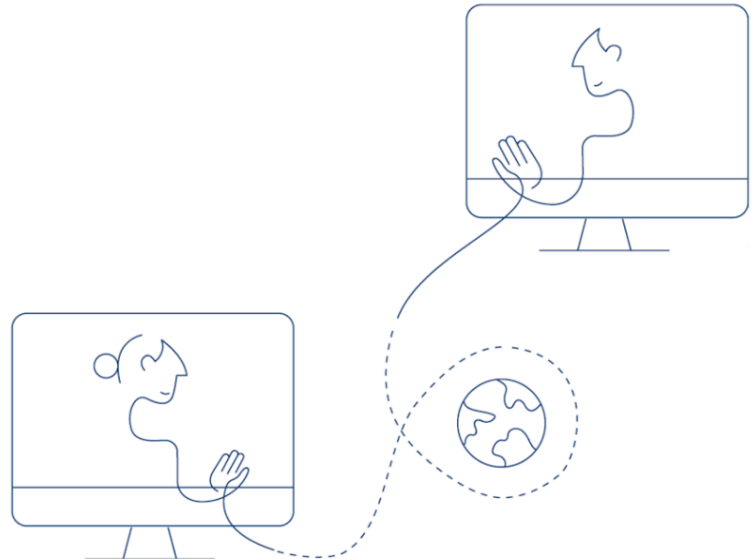


Master Thesis

# Innovation in a Hybrid Environment

*A qualitative case study of Novo Nordisk*



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## **Abstract**

Innovation is crucial for NN in navigating the competitive landscape, facing challenges such as sustainability goals, the patent cliff, and economic pressures. After Covid-19, many organizations have adopted the hybrid work model, valued by employees for its flexibility. Yet, the implementation of this model presents both opportunities and challenges, affecting professional and personal aspects, and its direct impact on innovation projects remains under-explored. Challenges identified include difficulties in conducting effective workshops when project team members are virtual, and especially in situations where the meetings are split between physical and virtual attendance. Additionally, the lack of building strong relationships between employees and managers, as well as a reduction in social activities, presents challenges. These factors can lead to poorer collaboration in a work setting, as employees may communicate less, miss opportunities to express themselves or become isolated in their own work. This difficulty of breaking away from their own ideas presents a challenge in innovation work, which heavily relies on collaboration among diverse employees contributing various expertise, providing input and expanding on each other's ideas. On the other hand, opportunities noted include enhanced work-life balance resulting from increased flexibility and time saved on commuting, whether between sites or from home to the office. This flexibility in turn contributes to increased productivity and work satisfaction. Furthermore, leaders in NN are faced with individual choices about the approach to adopt within their teams, resulting in variances in flexibility and potential envy between departments. This study conducts a thorough investigation into digital transformation and innovation work, aligning these with industry interviews. The study also examines the impact of the hybrid work approach on the perceived brand image of the company. Finally, the thesis introduces a practical framework developed by the authors, which is based on extensive literature on the various topics and thorough industry investigation, aimed at facilitating successful remote innovation within an organization.

# 1. Introduction

In the rapidly changing and growing pharmaceutical industry, staying ahead of the latest research in both R&D and technology is crucial. The industry was estimated to generate over 1.6 trillion U.S. dollars in revenue in 2023, marking an increase of more than 100 billion dollars compared to 2022. (Statista, 2024a). In this thesis, we will focus our analysis on Novo Nordisk, the largest pharmaceutical company in Denmark, using it as the case company to anchor our study and investigation. We will delve into three pivotal areas shaping the landscape of NN; 1) the evolving innovation needs within the pharmaceutical industry, 2) transformations into hybrid workplaces and 3) the importance of brand image. Connecting the three areas will allow us to explore the impact of the hybrid work model on innovation projects within the Novo Nordisk and examine whether it influences the perceived corporate brand image.

## 1.1. Area 1: Transformations Into Hybrid Workplaces

The adoption of a hybrid work model has accelerated in the aftermath of the Covid-19 pandemic. Studies indicate that people are significantly less physically in the office than before, and state that *“hybrid work is here to stay”* (McKinsey, 2023). Although it was possible to conduct occasional meetings remote via Skype or other platforms before the pandemic, the reality for many employees now includes the freedom and ability to work several days from home throughout the week (McKinsey, 2023). This aligns with Investopedia’s definition of hybrid work, wherein it refers to *“an arrangement where managers and employees sometimes work together in a physical office and sometimes work remotely”* (Fontinelle, 2023).

The hybrid trend has been adopted by both large and small companies, now allowing their employees increased freedom to plan their workweek. Several studies indicate a growing preference among employees for this way of working, reflecting a notable shift in preferences. Prior to the pandemic, many employees favored the office as their primary workspace, whereas post-pandemic, significantly fewer individuals express this preference (Gratton, 2021; Cisco, 2022). According to a study conducted by Cisco (2022), many employees perceive that the new hybrid work method provides them with more time and energy in their daily lives. Moreover, they report a notable boost in productivity and work quality when working from home. (Cisco, 2022).

