

# Improving the contract arrangement model of Coppa

MSc. Business Administration



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## Preface

This thesis has been conducted for the Master of Business Administration in Purchasing and Supply Management at the University of Twente. During eight months, research was conducted for the company Coppa Consultancy by doing a literature review and expert interviews.

The study aims to improve Coppa's current contract arrangement model. This model segments the providers of a municipality operating in the social domain. This reveals the strategic partners of a municipality and how they can adapt their (conversation)strategy. The assignment caught my attention since I am interested in the public and healthcare sectors. Interested answers and additions to the Model of Coppa emerged by conducting interviews. It was also very interesting for me since the contract management activities of municipalities operating in the social domain could still be improved and optimised.

Eight interviews were performed in total, and I want to thank each responder for their time, work, and contributions to this study. I would also like to thank Ms. Marlou Snijders, my Coppa supervisor, for her advice, encouragement, and criticism over the past few months. She also gave me the chance to conduct this study.

I did learn a lot during the process of conducting this research. Interested answers from the interviews revealed additions to the current model. It was also very interesting for me since the contract management activities of municipalities operating in the social domain could still be improved and optimised.

Lastly, I thank my supervisors from the University of Twente, Prof Dr Louise Knight and Dr Klaas Stek. They provided me with guidance and support during the research and freedom to perform the type of study, which was very nice. Their advice led to the contribution to the completion of this thesis. I also would like to thank Dr. Frederik Vos for his supervised work during the first part of my research.

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## Abstract

Effective contract management ensures municipalities get the goods and services they need while the providers receive compensation for their work (Mchopa, 2015). The number, complexity, and criticality of contracts of contract that link companies to providers have increased significantly (Brunet & César, 2021). Managing contracts from different providers can be complicated because there are significant and less essential suppliers (Brown & Potoski, 2003). To manage all those contracts more effectively, municipalities can segment their suppliers. The most known model to segment suppliers is the Kraljic matrix, a two-by-two matrix with the dimension of supply risk and profit impact (Bai et al., 2017).

Municipalities sometimes have many providers and need help getting a grip on these contracts, which can cause administrative burdens and capacity issues for contract managers<sup>12</sup>. By segmenting suppliers, providers are categorised based on various criteria. This segmentation enables municipalities to identify suppliers who can provide the best value, meet specific needs, and contribute to achieving their strategic objectives. There is hardly any insight into how municipalities can determine their strategic suppliers because they need to learn how to segment their suppliers, and the used models have limitations (Hudnurkar et al., 2016; Rezaei & Fallah Lajimi, 2019). Existing literature provides limited guidance on how municipalities can validate and enhance their contract arrangement models to optimise supplier segmentation (Selviaridis & Wynstra, 2015).

The research question: *How can Coppa's contract arrangement model for identifying partners be improved?* The research will explore methods, frameworks, and best practices from literature and outcomes of interviews to enhance supplier segmentation and strategically identify partners that align with the municipality's goals and objectives. Using the model, a municipality can measure the supply risk and the impact on the organisation of a service or good delivered by the supplier (Shiralkar et al., 2022).

Municipalities play an important role in social domain contract management, ensuring that providers of municipalities meet their contracts. To address the challenges in contract management, municipalities should focus on improving data accessibility, integrating tools and systems, and developing more comprehensive strategies. Flexibility in contract management strategies is essential to adapt to each municipality's specific needs and challenges. Effective communication, monitoring, and evaluating provider performance are vital to achieving contract goals and ensuring contract compliance.

Eight interviews were conducted with contract managers at municipalities, revealing information about contract management practices and provider segmentation operating in the social domain. The interviews revealed elements needed to be added to Coppa's current contract arrangement model. The existence of different segmentation models and criteria suggests that municipalities tailor their approaches to local needs. Achieving consistency in segmentation criteria could be challenging but can be essential for standardisation and best practices. The segmentation models of municipalities should be adaptable to remain relevant and practical.

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<sup>1</sup> Contractmanagement in het sociaal domein voor gemeenten | Nevi. (n.d.). Nevi. <https://nevi.nl/trainingen/contractmanagement-sociaal-domein-voor-gemeente>

<sup>2</sup> Trends & Ontwikkelingen - BIZOB. (2019). BIZOB. <https://www.bizob.nl/sociaal-domein/trends-ontwikkelingen/>

This research recommends criteria to the current model: the criteria spend, expected growth, provider experience in the impact dimension and the criteria geographical location, and quality in the delivery risk dimension. Including a new dimension, willingness, and associated criteria, the commitment, motivation, and trust to enter into a (long-term) relationship), could be relevant for Coppa to determine their strategic partners better. These factors highlight the importance of the “willingness” dimension, which should be incorporated into the provider segmentation model. The contributions of provider segmentation are improved focus on efficiency, enhanced budgeting, effective risk management, informed decision-making, strategic attention allocation, and efficient resource allocation. By segmenting providers, municipalities can allocate their resources more efficiently, focusing on partners that can provide higher value or entail higher risks. Provider segmentation in municipalities for the social domain is dynamic and multifaceted. While it offers numerous advantages, it also has challenges that must be addressed. Including various criteria in segmentation models will be critical for optimising contract management within these municipalities. A new model has been developed that municipalities can use to determine their strategic partners.

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## Index of abbreviations

<b>Abbreviation</b>	<b>Definition</b>
GDP	Gross domestic product
MCDM	Multi-criteria decision-making
OECD	Organisation for Economic Cooperation and Development
PBC	Performance-based contracting
PPM	Purchasing portfolio management
SPM	Supplier potential matrix
SRM	Supplier relationship management
TBL	Triple bottom line
TCE	Transaction Cost Economics

*Table 1: List of abbreviations*

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# 1. Introduction

## 1.1 Research Motivation

According to the European Union, public procurement accounts for 14% or more of the total gross domestic product (GDP)<sup>3</sup>. The success of procurement is dependent on the link between buyers, government agencies, and suppliers. For purchasing organisations, the suppliers are valuable resources, and managing these resources is a critical point for the performance of public procurement (Changalima et al., 2022). Managing the contracts of these resources, and suppliers, is called contract management, the process of managing contracts between two or more parties to ensure that both parties fulfil their contractual obligations.

Effective contract management ensures that organisations get the goods and services they need while the suppliers receive compensation for their work (Mchopa, 2015). The number, complexity, and criticality of contracts linking companies to suppliers have increased significantly, making it harder for government agencies to manage these contracts (Brunet & César, 2021). If services are outsourced to suppliers, the overall performance of the buying organisation, the government agency, is highly dependent on how these suppliers perform. Formal contracts always have limitations because they are never complete, as all possible events cannot be foreseen (Broekhuis & Scholten, 2018).

Managing many different suppliers can be complex due to the size and importance of each supplier, resulting in poor contract management (Brown & Potoski, 2003; Brunet & César, 2021; Patanakul, 2014). This could increase costs because the management costs of a contract can be very high. If managing the contract is costly, suppliers' opportunistic behaviours can increase (Zhao et al., 2018). This behaviour has been reported during contract execution where services and goods are not delivered on time, specifications are not being met as required, and internal users complain of late deliveries. Contract management is described as having a grip on project monitoring and control. When a contract is well-defined and planned, the principal (buyers) and agents (suppliers) find it easy to meet each other's needs efficiently, resulting in the timely execution of the contract (Oluka & Basheka, 2014). Organisations that successfully manage contracts have confirmed the fact that effective contracts depend, to a great extent, on the processes used to create those contracts. Thus, to award and successfully manage effective contracts, organisations must have mature contract management processes in place (Garrett & Rendon, 2015).

One of the methods to manage these contracts more effectively and efficiently is supplier segmentation. When dealing with many suppliers, this approach enables organisations to categorise suppliers based on various criteria (Bai et al., 2017; Oghazi et al., 2016). Supplier segmentation involves categorising suppliers based on multiple criteria (Lajimi & Majidi, 2021). Supply chain experts widely use the Kraljic method for supplier segmentation, also known as the Purchasing Portfolio Matrix. The method is a two-by-two matrix and knows two dimensions: (1) Supply Risk and (2) Profit Impact. Based on the supplier's performance, suppliers are assigned to one of the four segments (Bai et al., 2017). However, it has been criticised for its reliance on momentary supplier

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<sup>3</sup> Public procurement. (n.d.). Internal Market, Industry, Entrepreneurship and SMEs. [https://single-market-economy.ec.europa.eu/single-market/public-procurement\\_en#:~:text=Public%20procurement%20refers%20to%20the,goods%20or%20services%20from%20companies](https://single-market-economy.ec.europa.eu/single-market/public-procurement_en#:~:text=Public%20procurement%20refers%20to%20the,goods%20or%20services%20from%20companies).

performance and limited two-dimensional framework. Consequently, many segmentation methods with diverse dimensions have emerged, making it challenging for organisations to choose a suitable approach (Shiralkar et al., 2022).

Therefore, much research has been done on supplier segmentation, leading to many different methods with different dimensions defined in the literature. This can make it hard for organisations to choose a specific approach (Lajimi & Majidi, 2021). Organisations can effectively segment suppliers by developing tailored strategies, optimising resource allocation, and enhancing supply chain performance (Barrera et al., 2023).

Procurement within municipalities involves the acquisition of goods and services. Efficient and effective contract management is essential for municipalities to ensure contractual obligations, minimise risks, resolve disputes, and maximise contract benefits (Helby Petersen et al., 2022; Mchopa, 2015). Suppliers that deliver services to the inhabitants of municipalities are called providers. Currently, municipalities operating in the social domain have many providers of their products and services. Social domain means the field implementing the Youth Act, Participation Act, and WMO (Social Support Act). Municipalities and social organisations work together on health, welfare and safety. Together, they promote a broad approach to health and support and allow full participation<sup>4</sup>. Municipalities contract with healthcare providers annually to provide resources in the social domain. This research will focus on the contracts of municipalities operating in the social domain. However, how do you get a grip on these contracts<sup>5</sup>? Municipalities sometimes have hundreds of providers, which can cause more significant administrative burdens and capacity issues for purchasing, contract management, and municipal organisations<sup>6</sup>. The tendering and contracting process is essential because it is how municipalities and healthcare providers organise their offering of youth care and social support<sup>7</sup>.

The problem is that municipalities need help managing contracts and supplier relationships, leading to inefficiencies, increased costs, and suboptimal outcomes (Liu et al., 2009). Specifically, there needs to be a systematic supplier segmentation model for municipalities, which hampers their ability to optimise their procurement activities, ensure compliance, and maximise taxpayer value (Zhao et al., 2018). Municipalities can prioritise their engagement efforts by segmenting suppliers, establishing long-term partnerships with strategic suppliers, and optimising their procurement outcomes. To address these challenges, municipalities can benefit from adopting best practices and a framework developed in the field of public procurement (Barrera et al., 2023; Rezaei & Ortt, 2012). Existing literature must provide more guidance on how municipalities can validate and enhance their contract arrangement models. There is hardly any insight into how municipalities can determine their strategic suppliers because they need to learn how to segment their suppliers, and the used models have limitations (Hudnurkar et al., 2016; Rezaei & Fallah Lajimi, 2019).

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<sup>4</sup> Ketenbureau i-Sociaal domein. (n.d.-b). <https://i-sociaaldomein.nl/cms/view/b687a2d5-7864-4c2f-bde6-323399377a2c/00-aanbesteden-contracteren>

<sup>5</sup> Contractmanagement in het sociaal domein voor gemeenten | Nevi. (n.d.). Nevi. <https://nevi.nl/trainingen/contractmanagement-sociaal-domein-voor-gemeente>

<sup>6</sup> Trends & Ontwikkelingen - BIZOB. (2019). BIZOB. <https://www.bizob.nl/sociaal-domein/trends-ontwikkelingen/>

<sup>7</sup> Ketenbureau i-Sociaal domein. (n.d.-b). <https://i-sociaaldomein.nl/cms/view/b687a2d5-7864-4c2f-bde6-323399377a2c/00-aanbesteden-contracteren>

## 1.2 Research question

In our quest to address these challenges, we propose to validate and improve the contract arrangement model developed by Coppa. This organisation consults municipalities with their procurement and contract management. It improves the processes of municipalities by adapting their advice and knowledge. This research aims to contribute to the existing body of knowledge by establishing a systematic approach to enhance supplier segmentation and strategically identify partners aligned with municipalities' goals and objectives. We will explore literature, interview outcomes, and best practices to craft a comprehensive and practical framework for optimising procurement activities, ensuring compliance, and maximising taxpayer value. In summary, the research question stands as follows:

How can Coppa's contract arrangement model for identifying partners be improved?

In pursuing this question, our study endeavours to present a systematic approach that validates and enhances the contract arrangement model, paving the way for more efficient and effective supplier segmentation and a strategic alignment with municipal goals and objectives.

### Sub questions

1. What is (effective) contract management?
2. What factors influence contract management in municipalities for the social domain?
3. What is the contribution of supplier segmentation?
4. Which dimensions and criteria should be included in the model?

## 1.3 Company introduction

Coppa is a purchasing consultancy company in the healthcare and public sector. Coppa professionally supports organisations with their purchasing issues. Coppa is located in Arnhem. Coppa has excellent experience and knowledge about purchasing within municipalities and other government agencies. They have supervised European tenders, issued buying advice and set up the purchasing function for many organisations. In addition, they also help with the preparation of substantive specifications, programs of requirements, legal and project support, and the preparation of a savings plan or purchasing calendar. Coppa has excellent experience and knowledge about buying within governance, hospitals and healthcare institutions. This means that their services consist of purchasing advice, outsourcing purchasing, purchasing solutions, European tendering, legal advice, creating better places, purchasing collective and sustainability<sup>8</sup>.

Nowadays, business models are more complex, and companies have been refocusing on their core businesses in recent years, considering that delegating certain aspects of their value chain to third parties guarantees the efficiency of outsourced functions and drives flexibility and agility in their core businesses. Managing contracts from multiple suppliers can be challenging because certain suppliers may be more important than others. The added value of contract management intensity per contract must be thoroughly examined. Coppa carries out many different interim and advisory assignments in municipal contract management. There needs to be more insight into how

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<sup>8</sup> Coppa. (2023). *Inkoopadviesbureau voor zorg & overheid*. Retrieved January 17, 2023 from <https://coppa.nl/>

municipalities can determine their strategic suppliers. Only a few commercial companies, including Coppa, have developed a model for this.

To determine the strategic partners, Coppa is currently using a self-designed model to identify meaningful relationships. However, they are still deciding whether this model fulfils the requirements. This model is called **the contract arrangement model**, which includes the dimensions of supply risk and the impact on the organisation. To test these constructs, they use multiple criteria to test the impact and supply risk for the organisation. These criteria are set up by themselves, and they are still determining whether these dimensions and criteria include all the essential elements. Municipalities can segment the contracted suppliers by optimising the model and gaining insight into the strategic partners. For each type of supplier, it can then be determined which contract management intensity is desirable. This allows effective and targeted contract management.

#### 1.4 Academic and practical relevance

The contribution of this research is significant for practice and theory on contract management per type of supplier. The results of this research will give practitioners and academics of municipalities insights into the different segments of suppliers within their organisation. First, the new model has added academic relevance. The theoretical relevance of this research will be that it contributes to the existing body of knowledge in the field of supplier segmentation in the public sector. It provides a framework for municipalities or organisations in the public sector to work with. (Hudnurkar et al., 2016). Also, the current literature contains some gaps regarding supplier segmentation in the public sector. This research can address those gaps by exploring new dimensions, methodologies, or contextual factors that have yet to be extensively studied, thus expanding the knowledge base in the field (Bai et al., 2017). The model of the literature will also provide insights into whether it is applicable in the public sector and especially in the social domain of municipalities.

The new model aims to provide municipalities with insights into their strategic partners. Using the model, a municipality can measure the supply risk and the impact on the organisation of a service or good delivered by the supplier (Shiralkar et al., 2022). Based on this measurement, the strategic partners can be determined. Second, this research provides insights into the critical factors for municipalities to decide on their strategic partners. Lastly, it gives an overview of the different types of suppliers. The desired level of contract management and associated activities can be determined per type of supplier (Rezaei & Fallah Lajimi, 2019). This means municipalities can improve their supplier management performance because the research findings and recommendations can impact how organisations manage their suppliers. Implementing effective contract management activities and supplier segmentation practices can enhance supplier performance, reduce costs, and improve overall operational efficiency. The research findings can help organisations foster more robust collaboration and innovation with their suppliers. By understanding the capabilities and strategic fit of different suppliers, organisations can establish collaborative relationships, drive co-innovation initiatives, and tap into the expertise and ideas of their suppliers. It can help organisations to manage their contracts more efficiently, especially in the case of municipalities.

