MODELING BUSINESS COOPERATIONS AND THE CRM SYSTEM FOR THE TECHNICAL SECTOR

City of Heinola

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Abstract

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Abstract

This thesis explores the development of business cooperation models and the implementation of a customer relationship management (CRM) system tailored for the technical sector of the City of Heinola. The study addresses the challenges of enhancing business collaboration within municipal operations, with a focus on optimizing procurement processes, framework agreements, and projects.

A mixed-method research approach was utilized, combining qualitative thematic interviews with key personnel and quantitative data from municipal records. The empirical research revealed significant gaps in procurement efficiency, project integration with businesses, and the centralized use of CRM systems. The Microsoft Dynamics 365 CRM system was modeled to address these issues, providing a framework for improving communication, transparency, and engagement with business stakeholders.

Key findings include the identification of major business interfaces within the technical sector, highlighting the importance of streamlined procurement processes and active project participation by local businesses. The research concludes that adopting a structured CRM system enhances operational efficiency, fosters equitable communication with businesses, and supports strategic municipal goals. Recommendations for further research include evaluating the long-term effectiveness of the CRM system and exploring broader applications of the proposed business cooperation models.

Keywords

Municipality, Business cooperation, CRM, Technical sector, Heinola

CONTENTS

1 INTRODUCTION

1.1 Research Background

The topic of this thesis is limited to municipal organizations under the Finnish Municipal Act and The Finnish Constitution. Municipalities have long emphasized the need for public sector reform and customer-centered service delivery. Municipalities seek to advance a service industry and society that values the needs of customers and individuals. Both small towns and large cities are incapable of changing on their own. This transformation calls for deeper, cross-cutting cooperation between various social actors. Both the municipalities and societal changes have prompted the need for renewal. (Menna & Kettunen 2022.)

Businesses have discovered that providing exceptional products is no longer sufficient as a whole itself. That is because of the ease of market saturation and replication. Providing outstanding service on a regular and distinct basis is the crucial difference. Since a service depends on the participation and input of the consumer, it is more challenging to replicate. Utilizing knowledge of customer expectations, preferences, and behavior can lead to a competitive advantage. This entails starting a constant conversation with clients and making use of the data and insights gathered at every point of contact. (Payne 2012.)

Customer experience creates the basis for customer-oriented operations. In order to enable customer orientation, the operator must interact with the customer, and thus, listening to their wishes and needs, develop their operations to meet them. Customer orientation has been raised as a strategic focus in public organizations in many industries. (Saarijärvi 2020, 19-21.)

To promote customer orientation, municipalities have started to enhance digitalization and the CRM system is the tool for this. CRM has traditionally been used in business, but it also has great benefits in the management of municipal customers. The CRM system provides an overall picture of the municipality's customers and thus enhances customer cooperation. (Salesforce 2022.)

Customers of municipalities are both municipal residents and companies operating in municipalities. For the municipality to operate in a more customer-oriented manner, it must have sufficient knowledge of its clientele, as well as the wishes and needs of the customers in terms of services. (Yrittäjät 2021.)

To be able to understand what kind of customers already exist in the organization, it is necessary to gather sufficiently extensive information from those employees who are in

contact with companies in the daily work of the organization. In addition, the quality of customer relations, as well as the quality and efficiency of operating methods, must be examined. Based on the results of the research, the existing methods of operation can be developed into the most effective solutions for the organization, thus making work more efficient. Enhanced operating methods can also increase customer satisfaction. To support activities with companies, a customer relationship management system can be used, which is designed to support the organization's activities. This can also simplify and speed up work and bring added value both to working in the customer interface and to the customers themselves. In order to better understand business demands and how to serve them as sector consumers, this study aims to describe the business interfaces now in use in the technical sector and develop a model of business cooperation.

1.2 Thesis Objectives, Research Questions, and Limitations

Research objectives that are well thought out make the execution of the research questions possible and the objectives guide the process of answering the issue. Research objectives show a good sense of direction and purpose in the researcher. (Saunders 2016, 45-60.)

The purpose of this study is to define the existing business interfaces in the technical sector and create a model of business cooperation to better understand the needs of businesses and how to serve them as customers of the sector. This study also models the Microsoft Dynamics 365 CRM systems' possible use and infrastructure for the specific needs of the technical sector.

The research question explains the purpose of the study and defines the focus point of the research (Saunders 2016, 45-60).

The main research question is:

- How business interface information can be used to better the cooperation with businesses in the technical sector of the city of Heinola?

To achieve the answer to the main research question, the following sub-questions are composed:

- What are the business interfaces in each specific service area inside the technical sector?
- What are the existing methods of business cooperation in the technical sector?

- How the CRM system can be modeled to benefit business cooperation in the technical sector?

The research of this study is limited to the technical sector of the city of Heinola and the legislation that guides the work of municipalities. The research for the modeling of CRM systems is limited to the Microsoft Dynamics 365 CRM system, as that is used in the organization.

1.3 Theoretical Framework

The next stage of the research process is to review the body of prior research once the research question has been established and the topic has been defined to address it. The literature review's main goal is to familiarize scholars with the research and studies that have been previously done in the chosen field of study. (Godwill 2015, 37.)

This thesis has two different theoretical frameworks. The theories are divided into the part dealing with public administration and municipal legislation and the part dealing with business cooperations and customer relationship management. In Finland, the structure and operation of municipalities are dealt with by the Constitution and the Municipalities Act. Finland's municipal structure is also strongly in line with EU regulations. (Harjula & Prättälä 2019, 3-7.) In addition to these, in particular, the operation of the municipality's technical services is regulated by other legislative articles, such as the Waste Management Act and the Land Use Act (Kuntalitto 2023).

The theories of business cooperation and customer management are based on many written sources. The theory of business cooperation includes the qualitative means of cooperation. The business cooperation model describes the cooperation models and means based on the values of cooperation. Business cooperation models are divided into three parts, sharing, specialization and allocation models. The customer management theory focuses on the use of customer management in the municipal sector. The CRM system is based on the client's already existing Microsoft Dynamics 365 system.

1.4 Research Methodology and Data Collection

Research is the method of gathering, analyzing, and interpreting data in a planned and methodical manner to provide reliable answers to issues. Finding or developing solutions

to issues by using scientific methods is one of the fundamental goals of research. As a result, the primary goal of the research is to uncover the unknown truth that is concealed and undiscovered. (Godwill 2015, 4.) Any research project must begin by defining the problem. For the researcher to be motivated to conduct the specific research, the study must be of interest to them. (Habib et. al. 2014, 8-9.)

After deciding on the research problem, the research approach must be decided. Research approaches have been divided into deductive and inductive approaches. In deductive research specific notion or theory is derived from a broader component, such as broad theories. This proceeds from general ideas or theories to specific cases. The goal of this type of study is to have a distinct theoretical stance before gathering data that may be applied to solve a particular issue or challenge. Research that uses inference to reach broad ideas or theories is known as inductive research. (Godwill 2015, 11-12.) The research approach for this thesis is deductive as the conclusions will be drawn from the data gathered during the research process.

Data collection and numerical transformation are typical steps in quantitative research so that statistical computations can be used to draw conclusions. In qualitative research, the experiences of the participants in the study are of more interest. It involves gathering, analyzing, and interpreting data from observations of what people say and do. (Habib et. al. 2014, 8-9.) In this thesis, both qualitative and quantitative components are covered. Mixed-method research uses both techniques in combination to analyze problems from both perspectives.

Research data for this thesis comes from both primary and secondary sources. From the primary source, the data is collected straight from the source of data. Data is collected for the first time, and it is original. (Godwill 2015, 79.) In this thesis, the primary data source is the city of Heinola organization and its officials and employees.

Secondary data has already been collected from outside sources. Although this information has already undergone statistical analysis, it is gathered and examined to compare various studies or to advance fresh theories. (Godwill 2015, 79.) For this thesis, the sec-

ondary data is collected from legislation, literature, articles, the city of Heinola, and statistical sources. The figure below illustrates the research approach, methods, and data collection for this thesis.

Figure 1 Research approach, method, and data collection used in this thesis

One way to conduct qualitative, empirical research is through interviews. A direct interview with a topic is a fully qualitative procedure. It is frequently used to get accurate and insightful data regarding a topic. It's a conversational strategy where specific questions direct the conversation. (Elhami & Khoshnevisan 2022.) The interviews can be conducted either in person, as a telephone interview, or as a survey. The interview is based on questions gathered around the research topic. In a personal and telephone interview, the information obtained from the research and the data is much more extensive, compared to a written survey. In a survey, the ready-made answer conditions limit the collection of data to certain answer options. (Goodwill 2015, 80–86.) In this thesis, thematic interviews were used as part of data collection to find out the existing business cooperation models in the sector. A total of ten interviews were conducted for personnel in the technical sector.

1.5 Thesis Structure

This chapter will outline the structure of this thesis. The structure is presented in the figure below.

