

Master's thesis

NTNU
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Innovation in the public sector. A study of new Norwegian policy documents

Master's thesis in Organization and Management, Specialization in Innovation and Change Management

Supervisor: Per Morten Schiefloe

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Summary

Innovation in the public sector is the subject of this thesis. As innovation is a driving force in the private sector, it has yet to receive the same in the public sector. The connection between the public sector organizations and different groups, such as; citizens, private companies, and its sectorial environment, is highlighted as vital for innovation. This paper illuminates innovation and addresses the relationship between the literature on innovation and the selected policy documents through textual analysis to understand the documents and the literature in innovation. Innovation journey, innovative organizations, employee role, competency, digitization, ICT, user-centric focus, and a standard ecosystem and better collaboration between the public and private sectors are the primary keys of this thesis. Challenges such as demographic and climate change are also gone through. An analytical framework is assembled and applied through a textual analysis of the policy documents. The policy documents included for analysis in the thesis are:

Public Health Report. Good health – a common responsibility. Meld.St.34 (2012-2013)

Digital Agenda for Norway in Brief. Meld. St. 27 (2015-2016) Report to Storting

En innovativ offentlig sektor – kultur, ledelse og kompetanse. Meld. St. 30 (2019 – 2020)

One digital public sector: Digital strategy for the public sector 2019–2025

The study finds that innovation is emphasized as an essential activity, where all actors, i.e., the government, politicians, leaders, and employees, play a prominent part, together with private, public, educational, and research sectors. This thesis hopes to inspire further research in public sector innovation.

Preface

This thesis is a final part of my master's degree in Organization Management, with a specialization in Innovation and Change Management. The master's degree is completed at the Department of Sociology and Political Science, Faculty of Social and Educational Sciences, Norwegian University of Science and Technology – NTNU, Trondheim.

The background of the theme's choice is my interest in innovation, especially the Norwegian public sector.

A special thanks to my professor, Per Morten Schiefloe, for structuring my ideas from the time the thoughts came into being till product delivery. Through working with these topics, I have gained valuable insights that can be used in the challenges faced in producing the public sector of services. I look forward to transferring these ideas into concrete actions in my current profession

I would also like to thank my family and friends for their unconditional love and support.

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1 ABBREVIATIONS

Abbreviation	Full-Form
KRD	Ministry of Local Government and Modernisation
IN	Innovation Norway
DIFI	way Digitalisation Agency
OECD	Organization for Economic Co-operation and Development
EU	European Union
MEPIN	Measure Public Innovation (Innovasjon i offentlig sektor - SSB)
SSB	Statistics Norway (Statsistisk Sentralbyrå)
AI	Artificial Intelligence
RCN	Research Council of Norway
EDI	Employee driven innovation
COI	Center of public innovation
GDP	Gross Domestic Product
ISO	International Organization for Standardization
R&D	Research & Development
STI	Science Technology and Innovation
DOGA	Norwegian Centre of Design & Architecture
SME	Small and medium-sized enterprises
ICT	Information and Communications Technology
NTNU	Norwegian University of Science and Technology

2 INTRODUCTION

Innovation has become a buzzword, and the term and the relevance of innovation are prevalent in several contexts. In private enterprises, the innovative ability is a crucial element of competing and necessary for future existence. In the public domain, it is assumed that growth, welfare, and employment is depending on innovation. (Fagerberg et al., 2014).

Influential public sectors depend on innovation to create new ways of developing better solutions for society's citizens (Mulgan and Albury, 2003). To maintain high welfare services in the public sector, innovation is vital to address the economic and societal challenges (Bloch and Bugge, 2013).

This thesis aims at throwing light on innovation in the public sector, with the Norwegian public sector as the primary goal. The purpose is to bring light to innovation, as seen through specific Norwegian parliamentary reports, at the same time combining insight from innovation studies and literature on public sector innovation. OECD Reviews of Innovation Policy Norway, 2017, is the background document of the thesis, as its reference is frequently used and is fundamental to various white papers to the Storting.

The thesis structure is as per the table of contents, comprising nine main sections, divided into subsections to give the necessary reflections to the theme described in the former paragraph.

The thesis introduces the current practices of innovation in the Norwegian government in a nutshell.

3 EMPIRICAL BACKGROUND

3.1 Defining a framework for understanding public innovation

3.1.1 *Why innovate in the public sector?*

Governments and policymakers have long recognized the role of and the need for innovation for economic competitiveness and development. There is also a growing interest in innovation in the public sector to academics and practitioners for several reasons. For instance, the citizens and the private sector have rising expectations and demands towards public services. The public sector's anticipation is to offer responsive services to individuals and their needs and aspirations. The number of users requiring public services is increasing, and that the available resources cannot grow accordingly (Willumsen and Ødegård, 2015). New or improved ideas are required to meet the expectations within the budget provided.

There are various vital reasons due to which the public sector needs to adopt innovation. The first and foremost reason is the ongoing process of globalization. Globalization brings forth uncertainties, creating new problems, such as the dispersal and integration of refugees, climate change mitigation, as mentioned in the former para, which prompts new innovative public solutions. Unexpected events so-called 'wicked' problems, for example, the COVID-19 pandemic. Often innovation is seen as a valuable response to unexpected events. They are complicated in art and often need new solutions (innovative measures) to meet the challenge, such as climate change, public security, and poverty reduction.

Secondly, the global economy has shifted from a manufacturing base to a service base and knowledge economy, i.e., the new emerging trend in the global economy (Baden-Fuller, & Haefliger, 2013). Along with technological advancement, the dynamics of the global economy is also changing rapidly. The improvements and enhancements in the communication system in which the internet and advance technologies hold considerable importance are possibly by the

improvements and enhancements. A few of the common themes extracted from the innovative measures in large economies include speed, autonomy, and decentralization. One example of such is an innovative concept of the global marketplace (Crevoisier, 2014). Another example of innovation as a current phenomenon in the modern economy is the emergence and introduction of new innovative technologies such as Blockchain. Technologies such as these are not bound wholly focused on changing the dynamics of how we live and do things. (Kotsemir & Meissner, 2013).

Third, the new behavior and expectations, i.e., growing demand from users or the general public, meet everyday demands. Such as keeping pace, become more productive, more targeted, and systematic to renew and work smarter, in contrast to spending more resources and labor as a solution to significant challenges. The traditional ways are no longer in demand. The diverse, or so-called heterogeneous society expects a more tailored high-quality service away from the traditionally labeled “one size fits all.”

Finally, consumerism has provided a new sense of power to the people and has psychologically and economically trained people to demand seamless experiences, personalization, and innovation. People expect their government to seek their opinions, collaborate, and engage with them form matters that directly affect their lives (Faulkner & Senker, 2011). These expectations would require public sector organizations to enhance or take new paths and be more responsive to people’s demands; this could be not easy without innovation.

3.1.2 What is the Public Sector?

The public sector forms through various political processes and arenas on the national and local levels. It includes parliament, the supreme court, government, county and community administration, ministry’s, directorates, and supervising authorities, such as healthcare, social services, infrastructure, and cultural events: the services’ level and standard defined by the law’s

provisions, guidance, and standards. Many public enterprises are responsible for providing effective services, maintaining regulations, and supervising the public or private sectors. The political point of view and the public trend can push the public sector in different directions. The different sectors are different, and there can be differences within the sector. For example, the health sector has a large span from practical healthcare, supervising, controlling the services' quality and economy, and planning future systems.

However, the public sector and governmental works cannot be evaluated in isolation but analyzed in the context of political, social, technological, and environmental factors. It may be essential to note that societal issues and problems have become much more complex and complicated, and the solutions to these problems are not possible without interconnected efforts (Bekkers et al., 2013). One such example is climate change, which requires the attention and efforts of multiple governments worldwide working together to tackle it effectively. Innovation in these situations appears as the most feasible solution.

The public sector includes many players in a complicated process. This process includes decision-makers, leaders, employees, and users (Winter and Nielsen, 2008). Also, public governance is a set of legislation used in the public domain. Its governance practices visualize public policy brought to life in the state, regional, and local elements (Anttiroiko et al., 2011). The public sector is characterized by several features that make it distinct from other types of entities. One of the critical characteristics of the public sector is Public Accountability. The sector is accountable to the general public, whose relief and benefit entities are established. This is different from that of the private sector organizations, which are accountable to a limited group of people, generally the shareholders. The public sector enterprises/organizations have a defined set of powers that they could exercise, the rights available to them, and the responsibilities that they must

fulfill as enumerated in the law. The powers vested to them result from a law; therefore, the public sector organization works under that law's specified limits. The private sector organizations work on the free-market economy principle or chartered through memorandum or articles of associations. The third characteristic is the lack of equity ownership.

In contrast, individuals and groups are shareholders in private sector entities, ownership in the State's public sector enterprises (De Vries, Bekkers & Tummers, 2015). Management and the running of the day to day affairs of the company may not be at the discretion of the state. The concept of separation of ownership where owners are not responsible for running the organization does not hold in public sector organizations.

The public sector is also its operating and financial framework set by legislation as some of the public sector enterprises are termed statutory companies by promulgating a law. In most cases, the law is wholly dedicated to an individual public sector entity and is entirely associated with it. This law serves as a framework used for direction concerning all the firm's operating and financial activities. From the total capital to the capital structure and the scope of the activities to be performed, the public sector entities are bound under the statutory law's limits.

3.1.3 The public sector reform movements

During recent decades, several reform movements have been launched in the public sector to address the challenges outlined in the section why innovate in the public sector. However, the significance and interest in innovation often are linked to reform movements such as New Public Management (NPM), digital era governance, and e-government.

The underpinning ideas from which NPM came into existence is from the neo-liberal economics and organizational management theory. Innovations influenced by the NPM reform include the introduction of management by contract, privatization, outsourcing, and free choice

for users (Hansen, 2011). Thus, NPM is a new concept in running and managing the public sector organization and providing services to the people through public service organizations. The academics in the UK and Australia were the first to coin this term. The aim was to provide a businesslike or managerial service to the locals and regional governments' constituents. This medium implies that NPM aimed to introduce the private sector's structural and managerial features into public organizations. For example, features such as quality control, competitive tendering, consumer choice, and performance management (Meld. St. 27., (2008-2009.)). NPM adopts a radical approach where it emphasizes the decentralization of services. It works on the same approach that is adopted by corporate organizations to serve their client. These corporations adopt a customer-centric approach and propose the citizens' centrality as their mainstay (Christensen & Lægveid, 2017). In the context of NPM, the role of ICT and e-government is extremely important. Public sector organizations worldwide following the tenets of e-government create an environment where citizens do not have to bear the weight of physical actions. Online amenities from home give a more comfortable environment and allow the provision to apply for different governmental services. (Halvorsen, Hauknes, Miles & Røste, 2005). A quasi-market structure was adopted by many governments, among which the United Kingdom holds a pioneering position. In these market structures, the public sector organizations tend to compete with private sector organizations. New public management initiatives include increased efficiency, financial control, effective monitoring of the targets, value for money, and more power to the senior executives (Hyndman & Lapsley, 2016). In this regard, the governments set benchmarks and targets, periodically evaluated to observe any deviation, to have the possibility to address them promptly.

The change from input processes to output outcomes, as measurements and quantification of the public sector administrative services (Poole et al., 2006). Seeing in the Norwegian public sector prospects, the introduction of NPM has involved two aspects, management by goal and performance and organizational structure (Christensen, Egeberg, Larsen, Læg Reid, and Roness, 2010). According to Hansen (2011), management by contract, privatization, and outsourcing are more NPM thinking, whereas public administration (PA) entails a legislative bureaucratic, and rule-based approach to provisions of public services.

In addition to their contributions, all the above reforms have their shares in the boat of criticality. However, NPM has been partly criticized for its narrow approach to understanding and addressing society's complex needs in a pluralistic world. However, the induction of NPM and the shift towards user satisfaction and decision making are primarily highlighted as essential criteria for successful public management (Klausen, 2005).

3.1.4 The public sector in Norway

The Norwegian public sector comprises three governmental levels, the central, county, and municipality. The public sector in Norway could be highly competent and highly valued by both the government and the citizens. The revenue earned from the public sector amounted to 54.7% of the total GDP by 2014. GDP from Public administration in Norway increased to 52586 NOK Million in the first quarter of 2020 from 51528 NOK million in the fourth quarter of 2019.¹ Norway's public sector employs a large proportion of the total workforce in 2019; the total state employees registered were 166 555². According to the OECD, the proportion of women in the public sector employment is 60% compared to 59% in 2017 (OECD, 2017).

¹ <https://tradingeconomics.com/norway/gdp-from-public-administration>

² <https://www.ssb.no/en/statbank/table/12623/>

Nevertheless, the woman's share is also considerably higher, and it may be interesting to note that women filled more than 66% of these public sector employment positions. Science Norway, in 2017, published that around 94 percent of the workforce in Norway is satisfied with working conditions as compared to 86 percent in the EU.³ One of the significant features of the Norwegian public sector organizations is that the citizens of Norway are highly satisfied with the public sector. However, Norway has slipped from third to fifth place as the happiest country to live in the Nordic region (Nordic survey, 2020)⁴. In a survey conducted in 2012, more than 80% of Norway's citizens claimed they favorably satisfied their healthcare system (OECD, 2017). Across the OECD, the proportion of the highly satisfied citizens stood at 71%. As identified by the country's citizens, the unmet care needs stood at 2.3% on average, termed some of the lowest reported figures among other OECD countries. Similarly, the results suggest that public sector organizations, in general, are working competitively in Norway and are trying to provide the best of their services to the citizens (Sataøen & Wæraas, 2015).

³ <https://sciencenorway.no/forskningno-norway-society--culture/norwegians-tend-to-like-their-jobs/1450934>

⁴ <https://www.lifeinnorway.net/norway-falls-in-2020-happiness-rankings/>

4 INNOVATION CONCEPTS AND THEORY

From a theoretical perspective, an essential aspect of this study is understanding better innovation and particularly the potential signs that influence this process. This section provides the theoretical background of innovation, definition, concepts, attributes of an innovative organization, and employee-driven innovation (EDI). This section and the empirical background will help build the mosaic pieces for analyzing the policy documents.

4.1 Definition of innovation?

The first step is to go through the definitions to build a fundamental understanding of the expression. Innovation does not have a uniform definition, as different scholars, individual countries, academics, communities, the EU, and the OECD have defined it in different contexts and perspectives. Tidd & Bessant (2018) define innovation *as a process where new thoughts and ideas lead to new solutions to the existing problems or the successful exploitation of new idea*. The Research Council of Norway (Forskningsrådet, RCN 2012), defines innovation as: *«Innovasjoner er nye eller vesentlig forbedrede varer, tjenester, prosesser, organisasjonsformer eller markedsføringsmodeller som tas i bruk for å oppnå verdiskaping og/eller samfunnsnytte.»* The innovation here exemplifies new or significantly improved goods, services, processes, organizational forms, or marketing models used to achieve value creation and societal benefits.

The OECD's publication Oslo Manual 2018, defines innovation: *“a new or improved product or process (or a combination thereof) that differs significantly from the unit's previous products or processes and that has been made available to potential users (product) or brought into use by the unit (process).”* (Oslo Manual, 2018) This definition is the basis for defining innovation in the governmental policies and is often referred to or modified as per the policy

documents' need and direction. For example, innovation in the public sector is: *Innovasjon I offentlig sektor kan være en ny eller vesentlig endret tjeneste, produkt, prosess, organisering eller kommunikasjonsmåte. At innovasjonen er ny, betyr at den er ny for den aktuelle virksomheten den kan likevel være kjent for å iverksette i andre virksomheter* in the Meld. St. 30 (2019-2020). This definition is modified and extracted from the OECD definition.

The use of a new idea, design, or product has been defined as Innovation by the Cambridge Dictionary (“Innovation | meaning in the Cambridge English Dictionary,” 2020).

All the above definitions complement the description of innovation as something new, useful for creating economic value.

4.2 Successful exploitation of new ideas is known as innovation

A new idea or invention does not turn into an innovation until it has a practical use. Often, innovators are other than the creators of the ideas, who stand for the innovation itself. The innovation can occur elsewhere, as seen over time, away from its birthplace. An example here is Leonardo da Vinci's desire to make a flying machine. Da Vinci had the idea; however, he lacked the necessary elements like motor, lightweight, and manufacturing competence. It took centuries before his idea turned into innovation. Another example is the GSM Telephony, where Norway played a significant contribution. The transmission system GSM was developed by ELAB (The Electronics Laboratory at SINTEF) in Trondheim around 1970 but was put into commercial operation not before 1993 with two separate network operators: Telenor and Netcom.⁵

⁵ <https://snl.no/GSM>

Implementing innovation in any organization is not an accidental process (Tidd & Bessant 2018); instead, the entire journey from a conventional organization to an innovative organization requires planning and implementing. Note, it may be essential to note that different scholars have suggested different pathways to achieve an innovative goal. (Tidd & Bessant 2018) suggest a defined way to introduce innovation in an organization, i.e., a four-step approach described in figure 1.