## 2. Theoretical framework

### 2.1 Contract management

Contract management is a crucial process for municipalities to ensure the effective and efficient delivery of services to the public. Contract management involves the planning, negotiation, execution, monitoring, and evaluation of contracts between municipalities and providers (Helby Petersen et al., 2022). Contract management is strongly related to how well a firm performs. According to current research, corporate organisations can reap several benefits through contract management (Rashid Issa, 2019). Contract management entails the buyer's activities during a contract period to ensure that all parties to the contract fulfil their contractual obligations (Baily et al., 2021). Therefore, effective contract management aims to minimise risks, reduce costs, improve accountability, and maintain positive stakeholder relationships (Helby Petersen et al., 2022).

Contracts are "an agreement between two parties under which one party promises to do something for the other in return for a consideration, usually a payment" (Lowe, 2007, p. 318). It involves legally binding terms and conditions that both parties must fulfil (Kibogo & Mwangangi, 2014). The seller's primary goal is to obtain the maximum price above total costs, while the buyer seeks the lowest price below the value received from the product (Helby Petersen et al., 2022). Contract management also covers the title of financial optimisation. Municipalities have lost significant amounts due to weak contract management practices. Therefore, the operational efficiency of the business can only be achieved if there is proper contract management (Rashid Issa, 2019).

Contracts are vital for aligning incentives among supply chain partners and negotiating the specific terms of their relationship. Well-structured agreements reduce dispute resolution costs, promote stable relationships, and lower transaction costs within the supply chain (Sieke, 2008). So, more complete contracts can reduce uncertainty for both parties in the contracting relationship (Brown et al., 2007). Typically, an agreement involves two parties: the purchaser, who acquires goods or services by payment, and the supplier, who provides the goods and services. Additionally, a project manager may lead the purchaser's contract management team, and there may be involvement from subcontractors, who are suppliers to the leading supplier (Lowe, 2007). Performance results from a team reaching the objectives of the outsourced project. As with any other project, project performance can be measured as the extent to which a project is completed within time and budget and demonstrates a quality that satisfies customer requirements (Kerzner, 2017). The degree of project success that is outsourced is affected by numerous factors (Rose, 2013). One of the most significant factors is contract management, which is also why it is an important topic (Mutua et al., 2014).

The contract management process identifies the purchaser's needs and concludes upon contract completion. Critical aspects of the process include risk identification, apportionment, and management related to contract performance and relationship management between the purchaser and supplier (Lowe, 2007). In this research, the post-contract activities will be discussed, which means the activities that occur after the execution of the contract. The buyer must continue to exert effort to ensure the supplier performs satisfactorily. Supplier monitoring is widely used to ensure the contract's terms and obligations are followed (Mchopa, 2015).

Contract management experience significantly reduces spending on contract management activities by identifying effective transaction cost expenditures that lower risks and facilitate successful contract outcomes. Governments extensively utilise contracts with external suppliers to provide services and products, with public procurement constituting a significant portion of total government expenditures in OECD countries (Helby Petersen et al., 2022).

## 2.2 Theories of Contract Management

### 2.2.1 Transaction cost theory

One relevant theory for contract management is transaction cost economics (TCE), which provides insights into the make-or-buy decision in municipalities and helps understand the factors influencing the outsourcing decision and challenges in the contracting process (Williamson, 2008).

Municipalities often outsource services because the costs are lower than in-house provision, including searching for and evaluating contractors, negotiating and drafting contracts, monitoring performance, and enforcing the contract. Lowering these exchange costs enhances economic efficiency (Helby Petersen et al., 2022; Williamson, 2008). Contracts are negotiating regulators because they define the scope of work and the terms of agreements (Changalima et al., 2022).

To achieve desired procurement outcomes, organisations need to manage contracts effectively, as difficulties in contract management can hinder successful procurement (Nikolaou & Loizou, 2015; Zou et al., 2019). Transaction cost economics suggest that a detailed contract with clearly defined responsibilities, performance criteria, and incentives can reduce transaction costs associated with asset specificity and measurement difficulty (Zou et al., 2019). The risk of opportunistic behaviour and contract breaches can be mitigated by stipulating mutual expectations and crafting governance arrangements that match the exchange conditions (Yin et al., 2023; Zou et al., 2019). Ineffective contract management can lead to project delays and cost increases (Changalima et al., 2022). The objective for companies is to maximise the flow of goods and services while minimising transaction costs. The effectiveness in managing these costs determines the sustainability and growth of businesses, while poor management may lead to decline and closure (Judge & Dooley, 2006).

### 2.2.2 Agency Theory

In the context of contract management and supplier segmentation, agency theory explores the dynamics between principals (clients) and agents (contractors) and the potential principal-agent problem, where agents may prioritise their interests over those of the principals (Panda & Leepsa, 2017). Principals engage the agent to perform certain activities on their behalf where difficulties may arise (Changalima et al., 2022). To address this problem, municipalities can implement various measures such as incentive alignment, monitoring, control mechanisms, and corporate governance (Panda & Leepsa, 2017). To ensure that agents do not act in self-interest, the principal can monitor their activities or through contractual relationships (Changalima et al., 2022).

Formal contracts serve as the basis for business transactions between principals (buyers) and agents (suppliers), particularly in situations where pure market forces cannot govern the relationship (Van der Valk & Van Iwaarden, 2011). Monitoring is vital in helping principals address

agents' opportunism and ensure adherence to contractual obligations (Van der Valk & Van Iwaarden, 2011).

### 2.3 Effective contract management

Public sector organisations have increasingly relied on contracts to procure services and goods in recent years. Effective contract management in municipalities involves a systematic and strategic approach to efficiently handle contracts throughout their entire lifecycle (Helby Petersen et al., 2022). According to the agency theory, the objective is to obtain the service or product at the right quality, quantity, source, time, and price (Monczka et al., 2020). Implementing effective contract management practices is crucial for municipalities as it helps minimise risks, maximise value, and ensure compliance with relevant laws and regulations. It also reduces production costs, transaction costs, and contract risk (Helby Petersen et al., 2022). This research will focus on post-contractual tasks like contract execution, monitoring, and closure; the focus will primarily be on monitoring. Effective monitoring and administration procedures are crucial during contract execution to mitigate unforeseen circumstances, irrational choices, and opportunistic actions that may hinder the procurement entity from achieving value for money (Mchopa, 2015).

Municipal contract management can be complex and bring unforeseen challenges, making it difficult for both parties (Romzek & Johnston, 2002). That is why an essential feature of effective contract management is transparent and mutually understood specifications of each party's contract obligations and how the contractor's performance will be assessed (Romzek & Johnston, 2005). Successful contract management practices meet the needs of stakeholders, ensure the best allocation of resources, stimulate competition, and manage risks and potential liabilities, ultimately improving service delivery (Mchopa, 2015). Governments play a vital role in contract management activities as they allocate funds and have a clear understanding of transaction cost spending. Monitoring providers' performance is essential, positively affecting cost reduction, lead times, and buyer satisfaction (Changalima et al., 2022).

### 2.4 Complex contracts

Incorporating the concept of complex contracting and contracting in service triads is crucial when studying contract management and supplier segmentation. Complex contracting refers to the challenges in specifying products or services in a contract, often due to multiple stakeholders, intricate legal and financial structures, and high levels of risk and uncertainty (Brown et al., 2016). Understanding and effectively managing complex contracts are essential for addressing challenges related to contract management, performance monitoring, and governance (Brunet & César, 2021).

Moreover, as service purchasing becomes more prevalent in municipalities, the complexity of service contracts with providers increases. This complexity arises from the intangibility of offerings, context-dependence of value creation, resource and outcome heterogeneity, and inseparability of production and consumption of services (Eckerd & Girth, 2017). These complexities make it challenging to accurately describe and define complex products and services in contractual terms, leading to risks and potential conflicts arising from unclear terms (Brown et al., 2018). Managing complex contracts effectively requires attention to detail and adherence to all provisions

(Oluka & Basheka, 2014). Still, procurement contract management challenges can impede the achievement of desired outcomes (Changalima et al., 2022).

To manage complex contracts effectively, it is necessary to establish rules and relationships that foster cooperative behaviour between the purchasing government and the provider (Brown et al., 2016). These rules provide a framework for addressing deviations from contractual obligations and promoting accountability. In addition to formal rules, successful complex contracting relies on developing relationships that encourage cooperation and mutual understanding between the municipality and the provider (Brown et al., 2018). The joint agreement ensures that both parties interpret the contract rules and the relationship similarly, enhancing the prospects of favourable outcomes (Brown et al., 2016).

Municipalities face distinct challenges in service triads compared to other contract contexts due to specific dynamics and dependencies. A service triad involves a buyer, supplier (provider), and customer, where the buyer contracts with a supplier to directly deliver services to the buyer's customer (Wynstra et al., 2015). Often, these services are outsourced to other providers. Managing the outsourcing of core services in a service triad becomes critical because the buyer's performance towards its end customers relies on the provider's service quality (Uenk & Telgen, 2019). However, it is essential to recognise that the literature often overlooks the influence of formal and social contracts on managing providers in the contract management phase in the social domain (Broekhuis & Scholten, 2018).

The relationship between the buyer, supplier (provider), and customer in a service triad can be viewed as a complex interplay, where each actor directly connects with the other two (Broekhuis & Scholten, 2018; Wynstra et al., 2015). The supplier relies on inputs from both the customer and the buyer to deliver its services effectively, and the overall performance of the buying organisation is highly dependent on how these suppliers perform (Broekhuis & Scholten, 2018). The service triad can be seen in **Error! Reference source not found. 1..** The relationships within the service triad can be illuminated through agency theory, particularly in understanding principal-agent relationships, information asymmetry, and the need for control mechanisms. In this triadic structure, the buyer, supplier, and customer engage in a complex interplay where each actor directly connects with the other two.

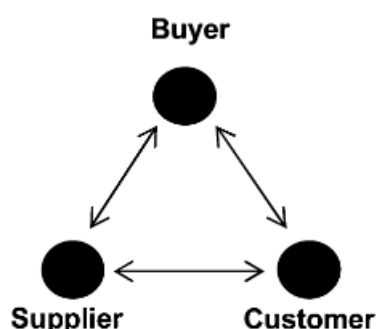


Figure 1: The service triad

To address the challenges specific to service triads, there are several mechanisms that municipalities can employ (Uenk & Telgen, 2019):



1. Obtaining or maintaining a solid position in the triad: Positions of each actor in the service triad may change over time. The "bridge" position, where the buyer maintains close communication with customers and monitors supplier performance, can provide advantages in terms of power and information. Building collaborative relationships with suppliers and minimising opportunistic behaviour are essential.
2. Relationship type: Fostering a collaborative relationship between the buyer and supplier, rather than an adversarial one, can help build trust and enhance the effectiveness of the triad. Close relational ties have a positive effect on performance.
3. Monitoring: Implementing monitoring mechanisms can assist buyers in dealing with potential opportunism from suppliers. Monitoring can involve assessing supplier output or evaluating supplier behaviour to ensure adherence to contractual agreements and service quality standards.
4. Incentives: Aligning the goals of the buyer and supplier through incentive structures can help reduce opportunistic behaviour and increase control over service quality. Designing appropriate incentives encourages suppliers to perform in the buyer's and end customers' best interest.
5. Contracts: Different types of contracts, such as behaviour-based or outcome-based contracts, can be utilised based on the measurability of desired outcomes. Contractual agreements should provide clear guidelines and performance indicators to effectively manage and evaluate service delivery.

In summary, effective management of complex contracts and service triads necessitates addressing challenges through detailed contractual provisions, collaborative relationships, and alignment of incentives.

## 2.5 Supplier segmentation

Supplier segmentation, the multi-disciplinary approach to categorising suppliers, is discussed in this section (Day et al., 2010).

### 2.5.1 Supplier Segmentation Definition

In supply chain management, the initial phases involve supplier qualification and selection. These are followed by segmentation and monitoring (Segura & Maroto, 2017). Supplier segmentation is one of the most critical components of contract management for businesses with many suppliers. Developing strategies for the various segments, rather than for each supplier, entails segmenting the suppliers into manageable groups (Lajimi & Majidi, 2021). Segmentation helps identify and categorise suppliers based on their unique characteristics, enabling organisations to develop targeted approaches for managing each segment (Rezaei et al., 2015). Supplier segmentation enables organisations to proactively manage risks and enhance supply chain resilience (Choi & Krause, 2006). By understanding the criticality and vulnerability of suppliers, organisations can allocate resources to mitigate potential disruptions and develop contingency plans. Segmentation helps identify alternative suppliers and diversify the supply base, reducing dependency on a single supplier (Manuj & Mentzer, 2008). Supplier segmentation enables municipalities to collaborate with suppliers to co-create public services (Teng & Liao, 2011). Supplier segmentation facilitates supplier integration and knowledge sharing within service triads, the relationship between buyer, provider

and customer (Broekhuis & Scholten, 2018). By categorising providers based on their expertise and knowledge domains, municipalities can develop targeted strategies to foster collaboration and exchange of best practices, improving service outcomes and effectiveness (Chiou et al., 2011). This can reduce the risk of the contracts that have been concluded and safeguard correct and timely service delivery to customers (Broekhuis & Scholten, 2018). Supplier segmentation enables organisations to develop tailored contractual arrangements based on supplier characteristics and capabilities.

### 2.5.2 Supplier Segmentation Dimensions

One of the most known models that can be used to determine the purchasing strategy of a specific category is the model of Kraljic (1983). The Kraljic matrix can segment suppliers based on supply risk and profit impact in supply chain management. This determines what relationship the buyer has with their suppliers. The model presents four categories: bottleneck (supply risk: high; profit impact: low), non-critical (supply risk: low; profit impact: low), leverage (profit impact: high; supply risk: low), and strategic (supply risk: high; profit impact: high) divided over two dimensions, called “profit impact” and “supply risk”, and then analyses the suppliers. There are many studies about the dimensions used to segment suppliers, but these dimensions do not contain all the variables that must be covered. According to the study of (Borges et al., 2022), the dimensions used vary per study and can be found in Table 2: Segmentation dimensions according to different studies. The total amount of studies differs a lot between the other dimensions. The number of studies is more for the dimension’s capabilities and willingness and the dimensions supply risk and profit impact. The relevance of this study shows that the dimensions of supply risk and profit impact are used most, which shows that these dimensions are critical. Also, the dimensions of capabilities and willingness are often used in studies, implying that these dimensions are essential. Dimensions that are not used much in studies show that these dimensions are not reliable to use to segment suppliers.

Dimensions	Covered by study	Number of studies
Products and Suppliers	Segura and Maroto (2017)	1
Agility & Business Excellence	Rajesh and Raju (2021)	1
Agility and Leanness	Drake et al. (2013)	1
Capabilities and Willingness	Rezaei and Ortt (2012), Rezaei et al. (2015), Rezaei and Ortt (2013a), Lo and Sudjatmika(2016), Bai et al. (2017), Rezaei and Ortt (2013b), Santos et al. (2017), Rezaei et al. (2017), Boujelben (2017),Duc et al. (2021)	10
Cost control and risk reduction	Hadeler and Evans (1994)	1
Customisation, Supply market volatility, Technological	Luzzini et al. (2012)	1

uncertainty, and Supplier power		
Durable arms-length and strategic partnership	Dyer et al. (1998)	1
Economies of Process and Economies of Information and Economies of Scale	Trautmann et al. (2009)	1
Strategic importance and Relationship contribution	Moeller et al. (2006)	1
Strategic importance of part to the buyer and buyer bargaining power	Tang (1999)	1
Supplier dependency risk and Buyer dependency risk	Hallikas et al. (2005)	1
Supply risk and profit impact	Olsen and Ellram (1997), Brun and Pero (2011), Gangurde and Chavan (2016), Gelderman and Van Weele (2003), Gelderman and Semeijn (2006), Hespings and Schiele (2016), Montgomery et al. (2018), Padhi et al. (2012), Caniels and Gelderman (2007), Caniels and Gelderman (2005), Torres-Ruiz and Ravindran (2018), Medeiros and Ferreira (2018), Gelderman and Van Weele (2002), Nudurupati et al. (2015), Kraljic (1983), Ferreira et al. (2015), Rius-Sorolla et al. (2020)	17
Supply risk and Profit impact and Capabilities and Willingness	Hudnurkar et al. (2016), Rezaei and Fallah Lajimi (2019)	2
Suppliers' commitment and Commodity importance	Svensson (2004a), Svensson (2004b)	2
Suppliers' Relative Power and Suppliers Overall Performance	Zhu et al. (2010)	1
Suppliers-specific investments and Buyers specific investments	Bensaou (1999)	1
Technology and Collaboration	Kaufmen et al. (2000)	1
Time frame and Content	Masella and Rangone (2000)	1

reducer resiliency and enhancers resiliency	Parkouhi et al. (2019)	1
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Table 2: Segmentation dimensions according to different studies

Rezaei & Ortt's (2012) model uses an integrated approach for supplier segmentation that includes two dimensions: capabilities (supplier knowledge and skills) and willingness (supplier motivation to collaborate with the buying company). They depicted supplier companies in four quarters based on their innovation and to show their evolutionary displacement over buyers for the buyer to engage in a strategic and effective partnership with the suppliers about a set of evolving business functions and activities in supply chain management (Rezaei & Ortt, 2012). In Figure 2: Supplier segmentation models (left: PPM model and suitable: SPM model), the two most popular supplier segmentation models, according to studies, can be seen.