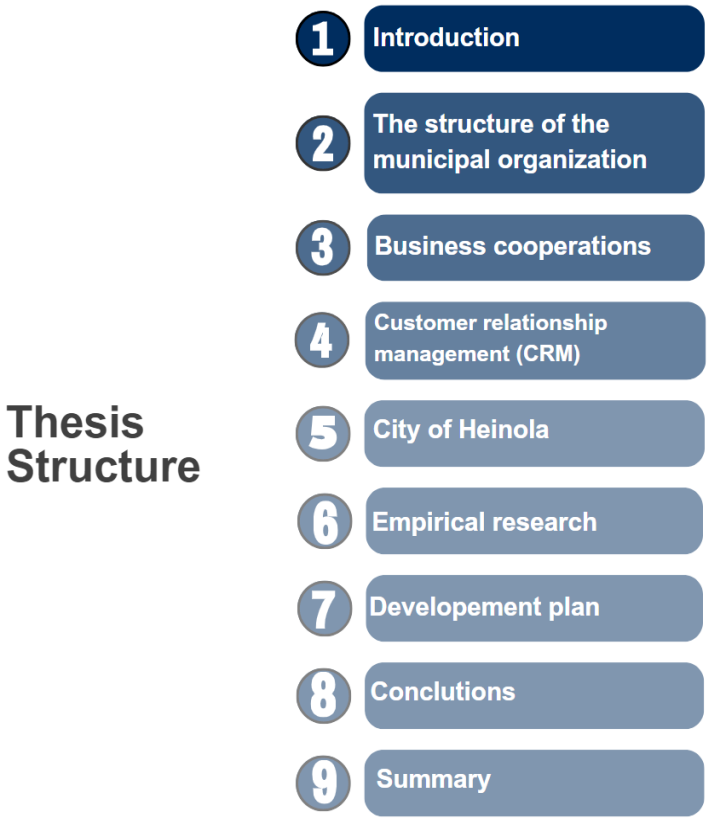

Figure 2 Thesis structure

This thesis starts with an introductory chapter. The introductory chapter includes the research background, thesis objectives, research questions and limitations, the theoretical framework, the research methodology, and the thesis structure.

The second chapter presents the structure of municipal organizations in Finland and the legislation that regulates them. The second chapter also discusses the structure of the technical sector and the legislation affecting it.

Next, in the third chapter, the theoretical basis of business cooperation and its models is presented. In addition, the importance of business cooperation in the municipal organization and how it can be shaped to support the municipal organization and companies will be discussed.

In the fourth chapter, an overall picture of the customer relationship management system is created. The use of the CRM system is observed both in businesses and in the public sector.

The presentation of the research commission, the city of Heinola, and its technical sector are in the fifth chapter of this thesis. The chapter presents an overview of the city and the structure of the city organization.

The sixth chapter introduces the empirical research part of the thesis. The chapter contains theoretical background information about the empirical research, as well as the thematic interview conducted during the thesis process and its results.

Bringing information collected on theme interviews to the development of existing business cooperation models is described in the seventh chapter. This chapter also describes the design process of the CRM system based on the research results.

The eighth chapter concludes the thesis. The chapter answers the research questions and evaluates the validity and reliability of the work, as well as presents possible further research opportunities. The last, ninth chapter of the work contains a summary of the thesis.

2 THE STRUCTURE OF THE MUNICIPAL ORGANIZATION

Finland is divided into municipalities based on the Finnish Constitution's §121.1 (731/1999). The municipalities are self-governing units whose task is to focus on the administration of matters in the municipality's territory. In self-governing municipalities, the residents of the municipality elect the highest decision-maker, the municipal council, which is responsible for managing regional affairs. In Finland, municipal administration meets European requirements and, despite its characteristics, has international roots. In 2020, there were 310 municipalities in Finland. Of these, 203 used the name municipality and 107 used the name city. (Harjula & Pränttälä 2019, 3–7.)

The activities of municipalities in Finland are governed by the Municipal Act (2015/410) and the Finnish Constitution (Harjula & Pränttälä 2019, 72-73). The Municipalities Act defines the structure of the municipality's administrative organization, the distribution of decision-making power in the municipality, and the municipality's responsibilities and obligations. Municipal decision-makers are elected in municipal elections every four years. The highest decision-making body of the municipality is the municipal council. In addition to this, the municipality can, based on the administrative rule, direct the authority to other institutions of the municipality, such as the boards. These are formed from the representatives elected to the municipality's council, and the boards supervise the activities of the organization of officeholders in their area of interest. (Kuntalaki 2015/410.)

In the Municipalities Act and the Finnish constitution, municipalities are defined with statutory tasks that they must produce for the municipality's residents. In addition to the statutory tasks, the municipality can also provide other services to the municipality's residents to increase the attractiveness and vitality of the municipality. (Harjula & Pränttälä 2019, 72–73.) Statutory tasks can only be defined in the law, and they include, for example, early childhood education and basic education, urban planning and land use, and water and waste management (Valtiovarainministeriö 2023). The municipality has an obligation to organize services for its residents that are outside the scope of the legislation. The constitution defines the legislative right to assign tasks to be organized by the municipality but also limits the fact that tasks can only be assigned to the municipality by legislation. (Harjula & Pränttälä 2019, 72–74.)

In municipalities, industries are usually divided into common sector and special sectors. The common sector generally includes the tasks taken on by the municipality by its own decision. Special sectors include the tasks assigned to the municipality in the Municipal Act or other legislation. (Harjula & Pränttälä 2019, 161–164.) The municipality has an or-

ganization of officeholders to carry out the given tasks. The council of the municipality determines the administrative rules of the municipality, according to which the organization of officeholders carries out the tasks. (Kuntalaki 2015/410.) In the municipality, the administrative rule precisely determines what kind of decisions any institution can make. In municipalities, the administrative rule is based on the Municipal Act, the administrative rule is defined in §90 of the Municipal Act. (Kuntaliitto 2023.) The highest decision-making power of the organization of officeholders rests with the municipal manager or the mayor, who is responsible to the municipal counsil (Kuntalaki 2015/410).

The operation of the municipality's sectors is defined by §6 of the Administration Act, which provides the legal principles for the operations of the sectors. These principles are:

- Principle of equality
- Principle of objectivity
- Proportionality principle
- The requirement of equal treatment and
- Prohibition of abuse of discretion

In legal practice, the general utility of the tasks, the locality of the tasks, the ban on supporting companies, and the ban on speculative activities have also been considered as well-established principles. (Harjula & Prättälä 2019, 163–164.)

Statutory duties are also defined by other legislation. For example, early childhood education and its services are defined by the Early Childhood Education Act, water and waste management are defined by the Water Act and the Waste Management Act, and the municipality's land use is determined by the Land Use Act. These legislations must be taken into account when the municipality carries out the statutory duties defined in the Municipal Act. (Kuntaliitto, 2023.)

Municipalities in Finland have the right to tax their residents (Suomen perustuslaki 731/1999). Municipalities have the right to decide on their own finances and, based on that, on the municipal tax. In addition, municipalities receive subsidies from the state for the management of statutory tasks. The most important task of the municipal council is to take care of the municipality's finances. The Municipal Act stipulates that the municipality's finances must be balanced. The tasks of the municipal council's financial administration include the annual budget and a two- to three-year financial plan. The council decides on the management of the municipality's assets and the services provided by the municipality and their fees. (Harjula & Pränttälä 2019, 229–232.)

3 BUSINESS COOPERATIONS

To collaborate in order to accomplish a common goal is the ultimate objective of cooperation. Cooperation increases opportunities for work since the people involved have more resources because of their shared resource pool. Cooperation is a technique that businesses employ for a variety of tasks, including subcontracting and industry development. (Huxham 2005, 4–6.)

A significant amount of a company's income and expenses comes through cooperation. Cooperations are crucial for innovation as well as for producing revenue. Companies spend 30 % of the research budgets on collaborations that account for more than 25 % of their income. (de Man & Luvison 2019.)

The exact reason for an organization's participation in a given cooperation or cooperative partnership will be specific to one's circumstance. There are several typical underpinnings for a collaborative benefit at a less granular level. These levels of collaborative benefit include:

- Access to resources
- Shared risk
- Efficiency
- Co-ordination and seamlessness
- Learning
- The moral imperative

If an organization can't accomplish its goals using only internal resources, it will frequently work with other organizations, meaning their benefit from cooperation is access to resources. (Huxham 2005, 5–6.) Differentiating between various asset kinds is useful. Depreciable assets include assets that are easily consumed, such as monetary assets. Long-lasting assets include machinery, structures, and talents, which can continue to be profitable for years. (Austin 2016, 432.) For example, collaboration between companies when bringing a good to market is when one business offers the good and the second offers entry to the market. These cooperations may be between small but innovative companies that have created a distinctive product, very large corporations, where the creation and distribution of products are complex processes, or companies looking to expand into untapped markets. Collaborations involving non-profit and government groups frequently depend on the need to pool resources, skills, contacts, and information. For example, municipalities, nonprofit organizations, and business development organizations often work together on issues of local development. (Huxham 2005, 5–6.)

In this instance of shared risk, the companies work together solely because the risks associated with completing the task individually are too great. This is a form of cooperation where the main objective is to share risk, as opposed to partnerships where everyone involved mutually agrees to share the risk even tho the cooperation has been created for different reasons. Shared risk collaboration is often costly research and development operations between organizations with comparable resources. (Huxham 2005, 5–6.)