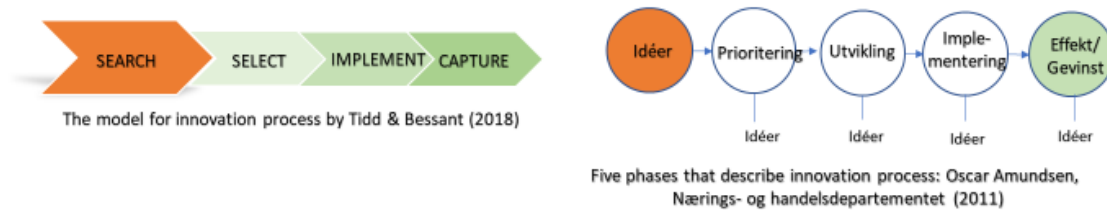


Figure 1: Innovation process illustrated by Tidd & Bessant (2018) and Oscar Amundsen (2011)

Parallel to Tidd & Bessant’s (2018) model is the five phases model by Oscar Amundsen. Amundsen’s model is taken in accord at this point, primarily to illustrate the common elements in the process of an innovative organization and the context of employee-driven innovation, together with Tidd & Bessant’s innovation model.

Illustration of Tidd and Bessant model: The first step in the journey is “search.” Refer to searching for innovation opportunities for the organization, to explore the different possible

sources from where opportunities could be found and extracted. Tidd and Bessant (2013) identify different sources that could be used as inspiration for innovation. In this regard, the first is a right to the organization where changing world events may force to adopt new strategies and mechanisms. New adoption of strategies is introduced from the second source due to unexpected events. Another source of innovation could be watching others as imitating leaders in an industry may also lead to innovation. Regulations could also be a source of innovation where the participants are legally bound to change that system and processes due to changing the regulatory environment (Golubeva & Sokolova, 2009). Necessity as a mother of invention is an old age belief that holds today and could be a powerful source of innovation. All the above sources could be used by the organization's participants to embark on a journey of innovation.

Amundsen called the first step as the *idée* - idea generation. He emphasized that this first phase aims to generate or formulate ideas, either in written or verbal context. Further expressed that initiating point can be generated out of a problem, an opportunity, or a sudden insight or a realization (Amundsen, 2011).

The second step in the process is "select." It refers to selecting the innovation, where participants must figure out precisely what is required and what mechanisms are needed to achieve that objective. At this point, it may be essential to note that decision making regarding the mechanism of innovation is a complicated process. The organization, therefore, cannot haphazardly make this decision; instead, they need a framework that may provide the guiding principle for mechanism selection. To support this, Tidd and Bessant (2018) identify three inputs that resolute into the innovation concept. This first input is the flow of signals that support the organization in identifying the market and the technological opportunities that the organization could exploit for its benefit. The second input is concerned with the knowledge base that the

organization currently possesses. This refers to distinctive competence. The organization is well aware of its operations, process, and products and is aware of the effective methods to offer the products and services. To select the innovation method to be successful and have a good fit between the adopting and the existing methods, the organization must be aware of the status of innovation approved and what the organization currently does (Saebi & Foss, 2015). The third input is the strategy approved is not specific to a particular unit. Instead, it should support the overall organization in must be an overall organizational fit.

Amundsen called the second step Prioritering – select. The goal is to determine which ideas are to forward to the next level for further development, and the ones need other processing.

The third step in the process is “implement.” In this step, the organization combines existing and new information, internal and external. The aim is to provide a solution to the existing problem. In this regard, if the concept is entirely innovative, there is a great scope for creativity on the organization’s side. The managers at this stage can face the challenge of creating conditions in which the proposed change process could flourish (Baden-Fuller, & Haefliger, 2013). To face this challenge involves combining knowledge provided by different organization segments with different functional and disciplinary backgrounds. Adopting flexibility would be necessary as the innovation process in progress would require adjustments at different implementation levels. Tidd and Bessant (2018) noted that at this stage, knowledge is not only essential but central to the process as this is what converts uncertainty to risk. Risk is more defined and can more clearly be measured. The decision making can be subject to bias elements or by various sources such as competitor analysis, technological knowledge, trend spotting, and other methods.

In Figure 1, by Amundsen (2011), he adds on development in phase three to illustrate the innovation process. In contrast, the model of innovation process illustrated by Tidd & Bessant

(2018) defines implementation at this point. Amundsen argues that this point realizing the ideal, i.e., the complete development process is of value before launching it into the market. On the other hand, it is all about using the solution to further organizational development.

The last stage in the innovation journey is to capture value from the exercise of implementing innovation. According to Tidd and Bessant (2018), the capture process must pass through four stages: experience, reflection, concept, and experiment.

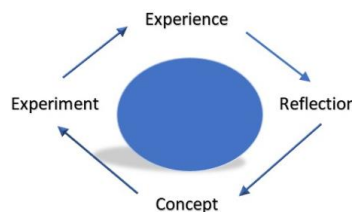


Figure 2: Tidd & Bessant (2018)

The above figure defines a learning cycle that is adopted by an innovative organization. At this stage, innovation is not a one-time process. Instead, it is a continuous process that could only prove successful if organizations can adopt it as a culture (Crevoisier, 2014). The organization must restructure itself to deploy the internal and external capabilities and competencies, focus on rapid product innovation, and timely responsiveness for the effective continuous execution of the process.

This final stage capture or “Effekt/gevinst” and their role in the innovation process model share the same thought (see figure 1). They aim to utilize the max potential for value creation in the new solution. The most common factor is to look at the opportunity or financial gains; however, better work processes or more efficient production are also crucial that slide into employee-driven innovation (EDI) explained later in this section.

In the next subsection, the types of innovation.

4.3 Types of Innovation

One of the most well-known interpretations of the innovation space is the model of 4Ps proposed by Bessant and Francis in 2005 to clarify how comprehensive innovation is and focuses on four broad categories. The four categories consist of axes starting with incremental innovation and ending with radical innovations. The four categories of innovation types are the product, process, position, paradigm.

Models are important as they are not just academic back-waters but influence behavior, investments and decisions. The 4P model is highly productive in understanding the enterprise's dynamics (Tidd & Bessant, 2018).

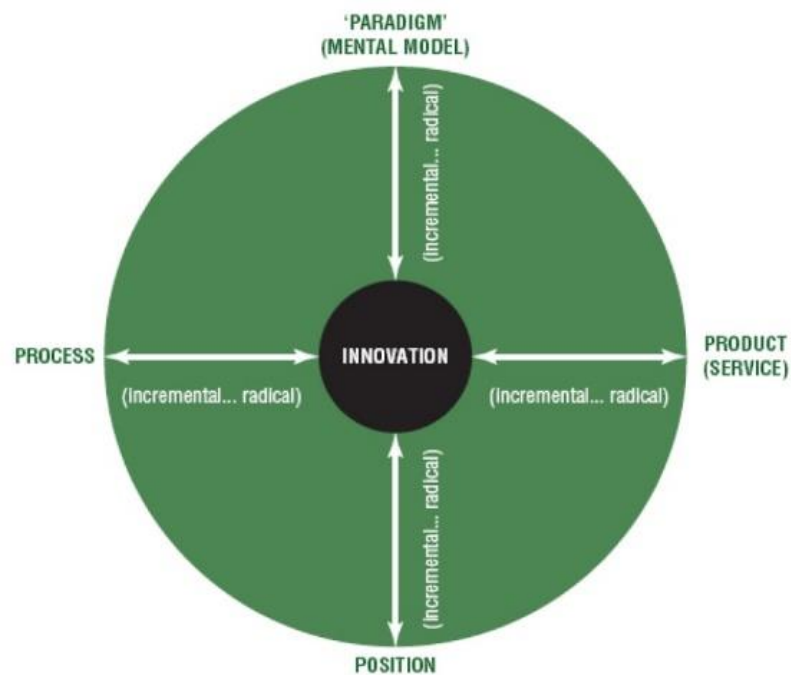


Figure 3: The 4Ps by Tidd & Bessant (2018); retrieved 04.06.20

Product

The product innovation may refer to introducing a substantially improved, redesigned, completely new product, or is about change in what is offered (Tidd & Bessant, 2018). In other words, the invention of “new products or services to a market” classifies as a product innovation

(Regjeringen, 2018). The product innovation may refer to the introduction of a substantially improved, redesigned, or a completely new product. A business may move towards the invention of a new product or a service or improve the technical specifications or quality improvements in a product. It may include the inclusion of new features, desirable functions, or material components in the products to make it unique to the existing design. Product innovation is one of the most common forms of innovation. With the changing technology, the products that we use today are rapidly transforming in more useable forms, from simple personal products to more technologically advanced machines, vehicles, or weapons.

Evanschitzky et al. (2012) focus on why product innovation is vital in the first place. According to Evanschitzky et al. (2012), with the innovative feature's help, the individual, small business, or a large corporate firm, can create new spaces. As the market dynamics have become increasingly competitive, innovation provides a firm ground in seemingly crowded marketplaces. Two different mechanisms are identified, which could introduce innovation. The first mechanism is finding gaps in the existing markets or products. Once the gap is effectively-identified, new products or services can be introduced that may help solve the consumers' problems. The second mechanism does not focus on existing gaps; instead, it suggests creating products first and then creating the demand.

Process Innovation

Process innovation is innovation in how an offering is created or delivered (Tidd & Bessant, 2013). Regjeringen defines process innovation as “new ways to manufacture or distribute products or services” (2018). OECD defines process innovation as an improvement in production techniques. Significant changes in technology, such as equipment or software, could be defined as process innovation. Unlike product innovation, the process's innovation associates with how the

product is designed, manufactured, or produced. The process of innovation could be the objective behind several objectives. It may reduce the per-unit cost of the product, increase efficiency, increase quality, or improve the delivery mechanism. These objectives could only be achieved if the existing processes are improved or enhanced to bring a radical change in how products and services are offered. It may be essential to note that both the product and the process innovation are broad phenomena and appear at more massive levels such as enterprise or industry. At the regional level, the process and product innovations are visible. Becker & Egger (2013) argue that the general belief that process innovation is associated with consumer goods and services is not an accurate, somewhat improved process at the level of governance would also fall in the process innovation category. If a local government implements an improved public management system, this would also be termed explicitly as process innovation. The system's ultimate objective is to enhance the services to the general public. Process innovation has two broad categories, known as radical innovation or incremental innovation. In the former, the process of innovation is dramatically changed, and massive structural changes are witnessed in a short period. On the contrary, incremental innovation could be defined as a step by step improvement regime in the existing stream of a process. Change is a continuous mechanism.

Position Innovation

Position Innovation refers to an established product or service produced by an established process brought into a new context (Tidd & Bessant, 2013). Norman and Verganti (2014) described position innovation as a change in how the products and services are offered. Position innovation is less broad than paradigm innovation generating in a broader context. In such innovation, the products or services positioned in a particular context are re-introduced with a completely different context, which may or may not be related to the original one. This is done as

the participants expect that re-positioning the product would attract more consumers. The redefined positioning is more relevant to the features and properties of the product or service. In the past various companies have embarked on the position innovation journey where they have successfully changed the context of their products and services. One such example is that of low-cost airlines (Edquist & Zabala-Iturriagoitia, 2015). While the airline business has been in existence for many decades, air travel is comparatively expensive to other traveling methods. The airline companies came with an innovative idea of low-cost airlines. The airlines provided essential services to airline passengers at a comparatively lower price, which is easily affordable for many consumers. The passengers may not receive the same type of luxury as regular airlines; their fundamental objective is to reach the farthest of distances in the lowest of the times.

Rowley et al. (2011) suggest that one of the approaches followed mainly by the organizations that embark on position innovation is the pyramid approach's bottom. The companies that aim at the position innovation use the same principle to tap into huge but very different high volume and low margin markets to capture the maximum number of consumers and a generally unexplored market. The low margins and high volume make it difficult for new firms to tap into these markets. However, established companies use their existing structure to tap into this untapped area. Edquist and Zabala-Iturriagoitia (2015) hold a different opinion of the position innovation and argue that the new product or services that the stakeholder imagines may be relevant or beneficial. The success of repositioning is not guaranteed, and it largely depends upon the effectiveness of the market study. Without empirical evidence suggesting innovation in the product's position, the organization must not change its existing position. Such exercises tend to create confusion in the minds of consumers. Consequently, rather than attracting, they could also be distracted from that product or the service.

Paradigm Innovation

Paradigm innovation is defined as fundamental changes in the mental models that define the job or organization's operations. Every institution, whether public or private, has a defined operational identity. Such as a giant technological company focused on producing hardware for computing equipment. Chesbrough and Bogers (2014) emphasize that by observing the changing dynamics of the business arena, where the company gradually shifted from hardware products to producing software and then gradually to consulting services, a paradigm shift as the organization's core operational identity is changed (Tidd & Bessant. 2018). It is important to note that a paradigm shift only occurs when the organization, whether public or private, deems that its current operations are no longer feasible in the long run. Continuing the current operation may lead to a loss of customers or essential participants. In public organizations, a paradigm shift may occur if the basic structure of the organization changes. For example, a local land revenue office that previously works on manual operations moves on to computerized records centralized at the State office; this could be a paradigm innovation (Chiaroni et al., 2016). With the changing social dynamics, the land revenue also believed in moving to a more technology-savvy structure, which, if otherwise ignored, may lead to its essential participants, the public dissuaded. Consequently, the mental model which defined how organizations worked changed significantly, leading to a more innovative organization.

4.4 Innovations mapped to the 4P model – Degree of innovation

Innovation is divided into three main categories based on their effect. These categories mapped to the 4P model considered in this thesis are Radical, incremental (day-to-day or gradual), and disruptive innovation. It is often common to distinguish between gradual and more radical innovations, and sometimes they can overlay. The dividing lines are in figure 3 display the overlay

or the blurred contours (Tidd and Bessant 2018). For example, f. example, a new ULSTEIN X-Bow vessel is both a product and a process innovation in the context, as explained by the concept simplified shipbuilding with better efficiency.

Radical innovations entail creating qualitatively new products, processes, facilities, or mindsets, i.e., something that has not existed before, either in the areas of technology or others. According to the Harvard Business Review: “*Radical innovation focuses on long-term impact and may involve displacing current products, altering the relationship between customers and suppliers, and creating completely new product categories.*” (Velis, 2020).⁶ However, radically new products may contain previous products, and even minor changes summed up together can lead to a more radical type of innovation. Norman and Verganti (2014) highlight that Radical innovation is a change process that tends to radically alter the structure and foundations of the existing systems, products, and processes. Unlike incremental innovation, which adopts a gradual and steady approach, a completely new product, system, and position is introduced in radical innovation, which has not been experienced before. A number of characteristics could define radical innovation. The first characteristic is the use of existing technology. With the evaluation of the successful radical innovation cases, one common theme that could be extracted was that the organizations that opted for radical innovation used the very technologies they were using previously. However, they explored an entirely new way of using that technology, which enabled them to create new products, services, and adopt a new position that was fundamentally different from their previous offerings. For instance, the new inverted bow vessel concept in the maritime history, the Ulstein X-Bow, launched in 2005 by the Ulstein Group in Ulsteinvik, Norway. A revolutionary hull line design with the ship’s bow upside down.

⁶ <https://www.bigthinkedge.com/radical-vs-disruptive-innovation-what-they-mean-for-organizations/>

Ritala and -Laukkanen (2013) discuss that radical innovation stem from the commercialization of novel products and ideas. This is another factor why public sector organizations may be reluctant to adopt radical innovation, as public sector organizations' primary objective is not a commercial activity. While this is true that some of the public sector organizations may be involved in a commercial transaction, it is ultimately aimed at serving the general population rather than earning profit. Another important feature of radical innovation is that it tends to serve an unmet demand. In this case, the users or consumers are often unaware of the need until a prototype is out and marketed. Such offerings are an outcome of Radical innovation and rarely found in other innovation degrees. There are examples where organizations introduced novel ideas and concepts that were previously unknown, but the target population was maintaining their tasks quite successfully without those offerings. However, with the introduction of those products, they were able to achieve their objectives in a more enhanced manner, for instance, simplifying everyday life using ICTs. Alexander and Van Knippenberg (2014) emphasize that agriculture for the last many decades is successfully carried out through the latest technology; however, tractors powered by sensors to track the crops was a radical innovation that enabled the farmers to keep a significant track of their crops. They could not realize such tractors' needs until the idea or the manufacturers revealed the prototype.

