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Why do Norwegian municipalities struggle to use digital platforms?

An explorative study concerning the drivers and prohibitors of using digital platforms

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Translations and Abbreviations

Translations:

Municipality = kommune

Municipalities = Kommuner

KS =The Norwegian Association of Local and Regional Authorities

Abbreviations:

NPM: New Public Management

Post-NPM: Post-New Public Management

NWS: Neo-Weberian-state

DEG: Digital era governance

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Abstract

This thesis studies the use of digital platforms in Norway. This is done through a qualitative case study that explores the drivers and prohibitors that affect municipalities in their use and development of digital platforms. Digital platforms are a part of the post-New Public Management reforms that aim to unite the public sector with citizens, non-profits and private actors in order to create a better-functioning government and society (*Christensen & Lægreid, 2011, p. 133*).

The research is split up into two parts. In the first part, selected platform literature is used to establish a concept around the notion of platforms. The notion of platforms is a relatively new phenomenon in public administration and does not have a universal description. By establishing a concept for platforms, this thesis has a more stable basis on which the rest of the study can continue to build.

The second part of the research concerns the exploration and analysis of the drivers and prohibitors experienced by Norwegian municipalities while using and developing platforms. This exploration is done based on data gathered through semi-structured interviews with eight municipalities in Norway. The interview data is then combined with administrative and organisational theories to analyse the effects of the drivers and prohibitors on the municipalities, while offering potential avenues to work with drivers and prohibitors.

The first part of the thesis resulted in the construction of the following concept for the notion of platforms: A platform is a policy tool to facilitate interaction, which is shaped by its governance and framework aspects to best fit the purpose for which the platform is designed. While this concept fits perfectly within the parameters of the platform literature, it did not align with the reality found in the data gathered from the interviews.

The second part of the thesis found that municipalities in Norway experience more prohibitors than drivers in their use and development of digital platforms. The main driver for the use of digital platforms is the desire of municipalities to deliver quality service. The main direct prohibitors to the use of digital platforms are resources and competence. While organisational, political/administrative and scale motivations play more indirect but still crucial prohibiting roles.

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1.0 Introduction

What is it that we expect from our government? Should a government only be charged with policing and upholding the rule of law (*Raadschelders, 2020, p. 17*)? To what extent are governments reasonable to care for the poor, the old and the sick (*p. 17*)? To what extent should citizens be involved in governance (*p. 5*)? "*There is no historical precedent for the range and scope of government activities and services today, which has been expanding almost continuously since the late nineteenth century. Government today is constantly adapting to a rapidly changing environment. That is, the "environment" is a constantly moving target for government, and government is a constantly moving target for society and its citizens.*" (*Raadschelders, 2020, pp. 18-19*).

The question of what someone expects from their government is no longer answerable by a list of demands. In modern society, the idea of government had become more complex; citizens expect more from their governments then at any point in history. Citizens don't only look at the quality of the service provided by their government, they expect good government, which means that a government should look after the well-being of their citizens (*Holmberg & Rothstein, 2012, pp. 1–3*).

To approach the challenges of a modern society, governments have gone through many changes over the years. Some important examples for the western democratic government style include the New Public Management (NPM) and Post-New Public Management reforms (*Christensen & Lægreid, 2011*).

New Public Management or NPM was a new management style for governments introduced around the 1980's (*Christensen & Lægreid, 2011, p. 130*). The goal of this new management style was to improve the inefficacy and legitimacy of the classic form of public management. This was done by changing the management style of the public sector to match that of the private sector, which means in practice a strong focus on economic norms. The goal was no longer to just provide the best service, but the bests service at the lowest cost. The government started to organise themselves more around specialisation, which worked in their own separate teams, also called silos (*Christensen et al., 2020, p. 137*).

Another focus of NPM was that the government should take more of a back seat, which gave a greater focus on the responsibility of non-public actors. The input of non-public actors, such as citizens, non-profits and private actors, were given more room to give feedback to government policy (*pp. 130-131*).

While the intention was there, it did not lead to a new democratic revolution. The input of citizens could be compared to the idea of a customer service line; actors could give feedback to the government, but the government did not have the systems in place to allow outside actors to really participate in the policy process (*pp. 131-132*).

After some years, the shortcomings of NPM became more pronounced and had to be dealt with. A new wave of reforms was needed to negate or solve the shortcomings of the NPM reforms, which are often referred to as the post-NPM reforms (*Christensen & Lægreid, 2011, p. 132*). These reforms were meant to overcome the coordination problems created with the specialisation approach and wanted for focus on a more whole-of-government approach (*p .132*). Another reason for the new reforms came from the need to more effectively counter wicked problems in society (*Christensen & Lægreid, 2011, p. 132; Head & Alford, 2013, pp. 719–722; Lagreid & Rykkja, 2015, p. 478*). The reforms mainly focused on returning the central government back to its more prominent role in governing, but not at the costs of citizens, non-profits and private actors. The goal of the reforms was to bring all these players together in a more united network and to govern together (*Christensen & Lægreid, 2011, p. 133*). "*The promotion of network governance became the order of the day.*" (*Christensen et al., 2020, p. 137*).

This network approach is nicknamed the neo-Weberian-state (NWS), which combines the traditional bureaucratic values of the state with a bigger focus on providing service to the citizens *(p. 138*). New technological developments open up new avenues for the formation of networks and other digital services, which is being nicknamed a digital era governance (DEG) (*p. 138*).

Being a public administration student in these times is very exciting. The focus on networks and the neo-Weberian-state and digital era governance theories, give me the hope that we as society might be getting close to a more perfect way of governance. This hope inspired me to dedicate my thesis to a particular part of these reforms: I wanted to know if the theories are actually being used in practice. This thesis will therefore look closer at the concept of platform organisations.

What is a platform organisation?

Describing what a platform organisation (*from here on referred to as a platform*) is the first hurdle one comes across when trying to research platforms. It's a fairly new phenomenon, which does not have a universal description; ask five different people, and one will receive five different answers. This is one of the reasons it was important for the researcher to take a closer look at platforms.

In the beginning of the research, the best description, that I could personally make, was that of a policy tool that facilitates collaboration (*Ansell & Gash, 2017, p. 19*). The platforms flexible framework creates many different varieties of platforms that are not easily combined into a singular architype, which makes a more detailed description unproductive.

At the end the research, I can look back and say that my first description might have been too precise. A policy tool to facilitate interaction fits better with the literature concerning platforms. But neither description aligned with the empirical data that was found in the field.

1.1 The relevance of researching platforms

That a researcher finds the topic of platforms worthy of research is a good beginning, but needs to backed up, or in other words can the researcher justify the research they want to do? To justify one's research there, are two forms of relevance that have to be proven, theoretical relevance (*Gschwend & Schimmelfennig, 2007, pp. 23-24*) and social relevance (*p. 23*).

Theoretical relevance

The theoretical relevance concerns the connection between the study with other related studies (*Gschwend & Schimmelfennig, 2007, pp. 23-24*). The question relates to how much can be learned from an extra study into a particular subject. To answer this question a researcher needs to perform an extensive literature review.

The literature review made it clear that there is still a need for research into platforms in the public sector. The existing platform research is overall focussed on the use of platforms in the private sector. The research of platforms in the public sector have been growing in recent years and have still left some areas uncovered. There is still theoretical relevance for research into platforms.

The societal relevance

Social relevance of a study concerns its relevance to non-experts, or people that are not specialised in the study topic (*Gschwend & Schimmelfennig, 2007, p. 23*). There is one particular distinction to keep in mind while looking into the social relevance of a study: how relevant is it to people effected by the study subject and to people that are not affected by it. (*p. 26*).

The social relevance for this study isn't as prevalent as the theoretical relevance. Platforms are still a relativly new phenomenon in public administration, and a non-expert will likely not be familiar with the term. It is unlikely that a non-expert will realise that a change in government policy might be connected to the use of platforms. There might be more relevance for actors that are involved in platform organisations themselves, which will only be a small number.

To try and counter the problem with social relevance, an effort should be made to focus the study subject on cases that would be of interest to non-experts. This could be done by looking for cases or subjects that stands close to citizens and is not too abstract. An example of this could be municipalities. Another way of increasing the studies' societal relevance is by focussing the study on the practical implications around the use of platforms. One way of doing this is by considering what motivational elements are important when one uses or wants to make use of platforms.

1.2 Research methods overview

To research the platform phenomenon, this study will make use of a qualitative approach (*Creswell, 2009, p. 8*). The study will focus mainly on the gathering of empirical data through interviews (*pp. 182-183*) and will make use of a multiple case study approach (Yin, 2009, p. 48).

The choice was made to keep the study in Norway. Norway has a long history of public administrative innovation (Christensen & Lægreid, 2004), which makes it an excellent research subject for a study concerning a relatively new public administrative phenomenon. Another interesting development concerning digital platforms in particular was the push of the previous Norwegian government (*Høyre et al., 2019*), and to a certain extent, the current government (Ar*beiderpartiet & Senterpartiet, 2021*) for the merger of Norwegian municipalities and increased digitalisation.

From the perspective of the researcher, there might have been some personal bias in choosing Norway. The research is being done at the university in Bergen (*UIB*), which makes Norway one of the first subject countries that comes to mind. Maybe more importantly, setting the research in Norway would provide a good personal challenge for the researcher to grow in understanding of the Norwegian language, culture and organisation. It is expected that the choice of Norway as a subject country has not affected the study or the results, but for the sake of transparency the bias should be mentioned nevertheless.

Next to focussing the study on Norway, the choice was made to use municipalities as the unit of analysis for this study. The choice for municipalities is to some extent a practical decision. Local governments are easier to reach and contact, and they stand the closest to citizens and other local actors. Municipalities also hold an intermediate position between the wants of the citizens and the wants of the national government, which encourages municipalities to find new approaches of problem solving (*Bentzen et al., 2020, p. 3*). The choice was made to focus the study on the seven biggest municipalities in Norway that are most likely to find information concerning the use of platforms.

1.3 Overcoming platform ambiguity by focussing on digital platforms

The one major obstacle encountered during this study was with the understanding of the term platform. While recruiting interview participants, it became clear that the term platform was received as vague by approached municipalities. Many interview requests were either outright denied or went unanswered. The choice was therefore made to focus the research topic on a particular form of platform organisations in the hope to ground the research some more.

Then, after some preliminary interviews, the choice was made to focus on digital platforms. This in the end did not solve the problems concerning the ambiguity around the notion of platforms, the many different interpretations of platforms persisted. But the more focussed approach did result in finding more willing research subjects and in the end; six out of the seven biggest municipalities contributed to the research.

1.4 Research questions and objectives

The main research questions this thesis will try to answer is as follows: *What is meant by the notion of platform, and what drivers and prohibits municipalities in using and developing digital platforms?* This two-part question will help grow the understanding of what platforms are, and what motivation there are around their usage.

1.5 A general overview of the thesis

To answer the research question this thesis is split up in two main parts. The first part considers the first four chapters of thesis and focusses on establishing a concept for platforms. The second chapter will discuss the literature review and theoretical framework for this study. In which the platform literature is broken down to its core elements, from which a platform concept will be constructed. The third chapter addresses the research methods and data gathering of this study. In the fourth chapter the platform concept will be used to analyse the empirical data from the interviews.

In the second part of the thesis focusses on the drivers and prohibitors that were mentioned during the interviews. The fifth chapter will provide a general overview of the encountered drivers and prohibitors and the different influences connected to them. The sixth chapter focusses on the direct prohibitors. The seventh chapter focusses on the main driver for the use and development of digital platforms. The last remaining chapters focus on the different indirect prohibitors and explore different theoretical avenues that municipalities could use to counter the effects of these prohibitors. Chapter eight explores organisational prohibitors, chapter nine explores political/administrative prohibitors and chapter ten explores prohibitors related to scale. The thesis ends with a summary, conclusion and recommendations for further studies.

2.0 The literature review and theoretical framework

While researching the different studies related to platform organisations, as mentioned in the introduction, it became apparent that there was no singular explanation of what a platform was. Oglesby and Burke (2012) probably described it best when they stated, "The study finds that there is a lack of clarity in the use of the term 'platform' and related concepts" (p. 4). Before diving into the term platform and the related concepts, it is essential to state the scope of this literature review.

The scope of platforms

The term platform can be seen as an umbrella term (*Ansell & Gash, 2017, p. 19*) that refers to much more than what this thesis will address. This thesis will focus its research on platforms in a public setting and specifically on the use of digital platforms by Norwegian municipalities. Literature concerning big private platforms offered by Apple, Meta, Sina Weibo, Google and Amazon are not up for review here. These larger platforms might be used as examples but will themselves not be the target group for this review.

2.1 A general overview of the literature and key characteristics of platforms

How does a researcher explain a theoretical concept that does not have a singular description? This challenge became the goal for the literature review, to identify a coherent way of explaining what all these different literary approaches had to say about platforms. The first step, therefore, was to create a general overview of the different kinds of literature; this resulted in Table 1, which gives a broken-down overview of the various uses, types and attributes connected to platforms. Table 2 zooms further into the platform attributes mentioned and marks how often certain attributes appear in the articles.

The rest of the literature review builds upon the singular pieces identified in the tables by discussing them in three main categories: Interaction, governance and framework.

Article	Platform attributes	Ways to use a platform	Platform types	Commonalities	Differences
Ansell & Gash (2017)	many-to-many interaction, growth (of participants), governance, participation (collective decision-making), framework, Interface	Interaction between government and outside actors, need a backbone organisation.	Functional modular, franchise, bridging organization, standardization & certification, matching, network of networks, benchmarking, knowledge, crowdsourcing.	All platforms facilitate interaction.	The platform types are differentiated based on interdependence between participants and platform. (participation and governance)
Ansell & Miura (2020)	Governance, output (generativity), interaction, scaling (growth), mobilising, framework, intermediary,	Connecting, scaling, innovation, intermediating, mobilizing, producing.	Interaction, production, open-innovation and co-creation.	All platforms facilitate interaction.	The platform types are differentiated based on output.
Klievink et al. (2016)	Governance, innovation, interaction, (flexible) framework	Business-to-government, government-to-government, government- to-citizens (government can learn from outside actors).	Information platforms.	The focus of the article is more on how platforms are organised. What and how they are governed.	
Nambisan (2009)	Innovation (problem solving or solution finding), interaction,	A network perspective, plug-and-play capabilities, a portfolio of success metrics.	Exploration, experimentation and execution.	The work in a linear process.	In practice experimentation platforms are not often used by public organisations.

(*table 1: key aspects in platform literature, continues next page*)

Article	Platform attributes	Ways to use a platform	Platform types	Commonalities	Differences
Oglesby and Burke (2012)	Interaction, intermediary,	Advocacy, capacity, data sharing, innovation, matching, setting standards, implementation, interaction.	Advocacy, capacity development, information sharing, innovation, matching/brokering, policy/standards, implementation, relationship building, thought leadership.		The platform types are based on actions. The different actions that platforms stimulate or accommodate is the differentiating factor.
Chen et al. (2022)	Market or network, governance, value, design, (digital) Interface, Interdependence, market-based, interaction	To facilitate interaction between complementors (sellers?) and customers. Sharing of resources, Provision of information, Conferring autonomy, giving rewards, Control.	Digital platform.		
Morell and Espelt (2018)	Openness, governance, interaction	How open the governance of the platform is concerning data and interactions.	Digital platform.		
Vestues (2021)	Innovation, co-creation, platformization, providing access	A good-dominated logic or service-dominated logic	Digital platform		A platform can be seen as a product or as a service.

(table 1: continued)

	Ansell & Gash, 2017	Ansell & Miura, 2020	Klievink et al. (2016)	Nambisan (2009)	Oglesby and Burke (2012)	Chen et al. (2022)	Morell and Espelt (2018)	Vestues (2021)	Total
Governance	x	x	x			x	x		5
Interaction	x	x	x	x	x	x	x	x	8
Many-to-many	x		x			x			3
Participation	x	x		x	x	x		x	6
Providing access	x	x	x	x	x	x			6
Value adding	x	x	x	x	x	x	x	x	8
Network	x	x	x	x	x	x			6
Design/ framework	x	x	x		x	x		x	6
Interface	x		x			x			3
Intermediary		x	x	x	x	x			5
Interdependence	x				x	x		x	4
Market-based						x			1
innovation	x	x		x	x			x	5
Sourcing			x			x		x	3

(table 2: Key words in platform literature)

2.2 The primary purpose of a platform is to facilitate interaction

While studying the literature, it became slowly apparent that the platform literature had one uniting concept, the facilitation of interaction (*Ansell & Gash, 2017, p. 16; Ansell & Miura, 2020, p. 267; Klievink et al., 2016, p. 69; Nambisan, 2009, p. 44; Oglesby & Burke, 2012, p. 4; Chen et al., 2022, p. 148; Morell & Espelt, 2018, p. 1; Vestues, 2021, p. 17*).

Interaction is a primary aspect of a platform and, therefore, is not the main focus of any of the articles. For example, some articles would concern themselves with the interaction between private and public actors (*Klievink et al., 2016, p. 69),* between the government and citizens (*Ansell & Gash, 2017, p. 17*), between platforms and their participants (*Chen et al., 2022, p. 148),* or a combination of different relationships within the platform (*Ansell & Miura, 2020, p. 265*). It was not until the literature was broken down into core aspects that it became clear how crucial interaction was to the idea of a platform.

Interaction through an intermediary position

One particular form of interaction that did jump out was how platforms interact within the larger organisational ecology (*Scott & Davis, 2015, p. 18*), or in other words, how a platform organisation interacts with other organisations and can bridge different organisational sectors.

In his article, Nambisan (2009) explains that he sees platforms fill the space between organisations and sectors (p. 44). A platform could, for example, link a local farm with a tech giant to create a social innovation that helps people to eat healthier.

Another effect of the intermediary position of platforms is that it acts as a uniting factor for organisations with similar goals. In their article, Oglesby and Burke (2012) explore this idea by studying the effect of platforms on humanitarian efforts (p. 8). They explain that platforms can facilitate multiway partnerships by being a separate entity that helps coordinate and promote the efforts of its member organisations. These coordination efforts allow humanitarian organisations to approach more complex issues that would have seemed impossible to solve while working alone (p. 9).

How are platforms capable of taking this intermediate position? Chen et al. (*2022*) theorise that it might be because platform organisations are meta-organisations (p. 148), which means that platforms are organisations that have other organisations as their members instead of individuals. Having other organisations as its members gives platforms a broader scope, allowing them to look beyond what a typical organisation would aspire to (*Ahrne & Brunsson, 2005, p. 431*).

2.3 The function of a platform is determined by its governance

While the purpose of a platform is to facilitate interaction, the governance aspect relates to how a platform is used in practice. The governance of a platform refers to how the leadership of a platform is organised and how the leadership structure will determine how a platform will operate. There are two main approaches to the literature to address governance. Ansell & Gash (2017) and Ansell & Miura (2020) use a more theoretical approach to describe governance as a power that affects how a platform functions. Klievink et al. (2016) and Chen et al. (2022) have a more practical approach towards platform governance and focus more on the direct effects of governance on the design and function of a platform.

