

Organizational Legitimacy in Innovation Units with Radical Mandates

An exploratory case study unpacking the role of
New Tech Lab in the DNB organization

Victor Antonio Ruiz Bergerskogen

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Organizational Legitimacy in Innovation Units with Radical Mandates

*An exploratory case study unpacking the role of New Tech Lab
in the DNB organization*

by

Victor Antonio Ruiz Bergerskogen

SNF Project No. 10033

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Bergen, June 2021

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Preface

This thesis paper is the final chapter in the Master of Science in Economics and Business Administration program at the Norwegian School of Economics. My major for this degree has been Strategy and Management. This thesis is a part of the FOCUS RaCE project and is an effort to better understand how established firms, such as DNB, are able to leverage their dynamic capabilities in order to create Radical Technology-Driven Change.

I would firstly like to extend a warm thank you to Professor Christine B. Meyer – a giant in her field, she has supervised and provided the support needed to allow me to put forward my best work, and I appreciate her input and insights on change management, organizational change, and radical innovation theory.

To DNB and New Tech Lab in particular, and their employees whom I have had the pleasure of interviewing – your experiences and reflections are the whole basis for this paper, and I am grateful for the time and insights you have afforded both me and this project.

To my dear family, and in particular my mother Bente – your unyielding support and belief in me has always allowed me to follow my own goals, even when it meant straying from the beaten path.

To my dear friends and fellow students Truls Jacobsen and Arvind Fossan, whose friendship and support have been invaluable through these five years in Bergen.

Lastly, to Øystein Samson Tjentland, for convincing a would-be science engineer that Economics and Business Administration was the path to greener pastures.

Bergen, June 2021

Victor Antonio Ruiz Bergerskogen

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1. Introduction

Long gone are the days where the large, national enterprises only needed to worry about the competition from their industry equals. These days, they also have to be wary of smaller, emerging competitors, prompting discontinuous change efforts (Birkinshaw, Zimmermann, & Raisch, 2016). This can pose a large threat to the established player – how does one respond? By actively changing one's trajectory to face the emerging competitor? This can be very costly in terms of resources and can lead to the company losing out in terms of profitability. Or rather by ignoring the new player instead? This can prove very costly, as new technology and trends can shift markets faster than large-scale companies are able to respond – just ask the executives over at Kodak (Anthony, 2016).

Looking at Norway in particular, one sector that has seen a shift in competition is the banking industry. In recent years, the incumbent firms in this industry have experienced tougher competition due to a combination of structural changes and innovations. One such challenge is the Revised Payment Services Directive – PSD2 - which was implemented across the EU in 2019. This directive has allowed consumers to have more freedom and power in terms of their banking information, which previously was afforded mainly to the big banks. Additionally, this has drastically lowered the barriers of entry for fintech companies, who are now able to access customers' financial information, which their consent, in minutes through BankID verification (Winther, 2019). The result has been a large-scale growth in the fintech and service provider sectors, with niche companies now being able to provide everything from spending habit analysis to automatic comparisons of credit card interest rates (Bentsen & Bjørne, 2019). External influences like these are possible pitfalls for incumbent players.

The banking world is one of rapid change and adaptation. One does not need to look back more than a few decades to remember the physical bank being a cornerstone of society – cash handling, mortgage applications, savings management, stock brokerage, all located in the same building. Payments were done by cheque or cash, and concepts such as phone-based payments and credit cards were merely science-fiction. Real estate agents, bank tellers, managers, stockbrokers, all situated under the same roof. In smaller towns and cities,

the major bank was often the literal center of the town.

These days, banks serve much of the same purpose, but a lot has changed. One would be hard-pressed to find a Norwegian bank offering cash services, and deposits and withdrawals are left to ATMs or grocery stores (Ripegutu, 2019). Stock brokerage is done online, or over the phone in a pinch. Applying for a mortgage on a new home is now done by a few clicks online, and the same goes for monetary transactions – there is very seldom a need for a traditional visit to the banks anymore (Nærø, 2020). This begs the question – what is the purpose of banks today, and what will their purpose be tomorrow?

As a response to these threats, banks need to be able to leverage their capabilities to maintain their competitiveness. One approach to this challenge is to address two fronts at once – continuing to develop exploitative activities in order to stay profitable in the short term, while simultaneously capitalizing on explorative activities to find new solutions and business areas and ensure the long-term success of the firm (Tushman & O'Reilly, 1996). However, structuring and enabling this process is not as simple as establishing a unit and handing out the task – in order to reap the full benefits of such an initiative, the organizations need to work continuously and consciously towards creating structures and processes that support their aspirations.

This research thesis aims to provide insights into how innovation units with radical mandates work to gain legitimacy within their organization, the factors that support this process, and the challenges that hinder it. The study does this by examining the Norwegian financial institution DNB and its New Tech Lab unit, and how New Tech Lab approaches the issue of legitimacy in the DNB organization. The study builds on insights from existing research on the topics of organizational ambidexterity and radical innovation, and utilizes interviews with members of the DNB organization, both within New Tech Lab and from units outside of New Tech Lab. Through researching and analyzing the underlying factors in this specific context through qualitative methodology, this study aims to answer the research question:

How do innovation units with radical mandates work to gain organizational legitimacy?

2. Theoretical Background

In this chapter, existing literature within the areas of radical innovation and organizational ambidexterity is reviewed. The information reviewed in this chapter provides the theoretical foundation for the analysis performed in this case study.

2.1 Radical Innovation

When discussing innovative initiatives in technology-oriented organizations, the topic of disruptive innovation is often highlighted. Clayton Christensen, a leading researcher on the topic, initially described the term in 1997 as a means of understanding how technological innovations can impact markets, and how new technological developments could topple seemingly superior technologies (Markides, 2005). His research work has since been updated to reflect the changes in the innovative landscape, and he argues that disruptive innovation can be described as small enterprises consciously targeting overlooked customer segments with a new value proposition, before using this entry as a springboard to challenge the incumbent players further upstream (Christensen, Raynor, & McDonald, 2015).

However, a rise in the popularity of the concept of disruptive innovation has led to the widespread adoption, and subsequent misuse, of the term. The term is widely believed to describe the process where a new entrant to a market creates instability, by introducing alternative means or value propositions, thus threatening the profitability and market share of the large, incumbent players (Schmidt & Druehl, 2008). This interpretation is largely removed from the original meaning, and in a 2015 article on the topic, Christensen addresses the misnomer and the original definition in an effort to clarify the now muddled meaning of the term. The article goes on to provide examples of large companies, such as Uber and Tesla, that are widely regarded to be prime examples of disruptive innovators – a notion that Christensen refutes through clarification of the originally intended scope of the term.

However, the concept of disruptive innovation is often confused with radical innovation – the creative and at times destructive nature of the two can make them appear similar at first glance, but they are vastly different in practice. Radical innovation is the concept of leveraging existing core competencies in order to create value in the long term through

business model development (Newman, 2018). Whereas disruptive innovation can be seen as an effort to innovate on known factors and structures in order to create value in existing markets, radical innovation can be seen as the process of developing new solutions and applying them in order to create new markets and possibilities through transformational processes (Kylliäinen, 2019).

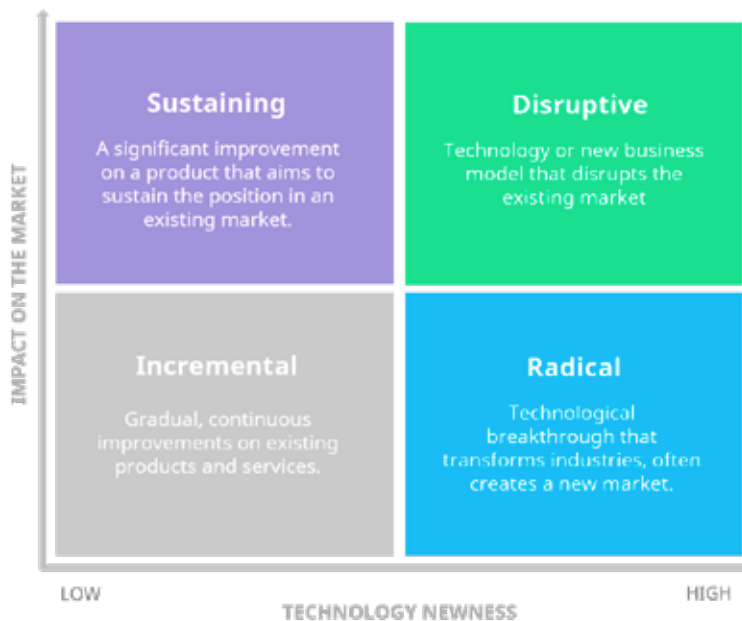


Figure 1: Matrix showing the market impact of innovation approaches (Kylliäinen, 2019)

There are many ways large corporations can structure themselves to encourage radical innovation processes, mostly leaning on the knowledge from organizational ambidexterity. These range from creating full-scale management systems for continuous focus on radical innovation, to externally separating the activities into smaller, autonomous units (O'Connor & Ayers, 2015). Research has shown that the level of support afforded to the innovation initiatives plays a key role in the success of such initiatives, and this dependency can act as a hindrance for these kinds of initiatives, particularly in large organizations. This relates to the existing knowledge of large corporations – large, exploitative organizations foster cultures

that prefer slower, more incremental change and predictability (McDermott & O'Connor, 2002). This stands at odds with the nature of radical innovation units, which rely on fast-paced methodologies that create unpredictability.

While radical innovation units can have explicit mandates in terms of what output the organization wants the unit to produce, there can still arise issues as these developments are introduced into the organization. The uncertainty that is tied to radical innovation projects can weaken the support for the initiatives in the main organization, and this can create friction between the members of the unit, as well as the unit as a whole, and the organization (McDermott & O'Connor, 2003). These issues can be mitigated by the right engagement from the leaders of the unit, as their guidance and communication are seen as key factors in this regard (Stensaker, 2018).

Regardless of the structural approach, large companies need to address the issue of radical innovation in order to maintain their competitiveness (O'Connor & Ayers, 2015). As an answer to diminishing returns on resources spent on incremental innovation in increasingly competitive markets, large organizations have the option of using exploration of radical innovation initiatives as a foundation for developing new concepts. This approach is seen as a way to achieve significant conceptual breakthroughs (Kasmire, Korhonen & Nikolic, 2012).

In order for established organizations to be able to reap the benefits of radical innovation initiatives, there need to be certain structural elements in place, or else the value cannot be captured. O'Connor & DeMartino (2006) introduces the topic of organizational structure as a venue for the development of capabilities related to radical innovation. In their research, they discuss the notion that radical innovation units need to be cultivated in an external environment before they are reintroduced to the main organization and argue that there is merit to developing these units as a connected part of the mother organization to support radical innovation. This relationship relies on management systems as a tool to enable the units to repeatedly produce radical innovation initiatives that benefit the organization (O'Connor & DeMartino (2006).

For innovation units that are tasked with projects related to research and development, the alignment between the mandate of the unit and the absorptive capacity of the organization is

seen as crucial (Banerjee, Lampel & Bhalla, 2019). The innovation unit benefits from having a clear mandate for either exploring new and emerging knowledge or exploiting existing knowledge, and if this mandate is misaligned with the vision of the main organization, this can hinder the innovative output of the unit. Having innovation units with clearly defined, explorative mandates, such as in radical innovation units, can mitigate this issue.

These theoretical insights suggest that radical innovation units can benefit from existing as a part of the main organization in various ways. For innovation units with radical mandates, being connected and aligned with the main organization while also incorporating autonomous methodology appears to support these radical innovation activities. One structural solution to this dilemma is the reliance on organizational ambidexterity to create a balance between the innovative unit and the main organization.

2.2 Organizational Ambidexterity

Coined by Robert Duncan in 1976, the term *ambidextrous organization* describes an organization that is able to perform and adapt in the current competitive landscape, while simultaneously making efforts towards developing adaptability towards the future movements in the competitive environment. In literal terms, the term means “two-handed” – the ability to tend to the present with one hand, and the future with the other (Duncan, 1976). However, this topic was not offered much attention until the article *Exploration and Exploitation in Organizational Learning* by James G. March was published in 1991. March conceptualized a divide that organizations had to tend to – the options of exploration and exploitation, and how these opposing concepts could be utilized together. The general idea of his research was that organizations can combine exploration of new possibilities and business areas on one hand, with the exploitation of known and profitable areas on the other, given the necessary resource allocation (March, 1991).

However, exploration and exploitation are, at their very cores, opposing activities – the former is an effort to gain knowledge and opportunities, the latter an effort to create growth and profitability. This divide has historically led to companies necessitating focusing on one of the aspects in their business model, as traditional organizations had not been developed with both activities in mind (Dosi, Nelson, & Winter, 2001).

Later in the decade, Michael Tushman and Charles O'Reilly expanded upon March's research, arguing that in order for companies to stay competitive in uncertain and dynamic markets, they need to be able to implement both incremental and revolutionary change (Tushman & O'Reilly, 1996). In their research, they proposed a common issue in successful organizations – *inertia*. Divided into structural inertia and cultural inertia, the phenomenon can be seen as an organization's lack of mobility.

Structural inertia happens when a firm grows in size and complexity, effectively making structural change seem overly costly and resource-consuming, even in the face of competition. Cultural inertia, on the other hand, is the result of long periods of success and prosperity, which can lead to complacency and change aversion (Tushman & O'Reilly, 1996). The authors argue that overcoming these aspects of inertia is a key feature of long-term success, and perhaps more pertinently, the avoidance of death by organizational complacency.