Incremental or gradual innovations occur far more frequently, which allows the overall economic impact to be significant. In practice, it can be said that they are fluid transitions between the different types of innovation. Souto (2015) focuses that incremental innovation refers to the gradual and steady process of improvements and enhancements in the existing products, processes, or positions. The incremental innovation largely focuses on the things that are already in existence, and therefore, it enables the organizations to build upon their existing

capabilities. This set of innovation is considered less risky. This is one reason that most of the projects that are termed as innovative follow the incremental version of novelty. At the same time, when organizations embark on their objective to introduce new products or processes, they are available with a choice to bring an immediate change or follow a more defined pattern of gradual change. The majority of the organization chooses the latter option in terms of financial perspective; the gradual change option is more feasible for the organization. It may be essential to understand that managing and controlling innovation requires careful planning and execution. Arnold et al. (2011) provide that with the help of incremental innovation, the organizations can create the capabilities that help them manage and execute the innovation projects in an effective manner. Numerous new concepts in the last two decades have been introduced that fundamentally follow the concept of incremental innovation. Total Quality Management or TQM is precisely known, and the incremental innovation principle could inspire the Learning Curve Effect. Some organizations in the past have adopted this concept and were able to introduce highly innovative products.

Oerlemans et al. (2013) emphasize that one of the main features of incremental innovation is that it does not rely on big leaps of technology. At the same time, it also does not have a massive impact on the market dynamics. This could be felt on a more profound level when the gradual introduction of novelty reaches a substantial level, and the difference or innovation becomes more prominent. Another vital feature of incremental innovation is that incremental innovation tends to be more feasible in implementation, unlike other degrees. There is limited uncertainty involved, and therefore, it is much easier to anticipate the possible outcomes of the innovation projects. From the perspective of innovation in governance, incremental innovation can be termed to be the most feasible option because any significant

changes in the governance may be required to be supported by financial investment. The dilemma that the organization of the public sector has to face is to utilize the taxpayer's money efficiently and, at the same time, provide them with continuously improved service. Robertson et al. (2012) emphasize that a more practical approach to ensure these facets is adopting incremental innovation. With the features of less risk, less investment in terms of resources, and continuous improvement, incremental innovation would allow the public sector organization actors to achieve their objectives with limited resources on stake.

Disruptive innovation is defined as the novelty that disrupts the existing system. Whether it is a market or a governance model, or in other words; *Disruptive innovation is an innovation that creates a new market and value network and eventually disrupts an existing market and value network, displacing established market-leading firms, products, and alliances*⁷ (Christensen, 1995). Christensen et al. (2015) argue that disruptive innovation is generally used interchangeably for radical innovation; however, both degrees have different structures, characteristics, and features. Disruption represents innovations that make products and services more accessible, affordable, and available to a larger population. For instance, the customization of the first car by Henry Ford, making it affordable for people outside the upper-class and after that, mass-produced automobiles. A disruptive innovation because they change the transportation market, whereas the first automobiles are radical. They were revolutionary but did not disrupt the market, as they were expensively suitable for only the upper-class. Thus, not all innovations are disruptive, even if they are revolutionary. At the same time, it is also essential to understand that terming a particular product or service disruptive at one fixed point in time does not reflect the actual dynamics of disruptive innovation.

⁷ https://en.wikipedia.org/wiki/Disruptive_innovation

On the contrary, it is an evolution of the services and products over time. Through the “technology mudslide hypothesis,” Christensen went further and “differentiated disruptive innovation from sustaining innovation. He explained that the latter’s goal is to improve existing product performance. On the other hand, he defines a disruptive innovation as a product or service designed for a new set of customers” (as explained earlier under this sub-section as Henry Ford’s automobile). Generally, disruptive innovations were technologically straightforward, consisting of off-the-shelf components ⁸in a product architecture that was often simpler than prior approaches. They offered fewer “what customers in established markets wanted and so could rarely be initially employed there. They offered a different package of attributes valued only in emerging markets remote from, and unimportant to, the mainstream” (Christensen, 1997). ⁹King and Baatartogtokh (2015) suggest that for this reason, it brings a disruption in the regular operation flow of that sector or the industry. In the case of Disruptive innovation, an inferior firm, mostly with fewer resources, challenges the established organizations of that sector. There are two ways through which this degree of innovation is practiced. Firstly, the entrants may focus on an overlooked segment of the market, which the mainstream organization has not catered. Second, the entrants may turn non-users into users, and by doing this, create their user base.

Christensen et al. (2011) focussing on public sector organizations; the disruptive innovation strategy may not generally be a favorable option for governance models. One basic reason for that is that disruptive innovation is adopted by individuals or groups working at the entry-level to capture a large market share. Cortez (2014) emphasizes that the fundamental governance model does not operate in the new entrant’s style in an unexplored market. The

⁸ https://en.wikipedia.org/wiki/Disruptive_innovation

⁹ https://en.wikipedia.org/wiki/Disruptive_innovation

public sector organizations are already spanned over the social strata. Therefore, they cannot act like new entrants and bring an idea that is focused on capturing a large target population. Therefore, disruptive innovation may not be a feasible option from governance models and public sector organizations.

4.5 Innovation culture and barriers

4.5.1 Characteristics of innovative organizations

So far, the key themes that emerged from the literature review are innovation and the public sector. Now we move forward to what are the common characteristics of an innovative organization. In this section, the focus is on “Tidd and Bessant’s description of innovative organization characteristics. Phrases as “People are our greatest asset” or “Microsoft’s only factory asset is the human imagination” Bill Gates (as referred in Tidd & Bessant, 2018 p.117). indicate one thing in common that human beings are an essential human resource. They can find and solve complex challenges, and their creative thinking gets exploited among multidisciplinary opportunities leading to great ideas that turn into an innovation. Thus, the human factor is an essential key to the combustion of innovation. However, this combustion occurs when certain elements align. Tidd and Bessant (2018) describe these elements as creative culture, teamwork, leadership, and appropriate structure. When these components align, innovative ideas emerge, leading to the advancement of the organization. Innovation is the base reason for the organization’s growth and progress, as understood by many scholars. According to Tidd & Bessant (2018),” it is easy to find prescriptions for innovative organizations that highlight the need to eliminate stifling bureaucracy, unhelpful structures, brick wall of communications and the factors that barricade flowing of good ideas.” However, this could be a little misleading as not all innovation works organic, and these types of organizations can sometimes act against the

interest of successful innovation. To be tagged as Innovative organizations, it is more than just a structure or process but requires a more integrated set of components such as skills, attitude, and values. Simultaneously, organizations based on team-working successful capabilities though with loose structures, prescriptions are not primarily innovative organizations.

According to Tidd and Bessant (2018), one of the essential characteristics that have played a pivotal role in the organization's success is innovation. The majority of the organization, which has adopted innovation in the past, remained more successful than their peers and competitors who did not believe in innovation's importance (Kotsemir & Meissner, 2013). In the past, it is evident that the organization that embarked on a leadership journey where they emerged as the market leaders and were able to increase their profitability were all those that adopted innovation as a principle. Tidd and Bessant (2018) also suggest that while adoption of innovation is a prerequisite for a successful organization, another essential factor that organizations need to consider is awareness of that innovation to the most important actors or participants, such as customers general public. It is this awareness that provides the organization the edge that differentiates it from its competitors. The awareness could be in different areas; however, some specific areas identified by Tidd and Bessant (2018) include 'Product Advantage,' which refers to creating a clear distinction in the product compared to those of the competitors by highlighting factors such as performance to cost ratio. The next is 'Market knowledge,' which refers to obtaining complete and detailed information regarding the market by conducting significant market and financial analysis. Lastly, 'Clear product,' where organizations should be well aware of their products' positioning and the specific markets and customer niche where they aim to launch the product. With this knowledge, they can more effectively reach to relevant clients. The organization must be clear about the benefits that it aims to deliver through the product.

The next area is ‘Risk Assessment’ as a development project of any sort goes through different types of risks, including manufacturing, technological, design, or market risk. The risk assessment is essential as the organization should conduct feasibility studies and identify possible risks before initiating the development project (Isaksen et al., 2017). The next area is of Project organization, where the organization should be aware of the implementation of cross-functional teams to ensure that they can manage the project as per its different requirements, whether these are technological or financial. Also, ‘Project resources’ where the organization should be aware that project development requires different financial, human resources, logistical, and multiple material resources. The combination and collection of these resources would support the organization in project development without any obstacle to the prime hurdle (Isaksen et al., 2017). The following area is the proficiency of execution. This area is important as the organizations need to take care of essential factors such as detailed market studies, quality of production and technological activities, test marketing, and pre-commercialization business analyses. According to Tidd and Bessant (2018), the top management’s support also holds considerable importance with all of these factors as these plays are a critical role in the innovation process and could prove to a game-changing factor.

4.5.2 Innovation culture and barriers in the public sector

As per the former explanation to the organizational role of innovation on general grounds, it could be plausible that the innovation process in a public sector organization is also affected by its culture, for instance, behavior towards risk and change, incentive structure, and perception of barriers to innovation. According to MEPIN rapport (2009), four identifiable elements identify how the public sector’s innovation process is organized. Firstly, the position is given for innovation in the organization’s overall strategy—secondly, the managerial role for

promoting innovation. The next is the structuring of the innovation process and, lastly, the competencies within the organization itself. However, these elements mentioned have different roles in the innovation process's respective stages, as mentioned in figure 1. It is from the idea stage to implementation.

Framework conditions influence innovation activities. The characteristics can be measured by examining which factors act as barriers to innovation activities. According to MEPIN rapport, there are four main characteristics. They are Political factors, organization, and culture, other internal conditions (insufficient incentives or none, the inadequate time allotted to innovation), external conditions, lack of capability to provide innovative solutions (suppliers), contractual rules, resistance to change (users).

4.5.3 Public sector innovation

Innovation can be characterized as an essential economic phenomenon concerning the private and public sectors (Fagerberg et al. 2014), as mentioned in the first section of the study. According to observations by Willumsen and Ødegård (2015), the number of users requiring public services is increasing, and the available resources cannot grow accordingly. New ideas are needed to keep up with current development. However, the use of the term, innovation related to the public sector is relatively new. It can also be controversial as connected to the competition. Public administration is, by nature, monopoly institutions and seldom exposed to competitive services. It can be argued that public governance does not give a sound basis for innovation and can be described as contradictory (Røisland 2013).

From a national perspective, the parliament review “Et nyskapende og bærekraftig Norge” (2008-2009) brought innovation in the limelight. This review focused on how public tenders contributed to healthcare (St. Melding nr 7 (2008-2009)). With the increased focus on innovation

and innovative ability, more research has been performed to understand the factors influencing innovation in the different activities nationally as internationally (Thune et al., 2011).

4.5.4 Innovative Procurement and barriers

Public procurement is becoming an important issue for innovation policies based on that public procurement can be used to promote innovation in businesses. The innovation procurement is not related to new products or services only; it is also associated with improving the existing solutions. In terms of measurement, procurement can potentially impact innovation in two ways. Firstly, in the organization itself, secondly promoting innovation in other organizations. Innovative procurement is defined *as purchases that encourage the development of products or processes that do not yet exist or require new features* (MEPIN, 2009). This can be seen through various practices: acquisition of components or software from ICT-suppliers, contracting of consultancy services (ICT, management, user studies, other), outsourcing of service provision, public-private partnerships, etc. (MEPIN, 2009).

In addition to this, improved ways of working and organizing are also included in the innovation procurement. The process is done in different stages (Golubeva & Sokolova, 2009). It starts with identifying a problem and designing its solution. The authorities responsible for procurement then initiate the procurement process. The products obtained are then used to address the issues. As the innovation procurement is associated with public procurement, it is generally carried out at the level of municipal corporations, state, and national ministries (Saebi & Foss, 2015). The procurement aims to provide more effective solutions to the general public and is expected to be cost-intensive.

There are four visible barriers associated with the innovation procurement process. The first one is Limited Competence, where there is a lack of expertise concerning carrying out the

process. The second barrier is the fear of making a mistake (Isaksen et al., 2017). With the apprehension that a new process might lead to damages, the actors do not carry out the innovation process. The third barrier is the lack of coordination. Different departments, units, and groups are responsible for carrying out the process, and lack of coordination between them can prolong or completely stop the process (Baden-Fuller, & Haefliger, 2013). Lastly, the lack of leadership is a significant barrier where, without a determined leadership, the process of innovation remains in a complete hurdle.

4.6 Public sector innovation on national ground

The public sector in Norway has many innovative projects in progress, and many are conceiving and conceptualizing. One project of public sector innovation is Service Shop. The project is the user management of municipal services, initiated by Larvik's local government in 2017. It is a unique concept that is aimed at creating comfort and solution for the general public and, at the same time, creates more certainty for the local government employees. According to the project, Larvik citizens would be able to book their required municipal services online. Unlike the conventional trend, that the municipal services are received as per the availability of the officers. Through the Service shop, an innovative and user-friendly technological solution, the citizens would set time to request different services ("Service shop - user management of municipal services - Observatory of Public Sector Innovation," 2020). The citizens can check the feasibility of their schedules and opt for the time that best suits them. The project ensures that the integrity and the privacy of the citizens are maintained at its fullest. The service has excellent benefits. While it provides great comfort for the citizens, it is also equally helpful for the employees. The service generates employee workflow, which they use to plan their days and job flow. They can more effectively manage their operations as they are already aware of the possible services provided in the coming days.

Public sector innovation in Norway's context considers the case of Asker Welfare Lab initiated by the national government in 2014. The project started by The Norwegian Centre of Design and Architecture (DOGA). At the earlier stages, however, the scope of the project was quite limited. When the officials started to discuss the project with the people, the project identified that the citizens' needs and requirements are quite complex ("Asker Welfare Lab - Observatory of Public Sector Innovation," 2020). The research is done in the context of the housing needs of the people. Evaluating and understanding the people's requirements enabled the officials to understand that there needs to be a central mechanism that may deliver the requirements concerning a single need. For example, suppose a citizen wants to build a house. In that case, they have to go through multiple types of transactions and consult different departments from the layout's approval to the home's final inspection. These are the complex needs that this project aims to deliver by creating comfort for the citizen. The project's first phase has been completed, and the project has moved towards its second phase. The service delivery concept is inspired by the emerging business trends where customers are provided their services in a minimum of the time.

Another example of innovation Norwegian public sector is the launching of the "The way home" program. The project could base on the reflationary strategy. Where the state aims to provide the necessary housing needs to every citizen but, at the same time, takes a step to the micro-level to ensure that every individual citizen has handled as per their profile ("The Way Home - Observatory of Public Sector Innovation," 2020). To initiate the project, the local government of Sarpsborg started the program in 2014 with two pre-defined stages. In the first stage, the people who rent a community residence, a folder is prepared with all the information on the tenet's community house. It will also contain important information on how he can move on

to a new house if he intends to leave the community residence. A time to time follow up is conducted by different housing contacts, and discussions are made with the tenants to support them in obtaining their residence. After obtaining thorough information, an individual plan is mapped and evaluated to what extent the tenant can contribute to the plan. If the tenancy period is expired and the tenant cannot find a new home, their current tenancy is renewed, or evaluate if a housing loan can assist the tenant in obtaining his own home. In the second stage, if the tenant obtains a housing loan, the folder previously discussed would contain all the practical information to help the buyer purchase the house of his choice. From viewings, different housing types to bidding, detailed and practical information is shared with the tenant.

Public sector projects in innovation are not in isolation. There are sectors, actors, organizations, research institutions, universities within the national and international boundaries that work together to achieve the common goal to strengthen the innovation capacity and maximize overall sustainable growth. EU and Nordic countries have close cooperation and are Norway's important trading partners in many vital areas, such as facilitating digitalization (One Digital Public Sector 2019-2025). The white paper Meld. St. 30 (2019-2020) says that 85 percent of the state enterprises and 74 percent of the municipalities have introduced at least two innovations in the last two years in the state's innovation barometers. This percentage is in line with the Nordic neighbors (Denmark, Sweden, Iceland, and Finland) (Meld. St. 30 (2019-2020) p. 17).

4.7 Employee driven innovation

As seen earlier in the section, one can comprehend that innovation involves the ignition and realization of new solutions that are valuable to organizations or businesses that develop the solutions and those who use them. Thus, in the interface of this context, the active participation in the development of new solutions by the employees is employee-driven innovation (EDI). It can also be about new products, services, manufacturing processes, work processes, or business models. Simultaneously, it is also essential to understand that not all employee innovation could be termed as employee-driven innovation, as specific parameters are essential to fulfill the EDI requirements. There are certain groups of employees that are inherently considered innovative as there due to their background and job nature. These employees include the marketing professionals and experts working in the R&D, whose task is to propose innovative and novel concepts for the growth of the organization and its products (Kotsemir & Meissner, 2013). The employee-driven innovation goes beyond this. To be termed an innovation as employee-driven innovation, the employee must be working on it beyond his job's regular scope. Therefore, this suggests that it would be essential to provide the employee's sovereignty and organizational support without proposing changes (Tidd and Bessant, 2018).