2.3.1 The power of platform governance

In their articles, Ansell & Gash (2017) and Ansell & Miura (2020) have their way of addressing the same phenomenon. Ansell & Gash (2017) describe in their study the power of governance, which determines how the platform leadership and platform participants will interact with each other, which they call vertical interdependence (Ansell & Gash, 2017, p. 26), and how platform leaders interact with each other or how platform participants interact with each other, which is called horizontal interdependence (p. 26). How interdependence is governed within a platform determines, to a large extent, how a platform functions and acts (Ansell & Gash, 2017, pp. 26-29).

Ansell & Miura (2020) describe the influence of governance power of a platform in a similar way: the governance of a platform determines how a platform will function (2020, pp. 265–269). The article explains that the governance power from platforms in the public sector comes from their ability to generate new output, which is called generativity (p. 265). Generativity refers to how platforms can continually produce new and unanticipated outputs. An example of this would be: a new policies, programs, collaborations or even new platforms.

As the paper explains, this generativity comes from three different sources: interaction, production and innovation (*Ansell & Miura, 2020, p. 265*). Interaction leverage refers to how platforms enable actors to interact with one another, whether between participants, platform leaders, or participants and leaders. Unlike the article by Ansell & Gash (2017), the focus is not on the relationship between these actors but on how they interact. The interaction could be exchanging information, knowledge, resources and other negotiations that can lead to something new. Each interaction, in turn, makes it easier to interact again in the future.

The second form of generativity is production leverage, which refers to the different kinds of products a platform produces (*Ansell & Miura, 2020, p. 266*). Within the public sector, platforms mainly produce services and programs. With each delivered product, producing the next one should theoretically be more effortless.

Lastly, innovation leverage refers to a platform's power to create new ideas, products and services (Ansell & Miura, 2020, p. 266).

2.3.2 The practical influences of platform governance

The other way of approaching platform governance is through the practical implication of governance decisions. Both Klievink et al.(2016) and Chen et al. (2022) address digital platforms in their articles and describe the practical influences governance decisions have on the design and function of a platform.

Klievink et al.(2016) describe how decisions concerning the governance structure of a platform will affect how the rest of the platform functions; who or how will determine what and when (p. 69). The decision-making structure comes close to the interaction approach of Ansell & Gash (2017), but where Ansell & Gash (2017) have a more theoretical approach to the question, Klievink et al.(2016) start looking at more practical implications of platform governance. In their article, Klievink et al.(2016) explore a case in which public and private actors want to construct a platform for standard business reporting (pp. 71-72). When looking at the platform's governance, it was decided that the public organisations should govern the platform because the private actors had no legal authority regarding business reporting (p. 75). While interdependence does play a role here, the practical implications of the law, in the end, decide the governance structure of the platform.

The most practical approach towards platform governance comes from Chen et al. (2022), who performed a literature study concerning digital market platforms. They describe platform governance as "a set of overarching rules, constraints, and inducements that platform owners develop and utilise to address market frictions in coordinating and deploying co-specialized capabilities" (p. 153). They look at the implications that particular decisions will have on the actions of platform participants.

In their article, Chen et al. (2022) focus on the roles of incentives and control in the governance of digital platforms (p. 149). A platform can use incentives to nudge platform users to act in accordance with the platform leader's vision. The study identifies four main incentives: sharing resources, providing information, conferring autonomy and giving rewards (Chen et al., 2022, p. 156).

Next to incentives, a platform leader can also choose to control the platform participants and force them to act according to the vision of the platform leaders by designing rules and control mechanics (Chen et al., 2022, pp. 161–162). The study further explores four of these mechanisms: access control, output control, behaviour control and external relationship control.

2.4 The unique framework of platforms allows for many different organisational uses and implementations

Platforms have a unique organisational framework that allows them to be organised differently. This section will highlight the more important choices and attributes concerning frameworks, such as success metrics, rules, openness, infrastructure, sourcing, flexibility, access and innovation.

2.4.1 Metric of success

While designing a platform, different organisational choices have to be made. One of the key choices considers the question, what is needed for a platform to be considered a success? This question can be answered by establishing a metric of success (*Nambisan, 2009, p. 49*). What constitutes success will be unique for each platform, but there are some general focus points. For example, a success metric should be based on the collective needs of the participants and not on individual success metrics. This can be done by establishing broad or large goals that all participants can identify.

Success is also a significant influence on the growth of a platform. Ansell and Gash (2017) identify four main indicators or types of positive feedback (*p. 24*) to explain this growth: attractor effects, learning, leverage and synergy. The attractor effect (*p. 24*) refers to the idea that a successful platform will attract more participants. And in turn, more participants will make a platform even more successful because it will have more resources to work with. These resources will then circle back to more participants.

Learning can come into play in multiple ways (*Ansell & Gash, 2017, pp. 24-25*). By learning more about the problem the platform is trying to solve, it can become more effective in countering that particular problem. A platform might even accomplish its goal by getting the complete picture of the problem and how it can be solved (*Nambisan, 2009, pp. 46–47*). Another way learning can lead to more success is by motivating the participants (Ansell & Gash, 2017, p. 25) when participants notice that the platform is making a difference by discovering new information.

It can motivate participants or recommit them to the platform. A third way of finding success through learning is by participants learning how to work together through the platform. By learning how to work or interact together through a platform, participants can potentially work more effectively in the future.

The next indicator is leverage. Leverage, in the context of this article, refers to a platform's disproportionate impact compared to its inputs (*Ansell & Gash, 2017, p. 25*). Participants who see that their resources or efforts have substantially more significant impacts through the platform are more likely to continue their support for the platform. Which in practice could mean more input for the platform.

Lastly, there is synergy; synergy refers to a platform's ability to combine diverse resources and translate them into enhanced results (Ansell & Gash, 2017, p. 25). For example, a platform that uses citizens' opinions to enhance the effectiveness of its policies will be more successful if it includes a diverse spectrum of citizens instead of only one particular group.

2.4.2 A platform's need for rules

Another design choice concerns how platform participants are supposed to act when encountering a problem because working with different organisations can be a complex endeavour that can meet many different challenges and issues. That is why a platform design must include systematic approaches to overcome any potential problems a platform might face (*Oglesby & Burke, 2012, p. 4*). When encountering a problem, rules and procedures can be a guiding force instead of risking infighting or any other derailment of the collaboration.

2.4.3 The design choices of a digital platform

Digital platforms have greater control over their participants than other platform types. The design of digital platforms requires additional design choices when compared to other platform types, such as openness, infrastructure and sourcing.

2.4.3.1 Openness

Digital platforms have great control over how open their platform will be. This control of openness usually works in favour of the platform owner instead of the platform participants. In their paper, Morell and Espelt (2018) look at how open the platform designs are in Barcelona. They did this by studying three different aspects of openness: technology, knowledge, and governance.

Technological openness refers to adopting software and architecture, favouring freedom and openness (Morell & Espelt, 2018, p. 2). Technical openness is measured by technical infrastructure and the use of blockchain.

Knowledge openness refers to information on the platform (Morell & Espelt, 2018, p. 2). This openness is again divided into two elements: content and data. Content refers to user-generated content license. In other words, how restricted is the platform's users' use of the content created on the platform? Data refers to the openness connected to the data users generate on the platform.

Governance openness has five categories, the first being openness of management and contributions (Morell & Espelt, 2018, p. 2). This category addresses how the contributions of participants are organised. For example, does a municipality offer a solution that citizens can rate, or can citizens offer solutions themselves, or can citizens offer solutions? In contrast, others interact with the proposals by commenting and rating.

The second category addresses the possibility of participants becoming administrators in a platform (Morell & Espelt, 2018, p. 2). Some platforms will require administrators. When that is the case, is the platform doing this themselves, or are the participants allowed to administer themselves? And how are those administrators chosen by the platform or the participants?

The third category relates to decision-making regarding community interactions (Morell & Espelt, 2018, p. 2). Are there formal or informal rules and systems connected to participant interaction? Can participants influence these rules?

The fourth category relates to what entities can participate on a platform (Morell & Espelt, 2018, p. 2). The question here relates to what entities can join the platform and what role they play within the platform. Is a platform that is only meant for businesses also allowing universities if they want to join?

The last category is the openness around economic management (Morell & Espelt, 2018, p. 2). How transparent are the economics involved with the platform? When participants donate resources to the platform, do they have a say in their use?

These categories together reflect the openness of a digital platform. A different degree of openness can be expected depending on the platform's goal. In general, it can be said that a more open platform is usually more user-friendly and should, therefore, be the goal for all digital platforms.

2.4.3.2 Common infrastructure

When using a digital platform, all participants must use a common digital infrastructure (*Klievink et al., 2016, pp. 68–69*). Organisations using different infrastructures can complicate even simple matters such as communication and work processes. For example, most organisations use Microsoft Teams or Google Drive to communicate and work, but these systems do not interact with each other. A more complex consequence of using different infrastructures is complications related to implementing solutions. If an organisation uses system A to design a digital solution, an organisation with system B might not be able to implement that solution.

2.4.3.3 Sourcing

Sourcing refers to where an organisation develops their digital platform. Two main sourcing strategies are given in the literature: outsourcing (Vestues, 2021, pp. 22–23) and insourcing (Vestues, 2021, pp. 25–27). When an organisation outsources their digital needs, it depends on another organisation to develop its digital needs, such as systems and infrastructure. This can be a good option for an organisation with digital needs but without the expertise or resources to develop its own digital systems and tools. The downside of outsourcing is that an organisation becomes dependent on external organisations for their digital needs. When updates or upgrades are needed, an external organisation must be hired to develop these (pp. 22-23).

Insourcing refers to an organisation designing and developing its own digital needs (Vestues, 2021, pp. 25–27). This gives an organisation the freedom to make its own decisions regarding digital developments and does not depend on external organisations. The downside of this strategy is that an organisation has to hire their own development team, which can be a costly endeavour.

2.4.4 flexibility is a unique part of a platform's framework

Next to design choices, platforms also offer some unique attributes that organisations can utilise. One of these unique attributes is a platform's flexible framework. This flexibility allows organisations to plug and play (*Nambisan, 2009, p. 49*). When organisations learn how platforms work and function, it will become easier for organisations to join different platforms quickly and cost-effectively in different contexts (p. 49).

Another example of flexibility comes from the study by Vestues (*2021, pp. 18-19*). In her study, she addresses the notion of platformization in digital platforms, which she describes as: "the sociotechnical process of establishing a platform structure across existing systems and practices" (*p. 3*).

Platformization allows organisations to alter existing digital systems quickly and is done in two steps. First, decouple systems, information, and activities into components (*p. 18*). The second step is reconnecting the components in a digital platform (*p. 18*).

2.4.5 Providing access and innovation

Another unique aspect that platforms offer is the ability to recruit a broad selection of participants; this can also be called the many-to-many approach (Ansell & Gash, 2017, p. 17). For example, a municipality can include its citizens in decision-making through a digital platform.

By reaching new and more participants, platforms are an ideal form to stimulate innovation. Ansell and Miura describe three ways platforms can facilitate innovation (2020, p. 266). Open innovation is when a platform's participants are asked to develop new solutions to a problem (*crowdsourcing*). Secondly, platforms can open their internal information to external actors through open data innovation. The external actors can use the information to solve any of their problems. Lastly, collaborative innovation has a multilateral flow of information in which individuals or collaborative groups could create innovation.

2.5 Platform typologies through design, output, action and singular-based approaches

The articles have different strategies to help clarify or demystify the concept of platforms. One way this is being done is through the creation of a typology. By categorising different types of platforms, one can create a clearer picture of what a platform could be. The main typology forms mentioned in the literature are design-based, output-based, actions-based, and singular-type platforms.

2.5.1 Design-based platforms

In their article, Ansell and Gash (2017) create a typology for platforms based on the design and governance of the platform (*pp. 26-29*). The specific design options that Ansell and Gash (2017) look at are the horizontal and vertical interdependence within a platform (*Ansell & Gash, 2017, pp. 26-29*). As explained in the governance section, horizontal interdependence refers to the relationship between the participants and between platform leaders. In contrast, vertical interdependence refers to the relationship between platform leaders and the participants. Both forms of interdependence are affected by the number of participants and the power of an individual participant. Ansell and Gash (2017) use the dynamic between horizontal and vertical interdependence, which can be used to identify nine different platform categories, as shown in Figure 1 from their study. Horizontal interdependence is shown as the platform's intermediary role, and vertical interdependence is shown as a platform's control over the design rules.

Platform's Intermediary Role

More Catalytic ←——————————————→ *More Aggregative*

Platform's Control over Design Rules

Stronger

Functional Modular Platforms (Ex: CALFED)

Standardization & Certification Platforms (Ex: Marine Stewardship Council)

Benchmarking Platforms (Ex: OECD)

Franchise Platforms (Ex: EPODE)

Matching Platforms (Ex: Global Hand)

Knowledge Platforms (Ex: National Nuclear Safety Knowledge Platforms)

Bridging Organization Platforms (Ex: EKV)

Network of Networks Platforms (Ex: World Social Forum)

Crowdsourcing Platforms (Ex: UNICEF)

Weaker

(Figure: 1, *Logics of Platform Governance, Ansell & Gash, 2017, p. 27*)

The benefit of using design as the centre point of their typology is that Ansell and Gash (2017) can show how diverse platforms are in practice. A platform designed to be completely dependent on its users is, in practice, a very different platform than a platform primarily independent of its users.

As seen in Figure 1, for example, crowdsourcing platforms that require direct input from their users depend entirely on their users for their existence (*p. 27*). A bridging organisation platform, which tries to connect different organisations while still negatively affected by the loss of organisations, can still find new organisations to help match (*p. 28*).

The difference between the two platforms might not be crystal clear; the line between the platform types is sometimes very narrow. This is the main shortcoming of the typology used by Ansell and Gash (2017); while there are clearly different platform types in theory, trying to differentiate these types based on their design choices concerning the dependence on platform users and the platform governance strength is unpractical. The unclear difference between categories would make any observations or interview answers potentially unreliable.

Another problematic point in the theory is that not all platform types are as realistic. Ansell and Gash (2017) even admit that they struggled to find a platform that fit the description of a platform that has low vertical and horizontal interdependence, the functional modular platform type " We found few examples of collaborative platforms with this type of functional modularity. However, the California water collaborative known as CALFED comes close." (*p. 29*). In summary, the platform typology from Ansell and Gash (2017) works great for showing the diversity of platforms in theory but might not be ideal for labelling platforms found in practice.

The typology described in the article by Ansell and Miura (2020) tries to counter this problem. In their article, Ansell and Miura (2020) differentiate platforms based on their output.

2.5.2 Output-based platforms
In the governance part of the literature review, I mentioned how the article of Ansell and Miura (*2020*) related governance to generativity, or the ability to create, which had three different forms of output: interaction, production and innovation (*p. 265*). These outputs are later in their article used to form four types of platforms: Interaction platforms (*p. 268*), production platforms (*p. 268*), innovation platforms (*pp. 268-269*) and co-creation platforms (*p. 269*).

Interaction platforms don't primarily aim to innovate or produce something; the sole focus is interaction (*Ansell & Miura, 2020, p. 268*). The article addresses two forms of interaction platforms: matchmaking and participation platforms. Participation platforms aim to connect people so they can share experiences and ideas. This could, for example, be useful for a municipality to inform citizens how a policy is going or where to build a new park. Matchmaking platforms are comparable to a marketplace where the goal is to match people for a particular reason. An example of a matchmaking platform could be one that matches people who need help with volunteers who would like to give some time to help out.

Production platforms aim to set up the production of services or programs (*Ansell & Miura, 2020, p. 268*). Like the interaction platform, interaction is still part of the production platform but is no longer the end goal. A production platform wants to create or produce something from the interaction the platform facilitates. There is one sub-type within the production platform, which is the co-production platform (p. 268). These platforms involve people outside the platform in the production. In the public sector, an example could be citizens reporting damages to their local government through an app; the government then sends people to resolve the problem.

The third type is the open innovation platform (*Ansell & Miura, 2020, pp. 268–269*). An open innovation platform aims to find solutions or innovations to a problem or dysfunction. The open aspect of the innovation platform points to the idea that the platform is open to anyone's input. All people are welcome to share their ideas and thoughts in the search for the right innovation. After the platform finds the right solution, the role of the innovation platform stops. An open innovation platform is not concerned with implementing the solution; it aims to find it.

The last type is the co-creation platforms (*Ansell & Miura, 2020, p. 269*). These platforms combine all three leverages (interaction, production, and innovation) to fully counter local or even global problems. Co-creation platforms aim to solve a particular problem; for example, a coastal city might struggle with a polluted shore. A co-creation platform created to solve that problem would have to bring the important actors together (*interaction*), work together with the citizens to find a potential solution to the problem (*innovation*), and then implement and execute the solution (production). In the end, this should help solve the problem by, for example, setting up shifts of people to pick up all the rubbish from the coastline for a month.

Utilizes Innovation Leverage

	NO	**YES**
NO	**Interaction Platforms** (Such as deliberation, participation or matching platforms)	**Open Innovation Platforms** (Such as crowdsourcing, open data platforms, Living Labs, etc.)
YES	**Production Platforms** (Such as service or co-production platforms)	**Co-Creation Platforms** (Such as agricultural innovation platforms or collaborative platforms)

Utilizes Production Leverage (NO / YES rows on the left)

(Figure 2, *A typology of governance platforms, Ansell & Miura, 2020, p. 267*)

The theoretical jumping-off point that all platforms facilitate some kind of interaction, combined with the ideas of production and innovation leverage, makes the typology of Ansell and Miura (2020) simple and practical. It is relatively easy to approach a platform and use the reasoning offered in the typology to identify which platform type one has encountered. A person only has to look at a platform's output and reflect on the platform, which has either the goal of producing something or innovating something. A platform type is still identified if it doesn't do either or both.

An apparent weakness of the article is the theoretical foundation that every platform involves some form of interaction. During the analysis, multiple platforms were encountered that did not have a clear form of interaction or participation, which made the typology of Ansell and Miura (*2020*) unsuitable for identifying the encountered platforms. This apparent weakness will be further explored in the data analysis chapter of this thesis.

Platforms produce social innovation

Another article that uses an output-based platform typology is Nambisan (2009). The theory behind the typology is based on different stages of social innovation that the writer has identified in larger networks (Nambisan, 2009, p. 46). In his article, Nambisan (2009) describes three types of platforms: exploration, experimentation, and execution.

Exploration platforms help define problems (Nambisan, 2009, p. 46). Platforms are needed to bring all stakeholders together on a particular problem so they can get the full scope of the issue.

An experimentation platform helps to test possible solutions for a problem (Nambisan, 2009, p. 47). An experimentation platform brings together actors involved in solving a particular situation. In his study, Nambisan (2009) notes that public organisations rarely use these platforms. He argues that public sectors usually immediately implement a potential solution when one is identified instead of first taking time to test their solution (p. 47). He then mentions how private actors routinely use experimentation platforms to trail their products before introducing them to the market (p. 47). When an experimentation platform is used, it should serve as a neutral environment for organisations to test their solutions (p. 48). Using a neutral environment, the participating organisations on the platform know that their solution is neutral and valid for everyone.

The last type of platform mentioned in the study is an execution platform (Nambisan, 2009, p. 48). Execution platforms are not meant to simply execute a solution but to share it with others. This can be done by designing and distributing templates of the solutions (p. 48). These templates should be easy to understand and flexible enough to be used in different circumstances. Execution platforms are also meant to support platform members to coordinate their efforts. This can be done by supplying each other with the knowledge of how the solution can be applied (p. 49).