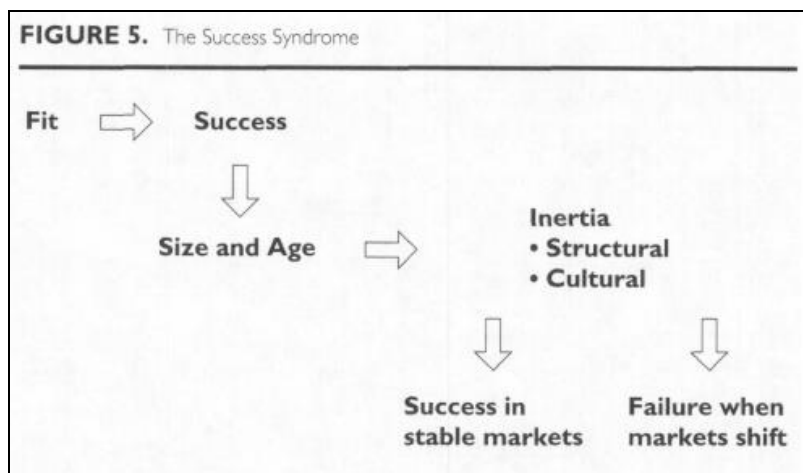
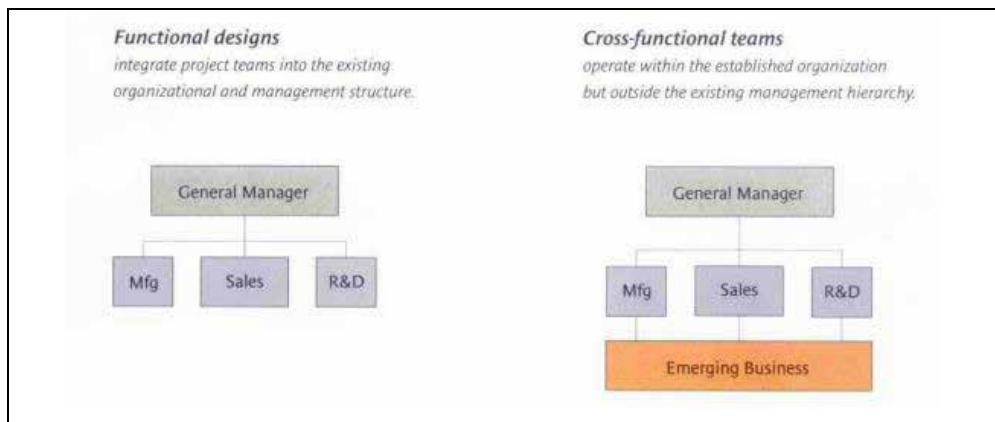


Figure 2: The Success Syndrome in organizations with inertia
(Tushman & O'Reilly, 1996)

The figure above shows an illustration of how a lack of organizational mobility can be detrimental in times of revolutionary change, and maintaining organizational ambidexterity was proposed as a solution to this threat.

Building on their research from 1996, the duo expanded on the topic in their 2004 publication “The Ambidextrous Organization”, providing a comprehensive framework and explanation for the phenomenon. Their conclusion was simple: for modern firms to succeed in the long term, embracing an ambidextrous mindset proved fruitful. The onus was mainly placed upon the role of management in these processes – the ambidextrous philosophy might create scenarios where the company effectively hosts smaller business units who work in contradictory and competing ways to the core of the organization. Being able to support and productively balance this divide is a hallmark of stable ambidextrous leadership (Tushman & O’Reilly, 1996; Tushman & O’Reilly, 2004).

In their article, O’Reilly and Tushman examined four ways of structuring organizations with innovation in mind. In the four layouts below, they observed a dramatic disparity in terms of goal fulfillment – while the organizations specifically designed for ambidexterity achieved a success rate surpassing 90%, the other three setups ranged from 0% to 25%.



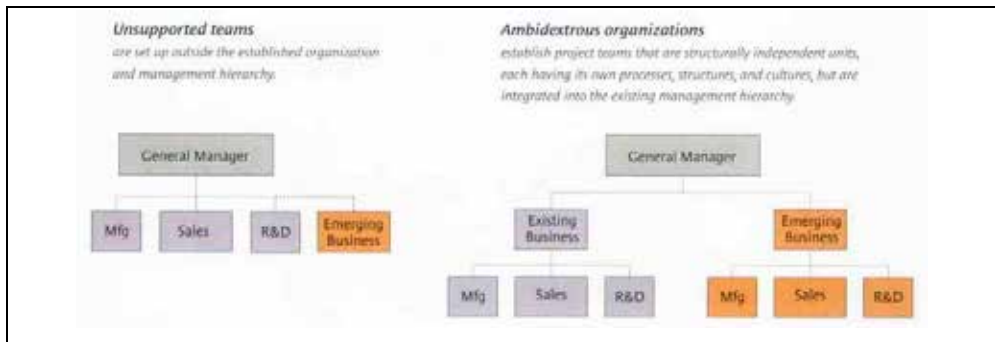


Figure 3: Organizing teams for innovation (Tushman & O'Reilly, 2004)

A common feature in research on organizational ambidexterity is the importance of upper managerial support. Tushman and O'Reilly argue that “a clear and compelling vision, relentlessly communicated by a company’s senior team, is crucial in building ambidextrous designs”. Other researchers seem to agree on this point, but some also argue the importance of aspects such as organizational structure and separating specialized subunits (Adler, Goldoftas, & Levine, 1999), while others have identified behaviors like initiative-taking, opportunity-seeking, and collaboration to be key attitudes by individuals supporting ambidexterity (Birkinshaw & Gibson, 2004).

Through studies on the topic of managerial support in ambidextrous organizations, Stensaker (2018) has researched the challenges and demands faced by the management of the explorative unit, which contrasts much of the existing knowledge on the topic, which mainly covers the perspective of the top management in the exploitative unit. The study points to a disparity in the experienced levels of dependency between the smaller and larger units and suggests a need for a balance between autonomy and interdependency to support the process of establishing the new unit.

The topic of autonomy in relation to organizational ambidexterity has been relatively well studied, especially with regards to the aspect of exploration. When structuring ambidextrous units with the aim of supporting exploration, researchers have identified three suggested ways of doing so – through strictly autonomous units (Burgelman, 1985), through loosely related units (Orton & Weick, 1990), or through units that are structurally differentiated

(O'Reilly & Tushman, 2004). Being able to select the correct approach in terms of the specific context is crucial when aiming to establish autonomy in the ambidextrous unit. Jansen, Tempelaar, van den Bosch, & Volberda (2009) argue that structural differentiation can help ambidextrous organizations handle organizational demands that may appear to be conflicting and/or inconsistent. However, they found that such differentiated exploratory and exploitative activities need to be managed closely in terms of how they are coordinated and integrated with the core activities of the organization.

Of the three solutions previously suggested, a literary review suggests that the option of structural separation is the most widely researched variant. Benner & Tushman (2003) describe this solution as a way for businesses to be able to both perform explorative and exploitative activities through different, separated units within the same organization, in order to minimize the effects of confusion and conflict as per Jansen et al. (2009). Other ways to separate the different kinds of activities are through temporal separation, a solution where the structure changes between exploitation and exploration over time (Brown & Eisenhardt, 1997), instead of the purely structural separation previously described, and through contextual ambidexterity designs, where the organization leans on individuals to perform changes and actions that build on the explorative and exploitative foundations (Birkinshaw & Gibson, 2004).

In recent years, studies have shown a tendency for large, established organizations to rely on external separation to satisfy demands for ambidexterity. This practice works similarly to structural separation but foregoes the need for establishing a separate unit in-house, instead opting for collaboration mechanisms such as strategic alliances, merger and acquisition processes, and joint-venture projects to provide the established firm with the necessary diversification (Stettner & Lavie, 2013; Andriopoulos & Lewis, 2010). Research has also pointed towards the need for different organizational structures to support different types of innovation when the innovation efforts are implemented through structural ambidexterity (Devins & Kähr, 2010).

Outside of the purely structural elements that affect organizational ambidexterity, the issue of organizational culture is also seen as central. Organizational culture encompasses the norms and values within any entity, which are communicated and enacted through various

dimensions of the organization (Balogun, Hailey & Gustafsson, 2016). Organizational culture can take many different forms, but there is mainly believed to be a divide in terms of rigidity. Sørensen (2002) finds that organizations with strong cultures benefit from stable environments and incremental change, which allows them to perform at a consistently higher level. However, this comes at the cost of fragility when faced with volatile and unpredictable business environments.

Whereas exploitative organizations benefit from strong and rigid cultures by way of a stronger belief by the members in the established goals and values (Andrews, Basler, & Coller, 1999), explorative organizations tend to benefit from more dynamic and flexible cultures, especially if this leads to a general organizational inclination towards continuous innovative processes (Sidhu, Volberda, & Commandeur, 2004). This stands in contrast to the nature of exploitative organizations, which tend to benefit more from predictable, consensus-based approaches to the relationship between the goals of the group, and the values of the organization (Sørensen, 2002).

3. Case Presentation

In this chapter, the case company that is to be studied is presented, as well as the general organizational context of the company. Following this, a more thorough description of the New Tech Lab unit and its structure is presented. Additionally, the historical backgrounds for both New Tech Lab as a unit and the general innovation journey of DNB as an organization are elaborated upon, to provide context for the research analysis.

3.1 DNB ASA

DNB ASA is the largest provider of banking and financial services in Norway, being home to over two million retail customers, as well as over two hundred thousand corporate clients. Listed on the Oslo Stock Exchange and publicly traded, the company is the second-largest company on the OSEBX, with a market capitalization of over 280 billion NOK per 01.05.2021 (Nordnet, 2021). Headquartered in Oslo, Norway, the company employs over 9,000 people across its various offices. The organizational structure is presented in the following map:

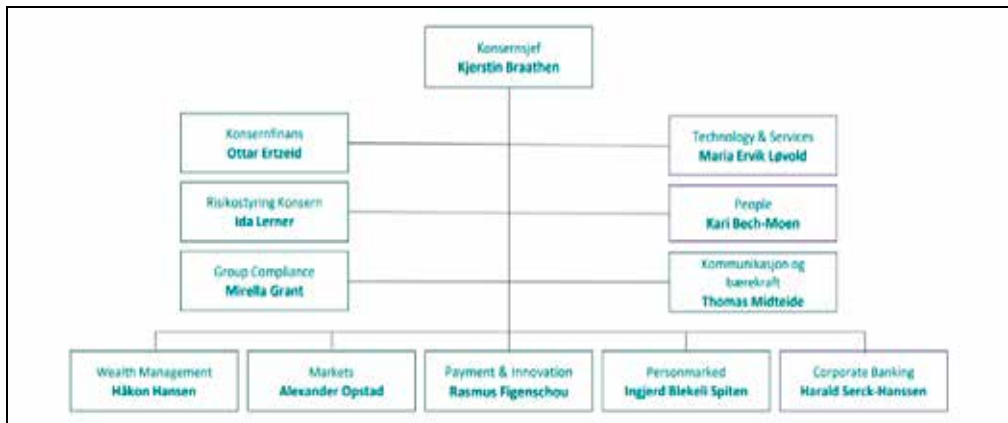


Figure 4: Organizational map of DNB ASA

The modern-day structure of DNB is the result of decades of mergers and acquisitions. The merger between Bergen Bank and Den norske Creditbank in 1990 served as the starting point of what would be a long chain of consolidation, which would lead to the modern DNB.

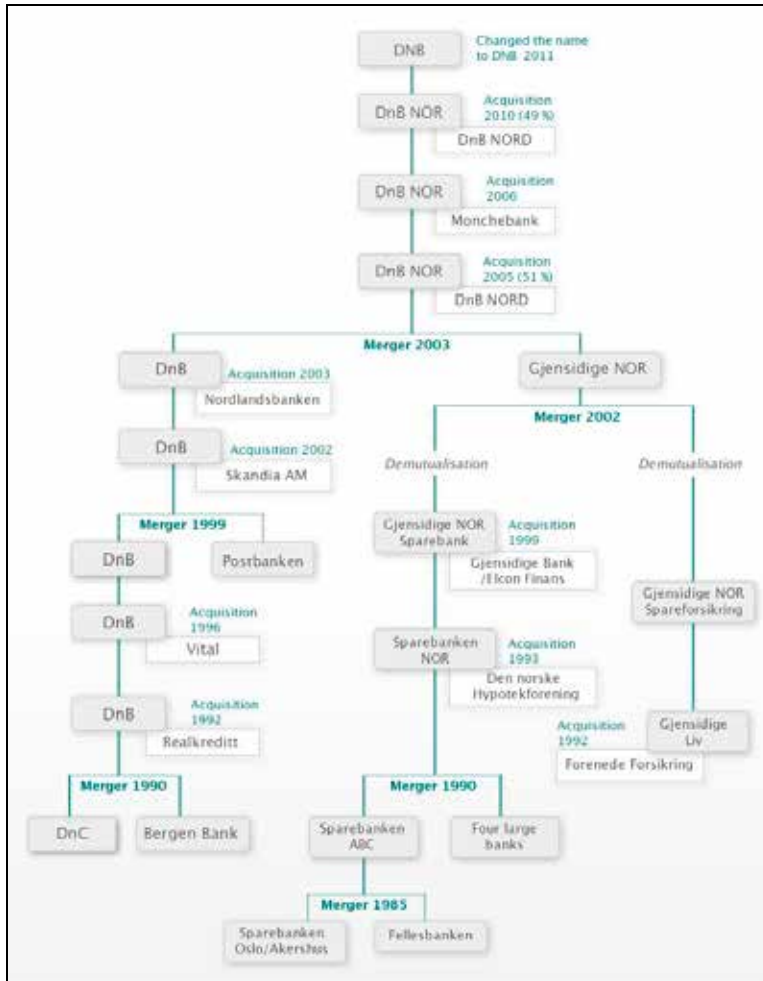


Figure 5: History of mergers and acquisitions in DNB

In 2019, the current CEO of the DNB group, Rune Bjerke, stepped down after leading the organization for 13 years. Having been recruited for the top spot of DnB Nor in 2006, he succeeded Svein Aaser as the head of the company (Hoemsnes, 2006). During his tenure as

CEO of the bank, he oversaw a number of radical change processes, as the bank faced a new technological reality. One of the main themes of Bjerke's leadership period was a heavy reliance on technological development, and how this could be used to ensure that DNB was able to keep its market positioning. An example of such an initiative was the 2016 launch of DNB NXT Accelerator, a joint venture with StartupLab that aimed to provide developers and fintech entrepreneurs with funding and support for their businesses (Weldeghebriel, 2016). Bjerke was asked about the collaboration, and responded (Trumpy, 2016):

"The entire bank needs to work differently and think digitally about everything we are doing if we want to avoid being passed by our competitors."

During this process, Bjerke also made it clear that he envisioned a paradigm shift in the organization as a whole, and was quoted in a 2016 interview with Shifter:

"We are too focused on yesterday's business models. Yesterday's way to offer products and services makes us forget that the changes are now happening at a pace that we have never seen before. We basically have to disrupt ourselves, and we need to get the whole organization to join in on disrupting itself so we can change at a rapid pace."