There are numerous efficiency bases for cooperation. The public sector has often stated that private companies are more efficient in providing services compared to public actors. Because of this, they have supported public and private sector partnerships to provide public services. Although the public sector has the necessary skills to produce the service, public and private actors can cooperate to produce services. Also, businesses may contract out supporting services like catering and housekeeping to other businesses that can benefit from the cooperation. Operational efficiency cooperation is common in purchasing and supply chains. The purchasing party benefits from contracts that, for instance, guarantee the supply at a set price, and the supplying party benefits from a relatively predictable market. In addition, the review of efficiency in cooperation concerns the coordination of the provision of public services in order to prevent duplication of services that cannot be justified by public costs. (Huxham 2005, 5–6.)

The focus of many governments has been the delivery of public services that seem seamless to the citizen-user. This cooperation benefit creates co-ordination and seamlessness. (Huxham 2005, 5–6) Working in partnerships with the government, civic society, and local communities is thought to be a potentially successful and efficient way to handle both local environmental challenges and complicated socioeconomic issues (Sullivan 2017, 203). This idea has also frequently served as the foundation for partnerships between bigger regionally based businesses and service-oriented small and medium-sized businesses (Huxham 2005, 5–6).

The justifications for learning can take many forms, just like the justifications for efficiency. While collaborative activities are frequently the goal of cooperation, some are started with the goal of mutual learning. This is frequently at least partially the driving force behind the creation of networks between organizations. Learning collaborations have been consciously developed in various industries. For instance, in the automotive sector, employees of the companies that supply them with vehicle components have served as trainers and advisers to their employees. In some situations, a corporation may decide to create an alliance or joint venture for the unstated strategic purpose of learning from the partner

organization. This would lessen the company's long-term need to form alliances for access to resources. (Huxham 2005, 5–6.)

Moral considerations are one of the most significant reasons to be concerned about partnership. This is based on the idea that no group functioning independently can address the pressing challenges facing society. These problems are essentially multi-organizational since they affect so many areas of society. (Huxham 2005, 5–6.)

3.1 Business Cooperation model

According to de Man and Luvison (2019), cooperation models can be divided into three models, sharing model, specialization model, and allocation model. Each of these models has its own characteristics in terms of the value they bring. The value of the sharing model is formed by combining similar features with the goal of achieving a greater network effect. In the specialization model, the pursuit of added value is based on the sharing of knowledge and skill resources. (de Man & Luvison 2019.) In this way, cooperation can achieve things that would not have been possible alone (Huxham 2005, 5–6). The basis of the allocation model is risk management. The value of the model is formed by the sharing of risks and responsibilities among the partners. (de Man & Luvison 2019.) In the figure below, three cooperation models by de Man and Levison are divided into value creation, value capture and value delivery.

	Sharing	Specialization	Allocation
Value creation			
Economies of	Scale	Skill	Risk
Capabilities	Similar	Complementary	Overlapping
Relationship of the partners	Horizontal	Diagonal	Vertical
Value creation potential	Predictable	Unpredictable	Increased predictability
Value capture			
Mechanisms	Pre-agreed split	Each partner carries own revenue/cost	Incentives tied to performance
Value delivery			
Interdependence	Reciprocal	Pooled	Sequential
Level of integration	High	Low	Focused

Figure 3 Three cooperation models by de Man and Levison (2019)

The Sharing Model

This collaboration strategy makes it simpler for buyers and sellers to transact business by combining human and physical capital. It is a decentralized approach in which businesses collaborate to produce products and services together or to buy and sell them directly to one another, without the aid of a middleman or commercial organization. (Choudhary 2021.)

The cost of some resources, such specialist equipment, prevents some businesses from using them. In these circumstances, it makes sense to utilize resources owned by other businesses via collaborations. As a result, businesses can operate more flexibility and affordably obtain the material resources they need. The cost of resource ownership is typically far higher compared to the cost of service use or access. (Grondys 2019.) However, members face three major coordination obstacles: how to manage changes that might affect each partner differently and weaken the cooperation, how to ensure the proper level of coordination to achieve the desired growth of revenue, and how to ensure that each partner receives their fair share of value (de Man & Luvison 2019).

The Specialization Model

Specialization cooperation include participants from several industries. Since learning must occur and success in innovation is difficult to anticipate, specialization models' potential for value creation is unpredictable. (de Man & Luvison 2019.) This is the circumstance in which learning occurs as a result of overt or covert cooperative efforts. Partner interdependence, transparency, trust, and a range of communication methods all promote effective knowledge transfer. (Lis & Sudolska 2014.) In contrast to the other two types, these coalitions change their structure more regularly (de Man & Luvison 2019).

The Allocation Model

The allocation approach has lately gained popularity in partnerships between the public and private sectors (de Man & Luvison 2019). When public and nonprofit managers decide to take part in a collaboration, they should carefully consider their ability to provide the agency resources that will likely be required and expected for success (Norris-Tirrell 2010, 84).

If the risk during the cooperation is distributed only to the other party, the responsibilities and goals often no longer meet when the cooperation activities are carried out. The higher

risk of the other party guides their actions independently, not in cooperation with the partner. With the allocation model, the risks are divided among the partners so that their areas and skills correspond to the risk's demands. (de Man & Luvison 2019.)

De Man and Luvison (2019) mention public procurement as an example of the implementation of the allocation model. In public procurement, the benefit of shared risk is emphasized and the risk is distributed in procurement both to the procuring public party and to the private party that produces the product or service that is the subject of the procurement.

3.2 Cooperation between municipalities and businesses

According to the municipal barometer conducted by Suomen Yrittäjät, entrepreneurs in Finland feel that the most important themes are the entrepreneurial approach of the municipality's decision-making, business services, the position of economic policy and the municipality's procurement. (Yrittäjät 2022.)

Compared to other OECD countries, the Finnish public sector is remarkably large. In order to cut public sector expenditures and support the success of companies, the municipality must cut the services it provides. When the municipalities organize only those services that the business sector cannot, the business of the companies in the area can be increased. The municipality's decision-making should also take into account how the made decisions affect the operations of companies in the area. (Yrittäjät 2021.)

In this thesis, the cooperation between the municipality and companies and the third sector is examined from the perspective of procurement, framework agreements and projects.

Public procurements are contracts for the purchase of products, services, or construction that are made by the state, municipalities, municipal associations, government institutions, parishes, and other procurement units as defined by the procurement legislation. Public procurement is required to be subject to fair, transparent, and nondiscriminatory tendering. (Kuntaliitto 2023.)

Framework contracts can be used to agree on the acquisition of certain products and services from a certain provider within the agreed time frame. This frees procurement tendering for the products or services of the framework agreement for the duration of the contract period. (Julkisten hankintojen neuvontayksikkö 2023.) Municipal projects can be internally financed projects, such as renovating municipal infrastructure, or externally financed projects, such as development or investment projects (Päijänne Leader 2023).

4 CUSTOMER RELATIONSHIP MANAGEMENT (CRM)

Customer relationship management, or CRM, is a business strategy that aims to build, develop, and enhance connections with specifically desired customers in order to increase corporate profitability and customer value (Payne 2012). CRM is used to handle all interactions and relationships with excisting and future customers. The objective is to increase business and improve business relationships. CRM aids businesses in maintaining contact with clients, streamlining procedures, and boosting revenue. (Salesforce 2023.)

Businesses may now maintain one-on-one interactions with their most important clients, due to the advancements in information technology (Shainesh 2014, 13). When discussing CRM, its often refer to CRM system. CRM system aids in managing contacts and sales and maximizing marketing actions, among other actions. CRM systems can be utilized to oversee customer connections throughout the customer lifecycle, including interactions in sales, marketing, e-commerce, and customer support.The use of an CRM assists in focusing on an organization's relationships with specific individuals such as consumers, customers, coworkers, and cooperation partners. (Salesforce 2023.) Relationship marketing methods are frequently implemented using information technology. In order to create profitable, long-term partnerships, CRM combines the opportunity of technology and new marketing ideas. (Payne 2012.)

CRM also focuses on establishing, preserving, and enhancing competitive strength by foreseeing consumers' future requirements in addition to meeting their immediate ones. Customers today rarely look for a isolated product. Instead, they prefer rapid delivery, a warranty that is assured, and continuing customer service. As a result, the good or service offer has taken on a variety of forms and is the result of functionally diverse knowledge. Businesses must know their consumers and competitors better than ever and actively use this knowledge if they want to boost customer happiness and decrease customer turnover. (Payne 2012, 11–17.) On the side of the demand, escalating client expectations will compel companies to implement CRM. On the supply side, the adoption challenges for technology-driven CRM activities will be lowered by technological advancements and the falling prices of communication and information technologies. (Shaines 2014, 10.) Access to knowledge and insights that support the production of customer value has been substantially improved through improvements in information-gathering and -sharing both within and among businesses. A crucial component of CRM is striking the balance between value provided to clients and value gained in return, as well as understanding how this may need to alter for various client segments. (Payne 2012, 11–17.)

The CRM can be divided into three components. Operational CRM involves with automating business procedures including customer interaction points in the front office. These industries include automation in customer service, marketing, and sales. As businesses build call centers or implement sales force automation programs, operational CRM has become a significant area of organizational spending. CRM providers prioritize providing an expanding selection of functional CRM solutions. The collection, organization, analysis, interpretation, and application of data produced by the operational aspect of the business are all components of analytical CRM. An important factor to take into account is the integration of analytical and operational CRM solutions. Utilizing collaborative services and infrastructure, collaborative CRM enables communication between a business and its various channels. This makes it possible for customers, the company, and its employees to engage. (Payne 2013, 26–27.)

