research. (Flick, 2018) A description of grounded theory as an approach is that the approach contains four essential features: low prejudices on the subject, simultaneous data collection and analysis, different interpretations of the data and the goal to construct a theory due to the research. (Bryant & Charmaz, 2007; Flick, 2018) The low prejudices on the subject and the description as a specific research approach are the common subjects in grounded theory that contain contradictions depending on the grounded theory's orientation or path.

The features of grounded theory are common argument between different approaches. Particularly the low prejudice to the subject, that according to Juliet Corbin (2017), the researcher does not begin the research from the theoretical background, since the gained knowledge would defeat the method's purpose. This feature is at the fewest conflicting feature, as when Glaser and Strauss created the method, there were noticeably more un-researched topics. So in that time, the theoretical literature beforehand could have disrupted the understanding of the topic. Also, Glaser and Strauss themselves were experienced researchers in social sciences. (Flick, 2018)
After Glaser and Strauss discovered the method in 1967, five slightly different approaches to grounded theory have developed. According to Creswell (2007), two of them are the mainstream approaches to the grounded theory, the Strauss and Corbin systematic procedures and the constructivist approach of Kathy Charmaz. However, Uwe Flick (2018) describes that at least the five different approaches to grounded theory existing today in some way at side by side or in competition against each other, depending on the way one looks at it. These different versions also allow the researcher to choose the most suitable approach when conducting grounded theory research. Uve Flick (2018) description of these five existing theory paths are:

1. The original Glaser and Strauss version they developed together in 1967. The original path focused on creating a new understanding of research and empirically developing a theory.
2. Glaser developed this path further in his book Theoretical Sensitivity in 1978. This path is today known as the classic grounded theory.
3. In 1987 Anselm Strauss started to develop his approach of Qualitative Analysis for Social Scientists. This grounded theory path was further developed with Juliet Corbin and is now advanced by Juliet Corbin alone. The latest editions of their path, many of Strauss's and Glaser's ideas have been abandoned. This version attracted the most attention in the 1990s but also provoked severe critique from Glaser.
4. Kathy Charmaz developed the fourth path originally in 2006, as the label constructivist grounded theory. This path of Charmaz aims to reintegrate the Strauss, Corbin and Glaser paths into an extended version of grounded theory.
5. Adele Clarke's path from 2005 is more a postmodernist version of grounded theory, focusing more on situations and discourses than theory development itself.

The traditional grounded theory approaches that are most commonly used can be divided into three basic approaches. The first is the Glaserian approach, as the classic grounded theory approach. This approach style is the heritage of the original Glaser and Strauss approach. The Straussian approach is a term used when discussing Strauss, Strauss & Corbin and Corbin approaches. The third approach is the Charmaz approach. When selecting an appropriate grounded theory method, each path or perspective is more suitable for some contexts than others. All base processes are similar in every common known grounded theory approaches. These approaches use similar technical vocabulary and methods to generate a theory to explain the phenomenon that is under the study. (Singh & Estefan, 2018) The summary of the key components of each of these three different grounded theory main paths is presented in Table 3.

36
Table 3 Choosing a suitable grounded theory method (Singh & Estefan, 2018)

<table>
<thead>
<tr>
<th>Areas of choice</th>
<th>Glaserian</th>
<th>Straussian</th>
<th>Charmaz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philosophy</td>
<td>Objective researcher, no previous context knowledge</td>
<td>Previous researcher knowledge recognised and the influence on the research</td>
<td>Acknowledged previous researcher knowledge and the influence on research</td>
</tr>
<tr>
<td>Focus</td>
<td>Developing grounded theory from all the data</td>
<td>Developing a detailed grounded theory</td>
<td>Developing a theoretical understanding</td>
</tr>
<tr>
<td>Research context</td>
<td>Aim to explore context-independent data to generalise in a broader context</td>
<td>Selective context, aiming to explore local issues to generalise in a wider context</td>
<td>Aiming to explore local issues for local context</td>
</tr>
<tr>
<td>Analytic style</td>
<td>Passive processing of the new data. Constant comparison of the core category, open and selective coding</td>
<td>Active analysis through structured procedures. Constant comparison to the selected main category. Open, axial and selective coding</td>
<td>Active researcher interpretation utilisation. Constant comparison for relevant categories. Initial and focused coding</td>
</tr>
<tr>
<td>Utility</td>
<td>For a broad theory construction across areas of interests</td>
<td>Suitable for taking several variables into account to improve the generalisability and predictive power of the theory. Can develop a sketchy description of the variables.</td>
<td>Suitable for developing a full depth theory in its local context. Theory may not be generalised outside the original context</td>
</tr>
</tbody>
</table>

