Success factors of implementing collaborative public sector projects

A study of the implementation of a collaborative welfare technology project in Norway.

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Abstract

Previous literature regarding project implementation and collaborative projects is extensive. However, research, so far, lacks a thorough investigation into aspects of the emerging field of collaboration amongst public sector actors. We extend existing research by merging the separate fields of collaborative projects and public projects. We seek to illuminate the interface between public projects and collaborative projects in an effort to identify success factors and barriers related to the implementation of collaborative public sector projects. By researching an inter-municipal project, we empirically establish distinctive success factors and barriers of this specific type of project. We consequently argue that elements of the two variables, public sector and collaboration, impact the implementation of project deliverables in projects. Further, we show the complexity of this structure and how the implementation of project deliverables can be context-dependent. Beyond broadening the literature on collaborative public sector projects, this thesis also contributes to the literature regarding projectification and project management.

Keywords: Collaborative public sector projects, Public projects, Collaborative projects, Project implementation, Projectification, Welfare technology, Norway

Preface

This master's thesis marks the end of our master's degree in business and administration at the School of Business and Law at the University of Agder. After two educational years, we are now excited to start our professional careers.

First of all, we want to begin by showing our deepest gratitude for the contributions of the participating municipalities in the county of Sør-Rogaland. Thank you for the commitment, helpfulness, and curiosity about our master's thesis. A big thank you goes out to those who volunteered and devoted time to share their experiences with us.
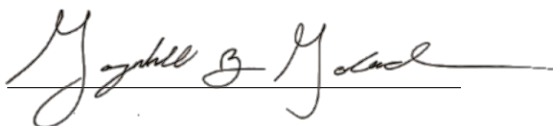
Secondly, we would like to take this opportunity to express our gratitude to our supervisor, Professor Andreas Erich Wald. Thank you for devoting time to helping us and being a good sparring partner. We appreciate your guidance through all the professional challenges this writing process presented.

Furthermore, we would like to thank all our fellow students for two great years. Covid-19 made this last year different than what we envisioned, but through digital communication, we managed to keep our spirits up and motivate each other through the last part of the master's degree. We wish you all the best for the future.
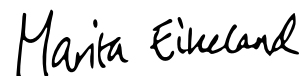
Finally, we would like to thank family and friends for their support, guidance, and great help with proofreading our thesis. A big thank you goes out to all of you.

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1 Introduction

Public sector organizations are increasingly collaborating to collectively solve various challenges and be better equipped for the future. Globally, the life expectancy in countries with high incomes is increasing (Meyer, Drefahl, Ahlbom, Lambe & Modig, 2020). Stensaker and Haueng (2016) proposes that both private and public organizations face requirements for conversion and in consequence have to readjust their organization according to changing business environments. The external environments that organizations operate in are rapidly changing, and are predicted to continue to change faster than organizations. This indicates a need for organizational change and change management (Burke, 2018; Karp, 2014). This also indicates that public sector organizations will experience higher pressures than before and consequently they will have to reorganize their services to sustain high-quality services in the future (Regjeringen, 2019). To navigate increasingly challenging environments, collaborative public sector projects have proved to be beneficial for participating organizations and public services in general (Regjeringen, 2020). However, there is limited empirical research that addresses public-public collaborations and how interactions among public organizations influence the project deliverables.

Existing literature accounts for aspects related to collaborative projects and public sector projects independently. However, literature regarding the combination of the two fields is limited. In that regard, Ahlgren et al. (2019) and Jacobsen (2014) address that there is a need for expanding the field by conducting research and procuring evidence from existing public collaborations. We address this gap in the literature by examining underlying causes for the variations in implementation across the participating municipalities in a collaborative public sector project.

The demography of Norway is changing, and in the coming years, the percentage of elderly in need of social services is anticipated to increase (T. Halvorsen, 2020). In consequence, public services are prone to experience limited human resources and welfare technologies have been predicted to become an essential tool for attaining a sustainable healthcare sector. Hence, there has emerged an increased focus, both nationally and internationally, on creating innovative welfare solutions in various collaborative constellations (Romsaas, 2017). More specifically, cooperation across organizational boundaries has emerged as an important strategy in the public sector to utilize society's overall resources (Ahlgren et al., 2019).

1.1 Problem statement and delimitation

This paper focuses on the interface between public sector projects and collaborative projects. There is limited literature that covers these two areas as a merged concept. In that respect, we wished to explore the success factors and barriers of implementing collaborative public sector projects. This culminated into the following problem statement:

What are success factors and barriers of implementing collaborative public sector projects?

To delimit our thesis, we conducted a study of one specific inter-municipal project - *Sør-Rogalandsprosjektet*. The purpose of this project was to implement welfare technologies in the healthcare sector. To further delimit our thesis, we chose to focus on the implementation of one specific project deliverable - electronic medicine dispensers. This entailed that we primarily examined manners related to the collaborative nature of the project and various aspects of the context in which the project deliverable was to be implemented. In doing so, we sought to identify the influence of both the public and the collaborative aspects of a project. The selected case had collectively acquired the electronic medicine dispensers and collaborated on the initial training of staff. Despite combined efforts on both procurement and initial training, there existed varying degrees of successful implementation within the individual participating municipalities.

1.2 Structure of the paper

In chapter one, we described the reasoning behind the chosen theme and problem statement. In chapter two, we explained the theoretical framework to which our work is related. This chapter consists of theories related to the concepts of public sector projects and collaborative projects. In chapter three, we provided an extensive description of our chosen methodological approach. Moreover, we presented the context of our selected case. In chapter four, we presented our results and discussion. We summarized our most prominent findings and related them to previous literature and consequently provided a basis for answering our problem statement. In chapter five, we presented our conclusion and addressed various implications and limitations of our thesis.

2   Literature review

This chapter constituted a theoretical starting point to study success factors and barriers for collaborative public sector projects. The purpose was to develop a common understanding of the phenomenon and to define the appropriate fields of application. In essence, we studied a phenomenon consisting of two independent phenomena. In reviewing the literature regarding these fields of study, we found limited empirical findings regarding success factors related to the implementation of public projects and even more limited findings related to public projects with a collaborative nature. Hence, we designed a framework that consists of two parts. The first part defines and presents various preliminary research within the field of *public sector projects*, whereas the second part covers relevant theories and preliminary research concerning *collaborative projects*. All these aspects were thoroughly discussed to justify the relevance of our problem statement and to account for the complex and compound nature of this specific type of project.

2.1   Projects as vehicles for change

In the context of organizational change, various literature often presents the process of implementing change as a linear process consisting of different steps or phases. However, in practice, change is typically an emergent and iterative process resulting from unanticipated challenges and consequences (Burke, 2018). This corresponds with the findings of Skogstad and Einarsen (2011), who addressed that most change management models are too normative and linear, thus not accounting for the nonlinear and continuous nature of organizational change. In this context, Burke (2018) suggested that planned organizational change is a paradox since one is supposed to thoroughly plan for a process that tends to never truly unfold according to plan. Consequently, a processual perspective is often used to account for uncertainties and confusion that might occur because of the ambiguous, stressful, and unpredictable nature of organizational change (Belschak et al., 2020).

Organizational change is often considered to be a process where an organization transforms from one relatively stable state to another through modifications of established structures, processes, and strategies (Jacobsen, 2018; Jimmieson et al., 2008). Belschak et al. (2020) argued that employees will react and cope differently to organizational change and suggests that there are individual characteristics that moderate reactions to change. Accordingly, there is reason to believe that large-scale organizational change will be met with varying degrees of individual or collective resistance. Furthermore, people tend to become resistant to organizational change

due to feelings of loss of the known, lack of choice, and feeling of coercion (Burke, 2018). Consequently, employees must be ensured that the organizational change is positive for the sector and that they will be able to cope with the change (Oreg et al., 2018). Management should consequently be aware of individuals' perceptions and attitudes and ensure that the employees have a sense of choice in determining and implementing the change, as this is closely related to successful implementation (Burke, 2018; Belschak et al., 2020).

To summarize, organizational change is often characterized by unpredictability as it is based on actions that break with previous patterns of behavior, thus, requiring a flexible structure that allows for an iterative process (Andersen, 2018; Jacobsen, 2018). A significant amount of literature addresses normative procedures for successful implementation of organizational change, including good advice and detailed progress plans (Stensaker & Haueng, 2016; Svejvig & Schlichter, 2020). However, Andersen (2018) rejected the idea of one common approach or phase model that holds for all projects. Consequently, it was indicated that projects are context-specific and context-dependent and should be treated accordingly.

2.1.1 Project implementation

This thesis was based on the understanding of project implementation as the phase where project deliverables are implemented into the line organization. Throughout this process, the goal is to transfer activities from the project to the line organization and ensure that the project is realized as intended. Finally, when the project has been implemented, participants have acquired new competencies that can be valuable for future projects. Simultaneously, there should be a focus on sustaining the progress after implementation (Digitaliseringsdirektoratet, 2019a; Digitaliseringsdirektoratet, 2019b).

When discussing project implementation, it can be distinguished between project outputs and project outcomes. Project outputs are defined as the artifacts which constitute the project's tangible results, whereas project outcomes are referred to as organizational change with accompanying end effects. More specifically, target outcomes are desirable and measurable end effects that emerge when outputs are implemented and utilized. Tangible outputs can be guaranteed but target outcomes cannot be guaranteed as it is not given that the desired outcomes are realized in practice (Zwikael & Smyrk, 2012). Williams et al. (2020) suggested that if the objectives of project outcomes are too abstract, project output might be a more natural measure for directing the project. This might lead to an increased emphasis on project-management success, instead of benefits management. During the completion of the project, an iterative process is often

desired in which the project group continuously updates, clarifies, and delivers sub-goals and sub-results. By facilitating iterations, adjustments and feedback from the line organization can be taken into account on an ongoing basis. Following the completion of the project, the phase of benefits realization and implementation into the line organization starts (Andersen, 2018). The project creates the basis for changes, but the implementation and utilization of the benefits is the responsibility of the line organization (Andersen, 2018; Digitaliseringsdirektoratet, n.d.). Previous research has indicated that projects have shown a tendency of failing in the implementation phase. To lower this tendency benefits management works toward bridging the gap between the planning of projects and realizing the planned benefits (Serra & Kunc, 2015). Previous literature indicates that, at the time of project completion, it is difficult to measure the value of the project as the project outcomes might not be realized until months or even years after project completion (Martinsuo, 2020). Coinciding with this, Albert et al. (2017) argued that organizations should choose success criteria that are suitable for the individual project as there does not exist a general model for assessing project success. Other important aspects of project success were addressed by Andersen (2018) who argued that support from the top management, clear goals and sufficient plans are recurring factors. This coincides with the findings of Doherty et al. (2012) who found that factors such as appropriate staff training, expertise and capability of IT staff, active user involvement, clear identification of project outcomes, and senior management commitment are important, recurring factors in technologies studies. Dupont and Eskerod (2016) published an article that proposed that using line managers as project benefit managers could be beneficial for implementing project deliverables into the line organization. This claim was based on the belief that line managers have thorough knowledge about operational processes, have key roles in several networks, and possess valuable relationships with other managers and subordinates. By using line managers as project benefit managers, a link between the initiator and the implementers of the changes is established (McMaster et al., 2005). In this context, previous research argues that the cohesiveness of a line manager's informal horizontal networks (Balogun & Johnson, 2004), mutual trust relationships with peers (Eskerod & Jepsen, 2013), and bridging network (Battilana & Casciaro, 2013) are important for the degree of successful implementation (Dupont & Eskerod, 2016).

2.1.2 Benefits realization

This thesis was based on a compound definition of benefits management. It was composed of the findings from several researchers to take into account the complex nature of the concept.

Hence, benefits realization was defined as a process to appropriate and achieve benefits from projects that ultimately will enhance the performance of the line organization (Ward et al., 1996; Farbey et al., 1999; Zwikael et al., 2019). Some terms used to describe this process are benefit(s) realization and benefit(s) management, consequently, we will use these terms interchangeably. By referring to benefits realization as a process, one accounts for the proposition that it should be planned for, enhanced, and attained throughout the life cycle of the project (Farbey et al., 1999).

Conceptual frameworks suggest that there should be prepared a benefits realization plan that states the planned timeline for benefits realization during and following project completion. Such a plan will also help clarify different roles and tasks related to the benefits realization. However, previous research indicates that organizations tend to use benefits management frameworks as mere guides (Williams et al., 2020) and that the focus on benefits realization is usually most prominent after project implementation (Digitaliseringsdirektoratet, 2019c). The planned benefits might change throughout the project and the planned results might differ from the realized results (Andersen, 2018).

Furthermore, Morris (2013) suggested that managers in business and government are primarily concerned about projects being managed and executed effectively and efficiently. More specifically, meeting or exceeding their strategic objectives and proving value for money. Some researchers report that projects often are primarily concerned about the technical artifacts, the project results, and consequently take less account for the facilitation of benefits realization (Williams et al., 2020). Others suggest that projects concerning organizational change and development tend to become too focused on developing their employees and human relations, thus, neglecting to develop general routines and procedures that support the change that is to be implemented (Andersen, 2018). Additionally, the phase of identifying the target benefits of a project is important to increase the likelihood of realizing benefits. In that regard, it has been suggested that all key project shareholders should be involved in the identification of project benefits (Williams et al., 2020).

2.2 Public sector projects

Previous literature is twofold concerning contrasts between the public and private sectors, as researchers have different perspectives of the extent to which public and private sectors are similar (e.g. Christensen et al., 2015; Gasik, 2016; Jałocha et al., 2014).

On the one hand, New Public Management (NPM) is a perspective where it is suggested that

the organizational models that are used in the private sector can be transferred to the public sector. This view suggests that the sectors could be defined within the same regulations and laws and that organizations can be organized using the same principles regardless of sector (Boyne, 2002).

On the other hand, some researchers claim that, in reality, there is a significant difference between the sectors (Christensen et al., 2015). Such critics of NPM argue that the differences between the two sectors entail that elements from the private sector cannot be transferred to the public sector (Boyne, 2002). Gasik (2016) suggested that there might exist two groups of differences that distinguish a public project from projects in other sectors and thus point out that he believes that there is a difference between the sectors. One of the groups refers to organizational differences between public and private organizations, whereas the other refers to characteristic differences between public and private projects. Sayre (1953, p.102, cited in Boyne (2002, p. 98)) stated the characteristics of public and private organizations are «*fundamentally alike in all unimportant respects*». These claims are based on the school of thought that believes that the differences between the sectors are significant. Thus, indicating that private sector practices are not transferable to public sector organizations (Boyne, 2002).

In comparison to the great amount of research on project management in the private sector, similar research in the public sector has not become as mature (Hodgson et al., 2019). However, the research of Schoper et al. (2018) showed that the share of project work was prominent in both the public sector and the private sector in Iceland, Germany, and Norway. This coincides with the findings of Fred (2020), who indicated that there has been a shift towards a temporary organizational structure in the public sector as local governments increasingly recognize projects as vehicles for change. Regardless of the growing interest in public sector projectification, the literature on the practical aspects of this process was surprisingly limited, especially at the local government level (Fred, 2020).

As shown throughout this section, there did not exist a common agreement in the literature concerning the distinction between projects in the public and private sectors. Various authors have discussed findings of success factors for projects and have conducted comprehensive literature reviews within the field (e.g. Albert et al., 2017; Belassi & Tukel, 1996; Santos & Varajão, 2015; Cooke-Davies, 2002; Crawford & Pollack, 2004; Ika, 2009; Iriarte & Bayona, 2020; Müller & Jugdev, 2012). However, we observed that the authors typically do not address whether the success factors are applicable for all types of contexts, organizations, and sectors.

2.2.1   Project implementation in the public sector

In public sector projects, efforts to align benefits could be complicated by competing interests of central and regional government (Holmen & Ringholm, 2019b). Such projects are typically strategically anchored in and prepared by the central government whereas the regional governments are in charge of the execution. This creates multiple layers of governance and complexity (Christensen, 2012). A fully defined project could have difficulties when facing sectors with a fluid nature that is characterized by frequent changes in desired benefits. This holds for public sector projects, especially when they include multiple layers of governance and if the projects solely facilitate benefits. In consequence, the realization of benefits is the responsibility of the line organization (Williams et al., 2020). In their study of cross-national, public project benefits management practices, Williams et al. (2020) found that the consideration of benefits decreased as the various projects progressed and were executed.

Furthermore, Nilssen (2019) addressed how external shocks act as catalysts for innovation in municipalities. External shocks are understood as events outside the municipality's control, that have the potential of influencing and changing the organization and its practices noticeably. Nilssen (2019) further stated that there is limited research on what happens after an external shock has subsided. However, she indicated a tendency of municipalities to partially return to their old structures and practices by integrating a few elements from the new practice. Innovations, and accompanying changes, challenges the established institutions within municipalities. The new institutions that emerge can contain elements of the old ones if the new and old institutions can work side by side. However, research on organizational change in municipalities indicates that actors tend to favor institution-specific rules and norms rather than realizing changes (Holmen & Ringholm, 2019a). Moreover, Holmen and Ringholm (2019a) suggested that a change aimed at a seemingly limited area affects and activates several parts of the municipality's units. Additionally, indicating that innovations can change as they are implemented to a specific context as a result of influences by the institutional forces at play. In that regard, there may be a need for both minor and major changes that must be implemented before they can be incorporated into the institutional framework. In this context, Magnussen (2016) found indications that one specific innovation might be implemented differently in practice across various contexts.

2.2.2 Success factors of public projects

Project success, especially critical success factors, is an intensively studied field. Consequently, various project methodologies, frameworks, and lists of critical success factors have been presented in various fields of study (e.g. Albert et al., 2017; Hughes et al., 2020; Serra & Kunc, 2015; Müller & Jugdev, 2012). Lists of critical success factors vary based on the focus, objectives, and motivation of the authors, e.g. stakeholder perspective, technology, methodology, or selected groups of factors (Iriarte & Bayona, 2020). Coinciding with this, the findings of Belassi and Tukel (1996) explicated how the composition of success factors varies depending on the project context. Moreover, Iriarte and Bayona (2020) indicated that the literature increasingly recognized that contextual factors should be aligned with structural factors. Hence, elements such as history, context, nature, and type were extracted as influential for project performance. This indicated that it was difficult to extract general project success factors from previous literature and that there was reason to believe that empirical findings were highly context-specific. In consequence, this entailed that one could only indicate recurring features and that it would be difficult to make generalizations for all types of projects.

As previously mentioned, the literature is twofold concerning the distinction between the public and the private sectors. Authors such as Jałocha et al. (2014), argued that the competencies of project managers are crucial for project success, especially for public sector organizations. In addition, Boyne (2002) discussed differences in attitudes among employees in the two sectors. He argued that public sector managers are less materialistic and have a stronger wish to serve the public. By doing so, the authors addressed sector-specific factors. However, several authors did not address their field of application which meant that their standing regarding NPM was not specified (e.g. Albert et al., 2017; K. Halvorsen, 2008).

Various literature refers to the distinction between hard and soft criteria of project success (e.g. Ika, 2009; Crawford & Pollack, 2004; Albert et al., 2017). Organizations and scholars are starting to recognize that project success is a compound concept that entails more dimensions than the traditional, hard criteria of time, cost, and quality (Ika, 2009). Albert et al. (2017) prepared a literature review that concerned the evaluation of project success and identified two categories of project success criteria as shown in Table 1. Hard criteria refer to the more traditional measures of success that typically are tangible and easily measured. Soft criteria are not as easy to measure and require a more comprehensive and in-depth evaluation. When evaluating soft criteria one needs to recognize that each criterion can be composed of several influential elements that also potentially are overlapping with other criteria for success. When the project deliv-

erables are available and the focus shift towards implementation, soft criteria gain importance (Albert et al., 2017). We chose to highlight the findings of Albert et al. (2017) even though they did not address whether it was applicable for public sector projects. This choice was based on the extensive research of different companies and industries that they had conducted, which indicated that their findings were not company- or sector-specific.

