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Business Administration

Removing Barriers
A Case Study on the Role of an Innovation Hub in Overcoming Barriers to Public Sector Innovation
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ABSTRACT

Purpose
The purpose of this paper is to highlight the most prominent barriers to public sector innovation, but also display what an innovation hub can do to help bypass such barriers.

Design/methodology/approach
This is an embedded case study with a deductive approach investigating innovation barriers in the public sector after a model of 8 different barriers which are all examined through a theoretical thematic analysis.

Findings
Limited resources, poor leadership as well as limiting laws and regulations were revealed to be the greatest barriers to public sector innovation. A lack of incentives and rewards and resistant users and suppliers were deemed not to hinder innovation especially. Innovation hubs can help bypass these barriers by bringing in external resources as money and substitutes, but also by offering public sector employees a platform to meet between organizational units, thereby allowing them to circumvent risk-avoiding cultures and ill-fitting structures to innovation that tend to exist in the public sector.

Research limitations/implications
The study is limited to innovational projects of one hub, situated in a relatively small town in Sweden. The results might not be fully transferable to other countries or contexts.

Practical implications
The results of the study could give an indication to public sectors what use an innovation hub can have in bypassing barriers to innovation.

Originality/value
Few studies have addressed the role of innovation hubs in the public sector, especially in combination with innovation barriers.

Keywords
Innovation barriers, Public sector, Innovation hub, Sweden

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1. INTRODUCTION

1.1 BACKGROUND

In the wake of the 2015 immigration crisis, the pilot study *Idésluss Mitt* was initiated, which on May 1st 2017 evolved into *Idésluss Sundsvallsregionen* (Demokratikonsult, 2020). *Idésluss Sundsvallsregionen* is an innovational project established in a small region in central Sweden that acts to encourage public sector innovation. The project was initially intended to deal with the new societal challenges directly caused by the crisis, like integrational issues, but has continued to work with other societal challenges since then (Andresen, 2020).

Traditionally there has been a belief that innovation has little to do with crises (Filippetti and Archibugi, 2010). However, Filippetti and Archibugi (2010) argue that innovation works not only as an engine in times of growth and prosperity, but also a cushion that can soften the fall in crisis and recession. In line with this, Mulgan (2007) suggests that each single year of the two world wars brought a full decade worth of creativity and innovation. Crises are nowadays considered not only to encourage, but also require, innovation and innovational thinking (Wipulanusat et al., 2019), although it might be difficult for organizations to maintain innovational practices in such times because of hindering factors such as financial difficulties (Filippetti and Archibugi, 2010). Today, there is a new crisis on the horizon: the COVID-19 epidemic, caused by the SARS-CoV-2 virus commonly known as the "corona virus" (Wang et al., 2020). Undeniably, this has caused complications for the Swedish public sector, as for the whole world, but perhaps it once again can act as an incentive to innovate.

Innovation in organizations can be defined as development and adaption of new ideas or behavior (Salge and Vera, 2012). These can be new products, services, or administrative systems among other things, and are commonly characterized by uncertainty regarding their chance of success and profitability (Eboli, 2014). Due to the modern era and its fast-paced technological change, innovation has become a vital part of any organization of today (Manso, 2017). Notably, innovation has traditionally been studied in the private sector, and research on **public sector innovation** have been very limited in comparison (Demircioglu and Audretsch, 2017; Bugge and Bloch, 2016; Micheli et al., 2012; Salge and Vera, 2012). However, today innovation is by many considered to be a necessary tool for governments to transform their operations, achieve economic prosperity and to tackle global competition (Wipulanusat, 2019). This has led to a worldwide surge in initiatives to increase innovativeness in the public sector, as well as efforts to transfer and adopt innovation processes from the private sector to the public one (Bugge and Bloch, 2016; Mergel and Desouza, 2013; Arundel and Huber, 2013; Sörensen and Torfing, 2011). The context of the public sector has characteristics widely different from that of the private sector, with a focus on societal objectives (Bloch and Bugge, 2013) affected by political influence, governance and legal constraints, leading to a different set of challenges regarding innovation (Smith et al., 2019). Bloch and Bugge (2013) refer to such challenges as **innovation barriers**, of which some are unique to the public sector. Innovation barriers are defined as obstacles that somehow delay, or completely halt, the adoption and implementation of innovations (Demircioglu, 2018). It is important to address the barriers of public sector innovation to maintain successful and systemic innovation (Wipulanusat et al., 2019).

Innovation in the public sector is considered quite a delicate subject considering the paradox of change and stability (Kromidha, 2015). Potts and Kastelle (2010) note how innovation in the public sector is more conservative than in the private one since changes only seem to be reactive rather than active. Reacting when a problem shows up that needs to be solved, rather than actively looking into the future trying to get a step ahead of the competition (Potts and Kastelle, 2010). Reasons for this are brought forward by Agolla and Van Lill (2016) who note how public

sectors are bureaucratic and complex in nature, typically work within budgetary and legal constraints and that the sector always has to consider how its actions directly, and indirectly, affect the public, which hinders innovation. Alongside this, Wihlman et al. (2016) notes how citizens demand continuity, transparency and rule of law when dealing with the authorities, but also that Swedish law entails municipalities to have a set of obligatory responsibilities towards the society and its people. These factors make organizations in this sector unable to change their business concepts overnight (Wihlman et al., 2016). All of this accounts for the stability part of the paradox. However, doing just this - changing business concepts - has been referred to as necessary by senior managers to be able to create a culture of innovation (Wihlman et al., 2016). It has also been noted how the expectations from the public about the public sector services in return for their tax money is increasing (Agolla and Van Lill, 2016). Innovation is considered by some to be a crucial element in providing public services as it facilitates improvement of service quality and efficiency, without necessarily requiring a raise in budget allocation (Kusumasari, 2019; Stewart-Weeks and Kastelle, 2015). Aging populations, social problems as well as global competition are also factors making it difficult to dismiss the idea that innovative solutions are needed in the public sector (Wihlman et al., 2016).

One strategy for national, regional and local governments to deal with mentioned problems is to develop what is known as an **innovation hub** (Hintsala et al., 2017). Winch and Courtney (2007, 474) explain how such innovation hubs, or innovation brokers, are dealing with innovative practices and they define them more closely as *"organizations that are founded to undertake an intermediary role rather than performing that role as a by-product of their principal activities"*. This type of organizational structure is dedicated to process and implement significant innovative changes while keeping a distance from the culture and usual routines of a mainstream organization (O'Hare et al., 2008). Winch and Courtney's (2007) study shows how such brokers can play a key role in innovational processes for public sectors and act to reduce the risk of innovation for such. Although O'Hare et al. (2008) note how innovation hubs often seem to fail within just a few years after their launch, ending up wasting resources and being unable to develop major, radical, innovations.

Wihlman et al. (2016) argue there is a lack of knowledge in what truly fosters public sector innovation. Agolla and Van Lill (2016) falls in line with this, and emphasize that public sector innovation is a field that has been neglected by scholars, and that their study on overcoming innovation barriers could be developed further. Research similar to that of Agolla and Van Lill (2016) are seemingly sparse and usually addresses very specific research areas. Their study is limited to the Kenyan public sector (Agolla and Van Lill, 2016). Then there is a study by Strow and Strow (2018) that focuses on barriers in public sector innovation related to population changes in USA. There is also the MEPIN report (Bloch, 2011) that studied an even broader spectrum of factors related to public sector innovation, including mentioned innovation barriers, comparing numbers of all the five Nordic countries. What these studies have in common is that they all primarily have quantitative approaches, focusing on numerical statistics gathered from surveys. What has not been done to the same extent, in the field of innovation barriers, is studies with more of a qualitative approach. Studies that explore these barriers more thoroughly and attain first-hand testimonies on how and why these barriers hinder innovation.

Research on public sector innovation in Sweden is hard to find, and Sweden was not brought up at all in Lee et al.'s (2012) study on countries in the forefront on public sector innovation. Instead the public sectors of USA, Australia and Singapore were named as such (Lee et al., 2012). Wihlman et al.'s (2016) study of Swedish municipalities showed how innovation as a concept was not fully embraced by the Swedish public sector, regarding both actions and attitudes. They found in the same study that senior managers in the Swedish public sector considered supporting innovation difficult, referring to a quote from one of their interviewees:

"*Our weakest ability is to organize and find a system that orchestrates the innovation process*" (Wihlman et al., 2016, 53).

Anzola-Román et al. (2018) argue that innovation researchers need to look outside the boundaries of a specific organization to overcome innovational barriers, and they suggest a focus on innovative practices that include collaboration with external agents such as innovation brokers and hubs. Bakici et al. (2013) note that such studies on innovation hubs tend to focus on the private sector, not the public one. Winch and Courtney (2007) promote the deployment of more case studies on innovation hubs to widen the perspectives of innovation research. O'Hare et al. (2008) suggest that future research on innovation hubs should investigate the innovation hub and the organization(s) it belongs to simultaneously, this to provide insight to the less obvious benefits of maintaining an innovation hub.

1.2 IDÉSLUSS SUNDSVALLSREGIONEN

The municipality of Sundsvall, together with the municipalities of Härnösand, Timrå and Ånge, alongside *Region Västernorrland*, *Bron Innovation* (a digital innovation company part of a network set up by the European Commission), *Bizmaker* (a regional innovation company), *Vinnova* (a government agency that act to promote growth and develop innovation systems) and the *European Regional Development Fund*, established in 2017 an innovation hub called *Idésluss Sundsvallsregionen*. "Idésluss" can be roughly translated as "idea gate", while "Sundsvallsregionen" simply translates as "the Sundsvall region". This hub exists to support people working in the public sector with their innovative ideas, to make the most out of the skills and knowledge within the sector, giving everyone a chance to contribute for the better of all. The project is part of a bigger, country-spanning project simply called *Idéslussen* run by *Vinnova* that 57 municipalities in Sweden are a part of (Sundsvalls Kommun, 2019a). The overarching goal of the project is to establish a positive culture of transformation and change but also to work systematically to increase municipalities' abilities to innovate and to create an infrastructure for innovation. Since its inception, *Idésluss Sundsvallsregionen* has managed 169 ideas, or "cases", of which 149 have been evaluated and 120 cases completed. (Demokratikonsult, 2020) The hub is hereafter referred to as either *"Idésluss Sundsvallregionen"* or just *"Idéslussen"*. The latter being the definite article of Idésluss, i.e. "The Idésluss" or "The Idea Gate".
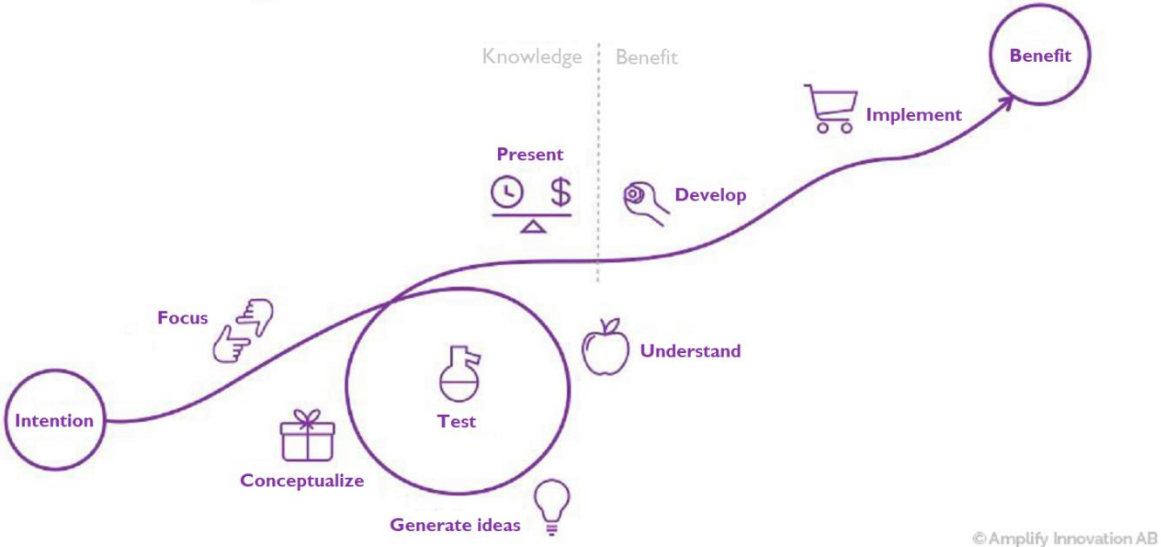

Figure 1: *Idéslussen's* own model of how an intention/need/idea goes through an innovation process until it leads to benefit (Sundsvall, 2019b). Note that it has been translated into English by the author for its inclusion in this study.

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Idéslussen has been available for all 8000 employees in the region's public sector. A person that reaches out to *Idéslussen* with a need or an idea is referred to as an "idea carrier", or "idea carriers" if they are more than one, and the people assisting them at *Idéslussen* are referred to as "idea coaches". The innovation process of *Idésluss Sundsvallsregionen* is shown in *Model 1* above. The "idea coaches" are meant to assist the "idea carriers" with focusing, conceptualizing, and testing the need/idea, everything to the left of the dotted line, by offering competencies, tools, methods and resources. Although they leave the implementation of the innovation to the "idea carrier" and the organization themselves (Demokratikonsult, 2020).

1.3 PURPOSE AND LIMITATIONS

The purpose of this paper is to highlight the most prominent barriers to public sector innovation, but also display what an innovation hub can do to help bypass such barriers. By conducting a case study on *Idésluss Sundsvallsregionen* and its related innovation projects, it aims to help people understand what truly hinders innovation in the public sector.

This study is limited to the innovation projects of *Idéslussen Sundsvallsregionen*. It mainly focuses on 4 of the 169 cases related to the innovation hub. These 4 cases were chosen since they were identified as 4 of the projects that differed the most, to be able to highlight similarities despite differences.

Lee et al. (2012) notes how public sector organizations to a higher extent than before are looking at the rest of the world in search for new ways of delivering public service, instead of innovating everything by themselves. Thereby, this research can give inspiration and insight to other public sectors organizations than just the ones that this case study covers. Today, with the situation of the corona pandemic, research on innovation might be especially useful.

1.4 RESEARCH QUESTIONS

What are the most prominent barriers to innovation in the Swedish public sector? How can an innovation hub help to bypass such barriers and successfully enable public sector innovation?