Because of the partly conflicting different grounded theory approaches, today's researchers often describe their research methods as "data collection and analysis based on grounded theory approaches" (Gibson & Webb, 2012). For this particular research, the most suitable method appeared to be the Charmaz, constructivist grounded theory approach, as the aim is not to develop a new theory since it seems very unrealistic. As a researcher, the broad knowledge and understanding of both risk management and procurements can not be unrecognised. However, the aim is to understand the way the subject is described and understood by the material. The research context is better described as local when it considered only Finnish public procurement and public procurement manuals. This constructivist grounded theory approach by Kathy Charmaz is a straightforward interpretative qualitative research approach with flexible guidelines, focusing on the theory that depends on the researcher's view of the context. (Creswell, 2007)

### 3.2 Description of the researched data

The research aims to develop a holistic theoretical understanding of how the public sector procurement manuals see and describe procurement risk management. To be able to conduct this understanding, the researched data needs to be public sector procurement manuals or other literature that is focused on the public sector procurement procedures and management.
This research uses literature from different public sector organisations and units, both at the governmental and municipal levels, including Finnish government official publications, different ministries, cities, and municipalities. Gathered material also includes operator procurement manuals that affect these public procurements, such as municipal association. Researched material also includes Jyväskylä University of Applied sciences and University of Vaasa courses directly focused on public procurements syllabuses. All the material used in this research is public material from public sources. Classified or unofficial documents are not used in the research. The material is collected from the government, ministries, cities, municipalities, and web pages directly or assisted by google searches. University syllabuses are searched from universities public webpages and from Studyinfo.fi, which is official Finnish study information and applying website by the Finnish National Agency for Education. A national procurement strategy is included in the data to gain a better perspective and selected cities procurement strategies. Other related materials included in the research material include the European Union procurement manual, the City of Helsinki sustainable procurement manual, and manuals from other national organisations.

The data was retrieved in this continuous comparison process until the material provided no new information, nor were there no new categories emerging from the data in the analysis. In the first phase, there were 28 different documents included, and in the end, 35 documents.

The research data of this research are listed below. All of the document names are translated to this list from the original language.

1. Government level procurement manuals
   a. Procurement instructions for the Ministry of the Interior’s branch of government 2018
   b. Handbook of Governments Procurements 2017
   c. Procurement planning – Instructions for procurement planning, Ministry of Finance 2019
   d. Ministry of Justice accounting unit procurement instructions, 2020

2. City procurement manuals
   a. City of Oulu procurement regulations 2018
   b. City of Porvoo procurement guidelines 2020
   c. City of Tampere procurement instructions 2017
   d. City of Kouvola procurement manual 2018
3. Municipalities procurement manuals
   a. Procurement instructions, Hausjärvi municipality 2018
   b. Nurmijärvi municipality procurement instructions, national and small-procurements 2019
   c. Kynsote procurement instructions 2019
   d. Hankasalmi municipality procurement instructions 2011
   e. Association of Finnish Municipalities, Municipality universal procurement instructions 2010
   f. Ylitornio municipality procurement instructions 2007
   g. Sysmä municipality procurement instruction 2020
   h. Hollola municipality procurement instructions 2020

4. Procurement strategies
   a. City of Helsinki, Urban Environment Divisions procurement strategy 2019
   b. City of Helsinki procurement strategy 2020
   c. National public procurement strategy 2020
   d. City of Tampere procurement principles 2019
   e. City of Pori procurement policies 2019

5. University courses literature
   a. A Good procurement, better business, Nieminen, 2016, Alma Talent
   c. Procurement management, from procurements to supply management, Iloranta & Pajunen-Muhonen, 2018, Tietosanoma

6. Other data sources
   a. City of Helsinki guide to sustainable procurements 2015
   b. European Union Innovative Public Procurements manual 2014
   c. Municipalities procurement services Kuha Oy instructions 2018
   d. Innovation Partnership manual, Business Finland 2017
   e. Keuda, Consortium of educational municipalities procurement instructions 2020
f. The Finnish Innovation Fund Sitra, the effectiveness of procurements, manual for public sector 2016

g. European Union, Public procurements, instructions for operators 2018

3.3 DATA ANALYSIS

This study's methodological approach, constructivist grounded theory, can be described as a descriptive inductive approach since this research focuses on the risk management of public procurements, and the aim is to find and describe how public procurement manuals describe risk management. The grounded theory research method that is selected for this research is, in a way, a typical form of inductive research, according to Jane F. Gilgun (Thyer, 2011). The basic inductive approach form is partly similar to the grounded theory, and the theory is developed from the data by spotting patterns of the subject. The simplified data analysis process is visually described in Figure 6. The inductive researchers, such as grounded theorists approach to the data, are as open as possible in the circumstances that the researchers are with the subject (Thyer, 2011).