According to some authors, as portrayed by Amundsen and his team in the journal of *Business Science and Applied Management*, volume 9, issue 1, 2014: the fundamental assumption is that the employees have the creative thinking, knowledge, and ideas that will enhance an organization's overall capacity to innovate. Provided the organization gives the space and the right or favorable conditions for it. Employee-driven innovation means that employees and their leaders or managers contribute the ideas to initiate an innovative process. However, equal engagement is essential to make the whole innovations process as viable as possible—a more proposed joint effort between the leader and the employee. EDI is practiced differently in organizations, and

nevertheless, there is no predominant facet whether one method is better than the other. Under this innovations process phase, as shown in figure 1, there is an expectation that idea generation and proposal that occur will strengthen development work, support the implementation phase, and optimize gains (Amundsen et al., 2014, p.25-28) .

Interestingly, Amundsen, in contrast to Tidd & Bessant, chooses five consecutive phases as an innovation process, as seen in figure 1 (to the right). According to Amundsen (2012), the innovations processes relate to these processes as they enhance innovation in the different phases. Especially phase one that he describes as the formulation of the idea, whether written or verbal. Whereas Tidd& Bessant describes it as Select, i.e., how can we find opportunities for innovation? Instead, this is a broad perspective and not necessarily relates to idea formulation instead of scanning internal and external environments for opportunities and signals (threat and opportunity). It is common to divide an innovation process into phases. Often one starts with “idea” and ends with “implementation” (use). These are the visible phases of innovation. In practice, a lot of work occurs in a business that is not always perceived as innovation work but essential for the right ideas. And once an innovation work is underway, it is not always easy to recognize the individual phases.

Organizations that are successful with MDI have a couple of standard cultural features such as trust, transparency, and improved cooperative orientation. There is also a probability that the features may overlap. The most common nine features (Amundsen, 2012) are:



Figure 4: Cultural characteristics in organizations that succeed with MDI, Amundsen, 2012 [Retrieved 31.08.20]

The figure above illustrates the common factors horizontally: commitment, trust, security, collaborative orientation, pride, tolerance, development orientation, autonomy, and transparency.

Engasjement: Commitment, the feeling of ownership, “to burn for “and go the extra mile is the first but the most crucial feature for commitment to developing innovation from the employee participation perspective. Commitment is supported by trust, security, and responsibility.

Tillit: Mutual trust and sharing of responsibilities between managers and employees.

Trygghet: A secure working environment for sharing knowledge and ideas at all times

Samarbeidsorientering: Cooperation/Collaboration between all entities, i.e., between employees, between employees, and leaders gives the best quality on all activities in an organization.

Stolthet: The feeling of pride from the employees builds a strong identity for the organization.

Toleranse: is illustrated by two different conditions, first, the idea capture and development, second, room for mistakes. To lower the threshold, invite open suggestions from all spectrums and keep in mind the employees’ diversity.

Utviklingsorientering: Collaborative and developmental orientation is all about leaders, and employees see improvement of organization and innovation as an integral part of their jobs.

Autonomy: A cultural trait that consists of self-governance and is essential for innovation.

Åpenhet: Open-mindedness and involving employees to innovate is the leading factor for innovative organizations.

4.8 Chapter summary

Innovation in the public sector introduced several concepts and theories. A new idea or invention does not turn into an innovation until it has a practical use. The cornerstones of the “innovation journey” and the model 4Ps by Tidd & Bessant (2018) describes comprehensive innovation and types of innovation. The characteristics of innovation rely on human resources, expanded in Amundsen (2012), organization, and the employee while innovative organization by Tidd & Bessant (2018).

5 METHODOLOGY

5.1 Introduction

The following section covers the methodology used for this thesis. The thesis is structured with innovation in the public sector as its focus, followed by subsections that describe the processes undertaken to explore the study's design. The last subsection will present the research questions and draw up some conjectural limitations.

5.2 Literature Study

5.2.1 *Point of interest*

This paper's interest follows innovation processes in the public sector and how governments approach innovation efforts. Also, to analyze the presumption of the bureaucracy of government agency as slow-paced.

5.2.2 *Research Design and objective*

For the researcher, the research method's choice primarily depends on what types of questions one wants to ask (Yin, 2009). The design chosen for the study is a textual analysis and secondary data. Since the study aims to review Norwegian policies in the context of innovation in the public sector, a thematic study will most appropriate. By conducting a textual analysis of the parliamentary reports provides us to obtain multiple objectives. The first objective is to understand the basic theme of the reports. The parliamentary reports obtain information from different sources, specifically innovation processes. The textual analysis would help understand the direction these reports aim to provide (Robertson et al., 2012). The analysis would be termed as surface-level analysis and would only focus on the text's most apparent contexts. The second objective would be to go beyond words and understand the report's narrative. The comprehension of the narrative

would remain incomplete until the background history verifies the narrative. The above steps and several others would enable the researcher a broad and in-depth understanding of the parliamentary documents.

5.2.3 Search method

The method adopted for the research began with a broad and straightforward approach for building the initial base of literature. Was performed by searching for relevant articles touching the central theme of innovation, the public sector, the Norwegian public sector, innovative organization, employee-driven innovation (EDI) in the databases. The primary database used for the research is Government.no¹⁰. Other databases, such as ORIA and Google, provided research findings.

5.2.4 Keywords & topics

Keywords are innovation, the public sector, the Norwegian public sector, organizations, EDI. The topics covered in the research are sociology, management, political science, organizational management, innovation, EDI, governance networks, and public administration.

5.2.5 Search criteria and data collection

Specific parameters in search criteria and articles' selection in the databases such as ORIA are set because of large hits on the keywords. For an article to be found relevant, it was necessary to set specific criteria or sort by function in the database. The criteria were set as per the year of publication, language, relevant keywords, as mentioned under subsection 4.2.4. The below table gives an overview of some hits in ORIA.

¹⁰ <https://www.regjeringen.no/en/id4/>

Table 1: Overview of some hits in the database: ORIA

Search with *	# Hits	Search with “	# Hits
Public sector innovation articles	4917	No results	
Norwegian public sector innovation	26 188	Norwegian Public sector	257
Employee driven innovation	536 421	Employee driven innovation	419

5.2.6 Contemporary literature and the choice of documents (data)

The public sector is subject to change over time due to multiple factors, such as changing government structure, demographic changes, and globalization. Contemporary literature and parliamentary reports (white paper) are focused, as this will reflect the most accurate situation and depiction of the challenges and the opportunities the public sector is facing. Therefore parliamentary reports (white papers) published before 2012 are not included.

Contemporary white papers related to the topic- innovation in the public sector are selected. There is no defined pattern for the choice, except for the topic-theme. The documents- white papers are gone through in-depth. The important contents are marked and, and few notes are sketched. However, one white paper related to health is selected as welfare technology is vital in the public sector as this will sketch out common or uncommon factors.

Together with the OECD Reviews of Innovation policy Norway, 2017, the four documents selected are the policy documents that address innovation in the Norwegian public sector. The documents chosen were in the framework of health and innovation. The purpose is to cover the significant areas of interest as per the demographic and other challenges mentioned in sections 1 and 2. One of the policy documents to be reviewed was not available in English. There will be traces of Norwegian language in the thesis to understand the documents better and analyze its context.

In addition to the articles found through the databases and other references, EU reports were also included, such as OECD Reviews of Innovation Policy Norway 2017, Measuring Public Innovation in the Nordic Countries (MEPIN). However, OECD Reviews on innovation policy is not included in the analysis, as it is a part of a series of OECD country reviews of innovation (OECD, 2017). Besides, its reference is impeccable in the policy documents.

5.2.7 Analyzing data

By collecting data from search method and search criteria, analyzing data is utilized by combining grounded theory in thematic analysis. *“Grounded theory is an approach whereby the researcher refers back to the literature relevant to the research topic and qualitative observations throughout data collection and analysis.”* (Heydarian, 2016).

The combination of systematic reading, keyword snowballing, and paragraph comparison limits biases, such that in-depth analysis is introduced the adequately thorough discussion by referencing articles with various backgrounds, respectively.

For analyzing literature-data, keywords are the primary choice. The researcher of the thesis used keywords to search the databases and the internet (search engines). To select which article is relevant to the thesis was done by reading the articles' abstract found through the literature search, followed by references of a selected article(s) and snowballing. If the article met the search criteria, the article went a more thorough analysis. The relevant literature did not show up in the searches; the researcher reviewed the lists of references in the relevant articles that had come up in the earlier searches with other keywords—a backward snowballing (Jalali and Wohlin, 2012). Snowballing is the subsequent step by reviewing the list of references in the chosen articles as relevant. Though snowballing is commonly used for sampling referrals. Note, this method is from a qualitative

perspective about “validity,” defined as “the correctness or credibility of a description, conclusion, explanation, interpretation, or other sorts of account.”¹¹

A systematic approach to reading performs the text analysis of the parliamentary reports (white paper)—the researcher of the thesis read in-depth all the policy documents connected to the thesis. Common and uncommon grounds, exclusion, and inclusion of data essential for the research are highlighted and noted in the print-outs. Also, with systematic approach gives articles a common ground for patterns to emerge independently, such that comparison provides a consistent structure for review and discussion.

The data analysis provides several advantages. First, it compares the interpretation of innovation processes within government entities. The second advantage is whether governments promote innovation or sustain innovation with the 4P model by Tidd & Bessant (2018). This method allows the researcher to compare and contrast innovation processes currently practiced in the public sector and see patterns between data from articles (Yin, 2009).

Upon any potential findings from the research, the researcher validated the findings by comparing the data and making sure the finding was in line with the research topic. If the topic or finding did not meet the search criteria, the finding is removed and not mentioned.

Once the data or findings were compiled, the researcher compared existing research for a pattern. Supported by Yin (2009), this method strengthens the validity of the analysis and data. The researcher also had long experience in the public sector, providing a solid foundation for this thesis.

¹¹ Maxwell JA. *Qualitative Research Design: An Interactive Approach*. Thousand Oaks, United States: SAGE Publications; 1996: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6104950/>

After summarizing findings or data, the researcher used quotes directly related or indirectly related to the research topic for illustrating the popularity of the research question.

5.2.8 *Limitations*

The public sector is large and complex, with many policy documents. The documents' choice does not cover all the government sectors or the area of responsibility or innovation in the public sector. The choice of documents can give gaps when discussed. As three documents focus on innovation, ICTs, and digitalization, the fourth entirely focuses on health factors. Despite the best-efforts, specific data could overlap as the policy documents have many similarities and some spillovers. Other than the policy documents, it is sometimes difficult to extinguish the difference between innovation categories. There is a blurring of the transition between the two extremes, i.e., the incremental or radical innovation. It can be challenging to determine is the one or the other of the four categories of the model. There is a slight tendency to overlap (Tidd & Bessant, 2018).

Also, my role as a researcher in this thesis can have flaws. Some data, however, can be skipped or misinterpreted while retrieving from the policy documents and other reference material.

5.2.9 *Strength and weaknesses*

These documents' first strengths are that they are prepared by the ministries or committees constituted by the ministries. As a result, the accuracy and authenticity of the documents are unquestionable. The second strength is that as the government is involved in preparing the documents, the political leaders and elective representatives' direction could easily be gauged. The third strength is that documents acknowledge the changing requirements of the present times. Therefore, it could be argued that the reports have been prepared on realistic grounds rather than

ideological assumptions. However, the choice of interviews was, therefore, eradicated. Thus, it is not likely that interviews would have added much more to the analysis.

With strengths, there are few weaknesses as well. One of the primary sources of weakness in the literature search is the relative lack of focus on innovation in the public sector. With the choice of qualitative approach, there can arise an overlap of analysis and interpretation to conclude. The other weakness is the involvement of the non-governmental sources or third parties in preparing the reports. Such reports may have an element of predisposition towards the interest of such groups.

5.2.10 Research questions adopted for the study are the following:

Q1: How do documents define innovation and reflect the innovation journey from idea to value creation?

Q2: What do documents say about organizational attributes and the need to develop organizations to become innovative?

Q3: What do documents say about the role of employees, and how this shall be stimulated?

5.3 Data – overview of the documents chosen for the thesis

The first document is Meld. St. 34 (2012–2013) Report to the Storting (White paper) Summary, Public Health Report Good health – a common responsibility. The report discusses the health challenges of the 21st century and its implications for Norwegian society. It focuses on knowledge-based public health work. The national system of follow up of public health policy is essential and administrative and economic consequences of the proposed changes.

The second document is **St. Meld. 27 (2015-2016) Digital agenda for Norway emphasizes making a simpler daily life and increasing** productivity. The white paper has two

main objectives, i.e., a user-centric and efficient public administration and value creation and inclusion. In light of this, the government ICT policy believes Digitization is essential and is a cross-sectoral issue. The five key priorities are a user-centric focus, ICT as a significant input factor for innovation and productivity, strengthening digital competence and inclusion, effective digitization of the public sector and sound data protection, and information security.

The third document is **Report to Storting Meld.St.30 (2019-2020) An innovative Public sector** (This is the English translation as the original title is “*En innovative offentlig sektor*”). This report discusses that Norway needs an innovative public sector and the Government's aim to achieve its goal – an efficient public sector.

The fourth document is **One digital public sector: Digital strategy for the public sector 2019–2025**. The report discusses different aspects of digitalization and the steps required to achieve the objectives of digital transitions. Matters such as seamless services, value creation, data sharing, digitalization friendly regulations, and ecosystem for digital collaboration and cybersecurity are also discussed in the report.

5.4 Summary

The chapter of the methodology described the research strategies to conduct the research effectively. The design chosen for the study is a textual analysis, and the primary choice for analyzing data is by keywords. The choice of thematic study is the choice because it will give a more constructive review from different angles and perspectives. Criteria relevant for the search provides the narrowing of the search to the relevant theme or topic. Norwegian government official site is the primary source to extract the document. At the same time, different databases, such as ORIA and Google, are also used. An introduction to the policy documents or the white paper gives an overview. A review of the policy document is in the next section.

6 A REVIEW of the New Innovation Policy for the Norwegian Public sector

This section starts with a two-line certificate written by Bjørnson to Heltberg in 1920, inspiring and beautifully written.

“Hvær tolkning, han gav, blev som syn, vi havde haft:

Det øget vor unge peronlig kraft”¹²

Loosely translated: Every interpretation he gave became like a vision we had: that increased our young personal power.

In this section, the new Norwegian policy documents chosen for the study will be analyzed and reviewed. The analysis will be of interest because it will illuminate the ongoing developments and challenges perceived by the contemporary actors, followed by the concluding subsection of the research question. This may entail their assessment of the current capacity for the contemporary actors and the general mass.

Public Health Report Good health – a common responsibility Meld.St.34 (2012-2013)

The report Medt.St.34 prepared by the Ministry of Health and Care Services begins with a general discussion of Norway's existing care structure. The report suggests that the Norwegian population has some of the highest life expectancies in the world. However, the changing dynamics and lifestyle require additional measures to counter the twenty-first century's challenges. An important step is the public health-act based on five principles (*Public Health Report Good health – a common responsibility*, 2012). The first principle is equity, meaning health facilities to different social classes should be provided without prejudice. The second principle is health in all policies. The third principle is sustainable development, which requires that the resource utilization must

¹² https://no.wikipedia.org/wiki/Bj%C3%B8rnstjerne_Bj%C3%B8rnson

be effective and efficient. The precautionary principle requires that standards be in place for public health matters.

The principle of participation emphasizes cooperation with local authorities in the decision-making process that impact people in their respective jurisdiction. The second chapter discusses the health challenges faced by the Norwegian population. The challenges are in line with global health trends (*Public Health Report Good health – a common responsibility*, 2012). This includes infectious diseases, as Norway is not immune to viruses like any other country. Smoking, alcohol consumption, physical inactivity, and unfavorable diet are some of the leading causes of death in different countries. Health policies must address these issues with efficiency and rapidly.

The third chapter discusses the essence of government health policy. According to the report, to create a more health-promoting policy, the government will strive to create an equitable society with planning and concrete efforts. A white paper will be submitted to the parliament, describing the people's living conditions, including the people in special needs. The aim is that the white paper will increase awareness and knowledge regarding health, social support, and social capital. Public health is given priorities in all the policies and planning that covers the environment. Steps are to promote outdoor physical activities, and initiatives were taken to create such an atmosphere—more green areas created to provide a more sustainable environment for the general population. The United Nations, World Health Organization, UNECE, and European Union took such health precautions concerning water, health, and food information program (*Public Health Report Good health – a common responsibility*, 2012). There are several other initiatives discussed in the report; however, the above steps define the government's direction to address the health challenges faced by the Norwegian population broadly. The next chapter discusses the initiative of health throughout the life course. The government intends to create policies that may contribute

to the various life stages of the individual. In this regard, there are several policy initiatives that the government intends to take regarding a better learning environment for children from the kindergarten level. The child welfare act will be modified to ensure welfare facilities for the children (*Public Health Report Good health – a common responsibility*, 2012). An increase in the health clinics' quantity and quality and a particular focus on maintaining the school health facilities. Efforts are proposed to harmonize the legislation so that legislative obstacles in the provision of the services could be removed. Efforts would be made to ensure that the older workers remain part of the workforce for longer and that their contribution could be extended further.