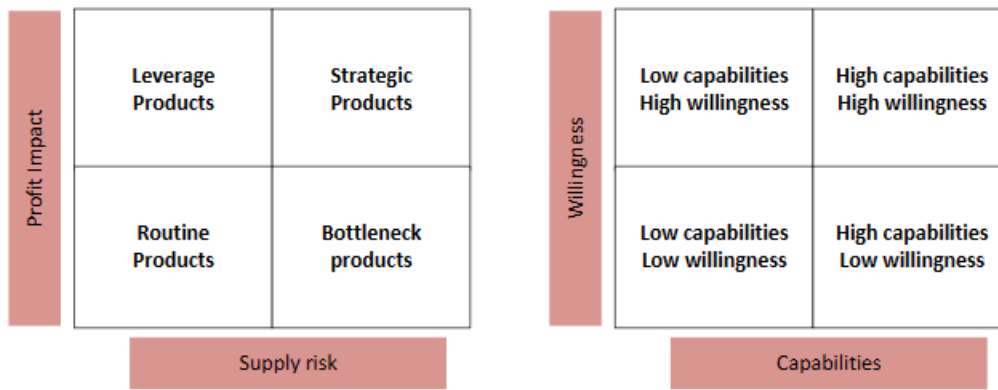


Figure 2: Supplier segmentation models (left: PPM model and suitable: SPM model)

### 2.5.3 Supplier Segmentation Criteria

The supplier's capabilities and willingness to start and maintain the relationship with its customer are fundamental to collaboration (Hudnurkar et al., 2016). According to (Hudnurkar et al., 2016), the model of (Rezaei & Ortt, 2012) is limited in terms of how practitioners can use the factors. This is because purchasing and supply management are more strategic these days (Rezaei & Fallah Lajimi, 2019). Rezaei & Ortt's (2012) model is called the supplier potential matrix (SPM), which includes supplier capabilities and willingness. The purchasing portfolio matrix (PPM) of Kraljic (1983) is the segmentation method that considers the dimensions of profit impact and supply risk. The difference between the models is that the PPM model focuses on the items being supplied. At the same time, SPM looks at the characteristics of the suppliers and the relationship between the buyer and suppliers. These approaches can be combined through a hybrid matrix called PPM-SPM, which proposes a more powerful segmentation tool. The new model allows decision-makers to segment suppliers by looking at what they supply based on their characteristics and relationship with the buying company. The combined conceptual framework is shown in Figure 3: Combined PPM-SPM approach.

<b>Leverage items (supply risk: low; profit impact: high)</b>	Low capabilities High willingness	High capabilities High willingness	<b>Strategic items (supply risk: high; profit impact: high)</b>	Low capabilities High willingness	High capabilities High willingness
	Low capabilities Low willingness	High capabilities Low willingness		Low capabilities Low willingness	High capabilities Low willingness
<b>Non-critical items (supply risk: low; profit impact: low)</b>	Low capabilities High willingness	High capabilities High willingness	<b>Bottleneck items (supply risk: high; profit impact: low)</b>	Low capabilities High willingness	High capabilities High willingness
	Low capabilities Low willingness	High capabilities Low willingness		Low capabilities Low willingness	High capabilities Low willingness

Figure 3: Combined PPM-SPM approach

The four dimensions that have been proposed can be found in Table 3. The dimensions are profit impact, risk, capabilities, and willingness. The associated criteria can also be found in Table 3. It also appears that the models presented by Kraljic (1983) and Rezaei and Ortt (2012) are the most dominant in the literature (Lajimi & Majidi, 2021). Therefore, they have been chosen to test the interviewees. The models are comprehensive and provide a complete picture. This is why this model will also be used in this research. When combining the two models, the number of segments increases to 16 instead of 4 for each model. For a company that is working with a relatively small number of suppliers, it is better to use a model which results in a few number segments. In contrast, combining the models could be more efficient for a company working with hundreds of thousands of suppliers, according to Lajimi & Majidi (2021).

## 2.6 Municipality tools

Contract managers commonly use the ABC analysis in the social domain. It highlights the providers that have the highest spend and the lowest. The ABC analysis is a technique for dividing providers into three categories: A, B and C. You perform such an analysis to help determine your supplier strategy and to improve your purchasing process. The three categories of the ABC analysis are as follows:

- Category A: These 20% of the providers from approx. 80% of the purchase turnover.
- Category B: These 30% of the providers from approx. 15% of the purchase turnover.
- Category C: These 50% of the providers from approx. 5% of the purchase turnover.

The ABC analysis is based on the Pareto effect: 80% of the effect is caused by 20% of the causes. This is also known as the 80/20 rule. Example: 80% of the profit comes from 20% of the customers. You perform the ABC analysis during the import of the purchasing data. You first sort the providers by size. You then create a row based on purchasing volume per provider. You add up the volumes and draw a line at 80% of the total volume. These are the A providers. The following 10% are the B providers, and the last 10% are the C providers<sup>9</sup>. Currently, spending is not incorporated in the model, which is important when distinguishing between providers.

Some municipalities segment their providers based on the complexity of the youth care; the youth care can be segmented into five segments. The WMO can be segmented into three segments. This could be taken into account when considering the criteria for the dimensions<sup>10</sup>.

## 2.7 Segmenting suppliers based on literature

The four dimensions proposed to test with the interviews can be found in Table 3. Literature covers those four dimensions most (Lajimi & Majidi, 2021). Also, ‘capabilities’ and ‘willingness’ are essential for multiple reasons: having a long-term relationship and solid and close buyer-supplier collaboration. It can also overcome difficulties in the relationship, like abuse of power, conflicts, and low profitability. Trust can reduce perceived relational risk and help maintain the stability of the supply chain in the long term. The dimensions ‘supplier capabilities’ and ‘supplier willingness’ provide the foundation for ‘supplier potential’ (Rezaei & Ortt, 2012). According to the research by Rezaei and Fallah Lajimi (2019), the criteria mainly used for the dimension supply risk are geographical location, product availability, delivery time, substitution possibilities, and quality. The criteria necessary for the dimension profit are the total amount purchased, expected growth in the company’s demand, product price and prior experience with the supplier. Rezaei and Ortt (2012) included many criteria for the capabilities and willingness dimensions in their paper. The criteria most commonly used for the dimension willingness are commitment to quality, communication openness, commitment to continuous improvement in product and process, relationship closeness, reciprocal arrangement, and willingness to share information. The criteria left out our dedication to continuous improvement in product and process since it is about the social domain. Also, relationship closeness is replaced by long-term relationships since municipalities conclude contracts for more extended periods. The criteria that were commonly used for the dimension capabilities are price/cost, profit impact of supplier, delivery, quality, financial position, and reserve capacity; the criteria that will be left out in this dimension are price, profit impact of supplier, delivery and quality since they are already standing in the model in the dimensions profit impact and supply risk.

Dimension	Definition	Criteria
Capabilities	Supplier capabilities are complex collections of abilities and acquired knowledge that organisations use through organisational procedures to	<ol style="list-style-type: none"> <li>1. Reserve capacity</li> <li>2. Financial position</li> </ol>

<sup>9</sup> ABC-analyse - Verbeter je inkoopproces | Nevi. (n.d.). Nevi. <https://nevi.nl/inkoop/inkoopkennis/abc-analyse>

<sup>10</sup> Handreikingen sociaal domein. (n.d.). PIANOo - Expertisecentrum Aanbesteden. <https://www.pianoo.nl/nl/sectoren/sociaal-domein/handreikingen-sociaal-domein>

	allow businesses to coordinate activities and utilise their assets in many crucial business functions for a buyer (Rezaei & Ortt, 2013).	
Willingness	The commitment, motivation and confidence to engage in a (long-term) relationship with a buyer (Parkouhi et al., 2019).	<ol style="list-style-type: none"> <li>1. Commitment to quality</li> <li>2. Communication openness</li> <li>3. Reciprocal arrangement</li> <li>4. Willingness to share information</li> <li>5. Long-term relationship</li> </ol>
Supply risk	The probability of an incident involving inbound supplies from individual supplier failures or the supply market occurring, with effects that prevent the purchasing business from meeting customer demand or pose dangers to the life and safety of customers, is known as supply risk (Zsidisin, 2003).	<ol style="list-style-type: none"> <li>1. Geographical location</li> <li>2. Product availability</li> <li>3. Delivery time</li> <li>4. Substitution possibilities</li> <li>5. Quality</li> </ol>
Profit impact	Profit impact is defined in terms of the volume purchased, the percentage of the total cost of purchases and the impact on product quality or competitive strategy (Lee & Drake, 2010).	<ol style="list-style-type: none"> <li>1. Total amount purchased</li> <li>2. Expected growth in the company's demand</li> <li>3. Product price</li> <li>4. Prior experience with supplier</li> </ol>

Table 3: Dimensions of supplier segmentation

The criteria used for the dimensions are:

1. Capabilities: reserve capacity and financial position.
2. Willingness: commitment to quality, reciprocal arrangement, willingness to share information, and long-term relationship.
3. Supply risk: geographical location, product availability, delivery time, after-sales support, guarantee, and quality.
4. Profit impact: total amount purchased, expected growth in company's demand, product price, prior experience with supplier.

## 2.8 Summary of Findings Literature

The summary of the theoretical framework is discussed here. It discusses contract management, the theories of contract management, effective contract management, complex contracts, supplier segmentation, tools that municipalities use for contract management and an overview of various dimensions and theories involved in managing contracts within municipalities. Contract management in municipalities means the planning, negotiation, execution, monitoring, evaluation,

risk identification, and management of contracts. It ensures effective service delivery, cost reduction, risk minimisation, and relationships with the citizens. Effective contract management provides that post-contract activities, such as contract execution, monitoring, administration, and closure, minimise risks and reduce costs.

One of the theories of contract management is transaction cost theory, which discusses the role of transaction cost economics in understanding the make-or-buy decision, reducing transaction costs, and mitigating risks associated with contract breaches. One of the other theories is agency theory, which addresses the dynamics between principals and agents.

Municipal contract management is complex, especially in service triads, emphasising the need for explicit provisions, relationship building, and cooperative behaviour. When municipalities contract providers for services to consumers, challenges arise, highlighting the importance of formal and social contracts in managing relationships.

Segmenting suppliers can help in contract management when having a high number of providers. Segmentation helps categorise providers based on multiple criteria. It helps in risk management, supply chain management, collaborative relationships and resource allocation. Municipalities are still determining which model to use and which criteria to segment the supplier. One of the models municipalities currently use is the ABC analysis, which segments the suppliers based on spend. Also, one of the models is based on the complexity of the services. Dimensions that are most commonly used in literature are the dimensions of supply risk, profit impact, capabilities, and willingness. The belonging criteria are in Table 3: Dimensions of supplier segmentation.



## 3. Methodology

### 3.1 Design

This research uses three methods to answer the research question: a literature review, expert interviews, and a case study. Doing a literature review on contract management and supplier segmentation provides a comprehensive understanding of the current state of knowledge, guides the development of a theoretical framework, and informs the methodology and objective of this research. It helps build upon existing knowledge, identify research gaps, and contribute to advancing this field. An efficient and well-executed literature review as a research methodology establishes a solid foundation for knowledge expansion and the facilitation of theory formation (Webster & Watson, 2002). Conducting expert interviews will provide a valuable means of gathering rich, contextualised information, validating concepts, understanding industry practices, and generating new insights in the field of supplier segmentation and contract management of municipalities. It complements other research methods, deepens the topic's understanding, and enhances the practical relevance of your research findings. Action research was used to improve the current contract arrangement model to research and act on the current model. It facilitates stakeholder involvement, iterative problem-solving, contextual understanding, learning, and change management. By engaging with municipalities, this research can contribute to practical improvements in provider management practices and generate valuable insights for academia and the public sector.

### 3.2 Literature review

The systematic literature review provides insights into the dimensions used for supplier segmentation and the criteria used for each dimension. The model that Coppa currently needs to be completed and provides gaps that can be found in the literature to improve the model of Coppa. The literature will provide insights into already existing models that can have a practical contribution to the case of Coppa. The literature can also give insights into research gaps and trends (Xiao & Watson, 2019).

The literature is found through Scopus and Web of Science because it reveals relevant and peer-reviewed journals. The articles also provide many relevant articles that will contribute to the research. Many articles were found by adding the words in the public sector in the search string so that we found articles about that area rather than the private sector. The introduction explains why contract management in public sector municipalities is complex and needs to be implemented fully. The first part of the research is about contract management in the public sector; the journals found on Scopus and Web of Science were most about the implications of contract management, effective contract management, theories of contract management, why contract management in the public sector can be complex and service triads in contract management. The second part of the research is about the criteria of effective contract management, the segmentation dimensions and criteria associated with each criterion, and supplier segmentation implementation.

The systematic literature review gives insights into existing scholarly research and literature on contract management and supplier segmentation in the municipal context. By synthesising the knowledge, it can contribute to this research. The literature review identifies gaps and limitations in the current understanding of municipal contract management and supplier segmentation (Snyder,

2019). The article by Xiao and Watson (2019) provides a guide to conducting a systematic literature review. The article outlines the step-by-step process of completing a systematic literature review, starting with defining the research question, developing search strategies, selecting relevant studies, and assessing the quality and relevance of the included studies (Xiao & Watson, 2019).

It reveals areas where research may be lacking, unanswered questions, or existing models or practices, may fall short. By identifying these gaps, you can focus on addressing the challenges and limitations relevant to the municipal context. The literature will also review existing supplier segmentation models and their dimensions and associated criteria, which can differ from Coppa's developed model. Effective segmentation criteria and successful strategies can be found by analysing the literature. The literature will also show the latest developments regarding contract management and supplier segmentation, contributing to the research. By incorporating the emerging trends into the improvements, Coppa can ensure that the model remains relevant and effective in a rapidly changing landscape. Conducting a systematic literature review ensures that the suggested improvements are evidence-based. This strengthens the credibility and validity of the proposed changes and increases the likelihood of achieving the desired outcomes. The research will also contribute to existing knowledge which could be relevant for municipalities or other firms in the public sector (Parris & Peachey, 2013).

1. Inclusion criteria: The inclusion criteria and the keywords used to search and select relevant articles from Scopus included *(effective) contract management, service triads, theories of contract management, supplier segmentation, public sector, and complex contracting*. Database filters were also used to exclude the journals that were not accessible. The articles that will be used are peer-reviewed because they have been rigorously evaluated by experts in the field and meet established standards of quality and validity. The data range will be from 2010 because this data captures the latest developments. Some older data sources will be used; these sources provide general information about contract management. The language for the articles must be English. The sources must be available on Scopus so that the articles are reliable.
2. Exclusion criteria: Articles that involved contract management in another sector other than the public sector were excluded because the private sector differs significantly from the public sector.

The paper's suitability will be assessed after the inclusion and exclusion criteria have been applied. The papers must be suitable to extract data from and synthesise an overall picture of improving contract management activities to segment suppliers (Hall et al., 2011).

### 3.3 Expert interviews

Expert interviews will be held to determine what dimensions and criteria are essential in municipalities to choose how they segment their providers to find strategic partners. Therefore, contract managers from municipalities in the social domain are interviewed. In theory, expert interviews can gather high-quality data only if the experts are on board. Although validity cannot be guaranteed, reliability increases the likelihood that a valid result will be obtained (Bogner et al., 2009).