<table>
<thead>
<tr>
<th>1. Data collecting</th>
<th>4. Assessing the codes</th>
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<td>2. Reading the material</td>
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<td>3. Uploading material to Atlas.ti</td>
<td>6. Creating concepts and categories</td>
<td></td>
</tr>
</tbody>
</table>

*Figure 6 Data analysis process*

The data that was gathered for this first phase included 28 different documents from government procurement strategy to city and municipal level procurement manuals. This data was reviewed by selecting segments estimated to be related to procurement risk management. These selected segments were marked with descriptive texts, which are the codes. In this phase, data were reviewed for any kind of information related to risks, security, safety or the phases of the procurement process and preparation phases of procurements. The data were repeatedly reviewed to gain a holistic understanding of the data and enhance coding and more detailed categories, with a constant comparison inductive process. The researcher compares all levels of data from codes to codes, categories to categories. (Bryant & Charmaz, 2007)
For grounded theory research, despite the chosen approach, the primary process is similar. The coding is about organising and classifying the first stage of the material, which proceeds to the actual analysis. The initial coding process starts with separating data into smaller parts, word-by-word or line-by-line according to some characteristic. Then the similar parts are classified together, and their common characteristic names the category. (Juhila, 2020; Singh & Estefan, 2018) This first coding step was to review cities, municipalities, state and ministry branch procurement manuals and strategies to find contexts suggesting risks and risk management in all possible perspectives. The phase was started by seeking almost all kinds of privacy, security and safety perspectives to exclude the possibility that any kind of indirect reference to risk management would not be ignored.

When the initial coding phase progresses, the researcher begins to perceive the direction of the emerging data. It is necessary to say that some codes begin concept forming straightforwardly, while others seem to float between the concepts. There was also noticed that security matters were referred to in some manuals through the security procurement process. Thus, the security procurement was coded in separate codes due to their deviant procedure and to gain a better perspective on the subject. Other subjects looked at from the data were references to significant steps in preparing and designing the procurements. Another notice was that there were several references to the Association of Finnish Municipalities, Municipality universal procurement instructions document, which was included in data for coding. Similarly, three municipality procurement manuals were added that referred to this instruction. In the initial coding phase, there were 781 codes added to the data and 14 concepts of categories.

In the next phase, focused coding, the researcher selects the relevant categories to the emerging theory. Singh and Estefan (2018) describe a category's relevancy so that "the selected category is relevant when it explains part of an underlying process or pattern of the subject phenomenon." The researcher collects more data essential to selected categories with a constant comparison inductive process, where the researcher compares all levels of data from codes to codes, categories to categories. (Bryant & Charmaz, 2007) Coding is the crucial link between collecting data and explaining it through developing emergent theory (Charmaz, 2006). This phenomenon becomes more and more apparent the further the core category coding progressed. The focused coding phase is when the most frequent and significant initial phase codes are sorted, integrated and organised a more extensive amount of data together. This focused coding phase is used to develop the most significant categories from a large number of data. (Charmaz, 2006) Even though there were a large
number of the initial phase codes, the core categories arose from these relatively easy. When focused on each core category at the time, these coded texts and segments emergent the category explaining perspectives.

Eventually, all relevant codes integrate into concepts, and concepts merge into categories through the continuous comparison process (Figure 7). (Singh & Estefan, 2018) New concepts and categories in evolving theory guide the researcher to begin theoretical sampling by searching for information relevant to and providing additional information about ascending categories. This continuous comparison process continues until the researcher discovers the saturation point, where no new ideas for concepts or categories are found, and the developing theory takes shape (Bryant, Charmaz, & Holton, 2012; Singh & Estefan, 2018).