The fourth chapter discusses the initiatives with respect to the increased emphasis on prevention. According to the report, the health and care services at the municipal level would be further integrated with the regional and national services. The national screening programs would be made more effective, and efforts would be undertaken as per the national health policy requirement. The next chapter focuses on knowledge-based health works. It defines the government's initiatives to utilize more knowledge concerning Norway's health conditions (*Public Health Report Good health – a common responsibility*, 2012). The inclusion of health policies and their impact on people's lives will be monitored with technology. With this knowledge, better policy initiatives will be designed. The government to achieve these objectives would create collaboration between different units and departments. A review of the regulation will also ensure that access to timely information is made possible, benefiting health service seekers.

Welfare technology is also a relevant term that should be further defined in the paper. Welfare technology is technical assistance contributing to enhanced safety, social commitment, mobility, and cultural activity. The technology enhances the individual capability to cope with daily tasks, in spite of sickness and psychical or physical disabilities (NOU, 2011:11: 99).

According to Høyrup (2010), the learning term can be generally defined as a process where the individual capacity (knowledge, abilities, competence) through actions, experience, and social interaction is enhanced.

On the job, training can be informal and formal, and learning could occur spontaneous when individuals interact socially. More specific examples of learning could be, through observing others, sharing knowledge and experience, from failures, and through individual and collective reflections. «Regjeringen vil føre en politikk som bidrar til økt bærekraft, som bygger på en samfunnsmodell med trygghet og tillit og som styrker innovasjonsarbeidet både i næringslivet og i offentlig sektor. Vi må investere i fremtida nå. Vi må skape for å dele. Innovasjon handler om å gjøre noe nytt for å skape fremtidas verdier.» (St.meld. nr. 7 (2008-2009): 5). To condense the quote, the aim of the government is to prepare the conditions for a creative and sustainable Norway.

To achieve this, the government promotes a creative society, creative people, and creative business. According to the parliament report (2008- 2009), statistics predict a double number of retirees pr—active workers during the next 50 years. To utilize resources better through innovation—a particular area for increased healthcare innovation is one suggestive way.

Digital Agenda for Norway in Brief (Meld. St. 27 (2015-2016) Report to Storting

The document was developed by the Ministry of Local Government and Modernization and covers the ICT strategy for 2019 to 2025. The document starts focusing on the priorities in the ICT policies that include adopting a user-centric approach, the role of ICT in innovation, creativity, productivity, the increased digital competence, the digitization of the public sector, and digital data security. The above could be termed as an integral priority; the government is working in its ICT policy. The above objective will change the dynamics of a number of participants, which generally

include the public sector, the private sector, and the general population (*Digital Agenda for Norway in Brief*, 2020). The creation of seamless services will lead to cost and time saving for the population and increase the organization's and departments' productivity. The ICT policy will, therefore, achieve multifold objectives.

The report discusses the role of ICT in value creation. According to the report, the government intends to create employment opportunities by exploiting the potential that the ICT services provide. The government believes that internet literacy is relatively high in Norway; however, there are still a number of people who cannot reap the benefits of the ICT technologies (*Digital Agenda for Norway in Brief*, 2020). The report proposes to include education regarding technologies in the curriculum to get familiar with the Internet and communication technologies. The contribution in the field is maximized from a very young age. The white paper discusses that the technological inclusion of the general public is ensured. According to *Digital Agenda for Norway in Brief*, 2020, this could be made possible by providing information on digital services through different mechanisms, including guidance services offered by public libraries, municipal services offices, or municipal specialist units. Other departments must also be taken on board to ensure digital inclusion by devising strategic initiatives.

The report highlights the need for restructuring from a resource economy to a knowledge economy, for example, the role of ICT. It was further pointed out that the vast revenue generated by natural resources has an impact on the country's industrial structures, which may have weakened incentives for education, research, entrepreneurship, and innovation. It was also pointed out that a poorly diversified economy is particularly vulnerable to fluctuations in commodity prices, for example—the drop in oil prices.

It also underlines the demographic challenges and the aging population in Norway. In 2060, four people aged over 67 for every ten people of working age, compared with 2.2 people in 2012(Meld.St.27 (2015-2016), Digital Agenda for Norway). The above illustrates almost a doubling of the old-age dependency ratio per working-age person (Meld.St.27 (2015-2016), Digital Agenda for Norway). The core emphasis of the Productivity Commission's report and white paper on the Norwegian economy's long-term perspectives in improving ICT and enhancing automation of communications and case processing procedures on a multidisciplinary platform, i.e., between the service provider, citizens, and industry.

The report emphasizes that a national electronic communication plan needs the time and must be initiated as it will open a new door of opportunities to the Norwegian population. To achieve this, the government has devised plans in specific goals and targets have been set. The first target is that 90% of the population should have access to high-speed internet through commercial rollouts. The coverage of mobile devices should be expanded to every area where people live and work. The increased communication will require developed infrastructure, and electronic communication authority will overlook and monitor the infrastructure requirements through data centers. There must be uniformity in the laws of laying broadband cables and other necessary devices (*Digital Agenda for Norway in Brief, 2020*). The government will work to ensure that every single user has access to the internet without any restrictions. This is important because the government does not intend to decide which content should be viewed by the population and which should be restricted. The government intends to let the users choose and access the content that they wish to access. The report proposes that the internet and other mobile connectivity will remain vulnerable without effective communication networks.

For this reason, the safety and security of these networks are also essential. To further advance safety measures, the government will ensure that electronic communication networks will be safeguarded from extreme weather conditions. Serious steps would be taken to ensure that all physical and logical attacks are avoided, and the networks are safeguarded against these attacks. The white paper proposes to make the communication networks reliable and robust enough so that these could also be used in emergencies (*Digital Agenda for Norway in Brief, 2020*). The electronic communication authority of Norway has been assigned the task of procuring the critical devices essential to network communications. The existence of at least three mobile networks. The competence between these services ensures that the carriers take more technological initiatives, and the general public would also receive more competitive prices for their network usage. The users of the network would be enabled fast access to electronic services. The white papers emphasize making the venture beneficial for both the parties where the investing in communication technologies may be profitable for the service providers and users of the networks are easy for the consumers (*Digital Agenda for Norway in Brief, 2020*). The government specializes in the health sector, and enhanced ICT technologies will support this area. It is believed that such initiatives will provide greater strength to the health sector. The white paper discusses the government's intention to work in partnership with the private sector and start initiatives based on co-financing principles. A national strategy will also be developed that will be specifically focused on cloud services. A quick overview: challenges and possible measures as emphasized in the white paper are briefly summarized in the table below:

Challenges	Proposed measures
Changes in demographics	Need for extensive adaptation. Become more productive. Enhance automation of communications and case processing procedures within and between agencies and citizens and industry using ICT.
Enhance automation and communication by using ICT	Governmental plan for ICT Creating user-friendly and seamless service, common login solutions (for example, Altinn, HelseNorge, A-ordning)
Climate change	Developing and using new technology (smart use of digital technology) can efficiently exploit resources and consume energy.
Digital competence and inclusion	From primary education through all life phases, digital competence shall be improved to ensure digital solutions' inclusion and confidence.
The growth of digital infrastructure and new behavior and new expectations	The government plan for national electronic communications
ICT – Online vulnerability	Joint Effort with the EU to promote a single digital market in Europe

An innovative public sector (*En innovativ offentlig sektor – kultur, ledelse og kompetanse*)

Meld. St. 30 (2019 – 2020)

The document focuses on promoting and enhancing innovation in the public sector to meet the challenges in the coming years, especially demographic, climate change, and less room for

economics maneuver. The first six chapters throw light on innovation in the public sector, framework, and funding tools—the focus on innovative culture, possibilities of digitization using technology. Cooperation between the private, public sector, and the research environments on national and Nordic regions is in the remaining chapters.

The report defines innovation in the public sector as “something new that creates value for citizens and the society.” This aligns with the OECD and definitions of innovation (see chapter 2). The report also reveals that Norway is an excellent country to live in and that the public sector enjoys a high level of trust. In reflection of the above, the Directorate for digitalization together with KS imply new, useful and also exploit as of the definition shelf of innovation and reflecting types of innovation through their barometer (Meld. St. 30 (2019 – 2020) p.14)

Triple Diamond Model

The triple diamond model is used for product creation and design. The model is based on six pillars, where each diamond incorporates two pillars, giving the model the shape of a diamond. The first pillar is termed “opportunity.” This is the first phase, and at this stage, an organization identifies the possible business opportunities that it expects to achieve. The next pillar in the first diamond is the strategy phase. This phase could be termed the most extensive one, where the initial planning for product designing is carried out (Charak, 2020). This step may include design thinking, data evaluation, digital transformation, and other essential tasks. The second diamond also has two pillars. The first pillar is termed “Discover,” while the second pillar is termed as “Define.” The first pillar is supported by extensive research regarding the product, exploring the unexplored aspects of design and product. It also incorporates an in-depth understanding of the products' future uses and specific ways; the idea could be used and implemented (Souto, 2015). At the “define” stage, the previous stages' insights are formulated to conceive the concept's raw idea.

The third and final diamond contains the pillars “Design” and “Deliver.” At the stage of “design,” the basic prototypes of the concept are built, and the ideas are validated to be put into a concrete form. At the final stage of “deliver,” the product is built and provided to the clients. At the same time, it is further refined as per the feedback, and possible flaws are removed at the delivery stage.

The next objective is that the government aims to reduce state detail management of the municipal sector and decentralize more power and authority to local communities and their elected representatives. Create better tools for innovation in the public sector in a more comprehensive way. Parallel to this, the government also aims to facilitate that the private sector and municipalities work systematically to develop an innovative culture. Building knowledge competence in ICT – digitization and knowledge transfer is equally crucial for sustainability and focuses here. The government facilitates the agencies (municipalities, county authorities, and central government agencies) with a common national digital collaboration ecosystem.

Further, the government is prioritizing competence building through facilitating digital learning. The policy selects to define competency since it is a comprehensive term and adopts the definition from Kompetansebehovsutvalget: as a combination of knowledge, understanding, skills, characteristics, attitudes, and values (Meld. St. 30 (2019-2020) p. 54). The White Paper goes further by emphasizing that the need for competency in the public sector is covered by mobilizing, renewing, and further developing the knowledge and competency through education, training, work experience, ongoing competency development through the workplace, or continuing further education programs for adults. For example, the program for enhancing the child welfare workers' competencies in the context to create efficiency for both the workers and the child welfare entity (Meld. St. 30 (2019-2020) p.58. This program is between Kristiansand municipality and the University of Agder. Thus, the key factor for modernization, efficiency building, and innovation

in the public sector is good quality and sound interactions between research and education. At present, there is an extensive collaboration between universities and other public and private actors on research, innovation, and education. The Government is taking prominent steps to enhance this cooperation between the employees and hiring competent new employees that the organization needs in the light of the present and future needs. Both are a part of strategic competence development and management in public enterprises.

There is a necessity to adopt a working method concept to promote innovation. In light of this necessity, competency is required to operationalize these methods as per the requirements over time. Design is one of the tools that bring forth the spark to the mindset and is summed up as *Hva og for hvem, før hvordan* (what and for who, before and now). Service design is one of such designs that can strengthen value creation through service innovation ((Meld. St. 30 (2019-20200) p.55). In collaboration with DOGA, the Norwegian Digitization Directorate has developed the stimulation scheme for innovation and service design (StimuLab); to stimulate user-oriented innovation through testing and experimentation. The keys to promoting innovation are agile methods, foresight, nudging (*dulting*), and digital competence.

The White paper aims to improve the platform for cooperation between the public, private, and business worlds.

The challenges and proposed measures in the white paper are briefly summarized in the table below:

Challenges	Proposed Measures
Changes in the demographics	Use of available resources more effectively. Innovate better technologies to meet the challenge through apps, digital courses, programs, etc.
Less economic room for maneuver, Unexpected events	Innovation in new technologies, among other things, can contribute to more efficient use of budget/economy, also, in case of unexpected events such as during the COVID-19 epidemic and after-effects of the unexpected event. Innovation can occur through the crisis in a good way, for example, by having capacity, culture, and training in innovation and rapid change, i.e., meeting the challenges a period of crisis.
Climate change	The government needs a more innovative step to establish research programs on national and international platforms.
Sustainability goals	Cooperation, mutual partnerships, and the relationships between the goal and sectors. A part of government policy and follow-up by the government.
Open collaboration on different governmental sectors.	More emphasis on joint digital solutions on local government, because all municipalities have the same statutory tasks, particularly useful to cooperate across municipal boundaries.

<p>Digitalization</p> <p>Increased internet, broadband mobile phone users</p>	<p>The need for Government aid to enhance digital and new technology programs and projects. Encouraging the use of artificial intelligence (AI) in technological areas.</p>
<p>Operational focus</p> <p>Risk aversions and incentives</p>	<p>Decentralizing. Municipalities and county municipalities are independent legal subjects with their own elected leadership.</p> <p>Enhance the municipality's innovative capacity, and decode fear to innovate through better budgeting, more freedom for trial and error.</p>
<p>Challenges in an innovative framework</p>	<p>The governments emphasis to establish a better innovative culture through partnership and research programs. Promoting through governmental digital strategies for public sectors such as Meld. St.27 (2015-2016) Digital Agenda for Norway. This official document is also reviewed in this paper.</p>

The Policy document also describes Risk aversions and incentives as barriers of innovation. The citizens didactic understanding of the public sector because it manages the community's resources and citizens' rights. In Norway, public confidence is higher to the public enterprises, thus making it more vulnerable. In the worst case scenario, errors from the public sector can result in negative consequences. Risks are not friendly partners of the public enterprises, and they often are reluctant to take risks. Many municipalities highlight that operational focus is the biggest barrier to innovation (Menon, 2018. *Nåtidsanalyse av innovasjonsaktivitet i kommunesektoren. Publikasjon 88/2018*). This is related to the fact that the public enterprises have political responsibility and are followed up by the control mechanisms such as the state supervision

of the municipal sector or the Auditor General's office. The Public sectors are also not outcompeted if they fail to renew themselves, such as private enterprises. However, at the same time, the risk of not making necessary changes can be greater in the long run, for example, by becoming outdated and losing the population's trust. Thus, innovation in the public sector is one of the government's main strategies for solving the challenges and seizing the opportunities that society will have in the years ahead (Meld. St. 30. 2019-2020).

One digital public sector: Digital strategy for the public sector 2019–2025

The document was developed by the Ministry of Local Government and Modernization and covers the digital strategy for 2019 to 2025. The document starts focusing on the user-centric approach, where the interaction of the public sector with the general population should be seamless. Norway's current situation concerning seamless services is still at its evolutionary stages (Astrup & Helgesen, 2019). The citizens generally have to obtain information from different websites concerning their different needs. Around 58% of the population and 64% of the business users are satisfied with the digital services; however, the remaining population prefers an improvement. One example of the seamless digital service is DigiHelse, where users can contact their municipal health services and would be able to maintain their previous contact records with the health services. The program is a collaborative initiative between the local and national government. Concerning further processing in providing seamless services, the document suggests collaboration between different governments' levels should be built on ongoing initiatives rather than starting new initiatives. Equal participation of all citizens must be ensured. The progress should be monitored by the new directorate of the digitalization (Astrup & Helgesen, 2019). The government, in collaboration and consultation with the Norwegian Association of Local and

Regional Authorities, would first devise frameworks and standards for providing the seamless services and would be provided on a priority basis to parents with seriously ill children, parents expecting children, job hunting, new in Norway, Death, and Inheritance and for starting a business in the country.

The document then proceeds towards the regulations of the digitalization. The document describes that at present, the majority of the regulations are technology-neutral and do not create a direct obstacle for the introduction of newer methods and technological innovations. The government needs to focus on digitalization-friendly regulations. These are important as without an elaborative framework of regulations; it might become to introduce new technologies. Regulatory barriers of any sort can also be addressed via the introduction of digitalization-friendly regulations (Astrup & Helgesen, 2019). In order to progress in this area, the government will review the regulation in implementation to remove any existing digitalization obstacles to ensure that seamless services are provided without any interruption. The private and public sectors would be contacted to provide their input for improvement in regulations. A guideline for digitalization-friendly regulations would be developed in easy language.