4.1 CRM in municipal organizations

CRM can be used in public governmental structures, particularely in municipalities, with resources allotted to manage the citizen-public relationship. This relationship will be referred to as customer demands and resource requirements, and it will start a shift in the way municipal business is handled. The primary objective is to create a citizen-centric CRM system that will support municipalities in their transition by giving their clients a single point of contact. (Tembo 2019.)

In Finland, no comprehensive peer-reviewed research has been conducted on the benefits and differences of customer relationship management systems between municipalities and companies. However, municipalities in Finland use CRM systems, and many companies in the field offer solutions for the needs of municipalities. For example, Innofactor has built a Microsoft Dynamics 365 CRM solution for the city of Tampere, which consolidates the city's cooperation and offers more unified solutions for different customer processes (Innofactor 2024).

4.2 Difference in customers in private sector and in municipalities

In private businesses and organizations a customer is an individual or an organization that is willing to pay for the product or a license to use it, and who wants to purchase it for themselves or their own use. Although money is typically used as payment, other products may sometimes be accepted in lieu of cash. (Simons 2014.)

The client may be an indirect or direct client. A direct customer transacts business with an organization, such as a manufacturer, directly. An indirect consumer does not have direct

interaction with the product's producer since they obtain the good in question by one or more middlemen. As a result, the indirect client is blind to the product's maker. Furthermore, the client may be an internal or external client. An external customer is an individual or organization that does not work for the company. An organization or assignment manager that works for the same corporation is referred to as an internal customer. When a product is purchased by an internal customer, the payment is handled internally by the business. Big businesses and those involved in development, manufacturing, or both have a large number of internal client relationships. (Pawar 2014.)

The municipality's customers are those for whom the municipality produces statutory tasks. Statutory duties determine what services the municipality must produce for its residents. In addition to the municipality's residents, the municipality's customers can also be communities operating in the municipality, tourists, companies or non-profit organizations. (Kuntaliitto 2013.)

4.3 Microsoft Dynamics 365 CRM system

Microsoft Dynamics 365 is a digital tool offered by Microsoft for managing company customers and customer data. The Dynamics 365 system offers tools for sales, marketing, production chain, and financial management for various industries. The Dynamics 365 system includes 15 different programs that serve different phases of business operations. (Microsoft 2023.)

The Dynamics 365 system can be customized according to the user's needs. Because the system is Microsoft-based, it can work together with other Microsoft systems, such as Outlook e-mail and Excel spreadsheet applications. (CGI 2023.) Customer data can be added to the system manually by users or external partners (Microsoft 2023).

5 CITY OF HEINOLA

The city of Heinola is located in southern Finland, in the province of Päijät-Häme, surrounded by the ridges of Salpausselkä and two lakes, Ruotsalainen and Konnivesi. Heinola is accessible from highways 4 and 5. The total area of the city is 839.29 km², of which 676.09 km² is land and 163.20 km² is inland water. (Heinolan kaupunki 2021.) About 18,202 inhabitants live in Heinola in 2022 (Heinolan Kaupunki 2023.) The unemployment rate in the region in 2023 was 13,2 % (MDI, 2023).

5.1 Brief history of the city of Heinola

Around 7,000 years ago, the streams of Suur-Päijänne broke through the Jyränkö ridge, forming a passage for Kymijoki. The ridges and waters of the region are still very important to the city. (Heinolan kaupunki 2021.)

When King Kustaa III revised the county division and erected a new centre of leadership, the lord's residence, in Heinola, the significance of the location was fundamentally altered. It developed into a small administrative and economic hub. But as time went on, the Grand Duchy of Russia's boundary expanded, the way counties were divided changed, and the Residence ultimately relocated to Mikkeli. After this, Emperor Nicholas I gave Heinola city powers as compensation in 1839. (Heinolan kaupunki 2021.)

As early as the end of the 19th century, goods and passengers were brought to Heinola by steamship. In 1932, the railway was finished. In 1993, the brand-new Tähtniemi bridge and the roadway were made accessible to vehicles. Large timber and textile factories constructed in the 1950’s and 1960’s offered employment. In 1997, the city and the rural municipality combined, bringing the population of the city to more than 20,000. Jobs in the manufacturing industry substantially declined at the beginning of the twenty-first century. The population has been gradually influenced downward. (Heinolan kaupunki 2021.)

5.2 Structure of the city of Heinola organization

The organization of the city of Heinola is divided into the decision-making body, the council and the organization of office holders. The municipal council, which is elected every four years in municipal elections, holds the highest decision-making power in the municipality. According to the city's administrative rules, the council is divided into the municipal council, the municipal government and the boards. There are four boards in the city of Heinola, the welfare-, vitality-, technical- and permit and control boards. Each board is responsible of an sector in the office holder organization. In addition to the wellfare-, vitality-, technical-, and permit- and control sectors, the organization has a common services sector, which acts as a support service for the sectors of the office-holder organization and the municipal manager. (Heinolan kaupunki 2023.) The structure of the organization of city of Heinola is presented in a figure below.

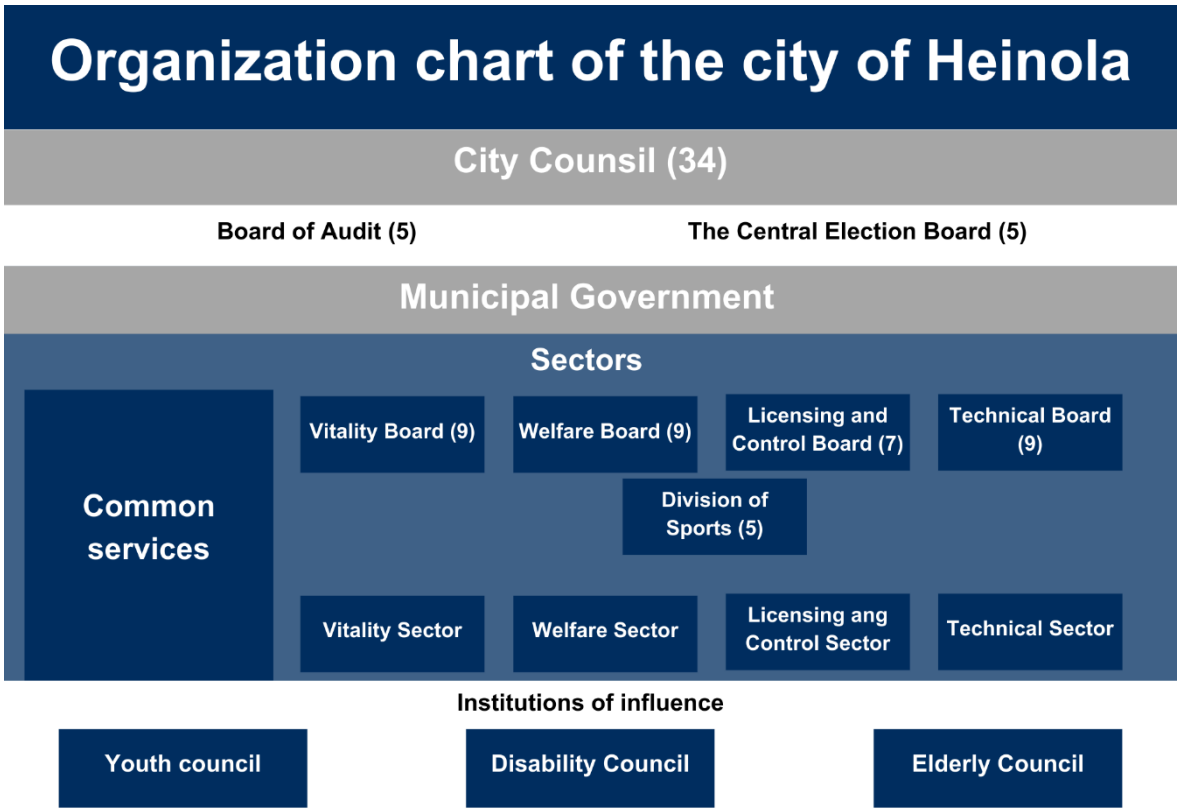

Figure 4 Organizational chart of the city of Heinola

Structure of technical sector in the city of Heinola organization

The city of Heinola organization has been divided into four sectors, the welfare-, vitality-, technical- and permit and control sectors. The technical sector has then been divided into

three service areas. The service areas are municipal engineering, food and cleaning services, and construction services. The director of the technical sector is responsible for the operations of the technical sector, and each service area has its own service area managers. (Heinolan kaupunki 2023.) Organizational chart of the technical sector of city of Heinola is presented below.