![Figure 7 The continuous comparison process](image)

The data was retrieved in this continuous comparison process until the material provided no new information, nor were there no new categories emerging from the data in the analysis. A total of 35 documents were added to this research data. In theory, this is when the researcher discovers the saturation point, where no new ideas for concepts or categories are found, and the developing theory takes shape (Bryant et al., 2012; Singh & Estefan, 2018). From the original set of codes, the concepts emerged through the continuous comparison process. At the end of the process, the five final core categories are the ones that can explain the phenomenon.

During the research, simultaneously were looked for more data, and there were found more possible material. However, if they did not add any new information to the research, only to the number of different risk management views in public procurements, since this kind of quantitative approach was not the purpose of this research, such data was not added after this theoretical saturation point.
Grounded theory coding and other qualitative research and analysis can be conducted using simple methods such as word or excel documents. It is not necessary to have any more sophisticated analysing tools. Tools used in this research are Tampere University provided tools. University provided Atlas.ti research software, which is modern analysing and coding software. When almost all of the documents are possible to have in pdf format that is suitable directly to the software, the researcher can save much time, especially in grounded theory, where it is necessary to move between the coding phases and add more data to analysis if data saturation is pursued.

3.4 RELIABILITY AND VALIDITY

One objective of qualitative research is to avoid mistakes, according to Hirsijärvi et al. (Hirsjärvi, Remes, Sajavaara, & Sinivuori, 2018). Traditional research evaluation criteria are reliability and validity. Both of these are common in quantitative research but usually seen in qualitative research criteria as well. The reliability of research means the reproducibility of the measurement results and the validity of a research method to precisely measure what is intended to be measured. (Eriksson & Kovalainen, 2008) Qualitative researches are systematically unique researches, and there is some kind of fingerprint of a researcher in the researches. According to Kathy Charmaz (Charmaz, 2006, 2017), essential factors are the reflexivity alongside the narrative substantive contribution in grounded theory. Charmaz (2017) describes constructivist grounded theory depends on methodological self-consciousness that requires deep reflexivity.

In grounded theory research, the reliability aspect can be fulfilled at a reasonable level for qualitative research by following the theory-based coding and categorising procedures and open-minded reflexivity in the analysis phase. The validity of the research in qualitative research guarantees that the report or description of the research is correct, which is also done by reflexivity (Eriksson & Kovalainen, 2008).

Reflexivity in research requires reflection of the research criteria and results related to the procedure of how the information is produced, organised and interpreted. Aaltonen and Högbacka (2015) describe reflexivity as thinking of how we think, which is broader and more systematic than critical thinking. Specifically, reflexivity refers to questioning the assumptions of our own actions. Aaltonen et al. (2015) claim that reflexivity is an essential tool of a researcher when it evaluates our research practices, thinking and procedures, aiming to produce more context-sensitive research. Charmaz (2006) underlines the necessity of a researcher in grounded theory to guard themselves against forcing his preconceptions on the data we code via reflexivity. As humans, every researcher
has preconceptions that may influence the research unless these preconceptions are evaluated in constant reflexivity. According to Aaltonen et al. (2015), researchers' own personality, position, and methodological and theoretical choices influence the research and strive to shape it. The purpose of reflexive review is to make this kinds of effects visible and even learn from them.

In this research, an open reflexive review is conducted continuously through the whole coding process, finding the concepts and categories to the focused coding phase constructing the core categories and to the end product, producing description from the data. This research's nature is not such that my own position in any social hierarchy or culture, age, gender or racial factors would affect the results. However, my position as a security and risk management professional specialised in protecting the organisation physical and information assets is a factor that is necessary to keep active in mind while conducting the research.
4 FINDINGS

The final core categories are the ones in grounded theory researches that the theory, or the perspective in this research, arises from. (Bryant et al., 2012) The aim was not to create a new theory; instead, the aim was to describe the perspective of how risk management exists in the manuals. This study identified five “theses”, which are: contract as a risk, supplier as a risk, risk management or risks are mentioned at some level, risk management referred to as part of the procurement and risk management as part of the procurement described as a holistic risk management perspective. Besides these five core categories, some manuals had no risks or risk management mentioned or referred to at any level, so they are handled as a sixth core category.

4.1 CONTRACT AS A RISK

The category contract as a risk is where the procurement risks are seen from a perspective that the contract concluded through the procurement process is not sufficient, or the procured service was not the best possible or wanted one. The risk is that an unfavourable contract binds the public organisation for a too long time, to bad quality service, expensive contract caused by pricing risk or similar issues.