The document then focuses on a common ecosystem for collaboration. According to the document, the local, regional, and central governments should all be on board and collaborate to provide digital services. This collaboration's current state is that different public sector entities are connected through common IT architectures. The 'Norwegian Association of Local and Regional Authorities' has been assigned to manage the shared services and IT architectures. At the same time, however, there is a uniform approach for a common ecosystem for collaboration. No coordinated plans are implementation that may encourage incentives for the use of digital technologies. Another major concern is the security of digital information. eID and eSignatur

protocols currently implement safe, secure logging to digital services (Astrup & Helgesen, 2019). The government plans to introduce basic data registers and common data sources for different public sector departments, common architectures, frameworks, multiple users' standard access mechanisms, and collaborative payments models. The responsibility of coordination between different departments would be assigned to the Ministry of Local Government and Modernization. It will also periodically monitor the efficiency of different agreements. The ministry would also be responsible for establishing the CERT function to develop efficient ecosystem procurement.

The majority of the public sector enterprises and entities get their procurement done through the private sectors. Therefore, a greater collaboration could be witnessed in this area, and for this reason, the government also intends to expand its cooperation with the private sector to promote innovative procurement. The aim is to streamline the innovation process in procurement and produce new job opportunities. One example of collaboration between the private and the public sector is that of the Consent-based loan applications. In this digital service, obtaining a loan process has been made extremely easy (Astrup & Helgesen, 2019). The loan applicants are no longer required to submit their tax returns to the financial institutions; rather, they would only have to provide their consent. After which the tax authorities would allow the financial institutions to access the information directly. To further facilitate it, the government intends to build common principles and frameworks through cooperation with the private sector to promote digitization. The government also intends to study the United States and Europe models in establishing a program of increased collaboration with the private sector and startup companies.

The document then focuses on the Cybersecurity as it is the most crucial component of establishing the digital culture. Without effective cybersecurity measures, data protection cannot be maintained, and digitalization efforts will get badly disrupted. In the National Cyber Security

Strategy for Norway (One Digital Public Sector, 2019-2015), different measures have been adopted for Data security. Measure 5 contains different vital areas, such as creating guidelines, frameworks, collaborative efforts, financial management, training, planning and execution, and other important measures (Astrup & Helgesen, 2019). The government intends to create a distinct administrative level that is wholly responsible for maintaining the security issues. Three different departments, such as the Norwegian Data Protection Authority, Norwegian Association of Local and Regional Authorities, and The New Directorate of Digitalization, would have the central role in maintaining and creating collaboration in cybersecurity and public administration.

An overview of the main challenges and possible measures, emphasized in the white paper, are briefly summarized in the table below:

Challenges	Proposed measures
<p>Digital transformation</p> <p>Lack of understanding of public administration and regulations.</p> <p>Increased expectations from users</p>	<p>Smarter ways of performing tasks throughout the public sector and value creation in the business sector. A user-centric approach.</p> <p>National digital collaborates Municipalities, county authorities, and the central government agencies - A common “ecosystem.” (common functionality and common IT architectures)</p> <p>Seamless service. A resource for the citizens to save time, increase availability and are environmentally friendly (chat function can be a useful option (Kantar TNS survey, 2019)</p>
<p>The need for common ICT systems national and international platform</p>	<p>Comprehensive digitalization programs and better cooperation on national and international platforms (private and public sectors, local and central government)</p>
<p>Health Cares</p>	<p>Use of ICT in seamless services</p>
<p>Increased data sharing</p>	<p>“Order in one’s own house,” better guidelines and programs by the government agencies. For example, The Ministry of Local Government and Modernization.</p>

6.1 Research Question

Q1: How do documents define innovation and reflect the innovation journey from idea to value creation?

Q2: What do documents say about organizational attributes and the need to develop organizations to become innovative?

Q3: What is the role of employees, and how this shall be stimulated?

The term innovation is approached differently in all documents. Some policy documents have an explicit section under the title innovation. In contrast, others approach innovation in value creation, increase efficiency, quality, and improvement in delivery mechanism, increase satisfaction among employees, simplify everyday life for the patients, the general public, and more. Innovation in the policy documents is also approached through various actors, such as the government, county or municipality, and their mindset to include innovation processes. The government has high ambitions to renew, simplify, and improve the public sector, making every day simpler by using ICT (Meld. St. 27., (2015-2016). p11). This motto runs through all the policy documents and is the core for value creation and, at the same time, reflects the use of process and incremental innovations as a common denominator. These aspects interconnect through the approach of the research questions. To follow.

6.1.1 Q.1. How do documents define innovation and reflect the innovation journey from idea to value creation?

The document Public Health Report Good health

Value creation through procurement, ICT, and competence

The white paper does not explicitly or underline innovation and value creation through ICT or digitization but covers the circle of health as the most value for creation. It lays enormous emphasis on good health as the main ingredient for value, as stated in the policy, “Good health is value in

itself and increases individual self-expression opportunities. Good health is a resource and prerequisite for other objectives, such as productive working life, efficient learning, and also the possibility for volunteer work. High levels of ill-health and low levels of functional ability place strains on and result in costs for both the individual and society in general in the form of health care services, sickness and absence, and social security". (Meld. St. 34 (2012-2013). p 19)

Thus, the white paper's innovation approach is more strategic and long-term and needs continuous working and support from existing and future governments.

The document proposes the drawing of long-term policies and a strategic vision through which healthcare is provided to the country's citizens with sustainability. The most profound implication of the approach is that it emphasizes sustainability for the success factor (a simpler everyday life). The white paper proposes that public health work has a higher chance of success based on a scientific foundation; the government aims to make public health work more evidence-based, impossible without being innovative in both policy and practice. A stronger professional foundation for public health work will contribute to improved outcomes and more efficient use of resources" (Meld. St. 34., (2012-2013) p. 53). One can consider this to be a process and incremental innovation (see section 4). The policy lays responsibility to the municipality sector to promote good health and the norms that tag along with regulations and finance. However, the framework for long term planning is more of a national follow-up program (governmental).

Knowledge development and competency building, followed by measures related to the ICTs, are more inclined to the significance of ICT for economic value creation in terms of increased social benefits aided by research and education and technological infrastructure. This may, in turn, enhance the management of data (for example, operation and maintenance of public buildings (p. 39). Also, to add on the government's aim to make public health work more evidence-

based through research and competency building. The objective here is to better overview health determinants (Meld. St. 34., (2012-2013) p. 53). However, the official document is a sectorial effort to bring innovation in one particular segment of the public sector, the health services. Thus, common responsibility proposes to focus on healthcare services as an essential step towards innovation.

Digital Agenda for Norway in Brief (Meld. St. 27 (2015-2016) Report to Storting

A significant part of the policy involves Procurement and ICT. The policy emphasizes ICT policies that must be based on the real challenges within the business world and the public sector regarding productivity, conversion, and streamlining. As stated below:

“Formålet med denne meldingen er å presentere regjeringens overordnede politikk for hvordan vi i Norge kan utnytte IKT til samfunnets beste. IKT-politikken må ta utgangspunkt i de store og reelle utfordringene næringsliv og offentlig sektor står overfor når det gjelder produktivitet, omstilling og effektivisering. Regjeringens IKT-politikk har i lys av dette to hovedmålsettinger: 1. En brukerrettet og effektiv offentlig forvaltning. 2. Verdiskaping og deltakelse for alle. (Meld. St. 27., (2015-2016) p.11)”.

Considering the above, the government has two main objectives: First, a more user-oriented and more effective public management and second, value creation and participation for all.

Profitable ICT acquisition contributes to innovation and user-oriented service (Meld. St. 27., (2015-2016) p.88).

The productivity Commission emphasizes in its other rapport NOU 2016:13

«Innkjøpsprosedyrer som innebærer tettere samhandling med leverandører (for eksempel innovasjonspartnerskap) kan bidra til større innovasjonsgrad i offentlige anskaffelser, men stiller krav til innkjøpsfaglig kompetanse.» (Meld. St. 27., (2015-2016) p.88)

To condense the quote, Procurement procedures that involve closer collaboration with suppliers (for example, innovation partnerships) can contribute to a greater degree of innovation in public procurement and emphasize the need for professional expertise in procurement.

One example is the innovative procurement in Stavanger municipality, the operation notices and alarms (Driftsmeldinger og Alarmer) (Meld. St. 27., (2015-2016) p.89), which consisted of a project that will gather all technical systems in a new operational center). This aligns with the innovative model of Tidd & Bessant and Amundsen. As illustrated in figure 6, the innovative procurement journey illustrates the four steps to evaluate the need, plan, organize, dialog with the market, and implement, as seen in the figure below.



Figure 5: Innovative procurement in Stavanger kommune, Kilde: Levrandørutviklingsprogrammet

This could relate to the upcoming need for user-centric focus, as seen in all the selected documents from 2012. The user-centric focus is related to all spectrum of life sectors from health to education and the ICT and the young and the old. In other words, making every day simpler and increase productivity.

Developing improvised services over the years have increased the user perspective in the public sector by an increase of 235 percent from 2010 to 2015 (SSB, 2015; Meld. St. 27., (2015-2016), p. 18). For instance, it started from platforms such as Altinn Des (2003) of digital forms,

after that DIFI, digital postbox. NAV, HelseNorge, E-resept, A-ordning. Since 2012, all these services have gradually been improved to meet the need for social and global challenges. This directs to the incremental and process innovation (see section 3). However, enhanced ICT and digitalization have not met the criteria that affect "all" actors in the sector. (Meld. St. 27., (2015-2016) p.69)

Another instance is the National ID card (Nasjonalt ID-Kort) project started in 2015 with the realization proposed in 2017. However, the goal is not yet matured (Meld. St. 27., (2015-2016)).

Thus, the policies core are the measures related to ICT, both in facilitating and direct innovation, stimulating the development of new ICT-solutions, and improvising them between public entities and across the sectors. There is a blend of technological infrastructure and developing services; this entails both process and product innovation and incremental degree.

En Innovativ offentlig sektor: Meld.St.30 2019-2020 (An innovative public sector)

The policy document starts with innovation in the public sector and the first three chapters explicitly talk about innovation. The policy defines innovation as , *«Innovasjon I offentlig sektor kan være en ny eller vesentlig endret tjeneste, produkt, prosess, organisering eller kommunikasjonsmåte. At innovasjonen er ny, betyr at den er ny for den aktuelle virksomheten den kan likevel være kjent for å iverksette i andre virksomheter»*. To condense the quote: innovation is new or significantly improved goods, services, processes, organizational forms or marketing models that are used to achieve value creation and/or societal benefits.

The government policy emphasizes public procurement as an important driver for innovation and public procurement as a tool for promoting innovation through procurement. The innovative procurement acquisitions, where the client is actively seeking a product or service not

available in the market, are about this policy. For example, it is the municipal enterprises such as the Bergen Vann KF. Bergen Vann KF was a project to develop new technology for cleaning tunnel pools for drinking water. The reason behind the project was the large financial expenses and the risk of removing the sludge. The new method will open up completely new possibilities. (Meld. St. 30 (2019-2020) p 74-75). Here a more product and disruptive innovation. Further, the program that carried financial profit, such as their national program for supplier development, when analyzed (fifteen innovative procurement) showed a profit or savings of a total of 429 MNOK and 390 newcomer jobs (Meld. St. 30 (2019-2020) p 74-75). This signifies procurement and ICT for economic value creation in terms of savings and creation of new jobs.

The policy emphasizes a more user-based focus and their active participation in the innovative journey. Also, the triple diamond (Den triple diamanten) model consists of three main phases: the primary diagnostic phase, the exploration and defining phase, and the development and delivery phase. Here the participation of different actors from different sectors, especially in the first phase, is emphasized. This will help save time, use of resources, and economy in a more useful way. Working together at an early stage will help procure real problems and challenges. The policy documents have three main aims: firstly, the politicians, and the public authorities' role to be more flexible, providing more room for maneuver and incentives to promote innovation. Secondly, the leaders must give room for mistakes and must erase the fear factor. Develop an open mind for promoting culture for innovation. Thirdly, the unification of different levels of the government and pursuing new forms for cooperation between them. Focuses on mobilizing society's collective resources in new ways through digitization ICT technologies and new working methods, ensuring right framework conditions, and supporting research innovation development.

Knowledge development and competency building are presented as tools for innovation and building knowledge centers in different subject areas, especially for the health sector. ICT and digitization and artificial intelligence can contribute to innovation in all sectors, central county, and municipal. For example, the Norwegian Battle Lab and experimentation (NOBLE), established in the Armed Forces, strengthen operational capability through concept development and experimentation in collaboration with NTNU, Trondheim. Another example in the Ålesund municipality, the *Smartbylab (future)*. A municipal sector investment to promote innovation and technology and is based on cooperation between the private sector, academic and social actors, or participants. The lab's goal is to develop and implement sustainability projects within education, health, infrastructure, mobility, energy, and supporting and accelerating new ones. This has been possible through the cooperation element with NTNU campus Ålesund and the Norwegian Competence Center, thereby having complete access to a research and development environment (Meld. St. 30 (2019-2020) p 65). The collaborative program between Kristiansand municipality and the University of Agder for enhancing child welfare workers' competencies is another example (Meld. St. 30 (2019-20200) p.58). Thus, the key factor for modernization, efficiency building, and innovation in the public sector are good quality and sound interactions between research and education. At present, there is an extensive collaboration between universities and other public and private actors on research, innovation, and education. The collaborative program between Kristiansand municipality and the University of Agder for enhancing child welfare workers' competencies is another example (Meld. St. 30 (2019-20200) p.58).

Other schemes such as StimuLab can strengthen the innovation capacity and competence in the public sector through service design, i.e., user-oriented innovation. Thus, the scheme (StimuLab), in the long run, will strengthen the innovation capacity by supporting innovative

projects, contributing to skills development and dissemination of experience across service-orientation design, and strengthen its value creation (Meld. St. 30 (2019-2020 p.55))

Renewal and further development of competencies are possible through education, training, work experience, ongoing competency development through the workplace, or continuing further education programs for adults. Interestingly, this aligns with the definition mentioned in section 3 and the NPM approach in the management context by the goal.

To meet the challenges of digitalization, which is growing rapidly and further affects technology such as smart telephones, users online 24/7, sensor technology, communications infrastructure- the internet as to speak. Further, the strategy describes that important prerequisites for enabling Norway to exploit AI are infrastructure in broadband and the 5G¹³. (Meld. St. 30 (2019-2020) p 65). The increase of users and the low-cost data storage and use, cloud reinforces the development.

Working methods will rely on the modernization of goods and services through innovation. For example, the doctor's and nurses' roles will need modifications or new ways to handle patients at home instead of the hospital. This aligns with process innovation, therefore new or changed working methods and processes within the public sector. (Meld. St. 30 (2019-2020) p 17)

Norway has a good innovative terminus a quo, but the need for better collaboration and government funds is required. The funds fund most of the innovation the actors already have. At the same time, a lot of pressure on the instruments available, for instance, when the funds are advertised, for example, through schemes such as StimuLab, FORKOMMUNE, and innovation partnership, there are far more good applications than there are funds. (Meld. St. 30 (2019-2020) p 17,18,36).

¹³ fifth generation mobile network

One digital public sector: Digital strategy for the public sector 2019–2025,

The white paper does not explicitly or underline innovation, but value creation by digitalizing public services through ITC. This strategy from the Norwegian Ministry of Local Government and Modernization (KRD) aligns with the Meld guidelines. St. 27 (2015-2016) to the Storting Digital Agenda for Norway. The strategy is cross-sectoral and applies at the customary level and offers guidelines for digitalization activities in the public sector and any sector-specific strategy (One Digital Public Sector, (2019-2025) p.7).

Value creation through procurement, ICT, and competence

This strategy overlays One Digital Public Sector (2019-2025), as mentioned in the former para. The procurement process is an essential driver for innovation, and that is presented in the form of examples (Box 1.10, p. 24). For example, the eBevis (eDocumentation), where tenders can be submitted without submitting the documentation of information, is because the public sector has the information already via tax certificates. This is an example simplifying the procurement process through digitalization (ICT) in platforms such as SkatteFUNN, a process innovation.

There is an emphasis that a user-centric focus and digitalization are a form of value creation by providing users with one platform to multiple working platforms from different agencies to meet or perform a task. The results from the survey performed by Kantar – The Digital Citizen (TNS, 2019), pointed out that people would like interaction with the public sector that is fast, efficient and frictionless, and seamless digital communication between government agencies. However, there were specific challenges that the report pointed out. For instance, the interest and competence of using digital services existed but are overpowered by the scarcity of understanding the regulations of the public administration (One Digital Public Sector, (2019-2025) p.14).

Seamless digital services are often developed on the existing ongoing projects or proposals and are essential for achieving seamless services. This is basically to have an overview of what

data is available and where and how the data can be shared. Under the National Data Directory, the directory services shall be further developed and used in the developing seamless service. (One Digital Public Sector, (2019-2025) p.18). “Seamless service is not necessarily a single service or process” (One Digital Public Sector, p.18). Here, the goal is to help end-users give information from different governmental sectors websites simultaneously, for example, through *virtual assistance*. Thus, some strategic measures aim directly at developing or diffusing already existing services. This can be a process innovation as it involves service offering to end-users and incremental as it goes along step-by-step improvising the existing platforms.