Hard criteria	Soft criteria
Cost performance	Company satisfaction
Economic success	Customer
Quality	End user
Time	Line manager satisfaction
	Project members
	Supplier

Table 1: Hard and soft criteria of project success
Source: Albert et al. (2017, pp. 807-809)

Furthermore, Müller and Jugdev (2012) argued that project success was one of the core subjects of project management, but that previous literature, interestingly, was highly divided and that there was no overall agreement on the scope and meaning of the term. Albert et al. (2017) supported these findings and explicated that it was important to address a few aspects and perspectives of project success to take into account the complex nature of the subject at issue. Interestingly, organizations have shown a tendency of evaluating their projects solely in terms of efficiency, thus neglecting the benefits delivered (Zwikael & Smyrk, 2012). Project management success has traditionally been based on the more traditional criteria of time, budget, and quality (the iron triangle), whereas project success is typically measured by the degree of realization of expected outcomes (e.g. Young et al., 2012; Badewi, 2016; Serra & Kunc, 2015; Zwikael & Smyrk, 2012; Zwikael et al., 2019). Moreover, whether one is assessing short-term or long-term success is of importance. Short-term success is often measured in terms of a profitability aspect and is often based on whether the project is completed within the given time horizon, predetermined budget, and within its scope. Long-term success is often a more strategic evaluation that is less based on financial measures. In this regard, the chosen time horizon

is believed to influence the perceived degree of success (Albert et al., 2017).

The paragraphs above explicated how project success is a compound and complex term with no common understanding of its scope and significance. Furthermore, the various aspects of project success are interrelated and not mutually exclusive and there is reason to believe that the appropriate measure for success varies in line with different stages in the project life cycle.

2.2.3 Barriers of public projects

Santos and Varajão (2015) indicated that similarities and differences between the public and private sectors have been a subject of conflicting thoughts in the literature and have been highly debated.

Public sector organizations	
Absence of competitive pressure	Less flexible
Attracts public attention	Less materialistic and intrinsic values
Complexity	Lower managerial autonomy
Dominance	More risk-averse
Focus on budget	Permeability vs instability
Formal procedures	Vague goals

Table 2: Characteristics of public sector organizations
Source: Compilation of the findings of Boyne (2002), Löfström (2009), Santos and Varajão (2015), and Van Der Wal et al. (2008).

Table 2 summarizes the findings of various researchers regarding characteristics that distinguish the public sector from the private sector, hence, characteristics that potentially act as barriers for public sector projects.

Various researchers have addressed aspects that are recognized as decisive differences between the two sectors (e.g. Jałocha et al., 2014; Boyne, 2002; Van Der Wal et al., 2008). Jałocha et al. (2014) argued that the most prominent similarities between the two sectors are related to functions of management, whereas the differences are rooted in different sector-specific constraints, conditions, and requirements. Public sector organizations are closely connected to the political environment of the society and have democratically chosen leaders. These aspects are examples of characteristics that distinguish the public sector from the private sector. Moreover,

public sector organizations need to assure citizens that they meet the requirements for openness, public insight, and professional independence. In specific cases, such requirements can be contradictory which requires the public organizations to be multi-functional (Christensen et al., 2015).

Boyne (2002) and Santos and Varajão (2015) stated that the main contrast between these sectors is the ownership of the organizations. While the public sector is mainly controlled by the state, private sector companies are often owned by entrepreneurs or shareholders. In addition, Van Der Wal et al. (2008) argued that they also differ in terms of what values are significant and influential. They found that public sector organizations value accountability the highest, thereafter lawfulness, and incorruptibility, whereas private sector organizations value profitability, accountability, and reliability. Another important differentiator between the public and private sector is that public sector organizations provide services without expecting direct payments from the citizens (Stentoft Arlbjørn et al., 2015). Public sector organizations predominantly emphasize optimization of internal processes, performance, and efficiency as opposed to aspiring to gain profits (Nik Hashim et al., 2020). As noted by Löfström (2009), public projects are used as procedures for reducing complexity, increasing quality, and achieving renewal and innovation of services. Whereas public projects are mainly carried out to become more efficient for the general public, private sector projects are mainly carried out to increase the profitability of a company. In addition, public sector organizations need to emphasize openness and insights (Christensen et al., 2015). Aritua et al. (2011) drew addressed that governments tend to utilize programs to align policy objectives with project benefits and to highlight their susceptibility to political and policy changes. There are several reasons why aligning the planned benefits with government goals can be complicated. In the public sector, the central governments are often in charge of creating a strategy, while the regional governments are responsible for executing the projects. This can create more complex project work and make it increasingly difficult to oversee the projects (Christensen, 2012). A study by Gasik (2016) found that management of projects in the public sector was significantly more complex than managing projects in the private sector. In addition to managing the expectations of many shareholders, there is a more formal and bureaucratic governance structure.

2.2.4 Summary of the prominent features of the findings

Table 3 shows characteristics of public sector projects that have been presented by other researchers. The findings highlight that public sector projects are distinguished from private

sector projects in that they are collectively owned by various stakeholders which increase complexity and increases public attention. Further, they are politically sensitive which increases instability and decreases permeability, and have less competitive pressures than private projects (Boyne, 2002; Santos & Varajão, 2015; Jałocha et al., 2014; Löfström, 2009). Nevertheless, these characteristics could potentially affect the degree of successful implementation of project deliverables. Whether they constitute success factors or barriers was not stated in the literature, but they indicate context-specific elements that should be accounted for when assessing the implementation of public sector projects.

Public projects

Affect a large number of actors	Multiple influential stakeholders
Attract public attention	Politically-sensitive
Chain of command	Uncertainty
Co-financiers	Unpredictability
Complex	

Table 3: Characteristics of public sector projects
Source: Compilation of the findings of Boyne (2002), Jałocha et al. (2014), Löfström (2009), and Santos and Varajão (2015).

2.3 Collaborative projects

Collaborative projects can be structured in different ways. One known structure is an inter-organizational collaboration which Bakker et al. (2011, p. 783) defines as «*Temporary inter-organizational systems of legally autonomous but functionally interdependent firms that interact to coordinate their efforts for the accomplishment of a joint service or product in a limited amount of time*». Within the literature, several articles have been written about inter-organizational collaboration (e.g. Bakker et al., 2011; Jacobsen, 2014; Lu et al., 2019; Le Pennec & Raufflet, 2018). Although many addressed aspects with inter-organizational collaboration, few explicit concern collaborations among public organizations.

Previous literature address that when public organizations collaborate with other public organizations, the value for both internal processes as well as value creation for the public is enhanced.

Löfström (2009) and Jacobsen (2014) suggested that a collaborative project structure is beneficial for reasons such as coordinating resources, competencies, time, knowledge-sharing, and attaining a stronger influence over the external environment. Although there are factors that might make collaboration relatively easy, there also exist factors that could reduce the incentives and motivation for collaboration. These could be relations connected to the people in the project team, e.g. an internal competition for access to knowledge (Picazo-Vela et al., 2018). Furthermore, their research found that organizations within the public usually collaborate to enhance the public services and not to strengthen their financial position. This was based on the claim that when the goal of the collaboration is to enhance the usage of resources, collaboration amongst public actors tends to be more beneficial than private collaborations (Picazo-Vela et al., 2018).

2.3.1 Inter-municipal collaboration

An inter-municipal project is a public-public partnership that is distinguished from partnerships within the public sector where actors on different levels are interacting (e.g. state and municipality). Each municipality in the collaboration is fundamentally alike and provides their respective municipalities with more or less the same services (Jacobsen, 2014). Depending on the purpose and objective, inter-municipal collaborations can be structured in various ways. Some collaborations might be a network that mainly focuses on knowledge-sharing, while others are highly structured (Jacobsen, 2014).

According to Aagaard et al. (2014), the primary forms of innovations within the public sector are usually incremental innovations in contrast to dramatic changes. However, over time, these incremental changes might be perceived as radical if they have impacted or changed the sector noticeably. Due to the bureaucracy and formal institutions, Aagaard et al. (2014) argued that implementing drastic changes through projects potentially was more challenging in the public sector. Moreover, Jacobsen (2014) found that a common focus area in inter-municipal collaborations is related to governance. Further, he described governance as a dynamic and partly predictable process for managing the public sector.

2.3.2 Success factors of collaborative projects

Collaborative projects are usually established when there is an incentive to innovate the current working methods as the interaction between entities might spur innovation (Löfström, 2009). By combining efforts, each organization will experience lower risks due to the total risk being shared (Maurer, 2010). Regardless of potential increases in complexity, collaborative projects

can result in both individual and collective opportunities that organizations might be unable to attain themselves (Zhang et al., 2018). Furthermore, Holmen and Ringholm (2019b) argued that different backgrounds, expertise, perceptions, and competencies of the participants could enhance the project result.

Research conducted by authors such as Matinheikki et al. (2016), Lu et al. (2019), Bakker et al. (2011), and Kujala et al. (2020) discussed several aspects of importance for inter-organizational collaborations. A reoccurring theme in these was the governance structure. Matinheikki et al. (2016) argued that clarifying the hierarchy and focusing on establishing a strong relationship between the organizations, was of importance. Lu et al. (2019) divided governance into two groups: formal and informal. Formal governance refers to contracts and procedures. In other words, it establishes a specific framework that the participants in the inter-organizational collaboration can utilize. Informal governance takes relational factors, such as trust, into account. Establishing a governance structure for the collaborative organizations could ensure that the interests of everyone involved are aligned and coordinated (Kujala et al., 2020).

The literature review by Le Pennec and Raufflet (2018) noted that to create a foundation for successful collaboration, the actors should focus on creating a shared vision, build trust, and find ways to effectively manage potential conflicts. In essence, creating a foundation of trust in an inter-organizational project was assumed to be important for achieving project success. If the participants trust each other, it could initiate more knowledge-sharing (Maurer, 2010) and if the team members have complementary knowledge this could enhance the success rates of projects (Picazo-Vela et al., 2018). Moreover, a trusting environment that is non-judgemental where sharing ideas and suggestions, as well as both giving and receiving constructive criticism is encouraged, could enhance the project deliverables (Holmen & Ringholm, 2019b). Furthermore, Matinheikki et al. (2016) argued that continuous communication can lead to strengthened trust. One way of doing this was to have frequent meetings with the project group. Le Pennec and Raufflet (2018) also emphasized the importance of an organization to find suitable partners and the right type of partnership, to ensure that everyone involved is committed to the project. Moreover, the collaboration enables organizations to focus on tasks of higher complexity than they might have been equipped for as a single entity.

2.3.3 Barriers of collaborative projects

Collaborating with one or more organizations can be challenging in several aspects. Löfström (2009) conducted a study where he looked into three inter-organizational collaborations in the

Swedish public sector. He found that the people in charge of the projects tended to neglect to update the line organization of their activities within the project. This led to employees in the line organization not knowing what the project activities were. In turn, this created difficulties with the integration of the various objectives. When new routines are established by the project without explicit involvement from the line organization, there is a chance that it could lead to resistance among employees. This can entail that employees might not be as excited about the new routines, as they might experience a feeling of exclusion in the preparation process (Löfström, 2009).

Bakker et al. (2011) explicated that, within inter-organizational projects, hierarchies in the project structure are often absent. In this context, Lu et al. (2019) argued that establishing a clear governance structure is important for ensuring that participants know what is expected of them and their roles in the project. Given that the primary issue of inter-organizational projects has proven to be to integrate a hierarchy for the structure (Löfström, 2009), indicated that failing to create a clear governance structure can constitute a barrier. Furthermore, this could have consequences for the coordination and progress of the project. Another potential challenge in inter-organizational projects could be to establish trust and shared understandings within the collaboration (Bakker et al., 2011). Moreover, the time-pressures of working within a project might also complicate the work (Maurer, 2010).

If there are differences in the understanding of the project, its goals, objectives, and responsibilities, it could create conflicts and delays in the progress of the project (Holmen & Ringholm, 2019b). When a project is collaborative, it is important to ensure that everyone wants to contribute. If one, or several, of the organizations, tries to attain benefits from the project without being a contributor, it could result in conflicts (Jacobsen, 2014). In addition to the mentioned factors above, it will also be of importance for a project to find the right balance between the freedom of action for participants and the control of the board. Too little or too much freedom of action could distinguish a successful project or a less successful project. However, the right balance is context-dependent (Aagaard et al., 2014).

2.3.4 Summary of the prominent features of the findings

Table 4 summarizes the most prominent success factors and barriers that have been explicated related to collaborative projects throughout chapter 2.3. The success factors indicate that to establish a collaboration that effectively implements the project deliverables, it is of importance to focus on communication (Matinheikki et al., 2016) and establish a shared vision of the goals

that have been set (Lu et al., 2019). Additionally, establishing a clear governance structure could ensure that everyone is fully informed of their roles and areas of responsibility. When reading through literature regarding collaborative projects, we noticed that the majority was primarily focusing on the positive aspects. This constituted a gap in the literature that we sought to address. Consequently, the barriers that were listed in Table 4 consist of various factors that could constitute barriers to the implementation if insufficiently handled. One potential barrier was that collaborative projects can struggle when balancing the level of freedom of action among participants (Aagaard et al., 2014). Moreover, previous research had found that integrating a project hierarchy was highly important and could inhibit the implementation if not sufficiently accounted for (Löfström, 2009). Another barrier indicated that it could be difficult to implement the planned routines of the project into the various line organizations (Löfström, 2009). Finally, collaborative projects are established for a limited period of time, which can make the project work and collaboration increasingly complicated (Maurer, 2010).

Success factors	Barriers
Continous communication	Balancing freedom of action
Create shared vision	Integrating a clear project hierarchy
Define roles and establishing a clear governance structure	Implementing routines from project to line organization
Establishing trust among actors	Time pressure
Information and knowledge sharing	

Table 4: Success factors and barriers of collaborative projects
Source: Compilation of findings of Aagaard et al. (2014), Le Pennec and Raufflet (2018), Lu et al. (2019), Löfström (2009), Matinheikki et al. (2016), and Maurer (2010).

3 Methodology and data collection

In this chapter, we have explained the methodological approach of the thesis. We do so by explicating and justifying our choices of methodological approach.

3.1 Position of scientific theory

The purpose of this study was to contribute to the academic and practitioner fields of project implementation through a study of a collaborative public sector project. In that context, this specific study was positioned within the field of interpretive social science since it investigated socially constructed realities of what the informants perceived from their surroundings. This entailed that our study mainly provided a basis for gaining insight into interpretations of implementation of project deliverables in the public sector (K. Halvorsen, 2008; Saunders et al., 2012).

From an epistemological standpoint, we worked within the field of interpretivism, meaning that our main priority was to better our understanding and to gain in-depth descriptions of the specific phenomena. This entailed that we as researchers influence the process as we interpret the data and consequently eliminate the possibility of the study being truly objective (Clark et al., 2019).

3.2 Research design

A research design describes how a project is going to be carried out (Hair et al., 2007) and is a systematic way of organizing the entire research process. The literature distinguishes between exploratory, descriptive, and causal research designs (Gripsrud et al., 2016). To answer our research question, we found it suitable to use an exploratory research design as we investigated a phenomenon that merged two different subject areas (Clark et al., 2019). Additionally, the previous literature on projects that were both collaborative and within the public sector was limited which also reinforced the reason for adopting an exploratory research design. The exploratory research design enabled us to use findings of the separate fields of study and seek rich descriptions of how the implementation took place in its real-world context (Yin, 2014). We gathered qualitative data regarding success factors and barriers, thus, explored the interface between the literature on public projects and collaborative projects.

The process of constructing knowledge in research is typically based on either an inductive or deductive approach (Clark et al., 2019). We argue that an inductive approach was appropriate

for our research. This entailed that the basis of this study was to study a phenomenon without using predetermined theories and hypotheses. We wanted to conduct a study where the ideal was to study the chosen case without having many prejudgements and the goal was to gain a holistic understanding of the case in contrast to testing various hypotheses (K. Halvorsen, 2008; Hair et al., 2007; Ghauri et al., 2020). When we first were informed about the case of «Sør-Rogalandsprosjektet», we received indications that there were varying degrees of successful implementation of medicine dispensers across the participating municipalities. We were intrigued by these observations and decided that we wanted to investigate whether the differences existed and what was possibly decisive for these. Hence, we formulated our research question based on an assortment of relatively random observations, rather than a precise theoretical foundation (K. Halvorsen, 2008). In sum, we chose an inductive approach as we sought to explain patterns of behavior from empirical findings to generate context-based theory-building, rather than testing theoretical hypotheses empirically.

3.3   Research strategy

When determining the research strategy, the study's purpose and problem statement, the scientific positioning, the given time perspective, and the scope, need to be taken into account (Saunders et al., 2012). This meant that our research strategy was chosen based on the time perspective of the thesis and the resources available.

Data can be collected through either a qualitative or quantitative approach (Gripsrud et al., 2016; Hair et al., 2007). Due to the nature of our research question, we considered making use of a qualitative approach appropriate. A qualitative approach enabled us to gain thorough explanations regarding what the phenomenon in question entailed, its underlying causes, and its potential effects. The goal was to understand the underlying factors of differences in implementation of project deliverables (Gripsrud et al., 2016). Consequently, we argue that a qualitative approach was suitable because it would enable us to retrieve in-depth information and reflections regarding our problem statement.

One commonly used approach when conducting a qualitative study is a case study design (Hair et al., 2007). This is because it is highly flexible concerning how research is carried out and because it enables the researcher(s) access to comprehensive data (Johannessen et al., 2004). A case study aims at gathering information from a specific event and providing an in-depth understanding of a phenomenon by using one or several cases. Moreover, case studies typically study an event from the perspective of various individuals to develop a thorough analysis of a

phenomenon (Hair et al., 2007; Ghauri et al., 2020). In that regard, we argue that a case study applied to what we wanted to research. A strength of using case study design was that that it enabled us to use various sources of evidence. This study sought to explore the implementation of a specific type of project. Hence, we found it suitable to make use of a multi-case design to extract factors and characteristics that potentially distinguished success from failure across cases (Yin, 2014). This entailed interviews with relevant candidates that could provide us with knowledge of the implementation of a collaborative public sector project in various contexts (Johannessen et al., 2020). By conducting a cross-case analysis we could compare findings across the individual cases, thus, increase our research's robustness. Furthermore, our purpose in conducting a multi-case study was to identify common features and consistent and inconsistent findings across the material (Johannessen et al., 2020).

In a qualitative study, empirical material is typically gathered using focus groups or personal interviews (Hair et al., 2007). We believed that conducting in-depth interviews with informants that were, or had been, central to the implementation of welfare technologies in various municipalities could provide us with invaluable insights into factors that separate success from failure. Interviews were our main source of information as they enabled us to attain information about the informants' personal experiences and perceptions about the project (Gripsrud et al., 2016). This further enabled us to retrieve more information affiliated with the implementation of the project and providing findings of various perspectives and contexts. Additionally, we used assorted documents prepared by the project management to gain extensive knowledge about the individual municipalities. This acted as a basis for comparing intended and realized goals and milestones. The documents included overall benefits realization plans, goals and sub-goals, and a document where the degree (percentage) of implementation within the individual municipalities was stated. We combined the data gathered from our interviews with observations and various documentation to triangulate our data. This provided us with a lot of detailed data and allowed us to show that the study's findings were supported by more than one source of evidence, thus, increasing the study's construct validity (Yin, 2014; Johannessen et al., 2020). We realized that we could not use the majority of these documents in the results and discussion sections, as much of the information was revealing and could jeopardize the anonymity of the informants. However, the materials created were used in preparing for interviews and when interpreting the gathered data materials.