2. THEORETICAL FRAMEWORK

In this section theories and results from previous research will be presented. Initially, public sector innovation is defined and discussed, followed by theories related to different types of innovation barriers. The barriers used for this study will be presented in a model, after which the choice of barriers for this model are discussed and compared to models and previous research. This is followed by a more thorough evaluation of each barrier in relation to previous research. Lastly, innovation hubs are discussed, and how the latter can assist in bypassing named barriers. The relationship between the entities is illustrated in Model 1 below.
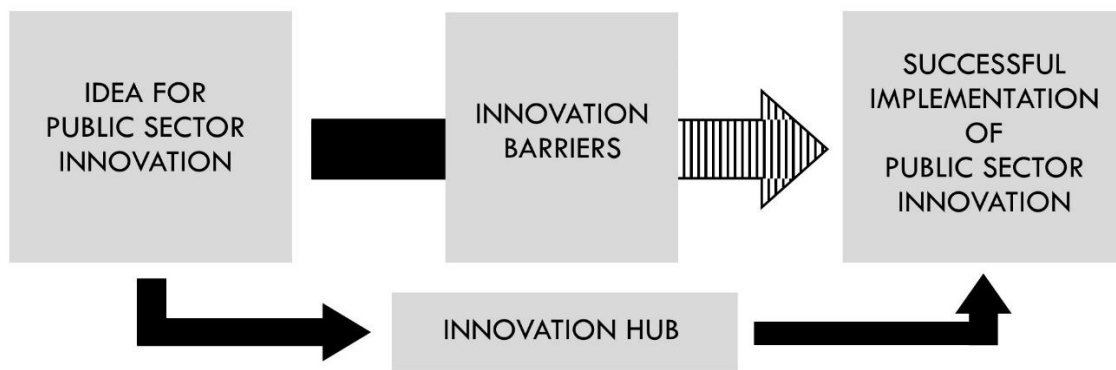
Model 1: The relationship between an idea, innovation barriers, an innovation hub and implementation of an innovation.

Model 1 illustrates the journey of an innovational idea in relation to innovation barriers, an innovation hub and successful implementation of public sector innovation. An idea for innovation in the public sector can potentially be implemented without ever facing a barrier, but if it does, barriers will hinder innovational ideas to be implemented. Not necessarily completely stop it, but a least slow the process down or making the process more difficult. Therefore, innovation journeys can go through an innovation hub to bypass the barriers, to eventually lead to successful implementation of the innovation in question.

2.1 PUBLIC SECTOR INNOVATION

Wihlman et al. (2016) note that since the concept of innovation is fairly new to the public sector, so are the definitions of what it can be. The term *innovation* is described as development and adaption of new ideas or behavior, which can be a new product, service, structure, or administrative system (Salge and Vera, 2012). Innovations are characterized by uncertainty regarding their chance of success and profitability (Eboli, 2014). Mulgan (2007) emphasizes that the ideas that spark innovation must go through a full process into implementation to be an innovation, it cannot simply be *a good idea*. Since the public sector typically is associated with a lack of an actual market with no clear competition, and instead has societal objectives, the characteristics of the innovation process has been suggested to be quite different compared to that of the private sector (Bloch and Bugge, 2013). The innovation process is affected by factors such as political influence, governance, and legal constraints, leading to a different set of challenges regarding innovation (Smith et al., 2019). Bloch and Bugge (2013) refer to such challenges as innovation barriers, and it is important to address such barriers to maintain successful and systemic public sector innovation (Wipulanusat et al., 2019).

2.2 BARRIERS TO PUBLIC SECTOR INNOVATION

Demircioglu (2018) defines innovation barriers as obstacles that delay the adoption and implementation of innovations. Smith et al. (2019) remark how the views of innovation barriers vary between employees from the public and the private sector. Bloch and Blugge (2013) note that although there are similarities between public and private sector innovation, aspects such as societal objectives argue *against* using the same framework for measuring innovation in the public as in the private sector. Accordingly, this paper will base its framework on theories on innovation barriers related specifically to the public sector.

Smith et al. (2019) note how there still is no definitive version of how to categorize public sector innovation barriers. Consequently, this study will propose its own model of categories, based on prior research. The model is primarily based on the innovation barrier model by Wipulanusat et al. (2019). Their model was created through a thematic analysis using the barriers by Borins (2006) as a base. Through their analysis a new model was created highlighting 8 factors as significant barriers. (Wipulanusat et al., 2019) This study builds upon what Wipulanusat et al. (2019) did to Borins' (2006) barrier model, trying to add to it. One barrier of the model used for this study, as well as some barrier names, were influenced by the categories of the MEPIN report (Bloch, 2011). Some scholars (Smith et al., 2019) divided barriers into the categories *external*, *inter-organizational*, *organizational* and *intra-organizational*. Wipulanusat et al. (2019) and Bloch (2011) have more specific models, with other types of barrier categories, which were deemed to be more useful for this study's purpose of highlighting specific barriers. *External* and *inter-organizational* are not barriers in themselves, these categories just specify where the barriers are.

Wipulanusat et al. (2019) presented 8 barriers categories: (1) *Risk-averse Culture*, (2) *Limited Resources*, (3) *Failure of Leadership*, (4) *Regulatory Requirements*, (5) *Few Incentives or Rewards*, (6) *Bureaucratic Culture*, (7) *Hierarchy* and (8) *Silo Effect*. The MEPIN report, on the other hand, highlighted: (1) *Lack of Flexibility in Laws and Regulations*, (2) *Lack of Incentives for Organizations*, (3) *Lack of Incentives for Staff*, (4) *Lack of Budgetary Funding*, (5) *Inadequate Time Allocated for Innovation*, (6) *Risk of Failure*, (7) *Lack of Cooperation in Organization*, (8) *Contractual Rules Hinder Collaboration with Suppliers*, (9) *Lack of Main Suppliers' Capability to Provide Innovative Solutions* as well as *(10) Resistance of Users to Changes* (Bloch, 2011). Comparisons of these two barrier models and the one created for this study, can be seen below in *Model 2*, followed by a short comparison summary of the 8 barriers. The barriers will be explained more thoroughly under sub-headings 2.2.1 to 2.2.8, where they are also discussed in light of other related innovation barrier literature.

WIPULANUSAT ET AL.	MEPIN REPORT (BLOCH)	WESTERGREN
Risk-averse Culture	Risk of Failure	Risk-averse Culture
Limited Resources	Lack of B. Funding / I. Time	Limited Resources
Failure of Leadership	X	Failure of Leadership
Regulatory Requirements	Lack of Flexibility in Laws	Laws & Regulations
Few Incentives or Rewards	Lack of Incentives (org./staff)	Lack of Incentives & Rew.
Bureaucratic Culture	X	Int. Bureacracy & Hierarchy
Hierarchy	X	
Silo Effect	Lack of Cooperation in Org.	The Silo Effect
X	Con. Rul. / Suppliers / Users	Resistant Users & Suppliers

Model 2: Comparison of the barrier models of Wipulanusat et al. (2019) and the MEPIN report (Bloch, 2011) with the barrier model created for this study.

1 Risk-averse Culture concerns the public sectors overarching culture of trying to avoid risk. The barrier stems from Wipulanusat et al.'s (2019) barrier with the same name and it is supported by the MEPIN report's (Bloch, 2011) *Risk of Failure*. Since a risk of failure in itself is not a barrier, rather how people act regarding risks, the former was deemed to be a better name to use in this study: that the public sector has got a culture of avoiding risks.

2 Limited Resources is quite a straight-forward barrier: the organization does not have enough resources to successfully develop and implement an innovation. It is the same in the study of Wipulanusat et al. (2019), while the MEPIN report (Bloch, 2011) divided it into two: *Lack of Funding* and *Inadequate Time Allocated to Innovation*. For the sake of simplicity, and to reduce the number of barriers, this study chose to combine them into one, like Wipulanusat et al. (2019).

3 Failure of Leadership is the idea that senior and middle managers somehow fails in making their organization develop or implement an innovation. It could be such issues as that they fail in motivating their employees (which ties into the *Lack of Incentives* barrier) to innovate, fail to implement innovation correctly or just show a lack of interest in innovation. It stems from the barrier of the same name from Wipulanusat et al. (2019).

4 Laws and Regulations regards different types of laws and regulation that make implementation of new innovations difficult. It stems from *Regulatory Requirements* from Wipulanusat et al. (2019) and MEPIN report's (Bloch, 2011) factor *Lack of Flexibility in Laws and Regulation*. This barrier also includes of any type of external bureaucracy, like political bureaucracy and hindering laws not being able to change because of political resistance etcetera. Internal bureaucracy, internal approval processes etcetera, is part of the *Internal Bureaucracy and Hierarchy* barrier.

5 Lack of Incentives and Rewards as a barrier is the idea that innovation practices are ignored since there is no motivation for the organization or its employees to innovate. The MEPIN report (Bloch, 2011) divided this factor into a lack of incentives for the organization and a lack of incentives for the staff, but here they will be combined into one as in Wipulanusat et al. (2019).

6 Internal Hierarchy and Bureaucracy consists of two of Wipulanusat et al.'s (2019) barriers (*Hierarchy* and *Bureaucracy*). Both bureaucracy and hierarchy relate to Agolla and Van Lill (2016) ideas of the public sector as being conservative and slow moving. They were combined into one since they were both considered to be dealing with these types of internal structural issues, and were deemed to overlap too much to be considered two distinct barriers. The combination of these two barriers is one of two major differences between the model of this study and Wipulanusat et al.'s (2019). External bureaucracy, like political bureaucracy, is included into the *Laws and Regulation* barrier, and bureaucracy related to suppliers is included in the *Resistant Users and Suppliers* category.

7 The Silo Effect is about poor cooperation between different public sector organizations or units within the same organization. It is taken from Wipulanusat et al.'s (2019) barrier *Silo Effect*, referring to that organizations function as "silos", standing by themselves, not cooperating with others. *Lack of Cooperation in Organization* is its equivalent in the MEPIN report (Bloch, 2011), although that factor did not include cooperation between organizations. To be able to refer to cooperation problems between different organizations as well as different units within one organization, referring to the barrier as *The Silo Effect* was deemed more suitable since it is not as specific.

8 Resistant Users and Suppliers can be found in the MEPIN report (Bloch, 2011) as three external barriers called *Contractual Rules Hinder Collaboration with Suppliers*, *Lack of Main Suppliers' Capability to Provide Innovative Solutions* and *Resistance of Users to Changes*. Notably, it is not in the model of Wipulanusat et al. (2019), and users and suppliers are in fact not mentioned once in the whole study. Thereby, this is the most notable addition of this model compared to the model of Wipulanusat et al. (2019). In their follow-up study of the MEPIN report, Bloch and Bugge (2013) just referred to these three barriers as one: *External Barriers*. In this study, anything the public (users) or suppliers do that can interfere with the innovation process will belong to this category, in line with Bloch and Bugge (2013), to limit the number of different barriers.

2.2.1 Risk-averse Culture

Due to high risk and uncertainty, the public sector tends to steer away from innovative practices, making risk-aversion a major innovation barrier (Micheli et al., 2012; Agolla and Van Lill, 2016). A reason for this is the public sector's obligation to maintain a continuous acceptable standard of different public services, and that continuity and radical innovative changes of such kind does not harmonize (Wipulanusat et al., 2019). Strow and Strow (2018) refer to Pfeifer (2011) who suggests that entrepreneurial and risk-taking employees tend to sort themselves into the private sector in search of rewards for their entrepreneurial endeavors. In line with this, the

public sector tends to attract the opposite type of employees (Strow and Strow, 2018). Thereby, the culture of risk-aversion, or the fear of failure, is highlighted as one of the factors dividing private from public sector innovation, and it is often assumed to be a key barrier to public sector innovation (Bloch and Bugge, 2013). Wihlman et al. (2016) suggest that the general understanding of the innovation concept itself in the public sector was a major hindrance to implementation of new policies. Mulgan (2007) argues that what intensifies this risk-avoiding culture is the media coverage, where even a small failure might put those involved under scrutiny, while successful implementation of innovational might pass unnoticed. However, in Bloch and Bugge's (2013) analysis of the MEPIN report (Bloch, 2011), risk-aversion does not seem to pose such an important hindrance to public sector innovation when compared to other factors. In fact, it was graded as the least significant barrier of all barriers investigated in the study for both the central government and regional governments in Sweden, Finland, Norway and Denmark (Bloch and Bugge, 2013). Stewart-Weeks and Kastelle (2015) suggest that experimentation and testing of new ideas should be conducted on a very small scale to promote innovation but with minimal risk, thereby bypassing the barrier of risk to a great deal.

2.2.2 Limited Resources

To successfully implement innovation, organizations need access to human and financial resources (Wipulanusat et al., 2019). Smith et al. (2019) emphasize how such resources are a common theme when discussing innovation barriers. The study of Wihlman et al. (2016) showed that a lack of resources was considered a prominent barrier to innovation among Swedish middle management since innovation practices were not prioritized under a limited budget. Innovation was witnessed as being a second-ranked goal by both middle and senior management in favor of financial objectives (Wihlman et al., 2016). In the same study, senior management experienced how employees argued that they lacked time in dealing with innovation (Wihlman et al., 2016). Regarding financial resources, in their analysis of the MEPIN report (Bloch, 2011), Bloch and Bugge's (2013) found lack of funding as one of the most important barriers to innovation in the Swedish public sector, just behind internal barriers, which included inadequate time for innovation (which also belongs to this barrier) and a lack of staff incentives to innovate. Studies have also found that extensive budgets are more likely to produce an innovative workplace than slim ones (Demircioglu and Audretsch, 2017). Thus, money is needed to fund innovative project development, testing and implementation. However, this stands in contrast to the public sector's obligation to utilize resources effectively (Wipulanusat et al., 2019). Like the risk-aversion barrier, this barrier can also be bypassed by piloting innovative ideas on a small scale, and then scale up when the time is right, according to Wipulanusat et al. (2019).