Another key moment in this part of DNB's history was the development and launch of Vipps. Vipps was launched in 2015 as a project under the DNB umbrella and has since been spun out as a standalone concept. Originally developed as an application for mobile payments over smartphones, Vipps has since expanded in multiple directions, providing additional services such as transaction handling in stores and cellular subscription services (Vipps, 2021). While the project produced losses in the large millions in the years following its inception (Ghaderi, 2019), establishing such a service was a central component in DNB's plan to shift its business model towards a more technologically dense version.

Following Bjerke's departure as CEO in 2019, Kjerstin Braathen was appointed as the new head of the company. Braathen transitioned from her position as CFO in Bjerke's management group and had therefore been a part of the journey that the previous CEO had led the organization through.

3.2 DNB New Tech Lab

New Tech Lab, the focal point of this thesis, is a sub-division of the Payments and Innovation branch of DNB. A small unit of seven members, New Tech Lab is in a somewhat unique position. Their project funding, while limited, is still secured by the board, allowing for predictability and stability. The vast majority of their costs are salary costs, and any necessary funding required for new projects is given on a case-by-case basis, or by engaging external partners (*interview with informant #3*). However, the unit has made a point out of being financially self-sufficient, basing this on the philosophy that this approach leads to greater autonomy (*interview with informant #1*).

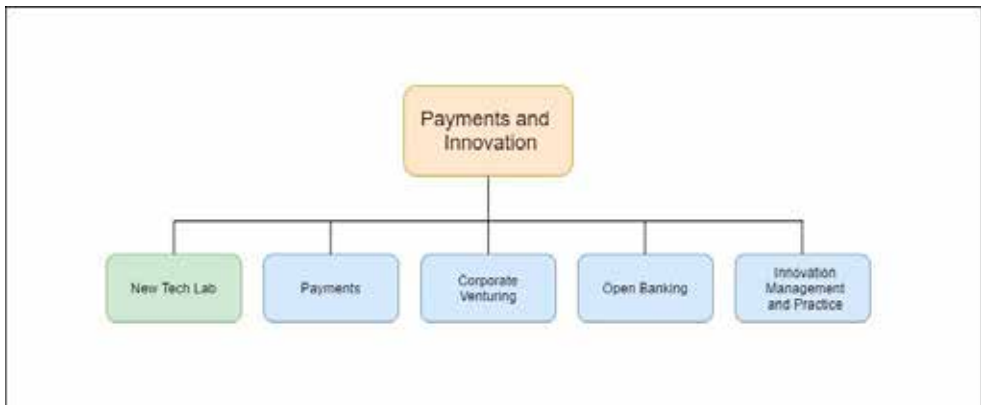


Figure 6: Organizational map of the Payments and Innovation branch of DNB

The Payments & Innovation branch of DNB, led by Rasmus Figenschou, is tasked with enabling the bank to pursue its strategic ambitions. This responsibility is twofold – firstly, the division is in charge of maintaining the technological group architecture, combining resources from different units to create projects and synergies for the bank. The second aspect of the division’s responsibility is exploring new opportunities related to technology –

combining the creative and exploring forces of the bank with third-party collaborators, in order to create value for the customers and other stakeholders (*interview with informant #6*).

New Tech Lab belongs to the latter half of the division, and along with other units such as the New Ventures group, it is a part of DNB's effort to stay updated on the technological advancements and opportunities that are available. The unit has been handed a clear mandate by DNB leadership – New Tech Lab is tasked with exploring the possible applications of new technologies in areas where others would struggle to see the possibilities. They are also tasked with transferring their research on cutting-edge technological developments back into the DNB organization, and sharing and translating these findings into useful information for the various stakeholders. This radical mandate as an exploring unit is relatively unique and fits into the greater mandate of the Payments and Innovation division.

One unique aspect of New Tech Lab is the heterogeneity of the members. Beyond their common interest for, and proficiency in, coding and technology, the members vary greatly. Their members hold a variety of backgrounds, from recently graduated technology students to life-long banking veterans, to Norwegian natives and recruits from abroad. The unit has a balanced mix of genders and experience levels, with all members sharing a common passion – solving problems quickly.

The team is structured and funded like a breed of a tech incubator and a consulting desk, led by Yngvar Ugland. A mathematical civil engineer, Ugland has previously worked for Microsoft, as well as several start-ups and FinTech companies, before settling in DNB in 2017. Branded as a “consumer technologist”, Ugland has been tasked with helping DNB gain a greater understanding of the technological advances that are being made, and how these can be useful to the bank (Giske, 2020). The team is aiming to keep a perspective of five to ten years into the future when working with emerging technologies, but they are also available as a resource on projects with a shorter time horizon (*interview with informant #2*).

New Tech Lab is an example of the subdivisions of DNB tasked with exploring *intrapreneurship* (Giske, 2018). A relatively new concept, this methodology allows employees of the organization to focus on in-house business development while taking an entrepreneurial approach to the challenges (Kenton, 2021). In DNB's case, this can equate to

allowing New Tech Lab to bring ideas and trends from the outside world into the bank, and then working to explore whether these trends have potential business value to DNB.

4. Methodology

In this chapter, the methodological approach for the case study is outlined. This includes an explanation of the research design and why it was chosen, as well as a description of the data collection process. Following this, the data analysis methods are accounted for, and lastly, a discussion around the quality of the research coupled with a brief discussion surrounding ethical considerations.

4.1 Research Design

The first step in any scientific research project is to decide upon a design and structure. The chosen research design is essentially a plan for the execution of the project, describing the methodological choices made regarding how the research question is to be answered (Saunders, Lewis, & Thornhill, 2019). The goal of the research design is to decide on a way to provide useful insights into the area being studied.

This thesis aims to understand how DNB New Tech Lab works in order to gain legitimacy for their work as a radical innovation unit in DNB. This is a specific case in a specific context, in a research niche that has not been previously explored. As such, this project is suited as an exploratory project, aiming to gather insights and understanding on a subject matter that has not previously been explored. Saunders et al. (2019) state that the exploratory approach is fitting for projects aiming to clarify the current understanding of an issue or phenomenon. Having chosen this design approach, it is important that the researcher focuses on gathering information and data, observing the participants, and attempts to build explanations for the findings along the way (Ghauri & Grønhaug, 2005).

As this is a singular phenomenon being observed in a unique context, the case study design is suitable. This format allows for research into the underlying factors of a concrete business case and is a good fit for projects wanting to gain a greater understanding of *what*, *why*, or in this case, *how* something occurs (Saunders et al., 2019). As there is only a single case firm and no specified time frame involved, this project is best suited as a single case study.

4.1.1 Research Approach

When designing a research project, one of the primary decisions to be made is whether the researcher is going to take a deductive approach, an inductive approach, or something of the middle of the two. Whereas a deductive approach aims to start with existing theory to develop the knowledge of a topic, an inductive approach is suited for projects that aim to explore a topic beyond the current bounds of knowledge, to understand a given phenomenon (Saunders et al., 2019). In the middle of these two approaches lies the middle ground, called abduction. This approach is based on the continuous use and analysis of the gathered data to create a more vivid understanding of the topic, essentially exploring the unknown while simultaneously analyzing the known.

This research project leans on the methodology of Grounded Theory (Charmaz, 2006). This approach is used to be able to develop a model dynamically, changing and improving it as more insights and information on the subject is gathered (Saunders et al., 2019). While Grounded Theory at its core may appear as a way to handle inductive research approaches, it has been found to possibly be more suitable for abductive research approaches (Charmaz, 2006; Corbin & Strauss, 1998; Suddaby, 2006). Taking this into consideration, as well as the research objective of the project, the use of an abductive approach for this project seems suitable.

This methodological choice is rooted in the nature of the project – the theoretical foundation for the thesis is based on organizational ambidexterity and radical innovation, topics that have been explored thoroughly, and therefore suited for deductive analysis. However, the topic of technologically accelerated, ambidextrous units in large, established firms, as well as the understanding regarding how they work to gain legitimacy, appears to be largely untouched. Approaching this inductively with the aim of gathering new insights and developing emerging theories is well suited, and the choice of an abductive approach for the project as a whole is deemed to be appropriate.

The use of abductive, exploratory research for this project is aimed to gain a thorough understanding of the topic based on existing theory while allowing for the gathered data to shape and direct the project according to the input from the participants.

4.1.2 Research Objective and Strategy

The objective of this research project is to gain an understanding of how New Tech Lab works to gain legitimacy for its work in the DNB organization, which is a unique research setting with a specific, case-based context. However, the insights gained from this project are interesting in several wider contexts as well, which adds to the value of the project. Choosing to approach this project through an abductive, exploratory case study is based upon the motivation for generating new, contributing insights in the chosen field.

As this study is not aiming to use numerical or other tangible data points, but rather non-numerical and less tangible inputs such as interviews and articles, it is appropriate to design this project as a qualitative study. According to Sanders et al. (2019), this strategy is suited for projects that aim to gather and develop new insights.

The reasoning for the choice of DNB and New Tech Lab as the case to be researched is the unique position the unit appears to be in. Essentially functioning as both an ambidextrous unit and an in-house consulting team in the biggest financial company in Norway, the unit holds a critical position in the technological development of DNB and can be seen as relatively unique due to its mandate within the organization.

4.2 Data Collection

This thesis is a part of the FOCUS RaCE project, a joint research program between NHH and SNF aiming to develop research-based knowledge on how established and well-performing firms successfully may respond to and manage radical technology-driven change (NHH, 2021). DNB is one of the corporate partners in this project, and with the help of my supervisor, Professor Christine B. Meyer, access to informants close to and part of the researched unit was granted.

4.2.1 Primary Data Sources

This case study mainly utilizes primary data gathered for the purposes of this singular project but does include other data sources in order to enrich the information foundation of the study. This allows for the possibility of *triangulation*, a process where the researcher relies

upon different data sources to strengthen the foundation of the findings (Saunders et al., 2019). Primary data is preferable to use in studies like this one, as the data collection can be designed specifically to get answers to the research question. However, this method of data collection is also time-consuming and resource-intensive.

The primary data used in this project has been semi-structured interviews with DNB employees, both within New Tech Lab, but also participants from other units, who have had experience with, or worked alongside, the unit in question.

4.2.2 Data Sample

The aim of this research project is not to gain a general understanding of organizational legitimacy in radical innovation units, but rather to gain an understanding of how New Tech Lab has worked towards gaining legitimacy in the organization. It was therefore seen as suitable to rely upon non-probabilistic, purposive sampling for the primary data collection. This approach is often taken when working with small sample sizes, where the few respondents are seen as particularly interesting or relevant (Saunders et al., 2019). It was early made apparent that the pool of potential participants for the study was small, due to the organizational structure of the unit. The nature of the project also meant that theoretical sampling was a suitable approach in terms of sampling.

At the onset of the project, the intention was to gain an understanding of factors involving and affecting New Tech Lab. Therefore, it seemed obvious to sample participants from the New Tech Lab team. However, as the emerging theory evolved during the research phase, it was clear that it would be beneficial to gain the perspective of external parties as well, both in other, parallel units, as well as from the managerial level. The sample chosen for this project can therefore be described as non-probabilistic, purposive, and theoretically sampled.

A key question when using theoretical sampling in research projects is at what point the sample size is sufficiently large and diverse. Saunders et al. (2019) refer to this point in the data sampling as theoretical saturation, which occurs when the researcher has gained a sufficient level of overview of the topic, and additional interviews or participants are deemed to be unlikely to provide any new insights or critical information. There was early seen to be

a clear correlation in the opinions expressed in the interviews, and these views aligned with existing theoretical knowledge.

After the sixth interview had been transcribed and briefly analyzed, it was made apparent that there existed a clear convergence in the viewpoints and themes across all the interviews, independently of the experience, hierarchical status, or affiliation with New Tech Lab. Theoretical saturation could therefore be argued to have been achieved at this point, and this supported the emerging core themes in the analysis.

Gaining access to the relevant informants and sources is a key factor in collecting meaningful data for research purposes (Saunders et al, 2019). The FOCUS RaCE project is an ongoing research program where DNB is one of the corporate partners. Professor Christine B. Meyer, the supervisor for this thesis, has previously researched New Tech Lab and provided the foundation for the access used in this paper by establishing contact with the leader of New Tech Lab. This contact led to access to several team members, how agreed to participate in the project. During the data collection process, several potential candidates for additional interviews were suggested, and following the emerging theory and evolving storyline that appeared during the process, three external participants were added. The common theme of the participants chosen for this study was that they all had insight into the workings of the unit in question, as well as a greater overview of the business area as a whole. The following table provides an overview of the participants, their roles in the organization, and whether they are a member of the New Tech Lab unit. Due to insights from the interviews being used as information in the Case Presentation section of this thesis, the interviews have been sorted by interview date in the Case Presentation and by organizational tenure in Methodology to remove any connections between informant identities and provided information.

Respondents	Organizational Role	Unit Member?
Respondent A	Group management member	No
Respondent B	Senior developer and manager	Yes
Respondent C	Senior developer and manager	No
Respondent D	Senior manager	No
Respondent E	Senior developer	Yes
Respondent F	Junior developer	Yes

Figure 7: Overview of participant roles in the organization

4.2.3 Secondary Data Sources

Prior to the primary source interviews, secondary data was gathered from various sources in order to gain a broader understanding of the case and context. Information was collected from the website of the company, from various news articles regarding DNB, New Tech Lab, and the company's technological ventures as a whole, as well as from a presentation held by the head of New Tech Lab, Yngvar Ugland, in a course on change management at NHH in 2020. These data sources were used to draw up an initial structure for the line of questioning and served as a point of departure for the development of the interview guide. Lastly, a variety of informal notes, drafts, and memos gathered and written during the length of the project were gathered and utilized to provide additional context and depth while analyzing. While not presented as directly as the primary data sources, the use of secondary data sources was influential in shaping the contents of the Findings, Discussion, and Conclusion sections of this thesis.

4.2.4 Choice of Approach

For this research project, qualitative semi-structured interviews were chosen as the approach for the primary data collection. As researchers, it is necessary to broker the trade-off between the structure and quantifiability of structured interviews, and the adaptability and dynamic possibilities of lesser structured interviews. As this project aimed to gain deeper insight into an unexplored context, the latter was deemed preferable. This approach was taken due to the

nature of the research question, and the lack of tangibility in the answers that were expected (Saunders et al., 2019)

In order to gain meaningful data from the interviews, an interview guide was developed. Apart from the opening questions regarding the subject's background, the questions were designed to be open-ended and to invoke further discussion, with the initial question meant to serve as a point of departure for the subject to share its insights. The interview guide was slightly modified during the interview process, as themes and topics that could be of interest emerged during the initial stages of data collection. Ideally, the interview process would have been conducted in person, but due to measures taken to combat the spread of coronavirus, all participants were working remotely from home. The solution was to do the interviews over video chat. While not a perfect substitute, this still allowed for non-verbal cues and emotions to be conveyed, as well as creating a more solid foundation of trust and interpersonal connection between the researcher and subject (Saunders et al., 2019).