Following the concretization of our problem statement, a suitable scope of the research was selected. The scope and the design of the research scheme have implications for the validity

and reliability of the research. Thus, it is of importance to discuss the appropriateness of the research scheme and whether it can affect the results to be found. In that context, research distinguishes between intensive and extensive research (Jacobsen, 2000). Even though the two types of research are not mutually exclusive, we argue that an intensive research design was best suited for our study. This was based on the premise that our study aimed to illuminate a specific phenomenon in depth by exploring the interaction between people and context (Jacobsen, 2000). Thus, we based our research on a set of relevant informants who could supplement us with rich and detailed descriptions of the phenomenon we were researching.

The time perspective of a study is also a key criterion for how research is conducted and is an aspect that needs to be addressed (Johannessen et al., 2004). Given the fact that our thesis was restricted to one semester, we collected our empirical data within a limited time frame. This entailed that the study was limited to look at the case at only one point in time and consequently eliminated the possibility of longitudinal research (Johannessen et al., 2004). Given the restricted time horizon, we selected the individual municipal representatives as our primary interviewees and narrowed our scope accordingly.

3.4   Context of the selected case

In 2019, the Norwegian Ministry of Local Government and Modernisation published their digital strategy for the public sector 2019–2025; «*One digital public sector*». The strategy was prepared as a result of Meld. St. 27 (2015–2016) Report to the Parliament Digital Agenda for Norway. The strategy addressed that there was an increased need for digital transformation throughout the entire public sector (Astrup & Helgesen, 2019), because of increased life expectancy (Meyer et al., 2020). The strategy further addressed that the public sector will become increasingly dependent on continuously implementing new technology to ensure a sustainable welfare society. Furthermore, it was believed that if the public sector failed to adopt the latest technologies and accompanying opportunities, they risked falling out of step with the needs of the population (Astrup & Helgesen, 2019).

3.4.1   Welfare technology and the National Welfare Technology Program

The Norwegian Directorate of Health, the municipal sector's interest and employer organization in Norway (KS), and the Directorate for eHealth had since 2013 collaborated on a national welfare technology program for Norwegian municipalities. The national initiative's main objective was to meet the municipalities' information and knowledge needs to facilitate the broad use of welfare technology solutions.

The Norwegian Directorate of Health has published two reports (in 2016 and 2017) which refer to experiences, reflections, and observations of the various «development municipalities». The two reports summarized valuable experiences that the municipalities encountered concerning opportunities and usefulness for the end users, relatives, and the service in total. The findings of the development municipalities were meant to create the basis for other municipalities that wanted to start using welfare technology. The reports show benefits for recipients, employees, and the municipalities. In the national welfare technology program, it was stressed that there were specific prerequisites for the successful implementation and use of welfare technologies. Training, change of routines, willingness to provide services in new ways, and recruiting various recipients were drawn out as important prerequisites for success (Melting, 2017; Melting & Frantzen, 2015).

The Norwegian Directorate of Health believes that welfare technology can provide increased security and better healthcare services for the recipients. Recipients include the elderly living in their own homes, elderly in nursing homes, patients with drug addiction and psychiatry, and people with impaired functioning (Melting & Frantzen, 2015; Melting, 2017).

In 2020, The Norwegian Directorate of Health, KS, and the Directorate for eHealth introduced the «*Helhetlig Tjenestemodell*», which we translated to the «*Comprehensive service model*». The model focused on the overall service area and explicates the tasks, roles, and external stakeholders that are included in the process of assigning welfare technology to end users. The model clarified that the managers should ensure that the technology is utilized.

3.4.2   Sør-Rogalandsprosjektet

Sør-Rogalandsprosjektet was established as a response to the national welfare technology program and consequently interacted closely with the national program. This entailed receiving guidelines, procedures, and methodologies from the central government. Moreover, municipalities were committed to reporting their progress quarterly. This was a project within the healthcare sector that took place in southern Norway, in the county of Rogaland. It was an inter-municipal project, where 14 municipalities collaborated on implementing welfare technologies as an integrated part of healthcare services. The project had been granted funding for the following two welfare technologies: electronic medicine dispensers and digital supervision. Given that the project had jointly procured and initially focused on implementing electronic medicine dispensers, this became a natural focus area of our thesis.

Even though it was a collaborative project and they had joint procurement of medicine dis-

pensers, each of the 14 participating municipalities was independently responsible for implementing the project deliverables. This entailed that the municipalities were responsible for facilitating the change in terms of how it was going to be implemented. Municipalities tend to vary greatly in size and the municipalities were encouraged to adapt tasks according to their municipal structure (Helsedirektoratet et al., 2020). In 2021, the smallest and the largest participating municipalities had a difference in the population of approximately 80,000 inhabitants. This indicated that there existed large differences in human, financial, and administrative resources across participating municipalities which consequently had to be taken into account. This will be further addressed in our results and discussion sections.

3.5   Data collection and data analysis

Originally, the concept of method means to follow a certain path to reach a goal. Thus, the methodology is concerned with guiding researchers in the process of examining whether assumptions are consistent with reality or not. The methodology provides the researchers with various procedures and accompanying implications for gathering, analyzing, and interpreting data (Johannessen et al., 2004). We chose to conduct semi-structured in-depth interviews for collecting data materials for our research. We believed that this method was appropriate in our setting because it facilitated a dialogue that provided access to informant's opinions, attitudes, experiences, and specialized insights (Jacobsen, 2000; Johannessen et al., 2004; Gripsrud et al., 2016). Given that we conducted inductive research, we were interested in individual reflections, interpretations, and how meaning was assigned to particular phenomenons and contexts. Thus, the purpose of the interviews was to identify factors that distinguished informants' experiences from each other. We found it suitable to conduct individual interviews instead of using focus groups since we believed focus groups could weaken our ability to explore nuances of informants' experiences (Gripsrud et al., 2016). However, some of the interviews were not conducted individually, as we encouraged the municipal representatives to invite other employees to the interview if they believed it would benefit the outcome. The overall goal of the interviews was to create a flexible conversation with informants based on an interview guide. Thus, we had a predetermined, overall structure and direction for the interviews but we allowed for themes, questions, and order to vary according to how the conversations naturally developed (Johannessen et al., 2004; Hair et al., 2007).

There are various ways of collecting data and conducting research and such data can be presented in several ways. Regardless of the procedure, researchers need to choose the number,

criteria, strategy, and approach for selecting and recruiting participants (Johannessen et al., 2004). When conducting a qualitative study it is important to identify informants with comprehensive knowledge about the phenomenon (Gripsrud et al., 2016).

The chosen case was an inter-municipal project where several people and departments were involved. Consequently, we had to narrow the scope of our sample by stating specific criteria and boundaries for informants (Johannessen et al., 2020). The main criteria for selecting informants was that the person in question had the overall responsibility for the implementation of medicine dispensers within their municipality. This was based on our desire to acquire a more comprehensive description of context-specific procedures of the implementation. In addition, we wanted to explore factors that could be decisive for the municipal differences. We started the process by scheduling a meeting with two representatives of the project management group. In the meeting, we informed them about our purpose and the project's suitability to our research. Subsequently, we collectively decided that the municipal representatives were appropriate informants and we were provided with their contact information. Before sending out a request to the informants, we were invited to hold an appeal in one of the project meetings to increase their incentives for participating and to inform the municipal representatives about who we were and what we wanted to study. Before the meeting, we requested one of our contacts to send out an information letter about our study, and during our pitch, we informed the project groups that we would contact them personally. Consequently, we contacted each informant by e-mail in which we further explained the purpose, background, and topic of our study. Thus, making use of personal recruitment to invite them to an interview (Johannessen et al., 2020). Out of the 14 participating municipalities, we conducted interviews with representatives from 13 municipalities. In some of them, we had interviews with two or more people from the same municipality and conducted a total of 16 interviews. We conducted eleven individual interviews, three interviews with two participants, and two interviews with four participants. The interviews with several participants contributed to the study because we got more complex discussions and varied reflections. Even though the last municipality would have been of relevance to interview, we conducted interviews with what we believed to be a sufficient amount of informants. The number of interviewees enabled us to explore unique factors of the various municipalities and thus enabled us to identify relevant factors impacting the implementation (Jacobsen, 2000).

Our sampling method can be described as a convenience sampling method since we got in touch with relevant people for our case study through our network (Hair et al., 2007). After getting in contact with our informants, we also opened up for the municipal representative to bring

along one or two people that might have relevant experiences and knowledge about the phenomena studied. In other words, aspects of the *snowballing method* were used to retrieve as much relevant data as possible in the given time horizon (Hair et al., 2007). In the interviews with multiple informants, the informants had different positions within the organization which could imply that some hesitated to share relevant information due to their superiors being in the same interview. Limitations of this will be addressed in section 5.3.

To prepare for our interviews, we created an interview guide with general questions and themes we wanted to explore. The interview guide contained general questions for different subjects and sub-questions, to get more in-depth information on our research question (Johannessen et al., 2020). In preparing the interview guide, we read through relevant literature and prepared a list of topics we wanted to explore in-depth. Based on these main topics, we prepared a set of general, open questions that we wanted our respondents to reflect upon. To be precautions of unsatisfactory or vague answers, we designed various sub-questions that could provide guidance when conducting the interviews. These sub-questions acted as a checklist for us and had the purpose of assuring that the important aspects were to be covered and fully elaborated.

Before the interviews, we sent out an information letter for the interviewees to prepare and think through the themes we wished to explore, thus, allowing them to talk to relevant employees before the meeting. This also allowed them to assess whether they wanted to bring someone along to the interview. Additionally, we informed them about what their consent entailed. Finally, we chose to exclude the interview guide in the information letter to avoid the various informants being influenced by each other's perceptions. Prior to conducting the interviews, we once again specified to our informants what their participation would entail and how we would safeguard their anonymity. Subsequently, we asked for consent to take audio recordings and explained that the purpose of the recordings was to transcribe the interview afterward and that all documentation was to be deleted at the end of the study (d.01.06.21).

Due to Covid-19, the semi-structured interviews were conducted digitally using "Microsoft Teams". Given that digital meetings had become highly accepted during 2020, we argue that the outcome of the interviews was not significantly affected because the online interviews were approximate of the same quality as physical interviews (Johannessen et al., 2020). The interviews lasted between 45 - 60 minutes. We started each interview by repeating a summary of the interview's purpose and showed the dictaphone we would use. The dictaphone enabled us to focus fully on what the informant(s) were saying and to observe information that emerged through body language and facial expressions. Our focus was to listen and follow up on the

information provided by our informants. Hence, we chose to have one person leading the interview and the other one taking notes. After each interview, we had a brief conversation where we discussed our observations and the main essence of the interview. We started each interview with general questions to get a soft start before we continued to discuss each topic in-depth (Johannessen et al., 2020). At the end of the interview, we repeated their right to deduct, revise, add, or withdraw information or participation. No informant chose to utilize this opportunity.

By using interviews as our primary source of evidence we gathered a great amount of data and ended up with 200 pages of transcribed recordings. This meant that we had to reduce this unstructured data into a manageable amount and structure it in a way that allowed us to communicate our findings understandably. Moreover, qualitative data must be both analyzed and interpreted, preferably by the same people who carried out the data collection. Further, previous research addresses that data analysis typically has two purposes: organizing the data as well as analyzing and interpreting it. Structuring the data entails reduction and systematization to facilitate a good foundation for analysis, whereas analysis and interpretation entail processing, interpreting, and identifying patterns within the collected data that are easily communicated (Johannessen et al., 2020).

As stated by K. Halvorsen (2008), the process of analyzing qualitative data is comprehensive and time-consuming, and there is no standardized method for analyzing qualitative data. Coinciding with this, we acknowledged that the data processing would take a lot more time than we initially believed. Based on our time estimations of getting acquainted with a software program for analyzing qualitative data, we perceived processing the data manually as most appropriate. Figure 1 illustrates our selected approach for conducting our first-order coding. Transcribing and coding our interview notes and recordings became the starting point of our data analysis. We conducted the interviews in Norwegian, which meant that we had to translate our data after transcribing it. To incorporate all the information provided by our informants, we chose to directly translate the quotes we used. After we had finished transcriptions, we printed them out and collectively read through them to gain a more comprehensive understanding of the data. Simultaneously, we color-coded relevant information. The color-coding separated our observations of decisive factors from informants' explicitly stated success factors and barriers. We also color-coded information we believed to be of importance, but which were not directly related to the degree of successful implementation. In addition, we highlighted various quotations that we perceived to be relevant for reinforcing our arguments. Throughout this first stage of analysis, we realized that our informants' perspectives, attitudes, and experiences tended to relate

to similar themes. Consequently, we entered all findings related to success factors and barriers into separate excel-sheets. Thus, we had long lists of both success factors and barriers. This constituted our first-order codes and acted as a basis for our further analysis.
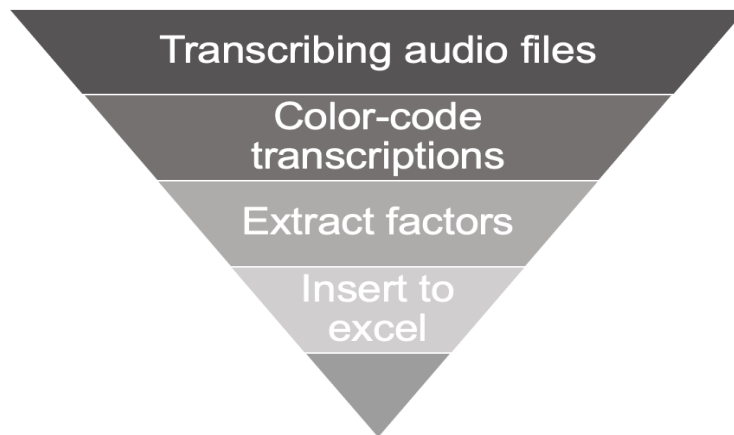
Figure 1: Illustration of first-order coding

Given that we utilized an inductive approach, we prepared categorizes based on the reoccurring themes from our transcriptions. These reoccurring factors constituted our second-order codes and created the basis for our categorization of findings. Several of these factors related to similar aspects, therefore we chose to merge them into seven comprehensive categories. Eventually, we identified the following categories: end user, employee, line management, project deliverables, line organization, inter-organizational collaboration, and Covid-19. Afterward, we repeated this process for the barriers and assigned factors to the same categories.

Figure 2 illustrates an example of how we conducted our second-order coding. The figure was based on excerpts from the first-order coding of success factors related to the project deliverable. After we had assigned the various factors to the technology category, we examined the nuances of them and merged related factors that referred to similar aspects. Subsequently, we created a more concrete and precise list of sub-factors. We conducted the same procedure for the observed barriers and summarized our key findings in tables such as Table 8 in sub chapter 4.1.4. Subsequently, we proceeded to conduct the same categorization of all categories to illuminate the most prominent findings related to the individual categories.

Service-centered suppliers	Being quick at removing the dispenser if there is any problems
Easy software/technological programme	Follow-up continously in terms of technological difficulties
Relatively easy technology to operate	Suppliers travel to different municipalities and have courses
Good support from suppliers	Make dispensers a natural part of the service
Pilly is easy to use	Foucs on having dispensers as a integrated part of the service
The accompanying datasystem is easy to use	Starting with a few in order to make the employees feel confident
Focus on welfare tehnolocy in media	Continuous focus on development of the service
One of the most easy welfaretechnologies to implement	implementation leads to flexibility for both employees and users
Using checklists from the supplier	Implementing the service alongside other integrated services
Using the videos for training	Dispernsers should become an integrated service
"Demo-rom" where technologies are set up	Easy to see both quantitative and qualitative benefits

Success factors - Project deliverables
General Public acquainted with the technology
Service-oriented suppliers
Technological awareness in the sector
User-friendly product
Various accessible training methods
Well-designed software

Figure 2: Illustration of second-order coding

3.6 Quality criteria in qualitative research

To ensure quality in our research materials, we justified our selected research process and research design. Previous literature suggests that qualitative research should be evaluated differently than quantitative research. Furthermore, the most relevant concepts to evaluate qualitative research are reliability, credibility, transferability, and verifiability (Johannessen et al., 2020). Hence, we discussed these concepts as measures of quality of the approach and findings of our research. When conducting a study, it is fundamental to question the reliability of the collected data (Johannessen et al., 2020). According to Yin (2014) and Hair et al. (2007), a reliable study should be trustworthy and consistent. Data collected in our qualitative study were highly context-specific. Thus, we had to acknowledge that our individual and collective perceptions and interpretations could affect the study (Johannessen et al., 2020). Hence, we have thoroughly described the different stages of our approach as a means for ensuring transparency in our study. To further strengthen our reliability, we included our interview guide as an attachment in the appendices (see Appendix A.1).

The credibility of a study examines if the research approach measures the variables that it intends to (Johannessen et al., 2020). Similar to reliability, credibility is closely connected to the research approach throughout the stages of collecting, analyzing, and interpreting the data (K. Halvorsen, 2008). To strengthen the credibility of our study, we provided our informants with the opportunity to correct, redact, or erase their statements if they felt something had been mis-

interpreted or left out (Johannessen et al., 2020). The sample we chose for this study could be described as credible because the majority of our informants had an administrative role within the municipalities for implementing the project. However, one clear weakness with the sample was that we could attain a more nuanced picture by including more employees, such as nurses or other health professionals, that directly work with the end users. To compare results from various participating municipalities within the given limited time frame, we chose to interview municipal representatives with the overall responsibility for the implementation process.

Transferability refers to the extent to which one can conclude beyond the immediate information collected and is the purpose of all research. The transferability of qualitative research often refers to whether the research succeeds in establishing explanations and interpretations from a specific context that are useful in other areas (Johannessen et al., 2020). We prepared descriptions of the phenomenon in question to strengthen the study's transferability and thus make it easier for others to assess whether the study's results can be transferred to other contexts (Guba & Lincoln., 1994, referred to in Johannessen et al. (2020, p. 252)). Our study was transferable and contributes to analytical generalization because other researchers could replicate our research in various contexts, transfer our findings to another context, and prepare a basis for further research. By studying the specific context of collaborative, public sector projects, we strove towards identifying success factors and barriers which were useful in areas other than what we studied.

In conducting qualitative research, we needed to assure that the findings were not a result of our subjective perceptions, but rather a result of the research (Johannessen et al., 2020). To maintain the study's verifiability, we focused on being accountable in processing the data materials. This entailed that we provided accurate explanations of all the choices we made in both the preparation of the data collection, the data collection itself, and the processing of it. Furthermore, we assessed whether our findings and interpretations are supported by previous literature.

We anonymized the individual informants and, thus, were able to increase the probability that informants did not withhold or provide incorrect information. Considering that this was a public project, it entailed that the list of participating municipalities was available for the public. In that regard, we reassured informants that all empirical findings would be anonymized and non-traceable. To secure the anonymity of our informants, we chose not to assign numbers to our informants. This enabled us to utilize data and statements, whilst simultaneously maintaining our informants' privacy. Furthermore, the respondents were informed that they could withdraw participation completely at any given time, as it was important for us to clarify that participation

was voluntary. We further reassured them that when the thesis was published on June 1st, all data would be deleted and destroyed safely.