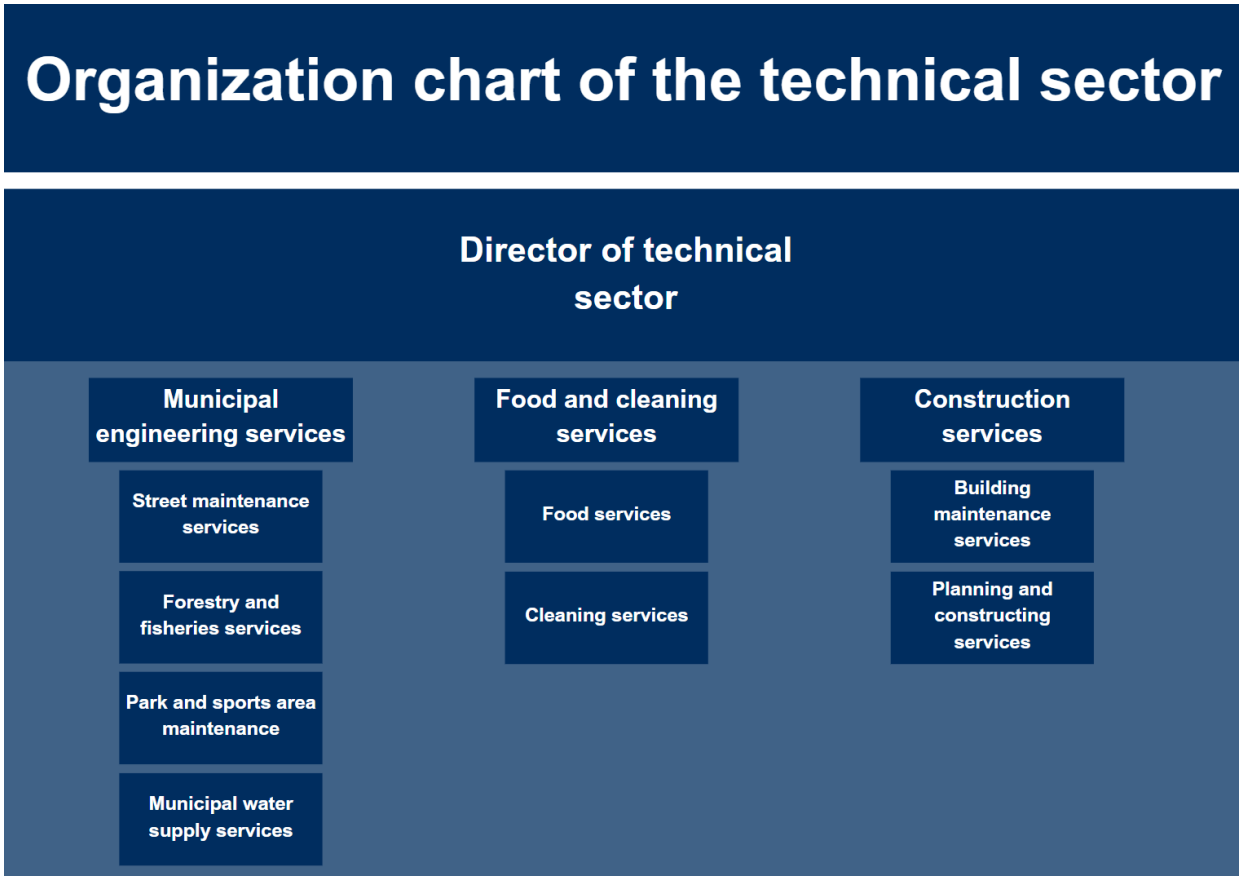

Figure 5 Organizational chart of the technical sector of city of Heinola

The municipal engineering service area includes street maintenance, forestry and fisheries services, park and sports area maintenance, and municipal water supply services. The task of the food and cleaning services is to take care of the catering of the municipality's educational institutions and daycare centers, as well as the cleaning of properties owned by the municipality. Planning, constructing, and maintaining the city's infrastructure are all tasks that fall under the responsibility of construction services. Additionally construction services is in charge of leasing out municipal-owned property, such as offices, to businesses. (Heinolan kaupunki 2023.)

6 EMPIRICAL RESEARCH AND DATA ANALYSIS

Empirical research generates information gathered from direct observation instead of from theories or beliefs since it bases itself on measurements and observations of phenomena (PennState 2023). Planning the steps to carry out the experiment and how to analyze it is crucial since empirical research bases on observing and documenting experiences. This gives the researcher ability to handle issues or impediments that might arise throughout the course of the study. (Bhat 2023.)

Defining the research's goal is the first stage of conducting empirical research. The researcher must specify what it is they are trying to discover and what the reserach question is. The researcher must determine whether there are limitations on the information, data, time, or resources that are available and whether the benefits of the research outweigh the costs. (Bhat 2023.)

6.1 Conducting Empirical Research

The timeline of the empirical research process is presented in a table below. The empirical research of this thesis was carried out with thematic interviews for officeholders and employees of the technical sector of the city of Heinola. The thematic interview was chosen as the research method due to the scope of the research topic, and the thematic interview gave the best overall understanding of it.

Stage of research	Timeframe	Description
Planning	1.6-15.6.2023	Planning the execution of the research and formulation of research questions
Process of interviews	16.6-31.7.2023	Scheduling and implementation of interviews. The interviews were spread over both June and July due to the office holder's and employee’s annual vacations.
Analysis of the results of the interviews	August 2023	After the interviews, the results were analyzed and written in the table in the next chapter.

The research started with planning the thematic interview process. In the planning phase, the goals of the research method were determined, which were to understand the extent

of business cooperation and to find existing ways of working. In addition, it was hoped that the thematic interview would reveal the personnel's views on the current state of business cooperation and possible personnel development suggestions for operating methods. This information would also be used as part of the CRM system modeling for the technical sector.

The thematic interviews were limited to personnel in the technical sector, who either directly or indirectly deal with companies in their daily work, and who was available at the time of the research to participate in the interview.

For the thematic interview, core questions were formed that guide the interview to find and examine business cooperation models. The interviews were conducted in Finnish, as it is the working language of the organization. The core questions translated into English were:

- What kind of matters do you communicate with companies in your work?
- How does cooperation with companies work in your experience?
- How could the process be developed?

Interviews with personnel were carried out either one-on-one or via Teams video meetings. Data was collected from the interviews using notes and mind maps. In addition, background material from the city of Heinola's guidelines was collected to support the interviews.

6.2 Results of Empirical research

Empirical research was conducted with thematic interviews with officeholders and employees of the technical sector. A total of ten interviews were held. The interviews were organized either face-to-face or via the Teams video conference system during June and July of 2023. The theme of the interviews was business cooperation in the technical sector of the city of Heinola.

The material and answers collected from the interviews were first organized into mindmap tables of each interviewer's answers. After that, the themes that arose in the interviews were extracted using keywords in the keyword diagram. From the keyword diagram, the most central themes about the existing methods of business cooperation and the organization's wishes about how cooperation activities could be developed emerged. The table below summarizes the responses from the interviews through the main themes that emerged in the interviews.

Business interface	The results of the interview
Framework agreements	Creation of clearer and more detailed listing of existing framework agreements, includin what can be procuired within each agreement. Timetable for frarework agreements, including start- and end-date and timeline for re-tendering process.
Procurements - Contains o Small purchases o National procurement o EU procurement	There is a lot of need for procurement, partly through framework agreements. A lot of small purchases are made from "familiar and safe" partners from whom purchaces have been made in the past. Search engines or employees own memos/memory are used to search for information. The procurement process is partly perceived as challenging and time-consuming. A simplified model for procurement or a person responsible for procurement is needed, so the procurement process does not to take time away from other work. Market dialogues are hoped to be part of the procurement process. The process of national procurement takes time, and employees have to prepare for this well in advance so that the work does not slow down. The sector used individual operators in service areas for whom working with the city is a useful addition to their business. A possible unified operating model has been considered for this
Projects	There are a lot of procurements in the projects, and the procurement process is perceived as time-consuming and difficult to understand. The municipal cooperation agreement is hoped to clarify and a simplify operating models for the procurement in projects carried out in cooperation with other municipalities. Companies are hoped to become part of the projects more actively.

Educational institution cooperation	Each higher education institution has its own portals, through which, for example, applications for higher education interns take place. Hopes for a clear approach to who creates profiles on the portals and information on which portals already have a city profile and with which IDs. There would be a need to get a list of which educational institutions offer education in which fields.

At the beginning of the interview, each of the interviewees described their work duties in the city of Heinola. The interviews were guided by the core questions created in advance, and the most significant of them was the interviewee's view on what kind of issues the technical sector and companies are connected in. In addition to this, the interviewee's opinion on the functionality of business cooperation and possible development proposals for the operation were asked. In this way, the interview provided a sufficient overall picture of the different forms of business cooperation for the entire sector.

Many of the services and products purchased by the technical sector are covered by framework agreements. Framework agreements facilitate the daily work related to procurement and speed up the procurement process. Framework agreements are valid for an average of two years. After the end of the framework agreements, they are often tendered for a new one. In the interviews, it appears that the sector’s employees would need to find information about framework agreements in a more centralized manner, as well as to find information about the products or services included in framework agreements more clearly. In the interviews, it also emerges that the expiration dates of the framework agreements could be compiled, and that a timetable could be created for the re-tendering of the framework agreements.

Based on the results of the interview, the most significant forms of corporate cooperation in the sector are the framework agreement arrangement and procurement. Procurement includes all services and products that the technical sector of the city of Heinola buys from companies. These include, for example, building real estate, mowing outdoor areas, purchasing tools, and planning and consulting work. The majority of procurements take place as small procurements, which do not need to be tendered under procurement legislation. These are often carried out from the same companies from which similar procurements have been made in the past. There is no excisting listing of companies from which small

purchases are made. Procurements are perceived to take up a lot of working time. In addition, the procurement process is perceived as complicated and laborious. The answers to the interviews show the desire of the employees for a centralized procurement employee in order to free up more time for other work.