4.2.5 Interview Process

After deciding upon the case company and the initial topic, Professor Meyer contacted Yngvar Ugland, the leader of New Tech Lab, to confirm their interest in participating in the project. Upon having this confirmed, contact with the potential participants was established by Ugland. Interview times and content was clarified, and the participants accepted the invitation to join. All interviews were performed over video chat.

A key part of obtaining meaningful data during the collection process is understanding the given business and research context. In order to be better prepared for the interviews, I gathered information regarding New Tech Lab, DNB, and the organizational structure of the bank before conducting the interviews, as this allowed for more precise lines of questioning, and a greater understanding of the structures and processes described by the participants during the interviews.

In conjunction with the data collection process, all participants received a consent form. This form outlined the scope of the interview, the ways their contribution would be used, and their rights as participants. The form also explained the FOCUS RaCE program and its

purpose, and the confidentiality agreements in place for the researchers who were to handle the data obtained during the interviews.

The first question of each interview was always asking the participant to give a brief description of themselves. Apart from providing useful biographical information about the participant, this was also an attempt to mitigate any initial nervousness in the subject, allowing for a more relaxed conversation. Following this, the participants were asked questions regarding their background, their history at the company, and their work. The main part of the interview consisted of questions regarding DNB and New Tech Lab, and the work that the unit does in the organization. The initial interview guide is attached as Appendix A in this paper.

Choosing the semi-structured interview approach allowed for the participant to stray from the initial questions at will, leading to a wider range of insight into the topic. During the interview process, I made a conscious effort to minimize the level of interruption, and to encourage the participants to elaborate on any matter they deemed interesting, thus allowing for topics that were previously unaccounted for to be discussed.

4.3 Data Analysis

4.3.1 Data Preparation

The first step in the process of data preparation was to transcribe the audio recordings of the interviews. While automated transcription services do exist, they lack the human element of contextual understanding. Elements such as humoristic undertone, sarcasm, and doubt can quite literally get lost in translation, and manual transcription was preferred for this task. This entailed manually converting the audio recordings to text documents. Elements such as “haha” and “eh...” were used to express humor and doubt, and the respondent’s speech was quoted as precisely as possible, even in instances where the answer lacked structure. This ensured that as much of the context as possible was included in the data material – this approach is beneficial when analyzing interviews of this manner, in order to fully grasp the nuances and meanings of the answers provided (Saunders et al., 2019).

One issue that arose during this process was the fact that the interviews were performed in Norwegian. This meant that any quotes to be used in the paper had to be translated to English. During this process, it is critical to pay attention to subtext and literary devices used, as these do not always translate well directly. However, this was mitigated by the manner in which the original transcription was performed – allowing for as much greater understanding of the subject's tone and inflections.

4.3.2 Initial Data Analysis and Initial Coding

The first step in the data analysis process began during the interviews – while interviewing the participants, notes were taken to allow for the initial development of ideas and themes to begin as early as possible. These notes were a key contributor to the dynamic development of the interview guide and the general direction of the thesis during the interview process and were a helpful tool in conceptualizing the early versions of the model (Charmaz, 2006; Saunders et al., 2019). The initial analytic process was inspired by Grounded Theory elements, with analysis and development being performed between the interviews. During the process of data collection, several topics and key elements appeared in all of the interviews, leading to additional attention being put into these themes in the following interviews.

Towards the end of the process of interviewing the participants, a clear agreement in the answers given was evident, and this led to increased certainty as to which elements were the most central in answering the research question.

The main part of the initial analysis consisted of going through all the transcribed interviews and giving each section codes according to the themes covered, based upon Kathy Charmaz's guidelines for coding qualitative data (2006). This varied from single sentences to whole passages, depending on the width of topics covered by the subject. Seeing as this project was aimed at exploring new facets of an existing phenomenon, *in vivo* coding was chosen for this process. This is a way of coding transcripts where the sections are coded using a short phrase or a word taken directly from the section in question (Given, 2008). This is a suitable approach when the author is looking for emerging themes and topics in the interviews – by using short terms from the interviews, the researcher can find recurring points that are potential subjects for further exploration in the following interviews.

Using this approach was very helpful in terms of managing such a large amount of data and information from the interview transcripts, and while time-consuming, this step allowed for much easier analysis in the rest of the process. After initially attempting to code the interviews manually, the software ATLAS.ti was tried, which proved to be more effective and precise. The use of this tool allowed for consistent coding and a greater level of organization, while keeping the advantage of having to manually perform the coding myself, leading to greater insight into the data material.

4.3.3 Thorough Data Analysis and Focused Coding

With all the interview material coded and prepared for further analysis, the process of focused coding began. Charmaz (2006) explains this process as the stage where the decision of which of the initial codes are going to be used to develop the analytic and explanatory focus of the coded data (Saunders et al., 2019). During the process of focused coding, the initially coded material was analyzed using the ATLAS.ti software, in order to gain an understanding of which topics were recurring across the different interviews. While interesting, this material was somewhat messy, and in need of further contextualization to provide value. The codes from the initial coding were then sorted into groups based on themes gathered from the initial research question and the emerging topics from the interview processes.

Following this, the relationships between the codes, the appearance of codes across different passages and interviews, as well as the groups and subgroups were examined and analyzed. When combining these input elements and viewing them in light of the emerging suggested themes from the interview process, several explanatory elements emerged. This process was dynamic and involved jumping back and forth between the aforementioned steps as more central themes and points appeared. This is in line with Charmaz (2006) and her description of focused coding – working dynamically and enabling comparisons and connections between the different layers of the codes and coding allows for greater insights to be learned and strengthens the emerging explanation.

The result of this process is the model shown in the Findings chapter. This model is an attempt at visualizing and representing the findings of the research phase as a useful tool for further comprehension of the topic. This model is interesting in itself in a vacuum, but in

order to gain greater insights, the findings in the model will be evaluated in the context of the existing research on organizational ambidexterity and radical innovation, as presented in the Theory section.

4.4 Research Quality

When performing business research projects, it is vital to hold a critical view of the quality of one's work. This section aims to address this aspect, through various metrics of quality. According to Saunders et al. (2019), the main scientific canons of quality-based inquiry are reliability and validity. **Reliability** tackles the question of whether the methods and approaches used would yield comparable and consistent results if replicated in a similar research setting. If another researcher were to attempt to perform this very project themselves, which choices have been made to increase the likelihood that they would be able to produce similar results? **Validity** can be seen as a measure of the appropriateness of the choices made with regard to the research objective. For qualitative research projects, validity can be seen as three main components. **Measurement validity** describes whether the chosen methodological approach is appropriate for measuring the phenomenon in question. **Internal validity** answers whether the findings of the research project can be attributed to the design choices made, rather than to luck or other confounding factors. Lastly, **external validity** is based upon the value of the findings to other, external contexts. In business research, case studies are often done in specific contexts, and the evaluation of external validity with regards to which extent the findings can be generalized and used by other parties (Saunders et al., 2019).

Some researchers have argued that these tools for assessing research quality are mainly suited for quantitative research and that they are less suited for qualitative purposes (Sinkovics, Penz, & Ghauri, 2008). A proposed alternative is the concept of **trustworthiness**, which is seen as a more holistic approach to the topic of research quality in qualitative research. This overarching evaluation is divided into four sections. **Credibility** is substituted for internal validity, **dependability** for reliability, and **transferability** for external validity. The last facet, **confirmability**, can be seen as a substitute for objectivity (Lincoln & Guba, 1985). As this project is a qualitative case study, Lincoln and Guba's motivation for utilizing these specialized terms is applicable, and compared to the original

measurements of reliability and validity, the latter framework appears to be a preferable way to assess the research quality of this project.

4.4.1 Credibility

Credibility can be seen as a measure of to which degree the participants' realities and understandings of the topics at hand align with the ones presented by the researcher (Saunders et al., 2019). There are several ways researchers can mitigate difficulties related to this issue – one being through a process called **member validation**, a process where the participants are allowed to participate and gain insight into the materials and the findings, in order to ensure an accurate portrayal of their opinions and experiences (Guba, 1981). As this project used semi-structured interviews for data collection, the participants were allowed to elaborate and expand upon unclear areas during their interviews, allowing for increased accuracy in their statements. Following the interview process, the participants were offered to review and comment on the transcribed interviews, to ensure that they felt that their viewpoints were accurately portrayed. During this process, dialogue with several of the participants was upheld, allowing for further input and inspiration.

The process of **triangulation** is achieved when the researcher is able to combine input from multiple sources and types of data, in turn strengthening the credibility of the research (Guba, 1981). While the primary data gathered for this project were the main part of the relevant data used, the collection of secondary data provided additional and helpful insights into the topic. Another element allowing for this aspect was the variety of the interviewed participants. While they shared the same employer, their backgrounds, experience levels, and hierarchical positions varied greatly. One key factor was the fact that participants from both New Tech Lab and other DNB subdivisions took part. This allowed for direct contextualization between statements from the perspectives coming from inside the unit, as well as from the outside. Additionally, the participants varied in experience from recently hired developers to long-tenured managers. These factors combine to create a heterogeneous mix of experiences and inputs, allowing for increased credibility for the correlating findings.

Lastly, the concept of **peer debriefing** can be used to further increase the credibility of the research. Saunders et al. (2019) suggest using a different researcher to discuss ideas and test hypotheses and findings. This was done in two ways for this project. Firstly, continuous

dialogue and discussions with the supervisor for the thesis, Professor Christine B. Meyer, were useful tools in ensuring that the direction of the project was consistent. Secondly, the FOCUS RaCE project provided an arena for sharing insights and questions among the participating student researchers. Towards the end of the semester, the project hosted an event where all the researchers could present their research and receive questions and feedback from fellow student researchers and faculty members. Professor Inger G. Stensaker provided critical questions and theoretical input that helped refine and align the research content during this event, which helped support the scientific credibility of the finished product.

4.4.2 Transferability

When performing scientific research projects, transferability is a way to judge to which extent the methods and foundation of the project are suited for being generalized and applied to other research questions (Sanders et al., 2019). In essence, this means that a research project with a high degree of transferability allows for much utility for other researchers who wish to take on similar projects. This case study relied on theoretical sampling for its respondents, with an exploratory and mainly inductive research strategy, which is an approach that concedes some transferability to gain applicability for the case in question. This type of “one-off” study is suited for uncovering a maximum range of information available (Guba, 1981).

As a researcher, decisions like these are a key part of designing a project that is best suited for answering the research question. For this project, the focal point was the understanding of the specific phenomenon of how units like New Tech Lab can work to gain organizational legitimacy. As such, the issue of transferability has not been the main concern in terms of reliability and trustworthiness. However, the research setting and the methodology used do provide a point of departure for other researchers who find the concepts explored in this thesis interesting, and who wish to examine similar units to New Tech Lab in other financial institutions or comparable contexts.

4.4.3 Dependability

As the process of an exploratory case study develops, so might the research focus and frame of the researcher. To ensure a satisfactory level of dependability as a researcher, it is vital to provide an honest and reliable account of the path of the project, and the changes applied underway (Saunders et al., 2019). This approach allows other researchers and readers to gain a clear and honest understanding of the processes related to data collection, analysis, and interpretation. (Guba, 1981).

Several measures were taken to ensure the dependability of this project during the research phase. This thesis includes descriptions of the methodological choices and dynamic adaptations made during the course of the project, in an effort to create transparency. During the whole research phase, fellow researchers, professors, and the supervisor for the thesis were consulted to ensure alignment between the emerging findings and the intended research angle, referred to as a peer audit by Guba (1981).

4.4.4 Confirmability

When performing scientific research, the researcher should take on an impartial and objective viewpoint, to allow for fair and balanced interpretations of the findings (Charmaz, 2006). While true objectivity can be argued to be unachievable, the researcher can take conscious measures to mitigate subjectivity to a large extent. One such measure in terms of this project was the communication with the informants and participants in the interviews. Charmaz (2006) argues that it is important for the researcher to be mindful with regards to building trust and rapport with the informants, as this leads to higher quality data collection. This was addressed during the entirety of the interview process. The participants received a consent form outlining all the relevant details of the interviews before the interviews took place. From the initial contact with the potential interview subjects, there was made a conscious effort to provide clear and transparent information about the interview process and the project in general, to create trust.

The interview process can in hindsight be considered a success in this regard. Several of the participants shared information and opinions that they later conceded could be seen as controversial or overly honest, but the agreement of confidentiality and level of trust allowed

them to share their unfiltered insights. Likewise, several of the participants went on to not only suggest additional subjects that the project would benefit from interviewing but also helped establish contact with the relevant parties, thus underlining the trust that had been established during the process.

4.5 Ethical Considerations

As a researcher, it is important to be mindful of the ethical aspects of the research performed. Research ethics can be described as the standards of behavior that act as guidelines for the conduct of the researcher, concerning the rights of the participants, or others affected by the research (Saunders et al., 2019). It is in the interest of researchers to abide by ethical standards both due to this being seen as the right thing to do by one's peers, but also because not doing so can have a significant impact on the outcome and quality of the research project (Saunders et al., 2019).

All researchers at NHH must abide by the institution's guidelines for research ethics, and this includes Master thesis students. These guidelines state that researchers at NHH are to follow norms for research ethics, such as expectations of honesty, impartiality, and openness towards their flaws in the role as researchers (NHH, 2015). In addition, as a part of the FOCUS RaCE research project, all researchers were required to sign a confidentiality agreement regarding the information they were to obtain through their academic work. This was an important requisite for the researchers to gain access to the external partners, who volunteered to share potentially market-sensitive information for the benefit of economic research.

All the participants that were interviewed signed consent forms that outlined how their contributions were to be utilized, and who would have access to their identifying information. In order to protect the participating subjects, all identifiable information has been omitted from the transcripts used in the research, with this information only being available to the researcher and the supervisor, per the confidentiality agreement. All information and materials related to the project have been stored safely on encrypted devices and will be handed over to the FOCUS RaCE program per their guidelines at the completion of the thesis before any remaining copies are to be disposed of safely.