To ensure that our study was carried out in line with research ethics legislation and safeguarded the privacy of informants, we submitted our planned research to the Norwegian Center for Research Data (NSD) (Johannessen et al., 2020). Our research and its associated data materials were approved which allowed us to further assure the informants that their privacy was protected.

4 Results and discussion

In the following chapter, we present and discuss the empirical data we have gathered in our research. The first part of this chapter is highly case-specific and the purpose of sub chapters 4.1.1 throughout 4.1.7 is to provide a detailed presentation of our findings. These findings summarize our informant's observations concerning the implementation of the specific case and its context. We start by explicating the various case-specific categories that originated from our data analysis before we continue to address each category's relevance by discussing it in the light of existing literature. We chose to include the discussion of the individual category after the presentation of the results to be able to have a better overall discussion in the end. In the second part of this chapter, sub chapter 4.2, we discuss findings and observations that are more generally applicable. By discussing our findings in light of specific characteristics of both public sector projects and collaborative projects, we sought to cultivate the specific features of the process that had taken place. This enabled us to illuminate the more general findings of our case, thus providing a basis for answering our problem statement.

4.1 Categories

4.1.1 End user

The first category we have prepared is called *End user*. This category entailed components that were mainly related to the end users of the welfare technology, more specifically, those who received healthcare services. Table 5 summarizes factors that we extracted from our findings that were highlighted as success factors and barriers for implementing welfare technologies related to this category.

Informants believed it was important to involve and encourage eligible end users throughout the whole process. Focusing on the beneficial aspects of a functional dispenser such as more flexible days and medication secured at the right time was believed to give a positive first impression. It was also noted that an angle of approach was to portray it as the users would be doing the employees a favor by helping them test the dispensers, which could make users feel more involved in the process. Identifying eligible end users was a process that several municipalities struggled with in the beginning. Some informants argued that it had been challenging to find suitable candidates since this was a new product and it was difficult to set criteria for allocating the dispensers. However, when potential end users were identified, most informants noted that it was beneficial to include the end users in the implementation to increase the chance

Success factors	Barriers
Conduct comprehensive mapping	Disruptive change for end users
Focus on user benefits	Locate suitable candidates
Identify ideal initial candidates	Resistance among end users
Involve & encourage end users and relatives	Varying needs in service areas
Include a trial period	

Table 5: Success factors and barriers: End users

of success. For the end users to feel confident about the change, our informants stated that they had a trial period before the dispenser was fully implemented. Another informant said that «*[...] We have promised them [end users] that we will introduce it for a trial period, and if it does not work then we will take it back. Because then they know that it is safe to try it, because it is not something that is necessarily forever*». This allowed the end users to become familiarized and comfortable with the technology and also be reassured that they could remove the dispenser if they wanted. This could ease the transition for some. However, the dispenser was not applicable for all end users and could be perceived as a disruptive change.

An informant stated that «*They [end users] are a bit skeptical at first, in a way. But it does not take a lot of days before they see the benefit of it and are very happy*». In that regard, informants noted that it was important to implement the dispensers at a pace the individual end users were comfortable with and reassure them that the «warm hands »of nurses would still be available to them. After a medicine dispenser was implemented, informants focused on how there should be a continuous follow-up of the users of the medicine dispensers, to ensure sufficient functionality and quality of the service. Informants also noted that relatives tended to have a crucial role in encouraging the end users, and should thus be taken into account when involving and engaging them. Generally, our informants had experienced that the relatives were positive toward the change, but this did not hold in every case. One informant noted that «*They are the ones who express concern because they do not feel safe and are worried about their loved ones [...] It rarely happens but it does happen. Most often, they are some of the driving forces, when we get to present the flexibility and the good sides of using the dispensers*». If relatives were reluctant

to the implementation, it could be challenging to convince the end users about the value of the dispensers.

Our results indicated that the end users constituted an important category because they were ultimately the ones that were going to have the change incorporated into their daily lives and routines. This aligned with the findings of Albert et al. (2017) regarding end user satisfaction constituting a soft criterion of project success. In that regard, we found that the implementation was dependant on the end user accepting the change as the process stopped if the end user was reluctant. In consequence, our findings indicated that it was important to adapt the pace of the implementation to the individual end user. Additionally, we found that it was beneficial to focus on identifying a set of initial end users that had a positive attitude and that they were eager to test the product. These candidates proved important for encouraging employees and for recruiting other end users. Burke (2018) argued how an organizational change could be a paradox because a plan that is thoroughly planned for usually unfolds differently in practice. This coincided with the findings in our data materials because the project deliverable was a device that would change the lives of human beings. In that regard, we argue that this specific implementation of project deliverables was complex as it had repercussions for a large number of actors. As previously noted, we found that relatives could be influential factors that impacted the perceptions of the end users. This entailed that the line organization needed to ensure that both the end users and their relatives were sufficiently informed and involved in the process.

4.1.2 Employees

This subsection covers aspects regarding employees and their roles throughout the implementation of project deliverables. Employees had a crucial role in the project as they were the ones that were given the task of handling the new technologies as part of their everyday routines. The number of success factors and barriers that are listed in Table 6 indicates how complex and comprehensive this process was. Our informants discussed that it would be important to allocate sufficient time for the resource personnel and employees to focus on this. This entailed having several people involved in the process and having employees working full-time specifically with welfare technology. One example of this was the following statement: *«I think this depends on having a dedicated person working on it and that they have the opportunity to spend some time on this»*. However, in several of the municipalities, this was not possible due to limited available resources. Informants from the smaller municipalities elaborated how this was especially challenging to do within their municipal structures. Working with welfare tech-

Success factors	Barriers
Accomodate skepticism	Irregular meetings and information sharing
Anchor and create a sense of ownership	Person-dependent
Motivate and encourage employees	Unclear division of roles & varying sense of ownership
Perform extensive and repetitive training	Unmotivated and negative attitudes amongst personnel
Procure dedicated resource personnel	Varying technological knowledge
Facilitate for regular meetings and information sharing	

Table 6: Success factors and barriers: Employees

nology was a task that employees had to do in addition to their existing work. One informant expressed this by saying that it could be «*[...] difficult for employees to see the value when the dispensers add to the workload on busy days*». Several also stated that although the dispensers led to reduced time spent on some tasks, there were always other tasks to spend time on. Informants also expressed that some employees wanted to work full time with implementation, but the municipality did not have enough resources to do this.

Anchoring the change and ensuring that employees have a sense of ownership within the municipality was considered important. One informant noted the importance of the organizational culture in saying: «*[...] it is important to have a culture where change is encouraged and one is willing to try new things [...] It is about them [employees] being allowed to provide input and that we listen to what they say when they provide input. Letting them participate. If you get things threaded down your head that you do not really understand, then there will be resistance*». In that regard, it was noted that anchoring the process by ensuring that everyone in the organization understood their roles and areas of responsibilities, would facilitate for the process to evolve in a structured manner. Another informant summarized this in saying: «*if they [employees] do not own it, you can forget implementing it at all*». In the initial phase of the project implementation, the informants felt it was crucial to appoint the role as resource personnel to someone that believed in the welfare technology and had an influential position among the employees. Informants tended to argue that starting the implementation with a few key personnel that knew, or learned, the systems well could be advantageous. Furthermore, the key personnel should have the responsibility of gradually training the other employees in the or-

ganization. Whereas having few resource personnel could be advantageous, it also implied that the process was highly person-dependent. One informant expressed that «*We have a specific person in one zone who is insanely good at implementing medicine dispensers and therefore they have a higher percentage than the others. None of the other zones have this person. That's what's weird about that kind of thing. It is completely person-dependent*».

Our informants also uniformly agreed that it was important to perform extensive and repetitive training. One informant illustrated this in saying «*it is such a new system and it requires mass training. This is what is often the case with new systems*». Ensuring that there is enough training for the employees regarding how to handle the medicine dispensers, was mentioned as crucial for the implementation. Some informants also said that, in the beginning, they had a dispenser available in the offices for employees to familiarize themselves with the product and its functions. This ensured that more people learned the routines, and in consequence, reduced the dependency on a few key people. In some instances, informants stated that there had not been enough focus on training employees for these tasks and that this acted as a barrier. Another mentioned challenge was limited training and repetition due to limited eligible end users. This was especially apparent within the smaller municipalities as they tended to have fewer users in general and consequently got less repetitive experience with the dispensers. One informant noted that «*when it is so little in use and very little as a routine, then it becomes very difficult for everyone to understand it and get enough competence [...] on a busy day, it becomes easier to snatch out that roll and say «now you get it manually»until we actually have time to familiarize with it*».

Moreover, we observed that the sector faced a need for increased technological knowledge as an increasing amount of technological advancements were being introduced as a means for improving existing practices. There had been several seminars for participants in the inter-municipal project that aimed at increasing the general knowledge about welfare technologies. Our informants acknowledged that once people learned more about the technology, they often became more positive towards it as well. However, several informants noted that a reoccurring attitude amongst employees was that «*For many, working and writing on the computer is something that has not been considered part of the job* ». Additionally, some informants mentioned that the healthcare sector had experience with adjusting to change and that it is a «*profession where one is used to various responsibilities*». They argued that these elements were relevant for the implementation of medicine dispensers as healthcare personnel was used to adjusting aspects of their services. Moreover, they were also used to working under a lot of time pressure

with much responsibility, which could help them see the value of implementing welfare technology. Some argued that implementing welfare technologies «*changes the fundamental way of operating*»and in consequence became a subject to resistance.

The category «Employee»was highly relevant because the employees of the line organization proved to be a key factor that could influence the projects' success. We found that if the employees were not motivated to realize the change, it could be nearly impossible to implement it. This further indicated that it was also fundamental that they believed in the change that was being implemented. However, we found that the personnel was to implement electronic medicine dispensers whilst simultaneously ensuring that their existing tasks were accounted for. In several instances, we found evidence of this acting as a demotivating factor that exhausted the personnel.

Following the findings of Williams et al. (2020), a fully defined project is believed to have difficulties when facing sectors with a fluid nature, especially when there are multiple layers of governance. Our findings indicated that the employees within this sector had experienced a lot of changes in a relatively short time as they were continuously being presented with new efficiency solutions. Within some municipalities, there had also been various degrees of reorganization or limited division of roles and responsibilities across various levels of governance. This indicated that the context in which the project deliverable was being implemented had changed a lot and was still changing, which potentially increased the difficulty of implementing the medicine dispensers. The implementation was further complicated by the tight schedules and constant time pressures the healthcare personnel had at the time of implementation.

Another interesting finding was how dependent the implementation of this project had been on a few key people. Most informants agreed that the process was highly person-dependent, as illustrated by this statement: «*[...] it comes down to the passionate souls when we had taken both time and the economy out of it. So it's pretty person-dependent*». Previous findings had, to our knowledge, not directly addressed this as either a success factor or a barrier to the implementation. We argue that this indicated that this person-dependency was either a healthcare sector-specific or public sector-specific factor. According to several informants, dependency on a few key people tended to increase when new projects were implemented. The resource personnel was often employees that believed in the change and were eager to acquire new competencies. Having some employees with comprehensive knowledge was seen as a good starting point by several of our informants. However, they also acknowledged that there was a downside to being that dependent on a few people, especially if there were replacements among them. If

passionate personnel was replaced, the line organization would likely become severely affected and thus more vulnerable to the change. A few informants talked about how employees sometimes did not handle alerts for the medicine dispensers when they appeared but left them to the resource personnel, indicating that there had not been established a general sense of ownership and excitement about the technology. In addition, this imposed even more responsibility and workload on the resource personnel. Lu et al. (2019) argued that establishing a clear governance structure could be important for participants to know their roles. Our results showed that many municipalities were highly dependent on a few key people. To reduce this dependency, we argue that by establishing clearer structures, several employees would be familiarized with the medicine dispensers, and know how to handle the project deliverables appropriately.

Implementing medicine dispensers in the healthcare sector, where there traditionally had not been used a lot of technological solutions proved challenging. In that regard, our results indicated a tendency of employees postponing learning and acquiring necessary knowledge about the change. It was a highly interesting notion that some employees within the sector still did not see utilizing technology as part of the job. Over the years, digitalization had become a part of the working environment in varying degrees within this sector. In that regard, we argue that this indicated that there needed to occur a significant transformation in attitudes amongst healthcare personnel for the sector to be able to handle the pressures they presumably would face in the future and the accompanying changes that they would have to implement. At the time of our research, welfare technologies were presumed to attain increased importance in the years to come when the elderly portion of the population was expected to increase significantly (T. Halvorsen, 2020; Astrup & Helgesen, 2019). The technology could be an effective resource for relieving some of the workloads of employees as it provided effective solutions and ways of working that required fewer human resources.

When new systems and products are implemented, some employees will naturally be more skeptical than others and they will likely react and cope differently to the change (Belschak et al., 2020). In this context, Burke (2018) stated that changes within an organization will likely be met with a varying degree of individual and collective resistance. These statements are consistent with our findings, as our informants mentioned that there were various reactions and attitudes. Most of them had been positive but there had been some reluctant and skeptical employees. A couple of informants noted how there usually were some (and often the same) employees that were a bit skeptical when new changes were going to be incorporated. We observed that when the project deliverables did not work properly it could increase the skepticism,

as stated by one of our informants: «*those who are a little skeptical get a reason to be a little more skeptical [when there are a lot of challenges], but at the same time, it is very good when it works, and the employees see it too*». In that context, our findings indicated a need for bettering processes of discarding previous procedures and routines when implementing new ones. We found that some employees returned to old habits and routines if they did not gain sufficient knowledge and exposure to the new routines. This coincided with the findings of Nilssen (2019) who argued that municipal actors tend to favor institution-specific rules and norms rather than realizing changes. Following the findings of Oreg et al. (2018), we found evidence of the importance of reassuring employees that they can handle the change that was taking place. We found that involving and encouraging the employees regarding the preparation of routines and guidelines could make them feel more included and motivated.

4.1.3 Line management

This category was of importance in our context because the management of the individual municipalities made important decisions concerning prioritization and delegation of roles. Furthermore, they decided how much time and resources should be set aside specifically for various tasks. Our findings related to this category is summarized in Table 7.

Success factors	Barriers
Allocate time and resources	Absent reporting routines
Anchor at all management levels	Constrained time and resources
Customize training and routines	Limited anchoring & sense of ownership
Facilitate continuous reporting	Person-dependency
Facilitate open and iterative communication	Uapparent benefits

Table 7: Success factors and barriers: Line management

Our informants frequently mentioned that one important success factor was for the management to allocate sufficient time and resources for implementation. One informant pointed out that «*it is important that you get time to work with it and that there is a focus, both outside and among the leaders, that this is important and that there are some who want to do the job outside. If no*

one wants to do the job outside and the manager does not agree that the job should be done, then I do not think you get it so well». This was further expressed by another informant «*I would say that this depends a lot on the prioritization of the middle managers, how much they have chosen to set aside time for people».* In consequence, prioritization of the project work, especially in the beginning, was mentioned as important. It was primarily discussed as a success factor, but it could also act as a barrier if the allocation was insufficient.

Anchoring the project at the management level was also reported as highly important, as expressed in this statement: «*if they [middle managers] are negative, then you are fighting a heavy battle».* Other informants exemplified this by saying that the managers should prioritize the project daily and that they need to ensure that actions are taken to reach predetermined goals. In essence, informants noted that the change needed to be anchored among the middle leaders. One informant summarized this in saying: «*I think those who work must have perseverance. Work slowly but surely, and have some resource persons around you and have middle managers who are involved in it, so to speak».* When asked about what could have been done differently, an informant expressed that anchoring the process even more in the management would have been beneficial. Furthermore, the informant believed that this would ensure that even more time would have been set aside for training. Several mentioned that if managers were positive about the new technology and had a sense of ownership, attitudes amongst employees would most likely be positively affected. In this context, some informants noted that it was also important to highlight the negative aspects and experiences as a way of acknowledging the struggles of the employees, as expressed by the following statement: «*It is important to not be focused on only the success, but also taking consideration to the things that do not go well and address it».* Regardless of the unison agreement that anchoring was important, this had proven challenging to realize. This was noted by one informant: «*[...] it is probably a bit about an absence in the sense of responsibility of the middle managers who are in daily life and who are responsible for following up that things we have agreed on are actually realized».*

Many informants stated that adapting training within the individual municipalities was an important part of the resource allocation. The initial training and information about welfare technologies were provided by the project, through seminars and courses. Furthermore, the municipalities needed to establish new routines due to this change. They received guidelines from the project, that they could adapt and customize according to their municipal structures. In this context, one informant stated that incorporating new routines was time-consuming and required a lot of administrative work. In this regard, another informant noted that «*if the traditional way*

works, it is preferred as it is less expensive and entails less resistance».
Maintaining focus on reporting was believed to ensure that the medicine dispensers were more visible in the organization and the benefits would be easier to trace. In that context, an informant said that «*the manager is very important concerning pushing and following up in operation and facilitating operation. Facilitate that the resource personnel have time set aside and facilitate repetition and reflection for the employees in operation all the way»*. Another informant underlined the importance of listening to feedback from healthcare personnel as «*they are, after all, the ones that handle the medicine dispensers on a daily basis»*. Even though reporting and communication among employees and managers were perceived as important, informants reported that it was not always adequate. Some experienced that, in general, there was little focus on reporting and that they received little feedback from their colleagues. In this context, informants noted that the managers should conduct regular follow-ups with the chosen resource personnel to obtain an overview of the process.

Belschak et al. (2020) and Burke (2018) found that the management should be aware that their employees have separate perceptions and attitudes toward changes and that they should try to ensure that employees have a sense of choice in determining and implementing the change. Our findings align with this as the line managers were appointed as highly important for motivating employees to incorporate change. Doherty et al. (2012) expressed that some recurring factors of importance within projects were senior management commitment and appropriate staff training. Our findings confirm this, as our informants had a general impression that most leaders encouraged the change and included employees as much as possible in decisions that were made. However, we found instances where management had not facilitated and encouraged the change sufficiently. In such instances, the implementation tended to stagnate which further reinforced the importance of line management. These findings further aligned with the arguments of Dupont and Eskerod (2016) and McMaster et al. (2005), concerning potential benefits of utilizing line managers when implementing project deliverables as they have thorough knowledge about operational processes and valuable relationships with subordinates. In that context, we argue that middle managers are important for establishing a link between the administrative part of the municipality and the operative part of the sector.

Burke (2018) argued that resistance toward change processes could be reduced by facilitating that employees were involved. This aligned with our findings, as we found that the implementation benefited from inviting employees that worked directly with the end users to contribute with inputs and suggestions for how routines could be established. Moreover, we observed that

it was difficult for middle managers to have a consistent focus on the project if there had been many changes in their tasks. We argue that it was crucial to have a manager that was committed to the project and worked towards achieving its objectives. In turn, this could lead to increased motivation among employees to face potential challenges related to the implementation. Furthermore, within certain municipalities, some had experienced that the absence of top management motivation had complicated the progress of the project. The process was anchored to some degree, but the main focus of the top management was the economic aspect of the process, which made it challenging to implement.

(Williams et al., 2020) found that projects often focus mainly on technical artifacts and downgrades the prioritization of benefits realization. In our study, we observed elements of such a tendency as some managers had primarily focused on economic results and savings. Following the findings of Christensen et al. (2015), public projects often have the purpose of improving efficiency for the general public in contrast to increasing profitability. In that regard, we argue that the observed focus on savings contradicted with common public projects and in consequence potentially had negatively impacted the progression of the implementation and the motivation amongst employees. Andersen (2018) argued that projects concerning organizational change could make managers too focused on developing their employees, and thus neglect to develop general routines to ensure that the change is implemented. We did not discuss this with our informants explicitly, but based on the interviews we conducted, we observed a tendency of this occurring. Many informants discussed how there had been a lot of focus on training of staff and ensuring that they knew how to handle the new technologies, which might have been done at the expense of establishing and fully implementing new routines.