As with the typology of Ansell and Miura (2020), the typology used by Nambisan (2009) is very practical. The focus on output and the three platform types makes it relatively easy to identify a platform type in practice.

A shortcoming of Nambisan's typology (2009) is that it focuses on social innovation (p. 46). This makes the typologies less useful when identifying platforms that do not relate to social innovation. For example, a platform that uses citizens to gain the full scope of a problem would be an exploration platform (p. 47). However, a platform that uses citizens to choose one of three different policy options would not comfortably fit in any of the three types described by Nambisan (2009).

2.5.3 Action-based platforms

At first glance, the idea of an output and action-based typology might seem interchangeable. The difference between action-based and output-based platforms can be derived from the thought process used while designing the typology. Oglesby and Burke (2012) and Klievink et al. (2016) use inductive reasoning to construct their typologies; they observe particular actions that platforms take or consider the primary purpose and use those to classify the platform type. Ansell and Miura (2020) and Nambisan (2009) use deductive reasoning to construct their typologies. They observe the bigger picture connected to the idea of platforms and include those points in their typologies. This is not stating that one way is a better way of describing platforms; the writers had different goals when writing their articles.

As mentioned, Oglesby and Burke's (2012) report makes use of an action-based typology. In their report, Oglesby and Burke (2012) observe the characteristics of different humanitarian platforms, such as form, purpose, organisational structure, function and activities (Oglesby & Burke, 2012, p. 13). Based on function and action, they establish nine types of platforms (pp. 16-17): Advocacy and influencing, capacity development, information sharing, innovation, matching/brokering, policy/standards, project implementation, relationship building, and thought leadership.

2.5.4 Singular type platforms

Another example of an action-based typology is the singular platform type Klievink et al. (2016) mentioned. In their article, Klievink et al. (2016) look at a singular platform type to which they refer as an information platform (p. 69) and describe as "Platforms thus are socio-technical artefacts that can transform the way actors interact with each other. They can be considered IT-based inter-organizational arrangements" (p. 69). The name information platform comes from an action-based approach; its primary objective is to share data or information, making it an information platform.

The last example mentioned is the singular-type platform by Chen et al. (2022). They use a singular-type platform because they use a systematic literature review. A vital literature review element is a solid definition of the study topic. For their research, they chose to focus on digital platforms, which they describe as "which are a type of platform that serves as a standardized digital interface and utilizes digital technologies to facilitate interactions between different parties." (p. 149). This description serves as their guide to identify 189 studies concerning digital platforms (*p. 149*).

A singular platform type works harmoniously with a specific case study, as with Klievink et al. (2016) or a systematic literature review. Still, one can't use a singular platform type when trying to identify different types of platforms. The singular type of platform is useful when trying to narrow down a particular platform type that one wants to study. For example, this thesis tries to study different kinds of digital platforms because a more narrow approach makes it easier to find fitting cases.

2.6 Summary

When breaking down the literature into its core elements, it becomes clear that the primary purpose of platforms is to facilitate interaction. How this interaction will function in practice depends on how a platform is governed and how a platform's framework is organised to utilise the different attributes that a platform can offer. With these revelations, the following concept of a platform was formed: A platform is a policy tool to facilitate interaction, which is shaped by its governance and framework aspects to best fit the purpose for which the platform is designed.

These different approaches result in the literature on different typology approaches such as design, action and singular approaches. In theory, there are many differences between these platform types, but in practice, platforms are often more similar than different.

3.0 Methods

There are many different choices to be made while designing and performing research. The purpose of this methods chapter is to provide an overview of the different choices made concerning the research design and approaches utilised in this study in a transparent way.

While performing research, a researcher is bound to run into complications and predicaments, either through one's own choices or external factors. In the spirit of transparency, this chapter will, therefore, next to addressing research and design decisions, also explain any complications that were encountered and how these, in turn, have influenced the research.

The researcher's worldview

Before diving into what research method should be used for this thesis, it will be beneficial to account for the researcher's ontological and epistemological views that influenced how the research was done. In their book Theory and Methods in Political Science, David Marsh and Gerry Stoker describe ontology and epistemology as part of someone (*Marsh & Stoker, 2002, p. 17*). This means that a researcher can't simply change their worldview based on their research; the researcher's worldview will somehow influence the study.

The research for this thesis was done from an anti-fundamentalist (*Marsh & Stoker, 2002, pp. 18, 26-30*) and a social constructivist *(Creswell, 2009, pp. 8-9)* worldviews. These views mean that there is not one absolute truth. There are different interpretations or constructs of notions; we could both be describing the same object in different ways and still be speaking about the same object. For the study, this means that the established notion of platforms is not meant to be a universal notion; it is an observation of observations (*Marsh & Stoker, 2002, p. 19*).

3.1 A qualitative case study

There are multiple approaches towards the design of a study: quantitative (Lowndes et al., 2017, pp. 254–257), qualitative (p. 237) or mixed methods approaches.

3.1.1 Qualitative over quantitative
The main empirical focus of this study concerns the drivers and prohibitors experienced by municipalities in the use of digital platforms, which are subjective terms. While it is possible to use quantitative research to categorise and measure to what extent municipalities experience drivers and prohibitors, a qualitative method might be more suitable for the exploratory nature of the study.

Qualitative research allows a researcher to look at what processes and experiences are behind the different drivers and prohibitors. Why does one municipality describe resources as a driver, while another municipality describes them as a prohibitor?

The qualitative method taps into narratives connected to the researched subject (*Marsh & Stoker, 2002, p. 199*). The drivers and prohibitors around the platform usage of municipalities is a context-dependent question, which fits this narrative focus. The social constructivism and interpretive worldviews are also best suited for a qualitative research approach (*Creswell, 2009, p. 8; Marsh & Stoker, 2002, p. 26*).

3.1.2 favouring a case study approach

There are multiple approaches a researcher can take when using a qualitative research approach. Some examples are grounded theory, a case study, phenomenological, and narrative research (*Creswell, 2009, p. 13*). A case study design makes the most sense from these different approaches when looking at the research objective. To confirm this statement, we look at Robert Yin's book on case study research, which identifies three conditions to test if one should use a case study as their research approach (*Yin, 2009, pp. 8-14*).

The first condition is the research question (*Yin, 2009, pp. 9-10*). The research question determines what the study focuses on. Yin advises that an exploratory or explanatory research question best fits a case study because these two approaches focus on history and context (*p. 10*). The research question for this thesis has two parts: a descriptive focus on platforms and an exploratory focus on the drivers and prohibitors of municipalities. For this second part, a case study could be an excellent fit.

The second condition is control of behavioural events (*Yin, 2009, pp. 11-12*). This condition considers the need for control of the event that is being studied. If control is required, an experimental design fits better. For this study, there was no need for any behavioural control. For example, there is no need to control a local government to see how they use digital platforms under specific rules. The goal was not to create an ideal context but to explore the potential drivers and prohibitors in a municipality under normal or unaltered conditions.

The last condition considers contemporary events (*Yin, 2009, pp. 11-12*). For a case study to function well, it needs to address a contemporary event from which people can still be interviewed or events that can still be observed. This last condition is a little more complex, considering platform organisations are a relatively new concept. Finding contemporary data did turn out to be a challenge. Some interview subjects were still in the early stages of developing a platform, which posed no implications for the questions related to drivers and prohibitors, but did make it harder to identify what types of platforms municipalities were using.

3.1.3 Municipalities as the unite of analysis

The unit of analysis plays an essential role in determining what kind of case study is needed for a research project (*Yin, 2009, p. 29*).

There are two contenders for analysis for this study: municipalities and platforms. Some effort was made at the beginning of the study to make platforms the unit of analysis. The focus on the platforms themselves would allow for a comparison of multiple platforms within a single municipality or an embedded case study (*Yin, 2009, p. 50*). A comparison between platforms within a single municipality could prove an interesting micro-level study in which individuals, departments, structures and a platform's purpose could be compared and studied. However, the lack of a common consensus concerning the term platform made it impossible to methodically identify multiple platforms within a municipality.

This complication made municipalities the best choice for analysis unite of this study. Using the municipalities as the unit of analysis allows this research to make various comparisons, such as population, economic situation and political influences. These different comparisons could be significant in identifying the various drivers and prohibitors.

With municipalities being the unit of analysis, the next step was to identify a singular platform type on which to base the research. The assumption was that different types of platforms would likely struggle with different drivers and prohibitors, therefore a singular platform type was needed for the comparison (*Yin, 2009, p. 54*).

The choice was made to focus this study's efforts on digital platforms. Digital platforms were found to be the most relatable platform type during the preliminary interviews. One major benefit of using digital platforms as a focus is that digital platforms are developed and used within the IT department. This made it possible to focus all contacting efforts towards a singular department, which made it somewhat easier to find suitable interview candidates. In practice, it was still troublesome to find enough willing interview participants. However, enough participants were found to make the study possible.

3.1.4 a typical cases design

Now the unit of analysis is identified, the next step is to determine what kind of case would best fit the research design. Multiple cases could be used: A critical case (*Yin, 2009, p. 47*), an extreme/unique case (*p. 47*), a typical case (*p. 48*), a revelatory case (*pp. 48-49*) or a longitude case (*p. 49*).

As things were, there was little readily available information on digital platforms used by municipalities in Norway. The lack of a common consensus makes it difficult to find general information on digital platforms used by Norwegian municipalities. This lack of information made it harder to identify critical, extreme, revelatory cases upfront. This meant they could only be used if identified early on during the research. Time restrictions made a longitude case approach impossible. The best choice for this thesis was to use a typical case approach. A typical case in this context would be a municipality with the resources and knowledge to develop or operate a digital platform, which would be one of the bigger municipalities in Norway.

Another point of consideration for a case study is the choice between a holistic or embedded case study (*Yin, 2009, p. 59*). A holistic case study would focus on a particular platform within a singular municipality while studying multiple municipalities. In comparison, an embedded study will focus on various platforms within a singular municipality while studying multiple municipalities. As mentioned in the previous section, there are some complications with designing an embedded approach. This study will, therefore, be a holistic case study.

3.1.5 A focus on the seven largest municipalities in Norway

While selecting a case, it is essential to set up multiple qualifiers for a case to be considered adequate for research (*Yin, 2009, pp. 91-92*). Location was considered as a potential factor but was abandoned for its impracticality. The cities with the most citizens are all located in the southern region of Norway.

Population is the main qualifier for this study. A municipality's population determines, to a large extent, the resources and manpower that the municipality has access to. A municipality with more resources has the room to innovate, develop or look for new implementations for digital platforms. While smaller municipalities will likely be more focused on core functions or basic tasks.

This leads to the hypothesis that smaller municipalities will likely suffer from more prohibitors than larger municipalities.

Norway is not a densely populated country; there are around 356 municipalities, with an average of 15.418 citizens. The seven largest municipalities have a population of over 100.000 and

While designing the original selection strategy, the choice was made to include at least four of the biggest municipalities in the research. These municipalities should offer the most likely cases to use digital platforms and, therefore, the most crucial cases to explore. After these four, municipalities will be elected based on population height going from 100.00 to 75.000, 50.000, 40.000, 30.000, 20.000, 15.000 and multiple candidates with 10.000 citizens. The limit was set at 10.000 as the lowest population level; the expectation was that a municipality with less than 10.000 citizens would not have the capabilities and resources to develop and use digital platforms.

The population data used for this selection process came from the website Statistics Norway (https://www.ssb.no/en/statbank/table/11342/tableViewLayout1/), which had the population numbers per municipality from 2023.

While reaching out and starting the interviews, it became clear that the chosen selection strategy was not practical. Even middle- and bigger-sized municipalities are not actively working on or with digital platforms. Even some of the seven biggest municipalities struggled to find the resources, manpower and expertise needed to develop and use digital platforms. The choice was therefore made to refocus all efforts on contacting the big seven municipalities.

Two midsized municipalities were already interviewed when this decision was taken. While the two municipalities showed similar drivers and prohibitors when compared to the biggest municipalities, the two municipalities also showed considerably more prohibitors than drivers. To make the most out of the acquired data, the two midsized municipalities will be included in the analysis of singular drivers and prohibitors, but the data will be secluded from the general analysis of drivers and prohibitors.

3.2 Data sources

Multiple data sources are needed to research the above-described cases. There are three types of data collection: observation, interviews and documents (*Creswell, 2009, pp. 178-180; Yin, 2009, p. 101).* Only interviews and documents played a substantial role during the research. Since digital platforms are an online or digital phenomenon, no credible reason was seen to add observations as a data source for this study.

Including multiple forms of data is required to be able to triangulate the data of a study (*Yin, 2009, p. 114*). This means that the different data sources can help corroborate each other. Data acquired during an interview might be subject to interpretation. A document or second interview that corroborates the interview data will increase the data's validity.

3.2.1 Interviews

Interviews will be a crucial data collection method for this study. Interviews will be needed to help establish the drivers and prohibitors municipalities encounter using digital platforms. The interviews in this research were mainly done one-on-one over a video call (*Creswell, 2009, p. 179*). The choice for holding the interviews by video call is primarily pragmatic. Video calls help save travel time and money and are easily done from home or the office. So actors don't have to make additional arrangements to facilitate the interview.

Multiple interviews with the same actor may occur over time (*Yin, 2009, p. 107*), for example, to ask additional questions or to clarify or confirm earlier statements. When there is only a singular additional question, an email will be sent to the participants with the question. This is done for practical reasons so that participants don't have to be interviewed multiple times to answer a singular question.

The interviews will make use of open-ended questions (*Creswell, 2009, p. 3*) and a semi-structured format (*pp. 182-183*), which means that the interview will contain structured questions that have been written down beforehand and follow-up questions that will be asked based on information that comes up during the interview.

The use of a semi-structured interview style did not always work as well as hoped. The different interpretations concerning the notion of digital platforms played a significant role in how an interview would progress. The interview questions were designed to question the understanding, use and the drivers and prohibitors connected to use of digital platforms. Not all interview subjects had a firm grip on the notion of digital platforms or had much experience working with them.
This meant that during some interviews, some of the structured questions had to be forgone in favour of a more open interview approach. This resulted in a more extended interview so as to still be able to acquire a complete picture of the data.

The interviews were in English to ensure the researcher and interviewee fully understood one another. During the interviews, participants did make use of Norwegian when they could not think of a word in English. To guarantee the authenticity and validity of the interview transcripts, the Norwegian words were still transcribed and will have an English translation added to them.

3.2.1.1 interview participants
The interview participants for this study were a combination of public servants and politicians. The inclusion of two groups originally came from a data point mentioned during the interviews. Implications were made that one of the two was not making any efforts to develop and use digital platforms. Including both groups could give a complete picture of the drivers and prohibitors. It should be mentioned that most interview participants were public servants. Out of the eight interview subjects, only three had political representation.

Next to the municipalities, interviews were held with DigiVestland and DigiTrøndelag. Which are organisations set up by municipalities to help facilitate the digitalisation of the member municipalities. At first, this was only meant as a preliminary interview, but the insights and alignment with other interviews made it beneficial to include the interviews in this study.

3.2.1.2 Gaining access

A network for potential interview candidates had to be set up during the study. In practice, this meant many emails to different municipalities around Norway. During the outreach, multiple setbacks were encountered. Firstly, it became clear that the notion of platforms was too abstract to find a suitable interview candidate. The search had to be refined to digital platforms, with added examples, so it was clear what the purpose of the study subject was. Secondly, it took a while for municipalities to return any communication. This was expected, seeing that municipalities are big bureaucratic organisations. However, the delay made it hard to get the ball rolling and gain access to the right information sources. Ultimately, one municipality out of the big seven showed no interest in the study. While the municipality did show interest in the study at first, in the end, they did not reply when interview dates were proposed. In the final weeks of the study, a last attempt was made for a last-minute interview. Again, some interest was shown in joining the research, but again, contact stopped after interview dates were proposed.

Public servants

As mentioned, the research participants were a combination of public servants and politicians. At the beginning of the research, public servants were approached by general email and phone calls to the municipality with a request to interview someone involved with digital platforms in the municipality. Throughout the study, the selection procedure for public servants would become more and more refined.

More focused searches were done on the digitalisation topics to locate individual contact details of public servants involved with the digitalisation efforts. If this yielded no results, the choice was made to work upward, contact managers with digitalisation in their portfolio, and request if they knew any public servants who might be able and willing to contribute to the study. In the end, former interview participants were asked if they had any contact with the last municipalities not yet represented in the study.

Politicians

At the beginning of the research, the decision was to contact only the biggest political party in a municipality. This was done using the local party's website and contacting their information point with an interview request. Later, the choice was made to approach all the major political parties involved in a municipality's local administration. The choice was made not to approach any opposition party because they might give a coloured perspective of potential drivers and prohibitors by mentioning that some problems would have been approached differently if they were in charge.

Another approach towards politicians was finding the candidate list of a local party and contacting city council members directly with an interview request. This request specifically asked if a politician could refer a colleague involved with digitalisation or digital platforms.

Overall, the efforts in contacting politicians were less fruitful than contacting public servants. This is likely due to the highly technical nature of digital platforms, which is something public servants overall might have more affiliation with than politicians. This point comes back up in the analysis when the relationship between politicians and public servants is discussed.

3.2.1.3 Preliminary interviews

This study made great use of preliminary interviews (*Rathbun, 2009, p. 696*). During the starting phase of the research, multiple preliminary interviews were held to help the researcher establish a network and understand more developments in the field. These interviews were, in practice, more structured conversations and were not recorded. The results of these preliminary interviews were a broader understanding of the role of digital platforms and how digital platforms are viewed within municipalities. The information gained through the preliminary interviews was later used as the basis for the interview questions.

The preliminary interviews were held with people involved with digitalisation within a municipality. Some of these people later participated in the formal interview rounds. One organisation that is not a municipality but was included in the preliminary interviews is KS (*The Norwegian Association of Local and Regional Authorities*). KS is an interest organisation for municipalities in Norway. They have been included in the preliminary interviews because multiple municipalities mentioned them as key actors in their digitalisation efforts.

While providing some additional insights, no new substantial information was gained from the KS interview, and the choice was made not to include them again during the formal interview rounds.

3.2.1.1 Coding the interview

The interviews were recorded with an audio device and transcribed in full (Creswell, 2009, p. 191). These transcriptions were then coded with the use of the program MACQDA. The coding process started originally with two codes to identify drivers and prohibitors. Similar drivers and prohibitors that were encountered in multiple interviews eventually became subcodes. These subcodes were, in the end, categorised into seven categories: Scope influences, policy influences, organisational influences, economic influences, political influences, unique factors and general platform information. Each category included all the drivers and prohibitors connected with that specific category.

3.2.2 Documents

The notion of documents is broad and can refer to all kinds of documented data (*Yin, 2009, p. 103*). Documents like emails, websites, notes, agendas, meeting minutes and internal reports will mainly be used to help verify and support information gained from other sources like the interviews (*p. 103*). Documents will help grow the understanding of events and processes involved with the setting that is being researched. Documents like academic publications and books will help me gain a deeper theoretical understanding of platforms and how they are theoretically used.

The documents used in this study were primarily scientific publications such as books, papers and articles. Some national government reports are used in this study to better understand the environment in which the municipalities work. For example, the Norwegian government's national digitalisation strategy could be significant in municipalities' digitalisation efforts.