Knowledge development and competency building, followed by measures related to the ICTs, are primarily in regulations and framework for data sharing and the relationships between law and technology and business and management models. This relates to the need to enhance more knowledge to be more adaptive to data sharing in central and local governments' infrastructures (One Digital Public Sector, 2019-2025, p.22). One such project is the *Lungegårsdvannet* (City of Bergen's Data Lake). The project aims to establish a common database where users from different commercial sectors can share data in different subjects“An initiative to establish cooperation to enable the local government sector to build on and further develop the experiences gained from Bergen.” (One Digital Public Sector, (2019-2025) p.25) is emphasized. A product and process – incremental innovation.

On the other hand, it is difficult to predict what competencies are required in the coming years because of the constant global climate changes and demographics. The contemporary trend focuses on digital transformation, away from its processors, where there was a heavy focus on technology. “Future competencies needs are essentially based on knowing how the opportunities

that lie in technology can be exploited in the agencies.” (One Digital Public Sector, (2019-2025) p.49).

Machine learning (AI) has a part in the strategy. The Norwegian State Education Loan Fund is seen as a user of the AI and has a positive experience, for example, to select candidates for “residential verification,” i.e., verifying the residential address against that of their parents (One Digital Public Sector, (2019-2025) p.26). Further, the strategy describes that important prerequisites for enabling Norway to exploit AI are infrastructure in broadband and the 5G (fifth-generation mobile network). Also, in computing and data collection and structuring this collected data to make it available for machine learning and AI. The National Library is the first library globally, currently developing its own AI, Nancy (One Digital Public Sector, (2019-2025) p.27). A more radical approach to innovation.

However, a common ecosystem for national digital collaboration is essential as it standardizes access to multiple users, business models, and contracts, a more common data source. Along with the rose comes the thorns. There are identified challenges, such as the public sector having a strong need to reduce costs by realizing the benefits of digitalization, such as reusing existing solutions. In addition to this, there is a lack of coordination between the common functionalities and architectures, thus achieving fewer benefits, higher inefficiency, lack of defined achievements, showing more bureaucracy for agencies, and not cost-effective. (One Digital Public Sector, (2019-2025) p.33).

E-health platforms are also described as value for economic creation and the need for cooperation between the ventral and local government sectors. An example is a need for better access to patient information. The strategy points point that there is a long-term vision “one citizen-one record” (One Digital Public Sector, (2019-2025) p.44).

Stimulate innovation by avoiding competing in the private sector, contra the public sector shall exploit the private sector's innovative power in developing public digital solutions and services. However, the strategy also describes that the government will participate as an active owner in defining the needs to exercise the cooperation between partners (One Digital Public Sector, (2019-2025) p.47).

Thus, creating standards for innovation journeys could be formulated together to design a broad framework. The broader framework would serve as a blueprint, direction, or guideline used by different public sector organizations in their particular context with modifications as per their internal policies. The policy documents also propose an authority's existence and operations that monitor innovation progress. By adopting this approach, the policy documents suggest embarking on a long-term innovation implementation journey in Norway. The strategy design would provide a direction for the formulation of tactical and operational plans adopted and implemented at the ground levels. Therefore, the policy documents' approach favors the unification of the central government's efforts, regional and local governments, and the different ministries involved.

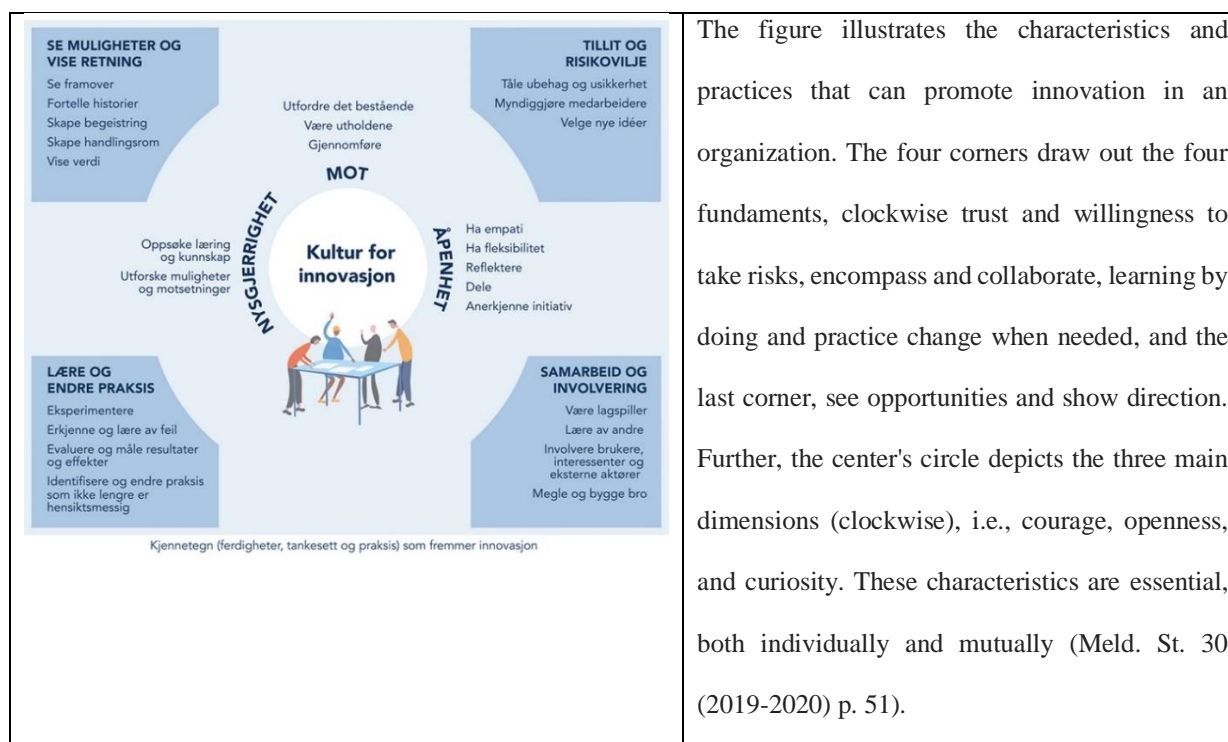
6.1.2 Q.2. What do documents say about organizational attributes and the need to develop organizations to become innovative?

Public Health Report Good health – a common responsibility does not explicitly focus on the pre-requisite for the innovative organization instead adopts a broader-based stance for public health policy matters. However, in some of the policy recommendations, the document focuses on regulatory, policy, and strategic initiatives where organizations could support both the executive and legislature to adopt and apply innovation in health care. As the document considers health services' specific area, the policy recommendations are also health services oriented. The organization should strive to adopt the best available technologies to provide better health care facilities to the people.

Digital Agenda for Norway in Brief (Meld. St. 27 (2015-2016) Report to Storting - adopts the approach of avoiding isolation of organization for the development of an innovative culture. The policy documents adopt the approach that an innovative organization cannot be created in isolation. Different participants have to work in unity and conformity to ensure that every organization's needs and requirements for innovation are effectively and successfully fulfilled. The policy documents are clear that individual organizations do not possess the required expertise and technical knowledge. For example, the public sector organization dealing in financial matters does not have communication and technology expertise. Similarly, organizations dealing with science and research do not possess advanced financial and investment expertise. Therefore, to develop an innovative organization, participants of different organizations must collaborate under a broader framework. By adopting such an approach, the fundamental problem of resource allocation can more practically be resolved. Consequently, organizations can learn from each other's experiences, which would further lead to savings in cost and time. The policy documents, therefore, propose a more practical approach to develop innovation organizations.

En Innovativ offentlig sektor: Meld.St.30 2019-2020 (An innovative public sector) – has an explicit section focusing on innovation (section 7, p.47). Innovation in the Report aligns with the definition of innovation described in section 3, i.e., new or significantly improved goods, services, processes, organizational forms, or marketing models are used to achieve value creation and societal benefits (see section 3). A culture is needed where curiosity, freedom, open mindset, and courage to learn from the successes and mistakes are accepted. The Report emphasizes that an innovation-friendly culture is a vital prerequisite for innovation. *As described in this report, culture is the combination of skills, attitude, and value, i.e., an overall workplace behavior, as mentioned under subsection 3.5.* As innovation in the politicians' role and significance, managers and

employees are at par in the innovative process. Besides, they are all are bearers of culture and have a significant role in developing an innovative-friendly culture. However, the role of the leaders to enhance organization as innovative is central. The innovation barometers (Difi (2018) Innovasjonsbarometer I Staten 2018; Raport KS, (2020) Innovasjonsbarometeret (2020) for the state highlight leaders as one of the most important driving forces behind innovation. They have a significant responsibility to give room for maneuver to discuss and ask questions and open-mindedness to the workforce. It also emphasizes that innovation competence is essential, but the culture and capacity for change are more important. The role of the Government to facilitate innovation in the public sector is central; therefore, the Government has illustrated through a figure *Kjennetegn ved kultur for innovasjon:*



The figure illustrates the characteristics and practices that can promote innovation in an organization. The four corners draw out the four fundamentals, clockwise trust and willingness to take risks, encompass and collaborate, learning by doing and practice change when needed, and the last corner, see opportunities and show direction. Further, the center's circle depicts the three main dimensions (clockwise), i.e., courage, openness, and curiosity. These characteristics are essential, both individually and mutually (Meld. St. 30 (2019-2020) p. 51).

Figure 6: Kjennetegn ved kultur for innovasjon. Kilde: Kommunal- og moderniseringsdepartementet (2020)

The white paper is in complete alignment with Amundsen's nine characteristics of employee-driven innovation. The development of a culture for joint innovation effort is achievable through several organizational efforts. Still, improved innovation capacity through the implementation of EDI practices requires the successful interplay between all three dimensions (roles, culture, and tools). (Aasen, Tone M, Amundsen, O, Gressgård, Leif J, Hansen, Kåre, 2012). However, this overlaps the research question 3 on EDI. As mentioned in the methodology section, there will be overlapping and spillovers because of specific policy documents' similarities.

One digital public sector: Digital strategy for the public sector 2019–2025 also adopts a policy of strategic initiatives to develop an innovative organization. However, unlike other documents, the Digital strategy for the public sector 2019–2025 also emphasizes operational and technical steps essential from the particular industry's perspective. The document also proposes focusing on regulations to avoid regulatory restrictions, and organizations could take more independent steps and have a more autonomous structure. It also emphasizes that bureaucracy is not favorable for innovative organizations.

6.1.3 Q.3. What do documents say about the role of employees, and how this shall be stimulated?

The Policy's Approach to Employee's Satisfaction

The policy documents have generally covered matters of the strategic level. Tactical and operational matters in the policy papers are absent. However, policy papers' strategic discussion suggests that employee satisfaction is an integral component for an organization to be effectively innovative. The policy documents suggest trust, reliance, and more powers to the employees to adopt more innovative approaches to perform their responsibilities. The establishment of an innovative culture in an organization is also essential for employee satisfaction.

Digital Agenda for Norway in Brief suggests the employees should be empowered by properly equipping with relevant technologies that may increase their efficiency and productivity.

Digital strategy for the public sector 2019–2025 proposes creating an eco-system to provide an environment of innovation, creativity, and productivity. While there is no direct discussion of employee satisfaction, various recommendations suggested in the official document indirectly lead to different measures that may prove helpful in employee satisfaction, such as supporting an organization through relevant expertise and technologies.

Public Health Report Good health – a shared responsibility does not explicitly focus on employee satisfaction; however, indirect recommendations have some implications. With the provision of primary health necessities virtually to the general population, their lifestyle would be further improved, ultimately leading to employee satisfaction in the longer run.

An innovative public sector (Meld. St.30) suggests that the employees must be involved at all levels as they have different competencies and professional backgrounds, and their contribution is crucial for innovation. Also, their participation will build trust and give them the possibility to see the big picture. It was enabling them to suggest how to solve the challenges concerning the organizational goals and the budget. The data set from this white paper also illustrates that leaders and employees must have the necessary digital competence, as it can contribute to more innovation. Enhancing digitalization in colleges will develop young employees with a better understanding and interest in the ICT field. (Ulsteinmodellene (Meld.St.30 (2019-2020) p.57)).

The white paper says that employee-driven innovation is not discussed explicitly through other challenges and measures within the public sector, such as awareness of sharing responsibility between employee and employer organization. Awareness of responsibility is also a value creation, as it will enhance effective public health work that will prevent the exclusion of large groups from

education and employment (Meld. St. 34 (2012-2013)). There are traces of EDI in Meld. St. 30 (2019-2020), where it expressed that employees from different professional backgrounds contribute to innovation at all levels. However, mutual trust, open-mindedness, and responsibility are the commitment towards innovation. Amundsen's nine cultural characteristics in organizations that succeed with EDI (section 3) are in alignment. There is no defined segment related to EDI. There is, therefore, no agreement between the literature and documents in terms of employee-driven innovation.

6.2 Summary

The purpose of the review chapter is to gather insight into the new Norwegian innovation policy documents and its relation to the public sector. The policies introduced from the documents have similar proposals within the documents.

The policy documents adopt an overall strategic approach for the development of an innovative culture. The government provides several incentives for innovation and continue to expand its innovation policies. However, the policy's current design gives the municipalities the role of innovators, whereas the national level is a facilitator's role. The municipalities also highlighted that operational focus as the most significant barrier to innovation (Meld.St.30 (2019-2020)).

In summary:

Q1: How do documents define innovation and reflect the innovation journey from idea to value creation?

Overall, the documents define the innovation journey from idea to value creation from different perspectives. The white paper *public health report* emphasizes good health as the most value for creation, while user-centric and ICT-digitalization runs through *all the policy documents*.

Embarking the innovation journey from idea generation to implementation is seen through project examples, such as Asker Welfare Lab (DOGA), Service Shop, The Way Home, and many more. Developing better knowledge and competency is also seen as value for creation.

Many scholars identify the innovation journey as essential to cope with the challenges (demographic, climate, etc.) running at an incredible pace. These insights the findings show a positive reflection on the innovation journey.

In summary:

Q2: What do documents say about organizational attributes and the need to develop organizations to become innovative?

Organizational attributes were not described explicitly in all the policy documents, except for Meld. St 30 (2019-2020) *En innovative offentlig sektor*. The policy emphasized that organizational attributes are essential (Figure 5), and the need for the whole organization's involvement in the innovation process from the creating of ideas to implementation is essential. Tidd & Bessant (2018), Amundsen (2012), and other scholars (Kotsemir & Meissner, 2013) suggest that organizational attributes are necessary for igniting innovation. Here isolation also comprises a leader's role within the organization, as their skills, attitude, and values play a pivotal role in balancing the bureaucracy and the room for innovation.

In summary:

Q3: What is said about the role of employees and how this shall be stimulated?

As Amundsen (2012) and Kotsemir & Meissners (2013), Tidd & Bessant (2018) study illustrated that it is both the culture and the leaders' initiative to create the conditions in which employees may thrive and come up with ideas. "Besides, all employees have creative thinking, knowledge, and ideas that will enhance an overall capacity to innovate, provided the organization provides the space and condition" (*En innovative public sector*). Public health report expresses the above through workplace organization. Other documents have been non-illuminative on Amundsen's (2012) suggestion to incorporate the nine cultural characteristics (figure 4) in the organization to succeed with MDI.

7 DISCUSSION & FURTHER SUGGESTION

The findings described that facilitating innovation runs like a red thread through the Norwegian Governmental policies. However, the analysis showed that there might be a need for more clarity regarding the concept of innovation and the freedom to build the blocks of innovative organizations, where organizations as a whole, together with the governmental heads, would play an equivalent role. The following discussion will shed light on the above.

7.1 The Concept of Innovation

The OECD has its definition of innovation; the ministry of Local Government and Modernization (KRD) put forth a simplified version in the policy document “En innovativ offentlig sektor,” aimed for the public sector. Findings from the analysis showed that the documents explored did not adopt a strict definition of innovation as each document discussed the concept with a variation. Thus, the dithering meaning of innovation and several definitions of innovation may muddle the public sector's communication process. Based on the above insights, this interaction may result in nebulous, or bias, based on subjective interpretations. Further, the findings illustrated that the term innovation to be foggier when utilized in modernization, digitalization, ICTs, change, and renewal context. Innovation in previously mentioned terms indicates that innovation can be misinterpreted and could relate to any change, depleting the real meaning (Tidd et al., 2018). The excessive use of the term “innovation,” along with the top leader's vast influence on organizations, may lead to a distorted view of innovation. Specifically, within the public sector, they are bureaucratic and where the structures are command or line-based. Innovation in the public sector occurs within a political framework, where top leaders are ministers, elected politicians, directors of state organizations, municipalities, county Mayor's. This point may

relate to Norway's public organizations, which are hierarchal and both command and line organized.