The FOCUS RaCE project is also collaborating with NSD, the Norwegian Centre for Research Data, to ensure proper data protection and handling of personal data. This is necessary due to this thesis having used identifying information such as names, dates, backgrounds, organizational roles, and occupations to develop the analysis and results. While any such personal data that can be linked to individual persons have been removed from the thesis paper itself, the mere handling and storage of personal data creates the need for following the guidelines and initiatives of NSD.

One main consideration for this project was whether to anonymize the name of the corporate partner or not. After careful consideration and deliberation with the supervisor for the thesis, it was deemed that revealing the organization in question would be of greater benefit than the potentially limiting consequences of the alternative. While negotiating access with the corporate partner, approval was granted to not censor the name of the unit or company in question, and this allowed for a more thorough discussion and vivid context in the Case Presentation. However, this was not an aspect that was taken lightly, and a conscious effort was made to omit any market-sensitive information or potentially damaging insights obtained during the interviews.

5. Findings

In this chapter, the results of the analysis performed in the research project are presented. A model stylizing the themes is shown first in order to create a roadmap for the findings, and the findings from the process are then explained, by the use of quotes and concrete examples gathered from the interview process.

5.1 Summary of Findings

During the interview process, the participants' opinions were largely converging on many of the topics discussed, despite their varying backgrounds in the company. Both answers to questions directly asking about legitimacy in the organization, but also to those less related to the point of legitimacy, created an emerging picture of the forces at work. Upon analyzing the interview, three main aspects emerged as the main pillars of the findings – structural requirements, actions, and distractions.

On the topic of required structural elements, four main components were discovered. The first of these components is managerial support. As it is known from theory on ambidextrous organizations, having upper management support and protect radical units such as New Tech Labs is a necessity. Another point is a clearly stated mandate in the organization – these units need to have a clear picture of what their goal is, and this also needs to be communicated to the entire organization. Following this, having highly skilled team members was seen as vital. In an ideal world, every team and team member is highly proficient in their area, but this is especially important for radical innovation units that seek to gain legitimacy. And lastly, being granted a high degree of autonomy in the organization is seen as important. Holding such a radical mandate means exploring issues that extend past the beaten path, and the unit needs to be allowed to wander off into the unknown if it deems this to be beneficial.

The second pillar, actions, can be seen as a threefold issue. Firstly, the need for tangible results is apparent. While radical innovation units can provide value simply by being solid in terms of sensing intangible trends and phenomena, it is seen as essential for them to produce tangible results and opinions to gain legitimacy. Secondly, a focus on delivering with quality. This ties in with the structural requirement of being highly skilled – if a team wants

to be taken seriously when given autonomy, it needs to prove that it is worthy of this freedom. Secondly, the focus on quality and being highly proficient at what the unit does. This was a topic that emerged broadly in the interviews – a common denominator was the respondents' views that the high degree of quality in the unit's work was a key contributor to their legitimacy in the organization. This is also related to the previous point and shows a complex picture of interweaving views on the unit. Finally, emphasis on openness and sharing of findings and information from the work of the unit. This was described as a key factor and is related to what can be described as the overarching theme of the Actions aspect – a continued focus on creating value for the organization as a whole. When being allowed to have such a free mandate as New Tech Lab has received, there is a clear expectation of their work being aimed at providing value for DNB to some extent, and this mutual understanding is a part of the foundation of this trust.

The third pillar considers distractions – issues that can erode the legitimacy of the unit. Here, two main challenges were proposed. The first one can be described by the term *not invented here* – a mindset that can exist in organizations, or parts of them, where the existing skill level is very high, and external actors, such as radical innovation units, are supposed to provide feedback and contribute new solutions. This mindset can undermine the legitimacy of the innovative unit, as they can be viewed as redundant, or encroaching on the domain of the expert unit. Lastly, having the radical unit being caught up in too many ad hoc projects, also called *firefighting* by the respondents, can weaken the focus on the unit's core tasks, and subsequently weakening its efforts to build legitimacy.

5.2 Model

In an effort to provide a clear and logical overview of the findings produced in this project, a model showing the relations between the topic and themes has been created. The model shown below is an attempt at answering the research question:

How do innovation units with radical mandates work to gain organizational legitimacy?

This structured model is a graphical representation of the findings in this thesis. It outlines ten key elements that were identified as important in terms of explaining the issue of legitimacy in the innovative unit. The themes are sorted into three categories based on their similarities, to provide further structure and comprehension. The first group, named Structural Requirements, contains four key elements that were found to act as necessary for the radical unit to create a foundation for gaining legitimacy. These factors were identified by the interview subjects, and a clear consensus regarding these four elements was made apparent. The second group of elements is the Actions – activities and processes that are direct products of the Structural Requirements, which establish and support legitimacy for the radical unit. Through the analysis, three main aspects were outlined as important contributing factors to the topic of legitimacy, all of which contribute to the key point of providing value to the organization. The last group, Distractions, are organizational processes that negatively affect and erode the legitimacy of the radical unit.

While the structured model provides a clear overview of the findings in the analysis, it would be too simple to merely suggest that:

$$\text{Structural Requirements} + \text{Actions} \div \text{Distractions} = \text{Legitimacy}$$

Instead, these factors appear to create a complex system of elements that together either support or inhibit the efforts of the innovation unit to gain legitimacy in the organization. In order to fully conceptualize these findings, a relational model is proposed. This model shows the relationships between the elements, how they affect other factors, and which roles they play with regard to the legitimacy of the unit. While these models have been developed as

products of a singular case study, they are intended as proposed aids in analyzing other cases that are similar in form and context.

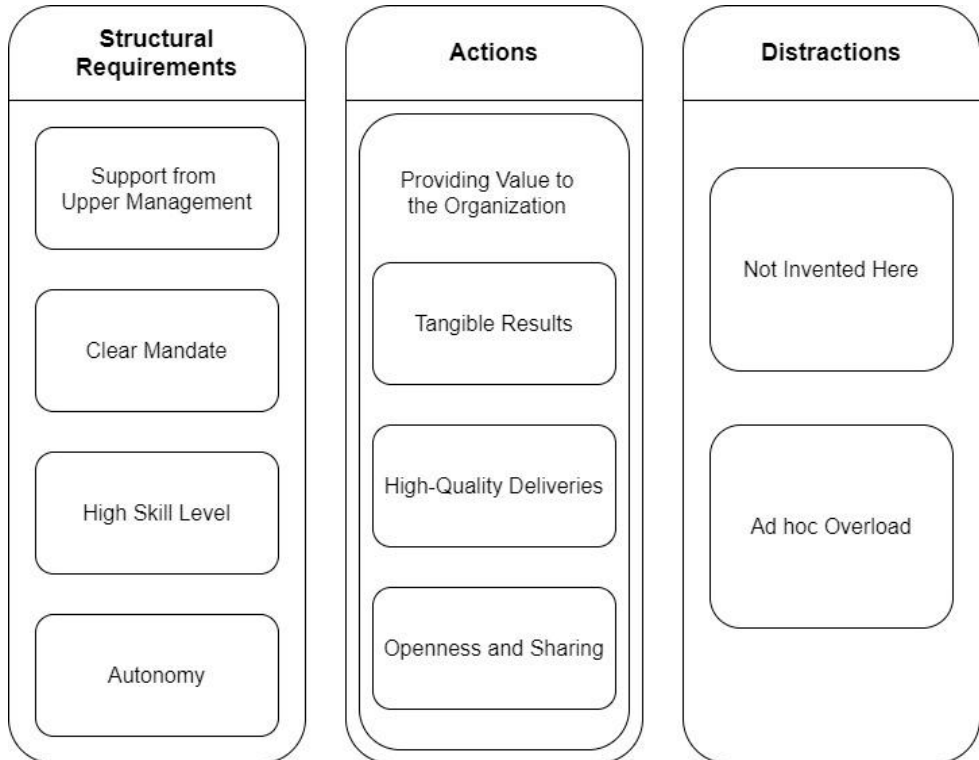


Figure 8: Structured model based on the findings of the research

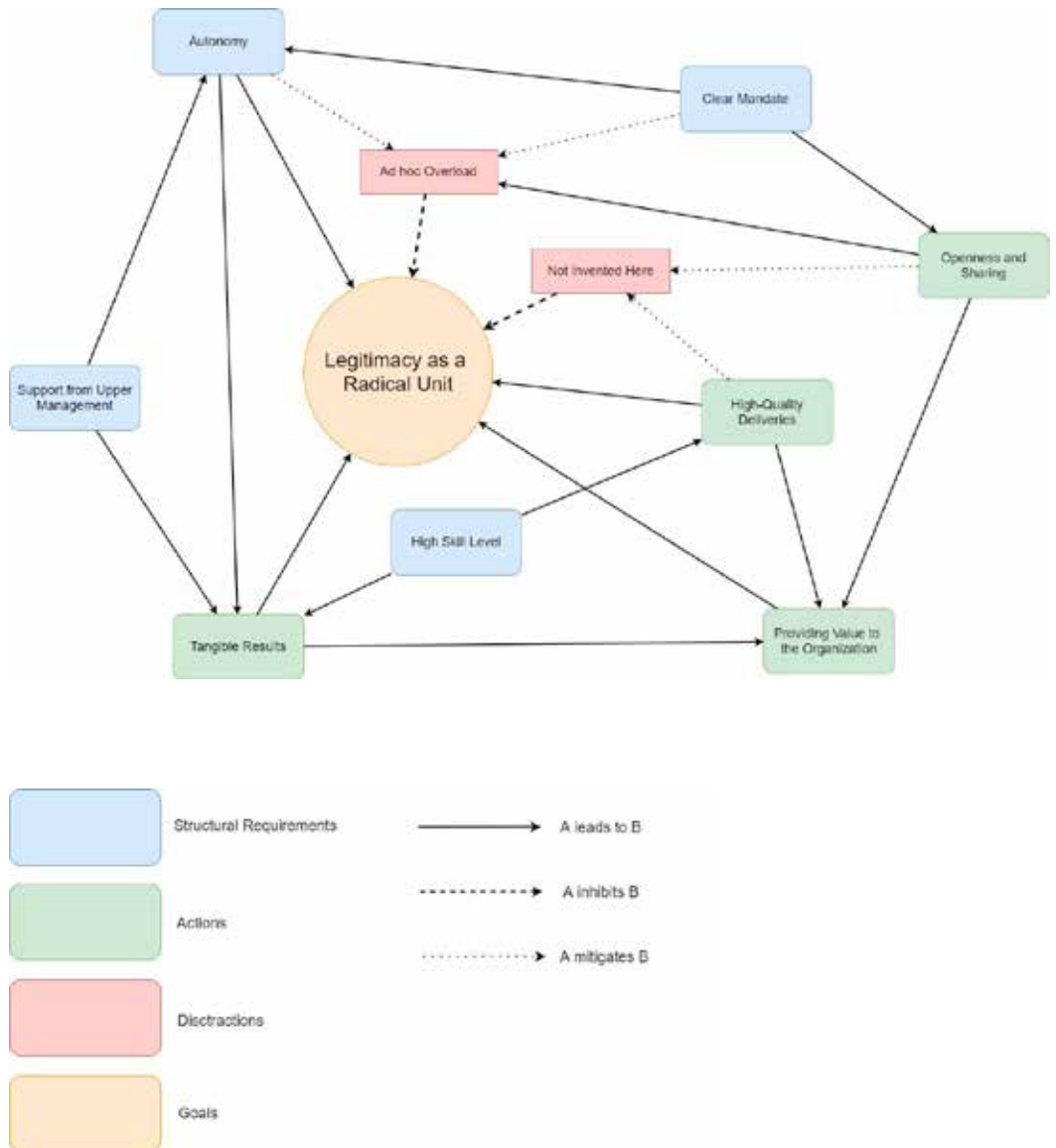


Figure 9: Relational model based on the findings of the research

5.3 Structural Requirements

5.3.1 Support From Upper Management

When analyzing the existing literature on the topic of organizational ambidexterity, the need for support from the managerial layers, as far up in the organization as the top-level management, is considered a key factor. This aligns with the views of several of the participants, as they expressed this to be a necessity for New Tech Lab to be able to exist in the current form.

And in other areas we have, I don't know, we do have support from the board, and, like leadership, because they are very focused on that they want DNB to lie ahead of the curve. And they want DNB to not just be a bank, but that we should be able to be more than that, and they are very focused on the point that you're not supposed to disregard how tomorrow's banking world can potentially look. So that is what is our task, and when you kind of know that the people sitting in the top management also subscribe to that philosophy, that it's important, then that is something that affects us positively.

One aspect in this regard is the need for upper management to express their support of the unit and their ventures outward, to create support. This is a topic that the CEO of DNB, Kjerstin Braathen, appears to have adapted with regards to New Tech lab.

She (Kjerstin Braathen) did present our smart refrigerator. Well, yeah, that was pre-corona, so that is a while ago, haha! And then she did speak a bit about the importance of New Tech Lab, the importance of being able to look ahead, the importance of not being confined to these boundaries.

During the interview process, two key persons in the upper management of DNB were identified by the participants as important contributors to the support and legitimacy of New Tech Lab – the aforementioned CEO Kjerstin Braathen, and Rasmus Figenschou, Group Executive Vice President of Payments and Innovation. The amount of trust afforded to the

New Tech Lab unit by these two was seen by several subjects as a necessary factor in order to ensure the legitimacy of the unit's work.

Well, the nice thing about Rasmus is that he is a proper banker. (...) So, he is this kind of, he knows how the bank works. And that is a nice counterweight to have, to have a leader that both, he is a type of guy who... I have a great deal of trust in him because he gives so much trust. So, when you feel that you are being trusted, it is great to know that he looks at it through the glasses of someone who knows banking. And at the same time, it's like, because he gives out so much trust, you know that he can explain all this in a manner which I am not able to, in the language of Kjerstin Braathen and the rest of the board. That is the reason why he finds what we are doing, and the way we are doing it, important. And then Kjerstin has her own way of explaining, like why she thinks what we are doing is important, which is another way to describe it all.

However, being supported by upper management does not mean that the unit is free from scrutiny. New Tech Lab is still responsible for pursuing the mandate handed to them by management, and they are still attached to the organization, even if they are seen as an autonomous unit.

You need to have a balance between shielding and reality orientation, because there is no one, at least not anyone who is supposed to create value, who can be completely cut off from the rest. (...) So, a balance between both shielding, and making sure that they have the opportunity to create those things that are somewhat off to the side, that you cannot necessarily see the value from at first glance, maybe not even in the next five years, but where we can see that, we believe that it is going to have an impact on the future of the bank.