It is also important to mention that documents are not free of bias (*Yin, 2009, pp. 103-105*). Sources play, therefore, an essential role in establishing where the documents came from. An obstacle with the documentation that should be mentioned is the language barrier. Most of the documents related to Norwegian municipalities will be in Norwegian, making it harder to pick up on some nuances that a native speaker could identify.

To counter this obstacle, this study will ask native speakers what the most fitting translation would be for the search for motivation in the documents. These natives were peers and had some knowledge of the workings of platforms.

3.3 Integrity Safeguards

With the methodology addressed, the next step is to ensure that the study's integrity is safe, which means controlling for any potential problems and risks concerning bias, validity, reliability and any potential ethical issues.

3.3.1 The potential effect of personal bias on the study

When a study works with case research, it is vital to watch out for bias in the case selection. A selection bias can influence the research results depending on the bias problem (*Ebbinghaus, 2005, p. 133*). For example, picking a case because it might be more likely to show a result can influence a study's generalisability and credibility.

The bias of case selection should be countered by explaining why a case or cases were elected. It might also be an idea to explain why particular cases weren't selected. For example, this should be explained if a case might have been interesting to research but was out of reach. An explanation of the case selection is given in the case selection section in the methodology chapter.

Reflection on the researcher

A researcher needs to stay critical of their potential biases during the research (*Creswell, 2009, p. 192*). The introduction of this study gave an overview of the potential biases of the researcher. One other bias came up during the study: the researcher's interpretation of digital platforms. As with the interview subjects, the research had limited or basic understanding concerning platforms. The understanding concerning platforms was broadened during the research, but it still wasn't perfect.

The researcher's lack of understanding concerning platforms played a role at the beginning of the study, especially during the starting interviews when the researcher struggled to come to a common understanding of digital platforms with the preliminary interview subjects. The choice was therefore made during the official interviews that the researcher would not impose his views of digital platforms but would let interview subjects tell their own story. Additional questions could be asked to highlight any angles concerning digital platforms that were not mentioned by the subjects of the interviews. But this was never done in a leading or forced way, so as not to let the researcher's bias influence the data.

3.3.2 Safekeeping the Interviews

Bias is an important influence during interviews that should be kept in mind. There should be a clear distinction between opinions and facts (*Rathbun, 2009, p. 691*). This can be challenging to do. Asking for data or documents to corroborate made statements is one way of safeguarding against bias problems. Another is asking indirect questions (*Rathbun, 2009, p. 694*). Asking indirect questions instead of direct questions helps both interviewer and interviewee to not misunderstand facts and opinions. The question "What could have been the cause?" instead of "What is this the cause?" is a more open question that leaves room for an interviewee to admit they might not know the factual answer.

3.4 Validities and reliability

A research project has to consider four types of validity: Construct validity, statistical validity, internal validity and external validity (*Kleven, 2008, p. 223*). Statistical and external validity is less important for this study does because it does not have a generalisation goal and does not rely on statistics (*pp. 226, 228*). The main focus will be on constructing internal validity.

3.4.1 Construct validity

Construct validity pertains to how well research indicators fit the theoretical constructs (*Kleven, 2008, p. 224*). Constructing the validity of research is hard to measure because it requires comparing visible or real-world indicators with invisible or theoretical constructs (*p. 224*). The best measurement of construction validity is to look at the shortcomings of the construct through construct irrelevance (*p. 225*) and construct underrepresentation (*p. 226*) to see how fitting a construct is.

Having platforms as subjects brings a unique challenge for this study. There is no universal definition of a platform within the public field. There is a higher risk of misunderstanding when communicating with municipalities about platforms. This makes it harder to have strong construct validity. Extra caution was taken when referring to platforms and other theoretical constructs with no universal definition.

One way the construction validity of this research was approached was through the use of negative information (*Creswell, 2009, p. 192*). Negative information refers to theories and ideas that run counter to theories that could or were used in the research. For example, a potential gap in the literature was encountered during the data analysis. New literature research was done to find any potential articles that might explain or address the potential gap that was discovered.

3.4.1.1 Construct irrelevance

Construct irrelevance pertains to subjects that the established constructs are looking for, which are irrelevant to finding the phenomenon being researched (*Kleven, 2008, p. 225*). This study tries to minimise irrelevant points by coding the interviews. Through coding, the collected data can filter the less relevant information and bring out the more relevant information.

3.4.1.2 safe keeping through coding

The interviews will be coded using a bottom-up approach (Locke et al., 2020, p. 2). This means that the data from the interviews will be leading. Labels and categories are based on similar answers in multiple interviews. In other words, the coding was a learning experience where much attention was given to the individual participants and the data as a whole. In practice, the interviews have been coded multiple times. Once after the interview was transcribed, the second time when all interviews had been coded once, and then a third time when the data analysis required new labels and categories. This guaranteed that the code had room to evolve by adding new data and being implemented the same way throughout the coding process.

3.4.1.3 Construct underrepresentation

Construct underrepresentation is the opposite of irrelevance, it addresses the important topics not covered in the theoretical construct (*Kleven, 2008, p. 226*). One way to minimise underrepresentation and increase one's construct validity is through respondent and communicative validation (*p. 226*). Addressing the construct of this study with the people who will be interviewed gives participants a chance to share their impressions on the construct. Which could help find any potential missing points and lose any irrelevant points. This was done during this study by asking every interview subject for their interpretation of digital platforms.

3.4.2 Internal validity

Lastly, a closer look is needed at the internal validity of this study (*Kleven, 2008, pp. 227-228*). Internal validity is about causal mechanisms used in a study (*p. 228*). In this study, the primary causal mechanism explored is the drivers and prohibitors around the use of digital platforms. It is crucial that during the study, a continual focus is reserved on ensuring that all efforts are being used to answer the causal mechanism and not on any other topics.

The use of the term platform does pose some challenges to internal validity. The term platform is not a universal term. Different people will have different associations with the term. To guard against this, some extra measures were taken.

First, an explanation of what a digital platform is will be included in all external communication. An interview request, for example, will include a description of what a digital platform is within the context of this study and an example will be given. The term digital platform will also be explained in the consent form that interviewees are asked to sign.

There will also be some safeguards during the interviews. For example, one of the first three questions during an interview pertains to the term digital platform and what people understand regarding it. This way, it is at least transparent how the term is used during the interview. After the interview, their interoperation can be noted in the transcript so internal validity around the term's usages can be safeguarded.

Peer debriefing will be used to guarantee that the study is at its very best (Creswell, 2009, p. 192). This means that a peer (*another master's student or a teacher*) was asked to examine the thesis, specifically focusing on internal validity. This will help spot any potential inconsistencies that the writer might have missed.

3.4.3 Research transparency

The reliability of a study is determined by how accurately it can be repeated by other researchers *(Creswell & Creswell, 2018, p. 199)*. A researcher can improve their study's reliability by giving clear, transparent and detailed descriptions of all the choices made during the study (*p. 201*).

The methodology chapter of this study was structured to function as a blueprint for any potential future researcher who would want to repeat the study. All relevant choices concerning the study, such as the research approach, the case selection, the interview approach, and the interview coding, have been described. Any implications or setbacks encountered have been accounted for, as well as in the methodology chapter and the theoretical framework and analysis chapters.

3.4.4 Safeguarding ethics

Ethical considerations are the last point that will be looked into for this research design. Research ethics are about one's moral behaviour and decisions while doing research (*Bos, 2020, p. 37*). This study has two primary ethics to consider: research and professional ethics (*Toshkov, 2016, p. 335*).

The research ethics of UIB

Research ethics pertain to values, norms and practices one should follow while conducting research (*Bos, 2020, p. 38*). A good way to start forming one's research ethics is to look at the guiding research principles or code of conduct one has to follow from one's employer or university (*p. 39*). These principles should help guide a study to become more impartial, transparent, professional and committed to representing the truth (*Toshkov, 2016, p. 335*). For example, UIB's guidelines on using sources guide research to be more transparent and will counter plagiarism (*University of Bergen, 2020*).

Another important point is that the findings of this research should be made available to other researchers (*Toshkov, 2016, p. 336*). This study is meant to explore a phenomenon that might need further research by other researchers. Publishing or sharing the findings with data services should make the data available to all who need it.

Professional ethics

This is where professional ethics come in. Professional ethics are about the values, norms and practices one uses with the people and organisations involved in the study (*Bos, 2020, p. 38*).

One of the things included in the research design is a consent form that all participants must sign. The consent form will help study participants understand their role and let them know what to expect from the study (*Bos, 2020, pp. 246–250*).

Next to the consent form, this study will protect the identity of its participants by not mentioning any names, positions or potential organisations. No reference to specific circumstances will be given either. A key meeting will be presented as a meeting to make sure participants cannot be narrowed down as a participant of a particular meeting.

The interviews

The guarantee of anonymity is also meant to help participants feel safe and secure enough to share their full and honest accounts. A part of this is how the interviews will be conducted. No invasive interview techniques will be used to gain information (*Bos, 2020, p. 240*). For example, even though the interviews will be held digitally, interviewees are advised to hold the interview privately where they feel comfortable sharing their thoughts.

Another important part of the interviews is ensuring no deception is used or experienced (*Bos, 2020, p. 243*). During the interviews, the researcher made sure not to ask any leading questions, and when a question did sound leading, the researcher would point it out. It is important that research participants feel they can give their own answers and don't feel pushed to give a more fitting or exciting answer to the interview question.

4.0 The data analysis and the discovery of a potential literature gap

Now that the research methods have been elaborated on. It is time to take a look at the data that has been gathered during the study. In the end, eight municipalities have been interviewed concerning digitalisation and their use of digital platforms. The interview participants were a combination of politicians and public servants.

During this analysis, we will take a look at the different platform descriptions and how municipalities utilise digital platforms. This analysis will be done based on the platform literature described in the literature review and the data gathered from the interviews.

4.1 Digital platforms in Norwegian municipalities

First, we will take a look at the understanding of digital platforms. The choice was made to add this section after encountering multiple problems regarding people's understanding of the term platform. Seeing that understanding was such an issue, it might be worth exploring the different interpretations that subjects have concerning platforms.

It should be mentioned that the participants of this study all had different positions within their municipalities, which affected the conformity of the answers. The goal is, therefore, not to compare the answer to one another. The goal of this section is to compare the individual understanding of the interview subjects with an explanation for platforms that were established through the literature review, which described platforms as a policy tool that facilitates collaboration.

During the interviews, all subjects were asked to explain what their understanding was of the term digital platform:

Subject A:

"I'm not the most technical or the most versed in that world. I use the word digital platform for an online program or software that allows us to gather a lot of different participants into one digital space. That can interact in different ways, both with written text or by other possibilities like thumps up or down or whatever. But also a place that can facilitate, for example, stuff that happens outside the digital realm, but what then can be a place where one gathers the information?" (*Interview with subject A2*).

Subject B:

"A digital platform, I would say, is a collection of needed infrastructure to actually get stuff presented on the screen, so if you put it there, it is available for employees. I don't like the word platform because there is so much debate on what the content is, so I am glad you are asking that question. I think right now, it is infrastructure you can run stuff on. That is it for me." (*Interview with subject B2*).

Subject C:

"A platform can be many things in my head; it depends on how you describe it and what you want it to deliver. The ecosystem in the ground, can I explain it like that? You have an architecture; you have something that is both integrations between systems, so you can get into all the data from all the systems we have in the kommune (municipality). We also have public registers; you have ... all of those national common registers or systems. A hub where everything is put together. We also work with sensors to get out the data from different sensors, a place where you can get hold of the data and also, of course, present it to the citizens. So, the whole shebang." (*Interview with Subject C*).

Subject D:

"Politically, I think we have all our meetings on these digital platforms, these kinds of systems. I think that is my understanding of what you are asking of, and also, I think even if it is the municipality's website, it is a digital platform that makes a part of this."(*Interview with subject D*).

Subject E:

"I think that term will have a lot of different meanings. From my perspective, a digital platform is something that can handle a lot of different systems and applications. I think a digital platform is something you can get from big companies like Microsoft or Google, but there are also a lot of smaller platforms. I also think that Office 365 is a kind of platform where you can do several things. I think a platform should be a fundament for different types of tasks, some kind of an adaptive or adjustive, that can do different things to support your business." (*Interview with subject E*).

Subject F:

"To me, a digital platform is what everybody wants. To me, a digital platform could be a lot, actually; it could mean a place or a network that is connecting with people and maybe systems. That has structure and rules for services. In my mind, it is a way of connecting services and in creating rules." (*Interview with subject F*).

Subject G:

"Digital platforms could be, of course, the technology itself, like the Microsoft Azure platform. But it might also be our digital maturity if you interpret it in the broader sense. So, the digital platform would be our people adept at different solutions and how to intervene in different projects, but I think what people in the municipality would mostly think of is the technology itself." (*Interview with subject G*).

Subject H:

"It's quite wide, wouldn't you say? For us, it is a platform that we can deliver services on and that we can do either just in the way we have always done, building on a platform within one service, or we can move more towards an ecosystem where we also have cooperation with the private sector. For other services, we can see that this platform enables us not only to value as a citizen but also to give value. So, I think that this platform is a bit elastic, and it is more than one physical and technical platform. Since we are doing it in English, it is hard to give a good explanation of all the systems." (*Interview with subject H*).

These statements show, like the platform literature itself, a diverse interpretation of the notion of platforms. To some extent, the diversity of interpretations was expected when accounting for the differences in the participants' positions.

One significant difference between the platform literature and the empirical data can be found when analysing the statements. The literature review showed that the primary purpose of platforms is to facilitate and govern the interaction between involved stakeholders. While the understanding matches the facilitating and governing aspects of a platform to varying degrees, there seems to be a gap concerning interaction.

The two articles that come closest to the subject's description come from Chen et al. (*2022, p. 149*). Who describe platforms as digital interfaces that facilitate interaction. The other article comes from Klievink et al. (2016, p. 69), who describe platforms as a tool to share information and data. The compatibility of the articles from Chen et al. (2022) and Klievink et al. (2016) is not surprising, as both articles focused on digital platforms. However, the interaction descriptions in both articles do not align with how the subjects describe the interaction. Both Chen et al. (*2022*) and Klievink et al. (*2016*) describe interaction as something that is done with external organisations that act as codependents with the platform.

All interviewed subjects refer to interaction from a practical standpoint, an interaction of data, information or systems. The municipality will design, govern and facilitate the platform; other departments or organisations can play a role, but the municipality is the main player. There is no description of codependents as described by Chen et al. (*2022*). Where the platform owner is dependent on the platform users for the platform to be a success. The article by Klievink et al. (2016) takes a more cooperative approach, where private actors and public actors come together to design a platform that benefits both, but also this cooperative approach is not mentioned by the subjects.

An example might help paint a more distinct picture: think of the information that is being shared between a municipality and a hospital. The municipality might want to increase or simplify how data is shared between the two organisations. To do this, the municipality might make use of a platform. The municipality designs and develops the platform and might ask the hospital for input. When the platform is set, the hospital can share data with the municipality via the newly designed digital platform. This hypothetical example shows what the interview data shows: not a partnership between equals but a more one-sided approach in which the municipality is the main actor.

This seeming gap between the literature and the interview data is unexpected. The gap, in part, might be explained by the literature's larger scope concerning platforms as a conceptual idea and the more practical relationship between the interview participants and the daily use of their digital platforms. A further analysis of the practical use of the platforms and the literature might help explain the potential gap.

4.2 Analysing platform usages through the eye of platform literature

The previous section explored the definition that municipalities used to describe digital platforms. This section will focus on how municipalities describe the use of their platforms by comparing the research data from the subjects and with the different usage focuses in the platform literature. A particular focus is given to the article by Ansell and Miura (2020), as this was seen as the most applicable article during the literature review.

4.2.1 Ansell and Gash (2017)

The first article we will look at is that of Ansell and Gash (*2017*). In their article, they describe nine categories of platforms based on the interdepends of the platform on participants and the governance strength of the platform (*Ansell & Gash, 2017, pp. 26-29*). None of the subjects describe their use of platforms in a way that comfortably fits with one of the nine categories described in the article. The municipalities all have complete control of the governance design of their described platforms. And there are no real interdepends of the platform on their participants.

To an extent, the municipalities depend on other departments or organisations to supply the platform with data, but all of these departments or organisations are part of the public sector and can be obligated by the municipality to provide the needed information. For example, if a municipality wants information from a school concerning the attendance of students. The school will need a law that prohibits the sharing of this information. Otherwise, they are obliged to share it with the municipality, which shows that there is no interdependence in the same sense as described in the article by Ansell and Gash (*2017*).

4.2.2 Ansell and Miura (2020)

Initially, the idea was to use the article from Ansell and Miura (*2020*) as the main literary focus for the analysis. The typology used in their article to describe platforms was seen as the most applicable platform literature because of their focus on leverage and output (*Ansell & Miura, 2020, pp. 267–269*). Only the platform described by subject A seems to fit one of these categories. The other platform descriptions are either not yet developed enough to have a clear leverage mechanism or, as mentioned before, don't have any clear stakeholder interaction.

The platform described by subject A fits best with the description of an interaction platform and in specific to the subtype of a participation platform (*Ansell & Miura, 2020, p. 268*). The literature describes the subtype as follows: "Participation platforms have been developed to generate citizen discussion about specific problems and policies" (*p. 268*). In the interviews with subject A, the following discerption was given of their platform:

"*One of the burrows was given 500.000kr because they had some challenges with youth disturbance and social inequality and this sort of stuff. So they were given half a million, and what exactly to spend that half a million on was to be decided through Decidem; it would be some kind of citizens' decision.*" (*interview with subject A1*)

The example shows that subject A used their platform to interact with citizens and to stimulate a discussion on youth disturbance and social inequality, which is an example of a participation platform. While the platform is out of development, the municipality is still discussing to what extent the citizens should be involved in the decision-making. One point of discussion is when citizens should be allowed to participate.

"*but we also wish to hear what the citizens think. This is something I have done myself; I have written a plan together with a group of people, and then we put the plan on the platform and asked people to say what they think. But what Decidem and generally citizen participation wants to support is asking and working with citizens much earlier, long before you put a plan or a first or second draft of a plan. Chancing it to allow citizens to say something much earlier in the processes, both with plans but also with developing services and stuff like that, is something that we have to work on.*" (*Interview with subject A2*).

The amount or extent of citizen involvement is an important discussion point when designing a participation platform; it affects multiple factors such as the interaction leverage of the platform (*Ansell & Miura, 2020, p. 265*), the openness of the platform (Morell and Espelt, *2018*) and the policy decision-making process (*Knill & Tosun, 2012, p. 122*).

The lack of generativity

The four platform types constructed by Ansell and Miura (*2020*) are based on three forms of generativity: interaction, production and innovation (*p. 265*). After the initial analysis, the interviewees were asked an additional question: if they recognised any of the three forms of generativity and if they could name examples of their use.

While some of them did mention that they could see the three different types of generativity in their work, they were described more as different processes rather than forms of output, as described by Ansell and Miura (*2020*, p. 265). Especially innovation was not seen as a function for a platform. Again, interaction was mentioned as an important aspect of a platform, but the focus was the exchange of information, which was mostly for internal use.

> "*Yes, I definitely agree that a platform could be used for all three purposes. As both organising interaction and providing a service would probably be easy to imagine, the latter innovation, however, would need to be seen as a process rather than a concrete function or ability of the platform. An example of interaction and service is our internal support service.*"
> (*Interview with subject G*).