Semi-structured interviews, the most common qualitative research technique, investigate what municipalities think are essential criteria and dimensions to segment suppliers (Kallio et al., 2016). Conducting expert interviews will lead to expert insights and perspectives from individuals with expertise in contract management, procurement, segmenting suppliers, or other relevant domains. Semi-structured interviews show reciprocity between the interviewer and participant (Galletta, 2013), enabling the interviewer to improve follow-up questions based on the participant's responses (Polit & Beck, 2010). The semi-structured interview questions are determined before the interview and formulated using the interview guide (Mason et al., 2004). A qualitative semi-structured interview guide contributes to the objectivity and trustworthiness of this study and makes the results more plausible. The literature review offers an essential basis for mapping previous knowledge (Kallio et al., 2016). The guide provides a focused structure but should not be followed rigorously (Holloway & Wheeler, 2002). This includes five phases, according to (Kallio et al., 2016), namely:

1. Identifying the prerequisites for using semi-structured interviews
2. Retrieving and using previous knowledge
3. Formulating the preliminary semi-structured interview guide
4. Pilot testing the interview guide
5. Presenting the complete semi-structured interview guide

Contract managers from municipalities are interviewed to answer the interview questions. The contract managers are operating in the social domain in municipalities. They must deal with monitoring providers and managing contracts. All the interviewees work as contract managers in municipalities in the social domain. The interviewees can be found in Table 4: Interviews with contract managers.

<b>Interviewee</b>	<b>Organisation</b>	<b>Function</b>	<b>Duration</b>
1.	Municipality X	Contract manager social domain	45 minutes
2.	Municipality X	Contract manager social domain	53 minutes
3.	Municipality X	Contract manager social domain (WMO)	60 minutes
4.	Municipality X	Contract manager social domain	36 minutes
5.	Municipality X	Contract manager social domain	40 minutes
6.	Municipality X	Contract manager social domain	43 minutes
7.	Municipality X	Contract manager social domain and project leader	45 minutes
8.	Municipality X	Contract manager social domain	29 minutes

*Table 4: Interviews with contract managers*

Experts can provide practical insights, share their experiences, and suggest improving the existing model. They can offer valuable information on best practices, emerging trends, challenges, and opportunities specific to supplier segmentation in the municipal context. Conducting semi-structured interviews allows open-ended questions and in-depth discussions. The aim is to capture contract managers' expertise and unique perspectives, complementing the insights gained from the literature review (McIntosh & Morse, 2015). Conducting semi-structured interviews can lead to contextually relevant information that can inform the improvement of the existing model within the specific requirements and constraints of municipalities (Kallio et al., 2016). Experts can also identify gaps and limitations in the current model. Their expertise allows them to identify areas where the model may need improvement, such as missing criteria for supplier evaluation, ineffective segmentation criteria, or overlooked risk factors. Coppa can present the proposed enhancements or modifications to the existing model to the experts for validation. Experts can provide feedback on the proposed changes' feasibility, practicality, and potential impact. Their validation adds credibility to the improvements and ensures they align with industry best practices and expert opinions. Engaging experts in the improvement process through semi-structured interviews fosters stakeholder buy-in. When experts are involved, and their insights are considered, they are more likely to support and champion the enhanced contract management model. Their endorsement can facilitate organisational acceptance and implementation of the improvements. When professionals are engaged and their insights are considered, they are more likely to endorse and promote the improved contract management model, facilitating the organisational acceptance and implementation of the enhancements.

The interviews will be recorded and transcribed. The interviews will be directly transcribed, and a summary will give an overview of the essential findings. After that, the interviews will be coded manually in Word. The codes will provide a basis for the theory we will be testing and the Coppa arrangement model and will try to determine if the criteria are right or wrong. Therefore, we will find excerpts that fit the codes. At the end of the analysis, the code must resemble the codebook we started with. We will have a pre-determined structure that exists of codes. The interviewees will be kept anonymous for confidentiality reasons. That is why all the participants have written informed consent.

### 3.4 Case study

The case study involves an in-depth and detailed analysis of a specific individual, group, event, organisation, or situation (Anthony & Jack, 2009). It focuses on gathering rich qualitative data through various sources such as interviews, observations, documents, and artefacts. The case study can provide insight into gaps in the current model and how this can be improved. The goal of a case study is to have an in-depth exploration of the case being researched and give detailed insights into the topic of interest. In the case of the municipalities, it can provide information about the various factors, circumstances, and interactions that influence the study's subject. The case study will also contribute to theory development because it offers empirical evidence that can support the existing model. After the theory development, the case study can be of practical application for municipalities. The case study will serve as a framework to delve into the complexities of contract management within municipalities, mainly focusing on supplier segmentation (Crowe et al., 2011).

To conduct the case study, first, the case has to be defined; after that, the case(s) has to be selected, then the data has to be collected, and lastly, case studies have to be analysed, interpreted, and reported (Crowe et al., 2011; Heale & Twycross, 2018). Expert interviews and a literature review will be conducted to collect the data. The literature review allows us to bridge the gap between theory and practice. The literature review provides a foundation of existing knowledge and best practices, while the case study data offers a practical lens to analyse and evaluate these theories (Crowe et al., 2011). Engaging with experts in the field of contract management brings invaluable perspectives and valuable insights. The expert interviews help validate and enrich the case study and literature review findings, further enhancing the credibility and applicability of the research outcomes. These interviews will elucidate how theories translate into actionable strategies for supplier segmentation, thereby directly impacting municipal contract management practices. The case study enables the identification of supplier segmentation in municipalities and demonstrates how Coppa can implement it in municipalities. This can strengthen Coppa's position and help municipalities find their strategic partners.

### 3.5 Contract arrangement model of Coppa

This section critically assesses and compares the criteria encompassed within the proposed model for supplier segmentation in municipalities with the established criteria utilised within the Coppa arrangement model. This analysis serves as a crucial step in refining the model and proposing tailored adjustments to optimise the segmentation of providers within the social domain. This section focuses on the proposed criteria and the already defined criteria of Coppa. Coppa's dimensions are impact organisation and supply risk, the same as Kraljic's model. The current Coppa model can be found in Appendix B. The criteria used for the impact of the organisation are:

1. What is the political risk, the possible effect on the image and the degree of sensitivity of the contract?
2. What is the degree of influence on achieving the municipal objectives and ambitions?
3. How does the contract influence residents' satisfaction with the municipality?
4. What is the influence of the contract on employee satisfaction?

The criteria used for the dimension supplier risk are:

1. What is the degree of availability (scarcity) of the service or product on offer?
2. What is the degree of potential risk if not delivered?
3. Is there an alternative possible?

When looking at the criteria for the dimension supply risk, the same criteria used in the proposed model and the contract arrangement model of Coppa are product availability, substitution possibilities and delivery time. The first and third criterion of the arrangement model of Coppa is almost the same as product availability and substitution possibilities. Coppa's contract arrangement model does not use geographical location and quality criteria. The criteria quality is the most crucial criterion for the dimension supply risk, according to Rezaei and Lajimi (2019) and many other studies, and currently needs to be included.

The criteria for the dimension profit impact of the Coppa arrangement model and the proposed model. The criteria are quite different because the criteria of Coppa are way more defined

than in the proposed model. It can be concluded that the criteria for expected growth in business demand and whether the provider contributes to the realisation of the municipal objectives and ambitions are the same because we are looking for it through the lens of municipalities instead of making as much profit. The influence of the contract on employee satisfaction and prior experience with the provider can be seen as quite the same, but they differ slightly. So, what is political risk, the possible effect on the image and the degree of sensitivity of the contract, and how does the contract's influence on employee satisfaction differ from the proposed? The criteria product price and total amount purchased differ from the Coppa model. This is because the first criterion of the dimension impact of the organisation of the Coppa arrangement model is about the quality of the product or service. In the Kraljic matrix, this is a criterion for supply risk.

Looking at the current criteria of the proposed model, they are written down in the language of the private sector. We made adjustments to make it relevant to the public sector. This is done in discussion with experts from Coppa working in the public sector. The model can also be found in Figure 2. This section outlines the questions that will be asked to segment suppliers and reward them. Figure 2 shows a clear overview of the different criteria outlined there. To evaluate whether the criteria of the proposed model and the Coppa arrangement model are correct, the criteria of Coppa will first be tested on the interviewees. After that, the criteria of the literature-based model are evaluated on the interviewees to see whether all criteria are relevant. After that, a conclusion is drawn about which criteria are essential and which are less important than we thought. After that, a recommendation is made for Coppa to adjust its model to segment providers in municipalities in the social domain.

Profit impact					Supply risk					Capabilities					Willingness				
To determine the impact of the contract on the organization, it is important to test a number of influence criteria. This is done in the contract assessment model by answering a number of questions and linking scores to them. The questions, possible explanations and scoring criteria are described below.					To determine the delivery risks, it is good to evaluate the extent to which equivalent products/services are available, what the scope of the supply is and what the consequences are if a healthcare product is not delivered. By answering the questions and giving a score for the					provider capabilities are complex sets of skills and acquired knowledge used by organizations through organizational procedures to enable companies to coordinate activities and use their assets in many critical business functions for a municipality.					The commitment, motivation and trust to enter into a (long-term) relationship with the municipality.				
Total amount purchased/ spend		What is the estimated total annual quantity of the product that the municipality plans to purchase? How does the purchasing volume from the provider contribute to the municipality's total costs?			Geographic location		Is the provider located within a reasonable distance from the activities of the government organization? Are there any potential risks associated with the provider's location in terms of transportation, geopolitical factors or natural disasters?			Reserve capacity		Does the supplier have sufficient capacity to meet any increases in demand from the municipality? Can the supplier accommodate any unexpected or peak demands?			Commitment to quality		Does the provider demonstrate a strong commitment to providing high-quality products or services? Can the provider provide evidence of quality control measures and certifications?		
Expected growth of the municipality's demand		Does the municipality expect an increase in demand for the product in the future? How does the provider's ability to accommodate potential growth align with the future needs of the municipality?			Product availability		Does the provider have a reliable track record of consistently delivering the required products to the public sector organization? What measures has the provider taken to ensure uninterrupted product availability?			Financial position		How financially stable is the provider? Can the provider provide evidence of its financial strength, such as financial reports or credit ratings?			Communication openness		Is the supplier responsive and available in communication with the municipality? Does the supplier proactively communicate any issues or changes that may impact the municipality?		
Product price		How competitive are the provider's prices compared to other potential providers in the market? Has the provider shown flexibility in negotiating price terms with the municipality?			Delivery time		What is the typical lead time for the provider to deliver products to the public sector organization? Has the provider demonstrated a consistent ability to meet delivery deadlines?								Mutual settlement		Does the supplier demonstrate a willingness to cooperate and make mutually beneficial agreements with the municipality? Is the supplier open to discussing and implementing improvements or cost-saving initiatives together?		
Prior experience with provider		What are the municipality's previous experiences with the provider in terms of product quality, reliability and overall satisfaction? Have there been any significant issues or concerns in previous dealings with the provider?			Substitution possibilities		Is there another provider who supplies a comparable healthcare product that can possibly be used for both healthcare needs?								Willingness to share information		Does the supplier willingly provide necessary information regarding its activities, processes or performance? Are they open to sharing relevant data and insights that can support the municipality's decision-making?		
					Quality		How does the provider guarantee the quality of its products or services? Are there quality certificates or standards that the provider adheres to?								Long term relationship		Does the supplier show interest in a long-term collaboration with the municipality? Can the supplier demonstrate a history of maintaining successful long-term relationships with other public sector organisations?		

Figure 2: Literature-based model

### 3.6 Semi-structured interview

The sub-questions of this thesis are partly analysed through interviews. The logic of the interview questions aligns with the broader research objectives of understanding contract management practices and provider segmentation and ultimately creating a better tool to assist municipalities in their contract management activities. These questions will help gather valuable information to achieve these research goals. The questions outline the objectives of this research to answer the research question and the sub-questions, which include the contract management activities of municipalities, factors influencing contract management activities in municipalities in the social domain, the contribution of provider segmentation, and the factors that are important for municipalities to determine strategic partners. The interview themes and questions can be found in Table 5.

Theme	Interview questions
Basic information	1. Which organisation do you work for?
	2. What is your position within the municipality?
	3. What does this position entail?
Contract management activities & providers	4. What are the typical contract management activities within the social domain in your municipality?
	5. What is the number of contracts/providers?
	6. Are all contracts/providers monitored and evaluated?
	7. How do you evaluate providers' performance during the agreement term?
Strategies, challenges, and tools	8. What actions are taken to achieve contract goals?
	9. What strategy does your municipality use to ensure that contracts are complied with?
	10. What strategy does your municipality use if there are infringements or disputes?
	11. What challenges do municipalities face in managing contracts effectively?
	12. Are there specific tools or systems municipalities use for contract administration/management?



Provider segmentation	13.	Does your municipality make a distinction between the different providers?
	14.	How is a distinction made?
	15.	What different provider segmentations have you encountered?
	16.	Which pillars are included in this (segments)?
Importance and contribution of provider segmentation	17.	Which topics would be crucial for determining the strategic providers?
	18.	What contribution does segmenting your providers make to implementing contract management?
	19.	What are the advantages and possibly the disadvantages?
	20.	Are there specific strategies or approaches your organisation uses to manage providers in different segments (if applicable)?
Relevance of new dimensions and criteria	21.	Do you think it is crucial to consider providers' dimensions, capabilities, and willingness, in addition to the dimensions of organisational impact and delivery risk?
	22.	Present all the criteria from Coppa and the literature in this section to test. This means that the interviewees must indicate whether they find the criterion relevant.
	23.	Are there any criteria that need to be added (in one of the models)?

Table 5: Themes and questions of interview

The new model aims to provide municipalities with insight into their strategic partners. Using the model, a municipality can measure the supply risk and the impact on the organisation of a service or good delivered by the provider. Based on this measurement, the strategic partners can be

determined. Second, this research provides insights into the critical factors for municipalities to decide on their strategic partners. Lastly, it provides an overview of the different types of providers. The desired level of contract management and associated activities can be determined per type of provider. This ensures that the management intensity can be distributed correctly between the providers to achieve the most significant added value. The interviews are coded in Excel to find answers to the research and sub-questions. The coding will be deductive, which will start with a pre-determined set of codes that will be described in Chapter 4.

The data is coded in Excel with a predetermined set of codes. The codes are divided into standard information, contract management, and provider segmentation themes. The codes under the themes' standard information are:

- Type of role
- Organisation
- Name

The codes under the theme of contract management are:

- Typical contract management activities
- Number of providers
- Evaluation of providers
- Monitoring strategies
- Strategies for contract compliance
- Strategies for contract disputes
- Challenges in effective contract management
- Tools and technologies used

The codes under the theme provider segmentation are:

- Segmentation and how
- Models used
- Factors for determining strategic partners
- Contribution of segmenting providers
- Segmentation model

The transcripts are all analysed, and the specific codes are assigned to the specific data that applies to that code. After that, the data is analysed to identify recurring themes and to look for relationships. The last data of the segmentation models is quantified using percentages. Then, the analysed data was interpreted to derive meaningful insights. Some of the data are also presented in tables to clarify it. After that, conclusions will be drawn based on the analyses, and recommendations will be provided.

## 4. Results

The following chapter starts with providing the indicative results of the interview with all the interviewees, and the different sub-questions will be answered. First, the results of the interview regarding contract management activities will be explained. Second, the factors influencing contract management in municipalities for the social domain will be explained. After that, the results of the interview regarding provider segmentation will be explained. Lastly, the results of the interviews regarding the current model, the improved model, and the missing criteria will be explained. Moreover, an overview of the results will be provided. Afterwards, the results will be summarised. All the sections provide information about contract management activities and provider segmentation of municipalities operating in the social domain because that must be improved in the current model. The last paragraph of all the sections summarises the implications of the section.

### 4.1 Typical contract management activities at municipalities

This section explains the typical contract management activities of municipalities operating in the social domain. Also, the first sub-question will be answered: What is (effective) contract management? A comprehensive analysis of responses from multiple respondents provides valuable insights into the core activities involved in this crucial aspect of municipal governance.