2.2.3 Failure of Leadership

Good organizational leadership plays a key role in facilitating innovation, and poor such acts as a vital barrier (Smith et al., 2019; Wipulanusat et al., 2019). Mulgan (2007) argues that by default, few people in hierarchal organizations are willing to take risks, but leaders can establish a culture in which innovation is seen as natural. Wipulanusat et al. (2019) argue that leaders must find mechanisms that encourage adoption and implementation of innovations, and this done successfully is shown in several studies to be the strongest drive for enabling innovation in the public sector (Kusumasari et al., 2019; Agolla and Van Lill, 2016). However, even with good leadership, frequent changes of management can also act as a barrier to innovation, since frequent leadership changes can make it difficult to manage a full innovation process. This phenomenon is referred to as "the too many hats syndrome" by Raipa and Giedraityte (2014). (Wipulanusat et al., 2019). Wihlman et al. (2016) refer to Cregård and Solli (2008) who notes

that due to the complexity of the leadership for Swedish public sector managers, the turnover rate of executives is notably high. Wihlman et al.'s (2016) study highlighted how a key innovation barrier from the perspective of middle management was that the goals and messages from upper management often were conflicting and irrelevant. Senior management was also found to have a more negative attitude towards opportunities for innovation, while middle management was more inclined to act upon such opportunities. The negative attitude from senior management was caused by concerns related to financing, reward systems and innovation orchestration. (Wihlman et al., 2016)

2.2.4 Laws and Regulations

Laws and regulation controls public sector approval processes and activities (Wipulanusat et al., 2019) in order to prevent impulsive and unpredictable actions and to ensure uniformity (Mulgan, 2007). Wihlman et al. (2016) note how citizens demand this rule of law when dealing with the authorities, but such legislation and policy are also found to be a common barrier for public sector innovation (Smith et al., 2019; Lane, 2018). Mulgan (2007) notes how there simply might not be room for an innovation if it does not fit existing laws and rules. To enable innovation some changes in legislation might be required, but such changes can be hindered by ideological disagreement of political parties (Borins, 2018; Jans et al., 2016). Wihlman et al. (2016) bring forward how Swedish law requires municipalities to have a set of obligatory responsibilities towards the society and its individuals, and that public sector organizations cannot change their business concept overnight, whether they would like to or not.

2.2.5 Lack of Incentives and Rewards

The public sector has traditionally not had the same organizational culture for rewarding successful innovation as the private sector (Wipulanusat et al., 2019, Bloch and Bugge, 2013). Strow and Strow (2018) argue that this lack of internal rewards is a notable barrier to innovation. Mulgan (2007) explains this by highlighting how intensity of competition provides motive for innovation, and that monopolistic sectors like the public one tends to lack such motives. There has traditionally been greater punishments for failed innovation, then rewards for successful such in the public sector (Wipulanusat et al., 2019; Mulgan, 2007). Strow and Strow (2018) refers to Bryson et al. (2017) who explains this by saying that while performance pay works well to motivate people in the private sector, it is negatively correlated with work performance in the public one. This since people who urge for performance related payment does not end up in the public sector anyway, implying that public sector workers are not driven by such incentives and rewards (Strow and Strow, 2018). Demircioglu and Audretsch (2017) opposes this and argue that if employees are treated the same regardless of their performance, there will be no motivation and support for employees to perform better and find more efficient solutions. Also the senior management in the study of Wihlman et al. (2016) expressed concerns about a lack of rewards being a barrier to innovative efforts among employees in the Swedish public sector. Mulgan (2007) argues that much of public sector innovation relies on willing adopters, people who are convinced that work and lives will be improved by doing things differently, regardless of monetary gains. In their analysis of the MEPIN report (Bloch, 2011), Bloch and Bugge (2013) found a lack of incentives for the staff in organizations (together with time constraints) to be the greatest barrier to public sector innovation in Sweden. Although the lack of incentives for the organization as a whole rated fairly low in comparison and was not seen as such a big barrier as the lack of internal incentives (Bloch and Bugge, 2013).

2.2.6 Internal Hierarchy and Bureaucracy

Agolla and Van Lill (2016) suggest that public sector organizations are bureaucratic, hierarchical and complex in nature, and that such organizational structures are considered to be a major barrier to innovation in the public sector (Wipulanusat et al., 2019). Among senior management in the Swedish public sector, bureaucratic traditions were singled out as a notably prominent and imposing barrier (Wihlman et al., 2016). Wihlman et al. (2016) and Wipulanusat et al. (2019) found innovation policies difficult to implement in these old-fashioned public sector structures because new ideas have to pass through so many steps to be approved and implemented, despite their popularity among management. If not approved of by management, it is hard to implement new ideas, and such a situation can occur when senior management sees innovation as a possible threat to existing hierarchies (Wipulanusat et al., 2019). Innovation in the public sector emanates from both top-down and bottom-up approaches. Top-down innovation is initiated when leaders or management champion new innovative ideas. In contrast, bottom-up implies innovative initiatives made by people further down in the hierarchy. (Wipulanusat et al., 2019) Taking an innovation from an idea stage to implementation and practice can easily lead to conflict along the way (Wihlman et al., 2016). This because of a general skepticism related to new ideas, and if existing practices and ideas suddenly are challenged by something new, a conflict can easily arise. Such conflicts can thus easily be avoided by not advancing innovational ideas. (Wihlman et al., 2016) Wipulanusat et al. (2019) argue that the public sector simply has a bias towards proven procedures, and that flatter structures and more open interactive processes need to be established in the public sector to stimulate innovative ideas.

2.2.7 The Silo Effect

Public sectors tend to be organized in divided departments, separated by walls of different power structures and finances, which hinders the spread of knowledge and cooperation (Mulgan, 2007). Wipulanusat et al. (2019) refers to this structural barrier as the silo effect, with public sector organizations acting as silos, each one with different obligations and assignments. The organizations are concentrating on their specific mission in their own silo, almost seeing the other silos as competitors when duties overlap. This, in turn, hampers collaboration and diffusion of innovation in the whole sector. (Wipulanusat et al., 2019) Mulgan (2007) argue that diffusion of innovation between public sector organizations have been lacking in spite of strong network efforts encouraging such. This due to discrepancy of what counts as success between departments, but also due to innovation posing a threat to existing power structures. Wipulanusat et al. (2019) argue that the silo problem can be solved by sharing ideas and collaborating across agencies on a cross-agency platform. In contrast to this, Strow and Strow (2018) highlight centralization as a major barrier to innovation and entrepreneurship in the public sector, and that innovative thinking seem to increase as local governments get more control and power of their own fate. Thus contradicting the idea of the silo effect.

2.2.8 Resistant Users and Suppliers

In general, public sector organizations can be seen as service organizations where the meeting with the customer is in focus (Wihlman et al., 2016). Mulgan (2007) argues that the best type of public sector innovators are those who are good listeners to what the public really want or need. Regarding this, Wihlman et al., (2016) note how citizens demand continuity, transparency and rule of law when dealing with the authorities. It has also been noted how the expectations from the public about the public sector services in return for their tax money is increasing (Agolla and Van Lill, 2016). In the United Kingdom, users have increasingly been handed the power to initiate innovation and shape services to meet their needs, and are not as tied to just

go along with whatever professionals believe they need (Mulgan, 2007). Implementing a major innovation often requires that suppliers somehow are accepting the innovation, and these actors might have to be convinced to join (Smith et al., 2019). Bloch and Bugge (2013) found innovation in the public sector rarely to be about a passive purchase of an innovation from suppliers, instead, PSO:s are most often the primary actor themselves, actively participating in development of innovations, not relying too heavily on suppliers.

2.3 INNOVATION HUBS

As Bakici et al. (2013) noted, there is a lack of studies on innovation intermediaries, like innovation hubs, in the public sector. Because of this, this section will make use of theories and studies originally focusing on the private sector, in contrast to the barrier segment (3.2) which merely was based on studies related to the public sector.

Wihlman et al. (2016) found in their study that senior managers in the Swedish public sector found it difficult to support innovation, with one of their informants explaining that their weakest ability was that they could not find a system that successfully orchestrated the innovation process. The public sector frequently encounters complex tasks of infrastructural development when trying to provide better services through enhancing innovation and innovativeness, tasks that require the involvement of various parties, such as public and private parties, citizens, resources and networks (Bakici et al., 2013). The challenges that comes along with major innovation processes may require new competencies and actions, some of which may conflict with existing practices and the day-to-day incremental innovation in an organization (O'Hare et al., 2008). To manage this conflict between innovation and the daily activities, the conflict of change and stability, organizations can make use of an innovation hub (Hintsala et al., 2017). This is a type of organizational structure is dedicated to process and implement significant innovative changes while keeping a distance from the culture and usual routines of an organization (O'Hare et al., 2008). Innovation hubs are typically funded to undertake an intermediary role of enabling innovation processes, rather than having it as a by-product of other daily activities (Winch and Courtney, 2007). Common challenges for hubs to deal with are mainly conflicts of interest between different actors and shareholders, bureaucracy, budget restrictions as well as problems with collaboration (Bakici et al., 2013). Winch and Courtney (2007) note how innovation brokers and hubs can play various of roles in innovation processes, ranging from validating new ideas to reducing the risk of innovation for adopters as well as facilitating solutions of unique problems by linking sources of innovation to their potential users. They can also assist organizations by discovering new innovational ideas, finding funding sources as well as connecting people and partners (Hood et al., 2014). Hubs can enable a platform where value and orchestration activities can be co-created across borders, a step away from typical hierarchical structures (Perks et al., 2017). To achieve this, innovation hubs can organize events such as conferences, panel discussions and workshops to increase awareness, knowledge and collaboration in regard to innovation in the public sector (Bakici et al., 2013). Where a new product or process is deemed to be experimental, an innovation broker can act to validate its use through testing and other measures, which is extra vital in the public sector where integrity and stability are essential factors in regards to procurement (Winch and Courtney, 2007). As a counterweight to the positive aspects of innovation hubs, O'Hare et al. (2008) note how innovation hubs, at least those in the private sector, often seem to fail within just a few years of its founding, ending up wasting resources and being unable to develop major, radical, innovations. For an innovation hub to avoid this and be successful, according to O'Hare et al. (2008), important factors are to start with a small team and grow organically, maintaining a close relationship with the core organization as well as building a balanced assortment of competencies.

3. METHOD

This section will present and explain how this study was conducted: its overall scientific approach, how data was collected and how the analysis was done. It also includes a method discussion section discussing the study's quality and ethics.

3.1 APPROACH

This study is a qualitative embedded case study with a deductive approach. A qualitative method was chosen because the study seeks detailed descriptions of the subject of innovation barriers and aims to truly understand the subject matter on a deeper level than a quantitative study would. It has a focus on the spoken word, and analyzes data primarily gathered from interviews and focus groups. Braun and Clarke (2013) explain that the most straightforward way to define qualitative research is that it uses *words* as *data,* which are collected and analyzed in various ways, as in this study. The phenomena in focus in this study is innovation, while the context is the public sector, which goes along with Yin (2007) who defines a case study as an empirical study of an ongoing phenomenon in its true context, typically when the boundaries between the phenomena and the context are unclear. A case study can consist of more than one unit of analysis at the same time, thus described in terms of and an *embedded* case study, denoting one case with several subunits (Yin, 2007). This study is to be regarded as a *single* embedded case study considering that it studies one specific project (*Idésluss Sundsvallsregionen*) that has several different subprojects (Yin, 2007).

One purpose of this thesis is to study the program called *Idéslussen Sundsvallsregionen*, in terms of how the orchestrating intermediators have facilitated innovation by removing or bypassing innovation barriers. Yin (2007) notes how evaluation of such kind of programs in the public sector is a common theme for case studies, and that development of theories of how a program is expected to function is essential for how to form such an evaluation. This embedded case study investigates 4 differing innovation projects (cases) of *Idésluss Sundsvallsregionen*, from a total of 169. Using only 4 cases of a total of 169 was deemed enough in line with Braun and Clarke (2013) who note how qualitative research tend to use smaller samples than its quantitative equivalents, although being analyzed more in depth. The choice to only conduct research on 4 cases was mainly because of time limitations. Braun and Clarke (2013) suggests that the sample size can be decided by the availability of factors such as time and resources, of which a lack of such was the case for this study. This study has a deductive approach since it originates from existing theories that are applied on a specific case (Yin, 2016). It addresses the research question by examining barriers to public sector innovation, initially in a literature review that generated a model suggesting 8 different public sector innovation barriers. The model was then used in the analysis of the barriers discussing prior research related to the new findings.

3.2 DATA COLLECTION

This study gathers primary data using two different methods: interviews and focus group interviews, while it gathers secondary data from making a document review. A literature review of scientific articles was also conducted. Yin (2007) argues that the strength of data collection in a case study like this is the opportunity to use many sources of information, thus providing the researcher with a wider perspective, but also an opportunity to compare data from the various sources. Corbin and Strauss (2008, 27) calls this "one of the virtues of qualitative research". Using various types of data sources in parallel related to the same problem is referred to as data triangulation, and when data from different sources are strengthening and verifying each other, the result of a study will be more convincing (Corbin and Strauss, 2008; Yin, 2007).

3.2.1 Primary Data

A total of 13 informants were interviewed for this study on 7 different interview occasions. Three of them were conducted as single interviews with the three full-time employees of *Idésluss Sundsvallsregionen*, then there were 4 focus group interviews with a total of 10 members from 4 different cases.

The cases used for the study was chosen by *Idésluss Sundsvallsregionen* themselves, after instructions of trying to choose varied cases to get a broad view. Yin (2007) notes how interviews are an important source of information for case studies because most case studies somehow relates to people. The interviews were of a semi-structured character, with the interviews following a series of questions, but the informants were allowed to express their own thoughts and ideas in more of a dialogue-form in comparison to a structured interview (Yin, 2007). This to avoid leading questions and to attain more "real" answers. Problems with the data collected from interviews could be that the questions are not formulated correctly which leads to skew answers (Yin, 2007). To deal with this, many similar, yet different, questions regarding the same themes were asked, but also fitting follow-up questions if the questions were not fully understood. The interview template for the hub interviews can be found in Appendix A.

As mentioned, focus group interviews with members of 4 of the cases were also held, with 2 to 3 case members in each focus group. The focus group interviews were held via *Skype for Business* for logistical reasons during the Corona virus pandemic. Focus group interviews were held instead of 1-on-1 interviews to obtain a broader view and more opinions of the same case (Braun and Clarke, 2013). Focus groups and focus group interviews are relative unstructured, but still guided, discussions usually led by a moderator regarding a topic of interest with a focus on talking points rather than direct questions (Braun and Clarke, 2013). Focus groups interviews reduces some of the artificiality and decontextualization compared to other forms of qualitative data collection, in terms of it enabling a life-like type of interaction mirroring everyday processes of social interaction (Braun and Clarke, 2013). This life-like type of data collection was used to strengthen the validity of the study. All interviews were conducted in Swedish, transcribed in Swedish and then later translated into English for use as empirical data. The interview template for the focus group interviews can be found in Appendix B.