4.2.3 Nambisan (2009)

In the article of Nambisan (*2009*), three types of platforms are described: exploration, experimentation and execution platforms (*Nambisan, 2009, p. 44*). None of the platform types align with how the subjects in this study use platforms. The platform types Nambisan (2009) named are based on the idea and stages of social innovation, and none of the subjects have named a dedicated platform to stimulate or capture social innovation. It might well be possible that social innovation platforms are not particularly suited in the form of digital platforms. While a digital format could be used to gather participants and share results, physical meetings will likely be more crucial for the success of platforms that try to counter social problems.

4.2.4 Oglesby and Burke (2012)

In their article, Oglesby & Burke (*2012*) describe nine types of platforms based on function and action: Advocacy and influencing, capacity development, information sharing, innovation, matching/brokering, policy/standards, project implementation, relationship building, thought leadership (*Oglesby & Burke, 2012, pp. 16–17*). Even though the names of some of the platforms, like information sharing and policy/standards, sound fitting, this is because of the function and action-based naming of the platform types. There is no theoretical connection between the platform types mentioned in the article and the interview data.

4.2.5 Klievink et al. (2016)

Klievink et al. (*2016*) describe platforms as information platforms in their article. "*Platforms thus are socio-technical artifacts that can transform the way actors interact with each other. They can be considered IT-based inter-organizational arrangements*" (*Klievink et al., 2016, p. 69*). As mentioned at the beginning of this chapter, this is a decently accurate description of how platforms are used by the interviewed subjects. Interaction on a platform mainly consists of sharing information. However, where Klievink et al. (2016) make a big point about sharing information between public and private actors, the subjects mainly refer to public actors sharing information with other public actors.

The article also describes the struggles concerning the platform's setup, which are not echoed by the municipalities. In the article, Klievink et al. (*2016*) describe how the actors had to work together to create a functioning platform where information could be shared. However, in the case of the subjects, the platforms are designed only or mainly by the municipalities themselves, and the struggles don't directly concern external actors.

One other similarity next to the platform description is the struggles concerning the use of similar systems, infrastructure and technologies mentioned by Klievink et al. (*2016, pp. 68–69*). Multiple subjects describe a struggle to cooperate with other municipalities because they all use different systems.

"it is important that you are on the same platform, so that is kind of my concern. When we try to share what we have done with ..., we give everything to them, but what we did not think of was that if we want something back from you, then we need to be on the same platform. You can't copy-paste and be on your platform" (*Interview with subject C*).

4.2.6 Chen et al. (2022)

As mentioned at the beginning of the chapter, the article of Chen et al. (2022) has the best matching theoretical description of a platform compared to the description of the municipalities. However, there is no further match between the literature and the subjects when looking at the practical use of platforms.

Chen et al. (*2022, p. 148*) describe the interaction on a platform as a marketplace where sellers come together to find buyers. This more private organisational approach towards platform use does not match the more public-focused municipalities' use of platforms. The interviewed subjects describe interaction on their platform as systems and data communication, which does not involve buyers or sellers.

4.2.7 Morell and Espelt (2018)

The article from Morell and Espelt (2018) focuses on the openness of digital platforms. Seeing that most subjects do not have working platforms yet, it is not possible to use the three openness factors mentioned by Morell and Espelt (2018). Only subject A has a platform that is no longer in development. However, no definitive decisions have been made on the openness of the platform.

For example, the interview with subject A mentioned that only citizens with a BankID can use the platform:

"But what we have done is make it so that when you log on, you have to use your BankID. But you don't have to use your real name; you can put on a user name, so you can still be anonymous to the greater public. But the system needs to know who you are because there have been so many bots. Also, if we think of using it for participatory budgeting, we have to be able to check if people actually live in the area that they are going to be voting for. That was a way to secure and know the identity of the people." (*Interview with subject A2*).

The decision to restrict the users to people that had BankIDs was made as a practical consideration to minimise the use of bots on the platform, not to exclude organisations such as corporations or universities from participation. One can say that this reflects poorly on the openness of the platform. As Morell and Espelt (*2018*) note in their article, it is hard to find the right balance concerning the openness of platforms, and the cautionary side favours a more closed platform.

Openness is an integral part of the development of digital platforms, and this is something that multiple subjects have mentioned. Subjects A, C, D, E, and G mentioned the importance of working with open source and not dependent on external actors. This is often said in the same breath as safeguarding the user information of the citizens and the restricting but necessary effects of the privacy laws.

4.2.8 Short Summary

The analysis confirms the notion in the previous section concerning platform understanding; there is an apparent gap between the described platform use in the literature and the description given by the interviewed subjects. The main gap relates to the lack of interaction with the municipality's platforms.

There was some connection between the literature of Ansell and Miura (*2020*) and the participation platform designed by subject A, which does offer some hope that the lack of correlation between the literature and the data might come from the early stage of platform development by the municipalities and that over the coming years, the gap with the literature might be bridged.

4.3 Vestues (*2021*) the digitalisation reforms of the Norwegian Labour and Welfare Administration (*NAV*)

During the analysis, it became clear that there was a gap between the platform literature and the empirical data gathered from the interviews. Another literature search was done with a special focus on empirical case studies in the hope of identifying a study that might be able to bridge the gap between the literature and the data. A couple of different studies were identified, such as a study from Borge et al. (2022) concerning the use of the platform Decidem in Catalan (Spain) and a study by Lee (2022) concerning the use of platforms in the clean city coalition in the USA. However, the most fitting case study from Vestues (2021) concerned the use of a digital platform by the Norwegian Labour and Welfare Administration (NAV).

While NAV is not on equal footing with municipalities, NAV's IT department is likely bigger than most municipal IT sections combined. The situation and desires of NAV described by Vestues (2021) do sound very similar to those mentioned by the interviewed subjects.

> "We do not have the size; we don't have the funding to do, for example, the same as NAV and skatteetaten. They have 1000 or 1200 developers; some are consultants, but half or more than half are full-time employees." (*Interview with subject G*).

4.3.1 Co-creation and platformization

In her study, Vestues (*2021*) describes two interesting notions concerning the use of platforms. The first notion is that of co-creation(*2021, pp. 2–3*), which is explained as "*public sector organizations cannot create value for citizens. They can only make value propositions that citizens might choose to accept.*" (*p. 2*). Which matches with the other literature used in this study but are described as codependents or interdepends between platforms and their users (*Chen et al., 2022, p.148; Ansell & Gash, 2017, pp. 26-29*). Vestues (*2021, pp. 18-19*) also describes the notion of platformization, which she describes as: "the sociotechnical process of establishing a platform structure across existing systems and practices" (*p. 3*).

In other words, platformization describes the process of how platforms are created in an environment with already existing systems and practices. Platformization is a phenomenon that is also described by the subjects of this study.

"We need to stop and try to tidy up all the systems in the entire infrastructure. We need a control system; we need a framework because all these things are intermingled right now." ….. *"It is always the hardest work to change how people work, and processes are designed. A big part of what we do is actually designing processes and flow between systems and trying to make it easy for you as a citizen to get what you want or what you are searching for."* (*Interview with subject F*)

4.3.2 Goods-dominated and service-dominated logic

Another similarity is the digital development of NAV mentioned by Vestues (*2021, pp. 22-31*) and the digitalisation experiences mentioned by some of the subjects. Vestues (*2021*) describes how NAV had a goods-dominated logic between 2006 and 2017 with an externally focused digital strategy. Systems were designed by external actors and are updated every four to eight years (*p. 22*); this is echoed by most of the subjects as their current state of affairs.

"That is one thing that we do. Because we don't have developers, we rely on standard software; we are dependent on the different suppliers and the different software companies that supply. To be really good at interaction with the users, they are not. So there is a gap, and I don't know how we should bridge that gap without hiring our own developers." (*Interview with subject G*).

"You have to be sure that everything is in the right design or that you have enough security on it. So I think that it will be a lot easier when you go and buy a system of competing companies. That is demanding in manpower as well and we have to do this many times a year. Also, for every municipality, every four years, you are not allowed to have it any longer because of EU regulations. A lot of different systems are going to be changed every four years, and that is multiplied 350 times." (*Interview with subject E*).

In 2017, NAV started to switch from an external IT focus towards an internal focus, described as a service-dominated logic (*Vestues, 2021, p. 25*). This meant that new developments and systems would be developed within the organisation. In turn, this allowed NAV to focus more on the needs of its users (*pp. 25–31*). Part of this swift was to standardise the processes around systems development and use within the organisation.

There is also a shift towards standardisation and user input by municipalities, although a more subtle shift. For example, some subjects voiced their wish for overall standardised processes.

"If the processes are identical all over Norway for all the municipalities, no problem, then we could have a digital solution in six months. But they are never the same; there are always some differences." (*Interview with subject B2*).

"standardising would be a necessity to digitise in the future" (*Interview with subject G*).

Some municipalities also show a more user-focused approach towards digitalisation.

"I mean how can we use digital technology to change the way we work in order to create better, much better services for our citizens, which is the most important part of what we do. We deliver a whole range of services to the citizens of …. And how can we use technology in a better way in the future, but also in a way that is secure, with regards to privacy, of course, for our citizens? So we have to be responsible in our work as well." (*Interview with subject F*).

"it will always come from serving the needs of the inhabitants in a better way, which would always be the starting point." (*Interview with subject G*).

Even though the subjects of this study show some signs of a desire to switch to a service-dominated logic (*Vestues, 2021, p. 25*), they are still primarily working through a goods-dominated logic (p. *22*). Currently, municipalities don't have the means for internal development and, therefore, still mostly work with an external IT strategy.

As with the other literature mentioned in this analysis, Vestues' (*2021*) study of NAV includes the involvement of users or citizens. The platforms being developed by the subjects of this study do not have users' direct involvement or participation. Municipalities keep users in mind; however, they don't have the means or competence to explore a more interactive approach with their citizens fully.

"Although we are quite large of a municipality, we are the … largest in Norway; we struggle to find resources for doing our basics, providing services to the inhabitants at the very basic level. And I think to compete with those prioritisations in childcare and education would be very difficult." (*Interview with subject G*).

There is another interesting point to mention about the study from Vestues (*2021*). She does not refer to any platform literature cited in this study. This is not entirely strange, seeing that Vestues's (*2021*) study has more of a technical focus than a public administration focus. Using other platform literature might not indicate a shortcoming in her or this study. However, it could hint at a gap between the public administration literature on digital platforms and the more technical empirical studies of digital platforms in Norway's public sector.

4.4 Discussion and Conclusion

In this chapter, the platform data from the interviews is compared to the platform literature. There are some similarities, such as the struggles and transformations of NAV described by Vestues (*2021*) and the struggles and desires of municipalities. The likeness of the participation platform described by Ansell and Miura (*2020*) and the platform described by subject A. And the practical considerations concerning openness by Morell and Espelt (*2018*). However, in the bigger lines, there is a gap between the platform literature and the data gathered during this study.

In the short summary, it was mentioned that the likeness between platform A and the participation platform from Ansell and Miura (2020) might mean that a more developed platform could bridge the gap between the literature and the empirical data. However, the article from Vestues (*2021*), which is a fully functioning platform, shows the same gap as the platform data gathered through the interviews.

While the platform used by NAV has some similarities with a production platform described by Ansell and Miura (*2020*, *p. 268),* as its main goal is to produce a service and does involve its users to enhance its services, the NAV platform is still mainly developed by a single actor, and while the platform is depended on its participants to increase its functionality, it can still function without the feedback from its users. All other articles, Ansell and Gash (2017), Nambisan (2009), Oglesby and Burke (2012) and Klievink et al. (2016), all describe how the platform needs interaction for its basic functions, which is simply not the case as described by either the NAV case or the data gathered in this study.

The only platform found, next to the participation platform of subject A, that does to some extent fit the description given by the platform literature, came up during a preliminary interview and is called Aktiv Kommune (*https://www.aktiv-kommune.no/hva-er-aktivkommune/*). Aktiv kommune allows municipalities to pool their sporting facilities together and rent them to citizens, which fits the description of a matchmaking platform: "*Matchmaking platforms exploit and mobilise unused or untapped resources by enabling and facilitating multisided interaction and matching.*" (*Ansell & Miura, 2020, p. 268*). This platform was designed mainly by one municipality and is now run in cooperation with multiple municipalities that are members of the platform.

While it is hopeful that the two platforms match the platform concept established in this study and fit the interaction platform description, the fact remains that of the eleven formal interviews, only one has given evidence that the platform literature matches how platforms are designed and used in reality.

5.0 Drivers and prohibitors

The remainder of this study will focus on the different drivers and prohibitors connected to municipalities' use of digital platforms. As mentioned in the methodology, a coding system was set up to analyse the qualitative information from the interviews, which led to the following results.

The code was designed to mark reasons not to use digital platforms as prohibitors. For example, when a municipality mentioned that they did not have the resources or competence to use digital platforms. Reasons that encouraged the use of digital platforms are marked as drivers. These could, for example, be the notion that platforms might improve societal interest in municipal politics.

5.1 A general overview of the drivers and prohibitors in the largest municipalities

Six of the eight municipalities interviewed belonged to the seven biggest municipalities in Norway. These municipalities were identified as the most likely cases to show the use and/or development of digital platforms. While it was the goal to interview politicians and public servants from each municipality, in the end, this only happened with two municipalities. To ensure that municipalities are not counted double, only the data from the interviews with the public servants will be used for this analysis and to keep conformity between the supplied data.
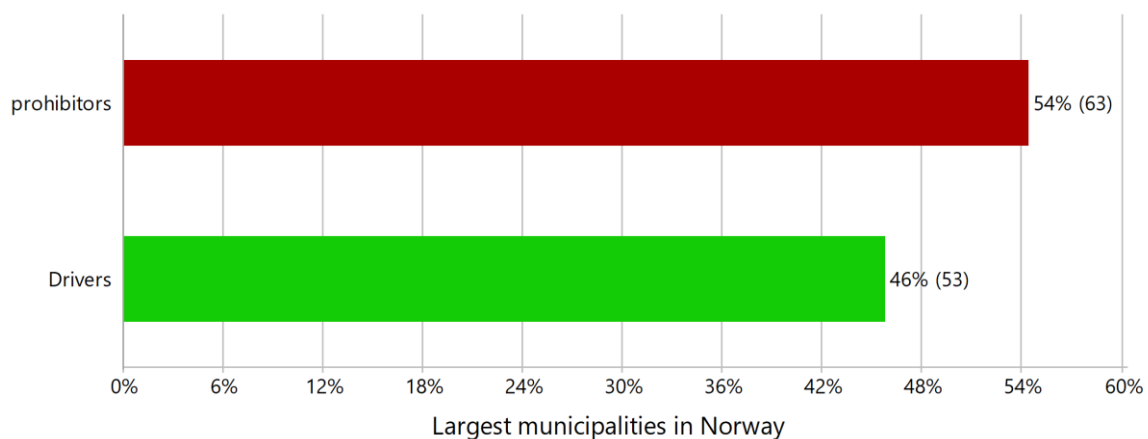
(Figure 3, Drivers and prohibitors in the largest municipalities in Norway.)

The figure above shows that municipalities struggle with 4% more prohibitors than they are encouraged by drivers. These numbers should not be interpreted as definitive, considering that only six out of the seven biggest municipalities contributed to the data.

The missing municipality was mentioned by some of the other municipalities as a partner in some of their digitalisation efforts, which gives the impression that if they were included in this research, the difference between prohibitors and drivers might have been smaller.

However, it is unlikely that the inclusion of another municipality would have shifted the balance in such a way that drivers would have become the prominent force. Meaning that prohibitors are the most prominent force for municipalities working with digital platforms.

5.2 Prohibitors are dominant in midsized municipalities

To put the above data in perspective, the data from the two midsized municipalities that contributed to this research confirm that smaller municipalities indeed encounter more prohibitors than bigger municipalities. Which confirms the hypothesis formed during the case selection. Both municipalities were only interviewed once.
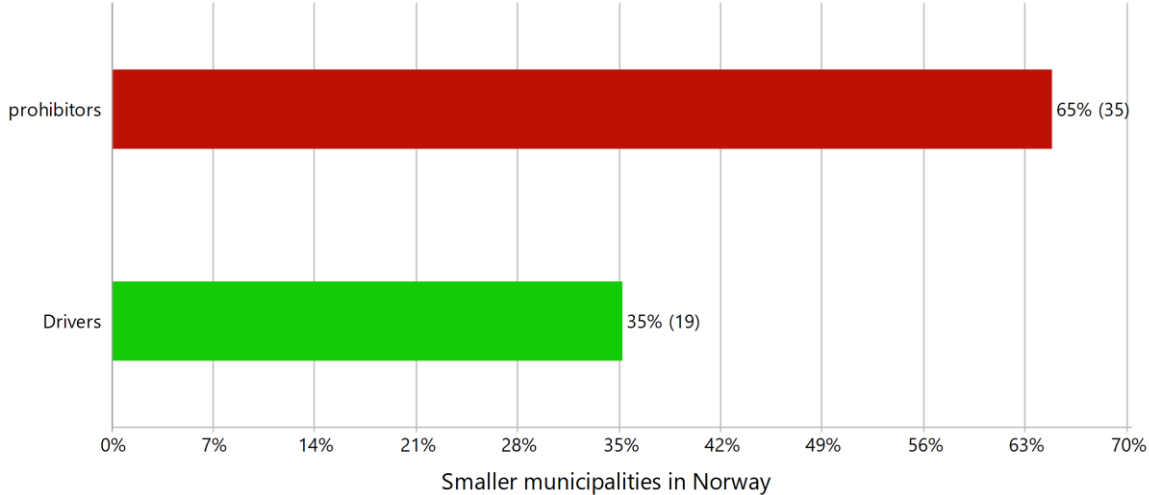
(Figure 4, Drivers and prohibitors in smaller municipalities in Norway)

This substantial change between the results of the larger municipalities and the midsized municipalities is likely the result of the smaller scope on which the midsized municipalities function. All the municipalities provide similar types of drivers and prohibitors during the interviews, which means that smaller municipalities do not struggle with any particularly different drivers or prohibitors than the larger municipalities. The importance of resources for the development and use of digital platforms will be discussed in the next chapter.