4.1.4 Project deliverables

Table 8 summarizes our most prominent findings concerning success factors and barriers of the project deliverables and their accompanying suppliers. When discussing the implementation of welfare technology, it was inevitable to discuss matters related to the technology itself. We quickly realized that there existed both positive and negative sides to the electronic medicine dispensers.

Several of our informants stated that the medicine dispensers appeared as a relatively easy product to implement and utilize, but that the process of implementing them had been frustrating because of several technical challenges. We also found that some informants experienced challenges related to the fact that the dispensers were a relatively new product, as put by one

Success factors	Barriers
General public enlightened	Brand new product
Service-oriented suppliers	Costly and time-consuming
Technological awareness in the sector	Several separate software programs
User-friendly product	Technological awareness in the sector
Various accessible training methods	Technological difficulties
Well-designed software	Unfortunate attitudes towards the technology

Table 8: Success factors and barriers: Project deliverables

informant: «*I felt that it was a brand new product when we received it, that was not particularly tested*». Moreover, some noted that they felt like they spent more time on errors and issues instead of using the technology. The various technological challenges had at times been a demotivating factor as expressed by one informant: «*[...] when there have been defaults on the dispensers, it becomes an extra thing on the scales for the somewhat negative employees*». When there had been immoderate issues or defaulted medicine dispensers, several reported that they simply removed the dispenser to sustain the optimistic attitudes towards the technology amongst users and employees. In this context, several of our informants mentioned the importance of acquiring a user-friendly product and accompanying software, especially when the project deliverable is related to technology. In this regard, one informant noted that «*[...] it is not only about utilizing technology. It is about an entire service that is changing their way of working, and that takes time*».

The ultimate goal of the project was to incorporate the medicine dispensers as a natural part of the services provided in the sector. In consequence, continuously focusing on learning the technology, maintaining, and developing employees' technological competencies were mentioned as success factors by several of our informants. In practice, however, our informants observed that there was generally a relatively low level of technological awareness within the sector which they believed inhibited the progress of the implementation. Statements from two of our informants further underline this: «*[...] it changes the way we work and one acquires new skills or knowledge, which many are not interested in because they might not consider it as a part of the core tasks as healthcare personnel*»and «*people are scared of the word welfare technol-*

ogy». Some continued by saying that when people are skeptical towards the project deliverable, it becomes challenging to convince them that it will increase the quality of the services. In the context of welfare technology, numerous informants noted that they faced challenges in creating consistency between the pharmacy's products and the suppliers' dispensers and to agree with doctors regarding the usage of multi-dose and medicine dispensers. One informant expressed this in saying that «*It has been a barrier for some [municipalities] that the doctors do not want to prescribe multi-doses [...] it is important to have the doctors «on board»*».

Furthermore, our informants stated the importance of having various accessible training methods available. Several municipalities had a dispenser available in the offices, for employees to familiarize themselves with the dispensers, their functions, and the accompanying software. There existed several medicine dispensers provided by different suppliers. The majority of the municipalities dealt with one supplier only, but some municipalities also incorporated dispensers from a second supplier. Generally, the municipalities were very satisfied with the assistance from the suppliers of the product and saw the value of having these service-oriented suppliers. The suppliers quickly assisted the municipalities when they were contacted and took every inquiry seriously. Hence, informants expressed they had a lot of trust in their suppliers. However, a few informants also stated that it was challenging to deal with two suppliers simultaneously. In addition to having different suppliers, there were also separate software programs for the different welfare technologies. The following statement from one of our informants emphasized this: «*[...] How many login pages are the nurses going to have? How many different systems for notifications are we going to have?*».

The various findings related to this category were highly context-specific in that they related to a specific project deliverable. In consequence, we have primarily discussed the more general findings that potentially could be transferable to other contexts. Albert et al. (2017) argued that hard criteria of project success such as performance and time are relevant but also add quality to the list of hard criteria. In this regard, we argue that this reinforced the importance of project deliverables being of high quality, delivered within a predetermined time horizon and that it performs as intended. For this project, the medicine dispensers and the accompanying software were the project deliverables that were going to be implemented. A general remark concerning the specific technology was that several municipalities experienced that the technology did not function as intended, thus, it acted as a barrier for the implementation. Moreover, welfare technology was a relatively new field that entailed rather big changes to existing cultures, routines, procedures, end users, and other relevant stakeholders. In turn, this indicated that there were

a lot of factors that needed to be accounted for regarding the implementation and functionality of the product. Especially in terms of increasing the knowledge of the technology for everyone involved.

This showed how the technology itself had, in varying degrees, acted as a barrier for most municipalities. Experiencing several initial challenges was thus believed to be unfortunate, as it made the process more frustrating than it could have been. At the same, our informants expressed that when the technology worked, it was perceived as a valuable addition to their services. In sum, we argue that the mentioned findings indicated that tangible project outcomes affect the more intangible aspects of the process, such as the soft criteria listed by Albert et al. (2017). We found that the quality and performance of the project deliverables were highly important to be able to reap the intended benefits. Following the findings of Albert et al. (2017), we argue that this implied that collaborative public sector projects should account for both hard and soft criteria when implementing project deliverables.

4.1.5 Line organization

This category addresses elements that are related to the municipalities in general, the administrative perspective, and management at a higher level. These findings accounted for the fact that the project deliverables were implemented under the auspices of a public entity. Table 9 summarizes our findings related to the implementation in the individual municipalities.

Success factors	Barriers
Anchor the change throughout the municipality	Allocating time and resources
Encourage continuous reporting	Facilitating administrative involvement
Establish a clear municipal strategy	Inadequate anchoring at higher levels
Implement the change into the budget	Lack of communication and collaboration
Involve stakeholders	Vague or missing goals
Share knowledge, resources, and experiences	Restricted budget

Table 9: Success factors and barriers: Line organization

An overriding comment that summarized our findings was that it was crucial to anchor the change throughout the municipalities. Informants noted that it should have been commonly

recognized that a change was taking place and that there would have to be set aside time and resources for implementing it. Another mentioned aspect was to establish clear structures and roles, as exemplified by the following statements: «*[...] someone needs to be responsible to ask for the results, or there will not be results reported*»and «*There have to be clear roles of responsibilities for employees to not wait on others to do it*». Informants mentioned that the implementation had been complex, in that it involved several departments within each municipality and that a clear structure and clarification of liability was absent. One informant summed this up in saying that: «*It is a complex organizational structure to implement changes in [...] it's not like within a bank, where an email is sent out to everyone and saying that «this is how we are going to it from now on»[...] It does not work like that at all*». This was a change that required different departments that traditionally did not collaborate, to collaborate. In that regard, several experienced a lack of communication and collaboration among the various departments. Additionally, numerous informants mentioned that it would be beneficial to have the «*Comprehensive service model*»from the beginning as it could help explain the complexity of the change and provide a more comprehensive description of what was needed to realize the change. They argued that such a model could have been used to further strengthen the anchoring within the municipalities.

Several informants also mentioned the importance of feeling supported at all levels within the municipality. This entailed that all actors involved were informed to ensure that they worked towards a common vision. In this context, one informant noted that «*various middle leaders did not prioritize attending project meetings and then I, as a municipal representative, lost my spark as I experienced that this was not a priority and that there was no common motivation for the implementation*». In essence, commitment, interest, and focus at the various levels of management and administration were considered important to motivate the rest of the employees for the project. «*The project leader is dependent on the different municipal managers working on this daily and have it anchored in the municipalities*», was expressed by one informant. Informants also mentioned the importance of ensuring that the administration is involved and dedicated. Several informants discussed the value of having a dedicated and perseverant project leader and municipal representative. Moreover, several informants mentioned that restricted budgets were a common barrier to the implementation. This because several observed that allocating a substantial amount of resources was highly important for succeeding. One of our informants stated that «*[...] because this is something that demands a lot of resources, I believe that it is a success factor that we have some administrative capacity, [...] that no one is all alone regarding*

all the questions, because this is something brand new with many aspects to consider». The most common mentioned elements were that there had to be economic resources set aside for acquiring and implementing the technology. Several informants noted that some municipalities had limited economic resources and that departments consequently had to spend money they did not have. This was believed to be the root cause for the slow progress and limited focus on attaining benefits.

Another important aspect was to ensure that politicians saw the value of the dispensers. Thus, anchoring the change politically for them to acknowledge that investments must be made before benefits can be achieved. This entailed that it was not possible to schedule substantial savings in the same year as the implementation occurred. At the beginning of the project, the individual municipalities were not responsible for the costs directly related to the dispensers, which was mentioned as a positive aspect. However, some informants believed that the dispensers might not get as prioritized when the economic responsibility for them was delegated to the individual municipalities. Applying for various funds, either within the municipality or from the central government, was also mentioned as important by some informants. It was believed that it could liberate more resources in the implementation phase and thus benefit the progression. Several informants claimed that assigning time and resources to have one or two employees specifically working related to welfare technology would be valuable. Additionally, several claimed that it could be beneficial to appoint a project group so that more than one person would have the overall responsibility for the implementation of welfare technology within the individual municipalities. By having a project group, there would be fewer liabilities on the municipal representatives and more people that are directly connected to the project and its progress. However, a few informants noted that although they believed these elements were beneficial, there was simply not enough room in the budget for it.

Encouraging continuous reporting was another reoccurring element in our findings. Informants stated that reporting is something that the sector can become better at in general and that routines for reporting observations and progress should be implemented at an early stage. Informants noted that there had been too much focus on quantitative benefits and economical savings in the beginning when it was quite difficult to identify financial benefits since the accompanying costs were high. Some found it difficult to measure every aspect, set criteria for what to measure and how to measure it. In that regard, one informant noted that «*[...] KS, centrally, had too much focus on this with benefits realization, and I think quite a lot of false numbers have been produced*». Additionally, some noted that it was time-consuming to create such goals and mea-

sures, thus, being a downgraded priority. Moreover, some noted that the greatest barrier was to simply get started and that there existed limited routines for continuing the implementation when the project was going to dissolve. They indicated that they wished they had more focus on this throughout the process.

Several informants also mentioned the value of involving the stakeholders. This encompassed collaborating with, informing, and aligning expectations of all relevant stakeholders. In this context, some informants noted that getting stakeholders to spread positive information and informing the general public was important for succeeding. This was based on experiences of spreading positive publicity about welfare technologies and increasing the general knowledge about it, which had led to increased acceptance, decreased resistance, and decreased fear of change among stakeholders. Some municipalities experienced great results from using the local newspaper to spread information about either success stories or the technology itself.

Informants from smaller municipalities believed that there were some benefits specifically related to their size. These included having short decision processes, being quick at adapting to changes, and the administration familiar with various end users and employees. However, they also mentioned that their municipal representatives typically had several roles within the municipalities, are often left working alone, and have less time set aside for welfare technology. Additionally, some of the smaller municipalities reported that they did not see the benefits of the medicine dispensers and had consequently not prioritized reporting them. In this context, a few informants also noted that they felt like the measures and tools from the national program did not take into account municipalities with different sizes and structures.

Albert et al. (2017) and Ika (2009) explicated that the distinction between hard and soft criteria is important to account for the complex nature of the subject at issue. Our findings confirmed this as we found empirical evidence that project success was recognized as a compound concept that entailed more dimensions than the traditional, hard criteria of time, cost, and quality. We observed that various informants had been frustrated about the great focus on hard criteria and that they were more interested in intangible criteria such as end user satisfaction. In that regard, we argue the importance of recognizing that success is a complex assessment that requires the inspection of several aspects and factors, both hard and soft (Albert et al., 2017).

Löfström (2009) discussed how it could be challenging to implement routines from the project into the line organization. Within our case, the participants had continuously been reminded to customize routines, training, and guidelines to their particular municipality. However, we observed that establishing new routines within the municipalities had not been prioritized or had

proved challenging, which partly aligned with the findings of Löfström (2009).

Our findings indicated that the progress of our selected case could be limited by decisions made in other entities within the municipality. This aligned with the findings of Holmen and Ringholm (2019a), which indicated that a change aimed at a seemingly limited area within the municipality can have implications for several parts of the municipality's units and departments. Moreover, our observations of varying degrees of successful implementation confirmed the findings of Magnussen (2016) concerning that one specific innovation might be implemented differently in practice across various contexts. We further argue that such variations could be the results of minor or major alterations that were incorporated into the project deliverable to implement it in a specific institutional framework (Holmen & Ringholm, 2019a). Our findings also confirmed the findings of Iriarte and Bayona (2020) and Belassi and Tukel (1996) that taking structural and contextual factors into account when measuring and assessing the degree of success is important.

Conceptual frameworks suggest that there should be prepared a benefits realization plan that states the planned timeline for benefits realization during and following project completion. Such a plan will also help clarify different roles and tasks related to the benefits realization (Andersen, 2018). In that regard, we found that the project group had encouraged participants to make benefits realization plans and set their own goals, to better anchor the change within the municipality, or to adapt the propositions from the central government. However, few actions were taken and there seemingly lacked a general sense of ownership within the municipalities. Thus, we argue that this indicated that there lacked a clear mandate to ensure further progress and realize benefits.

Even though there had been a considerable focus on facilitating benefits realization, several informants noted that the project had an excessive focus on the benefits realization. In this context, Williams et al. (2020) argued that benefits realization becomes the responsibility of the line organization if the project solely facilitates benefits. Our results indicated that this was the situation for our selected case. We found that several municipalities had not managed to use the benefits plans sufficiently, and in consequence, reaping the predetermined project benefits had been partly neglected. We further argue that if the benefits plans had been utilized to a greater extent, it would lead to an increased sense of ownership regarding the implementation. Moreover, our findings indicated that when municipalities perceived benefits as difficult to measure, they tended to not prioritize measuring them. Consequently, they tended to primarily report benefits in the quarterly reports to the central government. These observations coincided with

the findings of Williams et al. (2020), which indicated that organizations tend to use benefits management frameworks as mere guides and that the focus on benefits peaks at the point of project completion where benefits are to be reported and evaluated.

Williams et al. (2020) stated that project output might be a more natural measure for directing the project if the objective of the project outcomes are too abstract. In that regard, we argue that abstract project goals can further inhibit the municipalities' ability to identify and measure benefits. We found that vague or missing municipal goals potentially acted as a barrier to the implementation as it seemingly led to less accountability and made it harder to identify and report on benefits. This reinforced the importance of establishing a clear municipal strategy that supported and facilitated the change. In that regard, our findings indicated that such a strategy could ensure that everyone involved worked towards a common goal and consequently knew what tasks to prioritize.

The purpose of this thesis' case was to create a sustainable healthcare sector. We observed that the municipalities that had already experienced having limited human resources tended to perceive utilizing welfare technology as more valuable. Although informants noted that it would be ideal to implement welfare technologies prior to experiencing scarce human resources, we argue that this provided an example of the importance of having a common municipal goal. In that respect, we argue that the liability of limited human resources posed as a common goal in that the municipality worked towards counteracting this liability. We found that this entailed that the change was more sufficiently anchored and that the general level of engagement was higher in these municipalities. Consequently, we argue that creating municipal goals and strategies are important elements of implementing the project deliverable as they could enhance the anchoring throughout the municipality.

As illustrated in our results, the implementation of medicine dispensers and accompanying changes was something that various stakeholders had vested interest in. Thus, the municipalities had to spend a significant amount of time informing, preparing, and aligning the expectations of various stakeholders. This coincides with the findings Christensen et al. (2015), Boyne (2002), and Williams et al. (2020), concerning that public sector organizations need to assure citizens that they meet the requirements for openness, public insights, and professional independence. Interestingly, we observed that it was important to increase the knowledge amongst the general public. As a part of the Norwegian welfare state, public sector organizations provide services without expecting direct payments from the citizens (Stentoft Arlbjørn et al., 2015). In Norway, the general public's taxes are indirectly funding public services. This shows how public

sector organizations have an extensive amount of smaller stakeholders that potentially want to have a say in how the funding is spent. We observed that the ownership complicated the process because the general public felt like they had a say in what was right. In consequence, the municipalities needed to align a variety of expectations. In sum, we argue that this indicated that the general public could easily become a barrier to the implementation if they were not thoroughly informed and accounted for. Moreover, Jałocha et al. (2014) presented that public sector organizations are closely connected to the political environment of their society, have democratically chosen leaders, and often have several influential stakeholders. In this regard, our findings indicated that it was important to convince politicians about the benefits of welfare technologies. This indicated a need for anchoring the change politically, which supported that the political environment was of importance. This also coincides with the findings of Boyne (2002) who states that public sector projects are distinguished from private sector projects in that they are collectively owned by various stakeholders, which increases complexity and public attention.

4.1.6 Inter-organizational collaboration

This category addresses the advantages and disadvantages of collaborative projects that we have extracted from our findings. Table 10 summarizes our findings that related to this category. It visualizes the diversity of influential factors that needed to be accounted for in such a project.

Success factors	Barriers
Create shared goals and objectives	Conflicting perceptions
Ensure the project is anchored	Excessive focus on benefits realization
Keep participants accountable	Following the progress of the project
Meet regularly	Limited discussion about difficulties in plenum
Procure and train collectively	Varying level of anchoring
Share knowledge, resources, and information	Varying municipal size and resources

Table 10: Success factors and barriers: Inter-organizational collaborations

Several informants felt it was beneficial to have a shared progress plan and work towards common milestones. This was illustrated by the following statements: «*[...] I think that working*

*towards milestones is good because we get slightly pushed to actually work on this»*and «*I try to think of something negative, but I believe that it has almost been solely positive to have the support and help from each other»*. However, some informants had experienced that the level of motivation and prioritization varied noticeably across municipalities. Furthermore, our informants noted that there also existed varying levels of anchoring which potentially acted as a barrier to the progress of the implementation. Several informants noted that those working with or being responsible for the welfare technologies in the municipalities often worked a lot by themselves with complex problems. Other municipal representatives reported that they did not have time set aside for welfare technologies specifically, which made it even more difficult to prioritize. In that context, various informants suggested that ensuring that the project is anchored at the higher levels in each participating municipality was a success factor. The project management group decided it was beneficial to have the various Municipal Managers (Kommunalsjefene) as a part of the project board, as well as having each Chief Municipal Executive (Rådmann) sign an agreement that the municipality would focus on this.

Some mentioned that establishing clear guidelines and structures to clarify responsibilities, ownership, and financial burden was a success factor for an inter-organizational project. Moreover, several informants noted that the fact that there existed varying lengths of participation potentially acted as a barrier. Regardless of the reason for the late participation, the most prominent disadvantage was that late participants were not able to participate in all initial training and courses organized by the project. Some noted that this had consequently resulted in more resistance to the implementation process, as things had to evolve quickly and one had to constantly catch up to the progress of the other participants. It was also frequently mentioned that it was valuable to have someone that pushed the progress, kept them accountable, created a kick-off to get started, guided, and motivated the progress. «*There have been a lot of resources from the central team, they have held us a little bit accountable related to processes, which is good. There is a lot of positive [with the inter-municipal project]»*was stated by one informant. The project management worked on following up on the ones that had fallen a little behind the progress or faced challenges. In this context, several informants mentioned that they would not have been where they were at that point, without the inter-municipal project. However, a few informants noted that they, in contrast to other participants, experienced a feeling of constantly being behind the rest of the group as demotivating.

The project had regular meetings that pushed the municipalities to continue working and the majority of the informants found it beneficial to have monthly meetings. Additionally, they

stated that it had been valuable to have joint workshops and courses. Furthermore, several mentioned that it was beneficial to work together as it increased the possibility to procure funding. It also lessened the burden on the individual municipalities, especially in terms of testing all possibilities and having enough competencies and resources.