All interviews conducted for the case of this study, except for one, were recorded. The only interview not recorded was Focus Group 1, where recording was forgotten, and interview notes were used as empirical material instead. Considering the importance of details and language in qualitative research, it is important to obtain an accurate record of the interview, which can successfully be achieved by doing an audio recording (Braun and Clark 2013; Yin, 2007). All interviewees and participants of the focus groups was first asked if they approved that the sessions were recorded, in line with Yin's (2007) recommendation. Two recorders were used for all the live hub interviews, in line with Braun and Clark (2013) who recommend using two recorders in case one would fail. For the *Skype for Business* interviews, only the *Skype* recording function was used.

Table 1: Overview of the 3 interviews and 4 focus groups. Including number of informants (#), codes for the analysis (first letter indicating hub or focus group, the number is the order in which they were made, and the last letter indicates the different informants in the focus groups), dates (all in the year 2020), the field and content of the innovation case, as well as if the innovation has been implemented / is being implemented as of May 2020 (Impl.).

Interview	#	Code/s	Date	Field	Innovation	Impl.
Hub Employee 1	1	H1	Mar 11th	-	-	
Hub Employee 2	1	H2	Mar 11th	-	-	
Hub Employee 3	1	H3	Mar 11th	-	-	
Focus Group 1	3	F1A, F1B, F1C	May 8th	Healthcare	Re-organization	No
Focus Group 2	3	F2A, F2B, F2C	May 11th	Infrastructure	New technology	No
Focus Group 3	2	F3A, F3B	May 12th	Social Work	Re-organization	Yes
Focus Group 4	2	F4A, F4B	May 13th	Infrastructure	New admin. system	Yes
Informants	**13**					

3.2.2 Secondary Data

Secondary data, in form of documents as evaluating reports and web pages related to *Idésluss Sundsvallregionen*, have also been used for this study. An evaluating report by external researchers and two web pages related to the hub was used to explain the background of *Idésluss Sundsvallsregionen.* Two evaluating reports were also used in the analysis to triangulate the empirical data of the interviews. Yin (2007) argues that secondary data such as documents and archive material might be problematic due to potential bias. Researchers might assume that differing types of documents is the one and only truth, but it is important to note how each document is produced, and for which purpose, in order to avoid misguidance (Yin, 2007). This possible bias has been taken into consideration.

3.2.3 Literature Review

A literature review of scientific articles was also conducted for the sake of this study. This is in line with Yin's (2007) recommendation that a case study should be prepared by collecting and reviewing literature related to the subject of research. The scientific articles contextualized the research, provided data on research gaps, enhanced understanding of the research field and aided in the creation of the theoretical framework and development of a theoretical model. Braun and Clarke (2013) argue that data easily can be obtained through various electronic databases. This study made use of the *Primo* search function as well as *Google Scholar* to identify and obtain its scientific articles. Search terms used to find the articles were as follows: "public sector innovation", "public sector innovation barriers", "innovation diffusion public sector", "innovation hub", "innovation hubs", "innovation brokers", "innovation intermediates", "innovation hub public sector", "innovation brokers public sector", "innovation intermediates public sector", "crisis innovation" and "corona virus". In total, 48 scientific articles were used for this study.

3.3 ANALYSIS

This study uses a theoretical thematic analysis. The thematic analysis method was chosen since it can give a detailed description of a phenomenon but also identify themes and patterns through its data. In a deductive fashion, the analysis was guided by the existing theories and concepts in form of the public sector innovation barrier model (see *Model 1*). This gives the method its

"theoretical" epithet. (Braun and Clarke, 2013) Braun and Clarke (2013) argue that if not related to a theoretical framework like this, a thematic analysis will have limited interpretative power.

The first stage of analysis was the coding stage. Corbin and Strauss (2008, 66) refer to coding as *"taking raw data and raising it to a conceptual level"*. Quotes related to what hinders innovational processes were copied from the interview transcripts into a new document. They were there sorted after which of the 8 barriers they were deemed to belong, but also assigned labels of which transcript they originated from. Quotes from the three members of the innovation hub *Idésluss Sundsvallsregionen* were assigned the labels H1, H2 and H3 in the order the interviews were conducted. Quotes from the focus groups were assigned with F1, F2, F3 and F4 followed by the letters A, B and C indicating the answers came from different focus group informants. This study made use of selective coding, since only certain aspects of the phenomena of innovation were coded (Braun and Clarke, 2013). Some quotes were deemed useful for analysis of more than one barrier, thereby the quote was coded under several barriers.

The collected quotes were then analyzed barrier-wise in search of overall themes (Braun and Clarke, 2013). They were reviewed one by one to evaluate whether the barrier was a vital one or not, what specific factors within the barrier that are the most notable, what the hub did to help bypass named barrier, and if the views differed notably from the hubs (H1, H2…) point of view, to the different focus groups' (F1, F2…) as well as the notes of the different related documents. The themes identified were also compared to the existing research from the theoretical chapter, highlighting differences and similarities. The barriers, the role of the hub as well as the barrier model was then evaluated in the conclusion and discussion segment, where also ideas for future research were presented.

3.4 METHOD DISCUSSION: QUALITY AND ETHICS

3.4.1 Subjectivity and Bias

Corbin and Strauss (2008, 32) refer to objectivity in qualitative research as a "myth" since researchers always bring subjectivity in form of their own perspectives, knowledge and biases with them in their research. In the context of research, bias is the idea that the researcher inadvertently influences the results, making the results untrustworthy (Braun and Clarke, 2013). The existence of bias will be recognized in this study, and is taken into account in the analysis, with me trying to be as neutral and unbiased as possible. It is also taken into account that *Idésluss Sundsvallsregionen* themselves choose the 4 cases of investigation. Thereby, their choices might have been chosen in their own favor. This is discussed later in the analysis and conclusion sections.

Regarding knowledge, I as a researcher am lacking experience in this field of research, which can be considered a weakness. On the other hand, I bring a new set of ears and eyes, a new perspective, to the research field. Hopefully, I am not as affected by the common values of the public sector coming into this study, adding an outside perspective. In relation to this, Braun and Clark (2013) argue that all research activity is influenced by something, and that the influence the researcher brings is just one of many, while they also bring forward how subjectivity is positively valued in the quantitative paradigm by such authors like Fine (1992) and Holloway (1989).

Corbin and Strauss (2008, 49) explain how researchers act as translators of other people's words and actions, and that conveying meaning of what other people say is difficult and sometimes can be a "bit off". On top of this, since the interviews and focus groups were all conducted in Swedish, the translation of the quotes into English may further shift the meaning of quotes from

the intentions of the interviewees. The quotes were translated to as accurately as possible represent the original quote, focusing on the implications of the quotes rather than doing direct translations that might be skewed. Although in doing this it is hard to be strictly objective, since many words, idioms and likewise are not entirely translatable.

3.4.2 Validity

In this study, data is gathered from many different sources, which, according to Yin (2007), increases the validity of the study if applied in a correct way. Validity can be defined as to which extent a measure accurately reflects reality (Braun and Clarke, 2013). There are several means of validity for a researcher to consider, of which ecological validity is the most relevant for qualitative studies according to Braun and Clarke (2013). This study made use of such data collecting methods as focus groups to increase its ecological validity. This type of validity concerns the relationship between the real world and the research, whether the data collection of the research resembles the real-world context, and therefore then more appliable to real world settings (Braun and Clarke, 2013). As mentioned under 4.2.1, focus groups interviews reduces artificiality and decontextualization compared to other forms of qualitative data collection, and thereby mirrors real-life type of interaction better, increasing ecological validity (Braun and Clarke, 2013).

3.4.3 Transferability

Transferability is a concept mainly related to qualitative studies that refers to which degree results of a study can be transferred to other groups of people and other contexts. To enhance transferability, one needs to describe the specific context, participants, settings and circumstances well, for the reader to be able to evaluate whether the results can be applied to his or her context. (Braun and Clarke, 2013) Therefore, this study aims to describe these factors as thorough as possible, with the context of the case study clearly defined. Lee et al. (2012) notes how public sector organizations increasingly are looking at the rest of the world in search for new ways of delivering public service, instead of innovating everything by themselves. Thereby, by increasing the transferability of the results of this study, the research can inspire and give insight to other public sectors organizations.

3.4.4 Confidentiality and Integrity

The study also considers the participants' confidentiality and integrity by keeping the identities of the interviewees and focus group members confidential. Names mentioned in the interviews were changed into pronouns instead. Effort has also been made not to be too specific about the different cases so the quotes all too easily can be tracked. Corbin and Strauss (2008) suggest that confidentiality is one of the central obligations in doing interviews and making observations for a study, and that the anonymity of the subjects of the study needs to be guaranteed. The informants were given opportunity to withdraw from the process at any point, in line with what Braun and Clark (2013) refers to as the principle of self-determination. The interviewees and focus group participants were also asked beforehand if they approved of being recorded. With all this in mind, the study makes sure that the principle of integrity is followed and aims to give an honest and accurate representation of the data gathered from the participants (Braun and Clarke, 2013).

4. RESULTS AND ANALYSIS

In this section, findings from the interviews and documents will be presented, alongside an analysis of the findings connected to the theoretical framework. Findings regarding what has been hindering innovation will be presented under each of the 8 barrier sub-headlines, alongside what the hub has done to assist in bypassing mentioned barriers. All quotes from the primary data are coded according to *Table 1* (find in section 3.2.1). Quotes from documents, secondary data, are just referred to by author and page number.

4.1 RISK-AVERSE CULTURE

A few specific themes were identified from the interviews and the document review regarding risk-averse culture: the risk-avoiding *comfort zone*, the aspects of *fear* and *media*, a need to adjust *language*, as well as a need to "*go under the radar*". The culture of trying to avoid risk in the public sector was an aspect that the people of the innovation hub were well familiar with. Several quotes suggested this:

"Innovation is associated with risk, and the public sector likes to keep risk as far away as possible." (H3)

"To do something in a completely new way is pretty far off from our organization and us people who are working there. It is a big, big step." (H1)

"I do not have proof of this, but it has turned into a form of "what we know is what we're comfortable with". Even if it is tough and brutal, it is still in my "comfort zone" – so we're just continuing with what is familiar to us." (H1)

These quotes align with Strow and Strow's (2018) ideas of how risk-taking people tend to steer towards the private sector and not the public one, and risk-avoiding such sort themselves into the public sector for the opposite reason. They hint at how the public sector is more of a *comfort zone* for a risk-avoiding person since they are not expected or encouraged to take risks in the same way as employees of the private sector. Looking at the case informants, one of them noted how crazy it was that this culture of wanting to stay in the comfort zone existed in the public sector.

"One does not think of "innovation and the public sector" [together], but when you're in it you realize that it's completely crazy that we in the public sector is so far behind." […] to innovate public services is to manage the tax money as adequately as possible." (F4B)

Notably, the use of the word "risk" was challenged by one of the hub interviewees who preferred the word "fear", a term also used by Bloch and Bugge (2013), while the interviewee noted that the word "risk" was better suited when, for example, talking about care for elders and children. There was often an emphasize on the word "*fear*", and often in combination of doing something wrong and being exposed in the *media*. This had also been noted by the external researchers:

"We can talk about risk and we can talk about fear […] when working with children and elders there is an element of risk, but besides that I'd like to say there is more of a fear of being depicted badly [in the media] for doing something wrong" (H2)

"The fear of doing something wrong is very present I believe […] it's about people and important matters, so you can't just try and experiment as much as you want […] one can be examined by the media…" (H3)

"If we do not pull through, we might be depicted as incompetent…" (F3B)

"The statements of the key people show that there is a natural psychological resistance towards improvement work, as fear of showing shortcomings…" (Demokratikonsult, 2020, 38)

The first quote can be linked to the public sector's duty to maintain a continuous acceptable standard of different public services, such as elderly care, and to be accountable to the population in doing so, and that continuity and drastic innovative changes thus does not rhyme well (Wipulanusat et al., 2019). Notably, both hub informants H2 and H3 mention the media regarding the fear of failure, and the case informant F3B hinted at it. This relates back to Mulgan (2007), claiming that media coverage intensifies the risk-avoiding culture by making employees hesitant of taking risks, including risks related to innovation. The external researchers were also talking about how there was a natural psychological resistance towards improvement. This ties into the next theme: *language*. The culture of the public sector became apparent when the hub employees mentioned how "customer" was something of a dirty word in the sector, but also that they themselves avoided the word "innovation".

"… we don't talk so much "innovation" when we are out interacting with people, instead we're talking "value" for those we're working for [the public] […] it is easier for colleagues and co-workers to understand…" (H1)

"… some words just does not work to use in some organizations. If we are saying "customer" in one of the organizations people might be really upset…" (H2)

This relates to Wihlman et al. (2016) who suggested that the understanding of the innovation concept itself was a hindrance to implementation of new policies in the public sector, but *Idéslussen* and their projects seem to have found their way around it to some extent by phrasing it in other words. Or at least they are aware of it. Presenting things in a certain way to make co-workers approve of innovation was also seen as vital for one of the case informants.