In this category, innovative products and services procurement as a risk appears frequently. The logic considering the innovative procurement and especially their unknown future is, of course, understandable. Acquiring new unseen innovative solutions carries a higher risk of failure than procuring proven products that already exist on the market. The existence and probability of these risks should be recognized and prepared already at public procurement planning. As a solution to these innovation-based risks, the procurement manuals suggested that; The procurement contract may specify the risk-sharing between the supplier and the organisation. Similarly, parties may agree on the allocation and use of intellectual property rights so that the new experiments are also attractive to companies. (Aho, 2017; Enbom et al., 2014)

Other examples from a contract risk perspective are from the Procurement instructions for the Ministry of the Interior’s branch of government and the municipality of Hausjärvi procurement guide. The Ministry of the Interior (2018) suggest that the service contract definition must be able to describe the desired outcome and the measures of the service procured. The procuring public organisation should provide a clear picture of the scope, quality of the service, estimated workload, and possibly other requirements to tenderers so that the tenderers understand the whole service
entity the same way as the procurer and can make offers without significant pricing risks. The Hausjärvi municipality perspective to procurement risks considers the contracts that are renewed periodically. Their suggestion to manage such risks is that the procurement unit may assign the contract for one year at a time (Municipality of Hausjärvi, 2018).

4.2 **Supplier as a Risk**

Another perspective of public procurement risks is that all the considered possible risks are supplier based issues. According to the procurement manuals, these supplier based risks may complicate the contract's implementation between the supplier and a public organisation. All of the manuals' common perspective on these risks is that the supplier's risks are caused by its operational activity or financial situation.

According to the Handbook on Governments Procurements (2017), supplier management involves supplier risk analysis, the anticipation and mapping of supplier risks, the assessment of the probability and significance of risks, i.e. the determination of risk management measures during the contract period of a long-term or significant contract. At the beginning of the contract period of a significant or a long-term contract, the contracting entity should conduct a risk analysis, which identifies the various risk options and their probability and the impact on the implementation of the contract. (Kuuttiniemi & Lehtomäki, 2017) The Handbook on Governments Procurements suggest that the risks that an individual supplier may be related to are following:

- The supplier is unable to meet the set requirements for product or service
- The supplier's capacity, transport, warehousing or other logistical problems, quality of service or service starting problems due to the customer's needs differs significantly from expected
- The requirements for the product or service set by the contracting entity changes during the contract period due to legislation, organisational changes or the market or economic situation
- The supplier has not previously provided services to the public sector or has recently started its operations
- The supplier is required to provide services it has not previously operated
- The service provider uses several subcontractors whose financial situation varies
- The personnel relations between the contracting entity and the supplier's employees
- The supplier's key personnel are assigned to other projects or change employer
The governments' handbook sees the supplier ability and reliability to provide the agreed services or products as a significant risk for procurements. The city of Kerava (2019) suggests that the procuring organisation should monitor the suppliers' financial performance during the long-term contract periods to prepare and react to possible changes in the suppliers' financial stability. Also, one should monitor the credit information of the supplier, and if necessary, the subcontractor.

In the book A Good purchase – Better Business by Sanna Nieminen (2016), she argues that in an informed supply chain, the purchasing organisation ensures that the supplier has sufficient insurance cover to enable financial capacity and reliability to be restored after an actual risk event. This perspective to procurement risks is weighted to the supply chain perspective, where the purchasing unit, which is the public organisation, is purchasing via the procurement process parts for manufacturing processes. However, such production or manufacturing or similar operation is extremely rare within public organisations. Even though the perspective, the risks presented in this manual concerns only the supplier, and those possible issues that the interruption in suppliers operation might produce to the purchasing organisations own production. Nieminen (2016) claims that financial risk can still materialise even if the operational risk has been analysed and managed. Businesses may have ceased operations after a significant risk event, such as a fire. Also, the supplier's financial situation must be acknowledged from the risk management point of view. According to Nieminen (2016), a strategic partnership with a supplier who has been making losses, whose equity is running low and has no credible plan of how the supply company will make its business profitable is disastrous.

4.3 RECOGNISED RISK MANAGEMENT

One perspective to procurement risk management is obtained from the data are recognised risk management. This category brings together those common views where the procurement manuals refer to risk management even at some level. However, even if risk management is recognised as a part of organisations operations at some level, the link between procurement management and risk management as a key part of procurements is not recognised.