Respondent 1 stressed the significance of having conversations with healthcare providers to gather market insights and actively pursue the agreements made. Additionally, being responsive and present when providers signal issues or agreements are not fulfilled emerged as critical components of their approach. Respondent 2 mentioned that continual monitoring of contract terms and measuring key performance indicators (KPIs) are also critical. Respondent 2 underscores the need for flexibility to adapt to signals and evolving requirements while serving as a communication conduit for various stakeholders. Respondent 3 portrayed contract management as a multifaceted role. Respondent 3 highlighted having conversations with providers, acting as intermediaries between different layers of stakeholders and keeping management and the board informed regarding healthcare providers' status. A significant part of their function involved vigilance in detecting healthcare fraud and collecting signals from diverse sources. Respondents 4 and 5 highlighted the challenges associated with incident management. They pointed out that while managing incidents and taking corrective actions were essential, these activities often consumed a substantial amount of time, potentially affecting resource allocation and attention to provider discussions. Respondent 6 depicted municipalities as bridges between providers and local government. They highlighted ongoing discussions with providers, the organisation of worktables to ensure connectivity among providers, a vigilant eye on policy and trends, and the facilitation of dialogues to address areas of interest and foster connections among various parties. Respondent 7 underscored the significance of conducting discussions with contracted parties, regardless of their size, especially with those adding value to the municipality. Respondent 8 detailed a range of activities, including progress discussions with providers, signal-driven interventions when issues arise, close involvement in purchasing, identification of risks associated with providers in precarious situations, declaration of default for non-compliant providers, and termination of contracts when necessary. They also highlighted their role as a central coordinating entity within the complex network of stakeholders.

(Effective) contract management of municipalities encompasses a wide range of tasks and is very complex, including contract drafting, compliance monitoring, effective communication, and incident management. The activities vary per municipality. The implication drawn from this text is the importance of communication because of ongoing conversations with healthcare providers. Continuous monitoring also seems very important as being adaptable to evolving requirements because the role of contract managers is multifaceted. There are challenges associated with incident management because it can be time-consuming, and the right actions must be taken. Municipalities are bridges between healthcare providers and local government.

## 4.2 Factors influencing contract management in municipalities for the social domain

This section will discuss the factors influencing municipal contract management in the social domain. This will also answer the second sub-question: What factors influence municipal contract management for the social domain?

### 4.2.1 Number of providers

The contract managers interviewed were asked about the number of healthcare providers in their municipality. The number of providers fluctuated a lot, namely from 8 to 600. Respondents 2 and 5 mentioned that it is impossible to reach many providers, so they segment their providers. Respondent 5 also stated that it becomes easier to manage a few providers, and therefore, some municipalities are already downsizing their number of providers. Some of the municipalities have contracts with under 100 providers. The respondents with many providers indicated that it is more challenging when there are many providers. It became clear that the municipalities with fewer contracts are more often monitoring and evaluating all their providers.

### 4.2.2 Evaluation of provider performance during the duration of the agreement of the contract

Evaluating provider performance by municipalities operating in the social domain is critical to ensure effective service delivery and accountability. The responses from the various respondents highlighted the diverse approaches employed in this evaluation process. Therefore, the responses of the different respondents are evaluated. Respondent 1 highlighted using key performance indicators (KPIs) and budget ceilings, with the latter setting a maximum yearly expenditure based on the previous year's realisation. Additionally, client satisfaction surveys and relationship assessments played a pivotal role. Respondent 2 presented a more organic and adaptive approach, relying on signals and firsthand observations to assess provider performance. Respondent 3 provided insight into a structured monitoring system encompassing all contracted providers and clients. This system includes a dashboard with indicators and client numbers and allocates specific hours for each client. In contrast, respondent 4 indicated that their municipality did not engage in formal performance evaluation, potentially revealing a gap in accountability mechanisms. Respondent 5 emphasised data-driven evaluation, considering redemption percentages, client counts, and satisfaction survey results. Respondent 6 confirmed the use of performance evaluation by conducting contract

discussions and requesting specific data such as the number of clients, redemption percentages, municipality data, and considerations related to transformation. Respondent 7 emphasised close attention to matters through regular communication with providers. Monthly reports were required, covering various aspects, including quality of care, numbers, and financial information, in alignment with the contract. Signals received were discussed, and investigations were initiated when issues related to legality and efficiency arose. Respondent 8 mentioned a current reliance on general discussions with providers and information provided by the access system. They acknowledged a transition toward a more structured approach in the future.

Municipalities employ diverse methods to evaluate provider performance in the social domain. These methods vary from structured systems involving KPIs, budget ceilings, and client surveys (as demonstrated by Respondent 1 and Respondent 3) to more flexible, signal-based assessments (as indicated by Respondent 2). Respondent 4's response underscores the variability in practices across municipalities, with some not conducting formal evaluations. A common thread emerges in data-driven evaluation, encompassing redemption percentages and client satisfaction, reflecting the importance of metrics in assessing provider performance. The diversity in approaches reflects the complex and multifaceted nature of evaluating social domain service providers within municipalities.

#### 4.2.3 Contract monitoring in the social domain

The extent to which contracts are monitored and evaluated within municipalities operating in the social domain appears to vary significantly, as indicated by the responses of different respondents. Respondent 1 noted that not all contracts are subjected to monitoring and evaluation. Specifically, they mentioned that only contracts falling within categories 1 and 2 (strategic and leverage providers) of the contract agreement models receive regular attention. Evaluation occurs based on signals or specific incidents for contracts falling into categories 3 and 4. Respondent 2 expressed an idealistic perspective, suggesting that all contracts should be monitored and evaluated in an ideal scenario. However, they acknowledged that this may not always be the case in practice, emphasising the importance of a mature contract management system to facilitate comprehensive evaluation. Respondent 4 provided a concise response indicating that some municipalities employ good management and some have a proactive approach to contract management. Respondent 5 highlighted the practical challenges of monitoring many contracts, particularly when the number exceeds 100. They indicated that, depending on the municipality, a selection process is employed, and data is requested from a smaller number of providers. This approach implies that not all contracts are subject to ongoing evaluation. Respondent 6 offered a contrasting perspective, stating that contracts are monitored and evaluated. Their approach involves conducting contract discussions and requesting data from providers. Key metrics such as the number of clients, redemption percentages, municipality data, and transformation efforts are considered, emphasising a more comprehensive evaluation process. Respondent 7 noted that not all contracts receive equal attention, and monitoring is often based on spend. They prioritise engagement with providers that have a more significant impact on their vision and goals. Respondent 8 confirmed that not all providers are monitored and evaluated, indicating that there may be a selective approach to contract management.

The degree to which contracts in the social domain are monitored and evaluated within municipalities varies. While some respondents, like Respondent 6, indicated a proactive approach involving thorough evaluation, others, such as Respondent 1, 5, 7 and 8, mentioned selective or signal-based evaluations due to practical constraints or variations in contract types. Respondent 2 highlighted the importance of a mature contract management system for comprehensive evaluation. These responses underline the diversity in practices and challenges municipalities face in monitoring and evaluating their contracts in the social domain. Managing a large number of contracts seems to be challenging, especially when the quality exceeds a manageable threshold. Therefore, many respondents mentioned the importance of prioritising contracts based on multiple factors and adapting their management intensity to the importance of the contract.

#### 4.2.4 Actions taken to achieve contract goals

Contract managers take many actions to understand the actions taken by municipalities to achieve contract goals. Their insights provide a multifaceted view of the strategies employed in contract management. Respondent 1 highlighted the importance of proactive monitoring to meet contract goals. The respondent mentioned that deviations from contract objectives become apparent in practice and trigger conversations. Furthermore, the respondent emphasised building a file with signals, indicating a documentation-oriented approach. Respondent 2 described a structured approach involving regular meetings to review the contract, assess Key Performance Indicators (KPIs), and proactively respond to contractual requirements. The respondent also noted a reactive component involving quick communication with providers when issues or signals arise, facilitating problem-solving. Respondent 3 emphasised the significance of being aware of contract-related indicators and engaging in discussions around them. These discussions encompass financial data and the status of the contracted services. Their approach aims to guide healthcare providers toward achieving the contract objectives. Respondent 4 mentioned a combination of actions, including holding conversations and requesting information and reports from the involved parties. Respondent 5 outlined a data-driven approach, focusing on lead times from various providers and monitoring them for improvements. This approach relies on quantitative metrics to assess progress toward contract goals. Respondent 6 presented a retrospective control and supervision method. Providers can initiate investigations and reviews to rectify the situation if providers do not meet the contract objectives. Respondent 7 outlined a comprehensive approach that involves making strategic purchases, attracting and contracting suitable providers, setting up monitoring mechanisms, and regularly meeting with providers to discuss progress on agreements. In cases where issues arise, they engage in discussions to establish improvement plans and, if necessary, take follow-up actions. Respondent 8 pointed out that the actions to achieve contract goals are mainly defined within the agreement, where contract objectives are clearly stated and subsequently shaped through contract management.

Municipalities employ a range of actions to achieve contract goals. Respondents mentioned that monitoring and documenting proactively to achieve contract goals is essential. Building files with signals, proactively identifying deviations from contract objectives, and maintaining documentation provide insights into deviations and trigger conversations for corrective actions. A structured approach involves regular meetings, KPI assessments, and proactive responses to contractual requirements are highlighted. Additionally, a reactive component involves quick

communication with providers when issues arise, facilitating prompt problem-solving and ensuring contract adherence. Some respondents mentioned a data-driven approach, relying on quantitative metrics. Respondents emphasise discussing contract-related indicators, including financial data and service status. These discussions aim to guide healthcare providers toward aligning their efforts with the contract objectives and achieving mutually agreed-upon goals.

#### 4.2.5 Strategy that municipalities use to comply with contracts

To understand the strategies municipalities employ to ensure contract compliance, insights can be drawn from the responses of various respondents. These responses provide a multifaceted view of the approaches and methods utilised. Respondent 1 mentioned using a "budget ceiling" as a strategy for contract compliance. External factors like political influences may impact the strategy. Respondent 2 emphasised a strategy rooted in comprehensive knowledge and integration. Respondent 3 outlined a strategy focused on adherence to the contract based on specific indications, convictions, and utilising supervision and supervisors. The quality and regularity of care provided were also essential to ensure compliance. Respondent 4 indicated that compliance strategies are often determined when contracts are initially negotiated. This can involve the use of bonuses and fines to incentivise compliance. Additionally, they mentioned a proactive approach, such as monitoring for problems, resource allocation, and regular reporting. Respondent 5 highlighted that their strategy involves closely monitoring the contract, engaging in conversations with providers, and actively picking up signals from emails and data, followed by appropriate action. Respondent 6 described a strategy centred around contract managers, who are crucial in ensuring compliance. They also mentioned the importance of contract management and noted a system for signalling and addressing issues. Respondent 7 outlined a strategy that begins with setting goals for the coming years within plans. These goals serve as a basis for the purchasing process, and provider reports are carefully examined to ensure alignment with stated objectives. Respondent 8 described a reactive strategy based on signals. Compliance is achieved through communication with providers, potential involvement of supervisors, conducting research, and possibly on-site visits.

Municipalities employ diverse strategies to ensure contract compliance. These strategies encompass budget management (Respondent 1), comprehensive knowledge and integration (Respondent 2), adherence to contract terms and quality of care (Respondent 3), negotiation strategies and proactive measures (Respondent 4), effective monitoring and communication (Respondent 5), the role of contract managers and signalling mechanisms (Respondent 6), outlining a strategy with goals (Respondent 7), and a reactive strategy based on signals (Respondent 8). The variation in strategies reflects the complexity of contract management in the social domain and the need for tailored approaches to achieve compliance effectively.

#### 4.2.6 Strategy used if there are disputes in the contract

When disputes arise within contracts in the social domain, municipalities employ various strategies to address and resolve these issues, as indicated by the responses of different respondents. Respondent 1 described a strategic approach involving a "line of notice of default." Providers may no longer be allowed to accept new clients when a dispute escalates significantly until a resolution plan is implemented. Additionally, they highlighted the importance of signalling the issue to the council

and involving multiple layers of the municipality in the resolution process. Respondent 2 emphasised a reactive and signal-driven strategy for handling contract disputes. This approach suggests that disputes are addressed primarily in response to specific signals or incidents, reflecting a case-by-case resolution process. Respondent 3 mentioned a strategy focused on supervising and ensuring compliance with the terms specified in the contract. This implies that disputes are addressed by closely monitoring and ensuring compliance with the contractual terms and obligations. Respondent 4 mentioned a multifaceted approach, which includes using bonuses or fines to incentivise compliance. They also noted the importance of holding conversations with specific providers, although this may not be feasible with all providers. Respondent 5 highlighted the importance of explaining contractual obligations to providers to address disputes. Respondent 6 noted that dispute resolution is often outlined in the contract itself. It may involve consultation with relevant policies, highlighting contract conditions, and setting up specific actions and notifications. Respondent 7 discussed a strategy involving negotiating improvement agreements to address disputes. In more severe cases, enforcement processes and investigations are initiated when fraudulent practices or significant issues are identified. Respondent 8 outlined a multifaceted strategy for dispute resolution. For minor offences, discussions are initiated with the provider. The provider may be declared in default for significant offences, leading to consequences such as a client stop. If satisfaction is not achieved, the contract can be terminated.

Municipalities utilise a range of strategies when disputes arise within contracts in the social domain. These strategies encompass proactive measures such as notice of default (Respondent 1) and reactive responses driven by signals (Respondent 2). Additionally, strategies may involve supervision and adherence to contract terms (Respondent 3), the use of incentives and discussions (Respondent 4), pointing out obligations (Respondent 5), and referencing contract provisions and policies (Respondent 6). Municipalities also use strategies such as improvement of agreements and enforcement to address disputes (Respondent 7), discussion with providers and declaring providers in default for major offences (Respondent 8). The selection of an appropriate strategy may depend on the nature and severity of the dispute, emphasising the need for flexibility in contract management practices.

#### 4.2.7 Challenges faced by municipalities in effectively managing and administering contracts

Effectively administering and managing contracts within municipalities operating in the social domain presents everyday challenges, as expressed by various respondents. Respondent 1 highlighted the difficulties in measuring the quality of care, an essential aspect of contract management. They also emphasised the political landscape's challenges, which can impact decision-making and the complexities of determining Key Performance Indicators (KPIs). Respondent 2 emphasised the importance of clarity in contract management, particularly concerning its usefulness and the division of roles among different parties involved in the process. Also, understanding the nuances of contract management across various stakeholders emerged as a challenge. Respondent 3 pointed to various challenges, including collaboration with multiple municipalities and the transition from regional to local contexts, which can introduce uncertainties regarding task allocation. They mentioned the complexity of formulating accurate KPIs and the validity of indicators. Distinguishing between diverse healthcare providers and types of healthcare services adds complexity, making



provider comparison difficult. Respondent 4 expressed challenges in managing the volume of contracts and the need for specialised knowledge to oversee them effectively. Respondent 5 noted difficulties in gaining comprehensive insight into all contract-related data. They mentioned that while contract systems may be in place, a dashboard for streamlined data access is needed. The sheer size of providers can hinder meaningful conversations, necessitating a need for segmentation. Respondent 6 highlighted a cost-related challenge, particularly in managing rates offered by providers that can vary across municipalities. The process of verifying contract details was described as time and energy-consuming. Respondent 7 identified the intricacies of cost components and varying rates among municipalities, emphasising the time and energy required for contract verification. Finally, respondent 8 highlighted the overwhelming nature of managing contracts with approximately 300 providers. This scale makes it essential to allocate time judiciously and grapple with the municipality's dependence on specific providers.

Common challenges faced by municipalities in contract administration and management within the social domain include difficulties in measuring quality of care (respondent 1), clarity and role division (respondent 2), collaboration and transition challenges (respondent 3), the volume of contracts and specialised knowledge (respondent 4 and 8), access to comprehensive data (respondent 5), cost-related challenges (respondents 6 and 7). These challenges underscore the multifaceted nature of contract management in the social domain and the need for effective strategies to overcome them.