5.3 The individual influences

To conclude this chapter, an overview of the different individual influences that were encountered during these studies will be given. These influence categories are based on the interview answers from the municipalities and were constructed after the data had been gathered.
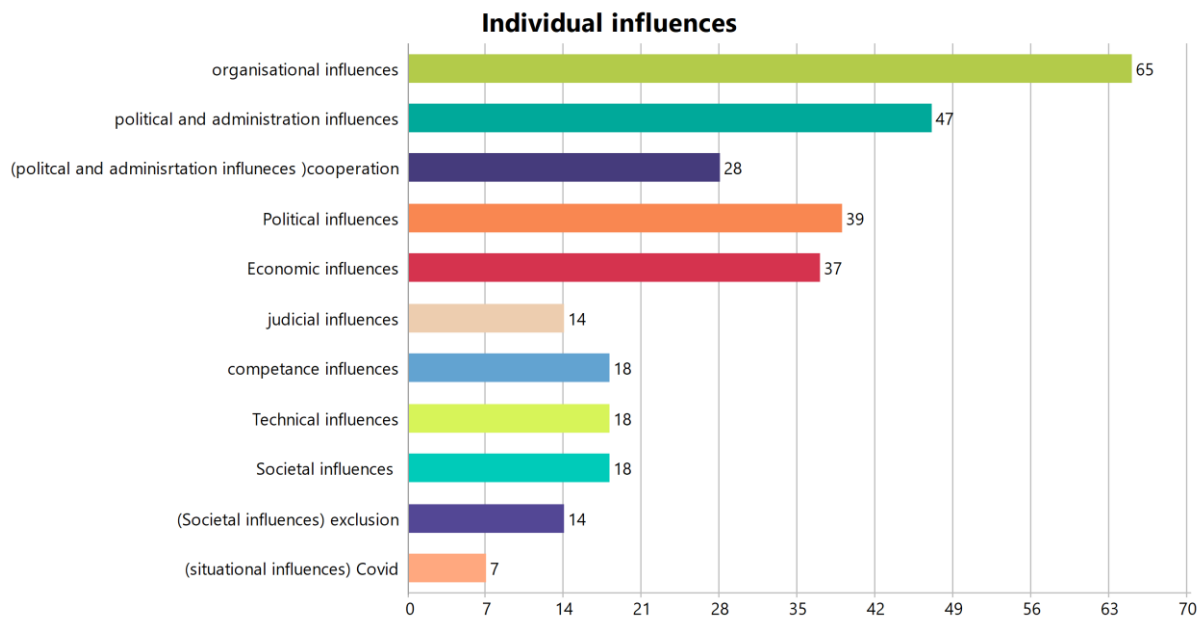
(Figure 5, individual influences concerning the digitalisation efforts of Norwegian municipalities)

As seen in Figure 5, the main influences mentioned during the interviews related to organisational and, political and administrative influences. Both of these categories will be explored in their own chapters (organisational influences in chapter 8 and political and administrative influences in chapter 9.). While not mentioned as often, economic, judicial and competence influences were seen as the most direct prohibitors. While technical and societal influences were mentioned as the most direct drivers, with political influences favouring drivers, they could also function as a prohibitor.

6.0 The importance of resources in the use of digital platforms

As seen in the table above, municipalities have a lot of different individual influences on the use of digital platforms. To be able to create a comprehensive picture of these influences, the choice was made to create various groups that address either one or multiple influences. This section will discuss the influences that directly connect with economic influences.

6.1 The critical role of resources

The nucleus of most prohibitors municipalities face is a lack of resources and competence. Almost all other influences will have a small effect concerning resources and competence. The lack of resources should, in part, speak for itself; using and developing digital platforms is neither straightforward nor cheap.

"we have a better overall picture. You might get some different answers from the municipalities, but in general, I think that they would also say that capacity, competence and economics are problems in general." (*Interview transcript DigiVestland*).

The interview subjects frame the money problem in two phases: the initial investment and the maintenance phase. The initial investment phase, usually considered a steep step, takes a more significant amount of money and time, while in the beginning, it does not show much in returns. This makes it difficult for those working with digital platforms to make a compelling case for those in charge of the funding.

"I think the biggest obstacle was to make them understand that it is expensive to build what we did. It was expensive to get the platform on track or to build it. Before you can start to show all the services and before you see the giving (returns), what do you get back?"
(Interview with subject C).

The second phase, which considers maintenance, is described from two sides. The first is a positive perspective that less money is needed for the project and that one is now seeing the investment results.

"It's not the hardest part; the most expensive part is done. So now we have this tool, and we are able to get all these voices." (*Interview with subject A1*).

The development results can show those in charge of the funding that the money is being spent responsibly and that further results will now come more quickly and with less needed funding.

The other side of the maintenance perspective has a more negative outlook on continual costs. There is a sentiment that the initial investment should lead to a permanent and final result, not something that will sap resources for the coming years.

"*They may be invested in the system and have money to build it, but of course, that is only one part of it; there has to be yearly maintenance of it for further development, and the money it is expected that another division takes. So most of the benefits are coming from people who are starting the project, but all the cost is just put in another department. One of the challenges with digitalisation is that the planning part has to have stable funding over the entire lifespan of the digitalisation initiative. There is more money for the first year of investment, but it is harder for a whole lifetime.*" (*Interview with subject H*).

The consensus concerning resources is a more negative approach; no municipality is leaping at the chance of spending money on digital platforms. The more positive responses subjects got mainly were related to the idea of improving municipalities' standing or service, but in almost no case was money simply spent without concern. The exception to this statement will be discussed at the end of the chapter.

6.2 Forced to find competence outside the municipality

One primary source that requires resources concerns acquiring competence and people with the capacity to design, develop and run digital platforms. As described in the study by Vestues (*2021*), competence can be acquired as a part of the organisation (*insourced*) or can be hired externally (*outsourced*) (*p. 22*). As mentioned in the previous chapter, municipalities favour using an insourcing strategy while comparing the Vestues (2021) study with the data. Still, municipalities often use an external sourcing strategy (*Vestues, 2021, pp. 22-23*).

Part of this comes from the struggle to find people with the right competence, which is seen as unachievable by municipalities; this is partly outside their hands, for there is a shortage of competence in this particular field.

"*we don't have enough competence, and it really is a scarce resource, the kind of tech-savvy or digitised content.*" (*Interview with subject G*).

"*They see now that they don't get new people; people quit their jobs, but they don't get anyone new because there is a lack of competence in that area.*" (*Interview with subject E*).

As mentioned, this means municipalities depend on external organisations for their digitalisation efforts. These businesses can be hired to use a system that has already been developed and that the municipality would like to use, or the business could be hired to develop a new system that fits the municipality's demands.

Both of these options are not perfect for reasons such as externals being unable to keep up with new technologies, bought digital tools requiring continual investment, and municipal seeming continually dependent on the external providers. This last point is especially a struggle for municipalities. They feel a responsibility to stay in charge of the data and information of their citizens, which they feel is at risk when too dependent on external organisations.

"We want to have the ownership so we are not in the pocket of someone external." (*Interview with subject C*).

While the sourcing strategy might be able to be changed when more resources become available for digital developments, the lack of people with the right competence will still be a problem. This could hold municipalities back, for the foreseeable future, from taking the digitalisation efforts into their own hands.

6.3 Strict laws make a complex task even harder to accomplish

The law plays an important role in Norway's public sector's digitalisation efforts. The laws around digitalisation affect how digitalisation can be developed, used and governed by the platform owner. A whole chapter in the national digitalisation strategy is dedicated to the subject of regulation (*Ministry of Local Government and Modernisation, 2022, pp. 28–30*). The chapter discusses switching from a technology-neutral regulatory perspective to a technology-positive stance. This means that using technology should become more accessible for organisations in Norway. An example of this could be relaxing laws that make it harder for organisations to change their paper data into their digital systems. The approach from the national government does sound surprising when compared to the description of municipalities because most municipalities describe the laws as restrictive or prohibitor.

"Yes, we have, of course, all other organisations. But we also have new laws and regulations with regards to, for example, the GTPR setting limitations on what we do as well. So we have to use more time, be more responsible, and evaluate in a way the new laws and regulations are working opposite of what the public is expecting of us." (*Interview with subject F*).

Returning to the national digitalisation strategy, the next chapter of the strategy does find some agreement with the points of the municipality when the discussion is briefly focussed on digital security: "Safeguarding information security in the public sector is first and foremost an agency responsibility." (*p. 33*). As the quote describes, the focus on digital security is a critical part of digitalisation, which municipalities do understand. An unsafe public organisation could have big negative consequences, from citizens losing trust in the government to the government being vulnerable to foreign cyber-attacks; this is where the impasse or the crux of the problem is found. Digitalisation has to be safe; otherwise, the risks outweigh the benefits, making an already difficult task even more impossible. As mentioned in the first section on resources and competence, municipalities are struggling with financing the development and use of digital platforms; by increasing the complexity with strict laws, municipalities will struggle even more to accomplish this task.

"Digitalising is very expensive to do in a secure and a responsible way. And I think that three, four, five years ago, we did not really see how high that cost really is. How much money does it really take to do this in a secure way or in an ethically responsible way?" (Interview with subject F).

6.4 Money cannot buy happiness, but could it buy digitalisation?

So far, the influences mentioned have all been prohibitors, but what would happen with these prohibitors if resources were no longer a problem? During their interview, subject D mentioned that before their municipalities merged, they worked for a smaller municipality, while the smaller municipality had a lot of resources. Some of these resources were used to digitalise their municipality.

"If we wanted to buy a new program, we did it, and we did not use our own experts, but we hired experts to do it; we hired support from the people who had the systems." … "We used the money to get it, and there are, of course, not a lot of municipalities that can do that, but we could. I think it was our financial position that made us able to do this." (Interview with subject D).

The digitalisation mentioned by subject D primarily focussed on the shift from a paper administration towards a digital municipality instead of developing and using digital platforms, which can be seen as a more technical and complex challenge. But the idea still stands: instead of a shortage of resources being a significant prohibitor, could an increase of resources turn a prohibitor into a driver?

During the interviews, subject A also mentioned that their digitalisation progress, in part, might be explained by their municipality's financial situation.

"We had the luxury of having nice to have money." … "We have had the fun of having money, testing new things, and trying new things. So, having a whole Smart City department, it is their job to test new technologies." (Interview with subject A2).

But in addition to a favourable financial situation, subject A also had positive political influences, a more fitting organisational structure, and in-house competence. Stating that they used the money to bridge any prohibitors is too simple and an overstatement, but it poses an interesting focus point. Could a substantial increase in resources create such a positive effect that it pushes a municipality to pass the most common prohibitors?

While this sounds like a promising query, one must look at such a vision's ethics. Where should the resources come from, and is such a move justifiable? During the interviews, subjects showed considerable hesitation when the idea of increasing resources was mentioned.

"we have to choose between a new IT system and maybe a kindergarten." (Interview with subject F).

"I think to compete with those prioritisations in childcare and education would be very difficult. So, if we should drive the agenda for digitisation, we would always have a starting point in the services and in the community. As responsible, I would never go to the politicians and speak for digitising as a necessity itself" (Interview with subject G)

6.5 Summary

While it is clear that resources play a central role in the use of digitalisation, it is not clear how to use this information in practice. The prohibitors like competence and complications through strict laws could, to some extent, be remedied through an increase of resources; however, so could a lot of other problems in society as well.

It is not the aim of this research to encourage municipalities to prioritise the use of digital platforms above other policies and problems; that is a question for politicians and not academics.

7.0 The desire for quality service as the main driver for municipalities

As highlighted in chapter five, municipalities experience more prohibitors than drivers when using or developing digital platforms. While most of this research is dedicated towards the analysis of these prohibitors, it would be neglectful not to give some attention towards the drivers that were encountered during the interviews.

7.1 The need to engage citizens

In contrast to many of the prohibitors encountered during this study, the drivers are actually decently straightforward. The first driver that came up during the interviews, to work with digital platforms, was a need for municipalities to engage with their citizens. Municipalities are noticing a disinterest from their citizens when it comes to interaction.

"it is hard to get the interest up specifically. People don't care about politics in general, and I think that is more or less because everything is going well; there are no real issues. So, we are going with digital solutions because we think we can reach more people. I know it is not perfect, but I think it is the solution; I don't see any better alternatives." (*Interview with subject A1*)

As mentioned in the quote above, maybe citizens feel disinterested towards their municipality because things are fine. However, this disinterest does not come from satisfaction but rather from contentment. They don't feel the need to spend their free time on community dialogue if there is nothing to talk about.

7.2 Digital platforms offer new opportunities

The need to engage with citizens leads municipalities to explore new solutions, such as digital platforms. Digital platforms offer many technical benefits that help municipalities in their work.

"But the big drivers are some of the opportunities that you can see regarding digitalisation transformation" (Interview with subject H).

Most citizens have likely noticed their local municipality utilising social media platforms in an attempt to engage them. Or the improvement of government websites that make information more accessible, which can even be read to those who have poor eyesight. And perhaps in the not-so-distant future, they might even be able to interact with the government through apps on their phone.

Digital innovations not only assist municipalities in reaching out to their citizens but are also seen as essential for municipalities to continue to offer their services. One interviewee mentioned that municipalities cannot keep up with the demands of a growing population and simply need to utilise new technologies to keep up with the demands of their citizens. This is one of the reasons that the current era we live in is nicknamed digital era governance (*DEG*) (*Christensen et al., 2020, p. 138*).

  "*Technology will play a huge part in replacing or supporting today's processes and work.*" (*Interview with subject G*).

7.3 quality service is a two-way street

A municipality needs to engage with its citizens and utilise new technical solutions to enhance its services. Both can be summarised into one enate desire: municipalities want to deliver quality services for their citizens.

As discussed in the introduction of this research, the desire for quality services is part of the current government reform wave and is a two-way street (*Christensen & Lægreid, 2011, p. 132*). Part of this reform is that governments are trying to become more democratic by focusing on transparency and openness. Transparency relates to the idea of letting outside actors and specific citizens see the processes concerning decision-making.

  "*The nice thing about the digital platform is that you can show a process and you can show something that lasts. If it is just an article in the newspaper, if it is just a news story on the kommune (municipality) website, then it is just like a moment in time. The platform gives us the possibility to show it as a longer process and also as a process that has some analogue and some physical meetings. But then it is always important to keep the transparency and get the results back into the platform so that the process is visible to everybody.*"(*Interview with subject A2*).

Openness, on the other hand, refers to the idea of being open to including input from citizens and other societal actors. This can happen in different ways, such as letting citizens choose their preferred option out of a selection of solutions prepared by the government, allowing them to propose their own solutions to a problem identified by the government or letting citizens participate in the entire policy process.

"citizen participation wants to support is asking and working with citizens much earlier, long before you put a plan or a first or second draft of a plan. Chancing it to allow citizens to say something much earlier in the processes, both with plans but also with developing services and stuff like that, is something that we have to work on." ("*Interview with subject A2*").

While organisation and openness are not easily organised and set, they are important points for a municipality to work towards (*Raadschelders, 2020, p. 5*). Digital platforms, with their ability to facilitate many-to-many participation (Ansell & Gash, 2017, p. 17), are seen as the tool that can make that happen. That is why the goal of quality service is a municipality's main driver when using and developing digital platforms.

7.4 summary

This driver chapter is shorter than most of the other chapters since the main driver for municipalities is very straightforward. Municipalities want to be able to offer their citizens quality services, and digital platforms are a key tool for them to accomplish this goal.

Engaging citizens, improving municipal services and increasing the transparency and openness of municipalities can all be done by the use of digital platforms. It is a clear reason for a municipality to at least explore the possibility of utilising digital platforms.

8.0 A municipality cannot use new tools while functioning in old organisational systems

The first group of influences that will be discussed all connect to organisational motivations. Most subjects explain that the use or development of digital platforms has affected the municipality organisation and how it functions.

"it is a little bit random; it should be a more established process of how to use the software and with which cases. It should not just be randomly from one case to another, but a more systematic use of it and how the results will be treated by the city as well is lacking."
(Interview with subject A1)

"The platform is helping us actually see the things we need to change in the way we do things. People often think that the platform, or something new that you buy, a gadget or something will actually solve the problem. But it just shows you what you need to change in the way you do things for the problem to be solved. Then it is like a good teacher, a good communicator, and not alienating people when you tell them their way of doing things does not work." *(Interview with subject A2).*

"It is sometimes easier to develop new services from scratch because then you don't have to change the work processes, which is the biggest work, right? It is always the hardest work to change how people work, and processes are designed." *(Interview with subject F).*

Exploring organisational reform or change is not a straightforward task. For this section, different theories will be used to explore where the need for reform or change comes from, what potential reforms might be needed and how this will affect the municipalities in Norway.

The analysis will be done from an organisational or ecological level (*Scott & Davis, 2015, p. 18*), depending on the internal or external focus of the analysis. This analysis will mainly approach organisations as open systems (*pp. 31-32*) and, to a lesser extent, natural systems (*pp. 29-31*).

To understand the issues concerning the use of digital platforms in Norway, it is essential to have a clear picture of the underlying movements in the public sector from an ecological level. Currently, the public sector, at least in the Western world, is undergoing the post-New Public Management reforms (*Christensen et al., 2020, p. 140*).

These reforms are meant to address some of the shortcomings of the New Public Management system. Public organisations went through a transformation from having all the responsibility concerning policy to delegating personalities to the private sector (*pp. 136–137*) to now sharing responsibilities with society at large (*pp. 137-138*). The use of digital platforms is a part of these changes and is a tool which facilitates interaction. Digital platforms as a tool affect how a municipality is organised and functions.

8.1 Structural and Cultural Effects

The interview quotes show that using digital tools will require structural and cultural changes within municipalities (*Christensen et al., 2020, p. 131*). Structural changes refer to changes in the formal structures of the municipality, such as rules, department, division and or team structures (*p. 131*). Cultural changes refer to informal changes and how people and departments interact with each other (*p. 131*). The changes a municipality might have to implement when using digital platforms will differ from municipality to municipality.

8.1.1 Instrumental change

Using a new tool will require some organisational alterations to be fully utilised. Think of specialised individuals or teams, management focus and communication (*Marion & Fixson, 2020, p. 211*). A municipality needs people with a certain level of competence to be able to develop and use a platform. Next, design and use platforms also have maintenance requirements, which also need staffing.

> *"it demands a lot of internally to handle these kinds of new digital tools, and we don't have those kinds of resources, which can be frustrating." (Interview with subject E).*

Another structural point for consideration is the processes. These can be digital processes, like the communication between systems. But also processes that concern the development of policy and interaction concerning internal or external actors.

> *"A big part of what we do is actually designing processes and flow between systems and trying to make it easy for you as a citizen to get what you want or what you are searching for." (Interview with subject F).*

An example of these processes could be using a digital platform to gain more input from citizens. Using a more open system will affect the existing policy design process if you ask external actors, like citizens, for their opinions. They will require a way to share their opinions; those opinions need to be accounted for during the policy design process, and the influences and results of the opinions will need to be communicated back to the citizens.

There are multiple ways to implement these structural changes; this study will not dictate how municipalities should implement any needed changes; the study will explore some potential ways municipalities could approach the implementation of these changes.

There are two main ways to approach structural changes from an instrumental approach: hierarchical and negotiation-based approaches (*Christensen et al., 2020, p. 131*).

The hierarchical approach describes decision-making as rational and responsibility of organisational leaders (*Christensen et al., 2020, p. 131*). Changes are based on the goals set for the organisation by its leaders (*pp. 3-4*). An example could be a political leader or top bureaucrat who knows digital platforms will be a key tool for municipalities. They, themselves, then make the structural changes within the organisation to make that goal a reality, for example, by forming a new department or changing formal processes.

The negotiation-based approach has a similar ideology (*Christensen et al., 2020, p. 131*), with the responsibility for the change lying with the organisation's leadership. The main difference is that the focus of implementing the change is on compromise and bargaining through negotiation. A negotiation-based approach replaces the more top-down process of the hierarchical approach with a more bottom-up focus (*p. 4*). An example of this could be a political leader or top bureaucrat asking department members how they envision using digital platforms within their department, which would start negotiations on what potential structural changes might be needed to make their organisational goal a reality.