Although several informants saw the benefits of the collaboration, some mentioned that it was unfortunate to have digital meetings or felt that there were too many meetings. Certain informants noted that the digital meetings created more distance between the participants and that it resulted in some representatives being less active. It also entailed that the informal discussions and problem solving that had often taken place during breaks disappeared when meetings became digital due to Covid-19. Moreover, several noted that the varying structures and sizes of the participating municipalities meant that they in reality were unable to follow the same path. Following the same path would, for some, entail that their progress would be held back, whilst for others, it meant that they would have to start using technologies that were irrelevant for end users.

All informants perceived it as beneficial to jointly procure dispensers because it entailed that they spent fewer resources on procurement. Some mentioned that when municipalities had individually procured products, the processes had been noticeably more time-consuming and resource-demanding. Nonetheless, there were also mentioned some limitations of the joint procurement. It entailed less customization, less sense of ownership, and only a few people gained knowledge about the procurement process. In this context, one informant noted that «*this is a large contract [...] you do not quite know what you are buying. Others have decided on your behalf, [...] that is the downside of being part of such a large project. It is not always adapted as we would like*».

Informants also noted that the inter-municipal project enabled municipalities to share innovation and achieve technological enhancement. One informant underlined the commitment of the participating municipalities by stating: «*After a while we became familiar with each other and started contacting each other when we needed advice, guidance, tips, and sharing of experiences. This led to us being able to pull the load together*». Some informants claimed, however, that varying knowledge, information sharing, and communication could also be a barrier. It was reported that communication had not been sufficient from the central program to the project, which made it difficult to be the connection between the national program and the municipalities. There had not been a sufficient clarification of expectations between the national program and the project management group, which made it difficult to provide the municipalities with

comprehensive information and guidelines. In addition, it was further noted that it was difficult to have control over all details when having a project that consisted of several large and complex participants. Another aspect that was challenging to control, were external factors, such as Covid-19. The pandemic led to an extension of the project. One informant noted that three years was a long time to work on a project and that the extension perhaps was at the expense of participants' motivation. Moreover, some municipalities reported that they felt the communication between the municipalities and the project management had not been sufficient. Especially when it came to addressing technological difficulties. Some noted that there had been incidents of conflicting perceptions amongst some municipalities and the project management. Such conflicts affect the dynamics and cooperation in the project group, thus acted as a barrier. Additionally, a few informants noted that when collaborating across several municipalities there is a chance of negativity spreading across participants in the sense that negative employees could easily get more negative feedback from others in different municipalities.

A collaborative project implies that several autonomous but interdependent entities combine their efforts to accomplish a common goal (Bakker et al., 2011). As Löfström (2009) and Jacobsen (2014) expressed, some of the major reasons for entering such collaborations could be to coordinate resources, competencies, sharing knowledge, and having a stronger influence over external stakeholders. Our findings confirmed this as the project in question was established to coordinate competencies, resources, and to share knowledge. Holmen and Ringholm (2019b) focused on how different backgrounds and competencies could enhance the result of a collaborative project. We found that all participating municipalities contributed with various expertise and valuable resources that benefited the purpose of the project. In essence, our findings indicated that combining efforts to implement the dispensers into the sector had increased the progress of most participating municipalities in terms of implementing welfare technology. However, we observed that it was especially beneficial for the smaller municipalities as they could benefit more by accessing competencies and resources that they did not possess themselves. Consequently, these municipalities were enabled to mainly focus on implementation instead of acquiring comprehensive knowledge and competencies within the field.

We found evidence that the absence of commitment and drive within the individual municipalities negatively affected the municipal representative's motivation and perseverance. In such cases, we observed that it was often highly important to be part of a collaboration where there was a common driving force and commitment. Instead of handling issues on their own, participants had a large network consisting of experienced and competent colleagues that could benefit

them. In the literature, Maurer (2010) argues that collaborating on projects reduces risks, due to participating organizations sharing the total risk. Throughout our interviews, we did not address risk explicitly, but the findings indicated that reduced risk was an indirect outcome of the collaboration. Additionally, as addressed by Boyne (2002), public organizations tend to be more risk-averse than compared to private organizations, which potentially constituted another reason for why the various participants perceived the collaboration as beneficial.

Kujala et al. (2020) described governance in the context of both formal and informal structures. The formal structures consist of contracts and procedures whereas the informal structures entail that the interests and goals of participants are aligned. Matinheikki et al. (2016) argues the importance of clarifying the hierarchy in addition to establishing a strong relationship among the participants. Our findings indicated that there had been a focus on establishing governance at both the project level and the municipal level and that there existed a relatively high level of trust amongst the participants. However, establishing clear structures and procedures proved demanding, especially at the municipal level. We observed that this often led to uncertainty concerning roles and responsibilities in the project. More specifically, there were a lot of formal structures and focus on establishing clear roles, but in practice, it was challenging to fully carry this out.

4.1.7 Covid-19

Originally, we did not plan to ask in-depth questions about Covid-19 related aspects. However, we realized that there was reason to believe that the pandemic impacted the implementation to some degree. By asking about the impact of the pandemic, we presumed that we could attain a more comprehensive overview of differences in perspectives and attitudes regarding the implementation itself. In this regard, we chose to address factors directly related to Covid-19 in this sub-section, but have discussed the influence of the factor where appropriate. Table 11 summarizes our key findings related to Covid-19.

When asked about whether Covid-19 had been a barrier to the implementation of medicine dispensers, the answers were surprisingly varied. On the one hand, some argued that even though Covid-19 led to a shift in focus, it was important not to let it become an excuse for insufficient implementation. This argument was often paired with the attitude that Covid-19 had not been an issue and that it had simply been something one had to adjust to and take into account in the everyday life. On the other hand, it was argued that Covid-19 led to a major shift in focus that caused the project to be a downgraded priority. This was exemplified by the

Positive impact	Negative impact
Encouraging digital meetings and courses	Acting as an excuse
Less contact and thus better infection control	Less development in general
Not letting Covid-19 be an excuse	Project prolonged
	Shift in focus
	Social distancing
	The liability of limited human resources enhanced

Table 11: Impact of Covid-19

following statement: «*We have tools to attain the benefits that we have, but it is not followed-up, and often Covid-19 have been used as a pillow to rest on*».

Several informants mentioned that there was reason to believe that more people would see the value of medicine dispensers due to Covid-19, as it could reduce human contact, thus, ensure better infection control. One common barrier caused by Covid-19 was the requirement for social distancing. Social distancing led to reduced human interactions, fewer physical meetings, and made physical training difficult. Interestingly, one informant stated that: «*[...] I thought Covid-19 would trigger increased usage of dispensers, but this has not happened, at least not to a high degree*». This is cohesive to what other informants discussed, that there had been less development in general due to Covid-19 and that the focus of healthcare personnel had shifted as the sector was under a lot more pressure.

Covid-19 also entailed an increased use of digital meetings and courses. Some perceived this as an obstacle whilst others perceived it as a force that transformed the services in the right direction. Moreover, some informants also noted that Covid-19 led to an enhanced liability of having limited human resources. Employees had to be divided into different cohorts and one was supposed to limit physical interactions, which made allocating time and resources harder for the majority of the municipalities. Some informants indicated that Covid-19 had become an excuse for a low number of dispensers. Additionally, it was used as a way of avoiding the change entirely or to defend a lack of realized benefits.

4.2 Discussion of central empirical findings

As illustrated in the literature review, there exists a diversity of literature in the separate fields of research - collaborative projects and public projects. In comparison to research on projects in the private sector and public-private sector collaboration, research on collaborative public sector projects is limited. To help fill this gap in the research, we sought to identify success factors and barriers of collaborative public sector projects by merging the two fields of study, thus, seeking to either confirm or deny various elements of the separate fields. We aimed to do so by discussing our empirical findings against the previous research and theoretical findings that were presented in the literature review. Most of our findings were relatively context- and case-specific. However, we argue that some of our findings could be transferable to other collaborative public sector projects. This created a basis for answering what barriers and success factors exist for collaborative public sector projects. In this context, it is also important to shed light on the fact that there existed many influential factors, more than what we were able to cover. We obtained a large amount of data and consequently had to extract elements that were less relevant to our problem statement. The magnitude of data indicated that there was a basis to carry out similar and more extensive research. This is further discussed in sub chapter 5.3.2.

4.2.1 Barriers of implementing collaborative public sector projects

Previous literature found that the management of projects in the public sector was significantly more complex than managing projects in the private sector. In addition to managing the expectations of many shareholders, public projects also tend to have more formal and bureaucratic governance structures (Gasik, 2016; Christensen, 2012). Our findings confirmed this as we found evidence of the implementation of project deliverables being highly complex in the public sector. In that regard, we found that the implementation was complicated by the large number of actors that were affected (Boyne, 2002), the formal chain of command (Löfström, 2009), and the political interference (Jałocha et al., 2014). The implementation introduced changes to existing services and consequently attracted public attention. We observed that several departments within the individual municipalities were affected by the change, which indicated that there had emerged multiple layers of governance. This confirmed the findings of Holmen and Ringholm (2019a), that a change aimed at a seemingly limited area affects several parts of the municipality's units. In addition, the bureaucracy and formal institutions complicated the implementation in that there existed a greater distance between those who decided and those who performed the change (Christensen, 2012). Our findings indicated that the bureaucracy and chain of command

in public organizations entailed time-consuming processes. Interestingly, we also found that the implementation of welfare technology and achieving predetermined benefits was a time-consuming process. Our findings indicated that this was something that permeated processes in the public sector and should be accounted for when implementing changes. This had not been covered by previous literature. In consequence, we argue that public organizations need to clarify expectations and responsibilities throughout the organization to thoroughly anchor the change. Additionally, we argue that such clarifications would be important to create a realistic and manageable time perspective of the implementation of project deliverables and the realization of benefits.

The change also entailed a need to account for multiple internal and external stakeholders. The findings presented in sub chapters 4.1.1 – 4.1.7 illustrated this in that there existed both internal and external actors that needed to be accounted for when implementing a project deliverable. Several of these factors aligned with the findings of Albert et al. (2017) regarding the shift from focusing on the more traditional hard measures to focusing on the soft criteria of success. Internal actors, such as employees and various actors in the line organization, could act as bottlenecks for the implementation and consequently needed to be accounted for. We also found that other stakeholders such as end users, their relatives, politicians, and doctors influenced the implementation. We argue that the influence of politicians could be a public sector-specific factor as we observed that municipal representatives were dependent on administrative and political support to be able to allocate enough resources for implementing the change. This further illustrated how public organizations are politically sensitive and affect a large number of actors. These findings aligned with previous literature (e.g. Jałocha et al., 2014; Boyne, 2002; Löfström, 2009; Santos & Varajão, 2015) regarding characteristics of public sector projects and public organizations. We argue that this strengthened the notion that implementing project deliverables to the public sector is complex. We recognized, however, that there probably existed other influential factors that did not emerge in our study.

As mentioned in our literature review, some distinctive characteristics of the public sector could potentially act as contextual barriers for public sector projects. Based on our findings, we argue that various public sector-specific elements complicated the implementation of project deliverables and consequently constituted barriers to the implementation.

Jacobsen (2014) argued that municipalities are fundamentally alike. In our selected case, we initially believed that the context of the participants would be fundamentally alike as they were municipalities within the same county. Our findings partly coincided with this as most of the

municipalities offered similar services and operated within the same sector and municipal level. This entailed that the municipal representatives were familiar with similar working methods, routines, jargon, and sector-specific issues. However, our findings indicated that the implementation had not unfolded similarly nor had the same effect in the different participating municipalities. Following the findings of Magnussen (2016), we confirmed that one specific change can be implemented differently in practice across various contexts. Given that our units of analysis varied greatly in size and had varying levels of resources, we argue that these variations constituting a decisive factor for the municipality's scope for action, which contradicted the findings of Jacobsen (2014). These observations identify a gap in the literature, as variations in municipal sizes and resources, had not been sufficiently addressed in previous literature regarding collaborative projects. Despite the large differences in municipal size and resources, we observed that the materials and methodologies provided by the central program had not sufficiently accounted for these variations. This entailed that various guidelines were not transferable to all municipalities, that their expectations were not necessarily aligned, or that the project deliverable was not applicable in all contexts.

Another element that was prominent in our findings was that the degree of successful implementation was strongly linked to specific individuals in the various municipalities. Our findings indicated that such person-dependency was something that permeated the public sector in general. This caused a tendency of relying on a set of passionate souls to realize change and maintain progress, indicating that several processes were highly person-dependent. We observed how this became problematic for the implementation as the various municipal representatives tended to work alone on their administrative duties related to the project implementation. Additionally, we found that the implementation was highly dependent on a handful of personnel. We found that such person-dependency could emerge because of limited resources within some municipalities. Moreover, another reason for such person-dependency was that a few passionate souls always volunteered or were appointed the responsibility of implementing changes. Most municipalities, regardless of inherent resources, had experienced this tendency. In that regard, we argue that this indicated that such person-dependency was a factor that was public-specific. The person-dependency acted as a barrier to the implementation as we found evidence of it decreasing the anchoring of the change in the line organizations and the sense of ownership across participating entities. This identified a gap in the literature regarding public sector projects, as such person-dependency had not been addressed as a barrier or characteristic of such a project. Christensen (2012) argued that public sector projects could be complicated by competing in-

terests of central and regional government. One reason for this was that such projects tend to be strategically anchored in and prepared by the central government, whereas the regional governments oversee the execution. Our findings confirmed this tendency as the selected case originated from an external influence of the central government. This entailed that the overall strategy had been created by the central government and that the various municipalities were responsible for implementing and realizing that strategy. Interestingly, we found that the municipalities were, paradoxically, supposed to map the various needs of end users in terms of welfare technology but the funding of the project was predetermined to include only two different technologies. This meant that the municipalities were trying to identify needs while simultaneously have been given the solution. As a result of this external motivation of the project, some informants felt that the implementation of medicine dispensers had a reversed approach and that it, in some contexts, was not an appropriate solution. This illuminated one potential barrier to implementing project deliverables from a collaborative public sector project into public sector organizations.

As noted by Boyne (2002), public sector organizations tend to have more vague goals than their private counterparts. Our study found evidence of contradictory expectations and goals between the municipalities and the central government. One aspect of this was that there seemingly existed varying perceptions of the end user. We found that the central government and the municipal administrations were primarily focusing on the municipalities and their benefits of implementing the change. In contrast, several of our informants focused on the patients and their benefits rather than the financial and time-related benefits of the healthcare services. This indicated an inconsistency in goals regarding the purpose of the project, especially regarding the contrast of attaining services as cheap as possible and increasing the quality of the services. These observations contributed to illustrate the complexity of public projects and the tendency of public organizations to focus on budgets, as mentioned by Santos and Varajão (2015), Jałocha et al. (2014), and Boyne (2002). Interestingly, these findings were in contrast to the findings of Picazo-Vela et al. (2018), Nik Hashim et al. (2020), and Löfström (2009) that argued that public sector organizations tend to emphasize enhancing and optimizing public services as opposed to aspiring to gain profits. We argue that this lack of alignment in incentives could constitute a barrier as it potentially reduces the performance and efficiency of the processes and counteracts the intended benefits of the project. In essence, these findings indicated a need for clarifying goals, roles, and responsibilities between the central and regional government, across participants in the collaboration, and within the individual municipality (Le Pennec & Raufflet, 2018;

Lu et al., 2019). Our study found evidence of vague and inconsistent goals constituting a barrier to the implementation in that a lack of a common driving force and motivation could inhibit the implementation.

Following the findings of Oreg et al. (2018), Burke (2018), and Belschak et al. (2020), it is important to be aware of employees' perceptions of the change in question and employees should be ensured that they will be able to cope with the change. In our study, we found that the healthcare services were not robust enough and did not have enough competencies within the field of welfare technology. In consequence, the sector was dependent on a lot of development of competencies and knowledge. Moreover, we found that the implementation of medicine dispensers essentially changed the way of working in the health sector, and the perceptions of the value of the implementation varied greatly. Given that the medicine dispensers were only a small portion of the welfare technologies that were going to be implemented in the public healthcare sector, we argue that the implementation was a dramatic change (Aagaard et al., 2014). In that regard, we found that it was important to reassure the employees of the positive outcomes of the change and to ensure them that they would be able to realize the change. In essence, we argue that it is important to assess what the change entails for the various departments, how the competencies are in the area, and whether the change is perceived as feasible by the employees in the line organization. However, given that we only studied a case within the healthcare sector, it should be noted that change processes and implementation of project deliverables might be perceived differently in other parts of the public sector. Consequently, we argue that barriers to the implementation might vary based on the context of the collaborative project and the line organizations in question. This will be further addressed in the implications and limitations of our study.

4.2.2 Success factors of implementing collaborative public sector projects

The most prominent success factor we identified was that collaborative public sector projects should be thoroughly anchored in the main project group and within the participating line organizations. Anchoring is a broad term, and we interpret it as a term that covers aspects such as establishing a sense of ownership, creating a common vision, and allocating sufficient time and resources for the process. We found evidence of this being applicable for both the collaborative and the public aspects of the project. Based on our results, we observed that anchoring was an element that permeated all aspects of the implementation. Consequently, our results indicated that anchoring the project at all levels was of importance for organizations entering collabora-

tive projects. We argue that this could ensure that participants knew what the change entailed and what was expected of them. Previous literature did not address anchoring explicitly, however, we observed that various aspects of the phenomenon had been addressed. Consequently, we will discuss different elements that have been covered by previous literature that we perceive as related to anchoring.

The overall project strategy was mainly created by the central government. This aligned with the findings of Christensen (2012), who argued that within the public sector, central governments are often in charge of creating strategies, while the regional governments are responsible for executing them. In that regard, we found that this could lead to the regional governments and employees within different organizations having a weakened sense of ownership regarding the process. Arguably, this could be an outcome of the project being fairly large, where decisions were made based on what the majority sees fit. To counteract this tendency, creating a shared vision, as discussed by Le Pennec and Raufflet (2018), could lead to collaborative projects experiencing that most participants have a sense of ownership and consequently focus on the implementation. Furthermore, Matinheikki et al. (2016) stated that to enable participants in a collaborative project to work efficiently together, there should be a shared culture and goals. As illustrated in our findings, the central and local governments had created an overall shared vision to enhance the quality of their services. This aligned with the statements of Nik Hashim et al. (2020) that public organizations aspire to optimize the performance and efficiency of services. This functioned as a reinforcing effect to motivate participants, and consequently increased the individual and collective progress. In that regard, we argue that having a common vision will increase the focus on benefits management and realization, create a common motivator, and ensure a common way of thinking across participants in collaborative projects.

In light of public organizations, our findings indicated that anchoring throughout all levels of the line organizations was especially important as the project was created as a response to requirements from the central government. We observed that anchoring throughout line organizations was important to enable project deliverables to be implemented effectively. Anchoring is a process that entails more than assigning local and overall project managers. To fully anchor a change process, our findings indicated that it was of importance to include aspects related to the collaborative project in the budgets, the strategies, routines, and procedures of individual participating organizations. Incorporating and focusing on these aspects could additionally lead to increased anchoring and a sense of ownership of the process. Thus, we argue that anchoring the change at all levels constitutes a success factor. This entails ensuring that municipal and

organizational managers are in favor of, and committed to the change, and encourages progress. Additionally, we found that demanding results was crucial and that middle managers have an important role in this. If results are not demanded, the focus on achieving goals could easily be forgotten and the sense of ownership could decrease. In turn, the commitment of middle managers could lead to their subordinates increasingly seeing the value and become motivated to continue the process.