Projects implemented in the technical sector can be either internally or externally financed. External funding is sought from stakeholders related to the operation. The projects include a lot of procurements, which are organized either with existing framework agreements, or tendered in accordance with procurement regulations. Procurements take a lot of time, and this slows down the work of the project, as the procurements are generally carried out by those working on the project. It is hoped that companies will participate more actively in the activities of the projects, but there are no existing tools or operating models for this.

The technical sector cooperates a lot with educational institutions located in Finland. Several students of educational institutions carry out theses work and internships in the sector. Almost every educational institution has its own systems, through which students apply for internships and theses work. In these systems, the city of Heinola has its own employer profiles. These profiles cannot be found centrally, and they are not always created by the same person. This causes confusion when using the systems. In the interviews, it was also revealed that there would be a need for information about which study programs are organized in which educational institution. However, for this thesis, educational institution cooperation has been left out of the development plan, as the educational institution cooperation is divided into many different sectors in the organization.

7 DEVELOPMENT PLAN

The development plan focuses on three main points that have come up in the interview part of the study

- procurement developement,
- project developement and
- CRM modeling

By clarifying procurements, the sector hopes for a more efficient process for procurement planning and implementation. This speeds up and facilitates the process and thus saves employees' working time. The projects support the work of the line organization and bring added value to the work of the technical sector. Projects are a good way to increase cooperation between the city and companies. The companies hope to be more involved in the city's activities, and by involving the companies, mutual benefits are obtained.

The city of Heinola has implemented the Microsoft Dynamics CRM system as a tool for business cooperation. The system in question has been in pilot use in the city's vitality sector, and now it is hoped that the use of the system will be expanded to the use of the technical sector as well. The CRM system creates opportunities for cooperation and communication between the city and companies.

7.1 Procurement Developement

A summary of all the city's framework agreements can be found on the Silta intranet on the Procurement and purchasing service agreements page. However, this page has not been linked to an easy-to-find location. The framework agreement page lists valid framework agreements. In addition, the framework agreements can be found in the Dynasty document system.To be used efficiently, procurement and purchasing service contracts page would need to be linked in a prominent place on the Silta intranet site. In addition, the page should open in more detail which services or products are covered by the framework agreement in question. Information about the companies included in the framework agreements should then be entered into the CRM system. The expiration dates of the framework agreements and the re-tendering schedules should be made into their own file on the Procurement and purchasing service contracts page and be updated when the re-tendering is in progress.

Information about the companies from which purchases have been made is collected from employees making purchases or from Dynasty, and that information should exported to

the CRM system. In the future, requests for tenders for small procurements could be made through the CRM system, so that the information remains in the system. Searching for information about companies is made easy and natural through the CRM system, so that employees do not have to use search engines or their own memory to search for information. Company information would be kept up-to-date in the CRM system.

The Silta intranet contains instructions on organizing procurement. However, this instruction is too broad and difficult to read. Clearer and shorter instructions should be drawn up on how to carry out the procurements and communicate internally when one has been created. If necessary, training should be organized for personnel on the execution of procurements and the preparation of procurement notices. Another option is to centralize procurements to the employee responsible for them, in which case the working time spent on procurements is freed up to do other work.

The city of Heinola's technical sector is starting market dialogues to improve the effectiveness and smoothness of procurement. A thesis on market dialogues has been completed in 2023. Market dialogues, organized in an up-to-date manner, increase interaction with companies, when companies learn what kind of entities the city is acquiring and how they can participate in tenders. In addition, the city would get useful information about what kind of services the companies participating offer. The up-to-dateness of market dialogues and the clarity of procurements could be promoted by an annual activity clock covering the entire sector. The technical sector has many tasks scheduled well in advance, for example new construction needs or road repair work. It is therefore very important to use market dialogues well in advance of the start of tenders, and with the help of the annual activity clock, they could be planned so that the largest possible sample of companies could participate in the dialogue.

7.2 Businesses as a Part of Projects

The hope of the technical sector of the city of Heinola is to activate companies to participate in projects. Implementing projects in cooperation with companies increases the involvement of companies in the city's activities and thus promotes cooperation between the city. The benefit from such cooperation is mutual. The city gets partnerships and special expertise from companies as part of project activities and city development activities. Companies, on the other hand, get to showcase their know-how and create partnerships with the city. In addition, in development projects, the company's operations also develop and may spawn new business models for the company.

A project office has been operating in the technical sector for about a year, the purpose of which is to promote the sector's development work. The operation of the project office is separated from the operation of the line organization, and it consists of experts from different fields. The task of the project office is to promote the implementation of the city's strategic goals in the technical and licensing and control sectors, to enhance the operational activities of the sectors by developing operating models, to promote cooperation between educational institutions, and to promote the utilization of external public funding sources that enable investments and development work that the city's budget would not necessarily allow.

The projects are one of the most significant ways to develop the city's operations outside of the statutory tasks of the line organization. The projects are often at least partially externally financed and thus development work can be done to improve the city's operations without jeopardizing the city's economy. In addition to financiers, partners in projects can be other municipalities or companies.

In order to get all the possible benefit from the projects for the development of the city, it is important that companies get to be part of this work. Companies are a significant part of the city's economic structure and are a significant factor in the development of employment in the city. In addition, the success of the city's business field brings positive visibility to the city and encourages the development of the city's population.

In order to get companies to be a part of the city's projects, there must be active contact with the companies regarding the projects. Companies should be aware of what kind of projects are being organized in the city, and what kind of benefits participation in the projects brings both to the company itself and to the development of the region. Project work as a whole should be made public, and direct communication should be directed to companies regarding projects. The active conversation with companies also provides the city’s employees information of the need and possibilities of companies. The application times for external funding projects are often short, and it takes time to map out needs from companies, unless an active dialogue with the companies has been achieved earlier.

In the application stages of project funding, the annual activity clock becomes particularly important. Many funding applications follow strict schedules, and application submission dates are fixed. With the annual activity clock, the projects can be schedule in such a way that they culminate in the completion of the applications at the right time. This requires the preparation of a precise schedule, so that both the progress of the project and the application process for funding go together seamlessly.

Market dialogues are becoming part of the procurement process of the city of Heinola, and the same model could be used to activate companies to participate in projects. In open discussion sessions in the style of market dialogues, both city employees and local companies hear each other's ideas, development proposals and needs. There are often points of convergence among these that can be modified into common project ideas.

A project guide is being prepared for the city of Heinola, which summarizes the stages of project implementation. The purpose of the project guide is to serve as a tool for those working on projects and to unify project work in sectors. The guide summarizes the phases of the project from planning, the search for funding, implementation, as well as closing and evaluating the project. In addition, a section for communicating about the project has been created in the project guide.

Communication plan is included in the project guide, but is unstructured and doesn't devide the communicational tasks in the project. Making a communication plan already in the planning phase of the project ensures that the communication of the project is not forgotten or does not remain a loose part of the project. The communication plan created as a result of this thesis is divided into four parts. These include internal communication, stakeholder communication such as funders, media and websites, and corporate communication. The four parts of the project communication plan are presented in a figure below.

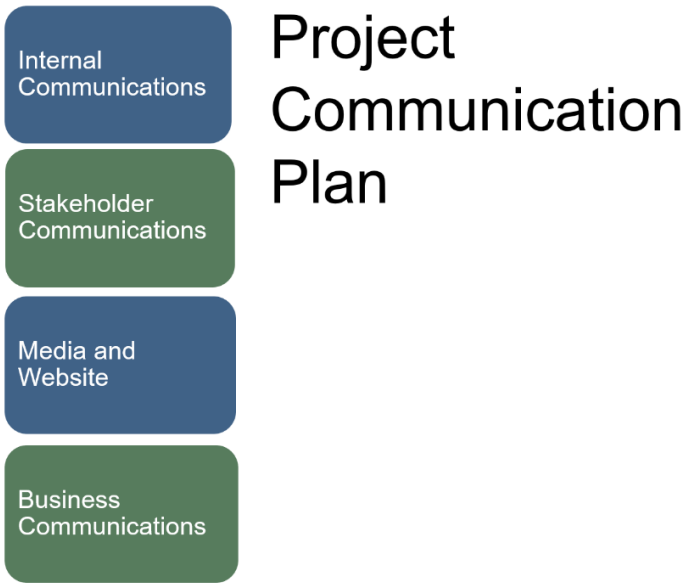

Figure 6 Project communication plan

The internal communication plan ensures that the organization is aware of the status and progress of the project. In addition, it is good to communicate at regular intervals about the fulfillment of the project's goals. In possible problem situations, regular communication shortens the possible time needed by other personnel to process the matter. In this way, the progress of the project does not slow down or stop despite problem situations.

Depending on the quality of the project, it may be necessary to add a plan for communicating with stakeholders, such as financiers, to the communication plan. This communication may be defined by the financier's requirements regarding the communication. It is necessary to plan this communication in advance so that it does not hinder or slow down the project work.

Media and website communication is important so that projects can be communicated quickly and comprehensively to the city’s citizens and businesses. Media communication includes both traditional media and social media. Traditional media, such as local newspapers, gives visibility to the city's application activities even for those citizens who do not follow the city's communication on social media channels. In social media, on the other hand, municipal residents can be quickly informed about changing situations. Website communication must be kept up-to-date, as it is the city's most significant communication channel.