#### 4.2.8 Tools and systems used for contract management in municipalities

Municipalities employ various tools and technologies for contract management, although the extent and integration of these tools vary among respondents, so let us dive into that. Respondent 1 emphasised the presence of several tools, mentioning "vendor link," Excel, Power BI, Cognos, and a "contract organisation model." Respondent 2 noted that some systems, including "Vendorlink," are in use, but they emphasised that integration appears to be a challenge. Respondent 3 provided a mix of technologies, including "Cognos," a contract management platform with regional use, a local dashboard in Cognos used by statisticians, and the prevalent use of Excel. Respondent 4 highlighted the importance of spend analysis and mentioned the existence of various contract management tools, such as "Fysio," "Vendorlink," and "pointer." Respondent 5 emphasised using contract management systems like Power BI and the focus on spend analysis, with an exciting note that the most prominent providers may not always be the most critical partners. Respondent 6 mentioned "Vendorlink" and expressed a need for a system to obtain figures and recognise trends, citing the time-consuming process of requesting data. Respondent 7 explained that there is no dedicated contract management system but mentioned using "Vendorlink" alongside other tools, including financial administration, healthcare administration, SharePoint, teams, and reporting tools like PowerBI and Cognos. Lastly, respondent 8 clarified that no specific contract registration system exists. Instead, they rely on a case system containing physical contracts and framework agreements. Financial insight tools and reporting tools are utilised to track client-provider relationships.

The respondents collectively revealed a varied landscape of contract management practices in municipalities, with tools like "Vendorlink," Excel, Power BI, and Cognos being mentioned frequently. Integration and the need for more comprehensive systems were recurring themes, suggesting potential areas for improvement in contract management within these municipalities. It

became the most used tool, Vendorlink; almost all the municipalities mentioned the system. Also, the tool power BI is called multiple times. The problem is that there is no integrated system of all the different systems, which means sometimes it can be challenging to investigate the data. There is a recurring mention of challenges in obtaining data or figures from these systems, suggesting that data accessibility might be an issue.

### 4.3 Segmentation of providers in municipalities

This section discusses the segmentation of providers in municipalities in the social domain. Most municipalities segment their providers to determine their strategic partners. Within the social domain of municipalities, segmenting providers involves a strategic approach to categorising and classifying various providers. This segmentation is crucial as it allows municipalities to understand better and manage their relationships with diverse providers. The sections below discuss this and show municipalities' factors to segment their providers.

#### 4.3.1 Segmentation of providers in municipalities operating in the social domain

Respondent	1	2	3	4	5	6	7	8
Segmentation	Yes	No	Yes	Yes	Yes	No	Yes	Yes
Number of providers (approximately)	200	8	200	200	8 to 600	33	270	300

Table 6: Segmentation of providers in municipalities

Table 5 shows the segmentation of municipalities. It seems that segmenting providers in municipalities for the social domain is not a universal practice, as not all municipalities distinguish their providers. Table 4 shows if municipalities segment their providers and the number of providers they have. 6 out of 8 municipalities segment their providers. Municipalities do engage in provider segmentation, as revealed by the responses from the different respondents. However, the methods and extent of segmentation vary among municipalities.

Respondent 1 confirmed the practice of provider segmentation, except in the smallest municipalities where the limited number of providers makes segmentation unnecessary. Segmentation is primarily based on Key Performance Indicators (KPIs) to assess providers and determine their suitability as strategic partners. However, they raised concerns about the reliability of the contract arrangement model. Respondent 2 acknowledged segmentation based on provider turnover in theory. Nevertheless, they pointed out that in practice, all providers are treated equally, regardless of their turnover, due to a commitment to fairness. Respondent 3 mentioned segmentation through the Coppa arrangement model, although there were ongoing efforts to refine and improve this model. Respondent 4 described segmentation using various models, such as the "impact contract/complexity contract" model in one of the municipalities, which categorises contracts into four quadrants, and the "ABC" model in another municipality, where contracts are classified into importance levels ("A" denoting high importance). Respondent 5 indicated that many municipalities are actively considering provider segmentation strategies. Factors like spend and

occasionally the Kraljic model are considered, but there is still a need to define the essential components of segmentation. Respondent 6 explained that municipalities do not have a well-defined segmentation model as desired, citing the absence of a dedicated framework. Respondent 7 detailed segmentation practices based on spend, with multiple categories and specific attention to certified youth protection institutions. The largest three categories receive distinct management, while contracts under 125,000 euros are managed using a signal-driven approach. Respondent 8 outlined a multifaceted approach to segmentation, considering factors such as provider size regarding turnover, client numbers, and considerations related to impact and risk.

Most municipalities practice provider segmentation, but the methods and rigour of segmentation efforts vary. Provider segmentation is not universally practised, especially in smaller municipalities with a limited number of providers. The desire for equitable treatment of providers and the ongoing quest for improved segmentation strategies are recurring themes across the responses, illustrating the complexity of provider management within municipalities. While some municipalities employ models and quadrant systems to categorise providers based on contract impact and complexity, others rely on theoretical approaches, like turnover, which may not consistently be implemented in practice. The ongoing exploration of segmentation strategies underscores the evolving nature of contract management within these municipalities. There are concerns about the reliability of existing models, which may hinder the effectiveness of segmentation practices. Factors influencing segmentation are turnover, spending, and contract complexity, which emerged as determining factors.

#### 4.3.2 Models that have been used

The municipalities that have been interviewed indicated that they use all kinds of different models to segment their providers. Some municipalities are not segmenting because they do not know how to do it, and the number of providers is too big. Most of the municipalities are using Kraljic and a spend analysis. Some municipalities also use the Coppa contracting model but stated that there are missing elements in the current model. Respondent 4 stated, "There are missing elements; we are looking to reshape the current model and change the criteria". Respondent 5 also used the ABC model, where A is important provided, and C is not. The pillars included in the segmentation models of the municipalities differ per municipality. They are segmented based on various criteria, as outlined by the responses of different respondents. Respondent 2 detailed several criteria considered in the segmentation of providers, including certification, turnover, turnover trends (increase or decrease), legal aspects, and quality aspects, particularly certification. Respondent 3 mentioned that despite ongoing changes, the segmentation criteria align with the Coppa contracting model. Respondent 5 highlighted several pillars included in provider segmentation, including the size of providers based on costs, client numbers, and a risk assessment. These criteria help determine the categorisation of providers. Respondent 6 indicated a desire to segment providers based on their size, although it was mentioned that this segmentation has not yet been fully implemented. Respondent 7 highlighted the Coppa contract ordering model that defines multiple criteria.

A range of criteria guides the segmentation of providers within municipalities operating in the social domain. These criteria encompass certification, turnover, turnover trend analyses, legal considerations, quality aspects, provider size based on costs and client numbers, risk assessments, spending, and criteria defined by the Coppa contracting model. Some respondents stated that there

are missing elements in the current model and that it needs to be reshaped. Almost all municipalities are familiar with the Kraljic model, and most have implemented some model to segment providers in the social domain. This means that it will be helpful for municipalities to define all the criteria correctly.

#### 4.3.3 Topics that are important when determining strategic partners

The respondents were also asked to name essential topics to determine their strategic partners. This involves considering a range of important factors highlighted by the respondents. All the respondents emphasised several critical criteria. Respondent 1 mentioned the criteria for quality of care, the relationship between different layers, financial health, and demographics. Respondent 2 mentioned the willingness to transform, primary conditions, and performance and size variation; Respondent 3 mentioned the cooperation with providers and the influenceability of the providers. Respondent 4 mentioned adhering to organisational goals, the purchasing policy, financial, managerial, and political risk, and the complexity. Respondent 5 mentioned the risks, the added value, the ability to manage objectives, the provider's size, and the provider's preference. Respondent 6 mentioned the size of healthcare demand or supply, the product offering, identifying key players, risks, and the number of clients. Respondent 7 mentioned the risks and the impact of the current model. Respondent 8 mentioned the dependence on the provider, the provider development potential, the size and client number, the turnover, and the supply risk. These criteria can be thematised into different themes. This means that the specific criteria mentioned by the respondents are distilled into overarching themes. These distinct themes collectively form thematic pillars crucial in the determination of the strategic partners of a municipality, encompassing various aspects. These themes also emerged by themselves without any foreknowledge, indicating that they consider these topics necessary. The themes can be found in Table 6.

Themes	Explanation
Quality of healthcare	We are assessing the quality of services potential partners provide, including care quality and meeting essential quality requirements.
Financial Viability	We are examining the financial stability, turnover, and viability of providers.

Collaboration and Interaction	Evaluating how well providers collaborate with different layers within the municipality and the willingness to cooperate.
Demographics	Understanding the demographics and characteristics of the population served.
Adaptability and Innovation	Assessing the provider's openness to transform, innovate, and adapt.
Performance Variation	Acknowledging performance, size, and expenditure variations among different organisations.
Strategic Alignment	Aligning provider objectives with municipality goals and purchasing policies.
Risk Management	Identifying, managing, and assessing various risks associated with partnerships.
Complexity	Evaluating the complexity of partnerships and contracts.
Added Value	Assessing the provider's contribution and added value to achieving objectives.
Capacity and Scale	Considering the provider's size, capacity, and ability to meet demands.

Preferred Attributes	Identifying providers that align with the municipality's preferences.
Impact Assessment	Assessing the impact of providers on various aspects such as political risk and employee/inhabitant satisfaction.
Influenceability	Considering the influence of the municipality on provider behaviour and development potential.

*Table 7: Factors important to segment*

#### 4.3.4 Contribution of segmenting providers

The contract managers were also asked what they thought the contribution of segmenting their providers was in executing contract management and the advantages and disadvantages. Namely, segmenting providers in the execution of contract management plays a significant role in optimising the process and incurring certain advantages and disadvantages, as stipulated by the various respondents. A firm must allocate its limited human, financial and technical resources on a selective basis to those relationships in its provider base from which it expects to generate the highest return (Day et al., 2010). Segmenting providers in the execution of contract management offers several contributions, advantages, and some associated disadvantages, as outlined by the respondents:

##### **Advantages and Contributions:**

1. **Improved Focus and Efficiency:** Segmenting providers helps prioritise partners that can substantially impact the organisation. This approach ensures that crucial consultations receive the necessary attention. Respondent 1 emphasised that consultations with less important parties remain essential.
2. **Enhanced Budgeting:** Respondent 2 highlighted that segmentation aids in budgeting by clarifying providers' expectations at various municipal levels. This fosters better financial planning and ensures everyone is aligned with their responsibilities.
3. **Effective Risk Management:** As noted by Respondent 2, the focus on larger parties allows for more efficient risk management. Since these parties often handle a significant share of clients, identifying and addressing potential risks becomes a priority.
4. **Informed Decision-Making:** Segmenting providers based on various indicators, as mentioned by Respondent 3, provides a structured overview of different providers. This model justifies allocating attention and resources, facilitating more informed decision-making.

5. **Strategic Attention Allocation:** By categorising providers, contract management can efficiently allocate attention and prioritise partners that offer more value or entail higher risks. This strategic approach helps achieve contract objectives and identifies areas for improvement, as highlighted by Respondent 5.
6. **Efficient Resource Utilization:** Respondent 8 emphasised that segmenting providers allows for the efficient use of time and resources. It helps reduce dependencies and enables contract management to focus on discussions with providers who can maximise benefits.

#### **Disadvantages:**

1. **Categorization Limitations:** Some respondents expressed concerns about categorisation, which may lead to certain providers being labelled unimportant. This could result in underutilisation and create an uneven playing field (Respondent 3).
2. **Reduced Contact:** Segmenting providers may inadvertently reduce contact with certain parties. This limitation is particularly relevant if consultations with less critical providers are overlooked (Respondent 1).
3. **Dependency Reduction:** While reducing dependencies can be advantageous, it can also potentially lead to smaller providers feeling less seen or recognised by the municipality (Respondent 8).
4. **Organisational Alignment:** In some cases, as noted by Respondent 4, contract management may be closely aligned with the content, which may restrict the full benefits of segmentation.
5. **Visibility for Small Providers:** The disadvantage for small providers is that they may not feel seen by the municipality. There is less insight into the small providers, which may represent a significant player (Respondent 8).

Segmenting providers in contract management offers clear advantages, including improved focus, efficient resource allocation, and effective risk management. However, addressing potential disadvantages, such as categorisation limitations and reduced contact with certain providers, is essential. Balancing segmentation with inclusivity is crucial for successful contract management in the social domain.

#### 4.3.5 Strategies used to manage the providers of the different segments

The municipalities use different strategies for managing providers in different segments. To effectively manage providers in different segments, municipalities operating in the social domain employ specific strategies tailored to the characteristics of each segment. Respondent 1 mentioned that segmentation-based management is primarily implemented in municipalities with many providers. This approach implies a consideration for scalability and resource allocation in provider management. Respondent 2 indicated that the approach is becoming increasingly proactive. While the response does not provide specific details. Respondent 3 highlighted that the management intensity and labour intensity vary across segments. It appears that more attention and resources are allocated to managing providers falling within the two most important categories of segmentation, the strategic and leverage providers. This approach prioritises management efforts

based on the significance of the provider's role. Respondent 4 emphasised the importance of customisation. They noted that strategies should be tailored to the organisation and its specific domain. This implies a flexible and adaptable approach that considers the unique characteristics of the municipality and its providers. Respondent 5 outlined a differentiated approach based on the differences between providers. They mentioned that one risk-driven approach focuses on risk assessment and mitigation. The other approach involves planning conversations with strategic partners, considering risk, intensity, and the right components to address with each provider to maximise added value. Respondent 7 described a spend-based management approach, where multiple categories are well-managed, and the category with the least spend is signal-driven. This indicates that financial considerations are significant in the management strategy selection. Respondent 8 highlighted that provider management strategies are based on multiple factors, including the size of the provider in terms of turnover, client numbers, impact, and risk. These factors help determine the appropriate management approach.

Municipalities in the social domain adopt specific strategies to manage providers in different segments. These strategies can include increased proactivity, scalability considerations for larger municipalities, varying levels of management intensity, customisation to fit the organisation's domain, and differentiated approaches that account for provider-specific differences. These strategies reflect the adaptability and responsiveness required to manage diverse provider categories effectively. What emerges is that the intensity of a provider is essential when applying a strategy.

#### 4.4 Segmentation model

As mentioned by multiple respondents who use the current model, criteria are lacking, and the model needs to be adjusted. The current model consists of 7 criteria under two dimensions. There are four criteria for the dimension impact organisation and three criteria for the dimension supply risk; the criteria can be found in Table 7. As mentioned before, some respondents mentioned that there are missing elements, and that is why we conducted interviews to determine what is essential to determine a municipality's strategic partners and which criteria are missing in the current model. The interviewees were also asked to respond to all the criteria from the current and literature-based models. The eight respondents all answered differently. Many respondents also mentioned that some criteria must be defined better because the concept of criteria can be comprehensive. Therefore, criteria were proposed to the respondents. This section will also answer the fourth sub-question: Which dimensions and criteria should be included in the model? This will be done with the literature-based model's answers and the themes in section 4.3.3.

Impact organisation		Supply risk	
1. What is the political risk, the possible effect on the image and the degree of	What are the risks if the provider does not perform according to the agreed quality? What is the degree of impact on the image	1. What is the degree of availability (scarcity) regarding the service or	Are there many providers who can supply the healthcare product in question?



sensitivity of the contract?	of the driver/municipality?	product offered?	
2. What is the degree of influence on achieving the municipal objectives and ambitions?	Does the provider contribute to achieving the municipal objectives and ambitions? To what extent does a provider influence this? Can a provider easily contribute to the objectives and ambitions?	2. What is the degree of potential risk if not delivered?	What is the degree of risk if a healthcare product can no longer be supplied? What is the effect/impact of this?
3. How does the contract influence resident satisfaction with the municipality?	To what extent does the provider's performance influence resident satisfaction in the municipality?	3. Is there an alternative possible?	Is there another provider supplying a comparable healthcare product that can be used for both healthcare needs?
4. What is the influence of the contract on employee satisfaction?	How does the collaboration between the consultants and the provider work? What is the intensity at which the consultant and provider work together? Do other departments have contact/collaboration with this provider? The more intensive the contact, the more critical the collaboration; in other words, the more significant the influence on employee satisfaction.		

Table 8: Current contract arrangement model of Coppa

The most significant difference between the current Coppa model and the literature-based model is that the literature-based model consists of two more dimensions, and the criteria are not all the same. The respondents were asked to give answers on whether the current and literature-

based model criteria are essential or not. The results can be found in Appendix E. The criteria can be found in Table 8; the criteria are also numbered to make it easier to write about the criteria. The extended model with explanation can be found in Appendix D. Criteria 1 is the first set of criteria defined in the models, criteria 2 is the second set of criteria specified in the models, and so forth. The respondents only had to tell whether they thought the criteria were essential. Based on this, the percentage of each criterion is calculated to determine whether the respondent thinks the criteria are crucial.