"[It is important] to be able to show value [to other people in the organization]. Show hard facts. Innovation is quite new to people in this organization so it can be perceived a bit hokey…" (F2B)

One case informant felt it was easier to just "*go under the radar*" rather than convincing co-workers of their project, being a bit anonymous not to encounter questioning from people in the organization. Another opposed this mindset and felt that they needed to be less anonymous in the future to get their ideas through and make people join their journey, not just hide it:

"We've been cautious with spreading information, both internally and externally, but rather been working with this 'under the radar' just to be able to do this" (F2A)

"We need to be less anonymous and really sell to people what we do. We can do that better in the future […]" (F1A)

In overcoming the barrier of culture of risk-aversion the hub has had a prominent role. From the empirical material, three major themes could be identified: creating a *comfort zone for innovators*, lowering risks by helping people *scaling down* and finding the right *balance of encouragement*. The people of the hub began their journey by trying to change the culture and the overall mindset of the sector, which includes trying to teach them to take risks:

"When we started this project we assumed it to be a 10 year journey, and we said that the first three years will be much about creating an open and allowing culture for anything to happen at all…" (H2)

"We're not trained to try. Just do it! Try it one time! See what happens! What's the worst thing that can happen? In some cases it's about life and death, but let's say those who aren't working with that…" (H1)

Perhaps by creating an allowing culture, the whole public sector can become a *comfort zone for innovators,* risk-takers and entrepreneurs, not only a comfort zone for risk-avoiders (Strow and Strow, 2018). A zone where people do not have to mind their language in fear of offending colleagues, and where *fear* of being depicted poorly in the *media* is not as present (Mulgan (2017). The answers from the case informants indicates how the hub made a temporary comfort zone for innovators by making it possible for the innovation projects to keep a distance from the existing habits and values of their own organizations, but also helping them *scaling down*, lowering risks:

"Idéslussen helped us buying gauges. […] If you're asking for that internally […] they might start questioning us…" (F2A)

"Now we've got somebody from the outside that says "everyone need to back off from their usual positions". It is easy to defend earlier sins and decisions, but now we neglect those [decisions]… " (F4B)

"To scale down were one of the important aspects. […] To get help in understanding that it doesn't have to be perfect [from the very beginning]" (F2A)

The quotes above relates back to O'Hare et al. (2008) who argue that a hub can help in developing and implementing innovative changes while keeping a distance from the culture and usual routines of the organization in question. The quotes also suggest that step-by-step encouragement alongside small-scale testing may help bypass the barrier of risk-aversion. This is aligned with the ideas of Stewart-Weeks and Kastelle (2015) who suggested that experimentation and testing of new ideas should be made on a small scale to promote innovation but with minimal risk. It also goes hand-in-hand with Winch and Courtney (2007) who argue that an innovation hub can validate an innovation in the risk-averse public sector by enabling testing. Not to raise fear among the public sector workers, an informant from the hub noted how the hub avoided being too "pushy", instead trying to find the right balance, and going by the quote from the case member, *balanced encouragement* seems to have worked well:

"It is about finding the right balance. You can't challenge too much, push too hard, then you won't get people to follow you" (H3)

"Idéslussen has encouraged us to come up with ideas, to test, and they have done it in an amazing way!" (F1B)

The external researchers agreed that there has been some progress in introducing a positive culture for innovation, but that it is a long process:

"The project Idésluss Sundsvallsregionen 2017-2020 overall goal of introducing a positive culture towards change and a systematic way of working has started […] and progressed a bit […] but [we] can conclude that change takes time" (Demokratikonsult, 2020, 32)

Risk-aversion was not deemed to be such a great hindrance to public sector innovation compared to other factors, ranking 7th out of 7 barriers in 4 of the 5 Nordic countries, including Sweden (Bloch, 2011; Bloch and Bugge 2013), and with the result of this study in mind, it might be correct. The barrier of culture of risk-aversion is a notable one, but perhaps not the most important and far from the hardest to bypass. The analysis indicates that it can be done by supporting and consoling people in their innovation journeys and allowing them to keep a distance from the organization's culture and usual routines as O'Hare et al. (2008) suggested -

to "go under the radar". It can also be done by making them able to try things on a small scale as suggested by Stewart-Weeks and Kastelle (2015). Although trying to establish a whole new culture may not be as easy. The culture and mindset of the public sector seem deeply rooted, and as long as innovative people are being drawn to the private sector, as Strow and Strow (2018) suggested, this might not be so likely to change. Even though Demokratikonsult (2020) concludes that progress has been made regarding that, the existing comfort zone might be hard to change. However, as long as an innovation hub like *Idéslussen* gives the innovative souls of the public sector a chance to shine, even though they are few, the light might spread through to the rest of the sector.

4.2 LIMITED RESOURCES

There were differing opinions and experiences regarding resources among the informants, but they all circled around two major themes: *time constrains* and *lack of funding* for innovation. Several of the hub informants, but also the external researchers, argued that *time constrains* hindered the innovation process in the public sector since it clashes with the everyday activities. However, informants also emphasized that the innovation process really *needs* to take time. The case informants agreed that time was a notable factor:

"It requires lots of work to deal with innovation processes, you need to take your time […] There's not a minute that personnel [working with people with disabilities] can do other things than the core activities." (H1)

"...it needs to take time […] we are many that are underestimating [the time it takes]…" (H3)

"A lack of time is always a great risk in a project, since the time [needed for a project] competes with the regular activities and assignments in the calendar." (Demokratikonsult, 2020, 51)

"Even if we have competent and engaged personnel they still need time to do their regular job […] one always need to prioritize time-wise." (F1A)

"It hasn't been an problem money-wise […] [although] there could be a lack of time…" (F1C)

This aligns with the study of Wihlman et al. (2016) in which senior management experienced how employees claimed they lacked time for innovation. This might not be all too surprising, because if people are already working full time it can be hard to tell where the time for innovation should come from. Notably, one of the informants noted how there had not been a problem money-wise for their project, and this is where the experiences of the cases starts to differ. Despite a greater workload, the organization of another case still pushed their employees to lower their costs. This type of reality does not go hand-in-hand with managing innovation projects, which also a hub informant noted:

"We have as a task to lower our costs, despite that [our workload] has increased […] Our reality does not allow any type of project budget, unfortunately." (F3A)

"… we don't have the money [to waste]! We are not allowed to waste the money which causes no one to dare to do anything of which the result isn't already given…" (H1)

This was also found in the study of Wihlman et al. (2016) who noted that innovation practices typically were not prioritized under a limited budget in the Swedish public sector. Financial objectives were put first, and innovation was perceived as being a "second-ranked goal" by both middle and senior management (Wihlman et al., 2016). One of the hub informants inclined that money really needs to be put aside for innovation, money that must be allowed to be gambled with:

"To work with innovation there need to be resources for that risk. When you're entering the casino you need to set aside 3000 as lost money, otherwise you cannot enter and play! It is the same thing here, and we don't have the money [to waste]! We are not allowed to waste the money which causes no one to dare to do anything of which the result isn't already given… (H1)

There is a great contrast between the need of "gambling money" available to innovate and the public sector's obligation to utilize resources effectively and not gamble, as Wipulanusat et al. (2019) suggested. There simply is no money available to spare, and if resources should be put into a project, it needs to be a success, which no one can guarantee in advance.

It is here where the innovation hub *Idéslussen* plays a part. A few themes were identified regarding what can be done do to bypass the barrier, one of them was to provide financial resources for testing, or *"gambling money"* if you like**.** Besides that, *Idéslussen* can give employees time for the innovation project by adding resources in form of *paying for substitutes*, but also resources in form of *adding competencies*. All of these added resources enabled a *"test zone"* for the public sector employees. One of the hub informants noted how one of their major tasks was to create a "*test zone*" for the public sector employees with the *gambling money*, where they could avoid the public sector's tight budget constraints. It was noted as something a case could not expect to get from their own organization, but the hub provided:

"They [Idéslussen] gave us financial aid, which was great. If you're asking for that "at home" [in the organization] it usually takes time and you might be questioned about it…" (F2A)

This related back to Hood et al. (2014) who noted that one of an innovation hub's main responsibilities is to find funding sources for innovation, which *Idéslussen* seems to successfully have done in the F2 case. Opposed to adding money, some cases seemed to need help in saving money by *scaling down*. One of the case informants highlighted how the hub had helped them to scale down their innovation process.

"It's great if there is external competence available. In our case to get help in the beginning to scale down, which isn't easy." (F2A)

This is in line with Wipulanusat et al. (2019) who argued that the barrier of limited resources can be bypassed by scaling down and piloting innovational ideas on a small scale, which can help saving money. In this case, an investment of external competencies from *Idéslussen* helped in creating a smaller scale pilot, saving money in comparison of doing it on a big scale. But even if finances are put aside specifically for innovation, one must know what to do with the money, a case informant noted, and that using it within a time limit is difficult:

"… the belief was that one could buy their way out of problems […] I'm in fact critical to that resources show up that are difficult to use well in such a short amount of time [3 months] (F1C)

This implies that the cases could have used some more help in how to use the money, and perhaps be allowed to spend it over a longer period of time. For some projects, longevity might be key, not a short economical boost used to purchase x or y. Besides adding straight out money for straight up purchase and testing, the hub also provides resources as *substitutes* and other *competencies*, to provide time and knowledge, and it was apparent that the different resources added to the projects by the hub made a great difference for the different cases:

"We have resources to take in a substitute so that she [an employee working with people with disabilities] can be part of the innovation process. It is a way of enabling personnel that are part of these development processes" (H1)

"We could never have done it [the innovation process] without Idéslussen that has facilitated with competencies and resources" (F1A)

"If you have needed contacts that isn't in your network, Idéslussen has assisted you in providing those contacts. It has worked great, a great support!" (F4B)

All of these resources were used to enable a sort of "test zone" for the public sector employees, where they could dare to explore:

"We [Idéslussen] have quite a lot of resources [...] and can come in with competence in form of "idea coaches" that facilitate and coaches the "idea carriers" to think, do, test and dare to explore" (H1)

"As of today, [the public sector] is so inflexible and limited in our tasks, and laws and budget never gives you this test zone, free zone [...] That is what we're trying to create now [a test zone]... (H2)

These quotes suggest that the resources used to create a test zone made it possible to avoid, or work outside, the organizational routines, supported by the theories of Hood et al. (2014) and Winch and Courtney (2007). This links to the previous barrier of the risk-averse culture.

In Bloch and Bugge's (2013) analysis of the MEPIN report (Bloch, 2011), they found a lack of funding as one of the most prominent barriers to innovation in the Swedish public sector, just behind internal barriers which included time constrains. This seem to be reflected in the results, whether the resources exist somewhere else in the organization or not. It appears to be a need of input of resources to get an output of innovation, and considering the financial constraints of the public sector it might create somewhat of a paradox. Notably, *Idéslussen* has done well in terms of helping the cases to bypass this barrier. Examples of this is the addition of "gambling money" in the F2 case, providing substitutes and competencies for the F1 and F4 cases, and helping to scale down as in the case of F2. All of which creates a *test zone* for innovation in the public sector. So even if the barrier itself is a difficult one, an innovation hub can make a huge difference in bypassing it. One should note though that the money and other resources that the hub provides does not just fall from the sky, in one way or another it is almost always somehow paid for by taxpayers.

4.3 FAILURE OF LEADERSHIP

It was apparent in the focus group interviews that the case members considered good leadership extremely vital for a successful innovation process, and poor such to be a great barrier. The major themes that emerged were *lack of interest/commitment* among leaders, *risk of media criticism*, the leadership role of *keeping up operations while also being a visionary*, the *turnover* factor as well as a *lack of clear directions*. Regarding *lack of interest/commitment*, some informants noted that they have had problems getting the right type of leadership to enable innovation, while a hub informant noted that executives need to see the value of the eventual output, not just the cost of the input:

"The leadership is very important, it is important that there is an interest to work with innovation, but in our fields that interest isn't all that great..." (F2A)

"All commitment emerge from leadership. [...] If you have leadership without commitment it is difficult to push forward. This has had a negative impact on us [...] it's hindering..." (F1B)

"Some things might need some efforts and input [...] time, money, energy, it requires an executive that sees the values in it." (H1)

These quotes relate back to Wihlman et al. (2016) who found a notably negative attitude towards innovation from senior management in the Swedish public sector, and that it was mainly because of concerns about financing, reward systems and innovation orchestration. But even if executives see the value in an innovation, there might be other factors that are stopping them. One hub member argued that the aspect of another barrier, the risk-averse culture, exists to a high degree among executives:

"… if you're portrayed poorly in the media […] you could quickly become replaced as an executive is something goes wrong… " (H2)

This relates back to Mulgan (2007) who argues that people in hierarchal organizations generally are not willing to take risks, and considering the *media criticism* they might face in case of a failed innovation investment, it might not be surprising that executives are trying to avoid it. A case informant defended executives' potential avoidance of innovation by explaining that switching between an operational and visionary role is not all that easy, which two hub members agreed with, with one adding the Corona crisis as a factor:

"It is tough for the executives […] It is really difficult to change between the operational and at the same time be a visionary…" (F3B)

"… executives in Sundsvalls Kommun today have their hands full of solving the challenges of today […] I'd assume that as of today 90% of our executives are talking Corona, and they still need to deal with their daily tasks at the same time." (H2)

"… all executives have a responsibility to develop their operations, but they are stuck in between sick employees, getting the schedule together, getting a budget together - "between a rock and a hard place". (H3)

This relates back to the lack of time among employees discussed in the limited resources section (5.2) (Wihlman et al., 2016), and executives might not have it any easier timewise than employees further down in the hierarchy. Keeping up operations while still being an inspiring visionary might not be all that easy, since innovation processes may come in conflict with existing practices and daily work of an organization, as O'Hare et al. (2008) suggested. Despite all this, Wipulanusat et al. (2019) argue that leaders are in the end responsible for finding mechanisms that encourage adoption and implementation of innovations, despite what barriers there are. One informant noted how leaders can truly make a difference by encouraging the employees:

"Sometimes you need those kind of people who can stand up and say "This will be great! Fight! Keep on going!" (F3B)

Although sometimes the idea carriers do not "keep on going". According to one of the hub informants, the most common reason for a case to fail was that the "idea carrier" somehow lost interest in the process, or completely changed jobs or position:

"The majority of the cases that have imploded have done so because the "idea carrier" has been lost […] The idea carrier can be anyone from an executive to an employee…" (H3)

Whether the "idea carrier" is an executive or not, it is still the leader, the driver, of the innovation process. Referring back to paragraph 1.2, the "idea carrier" is the reason that the case exists at all. Without the carrier, the case loses its initial engine and its visionary. Related to this, one of the cases faced problems when losing the executive that led their process and they found it difficult to have to change leaders while in the middle of the process, and that the new leader "inherited" something he/she had not been part of creating.