Business communication can be started already in the planning phase of the project and therefore it is good to create it in time. The business communication plan includes the communication used for the acquisition of partners as well as informing the companies about matters related to the project. The research revealed that companies would like to be more actively involved in project work. When business communication is already started in the planning phase of the project, companies have the opportunity to participate in the project's activities. From previous studies made for the city of Heinola, it appears that the companies in the area would like more active communication from the city, and would be willing to participate in the city's activities when they get enough information. That's why it's important to communicate with companies early enough about projects, for example. During the projects, the communication with the companies shows that the city also takes the companies into account during its operations. This kind of communication increases companies' awareness of what is happening in the city, and for example, possible complaints about the operation are avoided when sufficient information is available.

7.3 Microsoft Dynamics 365 for the City of Heinola

The city of Heinola started the digital development project Digitikkaat in 2022. As part of this project, a pilot experiment on the design and implementation of a CRM system for the vitality sector has been developed. The city of Heinola uses the Microsoft Dynamics 365 CRM system, and it is currently designed to serve the needs of the vitality sectors business services service area in business cooperation. One of the goals of introducing CRM was to make this system extend to the entire organization of the city of Heinola. The technical sector of the city of Heinola hoped that the CRM system could also be extended to their daily work.

The customers of the current CRM system are only companies and associations and organizations with business identity code. Customer data with certain criteria has been imported into the CRM system for the needs of vitality sector. This customer data is then divided into marketing lists based on industry classifications and the location of the company's headquarters. The goal of this design has been to enhance communication that benefits companies. In addition, the goal is to increase the activity of companies as part of the city's operations and to bring business services closer to companies.

The needs of the technical sector for a CRM system differ from the needs of vitality sector. While a large part of the tasks of vitality sector is directly supporting business operations, in the technical sector, services for companies are mostly entities related to the city's procurement. To increase the technical sector's more customer-oriented approach to business cooperation, the procurement process must be thought of more as a service offered to companies and not companies as service providers whose services the city buys.

For the CRM system to be used as a tool supporting the customer orientation of the technical sector, it must be designed to support the business cooperation models of the sectors. The results of the business cooperation interviews and the development proposals created in them have been used for this design. The most significant forms of corporate cooperation in the technical sector are the framework agreements, procurements and projects.

The design of the CRM system is divided into three parts, customer profiles, business clusters and business communication. These three main functions create the basis for the design and use of the system. These three parts are presented in the figure below.

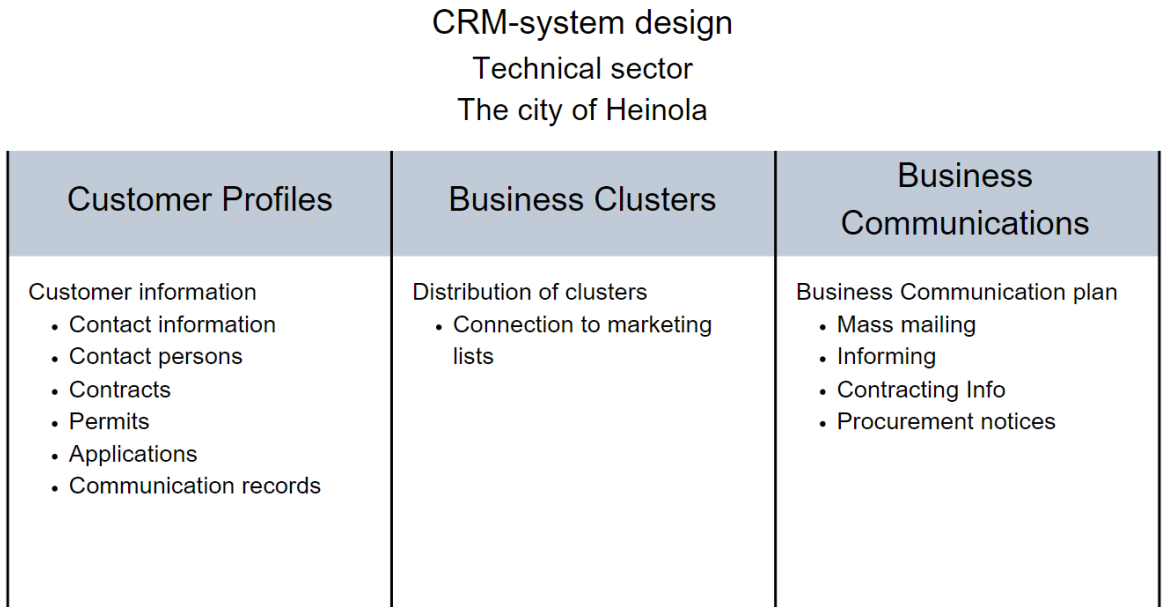

Figure 7 The three-part design of the CRM system

Microsoft Dynamics 365 system provides a personal customer page for all businesees in the system. The customers' pages contain the company's contact information, information about the industry and its decision-makers. In addition, the customer page is programmed to show all activities that have been done with the company. This function also includes e-mail communication with companies to the extent that it has been entered into the system. The most important part of the customer pages is the up-to-date maintenance of contact information so that the communication with the companies reaches the companies' decision makers. In addition to these, contracts between companies and the city, permit applications and other information that enhances business cooperation are linked to customer pages.

The business clusters were determined in cooperation with the personnel of the technical sector to correspond to the business sectors with which there is the most cooperation. Four of these business clusters were formed and they are bio and circular economy companies, companies doing forestry work, companies in the construction industry and companies doing land transfer and tillage. These business cluster link to excisting marketing lists that have been made into the crm system used by the city of Heinola.

The companies belonging to the company clusters are defined according to the industry categories of the companies as separate entities of the crm system. In the future, these

clusters can be used to organize procurement, to activate companies in project activities, and to map development and cooperation with educational institutions.

When organizing market dialogues as part of procurements, business clusters can be contacted directly, in which case invitations to market dialogues reach a larger group of companies in a specific field that could be interested in participating in the procurement tender. In these market dialogues, useful contacts from companies are also obtained, and the needs and wishes of the companies regarding the operation of the city are clarified through the discussion.

Business clusters can be contacted directly for those projects that touch the companies' industry or where companies from the industry in question could possibly be interested in participating in the implementation of the project. Companies should be taken into account already in the planning phase of projects, and through company clusters it is clearer to carry out communication regarding projects, when companies from the same industry have been assembled into ready-made entities.

8 CONCLUSIONS

The summary paragraph evaluates the research of the thesis, key findings and reliability of the thesis. In the evaluation of the research, the answers to the research questions and the key findings found for these questions are examined. The reliability of the thesis is evaluated and the results of the thesis are compared to the strategy and goals of the city of Heinola. In addition, the summary shows further research opportunities arising from the topic of the thesis.

8.1 Answers for Research Questions

The purpose of this thesis is to find opportunities for business cooperation at the interfaces between companies and technical sector of the city of Heinola, and to create a model for the technical sector to utilize the CRM system. The main research question has been answered through sub-questions.

Sub-questions

What are the business interfaces in each specific service area inside the technical sector?

The interfaces between the technical sector and companies fall into the four most significant categories. These include framework agreements, procurement, projects and educational institution cooperation. In this work, only the first three of these will be discussed, as educational institution cooperation is divided into several sectors in the organization of the city of Heinola.

The interfaces discussed in this work are abundant in all service areas of the technical sector. Procurement and framework agreements play the biggest role. The service areas have a large number of activities that require the services of the private sector, because it is not cost-effective for the city alone to produce all the services it needs by itself. In addition, service areas sometimes need products or services that require special expertise, which would not even be possible to produce themself.

Although the project activity has not yet spread to all service areas of the technical service, its importance is a significant development target at the interface of business cooperation. There are also procurements in the projects themselves, which in themselves are an interface between companies and the municipality.

What are the existing methods of business cooperation in the technical sector?

Among the existing forms of business cooperation in all service areas of technical activities, the most significant are the procurements, framework agreements and projects that

have emerged in business interfaces. These forms of cooperation are rooted in the sector's daily work.

However, each service area has unique forms of business cooperation that support the operation of the service area. For example, forms of cooperation in forestry and fisheries services include cooperation with companies that own forests and buy wood, and companies that produce fishery products, such as fish farms. On the other hand, for example, business partners that support construction services are companies that offer construction reneuwal services or locksmiths.

In projects, the forms of business cooperation also concern procurement. Projects often involve a lot of procurement and expert services during the project. As for projects, there are hardly any business partnerships in project implementation or planning.

How the CRM system can be modeled to benefit business cooperation in the technical sector?

In the technical sector, communication and contact with companies is decentralized, and each employee has his own way of communicating with companies. A uniform system is not in use at the time of completion of this thesis. For example, when making small purchases, "old and familiar" partners are often used, from whom similar products or services have been purchased before. This information is often in the employees' own memory or memos.

The CRM system supports uniform communication with companies. In addition, the company's contact information and previous contacts are available to everyone using the system. Through the CRM system, a larger group of companies is also reached, for example when organizing market dialogues.

Uniform communication also supports the city's equitable operation with companies. When national procurements, projects or company-oriented events are organized, all companies in the system can be contacted at the same time. Uniform operation between sectors also supports both activities between sector and companies.

Main questions

How business interface information can be used to better the cooperation with businesses in the technical sector of the city of Heinola?