The hierarchical and negation-based approaches sound decently straightforward on paper. But the reality is that structural changes are difficult to execute in practice. Structural inertia addresses the idea that pressures from internal and external forces prevent organisational changes (*Hannan & Freeman, 1984, p. 149*). Examples such as sunken costs, political coalitions, relationship changes and legitimacy fears are all concerns that hamper or even prevent organisational change (*p. 149*). If a leader knows that a structural change will have high sunken costs and no confirmation of success, they might try to hold off on that change. Another example could be legitimacy if a leader is not sure if they will be able to meet citizens' expectations concerning the use of digital tools. A leader might avoid using digital tools to protect the municipality's legitimacy.

The article from Hannan and Freeman (*1984*) states that the slowness of change does not have to be a problem. Innovation trends are not always permanent. An organisation that takes a while to change has the time to see what innovations are needed to survive and which are not (p*p. 150–152*).

The structural inertia theory can feel a little out of place because it is often seen in the light of organisational survival (*Hannan & Freeman, 1984, p. 151*). Public organisations don't have to worry about survival in the same way that private organisations do. Public organisations have designated regions of responsibility and don't have to compete with other public organisations to survive (*Christensen et al., 2020, p. 9*). One point concerning survival affects municipalities in particular, and that is their services (*pp. 7-8*).

"Because we will not be able, in a way, if you look at the demographics of the next twenty or thirty years, we will not be able to hire the number of people that we need to provide services in the way that we do today. So, we have to shift radically to survive." (Interview with subject G).

The data makes it clear that even the top seven municipalities in Norway struggle to set up and use digital platforms. If the use of digital tools is the future in public services, then small municipalities might have reason for concern. If they don't have the resources for the needed structural change, their survival might become more questionable than is preferable for a public organisation.

One way that municipalities might have to change is to have a more horizontal coordination structure (*Christensen et al., 2020, pp. 133-134*). Under NPM, there was a focus on vertical coordination (*Christensen & Lægreid, 2011, p. 132; Christensen et al., 2020, p. 137*). This vertical coordination was designed around specialisation. This is also named a silo construction, in which each team works in their own vertical silos (*Christensen & Lægreid, 2011, p. 132*).

The idea behind this construction was that specialisation would increase productivity. But in practice, it made coordination harder. The idea of horizontal coordination is to streamline the organisation more and have people work and communicate more horizontally (*Christensen et al., 2020, p. 137*). This horizontal coordination is something that can also be done through digital platforms.

Subject G is one municipality that describes the use of this more horizontal organisational approach in practice. *"I would like to emphasise one particular role that we have in the municipality, which is called the digital agent. That is really important to us, and I think that it is a very, very important role to bridge the gap between the managers and the services."* *(Interview with subject G).*

8.1.2 Institutional change

Structural changes are not the only point of consideration when it comes to organisational changes to accommodate digital platforms; cultural changes will also be needed. Using an interactive tool will require municipality departments and the municipality at large to become a more open system (*Scott & Davis, 2015, pp. 31-32*). Departments will be less closed off from each other if there is a tool that allows them to work more closely together. A municipality that has more interaction with its citizens will have to be more open and transparent concerning the municipality processes and what is done with the input gained from citizen interaction.

As with structural changes, there are two main ways to approach institutional changes: a cultural perspective and a myth perspective (*Christensen et al., 2020, p. 132*).

The cultural perspective focuses on the implementations that influence the established norms and traditions within that organisation (*Christensen et al., 2020, p. 132*). Points of consideration should be the communication leading up to the change, which actors are involved in the change and how the organisation of the change affect the status quo. For example, when a new political leader or top public servant uses a hierarchical approach to implement an organisational change instead of the usual negation-based approach. This change in approach could create more pushback from the employees.

The second part of the cultural perspective comes when the implementation process is completed and how these new changes affect the established norms and traditions in practice (*Christensen et al., 2020, p. 132*). These cultural changes might be substantial when considering the implications of using an interactive tool such as a digital platform. Departments that have never interacted before might now need regular contact while doing their job. In practice, it might benefit the municipality and function better when there is more frequent contact between the financial and education departments, for example. But it could feel like a hassle for the individual departments to make that change. Another example could be through citizen participation.

Where policy could first be designed with minimal external influences, citizens could give their direct opinions that must be considered, which can be especially difficult considering citizen participation usually comes from unhappy people.

"A big problem is that people don't care, and those who care are maybe the strongest voices that oppose the idea, so that is a huge issue." (Interview with subject A1).

The myth perspective examines how external cultural developments affect an organisation (*Christensen et al., 2020, p. 4*). In the case of this research, one should consider how digital transformation in the wider environment can affect the way citizens expect a municipality to behave or function. For example, most organisations within the direct environment of a municipality are using apps to interact with their customers. It will put pressure on the municipality to start using an app to interact with citizens so a municipality will not be seen as old-fashioned and lose legitimacy.

This is an example of coercive isomorphism (*DiMaggio & Powell, 1983, p. 150*). An organisation, through informal external pressures, feels the need to change and become more like the other organisations. Another example could be a municipality that struggles to keep up with service demands and will start looking at how other municipalities are doing to resolve these demands. An answer they could find is the use of digital platforms. Again, a fear of irrelevancy and legitimacy will encourage a change. This is an example of mimetic isomorphism (*DiMaggio & Powell, 1983, p. 151*). An organisation seeks the recipe for success by copying mechanisms that prove successful by other organisations.

A theory that describes the struggle to change an organisation's culture is path dependency (*Christensen & Lægreid, 2011, p. 129*). The idea of path dependency is that former choices made by an organisation contribute to an organisation's culture. The argument we have always done it that way is an everyday example of path dependency. When an organisation wants to make changes, these will have a cultural impact. It might be wise to review the history of former choices that have led to the current culture. This understanding will help organisations implement cultural changes with less resistance.

8.2 summary and conclusion

Organisational reform, structural or institutional, is a complex task. This chapter addresses the need and the potential ways that municipalities could approach these necessary changes. It is on individual municipalities to make the decision if a hierarchical, a negation-based, a cultural, or a myth perspective best fits their own organisational needs and institutions.

While this study leaves the how to municipalities, the why is clear: while the status quo is often more comfortable, an organisation has to react to new innovations and demands. The post-NPM reforms show that there are internal and external pressures for municipalities to change some of their current structures, such as the silo structures, and approach a more open and transparent organisational structure and institutions.

9.0 Friction between politicians and public servants

During the interview, many important influences concerning drivers and prohibitors were discovered. Some of these drivers and prohibitors were, to an extent expected; however, the relationship between politicians and public administrators, being a prohibitor, was not expected. This phenomenon was first encountered while interviewing a politician. When asked if they had experienced any strain, the answer was:

> "*Their only power is to delay, and I think they worked.*" (*Interview with subject A1*)

While defending their public servants, a larger picture of a, them and us, relationship was perceived. During the remaining interviews, and going over the previous interviews, this, them and us, approach towards the relationship between politicians and public servants kept appearing and gave the impression that there is a potential lack of trust between politicians and public servants.

> "*This is confidential, isn't it? Then, I would say it is a blessing; it really is. If we should ask them, I believe it would be very interesting and not intervening at all. Anyway, I believe they might interrupt the prioritisation process, and what they would say would always be at the top, and that would have severe consequences for some of the initiatives we already run. It would suffer from detail-oriented politicians making their decisions.*" (*Interview with subject G*).

> "*I think it is more difficult to get the organisation to do it as fast as we want it to be done, and that is a problem. As a politician, I get quite angry with the administration for not following up on our decisions or not following up fast enough. But of course, they have another point of view and have to do a bit of work between the decisions. I think we, as politicians, do not think it goes fast enough. We want it to be done yesterday, but it does not get done until a year later.*" (*Interview with subject D*).

Politicians doubting the intentions of public servants, and public servants eluding the involvement of politicians, is not a constructive work environment. This perceived lack of trust will have a negative effect on the use and development of digital platforms and should, therefore, be studied more closely.

9.1 The four relationship images of politicians and public servants

One source that explores the relationship between politicians and public servants is a book by Aberbach et al. (*1981*). Their book mentions four images to describe the relationship between politicians and public servants (*Aberbach et al., 1981, pp. 4–23; Bäck et al., 2006, pp. 289–290*).1. **Policy and administration** (*Bäck et al., 2006, p. 289*). This is where the politicians and public servants are fully separated. The politician makes a policy, and the public servants execute it. The public servants have nothing to do with politics. 2. **Facts and interest** (*p. 289*). In this category, the two parties overlap in policy making. The politician represents the interests and values connected to the policy, and public servants have the expertise needed to develop the policy. 3. **Energy and equilibrium** (*pp. 289-290*). In this category, both parties are involved politically with policy making. The differentiation between the two parties is through their focus. Politicians will have a broader focus and consider their supporters and those affected by the policy. The public servants will have a narrower focus, considering the vital external players involved with the policy creation. 4. **The pure hybrid** (*p. 290*). In this category, the relationships between politicians and bureaucrats work closely through policy creation and implementation processes. Both share their knowledge, expertise and network.

Using this theory on the data might offer insight into policy and implementation dynamics and responsibilities. For this analysis, the data was searched for matches with the descriptions of the four images. This included any mention of the tasks of public servants and politicians, responsibilities of public servants and politicians and overall involvement in the policy process of politicians and public servants. Using these points as a reference, the following table has been created.

	Image 1	Image 2	Image 3	Image 4
Subject A			x	
Subject B			x	
Subject C			x	
Subject D		x		
Subject E			x	
Subject F			x	
Subject G			x	
Subject H			x	

(Table 3, the relationship between politicians and public servants in Norwegian municipalities.)

It must be noted that the analysis is only a reflection of the relationship between politicians and public servants on digital platforms. It should also be mentioned that there was one subject from which only a politician was interviewed. All other interviews consisted of an interview with a public servant or both a public servant and a politician. This accounts for the one discrepancy in the results.

9.2 A difference in audience and long-term vs short-term goals

The results in the table show that there are no results in either image 1 or image 4. This means that, in practice, there is neither a total separation nor a complete hybrid approach in policy design concerning digital platforms. Aberbach et al. (*1981*) mention that the idea of image 1 was already outdated in the 80s, and 40 years later, this is still the case: "*the classic theories that excluded bureaucrats from any role in creating policy no longer fit reality, if ever they did.*" (*Aberbach et al.,1981, p. 239*).

In their book, Aberbach et al. (1981) found that most politicians identified with image 2 and public servants with image 3 (*p. 241*). Politicians acknowledged that public servants did contribute critically to the policy design process. However, the political arena had no room for public servants. Meanwhile, public servants described that their involvement was crucial in both the policy design and political arena. The data from this study also corroborates these statements, where politicians describe the relationship more like image 2, while public servants describe image 3, which is interesting, seeing that Aberbach et al. (1981, p. 16) expected that political and bureaucratic responsibilities would merge even further into image 4 over the years.

Image 3 was the most prevalent in our analysis. Image 3 focusses on the different political focusses of politicians and public servants (*Aberbach et al.,1981, pp. 9-16*). Politicians use a broad political scope that transcends departments and issues, while public servants choose to selectively focus their political efforts on individuals and groups connected to their department, or that could affect the stability of the policy (*p. 11*). One example from the interviews that shows the political involvement of both politicians and public servants is the position of those left behind by digital platforms.

> *"But you will always lose the oldest generation and some others, and that is a democratic problem if they are excluded." (Interview with subject A1).*

> *"The digitalisation question is, you don't want people outside, like old people or young people, that don't handle all the information well. It is as much about making things easy and explainable; it is not necessarily about coming up with a much more advanced solution. It has to also be manageable for the community to handle." (Interview with subject E).*

The idea that a tool might will exclude some people does not feel right with both politicians and public servants. However, there is a slight difference in perspective in their outcries. The politician focusses on the broader implications of the policy on local democracy. There is a wish to find a solution that can meet everyone's needs without leaving anyone behind.

The statement from the public servant has a more practical mindset. They are aware that some people might fall outside the policy and, therefore, propose the solution of constructing a less advanced tool that is more accessible.

Another example is the perception of COVID's effects on digitalisation in the municipality. Politicians see COVID as a positive influence on digitalisation, forcing people to start using digital tools.

> *"I also think that Corona has also has had a big impact on the general digital competency in our society. I think more elderly people can go to Team meetings or Zoom meetings now."* (*Interview with subject B1*).

Public servants found this perception frustrating, mentioning that the use of digital calls is not a real indicator of digitalisation.

"I don't think we have taken the necessary steps to be a real digitally working workforce in Norway because of COVID. I know that many think so and believe so, but I don't think that teams are the goal. If we have digital meetings, we have digitalised. There is a long way to really get the power of all these digital tools." (*Interview with subject E*).

How does this difference in political vision influence the development and use of digital platforms? Politicians and public servants don't only have different political focusses, they also work approaches. *"Bureaucrats are integrators, preferring tranquillity, predictability, manageability, and tidiness. Politicians, on the other hand, are partisans who bring both visionary and particularistic elements to the process."* (*Aberbach et al.,1981, p. 93*).

Politicians are elected to their jobs by the citizens. Politicians have either given promises of change and have to deliver on these promises within their term limit. The term limit pushes politicians to achieve short-term goals that fall within their term.

Public servants are hired to do a job. They have a direct responsibility towards their superiors and an indirect responsibility towards those affected by their policies. Public servants don't have a particular goal or time limit other than designing the best functioning policy; therefore, they value a stable and good functioning policy over a fast or fancy solution.

This conflict between change and stability could potentially be the nucleus of the perceived strife between politicians and public servants.

9.3 bridging the gap between politicians and public servants through understanding

One of the interview subjects offers a potential solution for bridging the perceived gap between politicians and public servants through understanding.

"but now the top leaders in this kommune (municipality), are doing a competence program to be more digitally mature so that they can understand it in another way. I think in the beginning when the project started, they did not know what we were trying to do at all. I tried to explain the different layers of the platform and everything. You have something underneath, the back end and you have something on top that the users can see, but they do not understand. But now they do, and that is because of the competence programmes they are in, and I think that it is extremely important that they understand." …

"cause I think that way would be a lot easier to do if they had that understanding in the beginning, so I think so, yeah. We have created this platform, and we have delivered what we were supposed to deliver, even if they didn't understand everything in the beginning. But it took much more time; there were a lot more bumps in the way if you understand. But it is very nice now that they finally see what we were trying to say." (*Interview with subject C*)

The politicians in subjects C municipality followed a course to help them better understand what digital platforms are and how they function. This new understanding helped politicians understand where the public servants were coming from and, in the opinion of the public servants, helped bridge the gap between them. This leads to the question, how does one motivate both politicians and public servants to grow in understanding?

The best place to begin is at the start. This quote from Aberbach et al. *(1981)* mentions that it is often public servants that are first involved with policy development: "*Nevertheless, in this first critical phase of policy development, most observers now agree, bureaucrats are usually more prominent than politicians.*" (*p. 246*). This notion is echoed by John W. Kingdon, who, in his three streams theory, explains that public servants are always looking for new policy innovations and solutions (Greer, 2016, p. 421), which allows public servants to be at the crib of most policy developments.

If public servants are involved from the beginning, how can they then encourage politicians to want to learn about the policy developments? Politicians usually don't have time to follow a course for every policy initiative. They often have multiple pressing issues to work with; if a public servant does not manage to engage the politician's interest, they will likely not prioritise learning about a new initiative.

As mentioned in the previous section, politicians are interested in goals that can be accomplished within their term limit and grab attention. The development of a digital platform will at first sound like a long and resource-intensive project and will struggle to grab lasting attention. A suggestion, therefore, is for public servants to learn how politicians reason, to argue that while a digital platform might not be fully developed in four years, thanks to available EU funds, it might not be that expensive and will set the municipality apart from its neighbours.

The complexity and ability around digital platforms might be a reason for the less active involvement of politicians on this subject. But politicians are an essential part of the government apparatus, and their involvement is an important factor in the use of digital platforms.

During the study, subjects mentioned that politicians were seen as essential drivers or distracting prohibitors.

9.4 The double-edged sword of politics

The involvement of politicians in the policy process was described as both a driver and a prohibitor during the interviews. Subject A explained that the involvement of politicians was experienced as a driving force for the development of digital platforms by helping to secure funding and manpower. The involvement of politicians is, therefore, likely a key reason that subject A went further along with their digital platform than other interviewed subjects. The same also counts for subject C.

"*Maybe our blessing was that it came from the political part because they have now decided that we should use this.*" (*Interview with subject A2*).

Other subjects, such as E and F, describe the lack of political involvement as a prohibitor. The lack of political attention and vision makes it hard for public servants to gain resources and direction.

"*We have a lot of initiatives, but in order to take a few steps forward, we are definitely in need of a more clear political focus.*" (*Interview with subject F*)

As quoted at the beginning of this chapter, subject G felt negative about the idea of getting more political attention for digital platforms. Mentioning that political involvement would impact the prioritisation of projects and would have a negative influence on the development of digital platforms.

While there are no guarantees on what way politicians will influence the prospects of digital platforms. The majority of the data does indicate that political involvement enhances the prospects of using digital platforms.

9.5 Summary and conclusion

The data from the interviews points towards friction between politicians and public servants when it comes to the development and use of digital platforms. One way of approaching this friction between politicians and public servants is through their different approaches concerning stability and change (*Aberbach et al.,1981, p. 93*).

Bridging this perceived gap won't be easy. Politicians will need to grow their understanding of particular policy developments, while public servants need to learn how to engage politicians to want to learn more about their policy developments.

A growing understanding between politicians and public servants, while likely beneficial for the development of digital platforms, might not always be easy or convenient for either party and consideration of both parties for each other is needed for the creation of a fruitful partnership.

10.0 The role of scaling in the development of digital platforms

Lastly, the point of scale motivations will be considered; scale here refers to a government level. There are three primary levels of government which should be considered. Municipality level, which works on a local scale. The county level works on a regional scale. Lastly, the national level works on a national scale.

10.1 Up or down scaling?

During the interviews, points were made concerning the scale on which digitalisation should occur. Most subjects mention that digitalisation is too big of a task to be solved by individual municipalities:

"We have 300 and some municipalities in Norway; I will stand on it that a lot of them have the same needs. Developing new platforms and systems, each on their own, is neither effective nor cost-effective. It is such a big thing to take out the full effect of using a new digital system, platforms or whatever and those mistakes we can learn from each other and together support each other. In my head, it is really good to do things together." (Interview with subject A2).

"It is not controversial to say, but I think that the municipality has too much power. They can decide what to do and what kind of platform they want. That is up to each municipality to decide, but when you are 350 municipalities in Norway, and they can all decide what kind of system they want, it is kind of a mess. If we want to try something out to see if it is good or not, the next city will have to do the same, and that is a lot of paperwork just to get a new system or platform inside. So you have to do this is 350 times. There should be a lot fewer systems, and there should be much bigger national or county control over the municipalities so that we can do something at a much higher rate. Now, if we test something out and we find out that it is good, then you have to do the same thing in 350 municipalities, which is a big drawback." (interview with subject E).

"standardising would be a necessity to digitise in the future, and that requires that we have much more central governance of the digitising of the public sector." (Interview with subject G).

Suppose municipalities are not the most suitable scale for implementing digital platforms. In that case, it might be interesting to explore the idea of shifting the responsibility of digitalisation to a higher government level. But when it was proposed that the responsibility should be moved to a different government scale, most subjects changed their tone considerably:

"I don't know if the national level is good, because Norway is a really long country, one solution in … maybe isn't good in ..., because they are so different." (Interview with Subject B1).