"It has been a problem now later in the process that [the executive] has quit, the clear visionary […] is gone." (F3B)

"The drive did not come from the current leader. [This executive] has inherited the innovation process." (F3A)

The above quotes relate to what is referred to as the "too many hats" syndrome that makes it difficult to manage a full innovation process (Wipulanusat et al., 2019). The *turnover* rate of executives has been argued as being notably high in the Swedish public sector because of the complexity of leadership (Wihlman et al., 2016), which certainly creates a problem here. Considering that the cases include a limited amount of people, losing just one of the case members might be devastating, whether it is the original "idea carrier" or an executive related to the project. Related to the importance of good leadership in the innovation process, a hub member noted how there is an over-reliance on the Swedish model in the Swedish public sector, that executives incorporate employees in the decision process in too great of a degree and instead need to point out *clear directions*:

"… I feel that executives generally have problems in pointing out a direction. The co-workers are pleading for one, but the executive believes that 'we're gonna figure that out with a collaborative workshop'. […] There is an over-reliance on the Swedish model." (H3)

This relates to Wihlman et al. (2016) who argued that conflicting goals and messages from the upper management was considered a great hindrance to innovation by middle management in the Swedish public sector. One case member simply felt sorry for the middle managers that were in the midst of this.

"… poor middle management that need to make it all happen." (F3A)

Consequently, it might not be a surprise that there are some conflicting messages regarding innovation from executives. There might be many examples of management wanting to innovate, but simply too many things coming in between causes a loss of focus. However, if the leaders of different organizations and units in the public sector do not find these mechanisms, an innovation hub might be able to do so.

Themes found in the interviews regarding *Idéslussen's* impact on the leadership barrier were that they could add an initial *boost* to get the project started and that they could *appeal to executives*, but a problem was also noted in that an *external hub cannot make executive decisions*. A case informant noted a resistance among executives when *Idéslussen* first was launched:

"When Idéslussen first were out to market themselves one could tell that some executives felt "we're not going to pe part of this"". (F4A)

A hub member noted that there is little the hub can do to get the innovation through if the executives are not "in on it", so to speak, also the external researchers noted this problem, indicating where there can be improvement:

"It is outermost a leadership question, that the executives understand how to rig a system in an organization where these pieces are falling into place. It is not enough that there is an 'idea coach' that is coaching 'idea carriers'." (H1)

"Demokratikonsult's analysis indicate potential of improvement when idea carriers are leaving Idéslussen and face implementation The routine as of now has been that the idea carrier forwards his/hers validated solution to the executive in question, who does not necessarily see any benefit of the solution." (Demokratikonsult, 2020, 38)

To put it simply: *the hub cannot make executive decisions*. If the hub wants to make a difference, they need to make the executives feel comfortable with the innovation as well as the hub's presence, not feeling that the hub is interfering with their daily work. This was expressed by one of the hub informants:

"We need to [...] make the executives feel that we aren't doing anything that interfere with their daily business..." (H2)

To change the minds of the management, the hub has been trying to appeal to them though activities, according to the external researchers. An informant from one of the focus groups noted that they had done so successfully, catching not only the employees' interest and enthusiasm, but also the managers' in the end:

"Idésluss Sundsvallsregionen has been conducting activities especially with a focus on executives and leaders in the different organizations and units, as training for middle management, support regarding innovation work and support for participation in the project... (Demokratikonsult, 2020, 51)

"... to catch the employees and executives, it was that support they contributed with." (F3A)

These quotes indicate how *Idéslussen* assisted in enabling innovation processes by *appealing to executives*. This relates to Winch and Courtney (2007) who argued that innovation brokers can act to validate an innovation to the people of an organization, which they deemed extra vital in the public sector where innovation can be looked down upon. On another note, one case informant noted that they have had positive change in regard to development of an innovation culture, although it had nothing to do with the presence of *Idéslussen*'s. Instead, the reason for their positive change was their new manager who was very keen on innovation:

"It's all thanks to our new manager, not the innovation program [...] he is talking to the whole department about daring to try something new and of course that leaves marks." (F4A)

This is in line with studies by Kusumasari et al. (2019) as well as Agolla and Van Lill (2016) who argued that managers encouraging innovation is the strongest drive for enabling innovation in the public sector. One should note though that *Idéslussen* cannot do anything regarding the different organizations' manager situations. They can try to put forward their point of view, but of course not replace whoever is in charge. Even though employees have got the wrong type of management, an informant noted how they saw an opportunity with the hub:

"For us [leadership] is often a barrier, it is hard to get a process like this going. It is quite hard to get it through, so we saw a benefit in getting a boost in this [program]." (F2A)

So without the initial blessing of their own leaders, *Idéslussen* might act as a substitute leader giving an initial *boost* to public sector employees' ideas, distancing themselves from their leadership. This relates back to O'Hare et al. (2008) who argued that an innovation hub can enable an innovation process to keep a distance from the usual routines of an organization.

Analyzing the results, failure of leadership surely seems to be a vital barrier for innovation, if not the most vital. A resistant manager with a lack of interest and commitment will not likely be leading an innovation process, and if someone else is trying to, the manager has got mandate to stop it. Opposed to this, an encouraging manager can completely change the culture of an organization by promoting innovation and new ideas as in the case of case F4. This in line with the views of Smith et al. (2019) and Wipulanusat et al. (2019) who argued that good organizational leadership plays a key role in facilitating innovation, and poor such acts as a major barrier to it. While *Idéslussen* obviously do not have any mandate to replace poor

managers, or take executive decisions for that matter, they can still appeal to them, encourage them and make them feel comfortable with innovation.

4.4 LAWS AND REGULATIONS

Law and regulation were brought up by most interviewees regarding what can hinder innovation in the public sector. Regarding this, a few notable themes surfaced. Besides the most obvious, that laws and regulations *restricts* what can be done (including the *integrity of citizens*), there was also the *crisis* factor as well as *political resistance*. Hub members, case members and the external researchers all brought up how legislation and regulation can hinder activities that are part of an innovation process:

"The way we have it today is incredibly narrow and stifling because of [...] authority regulations..." (H2)

"We have [...] arrangements, laws etcetera that control our activities..." (F1C)

"There are laws and likewise we need to act accordingly to, it's a certain type of standard. We cannot try out whatever we want..." (F2A)

"We are affected quite a bit by the law, we're working with [aspects] printed in the legislation..." (F3A)

"Regarding what are actual barriers [...] to some degree it can be the law. [...] We have a law saying that we cannot buy anything from anybody." (H1)

"There are laws making it more difficult and they can hinder innovational work in administrations. Examples of that are GDPR [General Data Protection Regulation]." (Demokratikonsult, 2020, 48)

Needless to say, this supports the views of Wipulanusat et al. (2019) who argued how approval processes and activities of the public sector greatly are controlled by laws and regulations. One informant noted that there are standards that need to be followed. Mulgan (2007) explains how this type of legislated standards exist to stop impulsive and unpredictable actions and to ensure uniformity, and Wihlman et al. (2016) argue that public sector organizations cannot just change their business concept overnight, whether they would like to or not. To have this type of uniformity might be seen as crucial today considering the ongoing pandemic This was addressed already in March when the hub member interviews took place:

"... we'll probably get strict rules how act regarding the Coronavirus outbreak. It will paralyze our organization for a couple of months. Everything else is set aside. [...] It is probably like this in any organization in crisis, but we are often in this type of limbo as an organization." (H2)

Even if laws and regulations are hindering to innovation on a day-to-day basis, crises as the Corona virus outbreak might enhance it even further. Notably, the informant points out that they are often in this type of limbo, indicating that laws and regulation are especially hindering to public sector organizations, having to take even more legislation into account than a common private company. In the case of the Corona virus pandemic, it might well be for the better of the citizens, the whole public sector needs to prioritize its resources. On a similar note, one case member hinted at the responsibilities the public sector has regarding the *integrity of the citizens*, implying it was a factor to consider when purchasing material:

"We need to have approved gauges, and we do not want personal information to be stored with addresses hinting at anything..." (F2C)

This is in line with Wihlman et al. (2016) arguing how Swedish law entails municipalities to have a set of obligatory responsibilities towards the society and its people, of which storing of personal information in this type of way can contain. They could not have gone about buying any type of gauges, which might have been simpler and more cost-efficient. Instead, because of regulations regarding integrity, they needed approved ones. One case did not have to fight the law in the same way that the other case members had to do, because they followed an already written legislation, basically just following instructions.

"We've been backed by the authorities in what we do [...] They have been talking about being more present in certain areas, and that is something we have adhered to." (F3A)

It might have been another story if their innovational idea would have been more "out of the blue", not part of something authorities have already greenlit. This implies that not all cases had problems with legislation and regulation. However, some of the hub informants focused quite a bit on that legislation needs to change to enable innovation, one of them also noted some political difficulties:

"The first thing we need to innovate is the legislation, the law [...] There are lots of rules and legislation making it difficult to innovate." (H1)

"... sometimes we get a 'political maverick' that swaps alignment which might make a new political majority being forced to rule with the earlier political majority's budget. We can be in those situations quite often. [...] It can create a stalemate..." (H2)

This relates back to Jans et al. (2016) and Borins (2018) who argue that legislation changes might be required to enable innovation, but which can be hindered by ideological disagreement of political parties. One of the informants above referred to this political problem, focusing on politicians turning independent and changing alignments. These are referred to as "political mavericks" in Sweden and can cause problems in regard of passing new legislation.

Laws and regulations are quite clearly not anything an innovation hub can change directly, lacking authority to do so, but a few themes regarding how a hub can impact innovation hindered by these barriers could still be found in the empirical material: *political knowledge* as well as the earlier mentioned test zone or *free zone*. Regarding the first theme, one case informant mentioned the importance of what the hub can add regarding knowledge of politics:

"It's good that they aren't part of our organization, instead part of the organization of the municipality. This gives them good knowledge about the political rule. It's not beginners that have entered..." (F3A)

While the idea carrier might be an absolute beginner regarding politics and legislation, the hub individuals can guide them through the political jungle with their *political knowledge*. Knowing how to cope with politics and the political system, the hub might be able to make politicians aware of the problem, come in contact and collaborate with the case, and influence politicians. This relates to Hood et al. (2014) arguing that a hub can assist in connecting people as well as Bakici et al. (2013) noting how a hub can enable collaboration. By leading the way for the cases in this political maze, *Idéslussen* aims to create a *free zone* for innovation, opening up possibilities not affected of hindering legislation, within certain boundaries of course:

"We're trying to create that [a test zone, a free zone] now - opening it up..." (H2)

This relates back to Perks et al. (2017) arguing that hubs can offering a platform where value and orchestration activities can be co-created across borders, making the innovational process taking a step away from typical hierarchical structures, but perhaps even some step away from regulations that would have stopped the innovation right away.

Most informants seem to agree that laws and regulations creates problems for the innovation process, primarily the implementation of innovation. Different laws must be considered as well as the integrity of the citizens, and at any time the innovation process might be suddenly halted because of political reasons. Looking at the analysis of what the hub can do, it is apparently very little. Political knowledge and a free zone of testing can make some difference, but an innovation hub can never change legislation by themselves. Although that is perhaps for the better, because who will argue for a risky innovation in the middle of a pandemic crisis? One should remember that laws and regulations exist for a reason, that public sector organizations, or any other organization for that matter, should not be able to do whatever they want, as Wihlman et al. (2016) explained. But to deal with legislation and regulations is it good to know how politics of municipalities and likewise work, a competency that *Idéslussen* has been able to add to the innovation projects.

4.5 LACK OF INCENTIVES AND REWARDS

The most notable theme found regarding rewards related to innovation in the public sector was a general *absence of rewards*. Regarding incentives, it was not a question of a lack of them, instead factors like *personal development* and *humanitarian motivations* were the most prominent, incentives that acted as rewards in themselves. One of the hub informants noted how the incentives for public sector organization to innovate differed in quite an obvious way compared to the private sector as there are few monetary incentives. The incentives and drives of the public sector can vary a lot, but it is argued that one of those factors is not taking risks for the chance of a possible favourable monetary output:

"... in a [private] company you need profit to survive, it is a very strong driving force. But in the public sector it can vary a lot..." (H2)

"... what are we [in the public sector] driven and controlled by? Well it sure isn't the amount of risks you have been taking..." (H1)

This related to Mulgan (2007) arguing how intensity of competition provides motive for innovation and risk-taking, of which monopolistic sectors like the public one tends to lack. Organizations in the public sector does typically not "lose customers" if they are not innovative. Both Bloch and Bugge (2013) as well as Wipulanusat et al. (2019) argue that the public sector traditionally has not had the same culture for rewarding successful innovation as the private sector has had. Talking in general terms of the public sector, both a hub member as well as a case member noted that there was an *absence of rewards* in the sector:

"... we do not get rewarded by doing things in a different way" (H1)

"Regarding rewards... If we don't pull through we might be depicted as incompetent... (F3B)

The last quote is referring back to the risk-averse culture of the public sector, all in line with Wipulanusat et al. (2019) and Mulgan (2007) who note that there have been greater punishments for failed innovation then rewards for successful innovations in the public sector. One of the hub employees addressed the question about rewards by referred to a survey that they had made with public sector employees regarding innovation and development.

"We asked questions regarding what kind of reward they would fancy, and that reward was to work with development. It wasn't cinema tickets or anything like that..." (H2)

"We conducted a survey showing that almost all of the [public sector] staff, about 98-99%, thought it was part of their tasks to work with development, they saw it as an everyday task" (H2)

These statements seem to correlate well with the state of minds of the case members, because seemingly all incentives brought up in the case interviews somehow related to the duties of their organization. Indicating they do not need any external incentives or rewards, just expecting *personal development* and wanting to do their job as well as possible to make the life of the citizens better, *humanitarian motivations*:

"Incentives are the economy of the public sector, human capital, dignity, integrity and independence of the citizen." (F1B)

"A strong belief backed up by research [...] that we have ended up wrong regarding social work. [...] I might have done this even I didn't feel that way, but then it might have been more difficult." (F3B)

"... it is great personal development to be part of a development project. You're getting an opportunity to immerse yourself that you won't be getting in your daily work." (F3A)

"For me it was about curiousness from a technical standpoint. I'm working in IT [...] there was new tech that had just gotten available." (F2B)

Notably, none of the informants mentioned any monetary reward of that type of benefit or incentive. This relates back to Strow and Strow (2018) and Bryson et al. (2017) saying that while performance pay works well to motivate people in the private sector, it is negatively correlated with work performance in the public one. This since people who urge for performance pay does not end up in the public sector anyway. What is rest is people who are not driven by such incentives and rewards. (Strow and Strow, 2018) A hub informant highlights this as an outstanding aspect of the public sector employees.