<b>Profit impact</b>	<b>Supply risk</b>	<b>Capabilities</b>	<b>Willingness</b>
1. Total amount purchased/spending	1. Geographic location	1. Reserve capacity	1. Commitment to quality
2. Expected growth of the municipality's demand	2. Product availability	2. Financial position	2. Communication openness
3. Product price	3. Delivery time		3. Mutual settlement
4. Prior experience with a provider	4. Substitution possibilities		4. Willingness to share information
	5. Quality		5. Long-term relationship

Table 9: Literature-based model

To improve the segmentation model, all respondents were asked to consider two different models: the current and literature-based models. Their input revealed that several areas of the current model can be improved—notably, criteria 1. Spend/ total amount purchased emerged as a significant missing element within the impact dimension. Additionally, the criteria 2. Expected growth of the municipality's demand, and 4. Prior provider experience is identified as a criterion that should be incorporated into the dimension of impact. The criterion product price seemed less important than the rest and can be left out.

In the supply risk dimension, the criterion 5. Quality seems essential and should be incorporated into the Coppa model—the criteria 1. Geographical location, 2. Product availability, and 4. Substitution possibilities were highlighted as important considerations. While product availability and substitution possibilities were deemed crucial, they are already covered in the current model. Quality emerged as a vital factor but requires a more precise definition as it is currently a broad concept; Coppa should do this. Geographical location should also be incorporated into the Coppa model.

Two dimensions not initially considered but were found to be highly important are "possibilities" and "willingness." Within the willingness dimension, criteria like commitment to quality, communication openness, mutual settlement, willingness to share information, and fostering long-term relationships scored above 75%, indicating their significance in determining strategic partnerships. Communication openness and mutual settlement scored 100%, underscoring their importance. This means that the dimension willingness is determined as essential and even scored better than all the other dimensions. Therefore, this dimension should be included in the renewed model.

Regarding the possibilities dimension, only two criteria seemed essential to incorporate in the Coppa model. Notably, criteria 1. Reserve capacity, and 2. Financial stability was found to be influential. This dimension has only two criteria so it could be left out. Furthermore, the criteria of financial stability and reserve capacity of a provider could be integrated into the delivery risk dimension.

Regarding strategic partner segmentation based on the Kraljic Matrix, the dimension of willingness becomes crucial. This involves assessing commitment, motivation, and trust to engage in a (long-term) relationship with the municipality. Consequently, the municipality can adapt its communication strategy by engaging in more extensive conversations.

Additionally, respondents mentioned criteria outside the original set, including redemption rate, provider development potential, client numbers, and complexity. The refined model should also consider these criteria for more comprehensive provider segmentation. The criteria for resident and employee satisfaction were debatable according to some respondents because they are related to client numbers.

#### 4.5 Summary of results

This section presents the results of interviews regarding contract management activities in municipalities for the social domain. These interviews shed light on various aspects of contract management, including the number of providers, evaluation of provider performance, contract monitoring, actions taken to achieve contract goals, strategies for contract compliance, dispute resolution, challenges faced, and tools/systems used. The interview also shed light on various aspects of provider segmentation, including the practices of segmenting providers operating in the social domain. Besides that, the four sub-questions will be answered.

The first sub-question: What is (effective) contract management? Typical (effective) contract management practices are contract drafting, compliance monitoring, communication, and incident management. Contract managers manage contracts and facilitate dialogue and collaboration between healthcare providers and local government entities. Time allocation, especially in incident management, poses a significant challenge and needs careful consideration for optimising contract management activities.

The second sub-question, “What are the factors influencing contract management for the social domain?” is a multifaceted answer and encompasses various aspects. The number of providers significantly influences contract management, and managing many providers becomes more challenging. Municipalities employ different methods to evaluate provider performance; some have a signal-driven approach, and some focus on only selected contracts. Municipalities employ diverse strategies to ensure contract compliance, including budget management, data-driven monitoring, effective communication, and proactive monitoring. When contract disputes arise, municipalities use various methods to resolve issues, such as notice of default, signal-driven responses, supervision, and discussions. The choice of strategy depends on the nature and severity of the dispute. The selection of strategies depends on the municipality's specific needs and objectives. Common challenges include measuring the quality of care, navigating political influences, defining meaningful KPIs, ensuring clarity in roles and responsibilities, and handling a high volume of contracts. Accessing comprehensive contract data and managing rate disparities across

municipalities are significant challenges. Municipalities use various tools and technologies for contract management, including systems like "Vendorlink," Excel, Power BI, Cognos, and others. Integration of these tools remains a challenge, and there is a need for more comprehensive and integrated systems to improve contract management efficiency.

Six out of eight municipalities engage in provider segmentation. The contract managers gave different answers to answer the third sub-question, what the contribution of provider segmentation is. Firstly, the segmentation methods vary among municipalities, with some using models like Kraljic, the Coppa model, and ABC, while others rely on theoretical approaches. The respondents mentioned multiple criteria for determining strategic partners, discussed in 4.3.3. The segmentation models are essential to decide on the strategic partners of municipalities in the social domain. Several dimensions and criteria must be considered, and the current model has limitations. Respondents emphasised several crucial criteria for determining strategic partners, including quality of care, willingness to transform, performance variation, and risk assessment. These criteria help align partners with the municipality's goals and priorities in the social domain. The respondents' answers provided themes around the various criteria that might be relevant when determining strategic partners. These themes are covered mainly by the criteria of the Coppa model and the literature-based model. Still, some criteria are not present in both models and could be taken into consideration to present in the new model. Advantages of segmenting providers include improved focus and efficiency, enhanced budgeting, effective risk management, informed decision-making, strategic attention allocation, and efficient resource utilisation. Disadvantages include potential categorisation limitations, reduced contact with some providers, and challenges maintaining organisational alignment. Strategies for managing providers in different segments vary based on municipality size, proactivity, management intensity, customisation, and differentiation. These strategies reflect adaptability and responsiveness to manage diverse provider categories effectively.

The current segmentation model focuses on the impact on the organisation and supply risk, with specific criteria in each dimension. Respondents suggested improvements in the dimension of impact organisation, including the incorporation of spend, expected growth, and prior provider experience in the impact dimension. In the delivery risk dimension, geographical location, product availability, and quality were identified as significant factors. Product availability is already included in the current model. Quality is a container concept, so it needs to be better defined. Two additional dimensions, "possibilities" and "willingness," were proposed. All the criteria for the dimension of willingness seemed to be necessary, with the criteria commitment to quality, communication openness, mutual settlement, willingness to share information, and fostering long-term relationships considered important. The criteria for the dimension possibilities that seemed to be important are reserve capacity and financial stability. The criteria of a provider's financial stability and reserve capacity could be integrated into the delivery risk dimension. Criteria outside the original set, such as redemption rate, provider development potential, client numbers, and complexity, were also suggested for inclusion. This also answers the fourth sub-question, which criteria and dimensions should be included in the model.

Municipalities play a critical role in social domain contract management, ensuring that providers meet their contractual obligations and deliver quality services. To address the challenges in contract management, municipalities should focus on improving data accessibility, integrating tools and systems, and developing more comprehensive strategies. Effective communication,

monitoring, and evaluating provider performance are key to achieving contract goals and ensuring contract compliance. Flexibility in contract management strategies is essential to adapt to each municipality's specific needs and challenges. Different segmentation methods and criteria indicate that municipalities tailor their approaches to local needs. This diversity suggests that there's no one-size-fits-all solution for provider segmentation and that municipalities must continuously adapt to new circumstances.

## 5. Discussion and conclusion

### 5.1 Conclusion

This research addressed the contract management activities and provider segmentation within municipalities operating in the social domain. Through a comprehensive approach encompassing literature review and expert interviews, the study addressed the validity and potential enhancement of Coppa's contract arrangement model, particularly in identifying strategic partners for municipalities. The research question of this research is: How can Coppa's contract arrangement model for identifying partners be improved? A qualitative study consisting of expert interviews and a literature review has been performed to answer this research question.

This research is focused on contract management activities and provider segmentation of municipalities operating in the social domain. Contract management involves the planning, negotiation, execution, monitoring, and evaluation of contracts between municipalities and providers (Helby Petersen et al., 2022). The mandate of contract managers within municipalities is to ensure the adherence of all parties to their contractual obligations (Baily et al., 2021).

To answer the first sub-question: What is (effective) contract management? The results of the literature and interviews can be used. According to the literature, effective contract management minimises risks, reduces costs, improves accountability, and maintains positive stakeholder relationships (Helby Petersen et al., 2022). Respondents also stressed the crucial role of municipalities in facilitating dialogue and collaboration between healthcare providers and local government entities. Respondents mentioned using different methods to evaluate provider performance; some indicated a proactive approach, and some indicated a signal-based approach. A proactive approach seems more effective when the goal is to build long-term, mutually beneficial relationships. It fosters trust, collaboration, and joint improvement efforts (Kırılmaz & Erol, 2017). This may be relevant for municipalities. Therefore, it is recommended to monitor proactively and build long-term relationships. Respondents also mentioned that there is no integrated system. All municipalities used many tools, but none were beneficial for gaining insights about everything.

Furthermore, this research addresses the post-contract activities. To answer the second sub-question: What factors influence contract management activities in the social domain? The literature review and the interviews can answer this question. Literature states that the sheer volume of contracts can be overwhelming, and managing them effectively can be challenging (Belotserkovskiy et al., 2018). Also, the contract can be very complex because the provider delivers services to the municipality's inhabitants, which means there is a service triad (Brown et al., 2018). Respondents mentioned many challenges in administering and managing contracts from providers. Therefore, it can be essential to categorise providers based on multiple criteria to develop a strategy for each segment to make it more manageable (Lajimi & Majidi, 2021). The interviews showed that the group the municipality considered the least important is also the least managed. The management intensity is based on the priority and importance of the provider. The bigger the number of providers, the harder it is to monitor the providers. Municipalities with few providers could monitor them all, but this did not count for the municipalities with many providers. The number of providers in the municipalities fluctuated from 8 to 600. Therefore, segmentation can help identify and categorise providers based on their unique characteristics, enabling organisations to develop targeted approaches for managing each segment (Rezaei et al., 2015).

To also answer the second sub-question, contracts in the social domain are complex because they mainly consist of services. Service contracts with providers are complex due to the intangibility of the contracts. These contracts require more attention to detail and adherence to all provisions (Oluka & Basheka, 2014). To manage complex contracts effectively, it is necessary to establish rules and relationships that foster cooperative behaviour between the purchasing government and the provider (Brown et al., 2016). Therefore, it could be important for municipalities to include the complexity of contracts in the segmentation since close monitoring can assist in dealing with potential opportunism from providers (Uenk & Telgen, 2019). Complex contracts often involve multiple transactions, uncertainties, and contingencies, leading to higher transaction costs—municipalities contract providers (health care organisations). Transaction cost theory states that contracts with providers must be designed to minimise transaction costs, and therefore, the contract must be managed effectively (Zou et al., 2019). The other theory, agency theory, states that providers must be monitored to perform not on their behalf but on behalf of the municipality (Changalima et al., 2022). Therefore, it is also essential to include this new dimension, willingness, in the contract arrangement model to see whether the provider is committed, motivated, and trusted to enter into a (long-term) relationship with the municipalities. Respondents mentioned monitoring and documenting this is crucial to achieving contract goals, and providers cannot act in their interests. Respondents mentioned that monitoring and documenting this is crucial to achieving contract goals. Building files with signals, proactively identifying deviations from contract objectives, and maintaining documentation provide insights into deviations and trigger conversations for corrective actions. A structured approach involves regular meetings, KPI assessments, and proactive responses to contractual requirements. Additionally, a reactive component involves quick communication with providers when issues arise, facilitating prompt problem-solving and ensuring contract adherence.

Six out of eight municipalities are segmenting their providers, but the methods of segmentation efforts vary. To answer the third sub-question: What is the contribution of provider segmentation? This question is comprehensive and can be answered with the respondents' input. Municipalities with a small number of providers in the social domain are not segmenting their providers because the number of providers is too tiny to segment. Some contract managers use the Coppa model, some the Kraljic model, some spending, and some the ABC model to segment providers. This depends on implementing the contract manager's model or the model that the municipality already has and the criteria they think are essential. They are segmenting because this is essential to determine strategic partnerships of the municipality in the social domain. Advantages of segmenting providers include improved focus and efficiency, enhanced budgeting, effective risk management, informed decision-making, strategic attention allocation, and efficient resource utilisation. Disadvantages include potential categorisation limitations, reduced contact with some providers, and challenges maintaining organisational alignment. Strategies for managing providers in different segments vary based on municipality size, proactivity, management intensity, customisation, and differentiation.

The respondents are asked which criteria they think are essential to segment providers and to determine strategic partners. With these criteria, themes are created that can be incorporated into the Coppa contract arrangement model. The themes are healthcare quality, financial viability, collaboration and interaction, demographics, adaptability and innovation, performance variation,

strategic alignment, risk management, complexity, added value, capacity and scale, preferred attributes, impact assessment, and influenceability; these criteria are discussed in section 4.3.3.

The respondents were also asked to name essential topics when determining strategic partners and to state whether they thought the criteria of the Coppa model and literature-based models criteria are essential. According to the respondents, provider segmentation contributes to improved focus and efficiency, enhanced budgeting, effective risk management, informed decision-making, strategic attention allocation and efficient resource utilisation. They also mentioned disadvantages like categorisation limitations, reduced contact, dependency reduction, organisational alignment, and visibility reduction for small providers. The extended explanation can be found in section 4.3.4.

The dimensions for supplier segmentation used most in studies are the dimensions of supply risk and profit impact. The second most used dimensions are the dimensions of capabilities and willingness. These dimensions are integrated into a new model in the literature (Rezaei & Fallah Lajimi, 2019). These dimensions are also used for the interviews. The criteria used are the most common in studies and applicable, in this case, the social domain. The questions per criteria have been applied from the perspective of contract managers operating in the social domain.

The current Coppa contract arrangement model has shortcomings, which emerged in the interviews. Coppa must include new criteria in the model. Their current model has good criteria, but some criteria must be added. The current Coppa model has two dimensions and seven criteria. Coppa could include the dimension willingness, with the criteria commitment to quality, communication openness, mutual settlement, willingness to share information, and fostering long-term relationships. The dimension of willingness is the commitment, motivation, and trust to enter into a (long-term) relationship. Criteria that could be included in the dimension impact are the incorporation of spend, expected growth, and prior provider experience. Criteria that could be included in the dimension of supply risk are geographical location, financial stability, reserve capacity, and quality. Quality seems to be a problematic criterion due to the respondents; since it is hard to measure, it needs to be precisely defined. These criteria could be included in the Coppa model to improve their segmentation model and determine their strategic partners better. This is important since the management intensity should be adapted to the 'importance' of the provider. Also, the respondents' themes could be incorporated into Coppa's contract arrangement model. This paragraph also answers the fourth sub-question: Which criteria and dimensions should be included in the model?

To answer the research question: How can Coppa's contract arrangement model be improved? The answers to the literature review and interviews should be incorporated. The respondents' answers are most important since the model has to be implemented in the social domain of municipalities. The most important implication is that Coppa has to include new criteria besides their current criteria. The dimension of willingness, commitment, motivation, and trust to enter into a (long-term) relationship with the criteria commitment to quality, communication openness, mutual settlement, willingness to share information, and long-term relationship seems very important. Also, the criteria of geographical location, quality, reserve capacity, and financial stability are essential for the dimension of supply risk. The criteria spent, expected growth of the municipality's demand, and prior provider experience are essential for the dimension impact organisation. The themes that respondents found important in determining strategic partners may



also be necessary. The contract manager can decide whether to include these criteria. Criteria that can be included and fall outside the current set are adaptability and innovation, complexity, capacity and scale, and influenceability. The suggested model can be found in Appendix E.

## 5.2 Limitations

The findings of this master's thesis shed light on the critical aspects of contract management activities and provider segmentation within municipalities operating in the social domain. The research, which incorporated a comprehensive approach involving a literature review and expert interviews, offers valuable insights and implications for academia and practitioners.

Contract sheer volume and complexity can be overwhelming, leading to difficulties in their administration and management. This challenge becomes particularly pronounced in municipalities with many providers. In such cases, effective monitoring and management become formidable tasks. Segmenting providers is a promising strategy to address these challenges. This study suggests potential improvements to make it more effective. This could also be a limitation since contract managers must judge more criteria. Also, contract managers could interpret the criteria differently, leading to different scores. The criteria weights must also be determined; every municipality will judge these weights differently.