"we here are a little bit before many others, and we want to share the effort we have made here with others. I think so, and I think in the future it must not be that many small things you only do here in .... I think you would always need to have the possibility to prioritise on your own as a kommune (municipality), kommuner (municipalities) are different, they have different needs at different times" (Interview with subject C).

"I think the danger is that we take away all the innovation from the lower level. And we have to make sure that we don't do that because a lot of the innovation and smart solutions you can find in the lower level or the ideas are in, the lower level on how to do things better.*" (interview with subject D).*

"We are very into local government, and as long as we have that kind of very well-functioning local democracy, it won't compete with what it requires to digitise. So, in the meantime, we need to seek some other solutions. I think it will be many years." (Interview with subject G).

In summary, municipalities struggle to digitalise in general. Only the biggest municipalities in Norway can afford to worry about the use or development of digital platforms. But there is no desire to delegate the responsibility of the digitalisation efforts up the governmental ladder. This described scale motivation is a general prohibitor for almost all Norway municipalities; it might warrant closer study.

10.2 The local way is the Norwegian way

This conflict is described in policy theory as the choice between a top-down or a bottom-up policy implementation. In short, a top-down approach is when a higher level of government designs a policy, sets the goals and has to be executed by a lower-level government. The efficiency of the implementation is measured by comparing the policy output with the original goal of the higher-level government (*Knill & Tosun, 2012, p. 153*). A bottom-up approach focuses more on the implementation process (*p. 155*). A lower-level government can alter the policy design to comply with local developments and needs. The focus is less on accomplishing the overall objective and more on addressing local needs.

Currently, the digitalisation development efforts are using a bottom-up approach. Municipalities are free to use digital tools as they see appropriate, as long as they comply with the central government's digitalisation strategy. The following points summarise this: It needs to be secure, privacy needs to be guaranteed, and digitalisation needs to be available for all (*Arbeiderpartiet & Senterpartiet, 2021*). The focus on local implementation comes from the Norwegian governance culture, which is strongly decentralised (*Bryden et al., 2015, p. 115*). The current central government describes their approach towards local government as follows:

"Regjeringen vil gjennom en helhetlig politikk overfor kommunesektoren sikre at oppgaver løses på lavest mulig hensiktsmessige forvaltningsnivå." (*Arbeiderpartiet & Senterpartiet, 2021, p. 33*).

Which roughly translates to:

"The government will, through a comprehensive policy towards the municipal sector, ensure that tasks are solved at the lowest possible appropriate level of administration."

While not helping the digitalisation efforts, one can commend the Norwegian government for its dedication towards democracy by trying to keep policy implementation as close to the citizens as possible. Upscaling does have negative democratic implications, which can be a decent argument against the whole idea of upscaling the implementation of digitalisation.

Since the actions of municipalities have already been explored in this study, it might be beneficial to look at the plans and influences of the national government. While, as discussed above, the Norwegian public sector subscribes to the bottom-up implementation approach, it does not mean that the national government does not have its own strategies when it comes to digitalisation.

10.3 exploring the digitalisation ambitions of the national government

The Ministry of Local Government and Modernisation published a digitisation strategy for Norway in 2019 (*Ministry of Local Government and Modernisation, 2019*). This strategy addresses multiple important aspects of digitalisation and mentions the following goals:

Goals for our work towards 2025:

1. The public sector shall be digitalised in a transparent, inclusive and trustworthy way
2. More tasks shall be performed digitally, and as seamless services
3. All citizens, businesses and voluntary organisations that have the ability to do so, shall communicate digitally with the public sector
4. The public sector shall exploit the potential of sharing and using data to create user-friendly services, and to promote value creation in the business sector
5. Local and central government agencies shall develop their services based on a common digital ecosystem for collaboration
6. Local and central government agencies shall realise benefits from digitalisation in a systematic manner

(*Ministry of Local Government and Modernisation, 2019, p. 8*)

While multiple of these goals could be related towards digital platforms, the fifth goal, related to a common digital ecosystem that local governments will develop, might be the most relevant for this study and will be explored further in this section.

The national government's view of municipal digitalisation

At the beginning of the digitalisation strategy, the background of the current digital state of the Norwegian public sector in 2019 is addressed. In short, the government is pleased with the state of digitalisation in the public sector in 2019, ranked at the top of Europe (*Ministry of Local Government and Modernisation, 2019, pp. 9–11*) and wants to keep improving its digital services. Key to this improvement is a common digital ecosystem, which encourages cooperation in the public sector and helps facilitate interaction with the private sector. The digitalisation strategy describes this digital ecosystem with the following simplified figure.
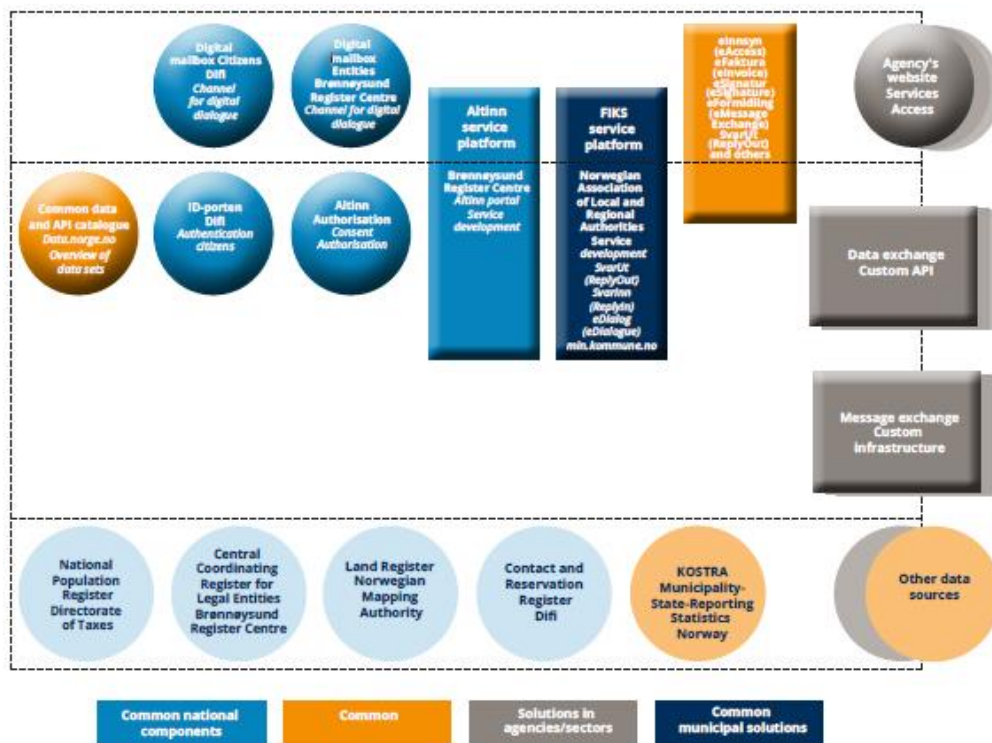
(*Figure 6, overview of key common components and common solutions 2019, Ministry of Local Government and Modernisation, 2019, p. 32)*

This figure shows that a couple of key national platforms are used within the public sector. Some examples mentioned in the digitalisation strategy are "Altinn, ID-porten (ID-gateway), Digital Mailbox for Citizens, National Population Register, Contact and Reservation Register, Land Register and Central Coordinating Register for Legal Entities. There are several other common IT solutions and technical platforms, such as helsenorge.no, nav.no, the National Data Directory and the FIKS platform. "(*Ministry of Local Government and Modernisation, 2019, p. 32*).

These digital platforms are all developed by the national government. This shows, to an extent, that the national government can create digital platforms. This could be an argument about how a top-down approach by the national government might, to some extent, solve the troubles connected to municipalities' development of digital platforms.

This could be done by a nationally developed infrastructure or a common ecosystem, as described in this chapter. Multiple subjects mentioned the need for a national digital infrastructure to simplify municipalities' digital cooperation.

"If the processes are identical all over Norway for all the municipalities, no problem, then we could have a digital solution in six months. But they are never the same; there are always some differences." (*Interview with subject B2*).

By being within the same system, municipalities will have an easier time sharing their developments with other municipalities. This idea of sharing solutions is already being used and has its own national platform, FIKS. FIKS is a platform developed by the KS (*The Norwegian Association of Local and Regional Authorities*); on the website, the following description of FIKS is given:

"Fiks-plattformen består av felleskomponenter og digitale tjenester. De digitale tjenestene er bygd opp av felleskomponenter som vi utvikler selv, og nasjonale felleskomponenter som allerede finnes. Den enkelte kommune og fylkeskommune velger selv hvilke digitale fellestjenester og felleskomponenter de ønsker å ta i bruk. "(*KS, 2020*).

Which roughly translates to:

"The FIKS platform consists of common components and digital services. The digital services are made up of joint components that we develop ourselves and national joint components that already exist. The individual municipality and county council themselves choose which digital joint services and joint components they wish to use."

While mentioning the importance of sharing developments, solutions and services. The platform does not address the concern of different operating systems that municipalities use, or in other words, the lack of a similar digital infrastructure. It echoes the bottom-up sentiment, where a solution from the top is given, but municipalities are free to choose if they want to use the solution. In practice, this means that municipalities must make a deliberate, unified choice to use the same digital services. This, in practice, is unlikely to happen, seeing the diverse needs of municipalities. A larger municipality might find the common solution insufficient for their needs. In comparison, a smaller municipality might not even have the resources, manpower or competence to use the common solution.

This frustration of municipalities not being able to utilise the services from FIKS is echoed as a concern in the digital strategy: "*There is no comprehensive overview of what common functionality is available or how agencies can implement common functionality. Lack of coordination of common functionality and common architectures leads to fewer benefits, inefficiency, lack of goal achievement, more bureaucracy for agencies and higher usage costs. The public sector is unable to fully realise the potential benefits of developing common solutions for identical needs. The ecosystem can help solve several of these challenges.*" (*Ministry of Local Government and Modernisation, 2019, p. 35*). The goals and plans mentioned in the rest of the chapter on the digitalisation strategy have, as of the time of writing, not led to any concrete changes towards the goal of a common ecosystem or national digital infrastructure.

Summary

This section shows that the municipalities and national governments aligned in their desire to see a common ecosystem used by the municipalities. The current bottom-up approach of the public sector has not yet resulted in this unified digital infrastructure. The implementation approach is not the only complication concerning scale-related prohibitions. It would be an overstatement to blame the implementation strategy by itself for the lack of progress, but it does have some shortcomings when it comes to achieving a unified approach based on voluntary participation.

10.4 Cooperation through platforms, a potential solution

One of the current ways municipalities are trying to shoulder the responsibility of digitalisation is through cooperation. There is a considerable amount of small cooperation between two or three municipalities on digitalisation. The most interesting ones to mention in this study are the cooperations organised on the county level. Examples of these are DigiVestland and DigiTrøndelag. These are both platform organisations, as described in the platform literature, and they could have had a more prominent position in this study if they had been identified earlier.

The Digi cooperations fit the description of co-creation platforms (*Ansell & Miura, 2020, p. 267)*. The cooperation facilitates groups for municipalities to interact. The cooperations help municipalities find ways to implement digitalisation strategies supplied by KS. In the near future, the Digi cooperations hope to evolve beyond a facilitating role and be more directly involved with the digitalisation of municipalities.

In practice, the interaction through these platforms helps standardise the municipality's digitalisation efforts through normative isomorphism (*DiMaggio & Powell, 1983, pp. 152-153*). The municipalities learn through the same strategies and apply them separately in their organisations. Which, in turn, will make the municipalities grow more similar when it comes to how they use and implement digital tools. Which will, in turn, benefit cooperation through isomorphism.

But these platforms have their own struggles as well. Funding, for example, comes mainly from the members themselves, which doesn't help smaller municipalities that don't have the resources to make use of digital platforms to begin with.

10.5 Summary and conclusion

The scale issue of digitalisation is rather complex. During the analysis, the focus was mainly on the experiences and opinions of the interview subjects, the national digitalisation strategy and the role of resources. There are other avenues, such as the democratic implications of upscaling policy implementation, that were not fully explored in this study.

During this chapter, the question was posed if a higher government might not be a more realistic scale of developing digital innovation. The Norwegian national government has already developed multiple digital platforms that show they are up for the task. But from the interviews and the national digitalisation strategy, it is clear that neither has much appetite for shifting the responsibilities.

Another potential solution might be the Digi cooperations that are already functioning in different counties in Norway. These cooperations are organised by municipalities for municipalities, which means that the municipalities stay in charge of the digitalisation efforts. The main issue again is funding.

Finding the right implementation level is a tough administrative question and should be explored in more depth in further studies. One potential question could be: If the increased demand for higher quality services justifies a less democratic implementation process of these services, is that what it takes to deliver on these higher demands?

11.0 Final Summary and Conclusion

During the thesis, two questions needed to be answered: What is meant by the notion of platform? And what drivers and prohibits do municipalities experience while using and developing digital platforms?

11.1 What is a platform?

During the literature review and theoretical framework, the main components of a platform were established. The primary purpose of a platform is to facilitate interaction. All other platform components are meant to shape and organise it to create the particular form of interaction an organisation wants.

The two main tools for shaping a platform are governance and framework. The platform governance determines a platform design by How the platform leadership and platform participants will interact with each other, what output is created or the generativity of a platform, what rules a platform will have and how participants will be controlled and incentivised. The framework of a platform includes the metric of success and the design choices concerning openness, infrastructure, sourcing and flexibility. The unique framework of a platform allows it to shape interaction between a small group of key actors or all the citizens in a municipality or country.

The governance and framework allow for many different approaches towards platform design. Different design approaches mentioned by the literature include design, output, action and singular-based approaches.

By analysing these main components, the following concept of a platform was created for this thesis: A platform is a policy tool to facilitate interaction, which is shaped by its governance and framework aspects to best fit the purpose for which the platform is designed.

Conclusion

The established concept and the different design approaches were used to analyse the data from the interviewed municipalities.

Against all expectations, the data did not match with either the concept or the different design approaches established by the literature. The platforms designed by the municipality do not facilitate the same type of interaction as the literature describes.

While some platforms are being created in cooperation with other municipalities, the platforms themselves don't facilitate interaction. The platforms mainly facilitate the transfer of data. The platforms mentioned by the interviewed subjects did not comfortably fit in any of the design approaches described by the literature.

However, there is one exemption. The platform described by subject A aims to facilitate interaction as its primary purpose and fits the description of a participation platform. This exemption does provide hope, but it does not bridge the gap that was found between the platform literature and the empirical data.

11.2 What drivers and prohibitors do municipalities encounter while using and developing digital platforms?

The second part of the thesis focussed on the data concerning the drivers and prohibitors that municipalities experience while using and developing digital platforms. The general finding was that municipalities in Norway encounter more prohibitors than drivers while working with digital platforms.

The main driver for municipalities to work with digital platforms is the desire to deliver quality services to their citizens, which is a noble goal that fits perfectly with the mentality of the post-NPM reforms.

The prohibitors that municipalities experience include resources, competence and organisational, political and administrative and scale influences. Resources and competence are straightforward prohibitors. Municipalities don't have enough resources and competence to use and design digital platforms adequately.

The other influences are more complex. The organisational influences concern the organisational challenges from inertia that come from incorporating a new digital tool into an established and bureaucratic organisation. The political and administrative influences concern the struggles between the expectations of politicians and public servants. The scale influences concern the impracticalities of designing digital platforms on the municipal level and the Norwegian government's decentralised culture.

Conclusion

While it was expected that municipalities would experience a substantial amount prohibitors, which was the main reason for the research to focus on the largest municipalities, it was not expected that even the largest municipalities encounter more prohibitors than drivers.

It will take some work for the municipalities to overcome these drivers. The organisational prohibitors show that municipalities need some structural and institutional changes to be able to facilitate this new digital tool. The frustrations between politicians and public servants can likely only be resolved when both groups come to a shared understanding of the needs and benefits that digital platforms can offer a municipality. The scale-related prohibitors could potentially be countered by the Digi cooperations, which guide and support municipalities with the implementation of new digital tools.

12. Recommendations for further research

While this research has made some progress in exploring the notion of digital platforms and their drivers and prohibitors, it did not succeed in its main goals. While a concept of platforms was created for this study, it is clear that there is a gap between the platform literature and the empirical data, and additional studies will be needed to explore the extent of the gap. While extensive literature studies on platform concepts inside and outside the public and digital realms might prove fruitful, the recommendation is for more empirical case studies of platforms to be done first. The focus of these empirical studies should stay on the public sector but should not have to be limited to digital platforms and municipalities. Much could be learned by studying national digital platforms or other types of platforms used by municipalities for policy purposes.

This study has established multiple prohibitors that could be further explored in additional studies. While each prohibitor mentioned in this study could be the subject of additional studies, it is recommended to give particular attention to the organisational and scale influences. How public sector organisational structure and institutions will be affected by digital era governance could be a fascinating case study that could be done on multiple government levels. The Digi cooperations could also be an interesting case study to explore to what extent the cooperation is able to counter the scale and competence prohibitors experienced by Norwegian municipalities.

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14. Appendix 1

Interview consent form

What is this study about:

This is a master thesis research for the department of administration and organization of the university of Bergen. This study has as goal to explore the drives and or prohibitors around the use of digital platform organisations by municipalities in Norway.

Digital platforms in the context of this study refer to online (*digital*) organisations that can be used as a policy tool. An example could be a innovation platform that allows participants to explore new ideas to find new solutions to existing problems.

What will be asked of you as participant:

As a participant to this study, you will be interviewed over a video call using the participants preferred medium(Teams, Zoom or skype). The interview will be semi structured, which means that some questions will be prepared beforehand, with room for potential follow-up questions. These questions will address the role of the municipality in the use of digital platforms and the views of the participant on the usages.

The interview should last about half an hour and the participant is encouraged to hold the interview at a place where they feel most comfortable. The interviewer will hold the interview from his home, so that no other people will be able to interfere or listen in on the interview.

Any potential discomforts and risk:

There is a possibility that participation in this research might result in discomforts to the participant. The participant is encouraged to mention these discomforts and these will be addressed during or after the interview in an appropriate way.

Any risks the participant should be immediately addressed. The participant should not have to face any personal risks by participating in the interview.

Benefits:

There is no financial compensation for participants in this research.

Your participation will help increase the scientific understanding digital platform usages in Norway.

Interview recording:

The interview will be recorded by audio only. The audio will be used to type out the interviews and for coding the interviews. The audio files will be saved for six months after the interview. This is done in case any alterations needs to be made to the master thesis. The audio recordings will be stored on the researcher's personal computer, only he has access to. The audio filles will only be used for the stated research purpose. After six months the audio file will be deleted.

Privacy:

The participants privacy and anonymity are top priority and will be safeguarded during this research in the following ways: By not mentioning any names or departments, instead letters will be used for example, participant A, working for department A. No reference to specific circumstances will be given. A key meeting will be presented as a meeting, to make sure participants cannot be narrowed down as a participant of a particular meeting.

Sharing of research results:

The participant is at liberty to request the end result of the research in which they participated. Which will be a master thesis in this case. The results will also be made available to the university of Bergen for use in their database.

What to do with questions:

If a participant has any questions, they are encouraged to send an email to dbr021@uib.no A question will normally be answered within one work week.

Consent:

As participant to this study, I consent to be interviewed for this master thesis. I understand the consequences and requirements of being a participant in this study.

Signature of researcher: _____

Signature of participant: _____

Date: _____