For example, the detached referring to risk management;

- The procurement policy of the city of Pori (2019) suggests that as an addition to the procurement content, the contracts should define the responsibilities, in which case it would also be risk management greatest extent.
According to the city of Oulu procurement regulations (2018), the procurement orders are part of the internal control procedures. These orders support the implementation of internal control and risk management of procurements.

The risks related to the procurement and production and the risks related to the change of supplier have been identified sufficiently to ensure the procurement quality and scope (City of Kouvola, 2018).

The Ministry of the Interior (2018) claims that from the risk management perspective, procurements must identify situations where corrupt activities may occur and seek to prevent these activities that may jeopardise the confidence to public administrations independence and impartiality.

City of Kerava procurement manual (2019) is an intermediate form between this category and the following. The manuals perspective on risk management is slightly broader than other manuals in this category. This perspective is such that it could have been categorised into the following category, risk management recognised as a key part of the procurement. However, in the procurement manual of Kerava, the risk management guidance are only in the procurement contract section 8. The manual has a very sophisticated procurement process chart visualised in section 2, the procurement process (Appendix 2, Finnish language). Nevertheless, this process chart does not recognise risk management at all. The city of Kerava procurement manual (2019) descriptions to risks are;

- The risks associated with the contracts are assessed during the contract preparation. Contractual risk refers to the costs and reputational risks associated with the contract or contractual relationship or the operational risk related to the city's organisational and production responsibilities.

- There are several different quality range contract risks. If actualised, these may result in additional costs or schedule delays due to price, damages, litigation, lost human resources, or any other reason. In the city's internal operations, contractual risks can be caused by incomplete internal information flow and non-compliance with contractual responsibilities.

So the city of Kerava understands the procurement risks mainly as contract risks, and it could have been categorised to contract risk category also. However, the interpretation made in this research is that the rest of the first category manuals does not have such broad contract manual risk description
and guidance, rather only a pretty narrow statement or interpretation that the contract constructs the risk.

4.4 **Risk management recognised as a key part of the procurement**

Unlike the previous paragraph, this category sums up the public procurement risk management perspectives that suggest risk management is a key part of procurement or that risk management is a continuing process ongoing with the procurement. However, this category's perspectives does not describe the necessary risk management process overall or does not see or describe it as a part of comprehensive risk management. This perspective was found from the data in the selected coding phase, where at first, these were grouped together with the previous category. However, the link to risk management was so straightforward that the categories need to be separated. Examples of the perspectives;

- As a premise to review the contract implementation and the service quality, we have identified the risks associated with the contract already in the preparation phase of the procurement. The risks will be managed appropriately throughout the contract's life.

- The procurement is also affected by other legislation, such as the Municipal Act: decision-making under the Procurement Act is at the same time part of municipal decision-making. The Municipal Act sets obligations to organisation internal control, and risk management also applies to procurement contracts and their management process.

4.5 **A comprehensive description of procurement risk management**

The data selected in this category included such a comprehensive description of procurement risk management that the connection should be clear also to those who are not experts of the risk management. There were two manuals selected in this category, the City of Porvoo Procurement guidelines 2020 and the European Union Public Procurement Guidance 2018. These both were exceptional compared to the rest of the reviewed ones. Although the European Union guidance could be interpreted as something else than Finnish public government publications, the manual is published in the finnish language. That is why it was interpreted as targeted to Finnish public organisations.

Both of the manuals include a separate chapter for risk management that describes the basic but essential risk management phases. For example, in the City of Porvoo procurement guidance
(2020), there is a description of the essential phases of the risk management process and also a description of comprehensive risk management;

- The risk management process components are; identification, assessment, measures and monitoring.

- Comprehensive risk management is linked to the organisation's strategic, operational and financial objectives and is intended to ensure that the set objectives are achieved.

The European Union procurement guidance to public procurements (2018) begins its risk management chapter by describing the complexity of the procurement processes that requires a significant number of different internal and external stakeholders. The context and combination of several different factors and impacts cause a number of risks that need to be identified and appropriately assessed.

The European Union guidance suggests anticipating potential risks, even in small and simple contracts. Although complex contracts are riskier than simple contracts, risk management should be integrated into all contract management processes. The contracting authorities should carry out risk assessments as early as possible in the procurement procedure's planning phase. (European Union, 2018)

Rather a positive issue in the European Union guidance (2018) was that it had a prompt to conduct risk management procedures in the small procurements, which are usually overlooked from my own experience. The remainder of the guidance is; In the case of small and simple contracts, two easy methods can be used to identify risks and corresponding mitigation measures:

- Critically examine procurement documents, and in particular technical specifications, in order to answer the question "what could go wrong?" This can be done by a person who is not directly involved in the preparation of the project.