Through the answers put forward in the interview process, one can argue that New Tech Lab has been offered a satisfactory level of support from the upper management of DNB, in order to give the unit the freedom and organizational space needed to focus on their tasks and goals.

5.3.2 Clear Mandate

What separates a group of nerds playing around in their office from a radical innovation unit, is a clear mandate. This is essentially an expressed statement of what the unit is supposed to be doing, and what their goals are in the greater context of the organization. Through the interview process, two very clear halves of this mandate were discovered, one of them being the main focus of the unit – radical exploration in the business areas of the organization.

(regarding the mandate of New Tech Lab)

It's about exploring new technologies, and about how we can apply them, both on future challenges, but also on the challenges of the present. That is probably the most concise way I can describe it.

The foundation for this part of the mandate is relatively simple – New Tech Lab is a unit created to explore the possibilities that lie ahead in a 3–5-year perspective, and preferably within areas that are beneficial to DNB and its long-term strategy.

So, the goal is really 3 to 5 years, and that is actually, we have the full range of possibilities within our budgets – which I believe are basically zero – to do and explore anything.

Another participant described this aspect of the mandate as the unit being the organization's sensor responsible for staying updated on the very cutting edge of technological development.

It is kind of twofold. One part is the innovation part, where the goal is that we are trying to stay ahead of the curve technologically, test the newest of the new technologies – it can be things people are barely yet talking about. And our job is to get a grasp of those things and, yeah, try to stay updated, and follow the trends of what is happening out there.

The other aspect of the discussion regarding the mandate of the unit was a concept described as *firefighting*. Essentially, this meant that New Tech Lab was brought in as a team of consultants to solve particularly complex challenges.

And the other half has turned into us stepping in wherever it is needed if there is some kind of crisis, that something is burning in the bank – it can be solved by sending in a team of developers that can work very efficiently and resolve the issue in a very short amount of time, to help out. So that is also something we have ended up doing a bit of.

This was elaborated upon by another participant, who immediately had an answer ready on the topic of the mandate of the unit.

(regarding the mandate of New Tech Lab)

Ehm, well, I was just about to call it firefighting, haha!

However, one issue that emerged was the origin of this mandate. During the interviews, it became apparent that this mandate was not simply handed to the unit upon its creation, but there was also a need for the unit to claim this space in the organization through their actions and communication.

And then it is like, then you have kind of built that position, you haven't just been given that mandate, but you have kind of taken it and earned it. And that is kind of how it works in DNB in general, that you need to take those positions that you... you can be given something like that formally in terms of the organization, but you have to... you need to kind of take that mandate seriously, and own it. The thing that's written on the paper can be interpreted like so and so – like how much, how large do you want to grow in that role?

There was a general consensus in the group of participants that New Tech Lab has been handed a clear mandate by the organization, and that this has allowed them to work towards establishing legitimacy and authority in their area of expertise.

Curiously, one participant was surprised by the degree of alignment between the FOCUS RaCE program and the mandate of New Tech Lab and deemed the two to be a good theoretical fit.

(regarding the focus of the research project being radical technology-driven innovation)

Yeah, because I find it pretty remarkable that you are using those exact words, because, and I hope the others have confirmed this, we are really the only ones in DNB who are doing radical technology-driven innovation.

5.3.3 High Level of Competency

Perhaps the most agreeable factor among all the participants was the skill level and the amount of competency New Tech Lab possesses. For a radical, exploring unit like New Tech Lab to be taken seriously, it needs to hold a high degree of know-how and experience, or it may struggle to be taken as a serious exploring outlet.

So, it is basically all about putting together a well-functioning team with members who have really good working capacity, and good knowledge.

There was also a clearly expressed focus on the team needing to consist of only generalists, as there was a concern that too many members with specialized tasks and would impede on the team's working methodology.

In a team that is as small as New Tech Lab, it is important that no one has got really specialized tasks. We basically have to be used where we are needed, be it architecture, security, like – we have to be able to cover all the bases. That is the core principle when it comes to cross-disciplinary teams, and that is probably part of the success factor for New Tech Lab. That we have that broad interdisciplinarity in the team.

Units with radical mandates such as New Tech Lab often need to master several different professional disciplines to be prepared for the challenges they might encounter. While not necessarily in the very highest echelon of these areas, the unit is seen to be armed with a broad variety of competencies at a high level, effectively ensuring that it is ready to provide opinions on almost everything it might face.

Well, the methodology is that they kind of, it's like – from my point of view, you often see engineers divided into two categories. You have the ones who are experts in one coding language or one technology, and they are really good at delivering solutions tied to that.

And then you have the ones who do not really care about coding and technology – they are simply great at all the aspects of it. They see the coding and the languages more like ways to get to the solution, and they can practically choose any tool. And New Tech Lab, they are more like the second kind, by way of them being more or less technology-independent, and they are not really concerned about what we call legacy, but simply try to do whatever is the fastest way to get there.

The need for a high degree of competency was discovered to be a key antecedent to the facilitation of the unit. One of the respondents who were a part of the founding group of New Tech Lab elaborated upon this point, explaining that they approached the issue of reliance on competency and skill as an all-or-nothing decision.

And at the same time, we were very clear that if we were to do this, it had to be designed around some core principles. Like the need for us to self-sufficient in terms of competency and capacity, or in other words – heads and hands.

5.3.4 Autonomy

When handed a radical innovation mandate, it is necessary for the unit in question to be granted enough autonomy for it to be able to perform its work. This was elaborated upon by participants from several managerial levels in the organization. One aspect of this was the feeling of trust towards the unit's capabilities and the decision process regarding whether it was to take on a new task. This theme of experienced trust was a general topic through the interviews.

And then on whether we are qualified to take on a project, that is kind of not up to us to judge. If someone comes to us and asks, "Can you guys do this?", then they need to have faith in our ability to do that, and then it's pretty much fine – and then we decide amongst ourselves on whether we believe that we can handle it.

This freedom was elaborated upon from all levels of the organization, including the managerial level above New Tech Lab. The decision to grant such a high degree of autonomy to the unit is not a product of chance, but rather a conscious managerial choice. This relies on a mutual understanding between the unit and the upper management in terms of areas of responsibility, the need for check-ins and evaluations, and expectations in terms of skill and performance.

New Tech Lab has adapted a hyper-agile methodology based upon the foundations of Kanban and Scrum, but even the minimal rigidity of these frameworks provides too much of a bureaucratic obstacle for the unit. They leverage this opportunity to gain autonomy. However, balancing autonomy and alignment is an important, and sometimes challenging, task that the unit needs to handle.

So, that is the first difference, that when you go into a meeting with New Tech Lab, you are not going to be met with bureaucracy, you are being met with the shortest path to the goal. Simple as that. That is the main difference, and the fact that they are so autonomous is a large advantage, but it is also very demanding for them, because they are still a part of DNB. And it is not like you can just go ahead and do whatever you want to – what you create has to fit into a bigger picture at some point. And that can bring challenges.

The general view of the informants was that New Tech Lab has been granted a high degree of autonomy through its mandate from the organization and that its somewhat unique situation allows it to differ from other similar divisions in the organization. The topic of autonomy is perhaps best summed up by one of the respondents themselves.

And that, after a while it turned into us not needing to ask anyone about what we were going to do. We are just doing what we are supposed to do.

5.4 Actions

5.4.1 Tangible Results

During the coding of the interview transcripts for this paper, the theme “tangible results” was the item that appeared the largest number of times across all the interviews. This showed that there was a broad understanding in the organization as a whole that this element is a key factor in terms of legitimacy. One of the most consistently held beliefs in the group of respondents was that in order for New Tech Lab to gain legitimacy as a radical innovation unit, it needs to deliver tangible results. The discussion topic of tangibility was seen as an important factor, as one can only get so far on abstract concepts and ideas alone, when in positions like the one held by New Tech Lab.

Yes, and our mantra is that we are going to deliver technology that works in our experiments. Like, it has to be a minimum of some sorts.

And when we proceed to present the solution, it is actually a solution that works, that we can show off. That makes things a bit easier.

This aspect also entails being able to collaborate with other parties and stakeholders to produce results that can be analyzed and evaluated. New Tech Lab is described by external collaborators as a unit that can do so efficiently, and this is seen as important.

(on New Tech Lab's work process)

Ehm – it's quick, they experiment and build clear proofs-of-concept, often with a technological approach, where they prove that it is possible. (...)

And this is something that they have done time and time again. Before they can get to this stage of proofs-of-concept, they usually have to go through a longer phase of exploration, where they are in dialogue with second and third parties. Then comes proof-of-concept, and then assessment of maturity in the cross-section between the needs of the business, and the possibilities of the technology.

When asked about the boundaries, or lack thereof, that New Tech Lab had been afforded by the bank, one of the informants drew the link between autonomy and producing results. By working to produce relevant opinions on topics that are important to the organization, the unit has created a degree of legitimacy that allows them to gain a higher level of autonomy.

But then again, we have sort of had to earn this position as well, by taking on these ballsy bets on some technologies, and being able to show that there can be extracted value from it, and this has gradually allowed us to gain greater autonomy over the projects. The fact that we are basically 100% autonomous in the way we are today, in terms of us being able to decide for ourselves what we would like to do – and then doing it, is a result of us having done a bunch of important things before. Let's just call it a reality injection.

Through the interview process, the participants put a great amount of emphasis on the specific projects that New Tech Lab has partaken in when asked about how the unit has worked to build up its legitimacy. There were especially two key moments that were identified in this regard.

Seeing Through The Blockchain Hype

New Tech Lab was established as a separate unit in the Payments and Innovation division as recently as 2017, but it received a baptism of fire during the peak of the blockchain hype between 2017 and 2018. As Bitcoin and other cryptocurrencies experienced tremendous growth in valuation in a matter of months, financial institutions were racing to be the first to deliver brand new blockchain-based concepts that would benefit from this hype. New Tech

Lab was put in charge of exploring the possibilities that existed for DNB within this new technological branch. After building a banking system founded upon blockchain technology, the unit produced a radical conclusion – this was hot air, a trend that DNB should avoid at all costs.

The strange thing about blockchain is that it ended up being hyped up to such an extent. But really, it's just a slow database. (...)

And it is possible that we are going to build a bank based on blockchain again in the future, but it was a nightmare the last time we tried it. And then it was pretty straightforward – this technology is simply not mature enough, so it was a nightmare for developers to use for the purposes of building that sort of solution.

At the time of this project, the major Norwegian banks were ramping up their project funding for innovations based on blockchain technology. While some competitors decided to go all-in on this new trend, New Tech Lab declared the initiative dead-on-arrival and deterred the bank from spending these large amounts of resources on blockchain development.

We try to come up with ideas. (...) We did kill a couple of initiatives – for example, we stopped the blockchain project before we had gone all-in and hired twenty blockchain developers, which we saw that quite a few other banks ended up doing. That hasn't been very successful.

With a clearly stated mandate as the unit in charge of exploring emerging technological advances and their value to the organization as a whole, New Tech Lab is expected to advise the organization on which avenues to pursue when new technologies become available. In the case of the blockchain debacle, this was achieved through a clear mandate and organizational trust.

Yes, and then we have the task of being kind of special agents, who move through unknown waters, technology waters. And being able to say “Oops, we do not want to go further in this direction”, like with the blockchain project.

The Compensation Scheme Portal

Following New Tech Lab's efforts regarding blockchain technology, the unit had proven its ability to deliver tangible results in a limited time frame. This was seen as the first step in establishing New Tech Lab as a unit with organizational legitimacy within its domain. Through a combination of good preparations and being at the right place at the right time, New Tech Lab suddenly found itself in the midst of a new, defining project.

So, we got attention, and we got very concrete deliveries. That was kind of the first step in establishing New Tech Lab. The next step, when we knew that this was a team that could deliver, was to give them tasks, and mostly from their own initiative. It was somewhat random that it happened this way, but there was a management meeting where the CEO was taking part, and I believe that Yngvar, being the leader of New Tech Lab, specifically "challenged" Kjerstin – if she had any tasks that appeared unsolvable, to let New Tech Lab have a go at them. And fate would have it that within the next 48 hours, such an impossible task appeared – originating from the Department of Finance, though Finance Norway, and then through Kjerstin Braathen – this project was what would end up being the compensation scheme.

While Norway was about to go into nationwide lockdown as a response to the coronavirus pandemic during the spring of 2020, governmental agencies and financial institutions raced against the clock to create a solution to the consequences of the impending lockdown. The issue was simple – the government needed a portal where businesses could apply for compensation payments to mitigate their revenue loss from the forced lockdown. The problem was that no such infrastructure existed at the time, and to make matters worse, most employees of the participating parties were now working remotely, creating further challenges in terms of collaboration. Estimates for the normal time frame to deliver a project of this size were denominated in months and years, not the required weeks. Failure to deliver a solution could render thousands of small businesses bankrupt, with large numbers of employees left without work. However, this was outside of New Tech Lab's usual scope.

It is possible that we should not have done the work on the compensation scheme. In that case, we would have had a lot of businesses, or we would have seen a lot of businesses cease to exist after a while.

The unit decided to tackle the challenge head-on, and in a feat of efficient problem solving, the collaborative team that New Tech Lab was a part of managed to deliver a fully functional solution in less than four weeks, which was inside the time frame of the project.

Well, it's like, the upper management is very grateful. They have someone who solves problems for them. And this whole compensation scheme project, it put DNB in a really good light. In reality, it was something we did for "AS Norge" – everyone else said that this was something we would not be able to do.

While this project was outside of the scope of work that New Tech Lab usually is involved with, its contribution and approach to the compensation scheme further cemented its legitimacy as a radical problem-solving unit to the rest of DNB.

Suffice to say, this was a very clear showcasing of the ability to connect a solid, delivering unit to a precarious problem for society.

5.4.2 High-Quality Deliveries

While the interview process showed that having inherent quality in the unit can be seen as a structural requirement for establishing legitimacy, it also uncovered that there is a widely held position that New Tech Lab's ability to apply these qualities is a key factor.

But when push comes to shove, the way they sort of legitimize themselves is simply by being skilled. That is only, it's actually the only currency that exists here. They have to work quickly, and that puts a lot of pressure on them, right. And then they are lucky to have some extremely talented individuals on their team. And that is in my view the best way to impress someone – by knowing what you are talking about, and that it immediately becomes apparent that these people have that knowledge. So, that is where the legitimacy lies, it's simply straight know-how and knowledge.

Knowledge and delivery.