Additionally, both classifications and novelty degrees are eluded in the white paper and by the KRD. If the probability of justification by Arundel and Huber (2014) is actual, the public sector managers tend to over-report innovations compared to the private sector. Then these simplified or varied definitions would not aid in future measurements of the public sector innovation. This is due to the diverse and equivocal description of the definition of innovation, allowing a bigger stand of freedom of choice to interpret innovation. Thus, there lies a probability that the leaders could identify specific improved measures as innovation with the organization's changing dynamics (Bloch & Bugge, 2013).

With the degree of innovation evaded from the white papers, innovative space is also a back-drop; in other words, fragmented levels of innovation. Incremental and radical innovations are essential factors as they relate to the concept of novelty. Arnold et al. (2011) emphasized that organizations create incremental innovation capabilities that gradually help them build innovation. In this retrospective view, these innovations are radical, i.e., small gradual steps can also represent radical innovation (En innovative offentlig sektor). The official documents elaborate on creating gradual capabilities among different agencies, units, and organizations.

An example is the tax administration work, which has over ten to twenty years, incrementally changed how the population submits the tax return through small steps over time (En innovative offentlig sektor). An incremental process innovation. The agencies involved in this study would be considered radical innovation today after being fully implemented, as the literature focuses on interpretations of innovative space (Tidd & Bessant, 2018), where the authors define the category and types of innovation (product, paradigm, position, and process). On the contrary,

the government is focusing on defining them with the public sector; for instance, “new products or services to a market” classifies as product innovation, while process innovation is “new ways to manufacture or distribute products or services” (Regjeringen, 2018). The above insight depicts different government and private sector practices in implementing the meaning of innovation and related factors. Therefore, this can present a challenge in categorizing and subsequently measuring innovation. An example here is the online application processes (automated). For the user, this would be a service innovation, as it delivers services. However, for the organization, this would be perceived as process innovation related to efficiency, i.e., improving the application process.

Another example is when the patient is at home instead of being in the hospital, this would require a change in the doctor's and nurses' working methods to meet the new criteria. According to Public Report no. D9 and authors Tidd & Bessant (2018), this is a process- incremental innovation related to new or changed working methods and processes within the public sector.

Digitalization of the public sector and seamless services are the central focus area in the policy documents towards value creation. They simplify everyday life to users through better services and more efficient use of government agencies' resources. The use of ICTs in digitalization is primary. For instance, the public digital services from the Norwegian Tax Administration/Altinn, providing certificates of registration and tax certificates. Other home-based e-health services at helsenorge.no allow users to handle health-related matters electronically and consult with the doctors. A collaborative initiative between the local government sectors and the Norwegian Directorate of eHealth DigiHelse ((DigiHelath) (One Digital Public Sector). On the other hand, the use of robot technology a project run by the Stavanger municipality. The robots remind the patients to be more active, take their medication, view exercise videos, and make video calls between healthcare professionals (En innovativ offentlig sektor).

The development of the first emission-free speedboats by the Trøndelag county together with ten other county municipalities. A project called PILOT-E, together with the ten-county municipalities and international industry. Trøndelag builds on previous experiences with innovative procurements. Trøndelag (Sør) county municipality in 2015-2016 and carried out a procurement process for climate-friendly ferries that resulted in four new hybrid ferries (En innovativ offentlig sektor). The tender not only triggered new ferries it also led that Siemens put its investment in battery development for the ships to Trondheim, and they patented a unique charging solution for high power requirements in places with little power available. The Norwegian Public sector has taken the lead in electric ferries and made innovative procurement of great importance for developing new technology. In short, the more one moves away from the known; the more one goes further from incremental to radical innovation. (Tidd & Bessant, 2018). Reviewing the categories with an example of types of innovation. A new ferry concept, such as an electric ferry, is radical product innovation. Siemens does it differently. The first electric ferry, Ampere, came in 2015 and was built as a result of one development contract. Another example is the Ulstein X-bow vessel is radical product innovation as it built something entirely new; the inverted bow that changed the history of shipbuilding. However, it can also be both a product and a process innovation in the context, as explained by simplified shipbuilding with better efficiency.

Interestingly, one question arises in light of the above. Is innovation new to the company, but not generally within the industry? Or is it new even though used in another industry? Is it entirely new to all, as the internet or online shopping was in the mid-90s? The 4Ps model does not provide a precise answer to the new question; one must define oneself in the organization (Tidd & Bessant, 2018). Is it an incremental or radical innovation? There is a blurring of the transition between the two extremes; it can be challenging to determine if it is one of the other four categories

mentioned in the 4Ps model (section 4). They can overlap with each other. There is no correct solution. But the good thing about the model is that it continually forces you to discuss where the innovation takes place and how much you innovate. You are in the process of using the model to get a clear understanding of where your innovation focus is to be placed. The purpose here is not to make insight into what is good or bad practice in isolation. But to apply to the framework and try to understand what the organization did well and, therefore, may be generalizable or critical to what the organization did well and what they didn't do well (Tidd & Bessant, 2018).

To further discuss the above, as described in the One Digital public sector," the seamless services as far as possible build on existing and ongoing initiatives," i.e., the technology is in use (One Digital Public sector (2019-2025) p. 18). The aim to do it better. An interesting question arises when one tries to relate how innovation, with the new to whom question or which category of innovation. There is a possibility of categorizing both incremental product and process innovation. When assessing, the span can be between the product the organization offers to the world and how it creates and delivers the product or the service they are offering. As mentioned in the former paragraph, it is sometimes difficult to categorize because of the blurring of the transition between the axis and the categories' overlay.

Generally, innovation is essential, but it is not easy to say anything more specific about when it pays off and how investing in innovation should be done in different situations. The most important thing with innovation is that it comes with many uncertainties, but it is all about learning (Ørstavik, 2001).

The official documents have elaborated focused on creating gradual capabilities among different units, institutions, and organizations. These include ministries, functional departments,

administrative organizations, public sector institutes, and universities. Oerlemans et al. (2013) emphasize that one of the main features of incremental innovation is that it does not rely on giant technology leaps. The result has also supported the Oerlemans et al. (2013) assertions that official documents do not consider adopting advanced technologies as their first preferred step. Instead, they first talk about the basic framework and standard creation, which are not linked directly with the technology. Therefore, this creates a consensus in the literature and results that public sector organizations are inclined towards incremental innovation as their primary substance of change compared to radical innovation.

7.2 Innovative Organizations

The variation in the definition of innovation and the difficulty associated with the assigning topologies to innovation and the challenge in categorizing and measuring innovation waver a whiff, for the need of better understanding regarding the journey of innovation and the implementation phase, which are essential attributes of an innovative organization (Tidd and Bessant (2013); Baden-Fuller, & Haefliger, 2013). However, Amundsen (2012) contrasts with Tidd & Bessants' (2018) four-phase journey opts for five phases. Amundsen (2012) argues that the first phase, formulation of the idea, whether written or verbal, is decisive for the last phase of the journey, *gevinstrealisering*. As it includes the complete development process and also many innovations falter at the implementation stage. It is interesting to note that one of the official documents En innovative offentlig sektor take a similar stance on the five-phase journey (Meld.St.30 (2019-2020)). They suggest government policies for earlier testing to adhere to

resource constraints or budgetary limits, as a basis for further development, before the final launch. The triple diamond model¹⁴ has similar reflections, as expressed by Amundsen (2012).

Components such as shared vision, leadership, and the will to innovate, appropriate structures, key individuals, effective team working, creative climate, and external focus are prerequisites for a successful innovative organization (Tidd & Bessant, 2018). The innovation barometers¹⁵ underline the innovation fostered when organizational culture is promoted with openness, generating new ideas, and consent for risk-taking and collaboration. Further, the organizational support for innovation in the context of incentives and motivation are incompatible. This mismatch could depress public sector innovation or limit such innovation to minor, incremental improvements (Osborne and Brown, 2011). “A risk-averse organizational culture can hamper innovation by preventing experimentation” (Borins, 2001; Brown, 2010; Kay and Goldspink, 2012; Osborne and Brown, 2011; Potts and Kastelle, 2010). Findings show that the above components are described in one in the policy documents *En innovative offentlig sektor*.

The government white paper asserts that leadership is essential, but culture is even more critical for creating an innovative organization. It could be reasonable to question when the definition (s) on innovation is not in consensus. Are there other factors that are not advocated effectively by the government? In the insight of the above, the leaders, both political and other in the public sector, are aware of the roles and responsibilities that pertain to promoting innovation in organizations. Fragmented understanding of the definition and the roles could blur the objective of innovation to the employees. The leader or manager's role is pivotal, as they are endowed the responsibility to foster innovation through elements such as strategic, systematic,

¹⁴ Source: Digitaliseringsdirektoratet, StimuLab

¹⁵ Source: Digitaliseringsdirektoratet, StimuLab

open for learning, room for maneuver, and think out of the box. The above harmonizes with the Tidd & Bessant's components of innovative organizations. The state and the municipal sector's innovation barometers highlight leaders as the most important driving force behind the latest innovations.¹⁶

As illustrated in the policy papers, the Government takes prominent steps to enhance competence through e-courses, a process-incremental innovation. To elaborate, for example, how we create the product that we are offering differs from writing a book or preparing a lesson or teaching a class. Still, we are using the same skills, i.e., our communication knowledge. Nevertheless, we have to develop software to simplify the process, producing e-classes on the web. We deliver the product to the users is also different from our usual way. We have still created e-learning courses; we have tried something similar but in an improvised way, doing something better (Meld. St. 30 (2019-2020)). It is all about learning and putting ideas into practical use. Educating people is an integral part of the innovative space, which gives a broader perspective to understand and accept change. Also, initiating freedom of expression and ideas is an identifiable element for an innovative organization (Amundsen, 2012; Tidd & Bessant, 2018). The findings show that only one policy documents illustrate the components of innovative organization, En innovativ offentlig sektor ((Meld.St.30 (2019-2020))). Though freedom of expression and the right to participation are mentioned in the Public Health Report, inclining towards human rights and not as innovative organization components (Meldt.St 34 (2012-2013)).

Therefore, there is similarity and conformity between official documents and the literature regarding the innovative organization's innovation journey and attributes.

¹⁶ Difi (2018) Innovasjonsbarometer i staten 2018. Rapport, KS (2020) Innovasjonsbarometeret 2020

7.3 Idea capture and the employee

Many scholars recognize the need for the bigger picture, where the whole organization's role is fundamental in the innovation process from *idée* - idea generation to implementation (Amundsen, 2012; Kotsemir & Meissner, 2013; Tidd & Bessant, 2018). Although Amundsen (2012) and Tidd & Bessant (2018) study illustrated that employees from different levels could initiate innovation, it is the leaders' responsibility to create the culture and conditions in which employees may thrive and develop compliance. Only one of the parliamentary reports *En innovative offentlig sektor* depicts that this is well understood on the agency level but is biased at the ministerial level (Meld.St.30 (2019-2020)). Parallel to this, the ministers' role is equally important, which would envisage their role as gatekeepers to innovation and not barriers. The Policy document also describes risk aversions and incentives as barriers to innovation. Many municipalities highlight that operational focus is the biggest barrier to innovation. (Menon, 2018. *Nåtidsanalyse av innovasjonsaktivitet i kommunesektoren. Publikasjon 88/2018*, Amundsen, 2012, Tidd & Bessant, 2018, St. Meld. 30 (2019-2020)).

To foster a mindset among public employees is crucial to bring about innovation in the public sector by solving challenges in cooperation with ambitious companies and developing solutions that improve people's lives (One Digital Public sector). Proxy creativity is synonymous with innovation. Too much emphasis on the idea is dysfunction (Tidd & Bessant, 2018). As discussed in section 4 and section 6, EDI's fundamentals can be defined by the three main interrelated elements; roles, tools, and culture. Inevitably, the cultural characteristics supporting EDI cannot be “inserted” into an organization by resolution. It is the competence of leadership, supported by suitable processes and tools that “might lead to the emergence of the desired cultural

qualities and the long-profit term” (Amundsen et al., p.30)¹⁷. The three main tools are the motor of innovative culture in the organization's curiosity: openness, trial, and error freedom illustrated in figure7, section six, and described in the policy document En innovative offentlig sektor Meld.St. 30 (2019-2020)). The different municipalities like Asker, Bærum, and Trondheim have implemented comprehensive leadership training programs for all municipalities specific to innovative working methods that have provided increased competence for change. When discussing EDI and the above, Amundsen’s (2012) fundamental assumption is that the employees have creative thinking, knowledge, and ideas to enhance an organization’s overall capacity to innovate, as mentioned in section 4.7, provided the organization gives the space and the right or favorable conditions for it. Employee-driven innovation means that employees and their leaders or managers contribute the ideas to initiate an innovative process that aligns with the white paper En innovative offentlig sektor. (Meld.St.30 (2019-2020). p.53)

Further, considering the public sector organizations as seen through the policy documents (white paper)s with the ongoing innovative projects, there should have been a more positive impact on the employee's involvement and proliferation, not only governmental or political focus.

The results showed that the cultural characteristics in organizations that succeed with MDI correspond to Amundsen’s (2012) white papers. Further, the findings showed a low correlation between the literature and documents in terms of employee-driven innovation. Intrapreneurship assists in employee-driven innovation as out of the box ideas suggested by Høyrup et al. (2012) could not be validated by the results. Similarly, the employees' loyalty when their ideas are valued and recognized by the management is absent to a certain degree.

¹⁷ https://www.business-and-management.org/library/2014/9_1--24-35-Amundsen,Aasen,Gressgard,Hansen.pdf

7.3.1 Further suggestion

Norwegian Public sector has experienced a remarkable transformation (OECD, 2017). Governmental policies increased the focus on innovation in the public sector, and along with it, the knowledge and insight to innovation. However, understanding the sources connected to innovation is fragmented, and there is a need for more attention to research on the subject.

This study has unearthed innovation concerning the Norwegian public sector in a nutshell. Due to this study's small sample and novelty, more extensive research is necessary to illuminate innovation in the public sector. Focus on innovation frameworks and set standards and better funding. Also, increased collaboration between different groups and actors must support innovative culture organizations for promising results and sustainability.

8 BACKGROUND DOCUMENT

8.1 OECD Reviews of Innovation Policy NORWAY 2017 – overview

The “Organisation prepares the document for Economic Co-operation and Development (OECD). It presents the overall assessment of innovation systems for its members and provides recommendations to enhance innovation. The suggestions are generally strategic in which particular focus is made on research and development. The report covers areas such as the change based on research and innovation, developing academic communities; Enhancing competitiveness and innovation, tackling major societal challenges, and improve governance.

The country is now facing a triple transition imperative. However, the most significant role in this transition is that of higher education. An important factor in promoting this sector is that Norway has fallen behind other Nordic countries. To fill this gap, it would be essential to focus on basic and higher-level education and the research sector. A few objectives described in the document are the development of academic communities and the enhancement of Norway's innovation and competitiveness. The report suggests that the performance of the country in terms of innovation has remained fixed. However, there are various opportunities where the country can excel in terms of innovation in industrial clusters (OECD, 2017). Increased coordination and collaboration between ministries and agencies are essential to reach the fullest potential. The RCN would be assigned higher responsibilities, and they allocate and assign resources to different research institutes.

Tackling major societal challenges is highlighted. The report suggests that the country had a great tradition of investing in societal problems. However, it lacks a systemic approach to coping with societal problems as no grand plan has been developed. The long-term plan proposed has focused explicitly on this factor. At the same time, the program has not succeeded in generating

new funding sources. No innovative ventures are planned where the generated funds could be invested (OECD, 2017). This, therefore, calls for more radical changes, and the long-term plan needs revision. It should specifically be in the area of “translational,” systemic issues where more practical solutions should be sought. The demand-driven innovation and user-driven innovation should be the specific focus of the plan. With these fundamental changes, it is expected that societal problems could be handled more effectively, and the tradition of the country could be continued.

There is a need for enhancing the governance of innovation on a national system (OECD, 2017). The report suggests that country has a stable and functional policy framework; however, it is highly sectorial. The policy framework is responsible for setting the direction of innovation, technology, and science policies. In the past, these sectorial policies had its advantages; however, changing dynamics of the country's economic state defines that a more coordinated approach should be taken (OECD, 2017). The policy framework's operational aspects are robust in implementation; however, it lacks the strategic depth. In this regard, it would be highly essential that more broad policies should be formulized where cross-policy approaches, funding issues, and regulatory matters should take the lead. These broad-based directions would further support a central authority's need, which monitors the coordination efforts (OECD, 2017). The current agency-level structure tends to increase the pressure on the RCN. Simultaneously, the current structure may be a little beneficial for long-term cross-cutting activities and policy innovation. The “21 Forums,” which are advisory bodies in nature, need to be further strengthened in this regard.

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