In the technical sector of the city of Heinola, the interfaces that are most significant when dealing with companies can be clearly identified. Procurements, framework agreements and projects are also the most used forms of cooperation with companies. When business

interfaces that touch the entire sector are identified, the operation of these interfaces can be developed.

The clearly most significant form of business cooperation in the technical sector is procurement and with them framework agreements. Making purchases is also a process that consumes a lot of working time. By clarifying the procurement process and providing sufficient training, a working model for the implementation of procurement is obtained, which makes working with procurement more efficient. The city's current procurement guidelines are too complicated and time-consuming for this. In addition, adequate training of employees in the implementation of procurement must be ensured.

In order to speed up procurement, the city of Heinola has framework agreements with various product and service providers. In order for the use of framework agreements to be as efficient as possible, there must be sufficient information about framework agreements for personnel. On the page that compiles the framework agreements, information about what the relevant framework agreement applies to should be found at a quick glance. In addition, there must be clearly identifiable statistics for the validity of the framework agreements, so that the re-tendering of the framework agreements can be started ahead of time, and so that this tender can be effectively communicated to companies.

In the defined business interfaces, similarities with project activities can also be found. There are also many procurements in the projects, the implementation of which also takes a lot of time away from the actual implementation of the project content. The same procurement development work can therefore also be applied to projects. For example, the market dialogue that is mainly used for procurement can be adapted to activate companies to participate in project activities.

The key findings to each research question in presented in the figure below.

Research question	**Key findings**
What are the business interfaces in each specific service area inside the technical sector?	• Framework agreements • Procurements • Projects • Each have special characteristics in the service areas
What are the existing methods of business cooperation in the technical sector?	• Framework agreements • Procurements • Projects

	• Educational institution cooperation
How the CRM system can be modeled to benefit business cooperation in the technical sector?	• Business and decision-maker contact information • Communication for business groups • Making the internal information of the organization available to the personnel
How business interface information can be used to better the cooperation with businesses in the technical sector of the city of Heinola?	• Procurement and framework agreement development • Activating businesses as part of projects • Harnessing the CRM system for the needs of the technical sector to promote business cooperation

8.2 Validity and Reliability

The purpose of this thesis was to create model of business cooperation and CRM-system for the needs of the technical sector of the city of Heinola. This modeling was done by answering to four research questions. It was possible to answer the research questions directly on the basis of the conducted research.

The development proposals derived from the research are correlated with the wishes and development proposals expressed by the personnel in the empirical research. The development proposals also support the strategic goals of the city of Heinola, especially the goals of renewal and profitability, as well as the goals of the strategy on strengthening inclusion and a renewed business life (Heinolan kaupunki 2023).

Based on the above-mentioned grounds, the thesis is valid and reliable.

8.3 Suggestions for Further Research

The purpose of this thesis was to create a business cooperation model for the city of Heinola and a model of how the CRM system could best be utilized in the city's technical sector. The topic itself creates further research opportunities for examining the functionality of the model and possibly updating it, as well as measuring the business benefits arising from the solution. In addition, the development of project work with local companies could be examined more closely in further research.

The organization of the city of Heinola is going through a change program and the structure of the organization will change from the beginning of 2025. The change program has been implemented in the city after the reform affecting social and health services. During this change program, the structures of the technical sector, like other sectors, will come together. After such a change, opportunities for further research on the adaptation of existing operating methods to the structural needs of the new organization arise.

The change in the structure of municipalities affecting the business field will be the changing employment services at the beginning of 2025. In this reform, the employment services maintained by the state will be transferred to the municipalities. Such a change is also apt to create opportunities and needs for further research.

9 SUMMARY

In order to better understand business demands and how to serve them as sector consumers, this study aims to describe the business interfaces in the technical sector and develop a model of business cooperation. This study also analyzes the architecture and potential uses of the Microsoft Dynamics 365 CRM systems for the particular requirements of the technical sector. The main research question for this thesis was *How business interface information can be used to better the cooperation with businesses in the technical sector of the city of Heinola?* and to better answer this main question, three subquestions were formed. Three subquestions were *What are the business interfaces in each specific service area inside the technical sector?*, *What are the existing methods of business cooperation in the technical sector?*, and *How the CRM system can be modeled to benefit business cooperation in the technical sector?*. To be able to answer these questions, theoretical framework was created and empirical research was conducted.

The research background, the objective of this thesis, and the research questions were introduced in the first chapter among with the theoretical framework and limitations. The topics literature review, methodology, data gathering, and thesis structure were also covered in the first chapter.

The second chapter creates a theoretical framework for the legislation governing the operation of the municipal organization and the structure of the municipal organization. The third chapter presents the theoretical basis of business cooperation. The chapter also introduces business cooperation models based on the benefit and value of business cooperation.The theory of customer relationship management, its use in the municipal organization and the Microsoft Dynamics 365 CRM system are presented in the fourth chapter. This paragraph also compares the differences in customer relationships in the private and public sectors.

The presentation of the client of the work, the city of Heinola, is in chapter five. The chapter also introduces the history of the city of Heinola, the structure of the organization, and the structure of the technical sector.

Chapter six describes the empirical research of the thesis. The implementation and results of the empirical research are presented in the paragraph. In the seventh chapter, a development plan for the client has been created based on the theory part of the thesis. The development plan corresponds to business interfaces found in empirical research, as well as existing business cooperation models.

This thesis is concluded in the last chapter. Both the main research question and its subquestions were answered. Furthermore, the study's validity and reliability were examined. Recommendations for further research are included in the last chapter.

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APPENDIX

Appendix 1

Glossary

Administrative rule – Hallintosääntö

Board – Lautakunta

Board of audit – Tarkastuslautakunta

Business interface – Yritysrajapinta

Business services service area – Elinkeinopalveluiden palvelualue

Central election board – Keskusvaalilautakunta

Common sector – Yleinen toimiala

Construction services – Tilakeskus

Decision-maker – Päättäjä

Disability council – Vammaisvaltuusto

Division of sports – Liikuntajaos

Elderly council – Vanhusvaltuusto

EU-procurement – EU-hankinta

Food and cleaning services – Ruoka- ja siivouspalvelut

Forestry and fisheries services – Metsä- ja kalatalouden palvelut

Frameworks agreement – Puitesopimus

Licensing and control board – Lupa- ja valvontalautakunta

Licensing and control sector – Luva- ja valvontatoimiala

Line organization – Linjaorganisaatio

Market dialogue – Markkinavuoropuhelu

Mayor – Kaupunginjohtaja

Municipal accosiation – Kuntaliitto

Municipal cooperation agreement – Kuntayhteistyösopimus

Municipal council – Kunnanvaltuusto

Municipal engineering service area – Kuntatekniikan palvelualue

Municipal government – Kunnanhallitus

Municipal manager – Kunnanjohtaja

Municipal water supply services – Vesilaitos

Municipality – Kunta

National procurement – Kansallinen hankinta

Officeholder – Viranhaltija

Organizational change program – Muutosohjelma

Park and sports area maintenance – Puisto- ja liikuntapaikkapalvelut

Procurement – Hankinta

Project – Hanke

Sector – Toimiala

Special sector – Erityistoimiala

Stakeholder – Sidosryhmä

Statutory task – Lakisääteinen tehtävä

Street maintenance – Katuyksikkö

Technical board – Tekninen lautakunta

Technical sector – Tekniikkatoimiala

Tendering – Kilpailutus

Vitality board – Elinvoimalautakunta

Vitality sector – Elinvoimatoimiala

Welfare board – Hyvinvointilautakunta

Welfare sector – Hyvinvointitoimiala

Youth council – Nuorisovaltuusto

Appendix 2

Hankkeen viestintäsuunnitelma – MALLI

Hankkeen nimi:

Hankkeen kuvaus:

Sisäinen viestintä	- Organisaation toimijat, jotka ovat kytköksissä hankkeeseen	- Mistä asioista heille viestitään?	- Milloin viestintä tapahtuu?
Sidosryhmät	- Esim. rahoittaja, yhteistyötahot	- Rahoittajan antamat kriteerit viestinnästä - Muiden kumppaneiden kriteerit viestintään	- Kriteerien määrittämät viestintäajankohdat
Verkkosivut ja media (perinteinen ja sosiaalinen media)	- Kaupungin verkkosivut - Muut kaupungin sivustot tarpeellisuuden mukaan - Kaupungin sosiaalisen median kanavat - Uutiskirje - Paikallislehti-jutut	- Hankkeen laadusta riippuen määritetään missä kanavissa viestitään ja mitä viestintä pitää sisällään	- Aikataulutus hankkeen etenemisen suhteen
Yritykset	- Yrityskumppanuudet hankkeissa - Hankkeen vaikutusalueen yritykset	- Mistä asioista heille viestitään? - Esim. Hankkeen vaikutukset yritysten toimintaan - Hankkeen markkinointi yrityksille mahdollisten jatkotoimien tai tulevien yhteistyökuvioiden osalta - Yrityksille tiedottaminen kaupungin toiminnasta	- Milloin viestintä tapahtuu?
Oppilaitokset	- Oppilaitosten mahdollinen hyödyntäminen hankkeessa jo suunnitteluvaiheessa - Harjoittelu tai opinnäytetyömahdollisuudet - Hankkeen markkinointi oppilaitoksille mahdollisten jatkotoimien osalta	- Mistä asioista heille viestitään?	- Milloin viestintä tapahtuu?