Having a team consisting of highly gifted individuals is not in itself enough to be able to produce useful outputs for the greater organization. They also need to show that these qualities can be put to use on relevant projects, which is something New Tech Lab is described as being good at by participants from outside of the unit.

They deliver.

And... they deliver with a sort of thoroughness that does not lead to large consequences, to put it that way.

New Tech Lab has also been described as being good collaborators when working across various teams and projects. The unit is often invited into projects owned by other units and subdivisions in DNB and asked to provide feedback or to explore alternative, creative solutions for the project. This process supports the unit's organizational legitimacy.

To be able to quickly grasp the scope of the issue, and the way they did so by simply asking questions, gathering documentation which they processed quickly – the way they adopt a problem, I found to be... I would probably not use the word “unique”, but it was at least a lot faster than what we have seen from other external parties and our collaborators. So, that was a bit different.

New Tech Lab is able to leverage its inherent competencies and domain knowledge and turn it into performance in terms of delivering results for DNB. A conscious focus on this aspect of the autonomous work process is seen as an important factor for enabling legitimacy.

5.4.3 Openness and Sharing

At the very core of New Tech Lab's mandate from DNB is the need for sharing the findings of the unit. New Tech Lab was created to bridge the gap between new and emerging technologies, and the existing ventures of the bank, to increase the value the bank could extract from these new opportunities. Several participants pointed to the various ways New Tech Lab works to share its newfound insights with the rest of the organization, and how they felt that this contributed to the legitimacy of the unit.

And then I have tried to see where it is possible to improve things, like to give – using coaching and sparring continuously, whether it makes sense to use old integrations here, and things like that create legitimacy as well. Being able to be that professional who is out there and contributing, who can ask those kinds of – seeing as I don't belong to the unit that is working on this delivery – you can ask those stupid questions.

And at times it can be well-reasoned stupid questions. So, yeah. I think that is also a sort of diploma that we had.

New Tech Lab have created a multitude of platforms for itself to share the results of its work with the rest of the organization. One such concept is *tech talks*, a recurring event where the unit presents the new technology it has explored, what it has done, and how these findings can be used going forward.

I think that we have gained a lot of legitimacy through people seeing what we have worked on, because we have been good at presenting our work if we have explored a new technology. We like to hold "tech talks", and these show off our work. And we try to share these insights with the rest of the organization, so it's not just us sitting in our office and thinking about things alone, we kind of try to include everyone.

Another medium New Tech Lab shares their work through continuously is called the *tech radar*. Essentially an internal blog for the DNB organization, the radar serves as a way for the exploring units to provide insight into their projects and processes. This initiative bridges

the gap between the parties, as it lowers the threshold for the other units to provide feedback or ask questions. This was elaborated upon by several respondents.

And I think people appreciate that – that we, we have this kind of radar, where people can have a look at what is going on, and then they can come to us with input, and ask “Hey, have you looked at this and this?”

And then we have this technology radar, which is our tool, which is available to everyone in DNB and is our visualization of this entire universe. At the same time, we document all the experiments and projects that we work on.

Through a continuous effort to share its work with the rest of the organization, New Tech Lab is able to provide insights into its processes for external parties, which helps support the legitimacy on the unit in the broader context.

5.4.4 Providing Value to the Organization

The three Actions described above all originate from the same key principle – providing value to DNB. New Tech Lab’s very reason to exist is a desire in the organization to gain valuable insights into areas that previously were seen as out of reach. The reason New Tech Lab is afforded such autonomy and legitimacy in its area can be boiled down to their ability to create value for the company.

They manage to create value, both in the short and long term. I think that is the best way I can describe it, or – they create value in the short term, and an area of opportunity in the long run, that is probably a better description.

New Tech Lab is one of the smallest expenses in terms of cost to the organization, only amounting to the salaries of the members of the unit. Any project funding needed for experiments requires funding from external partnerships.

But our costs are mainly tied to our salaries. The risk is relatively small. Okay, so you paid 5-6 people their wages, and then we get to extract the value from that.

Well, there is always a question regarding what gives the business the most bang for the buck in terms of resource allocation. And then you have this super-team of four to five, maybe seven to eight developers who are only supposed to focus on three to five years into the future – that is something I believe that we should never let go of as an organization.

It can be difficult to measure the value of an exploring unit such as New Tech Lab in monetary terms. This ties in with the mandate of the unit – as it is tasked with testing and evaluating new and untired technologies, it is also bound to fail.

But it is very difficult to measure, because how do you put a monetary value on all the little things we attempt, that never develop into something tangible? But then again, if there are not enough initiatives that fail, that means that we are not taking enough risks.

One way to mitigate the issue related to measuring intangible deliveries is to keep a short distance between the levels of management, to ensure that the activities are aligned with the visions of the organization, and its view on what creates value.

Take how it used to be before, if I am to exaggerate a bit – it was like, Rasmus, are you content? Do you have a good gut feeling about this? Yes? Okay, have you spoken with Rune Bjerke, does he have a good gut feeling towards what we are doing? Yes? Okay, then we also have a good gut feeling about what we are doing.

From the perspective of the managerial level, a concern may arise in terms of whether the human capital afforded New Tech Lab is put to good use, or if it would be better off spent in other divisions or projects.

If you over time, over a span of years, only manage to deliver solutions that get media attention, or that are exciting, but fail to create direct value, you are inevitably going to get questions regarding whether there are better ways to use these highly capable people.

However, there is a general notion that DNB does literally get its money's worth when it comes to New Tech Lab, as the unit is able to maintain a value-oriented mindset in its working methodology and focus.

To that point I want to add that the legitimacy of the team, both in terms of their competency as an autonomous team and the sum of their individual capabilities, in addition to their ability to work closely with the right stakeholders elsewhere in the bank,

is essential in terms of being able to create that value. So, the trust they have built up through their work is important. And that comes in light of who they are, and what they are able to deliver.

5.5 Distractions

While the interview process led to clear categories that support and create legitimacy, there were also raised concerns from the participants that there are factors that need to be considered in terms of the erosion of legitimacy. These forces, called Distractions in this thesis, can potentially weaken the legitimacy that the unit has worked towards obtaining.

5.5.1 Not Invented Here

The term “not invented here” is a piece of terminology that describes a tendency to avoid or devalue things that do not originate from the original unit in question. In terms of the DNB organization, this concept would entail specialist units showing hostility towards New Tech Lab when the unit attempts to provide feedback and insights on issues related to the business unit.

It is a term that originates in consulting, and it means “Don’t come here and tell me what to do, we know best – we’re the ones who made it”. And that is something that New Tech Lab also faced. Because some of them are pretty newly hired, and they don’t think in terms of the traditional DNB taxonomy – they have a completely different mindset, and then they are met with this.

This phenomenon is a defense mechanism, as the expert unit is trying to defend their domain as experts of their area. This poses a threat to the legitimacy of New Tech Lab as a radical unit tasked with solving problems, as they can be shoved aside as second-rate contributors. This inhibits crucial creative processes, as the radical unit is often brought in with the express purpose of contributing a new perspective. However, the informants also held opinions regarding how New Tech Lab could mitigate this effect.

They have to get through this skepticism by being really good at collaborating, and like – simply being really good at dialogue and communication.

However, there was not a clear consensus among the participants. On the contrary, one of the participants had not experienced this phenomenon concerning New Tech Lab.

So, I can't see that people... I have yet to experience that there has been any sort of negative experience of it. People have understood that this Stage 1, and then we are supposed to work on that and develop it.

Overall, this issue does not seem to impede too heavily on New Tech Lab's efforts to create legitimacy for its work, but it is seen as a factor that has to be addressed to avoid negative synergies. One suggested solution to this problem was for the unit to simply prove the expert unit wrong by delivering results.

They got very clear proof, where those who worked in the existing systems had one sort of mindset, and New Tech Lab came in with a completely different view, which allowed them to envision both solutions and timelines that were quantum leaps... well, multiples is probably a better word for it, multiples ahead of what we saw elsewhere.

One point to consider is the consequences this effect might have indirectly on New Tech Lab. The mere existence of the “Not Invented Here” concept can deter the group from wanting to attract attention for their work, as it is not in their interest to be seen as bragging. This can create a desire to exist more “under the radar” as a unit, in order to be allowed to work on their desired projects, which can hinder their legitimacy as a radical innovation unit.

5.5.2 Ad hoc Overload

While New Tech Lab has been handed a clear mandate regarding their areas of work, it has also been used as what can be described as in-house consultants – essentially being used as a resource for projects with short time frames that are out of the unit’s original scope. This concept has been referred to as *firefighting* by several of the respondents. During the interview process, concerns were raised regarding whether these activities were distracting New Tech Lab from its actual focus areas.

Ehm, I am afraid that they are going to get dragged into more of those firefighting projects. That that is what they, that they are going to have to deal with more and more compliance, like other units.

This topic can be seen as a double-edged sword. Originally, New Tech Lab was not intended to focus on these kinds of tasks, but it has been exactly these cases, and the results that the unit has delivered on these cases, that have contributed to building up the legitimacy of the unit in the first place. However, spending too much time and effort on these firefighting projects can indeed shift the perception of the unit, which in turn can affect its degree of legitimacy.

(on the whether firefighting is a part of New Tech Lab’s mandate)

To me, it is also something they are supposed to do. We are in constant dialogue with Yngvar regarding the balance between being exploring with regards to what is on the horizon, and being able to turn that “horizon perspective” back into the specific issues we are working with today, and that is what we need to deliver on.

So, having that balance is important. I absolutely think that they have to be able to deliver on both fronts. But the day they are reduced to only putting out these fires, with no regard for the “outside-in” perspective and being able to apply all of it, as well as the longer perspective, then I believe that we are failing.

After further analysis, the question of firefighting being a distraction, or a core activity, was deemed to land somewhere in the middle. It appears that the relationship between the two

options is not binary, but rather a gradient that allows the unit to tend to its mandate, while also being able to be used for necessary ad hoc projects. These activities can be viewed as relevant and beneficial to the organization as a whole, and given the right framing and communication, can in fact strengthen the legitimacy of the unit, rather than erode it.

But what you will also discover is that many of these projects that are based on firefighting, really have other elements that either validate or create an area of opportunity, after the project is finished. And that is also something we work actively towards, and that we discuss in order to create that optionality for the future. If you are only solving problems, you have not done your job properly in my eyes. And that optionality is not always apparent, but over time we are likely to see the value of it.

6. Discussion

In this chapter, the findings presented in the previous chapter are discussed and contextualized with the existing theory presented in the Theoretical Background chapter. By analyzing the specific context of New Tech Lab in the DNB organization, this thesis aims to understand how innovation units with radical mandates work to gain legitimacy for their efforts in the organization. In addition, the findings are used to propose new perspectives on the topic, where the existing literature does not provide insights, as well as a new nomenclature for aspects of organizational legitimacy.

This thesis aims to understand the relationships between innovation units, radical explorative mandates, and organizational legitimacy in established firms. The basis for the thesis is New Tech Lab, an internally located ambidextrous unit within the DNB organization, and interviews with six members of the DNB organization that hold key insights regarding the unit, its methodology, and its relationships. The analysis uses a singular case as its foundation and point of departure but is intended to provide insights that extend to other comparable units and organizations and is broadly fit for generalization.

The findings in this thesis on the topic of organizational ambidexterity are in line with the general consensus of the research on the area and add support to the previously understood importance of the involvement by upper management, as well as the role of autonomy. While the existing research on the topic of radical innovation is aligned with the findings of this study, the topic of innovation units with radical mandates has received little attention, as these factors have been viewed as separate issues. Lastly, the research performed on the topic of organizational legitimacy, especially in the context of innovative units and the internal perspective of the organization, appears to be virtually non-existent. This study establishes a baseline for understanding how radical innovation units work to gain organizational legitimacy, as while the context of DNB and New Tech Lab is a singular case to be studied, the framework established can be developed to research similar cases or compare findings across industries or organizations.

Upon embarking on reviewing the literature on the topic of legitimacy in organizations, the focal point of the thesis, it was apparent that this is an area that is nearly untouched by

business researchers. In fact, the term *organizational legitimacy* is mainly used as a term to describe the alignment between the social values held by an organization and the norms of the social context the organization exists in (Dowling & Pfeffer, 1975). In the case of DNB, this would describe the relationship between the core values of the bank – Curious, Brave, and Responsible – and how the Norwegian society views these values and the ability of the bank to adhere to them. However, this is far removed from the intended research objective of this project. Additional exploration of the existing research showed no further research on the topic of legitimacy and innovation units, which suggests the need for the establishment of a theoretical foundation on the topic that can serve as a starting point for further research.

In an effort to create clarity regarding the topic of legitimacy in organizations, a new nomenclature is suggested. The existing definition of organizational ambidexterity is mainly aimed at understanding processes and relationships between the organization and external parties. This stands in contrast to the definition adopted in this thesis, which considers organizational legitimacy to describe factors related to roles, mandates, and attitudes within organizations from an internal perspective. It is therefore proposed that the former perspective is to be considered as *external organizational legitimacy*, while the latter perspective is to be considered as *internal organizational legitimacy*. This approach would help mitigate any confusion related to the terms themselves, as well as giving the two distinct phenomena more concise names.

Regarding the results of the analytical portion of this thesis, the first point to consider is that the analysis shows how support from upper management is an important factor in building legitimacy for the innovation unit. This is fully in line with research on organizational ambidexterity, which emphasizes the role of top management as a key point in establishing support for the ambidextrous unit (Tushman & O'Reilly, 1996; O'Reilly & Tushman, 2004). However, the findings also show that simply having supportive upper management does not in itself equate to legitimacy in the organization; the support afforded to the unit does however help establish autonomy for the unit, which is seen as another important element. The high degree of autonomy that the unit experiences allows it to concentrate its efforts and capacity towards projects that the unit deems to be most beneficial for DNB. This is again in line with O'Reilly & Tushman's research on ambidextrous structures, as they outline the need for explorative activities to be organized in autonomous units for full benefit.

Additionally, managerial support acts as an antecedent for the unit's efforts to produce tangible results. Having support and recognition from the upper management helps guide the innovative unit towards activities that benefit both the explorative objective of the organization and the legitimacy of the unit.

The findings also point towards a clear mandate as being an essential requirement. Related to the issue of managerial support, the need for a clear mandate stems from the desire for a stable and predictable position in the organization. With a clear mandate being handed to it by the organizational management, the unit can be granted the necessary autonomy needed to perform its tasks, as well as being guided towards areas and activities that benefit both the unit and the organization. This finding is supported by radical innovation knowledge, as insufficient managerial support in large organizations is seen as a detriment to the legitimacy of the innovation unit's mandate (McDermott & O'Connor, 2003).