- Gather feedback and “lessons learned” on implementing previous similar contracts, possibly contacting other contracting authorities.

There is a reasonable reminder that public procurement officers do not need to have specific skills to carry out risk analysis and contingency plans in the European Unions guidance. Proper knowledge of the procurement context, procedure and standard methods should be sufficient.
"Poorly performed risk analyzes have not caused significant errors. The most common errors occur when risk analyzes are not performed at all.” (European Union, 2018)

4.6 NO REFERENCE TO RISK MANAGEMENT

The sixth perspective to procurement risk management is not an actual perspective at all. Within the data, there were procurement manuals that did not have risk management referred or acknowledged at any level. All of these manuals included in the first set of manuals gathered for this research. Afterwards, there would have been more similar manuals available, but the decision was made not to include more such manuals since this research does not have any quantitative aims for the manuals. Most of these manuals were from smaller municipalities and was very constricted overall.

Nevertheless, a couple of well-known growth centres were included in these and one state-level manual, the State procurement digitalisation manual from 2019. This State procurement digitalisation manual (Koivurinta & Pinni, 2019) suggests that procurement must be based on careful planning in the state. Also, the guide preface is suggested that the guide would provide guidelines and criteria for the procurement planning and schedule of government agencies and institutions.

Another example, Central Uusimaa Education Consortium Keuda, refers in their 2020 procurement manual (2020) to legislation and the Association of Finnish Municipalities guidelines.

- In addition to the procurement act (Public Procurement Act) and supplementary regulations, the commercial act, the municipal act, the administrative act, the publicity act and the customer liability act, as well as the association of municipalities' own administrative rules, these procurement instructions should be followed.

- The procurement guidelines specify the Association of Finnish Municipalities' procurement guidelines (General Procurement Guidelines for Municipalities 2010) and define Keuda's own procurement practices, especially with regard to procurements below the national threshold level and the competence of officials in procurement matters.

However, the general procurement guidance for municipalities (2010) risk management perspective is included in the first category perspectives; the procurement risks are seen based on the contract and contract risks.
5 CONCLUSIONS AND REFLECTION

This research explored the manuals and guides for public procurement, using a constructivist grounded theory approach by Kathy Charmaz, to develop a theoretical understanding of a subject. This research focused on understanding the risk management perspective on public procurement manuals and guides and the relevancy of risk management. This research focuses on answering the research questions:

- From what perspective procurement manuals describes risk management?
- Is risk management a relevant factor in procurement, according to the manuals?

The research findings answer the first research questions, “From what perspective procurement manuals describes risk management?” and describe six different perspectives to risk management according to the selected material results and analysis.

The six perspectives are following;

- **A comprehensive description of procurement risk management** set such guidance that the connection should be clear also to those who are not risk management experts.

- **Risk management is recognised as a key part of procurements**, suggesting that risk management is a key part of procurement or that risk management is a continuing process ongoing with public procurement. No description or guidance included.

- **Recognised risk management**; however, the link between procurement management and risk management as a key part of procurements is not recognised or set.

- **Supplier as a risk** considers that possible risks are supplier based issues that may complicate the contract's implementation between the supplier and a public organisation.

- **Contract as a risk** category perspective is that the procurement risks are contract-based; the contract made with the supplier is not desirable or binds the organisation to bad quality or an expensive contract.

- The collected data also included manuals that had no recognised connection to risk management.
To answer the second research question, “Is risk management a relevant factor in procurement, according to the manuals?” the research findings for the risk management relevancy of the manuals were diverse. As Table 4 shows, only two of the selected procurement manuals have a comprehensive risk management description. Nonetheless, the relevancy of risk management in public procurements are undisputed in 13 manuals, and there is no relevancy in the six manuals. In the rest of the manuals, relevancy is an interpretative subject. These are the supplier as a risk and contract as risk perspectives that discusses risks at a certain level; however, their perspective is so narrow that the comprehensive relevancy could not be clarified in this study.