Setting aside sufficient time and resources to carry out the implementation was another crucial aspect of anchoring. Our results demonstrated that to ensure the implementation of project deliverables, the management needed to set aside a sufficient amount of time and resources for employees to realize the benefits and fully implement the change. By allocating these resources, employees and middle management would be reassured that they had support from, and were encouraged by, the administration to continue and prioritize the process. This also amplified the importance of including affected stakeholders, because if they are not adequately taken into account, they could constitute bottlenecks for the implementation.

Albert et al. (2017) stated that the time perspective of project processes could influence how successful the implementation of project deliverables would be perceived. The time perspective of the implementation of project deliverables could also be a determinant of the number of resources that should be set aside. The results of this study indicated that within some municipalities, there had been instances where the managers had an unrealistic time perspective for the benefits realization. Some managers had expected to see benefits too early and consequently deemed the project as unsuccessful when the major benefits were not found early on. Thus, we argue that for public organizations to lay the foundation for a successful implementation, it will be important to clarify the expected time perspective and desired goals. Moreover, the management should ensure that the focus on the project and implementation of project deliverables is maintained throughout the entire process.

We recognize that anchoring is a broad term that covers several aspects, where there is not always a clear distinction between what makes them mutually exclusive. We argue that clarification of roles and responsibilities is highly interconnected with anchoring a process. Regardless, we decided to elaborate on this as a separate success factor because our results indicated that this was a factor that was important to adequately implement the project deliverables. Nilssen (2019) argue that when implementing changes in an organization, a vulnerability is that employees often are prone to return to old practices. Clear roles and responsibilities could ensure that various project deliverables were fully implemented. Additionally, maintaining a daily fo-

cus on practicing the new routines and utilizing the project deliverables. Our findings illustrate that it is important for the individual line organizations in collaborative projects to acknowledge that the project deliverables are not fully implemented before it is included in routines. For the specific project we looked into, our results indicated that there could occur a situation where the change is seemingly anchored in the line organizations, but there is not a clear division of roles. This entailed that there was a vague clarification of who was responsible for various tasks. We observed a tendency of several people being involved and partly being responsible for the process but that few actions were taken to increase the progress of the implementation. In that regard, we argue that this absence of clarification of responsibility led to no one owning the change in practice, and consequently reinforcing the importance of anchoring the change.

Previous research (e.g. Holmen & Ringholm, 2019b; Zhang et al., 2018; Picazo-Vela et al., 2018) state that projects with a collaborative nature enable participants to have more competencies and knowledge at their disposal. This corresponded with our results and supported the theory that collaborations amplify the total resources of projects. Based on our findings, we argue that the collaboration was decisive for the performance of the individual participants, thus, acted as a success factor. In alignment with the findings of Maurer (2010), Holmen and Ringholm (2019b), and Matinheikki et al. (2016), we observed that the level of trust amongst the participants was influential, and we argue that it was a success factor for collaborative projects. There are several different ways of establishing trust in collaborative projects, regardless if they are in the public or private sector (Maurer, 2010). Nevertheless, we observed indications of trusting relationships being easier to establish amongst public sector organizations, as they are familiar with the challenges and routines within the sector. Our findings indicated that there existed a considerable amount of trust among the participating organizations.

Additionally, our findings showed that the organizations had started to communicate and collaborate beyond the scope of the project. We argue that this indicated that there was a significant level of trust amongst the participants which seemingly increased their willingness to contribute to the project. Hence, we argue that it was highly important to establish a sense of trust and create a sense of belonging amongst all participants to be able to reap the benefits of the collaborative nature of the project. The fact that there existed a trusting environment within the project largely facilitated information sharing, which could be used to increase the pace of the implementation process within individual line organizations. Furthermore, these findings indicated that collaborative projects improve the implementation of project deliverables because they allowed participants to spend less of their resources to acquire new knowledge and train ex-

isting staff. More specifically, complementary resources within collaborative projects reduced the need for each participant to have in-depth knowledge within every imperative aspect of the process, as stated by (Holmen & Ringholm, 2019b). We argue that collaborative projects could be a motivating factor to maintain focus for organizations with fewer resources, due to increased access to resources that encompass their core knowledge. Hence, we argue that for collaborative public sector projects, sharing of resources should be encouraged. This aligned with the findings presented in Table 4, by Lu et al. (2019), where information and knowledge sharing was presented as a success factor.

Boyne (2002) argued that a common attitude within the public sector is to have the collective good in mind and therefore employees tend to share information easily. As shown in our empirical data, this was evident within this project as well, as the background for the project had been to create sustainable healthcare services. To reach the desired purpose of the collaborative project, we found that continuous communication was highly important. These arguments are further substantiated by the findings of Picazo-Vela et al. (2018), who argued that collaborations among public sector organizations increase the contributions of benefits to society. We found that establishing collaborative projects within the public sector proved to enhance the services in several aspects. A positive outcome of the large-scale project was that the participants could jointly procure products. The mentioned drawbacks of not jointly procuring the project deliverables further reinforced the importance of utilizing the benefits inherent in collaborative projects. The collaborative project also kept the participants accountable. We argue that this could stimulate the progress of implementation but have not, to our knowledge, been explicitly expressed in previous literature. This was emphasized and highlighted several times as a beneficial aspect of the collaboration. Consequently, we argue that participants within collaborative projects could experience stable progress due to others having comprehensive insights into their achievement of milestones and objectives. In turn, this could motivate employees to maintain focus on the processes.

4.2.3 Summary of central empirical findings

To summarize our discussion, we have presented our main findings related to our problem statement in Table 12. The highlighted aspects summarize the most important factors to consider when implementing project deliverables from collaborative public sector projects into public organizations.

The first success factor entails clarifying various expectations and goals among the central and

Success factors	Barriers
Aligning expectations and goals	Competing interests between central and regional government
Allocate sufficient time and resources	Magnitude of influential stakeholders
Anchor the change	Multiple layers of governance
Creating a common vision	Person-dependency
Establish trust among participants	Rivalry among participants
Prepare response to external factors	Vague and inconsistent goals
Sharing resources across entities	Variations in size and resources

Table 12: Summary of central empirical findings

regional governments. Further, allocating time and resources entails that the line organizations allocate resources, set aside time, implement the change into the routines and practices. Another success factor is anchoring, which creates a greater sense of ownership throughout the line organizations. Moreover, we suggest that the collaborative project itself and the individual municipalities should create a clear common vision. Furthermore, encouraging continuous communication and counteracting rivalry proved important for establishing trust within collaborative projects, and in consequence act as a success factor. We further argue that public organizations should prepare responses to external factors. Such external factors were beyond the control of the public organizations. Consequently, municipalities should prioritize identifying potential factors and their accompanying effects prior to the implementation. Examples of such external factors are attitudes of the general public, contradictory opinions of doctors, and Covid-19. Finally, we suggest that sharing resources across all participating entities constitutes a success factor of the implementation. Our empirical evidence indicated that this could ease the burden of the individual participants, increase the project's bargaining power, and enhance the project outcome in general.

The barriers listed show several factors that are interrelated to the success factors. We argue that these are also important to take into account and consider throughout the project phases. Whereas most of the listed barriers are accounted for in the success factors, we would like to stress the importance of barriers such as person-dependency and variations in size and resources of collaborating organizations. These barriers constitute context-specific elements that should be addressed when implementing a collaborative public sector project.

5 Conclusion

5.1 Concluding remarks

This thesis illuminated the interface between public projects and collaborative projects in an effort to identify success factors and barriers related to the implementation of collaborative public sector projects. The conducted research provided a basis for answering our problem statement:

What are success factors and barriers of implementing collaborative public sector projects?

The study provided empirical evidence of a collaborative public sector project to address the gap in the existing literature and to raise awareness of the growing importance of such a project. Consequently, we contributed to the existing literature by conducting comprehensive research of the merged phenomena of the two types of projects.

Our findings indicated that elements of the two fields, and potentially the relationship between them, affect the degree of successful implementation of this specific type of project. We observed that selected characteristics of public projects and collaborative projects constituted barriers to the implementation. Further, we found empirical evidence of public organizations using collaborative projects as a strategy for creating an efficient and sustainable public sector. Moreover, our research has empirically established success factors and barriers to implementing collaborative public sector projects by conducting interviews with a total of 25 informants. In that respect, our findings confirmed that there existed variations in the degree of successful implementation of project deliverables across participants.

As a general result, we found that anchoring, allocating resources within the individual line organizations, knowledge & resource sharing, and creating a sense of unity constituted the most prominent success factors of collaborative public sector projects. Contrary to these findings, we found that the most important barriers to consider for collaborative public projects were to overcome public sector-specific complexity, such as aligning central and regional government expectations and reducing the person dependency of processes. Additionally, we found that managing the magnitude of influential stakeholders and overcoming variations in size and resources of collaborating organizations could be challenging.

5.2 Implications of the study

We acknowledge that, albeit being a study where we strove towards keeping a high level of rigidness in our sampling collection and analysis, our thesis was limited compared to the vast field we studied. Still, there were some relevant findings with coinciding implications and suggestions for future research that we would like to present.

5.2.1 Theoretical implications and suggestions for future research

Our thesis contributed to the existing literature by expanding the field of public-public collaborations (Ahlgren et al., 2019; Jacobsen, 2014). We studied a phenomenon consisting of two separate fields where there were limited empirical findings and knowledge about both fields independently, and even less knowledge when merging the two fields. We contributed to filled this gap in the literature by providing empirical evidence of a collaborative public sector project. In essence, this entailed that we uncovered different spectra and consequently provided fullness to existing theory by studying this specific type of project. However, there still existed a need for more research within the field. Given that we studied one specific sector within the public sector and only studied municipalities within one county, we argue that there was a need to further expand the field by conducting similar research in other contexts, both in terms of geography and sector. Our study did not compare implementation comparing across counties, and in consequence, we recommended that future research should conduct a similar research approach to uncover their implementation process. This could further contribute to providing increased common knowledge and a basis for comparison of other implementation processes in collaborative public sector projects, as well as other similar change processes in the Norwegian public sector. In this way, our research contribution could be used to design new, better, and suitable strategies for the implementation of collaborative projects in the public sector. Furthermore, we recommend conducting quantitative research to further fill the gap in the literature about collaborative public sector projects. In contrast to our qualitative research, such quantitative research could arguably enable quantification of information and establish the significance of various factors (Clark et al., 2019). In that regard, we further suggested that large-scale, quantitative research could potentially provide a basis for comparing success factors and barriers across counties, municipal sizes, and public sector organizations. In sum, these mentioned suggestions for future research would contribute to our findings as they could test the robustness and generalizability of our study.

As noted in our literature review, some researchers argue that principles from the private sector

are transferable to the public sector (e.g. Boyne, 2002; Stentoft Arlbjørn et al., 2015), whilst others propose that there exist significant differences between the two sectors, consequently eliminating the transferability (e.g. Christensen et al., 2015; Gasik, 2016). Given that we did not conduct a comparative study of the public and private sectors, we could not take a clear position in the discussion regarding the level of transferability between the two sectors. However, our study identified a great number of factors that were seemingly public sector-specific and that various characteristics of the participating entities and their environments were influential in the implementation of project deliverables. This indicated that there actually existed contextual and organizational differences between the sectors and consequently suggested that the differences were possibly significant nonetheless (Christensen et al., 2015; Gasik, 2016). Interestingly, we observed that several of our findings coincided with the findings of Albert et al. (2017) regarding soft and hard criteria of success. This could indicate that their findings were applicable for collaborative public sector projects as well. More specifically, these observations indicated that principles applicable to private sector organizations could be suitable for public sector organizations.

Previous literature indicates that it is difficult to measure project value at the time of project completion as the project outcomes might not be realized until months or even years after project completion (Martinsuo, 2020). In the context of our selected case, the project started three years before our research, however, several municipalities were still implementing the medicine dispensers. In this regard, we argue that it could be relevant to conduct a longitudinal study of the selected case to provide more nuanced and elaborative data. Moreover, our study found evidence of the degree of successful implementation varying across municipalities and even across departments within the same municipality. To our knowledge, this had not been covered by previous research. Consequently, we propose that future research should seek to investigate the significance and potential causes for variations across sectors, municipal borders, and municipal departments.

5.2.2 Practical implications

The results presented in this study have some evident implications for practice. We uncovered a vast set of factors that influenced the degree of successful implementation of project deliverables within collaborative public sector projects. From a managerial perspective, we found that one of the main aspects to handle the complexity of such projects was to ensure the change was thoroughly anchored. We suggest that sufficient anchoring within the overall project and

the various line organizations could make sure that everyone involved would be aware of their roles and have a structured progress plan for implementing the project deliverables. It could provide the basis for most employees to see the value of the processes and consequently reduce the dependency of a few key people when change processes are initiated in the public sector. Anchoring also consisted of the level of ownership relevant stakeholders have for the process. To ensure that collaborative projects in the public sector maintain steady progress, employees needed to have a sense of belonging and responsibility. Our results indicated that an increased sense of ownership would lead to more actions being taken. To increase the sense of ownership, we suggest that each participating line organization should establish separate project groups. This could ensure that more of the employees would interact with the project group and consequently interact more with the project deliverables. In turn, this could lead to an increased focus on keeping momentum for the implementation of the project deliverables.

Coinciding with Nik Hashim et al. (2020), we found that the establishment of collaborative projects in the public sector contributed to the enhancement of the overall performance of the provided services. However, it was composed of several factors, where aligning involved organization expectations and purposes were key aspects. A practical implication was that collaborative projects could enhance participating organizations' services if there was established trust and participants eagerly shared available resources. In consequence, we argue that such collaborative projects should be established across organizations in the public sector as our findings found evidence of it improving public services. Another aspect that proved important for these projects was that collaborating on challenges that potentially decelerated the implementation could lead to increased progress. Moreover, highlighting and discussing specific challenges participants experienced throughout the process could lead to more knowledge about how to overcome diverse challenges in a better way. We suggest that highlighting these aspects and openly share them across organizations could lead to increased trust among them. Additionally, this could reduce the complexity of the processes that were taking place.

Within larger collaborative public sector projects, participants can vary in size and inherent resources. Therefore, establishing clear structures and information flows to secure effective and efficient progress is even more important. Time pressures and restricted resources could be challenging factors that potentially lead to resistance concerning the change processes. We propose that one of the most important aspects that could mitigate this effect was to ensure that the middle management within the line organizations sees the benefits of the initiated processes. Having a middle manager that motivates and encourages employees in the process can be the

differentiator between a successful implementation and a less successful implementation. Our study showed that the degree of successful implementation varied significantly across municipalities and even across departments within the same municipality. These findings imply that public organizations should be aware of potential variations of implementation with the same organization. This further implies that actors working within the public sector should structure and customize future collaborations and implementation processes to account for potential differences across departments and units.

5.3 Limitations of the study

Inevitably, there existed limitations to our study. The field of study was highly complex and we were not able to cover every aspect of this in-depth. Although our data was based on the perceptions of 25 individual respondents across different municipalities, the single county and single sector constituted a limit to the sample. Findings might have been quite different in other public entities such as hospitals, police, and the army. This master's thesis aimed to contribute to the area where previous research regarding collaborative public sector projects was deficient. Our study provided insights into such a project. However, our study was only conducted in the healthcare sector. Consequently, we argue that the study should be replicated in other public sector organizations, other counties, and societal contexts to substantiate our findings.

Another limitation to our study was that our collected data material was based on the informants' experiences of the social context in which they were situated. Thus, the findings presented consisted of the informants' subjective perceptions of reality. Additionally, the data that was elucidated was primarily from municipal representatives and the project management group. This was because we had a comprehensive study and consequently needed to narrow the scope of our sample. Our selection of informants entailed that we were unable to present the entire comprehensive picture of the implementation. Our study could potentially have gathered more nuances of the implementation by interviewing various involved actors such as end users, nurses, and middle management.

There also existed a few general limitations regarding our roles in this research. One limitation was the limited time horizon of the master thesis, along with our first experiences as researchers. As an attempt to limit the potential impact of this on the interview outcomes and accompanying findings, we chose to change the leading interviewer for every other interview. We experienced a steep learning curve and treated this thesis as a comprehensive learning process. This was something we had in mind throughout the journey as it potentially affected our interpretation

and production of the thesis. In this regard, other limitations regarding our selected methodological approach were that the presence of the researchers in the interviews (K. Halvorsen, 2008) and our subjective interpretations (Clark et al., 2019) act as potential sources of error of our collected data material.

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A   Appendix
A.1   Interview guide

1. Orientation
(Summary of the information document concerning GDPR and privacy)
1. Background for the interview
2. What the interview will be about and the time spent on each interview
3. Clarify that we are only going to talk about medicine dispensers
4. How the results will be used
5. Privacy policy and anonymization of the informants
6. Inform about the right to stop the interview at any time and to change/correct their answers throughout the interview
7. Request for the usage of a tape recorder for the most accurate reproduction of the interview
8. Offer the informant to receive the result
9. Questions or clarification of potential ambiguities

After getting consent from the informant, we start recording the interview.

2. Introduction:
1. How would you describe your role in the project, and how long has the municipality worked on the implementation of medicinal dispensers?
2. How did you get chosen for your specific role in the project?
3. How much time have you been given to work on the project and what resources are made available for you?

3. Objectives
1. What different objectives have been set for the project? How far along in the process of achieving these objectives have you come?
2. Show the overview of municipal implementation in percentage (that we were given from the project leader). What are your thoughts about this percentage? Are you satisfied with the level of implementation, why/why not?
3. Are the municipalities free to decide on how they want to implement the medicinal dispensers, or are there some general rules/measures for the implementation that needs to be taken into account?
4. Can you describe to what degree and in what way, you in the project team are invited to partake in decisions and actions taken?
5. Have employees from different relevant positions been able to partake in the decision-making? Who is responsible for making the decisions?
   a. For example
      i. Is there a focus to create a sense of ownership among the employees that are going to implement the medicinal dispensers?
      ii. Are the majority of decisions taken from the leaders at the top or is it set up more like a negotiation process among the different actors in the collaboration?

4. Preparing the municipality for change and training
1. What had been done prior to the implementation of the medicinal dispensers, especially considering preparing the employees for change and training for new routines and systems?
2. How did you arrange and assign responsibilities for the implementation of the medicinal dispensers in the different zones within your municipality? What was the basis for this decision?
3. How did you divide employee's time between implementation and training of the new routines, versus the time they need to spend on their daily tasks?
   a. Who is responsible for the training and how much time has been given for training?
   b. Have there been given clear guidelines for the different people responsible for how they should prioritize their time and resources available?
4. Can you describe what type of employees have the key roles in this change process for your municipality? Who has been chosen to be "superbruker"?
5. Do you think the implementation is dependent on initiators/enthusiasts in the individual municipality? Do you have any examples of this?

5. Differences between zones and/or departments
1. Within the municipality, are there differences in the degree of implementation across zones or departments? If so, do you have any thoughts about what can be decisive factors for this?
   a. What do you believe are important driving forces for the work?
   b. What do you believe can make the most impact on the realization of the implementation, the types of users, or qualities among the employees?
   c. If there are different zones within the municipality, are there set up meetings with the different zones to discuss the work of implementation?
2. What driving forces do you believe to be important for the progress of the implementation within the different zones?