"This is what's so amazing with the public sector, the incentives: 'I cannot make more money, but I'm doing something good'. Most people I meet want to create value and do good things..." (H3)

This stands in stark contrast to the ideas of Demircioglu and Audretsch (2017) who argue there will not be any motivation for employees to perform better and find more efficient solutions if they are not rewarded according to performance. The idea of being motivated by doing something that can benefit the whole society was emphasized by another of the hub interviewees:

"What I think is great about Sweden is the principle of public access to official documents, we share what we are doing well here in Sundsvall. Then I might be allowed to stand on a stage in front of all of Sweden's municipalities and talk about it [...] that is also a reward!" (H3)

Working with innovation to benefit others are adding to Mulgan's (2007) ideas that much of the motivation for public sector innovation is that people believe that their work and lives will be improved by doing things differently.

The most obvious contribution by *Idéslussen* regarding incentives to innovate seems to have been the *innovation training program* they provided. The program showed the public sector employees that innovation in the public sector is, in fact, a factor, and not just something for the private sector.

"[What motivated me] was that I had participated in the training and wanted to do a test [...] Try it out and see if we could get this innovation process into our organization." (F2C)

Just like the idea carriers must have an incentive to innovate, a hub informant argued that the organization in itself must have an incentive, a will, to innovate for the innovation to be successful. It is not enough with just will of the employee part of the training program:

"The organization must want to. It is still the organization of the case that have a responsibility to implement things into their organization and activities, it is not us." (H2)

Bloch and Bugge (2013) found the lack of internal incentives (together with time constrains) to be considered the most prominent barrier to public sector innovation in Sweden. The results of the interviews do not seem to align with this. People that have been a part of these innovation cases seem to not to lack incentives, otherwise they would not have been part of these innovation cases in the first place. Therefore, this barrier has been somewhat difficult to analyze based on the empirical material. There might be many possible innovation projects that never took place because public sector employees lacked incentives to make it happen. Nevertheless, it is apparent that the case members of this study have a different set of incentives than scholars have been pointing at. It does not seem to be about monetary rewards and likewise for these employees. Instead it is improving their service to their customers, the citizens, as well as personal development that is most important. The concern of a lack of incentives expressed by senior managers in the Swedish public sector might then not be justified (Wihlman et al., 2016).

4.6 INTERNAL HIERARCHY AND BUREAUCRACY

There were two major themes identified related to this barrier: the *top-down* issue, the factor of *threat to existing hierarchies*. Notably, far from all case informants had these issues. In fact, some had very few problems regarding internal hierarchies and bureaucracy. Informants from both the hub and one of the cases felt that there is a big hierarchic gap between the decision making and the employees trying to push through innovations at the bottom:

"There is a big gap – [between] what happens in the everyday reality all the way up to management" (H3)

"We work in an organization where the decisions need to be established in a hierarchal top-down manner [...] it does not create the right vigor for innovations..." (F1A)

"Top-down have been hindering, the hierarchy. There has been a hierarchic order in how things are to be established..." (F1B)

Both Wihlman et al. (2016) and Wipulanusat et al. (2019) found innovation policies difficult to implement in the existing public sector structures, as new ideas had to pass through so many steps to be approved and implemented. *Top-down* decision-making regarding innovation is emphasized as being a specific issue, considering the great gap between the decision-makers on the top of the hierarchy, and the reality on the bottom of it (Wipulanusat et al., 2019). Although some cases found they had mandate to take their own decisions, not having to go through all these steps, thus avoiding the top-down issue:

"We have had quite a good capacity do decide for ourselves" (F3B)

"[Our innovation] were linked to an existing system we had on a contract, therefore it has worked easier. It would have been more difficult dealing with a new procurement..." (F4A)

This seems to relate a lot to what type of innovation the cases tried to push through, and what had been greenlit by management ahead of time. Case F3 seems to have been given some autonomy making them able to push through with their innovation easily, an autonomy other cases lacked. Noted in the quote above, the innovation of case F4 was tied to a system they already had a contract on. It was noted as being quite easy to get the innovation process through if people higher up in the hierarchy had an interest in, and a positive view of the project, while quite a bit harder if that was not the case:

"We had it easy since we [management and the case members] shared the same stance." (F3B)

"... the decision [whether to continue working with the innovation] has gotten stuck on the management level. The executive need to consider it valuable and forward it to the board. […] but I think we'll be allowed to continue working with it." (F1A)

"We heard there was an interest [from management] going in another direction with the innovation since they believed this [our original idea] would go nowhere…" (F2B)

"They [Idéslussen] perceive that it has been easier to work with employees far out in the branches of an organization, and that it has been harder [to work with] executives and likewise since the projects often have been perceived as threatening" (Demokratikonsult, 2020, 48)

It seems apparent that ideas not popular among management become notably harder to implement, like when senior management sees innovation as a possible *threat to existing hierarchies* (Wipulanusat et al., 2019). Although one should note that that such skepticism from senior management might be completely valid, and got nothing to do with possible threat to existing hierarchies. Wihlman et al. (2016) argue that there is a general skepticism about anything new in the public sector, and if existing practices and ideas are being challenged by something new there can easily be a conflict that halts the innovation. People might avoid this type of conflict by not advancing their innovative ideas (Wihlman et al., 2016). Although the particular case F2, quoted above, managed to push through with the help of the hub.

There were a few examples of how the hub successfully had helped their cases in bypassing hierarchies, like the one mentioned above. Themes that could be assembled regarding the hub's role was *enabling autonomy* by bypassing decisions and assisting in *dealing with bureaucracy*. In addition to this, the hub informants themselves highlighted an *issue with how the hub was "rigged"*. One informant explained how the money (resources) made available by *Idéslussen* helped them to bypass the hierarchal top-down decision process, while another noted how their hub truly knew they craft in *dealing with bureaucracy*:

"It's a bureaucracy and one must know that craft – how to get a good idea through. […] In that regard Idéslussen has been important." (F1C)

"It went smoothly [to carry on with the innovation in this organization structure] and the reason for this is that Idéslussen stepped in and helped us. […] We got money [from Idéslussen] to buy what we needed, and that made it possible for us to go on without needing a decision […] We didn't need to go further up [in the hierarchy]…" (F2A)

By making external resources available, the F2 case avoided the top-down decision making process, which allowed them to continue without any hassle with bureaucracy, *enabling their autonomy* by enabling a platform taking them as step away from typical hierarchical structures (Perks et al., 2017). Despite having to tackle bureaucracy, the former quote indicates the importance of getting help from the hub in that regard. Although the hub themselves noticed a problem with the way the case process was constructed:

"What hinders implementation [of the innovation cases belonging to this project] is the way Idéslussen is rigged through this employee perspective: "Come with your idea as an employee, it does not matter whether your manager think it's a good idea or not…" (H3)

They backed projects from employees far down in the hierarchy, projects that were closed by executives when reaching the implementation stage, with a lot of money and time wasted on a project that never went anywhere. To put it simply: the hierarchy put a stop to the innovation. Wipulanusat et al. (2019) argued that the public sector simply has a bias towards proven procedures, and that flatter structures and more open interactive processes need to be

established in the public sector to stimulate innovative ideas. But for now, the hub acknowledges that hierarchy is a notable barrier for bottom-up innovation and that they probably should contact and have a dialogue with people higher up in the hierarchy first, to get them onboard, also enabling more of a top-down approach in the innovation processes related to the hub:

"Rather than going to the employees and tell them "Come to us with your idéas", [we should have] gone to the boards and talked about challenges and needs instead, making them phrase "these 3 things are important for us…' […] we [at Idéslussen] have learned that" (H3)

Internal hierarchy and bureaucracy can be seen as an especially prominent and imposing barrier if the innovation comes from the bottom of the hierachy. If the process must be approved in many steps it might clash eventually with disharmonizing beliefs and ideas. However, some cases did not have this problem. Therefore, trying to get approval from top management early in the process might be preferable, as one of the informants from *Idéslussen* suggested.

4.7 THE SILO EFFECT

Some major themes were identified concerning the silo effect: the *specialization* of units, the *lack of communication* between units and an overall *resistance to cooperate*. In the theoretical framework, the term "silo effect" was brought up, with public sector organizations acting as silos, each one with different duties acting independently from each other (Wipulanusat et al., 2019). Rather than talking about silos, one case informant referred to the silos as "downspouts", which are quite a bit narrower but implies the same problem. A hub informant took the expression even further, referring to the units as "straws":

"We've got a multispecialized organization […] distinct downspouts between different units […] It was basis for why we wanted to make a change…" (F3A)

"We're talking about straws. We have left the downspouts, it's more like straws…" (H3)

These quotes suggest that the silo effect exists in the public sector in question. One case informant suggests that specialization of units is a reason for this, and that efforts made in trying to change it was met with resistance:

"There was a resistance. There is always a resistance to break a specialization, you feel safe and confident that you are good at what you know" (F3A)

This related back to Mulgan (2007) who argued that diffusion of innovation between PSO:s has been lacking, even with strong network efforts in encouraging such, because the discrepancy of what counts as success between departments differ, but also how innovation may threaten existing power structures. It is apparent that many organizations and units are concentrating on their specific mission, what they *specialize* in, in their own "silo", "downspout" or "straw". Although this does not necessarily have to mean that the unit or organization in question in functioning poorly, suggested by the following quote by a hub informant:

"In some downspouts it works really well, they have resources and know what they're doing. In others not so much. The problem is that it doesn't spread, people don't talk to each other, one does not share…" (H3)

The informant notes that there is a *lack of communication* between the units. Wipulanusat et al. (2019) argue that a reason for the silos having problems communicating could be that they saw other silos as competitors, especially related to overlapping duties. Remarkably, Wipulanusat et al.'s (2019) theory that overlapping duties would increase the impact of the silo effect stands

in direct contrast to the earlier quote by informant H3 suggesting that specialization causes the effect. Perhaps specialization is an effect of units having problems cooperating and sharing overlapping duties, and that there just is an overall *resistance to cooperate*. One hub member argued it would be preferable with some type of common management, some centralization, while one of the case informants noted that their organization has started reorganizing to achieve this:

"… we would get greater effects with some common management, but there is none!" (H3)

"The organization looked different before, with one unit standing on one "leg" and one unit on another. […] One would have hoped for better cooperation, but it can be better with the reorganization [getting rid of the two "legs"]…" (F1A)

In complete contrast to these statements, Strow and Strow (2018) highlights centralization as a major barrier to innovation in the public sector, and argues that innovative thinking seem to increase as smaller units like local governments get more control and power of their own fate, to some degree contradicting the idea of the silo effect. One can argue that some hierarchal steps are bypassed in this way. An extreme case of centralization would be that every executive decision had to be taken on a parliament level, so Strow and Strow (2018) might have a point, although it is quite obvious looking at the answers of the informants that they consider themselves in need of some type of centralization.

The major theme found regarding how a hub can help bypass this barrier is by mainly creating a *platform for cooperation*, which enables for example the *creation of synergies through dialogue*. One informant noted that this was one of the great questions for the hub to answer:

"How do we build the teams in between [different organizations]? […] It depends on what the case is about. [sometimes] you need to involve more [units/organizations] in the operation if we are going to use time in doing workshops…" (H1)

The hub did quite well in this regard, at least in one case where 3 different organizations collaborated across a platform in form of a workshop provided by *Idéslussen*, with great success:

"We got help from Idéslussen and had a first workshop together with two other organizations and we made a lean experiment: what we wanted to do, what we should learn and what we wanted to measure… Just so we all would agree what we should get out of the case" (F2A)

"The cooperation between the involved organizations […] went great!" (F2B)

This is just in line with Wipulanusat et al. (2019) who argued that the silo problem can be solved by sharing ideas and collaborating across agencies on a cross-agency platform like the workshop provided by *Idéslussen*. It also relates to Bakici et al. (2013) arguing that hubs can organize events such as workshops to spread awareness, knowledge av collaboration between organizations, units and people. The external researchers are in line with this and argue that *Idéslussen* has been creating synergies between units:

"… Idéslussen has been used as a tool for dialogue and methods which has been resulting in synergies enabling the project to reach out on a bigger front" (Demokratikonsult, 2020, 39)

This relates back to the *lack of communication*, with Wipulanusat et al. (2019) arguing how silos sees each other as competitors, thereby having trouble communicating. Here the hub creates synergies through dialogue, made possible by the mutual platform they have provided for the different organizations.

Throughout this analysis it is quite apparent that the silo effect truly is a factor to consider in the public sector, with informants going so far as referring to them as "straws". Whether specialization or overlapping duties is responsible for the silo effect, there definitely seem to exist a resistance to collaborate between organizations. But by providing a mutual platform that encourages communication, cooperation, sharing of knowledge and a mutual understanding, *Idéslussen* seems to have assisted the cases in bypassing this barrier. Even if some common management, or centralization, would be preferable. Although the hub has no mandate of changing that.

4.8 RESISTANT USERS AND SUPPLIERS

The number of quotes referring to users and suppliers was limited in the interviews. Users and suppliers were simply not brought up to the same extent as other factors when talking about innovation in the public sector. However, some themes emerged, like *absence of resistance from users*, which can have been a result of *cooperation with users* as well as *silence towards users*. Another theme brought forward was *gap between suppliers and reality*. Notably, the case informants did not seem to agree there was any sort of resistance from users, emphasizing the two-way communication and positive responses they had gotten from the public so far:

"The interest and commitment of the public has supported us…" (F1B)

"Everyone has been very helpful, people want to share what their problem is." (F4B)

"We have a great focus on the people that are working with [the innovation], but also citizens that are getting better response." (F4A)

This relates back to Mulgan (2007) who argues that the best type of public sector innovators are those who are good listeners to what the public really wants or needs. Also Wihlman et al. (2006) emphasized how the meeting with the customer should be in focus. This seems to have been the case for the cases related to the quotes above, which might have led to an *absence of supplier resistance*. Another informant stressed their devotion of the public, underlining the importance of not wasting the money of the taxpayers.

"We want to spend the tax money correctly. I do not like those [short sighted] kind of money, I want the long-term view". (F1C)

A parallel can be drawn to Agolla and Van Lill (2016) who pointed at the public's expectations on how the public sector are spending their tax money and the importance of transparency and continuity. One informant accentuated the importance of good cooperation with the users, helping them make their own lives better.