Expanding upon this point, the importance of producing tangible results for the innovative unit in relation to its legitimacy is clear. While explorative units with radical innovation mandates can have somewhat vague or intangible goals due to the nature of their work, it is still seen as vital for them to produce tangible output if they aim to be viewed as legitimate in their role. This can be understood by assessing the viewpoint of the upper management – it can be challenging to support and defend a unit that solely produces abstract concepts and analyses that fail to provide clear value. In the case of New Tech Lab, the unit was able to produce concrete suggestions and opinions on key issues for DNB, such as the initiative on stopping the blockchain development, and this was seen as an important step in establishing the legitimacy of New Tech Lab in their role.

This study also underlines the importance of establishing a high level of skill in the innovative unit as a requirement for gaining legitimacy. The respondents from other divisions of DNB outside of New Tech Lab expressed a common emphasis on the skill level of the members of the unit, and how this high level of proficiency acted as a foundation for the creation of legitimacy through the activities of New Tech Lab. Having the required level of competency present in the unit supports the delivery of tangible results, while also acting as a requirement for providing high-quality deliveries. The findings of this project underline a clear relationship between the ability to deliver input and contributions of high quality, and

the perceived legitimacy of the unit in terms of a radical innovation mandate. By quickly being able to adopt new problems and offer insights and suggestions to existing processes together with external parties, the unit supports the aspect of legitimacy.

As previously discussed, receiving a clear mandate is deemed to be an important requirement for establishing legitimacy. Another point supporting this is the topic of knowledge sharing and openness in the innovative unit. By electing to include the sharing of results from exploring activities as a part of the unit's mandate, the management can support a culture of openness that allows external parties in the organization to gain a better understanding of the processes of the innovative unit. This heightened level of insight lowers the barrier between the unit and the rest of the organization and encourages collaboration and interest between the two entities. O'Connor & DeMartino (2006) point towards this interconnectedness between the unit and the organization as being beneficial in supporting the radical innovation processes of the unit, and therefore a positive element in the efforts to create legitimacy.

The three key activities of promoting openness and sharing of knowledge, delivering high-quality contributions, and providing tangible results share a common denominator – that they provide value to the main organization. This strong correlation between providing value and being experienced as a legitimate radical unit is one of the most interesting findings of the research project. The three aforementioned activities can be seen as different ways to provide valuable contributions to the organization, and there has emerged an understanding from both the innovative unit and the main organization that this is an important aspect to the legitimacy of the radical unit.

While there are clear structural necessities that need to be in place to facilitate the legitimacy of the innovative unit, as well as several actions, there are also factors present that inhibit and weaken the legitimacy of the unit. One of these issues can in fact be amplified by the ability of the unit to deliver high-quality solutions. In the case of New Tech Lab, the mandate of the unit is primarily focused on exploring possible radical technological developments for DNB that lie within the next decade by doing experiments and research. However, the unit has also been involved in numerous short-term projects that aim to solve a concrete issue, such as the Compensation Scheme project.

While being good at knowledge sharing and being open about its efforts mainly promote value-creating activities, it can also act as a double-edged sword by leading to New Tech Lab being overwhelmed by such extracurricular tasks. Forcing the unit to direct its attention to tasks and projects that are outside of its initial mandate can remove the focus on its core activities in the organization, and instead weaken the unit's legitimacy. This dilemma can lead to the innovative unit electing to reduce its openness to the main organization, as a measure to avoid being forced into projects that do not benefit the unit. However, in the case of New Tech Lab specifically, this dilemma appears to be mitigated by a clear mandate from the organization which includes a mutual understanding by New Tech Lab and the management that such activities are part of the unit's mandate, to a certain extent. Additionally, the level of autonomy given to New Tech Lab by the organization generally allows the unit to decide which such activities it wants to take part in. It is however worth considering in the general sense that the effect of diverting the attention from core activities to ad-hoc activities in innovation units can harm the organizational legitimacy of the unit, and lead to a conflict of interest between the unit and the organization as a whole.

Another factor that can erode the legitimacy of radical innovation units is the friction that can arise between the innovative unit and expert teams in the organization, which has been named Not Invented Here in this thesis. This issue stems from territorial domain protectiveness in established organizations, where senior members with specializations in their areas can exhibit marginalization-based attitudes towards generalists that are brought in to collaborate on a project. In the case of New Tech Lab, this has come as a result of the unit being established recently compared to the core divisions in DNB, as well as being due to the partially young and, compared to the senior developers in DNB, inexperienced members of the unit. While not a major inhibitor of legitimacy for New Tech Lab, the findings of this project uncovers that this has been an existing issue for the unit.

However, two clear ways to mitigate this problem are proposed. Firstly, New Tech Lab has worked to challenge this phenomenon by excelling at communication and collaboration with other teams, which has led to positive perceptions of the unit in the rest of the organization. Secondly, by proving the biases of the specialist units and members wrong through providing high-quality deliveries. These two points serve as solutions for innovative units that are experiencing issues related to marginalization or hierarchical elitism.

7. Conclusion

In this final section, a brief summary of the thesis is provided, including findings, existing literature, methodological approach, and implications for the topic literature. Following this is a short elaboration regarding possible avenues for future research on the topic, the implications of the findings for organizations and innovation units, and finally a discussion regarding the limitations of the study.

This study aimed to explore the research question:

“How do innovation units with radical mandates work to gain organizational legitimacy?”

To answer the research question, the Norwegian bank and financial institution DNB, along with its radical innovation unit New Tech Lab, was chosen as the context for the qualitative case study. Through semi-structured interviews with six members of the DNB organization, both participants from New Tech Lab and other units in DNB, as well as secondary data available regarding DNB and New Tech Lab, an analysis was performed to conceptualize which factors take part in supporting and inhibiting the legitimacy of New Tech Lab as an innovative unit with a radical mandate in the DNB organization.

In order to contextualize the findings from the data collection process, these were viewed in light of existing literature on the topics of radical innovation and organizational ambidexterity. While these research topics were deemed to be the most interesting and suitable for this thesis, it was discovered that the third topic of the intended theoretical foundation – organizational legitimacy within organizations – had not been previously researched in any comparable contexts. This theoretical shortfall underlined the need for research on the topic.

The main findings of this thesis provide a framework for how innovative units with radical mandates in established organizations can gain legitimacy. The findings point towards three categories of factors that influence this legitimacy: structural requirements, actions by the unit, and distractions. The structural requirements outline four key elements that need to be in place for the innovative unit to be able to attain a position of legitimacy. Furthering this, three concrete actions by the innovative unit are established as key activities to capitalize on the structural elements that are in place, as well as an overarching theme related to value generation. Lastly, the findings point towards two organizational features that can affect innovative units with radical mandates negatively by weakening the unit's legitimacy.

Perhaps the least ambiguous output from this study is the importance for radical innovative units to maintain a constant focus on providing value for the main organization, to support their legitimacy. This aspect does not appear prevalent in the existing literature, but the results of the analysis in this project are clear – the extent to which the innovative unit manage to engage in activities that produce value for the organization is directly related to the issue of perceived legitimacy.

Many of the findings of this thesis are in line with existing research and knowledge on the topics of organizational ambidexterity and radical innovation. One key feature of research on the former topic is the importance of managerial support through all layers of the organization. This sentiment is echoed in the findings of this project. Similarly, the findings of this thesis suggest that there is a need for a clear mandate in the innovative unit to facilitate legitimacy in the organization. This is in agreement with research on radical innovation and supports the correlation between clearness of mandate and the ability to contribute to the right initiatives in the organization.

The topic of legitimacy within organizational cultures appears to be an aspect of organizational theory that is suitable for future research. The literary review of the topic revealed virtually no prior research, and the term *organizational legitimacy* did only appear in research related to external attitudes experienced by organizations, and not in relation to legitimacy in internal organizational structures. This thesis proposes a new theoretical approach to the concept of organizational legitimacy, and future research on the topic should aim to examine this concept in other contexts to build a more solid theoretical foundation.

Lastly, several limitations to this study have been apparent, and need to be addressed. While the purpose of this thesis is to explain the dynamics of a general case situation, it does so by examining a single case in a single organization. This comes at the cost of limited generalizability, as it is difficult to argue that these findings are highly applicable to other contexts. However, this does provide a good foundation for future research – performing a similar research project within a similar context, such as other Norwegian banking organizations or comparable entities in other countries, can refine the model and findings presented in this thesis. This can either create support for the concepts presented through similar findings or establish a more nuanced and critical view if the findings deviate.

Another limitation to this project is the scope of the informants and interviews. While theoretical saturation can be argued to have found place in this project, it is the view of the author that it would have been beneficial to have had more informants available for participation, as this could have affected the data collection positively. In addition, this study only provides a snapshot of the context and organization – it would be interesting from a research perspective to be able to observe how these factors and mechanisms develop over time in the same context. Both of these limitations provide guidelines for future research, and how subsequent projects can build upon the experiences from this project to enhance their quality.

Finally, it is important to consider the possibility that the case of New Tech Lab is not representative of most innovative units. Throughout the interview process, New Tech Lab received high praise for its efforts in the DNB organization, and the consensus portrayed New Tech Lab as a model innovative unit. It is therefore necessary to consider that New Tech Lab as a unit, and/or DNB as an organization, are outliers in the data. While this weakens the immediate generalizability of the findings, it also strengthens the value of a future study that aims to evaluate the same phenomenon in another context.

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9. Appendix

9.1 Interview guide

1. Who are you?
2. What is your position in DNB?
3. What is your background?
4. Why did you want to be a part of New Tech Lab?*
5. How would you describe the New Tech Lab unit?
6. How would you describe the working methodology of New Tech Lab?
7. How would you describe the working methodology of DNB as an organization in general?
8. In your own words, how would you describe the purpose of New Tech Lab in the DNB organization?
9. How do you think Kjerstin Braathen, the CEO of DNB, would answer that question?
10. Which factors in New Tech Lab's work do you believe contribute to the legitimacy of New Tech Lab in the DNB organization?
11. How have you experienced the reception of your work in the greater DNB organization?*
12. How has the reception been towards the efforts of New Tech Lab in the DNB organization?***
13. Have you experienced any potential issues for New Tech Lab with regards to their legitimacy in the DNB organization?
14. How do you see the development of New Tech Lab and its position in DNB in the next 5 to 10 years?
15. Are there any insights on New Tech Lab and the DNB organization that you would like to add the context of this interview?

* denotes questions only asked to members of New Tech Lab

** denotes questions only asked to non-members of New Tech Lab

9.2 Consent form

Samtykkeskjema – FOCUS RaCE-programmet

NHH – Norges Handelshøyskole

Tilbud om deltakelse i forskningsprosjekt om DNB New Tech Lab

Bakgrunn: RaCE-prosjektet (Radical Technology-Driven Change in Established Firms) er et samarbeid mellom Norges Handelshøyskole (NHH) og Samfunns- og næringslivsforskning (SNF). Prosjektet har som formål å utvikle forskningsbasert kunnskap om hvordan etablerte og suksessfulle selskaper møter og håndterer radikal, teknologidreven innovasjon. Denne konkrete studien tar sikte på å forstå DNB New Tech Lab, og hvor lignende enheter med radikale innovasjonsmandater jobber for å opparbeide seg legitimitet i organisasjonene sine.

Intervjuprosessen: Du inviteres til å delta i et intervju som vil vare i underkant av en halvtime. Under intervjuet vil det blir gjort lydopptak. Dette opptaket vil så bli transkribert. Du vil få fullt innsyn i transkriptene, og vil også ha retten til sitatsjekk og gjennomgang av intervjuet i etterkant. Alle personalia og gjenkjennbare karakteristikk vil bli fjernet fra materialet, og det er kun deltakerne i intervjuet som har tilgang på denne informasjonen.

Samtykke og konfidensialitet: Deltakelse i dette prosjektet er frivillig, og du kan trekke tilbake ditt samtykke når som helst. Forskerne ved FOCUS-programmet vil ha tilgang til innholdet i intervjuet, og disse har signert taushetserklæringer i forbindelse med forskningsarbeidet.

Bruksområde: Ditt bidrag vil bli brukt til å utvikle forskningsarbeid, samt til å produsere en masteroppgave innen økonomi og administrasjon.

Annet: Ved å signere dette skjemaet samtykker du til at innholdet i intervjuet blir benyttet i dette forskningsprosjektet. Dersom du har spørsmål vedrørende din deltakelse i prosjektet, ønsker å bli tilsendt det ferdigstilte forskningsarbeidet, eller har andre spørsmål, kan du kontakte adressen nedenfor.

Med vennlig hilsen,

Victor Antonio Ruiz Bergerskogen
victor.bergerskogen@student.nhh.no
FOCUS RaCE-programmet
NHH | Norges Handelshøyskole

Samtykkeerklæring for forskningsprosjekt:

Jeg bekrefter å ha mottatt skriftlig informasjon om forskningsprosjektet, og samtykker til å delta i denne studien.

.....

(navn)

.....

(telefonnummer)

.....

(signatur)

This thesis aims to explore how innovation units with radical mandates work to achieve organizational legitimacy. The context for the study is the Norwegian banking institution DNB and its innovation unit New Tech Lab. Interviews with New Tech Lab members and other DNB employees were used as the basis for the research and the findings of this research are presented and considered in relation to the existing literature on organizational ambidexterity and radical innovation.

The findings of the research project suggest that three main factors affect the legitimacy of these units – structural requirements, actions by the unit, and distractions. The findings are used to create a framework that shows the relationships between these factors and outlines the importance of elements such as managerial support, autonomy, and clear innovation mandates, as well as identifying the core behaviors that support the legitimacy of these units. The research also uncovers two challenges that may arise as a result of efforts to establish legitimacy, that may in fact undermine the legitimacy of the innovative unit. One key finding of this thesis is the importance of the innovative unit's ability to provide tangible value that is visible to the members of the organization. The thesis finds that by engaging in activities and collaborations that create value for the main organization, radical innovation units can generate attitudes and relationships that support their legitimacy in the organization.

While the majority of the findings in this thesis are in alignment with existing research on organizational ambidexterity and radical innovation, virtually no prior research on the topic of internal organizational legitimacy has been done. This thesis establishes a point of departure for future research projects on the topic and proposes a new perspective on the concept of establishing internal legitimacy within organizations.

SNF



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