6. Challenges
1. Have you needed to integrate new computer systems due to the implementation of the medicinal dispensers?
   a. Training of employees in these systems
   b. Have you received any follow-ups from the suppliers and/or ICT departments of the computer system and the medicinal dispensers?
2. Have you met any resistance with the implementation of medicinal dispensers among the users?
3. Have you met any resistance from the employees? Have you received any feedback about the balance between taking care of the existing users while at the same time implementing changes?
4. What conditions do you believe could have had an impact on the challenges (i.e. what is the basis for the skepticism?) and how could it possibly have been avoided?

7. Collaboration among the municipalities
1. How is information-sharing taking place between the municipalities?
2. Has it been set up for communication across the municipal boundaries if anyone is experiencing challenges, or wants to share positive experiences with the implementation? Have you used these channels?

8. Experiences
1. What do you think has gone well in this process? What do you think could have been improved?
2. What significance do you feel that the dimension of time has had for the implementation?
3. How would you describe the work with anchoring the change? Especially considering:
   a. Coordination of financial, organizational, and human resources? Have these factors been sufficiently been arranged in order to realize the change?
   b. Has the project had a predetermined and clear division of roles? Is it clear who has the main responsibilities for different tasks in the project, and where results and experiences are being reported?
4. Do you follow up if the technologies are used in practice, and if the users and employees are satisfied with the results after the installment of the medicinal dispensers?
5. How would you assess the total execution of the implementation of medicinal dispensers in your municipality? Are you satisfied – why/why not?

9. Final part of the interview/ summary
1. Can you summarize aspects that you believe have been important in the zones that have a high degree of medicinal dispensers implemented?
2. Do you have any final remarks about working on a project that aims to implement larger changes in the public sector or the healthcare sector?
3. Is there anything you would like to add? Is there anything you want to explain or specify one last time?
   - This is an opportunity for the information to inform about something the informant forgot and/or that (s)he thought of during the interview.

To finish the interview, we will again inform the informant about the privacy policy and anonymity of our research.

We stop recording the interview - and inform our interviewee about this

- We clarify with the informant whether they would like to read through our assignment before it is published
  - o If the informant wants to read through it, we will gather the information needed to send the assignment to him/her
- We will ask if it is okay for us to get in touch with the informant if there is a need for follow-up questions
- We ask if the informant think we should talk to other specific people to get information about other relevant aspects of our research
- Thank the informant for the interview!

A.2 Discussion Paper: Marita Eikeland

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Discussion paper

The reflection note is part of the guidelines for writing a master's thesis at the School of Business and Law, University of Agder. Throughout this discussion paper, I will give a presentation of the thesis and discuss how our thesis corresponds to the concept "Responsible" and thereafter give a summary of this paper.

Presentation of the thesis

Magnhild Barvik Mæland and I wrote this thesis as the final step to finish our master's degree in Business Administration. In our initial discussions regarding this thesis, we quickly decided that we both found it interesting to look into the fields of strategy, projects, and project management. Our thesis aimed to contribute to the research on collaborative public sector projects. This is a field of study with relatively little research as it essentially merges two different fields of study, public sector projects and collaborative projects. We have looked at these fields separately and further discussed the implications of the combination of these elements. After a while, we decided that we wanted to look into aspects that could pose as success factors and barriers for collaborative public sector projects. Additionally, we wanted to explore whether there are differences with project organization and implementation in the public and the private sector.

We were informed about a large collaborative public sector project in the Norwegian healthcare sector. Consequently, we decided to conduct a qualitative study of this specific project which would enable us to explore such features and associations. The project we looked into was called "Sør-Rogalandsprosjektet" and consisted of 14 municipalities in the south-western county Rogaland. It was an inter-municipal project which aimed to implement welfare technologies as an integrated part of the healthcare services. The project was created as a response to a national initiative, where all Norwegian municipalities were encouraged to implement technologies in the healthcare sector in order to maintain sustainable services for the future (Astrup & Helgesen, 2019). The goal of this project was to implement several types of welfare technologies, but for us to limit the scope of this study, we decided to explicitly look into the implementation of electronic medicine dispensers. We perceived this case as suitable to answer our problem statement and saw this as an opportunity to broaden the existing literature on this field.

We found this case appropriate to study success factors and barriers of collaborative public sector projects, as the participating municipalities had varying degrees of successful implementation of project deliverables. Consequently, we formulated the following problem statement: "What are challenges and success factors of implementing collaborative public sector projects?".

Most of our findings were aligned with the findings of several researchers, such as Gasik (2016), Boyne (2002) and Holmen and Ringholm (2019a) regarding the challenges of implementing public sector projects. These include barriers such as challenges related to many stakeholders and that several departments were affected by these changes. On the other hand, success factors such as thorough anchoring had not been thoroughly discussed in theory. Findings incorporated in the broad term such as allocating sufficient time and resources, create a common vision, establish trust and sharing of knowledge and information, have support from previous research (e.g. Le Pennec and Raufflet, 2018; Matinheikki, Artto, Peltokorpi, & Rajala, 2016; Picazo-Vela, Guiérrez-Martínez, Duhamel, Luna & Luna-Reyes, 2018; Maurer 2010). The thesis contributes to theory by giving thorough insights into project work that have been conducted solely among public actors, which have given increased knowledge about collaborative public sector projects.

The concept responsible

The term responsible is broad and can be understood in numerous ways, depending on the field of application. When conducting research, it is especially important to handle it responsibly. Regarding research ethics, the University of Agder defines the concept of responsibility as *"All research entails a responsibility of making sure that knowledge one gets access to is not misused, and that society benefits from it."* (Universitetet i Agder, n.d.) Throughout this reflection note, I will discuss how we

have focused on responsibly conducting our thesis and discuss how this concept relates to various aspects in the thesis.

Discussion of the thesis related to the concept responsible

When we started the progress of writing our master's thesis, we quickly realized that there were several ethical issues we needed to consider. Moreover, we had to utilize knowledge from our prior courses as well as general knowledge to extensively reflect on them.

Our master's thesis was based on a field that had not been extensively covered up until this point. Accordingly, the topic of our thesis was a complex area with relatively little prior research that specifically addressed collaborative public sector projects. However, we found a lot of information on the fields separately. Thus, we decided to look into them separately before trying to merge them.

Both the topic of our thesis and the formulated problem statement relates to the concept responsible in that it explores a professional field with limited research and contributes to this field. Generally, society and professionals within this field could benefit from this study in that our findings could potentially ease the processes of public sector organizations to some degree. Additionally, we were responsible to choose a problem statement and research question that was feasible to conduct in order to produce results that in turn would contribute to the general society. The thesis contributes with some general findings, but at the same time, collaborative projects in different public sectors could unfold differently to certain degrees.

Overall, the most prominent ethical challenge that was evident from the initial phase of the work with this thesis was related to conducting our study in line with the national privacy regulations and laws. This specifically implies how we handle aspects related to how we cultivate our findings.

Responsibly processing our gathered data materials entailed ensuring that the anonymity of our informants was upheld. This was also one of the focus areas throughout this thesis and we had several discussions about how to best secure that the information presented in the thesis could not be traced back to the informants or their respective municipalities. In order to carry out the study in both a responsible and ethical manner, we wrote an application to the Norwegian Centre for Research Data (NSD) to receive approval that our planned study aligned with privacy regulations. NSD is an organization that evaluates projects based on research ethics rules and ensures that confidential information is protected (Johannesen, Christoffersen & Tufte, 2020). When writing the application, we thoroughly described the entire research process we wanted to conduct and how we planned to proceed in handling the data materials that we were going to gather throughout this study. After the planned research had been approved by NSD, we sent out a form to our informants where they were fully informed about their rights as informants and what they could expect from participating in our study. Each informant gave their written approval to participate in our study.

To handle the collected data responsibly, we kept audio recordings on our private, password-protected computers, and deleted these as soon as they had been transcribed. Additionally, transcriptions were deleted when this thesis was delivered. Furthermore, when we presented the findings of various informants, we did not give any indications that made it possible to decode which informant had stated what. Initially, we had given our informants randomized numbers from 1 to 25 (because we had 25 informants). However, after some back and forth, we found that it would be more responsible to only refer to the informants without any numbers, as we believed that this would lead to speculations and a possibility to compile the quotations from informants that had been assigned the various numbers. Therefore, when we used quotations from our data materials, we only utilized the collective term "informant".

The relationship between ourselves as researchers and our informants was important to cultivate adequately. Our roles as researchers entailed a unique responsibility and we needed to ensure that the trust our informants gave us was reciprocated. Throughout the conducted interviews, our

informants shared as much and as detailed information as they felt comfortable with. Because we attained thorough insights into the implementation and relations related to the collaborative project, it was important that we handled the sensitive information we received responsibly.

Challenges related to our units of analysis and their operating environment
Sustainability is a theme that permeates most organizations' everyday routines and goals. In the years to come, it is predicted that the percentage of elderly in countries with high incomes will increase (Meyer, Drefahl, Ahlbom, Lambe & Modig, 2020). This indicates that there will be a need to restructure the way healthcare services are provided to society. In order to meet this future demand, the Norwegian Ministry of Local Government and Modernisation published a strategy that aimed at reaching a more digital public sector and it was addressed that the public sector needed to increase the use of digital solutions (Astrup & Helgesen, 2019). Increased use of technological solutions could ensure that the sector provides services more effectively, which additionally increased the services for their end users. Consequently, *Sør-Rogalandsprosjektet* was established with the aim of integrating various welfare technologies as a natural part of the service offerings within the participating municipalities.

Implementation of welfare technologies in the healthcare sector has several aspects that need to be thoroughly and carefully considered in relation to the concept "responsibility". The services were still expected to be provided responsibly and ethically. When implementing electronic medicine dispensers into the homes of end users, it could increase their quality of life. Overall, welfare technologies have several aspects that ensures increased the quality of the services for end users and additionally relives employees in the sector from some of their tasks. This would enable healthcare personnel to focus on other tasks that has to be handled.

However, there are some aspects of welfare technologies that need to be taken into account in order to ensure that the services are still conducted responsibly. As our findings suggested, some end users and employees could be skeptical toward this change. Implementing technology changes the provided services noticeably, and it entails a change that can seem drastic to some end users. The implementation of electronic medicine dispensers allows healthcare personnel to reduce home visits from up to several times a day to maybe once every 7th or 14th day. This indicates that some end users might feel a sense of losing daily supervision and check-ups, even though the medicine dispensers have surveillance systems to ensure that the medication is dispensed at correct times. When something unforeseen happens, end users can easily contact the healthcare personnel. Simultaneously it could be a solution that some employees within the sector are skeptical towards because it indicates that they do not have the same opportunity to supervise their end users and maintain the same level of contact with them. Even though this entailed fewer home visits, the end users also attained thorough surveillance and follow-ups, to ensure that services were sufficiently provided. I argue that this relates to the concept responsibility, because we have researched an area that have several ethical aspects that needs to be accounted for, and it is of importance to offer these services sufficiently.

Another potential challenge that needs to be handled responsibly is that some end users might not be truly confident in incorporating new technologies into their lives. In this regard, it will be important to thoroughly map the individual end users, in order to find the instances where it is responsible to replace the services provided by human personnel with an electronic machine. Furthermore, I would like to highlight that the main incentive for personnel within the healthcare sector is to ensure that they provide the services in a way that enhances the qualitative benefits for their end users. Additionally, this project is a part of a plan that incorporates a long-term perspective to ensures that services are provided sustainably in the future and it will generate social wealth by ensuring that elderly people can live longer in their own homes. At the same time, the schedules of healthcare personnel will be more sustainable. When the already pressured services experience even

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more pressure from a growing number of end users, the services would be pushed over the limit of what is responsible for the employees within the sector.

Summary

In this discussion paper I have thoroughly described some of the most prominent features of our thesis that relates to the concept "Responsible". When conducting this research, it was crucial that we ensured that information about our informants was kept confidential and that the data we used throughout the thesis was thoroughly anonymized. Furthermore, I have discussed some of the aspects of the healthcare sector and how various aspects of implementation of welfare technologies in the sector is related to this concept.

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A.3   Discussion Paper: Magnhild Barvik Mæland

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Introduction
This discussion paper is written as a supplementary part of my master thesis at the School of Business and Law at the University of Agder. I will start this discussion paper by providing a summary of our thesis and our most relevant findings. Subsequently, I will discuss how our thesis related to different international trends and forces. Finally, I will briefly summarize my discussion.

Presentation of thesis
My cowriter, Marita Eikeland, and I submitted this thesis to complete our Master of Science in Business Administration specializing in International Management. Through a wide range of subjects and courses throughout the last two years, we both found great interest in the field of projects and project management. In this regard, Marita and I chose to write about success factors and barriers for implementing collaborative, public sector projects.
Following the findings of Ahlgren, Lind, and Nyland (2019); Jacobsen (2014), there existed a need for expanding the field by procuring evidence from existing collaborations. We aimed to fill this gap by conducting a qualitative study, more specifically a case study, on an ongoing collaborative public sector project called "Sør-Rogalandsprosjektet". The project focused on implementing welfare technology in the healthcare sector in Norway. The project was an inter-municipal project consisting of 14 municipalities located in the southern part of the county Rogaland. The project had collectively procured medicine dispensers and had completed training organized by the project management group. Following that, the responsibility of implementing the medicine dispensers was transferred to the individual municipality. Interestingly, we observed that there existed varying degrees of implementation across the participating municipalities. This information got our attention, and the case was consequently regarded as suitable as a case for studying success factors and barriers of implementing project deliverables in collaborative public sector projects. In consequence, we developed the following problem statement:
        "What are the challenges and success factors of collaborative public sector projects?"
We realized that there was limited empirical evidence concerning the combination of a collaborative and a private sector project, especially when looking into the implementation of such a project. Thus, we chose to investigate the various subject areas individually to be able to compare our empirical findings against the different theoretical findings. By doing so, we wanted to test whether our findings supported or rejected various elements from the literature concerning public sector projects, collaborative projects, and successful implementation of projects. We conducted a qualitative study where we interviewed 25 representatives from 13 different municipalities. We contributed to the already existing literature by gathering empirical evidence regarding the contextual factors that constitute project success. Our most prominent findings were that public sector organizations are more bureaucratic, require anchoring throughout the organization, and need to adhere to requirements from the central government. Moreover, we found that sharing resources, creating a sense of trust, and creating a common vision were important factors for collaborative public sector projects. Several of our findings confirmed findings of previous research regarding characteristics of public organizations (e.g. Boyne, 2002; Santos & Varajão, 2015; Van Der Wal, De Graaf, & Lasthuizen, 2008), public sector project (e.g. Jałocha, Krane, Ekambaram, & Prawelska-Skrzypek, 2014; Löfström, 2009), and success factors and barriers of collaborative projects (e.g.Holmen & Ringholm, 2019; Matinheikki, Artto, Peltokorpi, & Rajala, 2016).

Discussion of the concept "international"
The mission of the School of Business and Law at UiA is to "*co-create knowledge by applying international, innovative and responsible perspectives*"(University of Agder, n.d.). In this discussion paper, I seek to discuss the international perspective of my thesis as a means to illustrate that I have acquired a global mindset through my master's degree.
Prior to discussing the international perspective, I will briefly discuss my thought regarding the responsible and innovative perspectives of the mission. Throughout my master's I have been

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challenged to take a stand on various ethical issues regarding business and law. In that regard, I have been challenged to question the choices of others and to critically evaluate the consequences of my actions. Moreover, I have been presented with a number of tasks related to being a responsible consumer, running companies sustainably, and running accountable businesses.

As a result of being challenged with these various issues, I have acquired a mindset that seeks to further develop and improve existing knowledge and procedures by asking critical questions and thinking innovatively. Through different experiences with group work, I have also experienced the value of diversity and collaboration to spur innovative thinking.

In sum, I argue that I have required qualities that will benefit my future employers and myself as a professional.

The starting point for our thesis was based on findings from the literature on projects and the implementation of projects. These fields of study were extensively researched, both empirically and theoretically. Various literature addresses that projects tend to be highly context-specific and context-dependent, thus rejecting the idea of one common approach or model for implementing projects (Andersen, 2018; Belassi & Tukel, 1996). Regardless of this, there exist innumerable sets of conceptual frameworks and guides with the purpose of guiding firms in implementing project deliverables into the line organization (Stensaker & Haueng, 2016; Svejvig & Schlichter, 2020). I argue that the rejection of one common approach for implementing projects is interesting as it questions our study's transferability and because it provides a basis for conducting comparative analyses. By conducting comparative studies across countries, one could empirically test if the claim holds or not and if there exist country-specific biases.

Another element that explains how the topic of our thesis is related to the broad concept "international", is the digital transformation that has emerged over the last decades. These technological developments and advancements that have been, and still are, implemented in various aspects of life (United Nations, n.d.) contribute to the relevance of our thesis. Considering the theme of our thesis, I argue that technological developments create both possibilities and pressure to renew and develop public sector services in several countries. As public organizations seek to renew and develop their services, there might be a need for being aware of public sector-specific barriers and success factors. In that regard, our thesis could be internationally applicable in that we contribute to expanding the existing literature and potentially provide a basis for other researchers to replicate our study in similar or dissimilar contexts.

Furthermore, one international trend that is apt for our thesis is the increasing projectification in various countries and industries. This also holds for the public sector, as projects are increasingly being used as a way of implementing change in the sector (Schoper, Wald, Ingason, & Fridgeirsson, 2018). Through our study, we have observed that various public actors are increasingly collaborating and working together. Such collaborations typically emerge as a result of requirements of making better use of resources. At the same time, we found that there tends to exist an external pressure to use the financial resources as efficiently as possible and for the common good. This might not be applicable for all types of countries, but some aspects might transferrable regardless of the structure of the government. However, our findings do not have to be transferrable to be of interest. The fact that there potentially exist differences across countries with varying governmental structures is interesting as it creates a basis for further research. In that regard, it could be interesting to conduct a comparative study where one compares our findings against a similar study of one or several countries. I believe that the findings of such a comparative study could be helpful for all countries involved.

Our chosen case concerned the implementation of welfare technology which I believe will become increasingly important for several countries. The fact that people live longer (Meyer, Drefahl, Ahlbom, Lambe, & Modig, 2020) and that there is an increasing need to make public sector services more

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efficient (Regjeringen, 2019) further strengthens this argument.

In addition to this, I also believe that Covid-19 added to the international relevance of our thesis. This because health care services across the world were under extreme pressure and had to adapt to new ways of working whilst simultaneously performing their usual tasks. Covid-19 acts as an example of how external factors can influence the way organizations perform their services and that it can amplify the liability of limited human resources. We found that Covid-19 affected all participating entities regardless of infection rates in the specific municipalities.

Additionally, Covid-19 exemplified the value of cooperating both within a country and across countries. In this regard, I argue that such external events can contribute to increasing the need for inter-organizational collaborations in both the private and public sectors. As noted in our thesis, we have several suggestions for future research regarding replications of our study in similar and dissimilar contexts. One of the suggestions is based on the possibility to compare findings across countries and sectors. Another suggestion relates to the ability to transfer findings from one context (or country) to a similar context (or country). I argue that both public and private actors from various countries can benefit from sharing resources and knowledge about events that several countries are facing. This could entail that the individual countries could avoid "reinventing the wheel".

Summary

In sum, I argue that our thesis related to the broad concept of "internationalization" in several ways. Firstly, we expanded our specific field of study by procuring evidence from an existing collaboration and consequently addressed the gap in the literature concerning collaborative public sector projects. By doing so, we provided a basis for other countries to replicate similar studies and to possibly compare them to our findings. Secondly, our thesis studied a case that was highly relevant to the digitalization trend that had emerged over the last decades. Finally, the global pandemic, Covid-19, contributed to the international relevance of our study. Covid-19 exemplified how external events might inhibit a predetermined process, how it can change the course of action within a sector, and how important it is to work together across nations when faced with similar problems.

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