Another limitation is that this study primarily relied on expert interviews, which introduces some subjectivity to the findings. 8 respondents answered the questions asked and indicated the relevance of the criteria. This research highlights the importance of tailoring provider segmentation methods. Only 8 contract managers were interviewed, which could lower the reliability. The findings are not directly transferable to municipalities with entirely different governance structures or to different domains outside the social domain. Also, identifying limitations in the existing models highlights the necessity of continuous improvement in provider segmentation. Municipalities should be open to refining and adapting their approaches over time.

Currently, no financial factors in the Coppa model need to be integrated into any segmentation model since they directly impact budgeting and risk management. The criteria of Coppa's current contract arrangement model do not include any financials. Criteria like commitment to quality, communication openness, mutual settlement, and fostering long-term relationships have been identified as vital. These criteria should be incorporated into segmentation models to assess providers' willingness and ability to collaborate effectively.

Multiple criteria were proposed to the respondents, which they had to answer. Data reliability can be affected by the perception of the respondents. The respondents had to answer yes or no to the different criteria, which might have impacted the results. Other respondents could give other answers. Therefore, only the criteria that scored a percentage higher than 75 per cent are considered. Also, the criteria are out of the literature, or respondents give multiple answers.

## 5.3 Future research

Future research could use quantitative techniques and larger sample sizes to validate the proposed enhancements to the Coppa model more thoroughly. Quantitative methods provide objectivity in

evaluating the effectiveness of the model. This validation can offer evidence to support the model and the proposed criteria. This would involve collecting data from a larger sample of municipalities and assessing the effectiveness of the literature-based model in improving provider segmentation. Also, larger sample sizes enable greater generalisability of research findings. The current research is focused on the social domain in municipalities; future studies can include another public sector. Comparative studies between different sectors can highlight similarities, differences, and sector-specific challenges in provider segmentation.

It is investigating an integrated system that provides all information for the municipality of the providers. There is no integrated system, and different systems and tools are used to save data. This is not the most convenient way and does not give a clear picture of each provider. The way that they are working is not efficient. A promising research direction is investigating how emerging technologies can enhance decision-making and predictive modelling in provider segmentation. An integrated system would offer a centralised platform to store all relevant data about providers, contracts, performance metrics, and other critical information. Having all information readily available enables informed and data-driven decision-making. This includes evaluating provider performance, identifying areas for improvement, and making strategic decisions regarding contract management, resource allocation, and strategic partnering. This will also improve efficiency because monitoring providers' activities can be done more efficiently.

Exploring the dynamics of long-term relationships between municipalities and healthcare providers, especially in the context of the “willingness” dimension, could yield valuable insights. The criteria used for this dimension could be delved into over extended contract periods. Then, municipalities could see whether the providers are strategic partners. Also, provider segmentation relies on specific criteria. Future research could delve into the standardisation of these criteria definitions. Developing a standardised framework for assessing these criteria can enhance the consistency and comparability of segmentation practices across municipalities. Comparing the contract management practices and provider segmentation models across different countries or regions could reveal variations in approaches and best practices. Such comparative studies could provide valuable cross-cultural insights. Therefore, achieving standardization across municipalities in provider segmentation could be important. Including stakeholders also might be relevant since they have viewpoints other than those of the contract managers.

#### 5.4 Practical implications

The research highlights the critical importance of effective contract management within municipalities. Contract managers and municipal administrators can benefit from a renewed focus on planning, negotiation, execution, monitoring, and evaluation of contracts. Implementing best practices in contract management can help minimise risks, reduce costs, improve accountability, and foster positive stakeholder relationships. This suggests that municipalities should invest in training and resources for their contract management teams to ensure they are well-equipped to handle the complexities of social service contracts.

Municipalities should consider adopting provider segmentation strategies to streamline operations and enhance efficiency. Municipalities can tailor their approaches to each segment by categorising providers based on multiple criteria, leading to improved focus, budgeting, risk management, and informed decision-making. Municipalities can allocate their resources more

efficiently and give attention to providers with the most impact in the social domain. This approach ensures that the use of resources is optimised. This also means that financial resources can be better deployed.

Municipalities using the Coppa model for provider segmentation may consider the proposed enhancements, including the "willingness" dimension and associated criteria. Doing so can give them a more comprehensive view of their service providers and help them make more informed strategic partnering decisions. Municipalities must collaborate with experts and stakeholders to adapt and refine the model to meet their needs.

Municipalities should explore integrating digital tools and technologies to streamline contract management and provider segmentation processes. Investing in contract management software, data analytics platforms, and other technology solutions can significantly improve efficiency and decision-making. However, it's essential to ensure that these technologies align with the unique requirements of social service contracts.

Contract and project managers should establish clear performance evaluation metrics for healthcare providers. These metrics should align with the objectives of social service contracts and be regularly monitored to ensure that providers meet their contractual obligations. Practical performance evaluation can lead to improved service quality and accountability.

Municipalities should foster collaboration and dialogue between healthcare providers and local government entities. Creating a conducive environment for cooperation can lead to better outcomes for the community. Municipal leaders should actively encourage and facilitate such collaborations. Also, the collaboration between different providers could lead to better outcomes because multiple providers could help municipalities' clients.

Municipalities should adopt a continuous learning and adaptation culture in their contract management and provider segmentation practices. The social service landscape is dynamic, and municipalities must be agile in responding to changing needs and challenges. Municipalities can allocate their resources more effectively by segmenting providers, ensuring that strategic partners receive more attention. This can lead to some providers feeling less valued and engaged in the process of municipalities, so the strategy of municipalities to engage in conversations should be balanced. Municipalities must take steps to ensure fairness and equal treatment.

In summary, the practical implications of this master's thesis research revolve around improving contract management practices, adopting provider segmentation strategies, and refining the Coppa model. Additionally, integrating technology, sustainability considerations, and a commitment to collaboration and continuous improvement are essential for municipalities seeking to enhance their service delivery in the social domain.

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# Appendix

## Appendix A

### **Interview questions**

1. Which organisation do you work for?
2. What is your position within the municipality?
3. What are typical contract management activities within the social domain?
4. How do you monitor and evaluate providers' performance during the term of the contract?
5. Are all contracts monitored and evaluated and what actions are taken to continue to meet contract targets?
6. What strategy does your municipality employ to ensure that contracts are adhered to and addressed if there are breaches or disputes?
7. What are the challenges municipalities face in effectively managing and administering contracts?
8. Are there any specific tools or technologies used by municipalities used for contract administration/management?
9. Do you differentiate between suppliers? And how?
10. What different supplier segmentations have you come across?  
Which pillars are included (segments)?
11. Which topics do you think would be crucial in determining the strategic providers? Are there certain factors that determine this?
12. What contribution does organising your contracts/providers make to the implementation of contract management? What are the advantages and possibly the disadvantages?
13. Are there any specific strategies or approaches that your organisation uses to manage suppliers in different segments (if applicable)?
14. How does your organisation assess the risks of suppliers/providers



in different segments?

15. Suggest all the different criteria from Coppa and from the literature in this section to test them. This means that interviewees should indicate whether they find the criterion relevant or not.

16. Are there any missing criteria (in any of the models)?

## Appendix B

### **Current contract arrangement model of Coppa**

**Privately**

## Appendix C

### Literature-based model

Profit impact		Supply risk		Capabilities				Willingness	
To determine the impact of the contract on the organization, it is important to test a number of influence criteria. This is done in the contract assessment model by answering a number of questions and linking scores to them. The questions, possible explanations and scoring criteria are described below.		To determine the supply risks, it is good to evaluate the extent to which equivalent products/services are available, what the scope of the supply is and what the consequences are if a healthcare product is not delivered. By answering the questions and giving a score for the degree of additional risk,		Provider capabilities are complex sets of skills and acquired knowledge used by organizations through organizational procedures to enable companies to coordinate activities and use their assets in many critical business functions for a municipality.				The commitment, motivation and trust to enter into a (long-term) relationship with the municipality.	
1. Total amount purchased/ spend	What is the estimated total annual quantity of the product that the municipality plans to purchase? How does the purchasing volume from the provider contribute to the municipality's total costs?	1. Geographic location	Is the provider located within a reasonable distance from the activities of the government organization? Are there any potential risks associated with the provider's location in terms of transportation, geopolitical factors or natural disasters?	1. Reserve capacity	Does the supplier have sufficient capacity to meet any increases in demand from the municipality? Can the supplier accommodate any unexpected or peak demands?			1. Commitment to quality	Does the provider demonstrate a strong commitment to providing high-quality products or services? Can the provider provide evidence of quality control measures and certifications?
2. Expected growth of the municipality's demand	Does the municipality expect an increase in demand for the product in the future? How does the provider's ability to accommodate potential growth align with the future needs of the municipality?	2. Product availability	Does the provider have a reliable track record of consistently delivering the required products to the public sector organization? What measures has the provider taken to ensure uninterrupted product availability?	2. Financial position	How financially stable is the provider? Can the provider provide evidence of its financial strength, such as financial reports or credit ratings?			2. Communication openness	Is the provider responsive and available in communication with the municipality? Does the provider proactively communicate any issues or changes that may impact the municipality?
3. Product price	How competitive are the provider's prices compared to other potential providers in the market? Has the provider shown flexibility in negotiating price terms with the municipality?	3. Delivery time	What is the typical lead time for the provider to deliver products to the public sector organization? Has the provider demonstrated a consistent ability to meet delivery deadlines?					3. Mutual settlement	Does the provider demonstrate a willingness to cooperate and make mutually beneficial agreements with the municipality? Is the provider open to discussing and implementing improvements or cost-saving initiatives together?
4. Prior experience with provider	What are the municipality's previous experiences with the provider in terms of product quality, reliability and overall satisfaction? Have there been any significant issues or concerns in previous dealings with the provider?	4. Substitution possibilities	Is there another provider who supplies a comparable healthcare product that can possibly be used for both healthcare needs?					4. Willingness to share information	Does the provider willingly provide necessary information regarding its activities, processes or performance? Are they open to sharing relevant data and insights that can support the municipality's decision-making?
		5. Quality	How does the provider guarantee the quality of its products or services? Are there quality certificates or standards that the provider adheres to?					5. Long term relationship	Does the provider show interest in a long-term collaboration with the municipality? Can the provider demonstrate a history of maintaining successful long-term relationships with other public sector organisations?

## Appendix D

### Results criteria interviews

The number of the criteria relates to the number of the criteria described in the model in Appendix B and C.

Model Coppa impact organisation				
Interviewee	Criteria 1	Criteria 2	Criteria 3	Criteria 4
1	Yes	Yes	No	Yes
2	Yes	Yes	No	No
3	Yes	Yes	No	No
4	Yes	Yes	Yes	Yes
5	Yes	Yes	Yes	Yes
6	Yes	Yes	Yes	Yes
7	Yes	Yes	Yes	Yes
8	Yes	Yes	Yes	Yes
<b>Outcome</b>	100%	100%	63%	75%

Model Coppa supply risk			
Interviewee	Criteria 1	Criteria 2	Criteria 3
1	Yes	Yes	No
2	Yes	Yes	Yes
3	Yes	Yes	Yes
4	Yes	Yes	Yes
5	Yes	Yes	Yes
6	Yes	Yes	Yes
7	Yes	Yes	Yes
8	Yes	Yes	Yes
<b>Outcome</b>	100%	100%	88%

Model literature-based impact organisation				
Interviewee	Criteria 1	Criteria 2	Criteria 3	Criteria 4
1	Yes	Yes	No	Yes
2	Yes	Yes	No	Yes
3	Yes	Yes	No	Yes
4	Yes	No	No	Yes
5	Yes	Yes	No	Yes
6	Yes	No	Yes	Yes
7	Yes	Yes	No	No
8	Yes	Yes	Yes	Yes
<b>Outcome</b>	100%	75%	25%	88%

Model literature-based supply risk					
Interviewee	Criteria 1	Criteria 2	Criteria 3	Criteria 4	Criteria 5
1	Yes	Yes	Yes	No	Yes
2	Yes	Yes	No	Yes	Yes
3	No	Yes	No	Yes	Yes
4	Yes	Yes	Yes	Yes	Yes
5	Yes	Yes	No	Yes	Yes
6	Yes	Yes	Yes	Yes	Yes
7	Yes	No	No	Yes	Yes
8	Yes	Yes	Yes	Yes	Yes
<b>Outcome</b>	88%	88%	50%	88%	100%

Model literature-based capabilities		
Interviewee	Criteria 1	Criteria 2
1	Yes	Yes
2	No	Yes
3	Yes	Yes
4	Yes	Yes
5	Yes	Yes
6	Yes	Yes
7	No	No
8	Yes	Yes
<b>Outcome</b>	75%	88%

Model literature-based willingness					
Interviewee	Criteria 1	Criteria 2	Criteria 3	Criteria 4	Criteria 5
1	Yes	Yes	Yes	Yes	Yes
2	Yes	Yes	Yes	Yes	Yes
3	Yes	Yes	Yes	Yes	Yes
4	No	Yes	Yes	No	No
5	Yes	Yes	Yes	No	No
6	Yes	Yes	Yes	Yes	Yes
7	Yes	Yes	Yes	Yes	Yes
8	Yes	Yes	Yes	Yes	Yes
<b>Outcome</b>	88%	100%	100%	75%	75%

## Appendix E

### Suggested model

Impact organisation		Supply risk		Willingness		Optional criteria	
To determine the impact of the contract on the organization, it is important to test a number of influence criteria. This is done in the contract assessment model by answering a number of questions and linking scores to them. The questions, possible explanations and scoring criteria are described below.		To determine the delivery risks, it is good to evaluate the extent to which equivalent products/services are available, what the scope of the supply is and what the consequences are if a healthcare product is not delivered. By answering the questions and giving a score for the degree of additional risk, you gain insight into the delivery risk		The commitment, motivation and trust to enter into a (long-term) relationship with the municipality.		Adaptability and innovation Complexity Capacity and scale Influenceability	
What is the political risk, the possible effect on the image and the degree of sensitivity of the contract?	What are the risks if the provider does not perform according to the agreed quality? What is the degree of impact on the image of the driver/municipality?	What is the degree of availability (scarcity) regarding the service or product offered?	Are there many providers who can supply the healthcare product in question?	Commitment to quality	Does the provider demonstrate a strong commitment to providing high-quality products or services? Can the provider provide evidence of quality control measures and		
What is the degree of influence on achieving the municipal objectives and ambitions?	Does the provider contribute to achieving the municipal objectives and ambitions? To what extent does a provider have influence on this? Can a provider easily contribute to the objectives and ambitions?	What is the degree of potential risk if not delivered?	What is the degree of risk if a healthcare product can no longer be supplied? What is the effect/impact of this?	Communication openness	Is the supplier responsive and available in communication with the municipality? Does the supplier proactively communicate any issues or changes that may impact the municipality?		
What is the influence of the contract on resident satisfaction with the municipality?	To what extent does the provider's performance influence resident satisfaction in the municipality?	Is there an alternative possible?	Is there another provider who supplies a comparable healthcare product that can possibly be used for both healthcare needs?	Mutual settlement	Does the supplier demonstrate a willingness to cooperate and make mutually beneficial agreements with the municipality?		
What is the influence of the contract on employee satisfaction?	How does the collaboration between the consultants and the provider work? What is the intensity at which the	Geographic location	Is the provider located within a reasonable distance from the activities of the government organization? Are there any potential risks associated with the provider's location in terms of transportation, geopolitical factors or natural disasters?	Willingness to share information	Does the supplier willingly provide necessary information regarding its activities, processes or performance?		
Total amount purchased/ spend	What is the estimated total annual quantity of the product that the municipality plans to purchase? How does the purchasing volume from the provider contribute to the municipality's total costs?		Quality	How does the provider guarantee the quality of its products or services? Are there quality certificates or standards that the provider adheres to?	Long term relationship	Does the supplier show interest in a long-term collaboration with the municipality? Can the supplier demonstrate a history	
Expected growth of the municipality's demand	Does the municipality expect an increase in demand for the product in the future? How does the provider's ability to accommodate potential growth align with the future needs of the municipality?	Reserve capacity	Does the provider have sufficient capacity to accommodate any increases in demand from the municipality? Can the provider accommodate any unexpected or peak demands?				
Previous provider experience	What are the municipality's previous experiences with the provider in terms of product quality, reliability and overall satisfaction? Have there been any significant issues or concerns in previous dealings with the provider?	Financial stability	How financially stable is the provider? Can the provider provide evidence of its financial strength, such as financial reports or credit ratings?				