"We want to create a good cooperation [with the users] to lessen their needs." (F1B)

Making the public shape their own services was something Mulgan (2007) noted had been increasingly common in the public sector of the United Kingdom. This *cooperation with users* can assist in closing the gap to the public. However, both informants as well as a quarterly report on *Idéslussen*'s activities noted the importance of closing the gap to suppliers as well, and how valuable supplier input is:

"How do we create an arena where we in the public sector invite the private sector to make them better understand our platform? […] It doesn't work that an IT company supplies a system that isn't connected to the practical and actual reality of our assistant nurses that are in the home care." (H1)

"Companies have a need to understand and get a view into the conditions of the public sector as well as their operations for product and service development…" (Tillväxtverket, 2019, 4)

"… ideas came to us from his [the training coach's] experience of different operations, processes and suppliers, which have been very valuable" (F2B)

Also Smith et al. (2019) wrote about the importance of bringing the suppliers closer to the innovation and its context. If there is a *gap between suppliers and the reality* of the activities in the public sector, it might be difficult for the suppliers to understand what is really needed. Although for the F2 case, the gap seems to have been small thanks to good dialogue and cooperation. The informants from the other cases never mentioned suppliers in that regard, which can make one assume there were no major problems with suppliers in those cases. Although this does not mean that the problem does not exist among other cases.

Earlier, the *absence of user resistance* was brought up. Although good cooperation and two-way communication with the users could have been a reason for this, there might also be another factor: *silence towards users*. Several informants noted how the cases themselves kept a low profile:

"We have not been saying 'hey, look at us!'. We have gone on by ourselves and people have heard it throught the grapevine…" (F2B)

"It is implemented, but we have not marketed it externally yet." (F4A)

If the word is not spread, people might not know about the innovation until it is implemented, which makes this barrier hard to fully investigate. If they do not know about the process, it is hard to evaluate their potential resistance. This might be a simple reason for the absence of user resistance, if the word is spread about the innovations before implementation, there might be a backlash, something many of course wish to avoid.

Since user and supplier resistance does not seem to have been a notable barrier, the role of the hub gets a bit difficult to investigate. Only one theme can be found: that the hub enabled some *supplier input*. One informant noted how the training coach, an external resource of the innovation hub, brought in ideas from suppliers to the innovation process. A quarterly report also emphasized the role of the hub:

"… ideas came to us from his [the training coach's] experience of different operations, processes and suppliers, which have been very valuable." (F2B)

"Idéslussen offers […] dialogue to generate learning between the private companies and the public sector…" (Idéslussens Rapport till Tillväxtverket, 2019, 4)

This links back to Hood et al. (2014) who noted that an innovation hub can help organizations discover new innovative ideas as well as connect organizations to different partners like suppliers. Even if the *supplier input* came as second hand-information, it was still valuable. Regarding bypassing the barrier of resistant users, the hub does not seem to have to do too much at all. Although one should note that users were not considered to be a barrier to any of the cases, so they did not need to either.

The barrier of resistant users and suppliers is somewhat hard to investigate, people might not know about the innovation until it is implemented, making this barrier hard to fully investigate. If people do not know about the process, they cannot resist it either. Although what could be read from the results was that the informants did not seem to get anything but praise and backing from the public regarding their innovations. They seemed eager to listen to their users, prioritizing their thoughts and needs, and perhaps thereby met little or no resistance. Supplier

resistance did not seem to be a notable barrier either, but the hub could at least provide some supplier input. Bloch and Bugge (2013) argued that public sector organizations usually are very active themselves regarding innovation processes, thereby not relying very much on suppliers to provide innovations. This might very well be the case here, that suppliers simply were not that important of a factor. A factor to consider is that by avoiding asking leading questions in the interviews, the informants did not seem to lean into talking very much about suppliers and users themselves. Without them talking about users and supplier, it is hard to analyze these aspects. If their impact had been greater, surely there would have been more empirical material to work with regarding this analyze.

5. DISCUSSION AND CONCLUSION

This study has contributed to the research on innovation in the public sector by combining a study on innovation barriers with studying what role an innovation hub can play in overcoming them. In earlier research on public sector innovation these two entities have been studied apart. Also, considering the ongoing Corona pandemic, public sectors worldwide might be in need of some new perspectives on what hinders innovation and what an innovation hub can do to enable it, as innovation can act as a cushion to soften the fall in crisis and recession (Filippetti and Archibugi, 2010). This study can contribute to theory by bringing in a new perspective.

To summarize the findings of the analysis, three of the barriers from the model can be identified as more prominent than others: *Lack of Resources*, *Failure of Leadership* and *Laws and Regulations*. These are barriers that by themselves easily can make or break an innovation process. This study suggests that sufficient resources, leadership that encourage innovation as well as allowing and approving management all needs to be present for the innovation process to survive its own organization. If employees are lacking time to innovate, the organization is lacking finances to invest and management the right skills and will to innovate, innovation will not likely occur. However, an innovation also needs to align with laws and rules that are in place since you cannot break the law just to implement an innovation. That the organizational "silos" were referred to as "straws" is also alarming, stubborn internal hierarchy and bureaucracy was a problem for many and the culture of risk-aversion was also very notable. Although from these results, it is hard to agree with the scholars that *Lack of Incentives and Rewards* would be a notable barrier, as for *Resistant Users and Suppliers*. This since the interviewees simply did not lack incentives, while users and suppliers were barely mentioned at all, suggesting them not being notable factors in relation to public sector innovation. At least not for the cases investigated.

This leads us to the impact of the hub, what a hub can do to help bypass innovation barriers in the public sector. A hub can bring in resources like investment money and substitutes, organize innovation training programs and workshops, offering public sector employees a platform to meet between "straws" and allow them to "go under the radar" - avoiding the culture and hierarchies of the public sector. Although it is seemingly difficult for a hub to change the deeply rooted risk-avoiding culture altogether. Neither do they have any mandate to take decisions or change management on behalf of the public sector organizations, although by trying to appeal to management and make them see innovation in a different light, they can help bypassing the barrier in that regard. They can guide the management in the right direction, as well as guide their "idea carriers" through the "jungle" of legislation and bureaucracy in the public sector. O'Hare et al. (2008) argued that innovation hubs often seem to fold within a few years since their founding, ending up being unable to develop major, radical, innovations. This does not seem to be the case here. The hub seems to have been great of help in many innovational processes in the region, and nothing hints at it folding anytime soon.

Resistant Users and Suppliers was a difficult barrier to examine, partly because of lack of empirical material, but also since it did not seem to be much of a barrier for the cases investigated. Wipulanusat et al. (2019) did not include users nor suppliers as barriers in their model, so this was one of two major differences between the model used for this study and theirs. Without trying to ask leading questions, few informants mentioned users and suppliers during the interviews. Because of this, one could argue that it should be left out from the barrier model. However, surely it depends on what type of innovation you are trying to develop and implement. Just because users and suppliers did not act as notable barriers for these four cases, they might be great barriers for other innovation projects. I would argue that the *Resistant Users and Suppliers* barrier should be kept as its own barrier category in future studies. Theoretically, it could be divided into two different barriers for future studies: "Resistant Users" and "Resistant Suppliers". Although considering how inconspicuous they were deemed to be through this analysis, this study does not support splitting the barrier, but it could be considered.

Another discussion point regarding the model, primarily noticed during the analysis, was that many of the barriers overlapped, and much similar analysis was repeated under several barrier headlines. For example, both *Laws and Regulations* as well as *Failure of Leadership* ties heavily into *Internal Hierarchy and Bureaucracy*. One might question where the line is drawn between a board decision that halts innovation taken with a law in mind, and the actual law that they are considering. The innovation can be considered to be halted by either hierarchy, leadership or legislation. During the creation of the model for this study, the *Hierarchy* barrier and the *Bureaucracy* barrier from Wipulanusat et al.'s (2019) model were combined into one, in an effort to avoid this type of overlapping of barriers. A separate analysis of these two factors were deemed to be too repetitive and similar, and I would argue that this was the correct decision. Clearly it is very difficult to come up with distinct barriers that does not overlap at all, and as Smith et al. (2019) suggested, there still might not be a perfect model for public sector innovation barriers, even after this study. Although overall, I would argue the model used in this study is an improvement to the barrier model of Wipulanusat et al. (2019) for the reasons stated above. Preferably, this model should be applied to more case studies in the future to ensure that the model is viable.

5.1 LIMITATIONS AND FURTHER RESEARCH

Since the hub employees themselves where the ones putting the researcher in contact with the case members, the results can have been affected by bias. All cases had either been implemented or were to be implemented, so to investigate some less successful cases would have been desirable to study as comparison. All case informants were also seemingly interested in innovation and all had incentives to innovate, which leaves out people that lacked incentives, those who chose not to be a part of the projects of *Idéslussen*. This is a clear limitation of the study. Some of those employees could have been interviewed as well to get a broader picture of the situation, especially regarding the *Lack of Incentives and Rewards* barrier, but also the barrier of *Risk-averse Culture*. In the *Failure of Leadership* category, the study found that there was a lack of commitment regarding innovation among management in the organizations of several of the cases. To investigate this properly, and triangulate the findings, the management of these organizations could have been interviewed as well. It could have been interesting to get their perspective as well, not just the hub and the case members.

Besides being a useful outside perspective for *Idéslussen* as well as the whole public sector of the Sundsvall region, this study may be of use to any manager that aims to greaten the rate of successful implementation of innovative ideas in their organization. By highlighting what barriers that exists, and what are the most prominent ones, managers and executives might get

an insight into what can hinder their innovation processes beforehand, and thereby take actions at an early stage. This study also emphasizes how an innovation hub can assist in bypassing such barriers, demonstrating to organizational managers its positive influence in enabling public sector innovation.

Suggestions for further studies could be to put this model to the test on other innovation projects, preferably by also interviewing unsuccessful projects, people completely uninterested in innovation as well as people far up in the hierarchies, like board members, to get a broader view of the situation. Another suggestion would be to analyze just one of these barriers, going deeper into it and finding even more themes. A quantitative study could also be used to complement this study. Perhaps one including a survey with respondents from all of *Idésluss Sundsvallsregionen*'s 169 cases, even the failed ones, to get a broader view of the barriers as well as a more nuanced picture of the impact of how a hub can impact an innovation process.

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APPENDIX 1: Question Template for the Hub Interviews

Innovation
- Vad är och innebär innovation inom offentlig sektor för dig?
- På vilket sätt, tror du innovation inom offentlig sektor skiljer sig från privat sektor?
- Vad kan offentlig sektor lära av privat sektor ifråga om innovation och vice versa?

Förutsättningar för offentlig innovation
- Vilka förutsättningar bör finnas för att offentlig sektor ska kunna bli innovativa? Vad möjliggör? Vad hindrar?
- Vilka förutsättningar och resurser (ex pengar, kunskaper, stöd etc) har ni genom Idéslussen?
- Beskriv vilka nyckelresurser (pengar, kunskaper, nätverk, legitimitet etc) som behöver vara på plats för att offentlig innovation ska kunna fungera? Motivera varför?
- Hur skapar idéslussen förutsättningar för dessa? Vilka hinder finns?
- Vilka organisationer eller avdelningar i den egna organisationen bidrar med resurser till innovationsprocesserna? Vilken typ av resurser? Och vilken roll har dessa organisationer/avdelningar i casens innovationsprocesser (ge exempel utifrån casen)?

Stöd
- Vilket stöd har ni för att stötta medarbetare i deras innovationsarbete?
- Upplever du att ni har ett tydligt mandat bortom projektets ramverk? Från vem/vilka organisationer?
- Är detta tillräckligt eller är det något som saknas och om så varför?

Orkestrera innovation
- Beskriv hur du (från nav-perspektiv) arbetar med en innovationsprocess (steg för steg) i olika faser. Arbetar du likartat enligt ett system eller görs det individuella anpassningar ständigt? Viktiga insikter kring detta?
- Vilka aktiviteter genomför ni under innovationsprocesser?
- Arbetar ni enligt något system/modell? Eller är de speciellt anpassade till situationen?
- När och hur tillförs resurser? Vilka? Beskriv processen
- Vilka lärdomar tar du med dig från genomförda aktiviteter i Idéslussen?

Implementering av innovationer
- Hur arbetar ni för att implementera innovationerna tillbaka i den egna organisationen? Har ni något system/metod för det? Om så beskriv detta? Ge gärna ett exempel på hur ni arbetat med detta.
- Vad möjliggör implementering? Vad hindrar implementering?

Engagemang/commitment och relationer
- Vilken strategi arbetar du efter för att "få upp deltagarna på spåret"?
- Hur engageras andra i innovationsarbete? På vilket sätt visas deras engagemang (hur kommer det till uttryck?)

APPENDIX 2: Question Template for the Case Focus Group Interviews

- Vad har ni haft för incitament för att driva denna innovationprocess? Vad är det som har motiverat er? Vad hade kunnat motivera er ännu mer? Vilket är ledarskapets roll i det? (Lack of Incitaments and Rewards, Failure of Leadership)

- Hur har samarbetet fungerat internt under denna innovationsprocess? Mellan kollegor, ledning, de olika delarna av organisationen, organisationerna…och Idéslussens projekt-team? (Leadership, Silo Effect, Hierarchy)

- Hur upplever ni att responsen varit från folk utanför detta case under denna innovationsprocess? Avdelnings- och kommunledningen, kollegor, politiker, kunder och leverantörer? Har folk varit positiva, medgörliga, motsträviga, ointresserade…? (Leadership, Risk-averse culture, Political Resistance, Supplier and User Resistance)

- Hur väl har organisationsstrukturen i eran avdelning passat sig för att driva igenom innovationsprocessen? Hade en annan struktur skapat bättre förutsättningar? Om så vilken? (Bureaucracy, Hierarchy, Silo Effect)

- Har ni haft tillräckligt med resurser för att på ett bra sätt kunnat genomföra er innovationsprocess? Om inte – vad har saknats? Och vilka resurser anser ni måste finnas om innovationsprocesser i offentlig kontext ska fungera? (Resources)

- Har något utomstående, likt lagar, politik, allmänheten, noterbart påverkat innovationsprocessen? Om så vilket, på vilket sätt och hur har ni agerat för att överkomma detta? (Laws and Regulations, Political Resistance, User Resistance)

- Hur viktig har Ideslussens roll varit för eran del? På vilket sätt skattar ni betydelsen för deras insats?