<table>
<thead>
<tr>
<th>Category coverage</th>
<th>Manuals</th>
<th>Risk management relevancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>A comprehensive description of procurement risk management</td>
<td>2</td>
<td>Undisputed</td>
</tr>
<tr>
<td>Risk management is recognised as a key part of procurements</td>
<td>3</td>
<td>Undisputed</td>
</tr>
<tr>
<td>Recognised risk management</td>
<td>8</td>
<td>Undisputed</td>
</tr>
<tr>
<td>Supplier as a risk</td>
<td>7</td>
<td>Open to interpretation</td>
</tr>
<tr>
<td>Contract as a risk</td>
<td>9</td>
<td>Open to interpretation</td>
</tr>
<tr>
<td>No category (No risk management recognition)</td>
<td>6</td>
<td>No relevancy</td>
</tr>
</tbody>
</table>

As the findings show, those public procurement manuals that include risk management at any level emphasizes supplier selection and the success of the supplier selection and tendering process. The most comprehensive manuals discuss comprehensive risk management and its linkage to the organisation's strategic, operational, and financial management and objectives. These manuals also emphasise the supplier- and the contract as a risk perspective. In addition to the supplier selection, contract-based risk, and the procurement's success, the risks should also be assessed in terms of the procurement subject and protecting the authority's information. Procurement processes in organisations should be organised so that procurement planning can be carried out with all necessary stakeholders such as procurement and tendering experts, substance experts, security-,
information security and risk management experts, etc. The procurement responsibilities should also be clarified, considering risk management.

According to Ilmonen et al. (2016), good practice of comprehensive risk management is a process performed by the top management of the organisation, operative management and all employees together. It is performed through all organisation processes and at all levels. As the aim of comprehensive risk management is to consider all the significant factors that may affect the organisation operation. However, the approach seeks to avoid situations where risk management is seen as a redundant administrative process, or some significant organisation department is not committed to it.

The good practice of a comprehensive risk management approach contradicts the silo-like structures of public organisations. There are too many and inconsistent instructions creating a too complex entirety. Proper legislation, regulations, policies and guidelines are necessary as a foundation for safety thinking and activity. However, any safety aspect cannot be promoted with only instructions or regulations. The guidelines and methods they promote need to be usable and supportive to reach the guidelines' original goal. It is necessary to understand that if the guidelines truly help conduct the procurements or motivate personnel to follow the guidelines and continuously improve safety practices. (Ilmonen et al., 2016; Teperi, Ruotsala, & Ala-laurinaho, 2021)

Situational Picture of public procurement in Finland statement (2020c) is that the public procurement process development requires multidisciplinary expertise, covering analysis, stakeholder cooperation, communication, performance monitoring and management expertise. Comprehensive procurement management is more than just taking legal and technical considerations into account in the bidding process. When this statement is compared to Anttiroiko & Oulasvirta research results (2017), the unique nature of risk management and a silo mentality hinders the adoption of the comprehensive risk management model because the decision-makers are comfortable with the silo-like management together with slow benefit realisation does not support voluntary adoption of comprehensive risk management model. There may be a lack of cross-silo cooperation and unconscious anti-innovation culture, which boosts the silo-like structure.

Relying on the research results and the previous discussion, a few suggestions arises to procurement manuals:
The first suggestion is that the manuals should provide better coverage to all key parts of the procurement process. The manuals should indicate the necessities for successful public procurements. The accuracy of the manual does not need to be fully detailed. However, such that procurement personnel understand the necessity to integrate all critical parts to the procurement, including risk management.

The second suggestion is that the organisation procurement guidelines and manuals should cover the comprehensive risk management perspective to understand the complex connections and dependencies with all the organisation operations and clarify the responsibilities.

The third suggestion is that those organisation procurement guidelines should be organised and coherent. The guidelines should take into account differences between departments. In-depth instructions should be available, and clear instructions to contact substance specialists.

As a fourth suggestion, the procurement manuals should also include broader coverage of different perspectives of the possible objects to be protected in procurements, whether the objectives to protect are information, people, property or values, and the procurement process success objectives.

It is naïve to think that these researched materials are the only information that the procurement personnel knowledge is based on. Nevertheless, when these are the public sector guidance discussed, there is a necessity to be a more comprehensive sampling of issues that need to be considered when planning public procurement. Public procurement as a concept needs a lot more research to find all the critical factors that prevent a successful and efficient procurement process. As this research focused only on the procurement manuals, the suggested following research could focus interviews on the operative procurement departments.
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7 APPENDIX 1: CITY OF KERAVA PROCUREMENT PROCESS

City of Kerava procurement process from the City of Kerava Procurement manual 2019.