## 1.2. Area 2: The Evolving Innovation Need

The pharmaceutical companies, however, may face challenges with hybrid work. A lot of the work within this industry involves a significant level of confidentiality (Barlow, 2017). Moreover, a considerable number of laboratory workers are engaged in the development of new drugs, necessitating their physical presence in the laboratory and on production sites. Furthermore, this industry is characterized by its strong emphasis on innovation, striving to be first-to-market with innovative products and groundbreaking technology. This is likely due to the time-limited patents they hold, which can be replicated and sold by other biotech companies as cheaper alternatives to the original product after expiration. Consequently, this necessitates a constant cycle of innovative thinking and product development to sustain revenue stream. Innovation has become increasingly challenging for pharmaceutical companies, compounded by the complexities of drug discovery science, and intensified regulatory and economic pressures from government and healthcare payers (Barlow, 2017). NN is actively collaborating with partners to accelerate R&D efforts (What we do, n.d.). Thus, managing sufficient innovation efforts alongside ensuring confidentiality, sufficient interactions and laboratory work without physical proximity could therefore impose challenges.

### 1.2.1. The Case: Novo Nordisk

Novo Nordisk, hereafter NN, is a leading global healthcare company established in 1923 and headquartered in Denmark. The company was established through a collaboration between two Danish firms specializing in insulin production. Originally, NN concentrated its efforts on diabetes care, and it has since become a frontrunner in both diabetes and obesity. According to their latest annual report covering 2023, they have impacted 41,6 million individuals living with these conditions through their medications, marking a 10,5% rise since 2019. Recently, NN addresses ten disease areas, including type 1- and 2 diabetes, obesity, growth disorders, haemophilia, sickle cell disease, MASH, cardiovascular disease, Alzheimer's disease, and primary hyperoxaluria. Their overarching objective is to “*defeat serious chronic diseases*” through pioneering scientific breakthroughs, enhancing medication accessibility and striving for disease prevention and cure (Who We Are, n.d.). With a global presence in 80 offices and products available in 170 countries, NN employs over 64,000 individuals (What We Do, n.d.). Their net sales in 2023 reached 232,261 million DKK, with net profits of 83,683 million DKK (Annual report, 2023). In 2023, NN's diabetes weight-loss drugs, Ozempic and

Wegovy, propelled it to become Europe's most valuable company surpassing Denmark's yearly GDP in market capitalization (Billing, 2023; Hanson, 2023). NN produces 50% of the world's insulin supply, manufacturing over 600 million insulin pens and serving over 36 million individuals with their diabetes care products (What we do, n.d.).

### **1.3. Area 3: Brand Image**

Companies across all sectors invest considerable effort in developing and maintaining their brand's personality, voice, and market position, extending beyond tangible elements such as the brand name and logo to set themselves apart from competitors. The brand image is shaped by an individual's perception of the brand, influenced by both direct and indirect interactions with the brand. This perception can change over time, for example, in response to the brand's adaptation to market trends such as new innovative solutions or the hybrid workplace. A strong or favorable brand image can significantly boost a company's performance by attracting customers, employees, and investors. (Gregory, 2003; Chernatony, 2010). The section about hybrid work highlights how the concept has become a priority for many people who have discovered the advantages of occasionally working from home (Cisco, 2022). Consequently, it may be crucial for traditional pharmaceutical companies to consider embracing remote work options to enhance their brand image. This strategy may be key not only to retaining valuable employees but also to attracting new, talented professionals who can contribute to the company's long-term growth.

### **1.4. Purpose of the Study**

In this study, we will explore how the global pharmaceutical company NN has embraced the hybrid workplace approach and how this new working style affects innovation projects within the firm, when having to collaborate with your team members in a hybrid setting. We will investigate the challenges and opportunities that arise in connection with hybrid work. Additionally, we aim to gather some 'best practices' for leaders to manage teams, foster creativity, encourage idea generation, and facilitate knowledge sharing in hybrid work environments. Moreover, we will explore the shifts in communication strategies, collaboration tools and leadership styles from traditional in-office settings to hybrid work settings. Furthermore, we will investigate how the transformation to a hybrid work model is communicated to enhance the company's corporate brand image.

## 1.5. Research Question

### **Research Question:**

How does the integration of hybrid working environments impact the innovation projects within Novo Nordisk, and how is the corporate brand image affected by the change?

**Sub-question 1:** What are the key challenges and opportunities associated with innovation in a hybrid work setting?

**Sub-question 2:** How do communication and collaboration tools, and leadership approaches differ in hybrid work environments compared to traditional office settings?

### **1.5.1. Significance to the Field**

Exploring how hybrid work dynamics are integrated into the pharmaceutical industry, can enhance the understanding of modern workplace dynamics and how to manage these in an innovation-driven industry with employees distributed between factories and offices worldwide. This research could reveal specific challenges and opportunities within the sector, potentially informing strategy adjustments across various industries to foster a robust culture of innovative collaboration in hybrid environments, benefiting both organizational behavior, adaptability, and resilience research (Bailey and Breslin, 2021; Roper, 2020). Investigating the communication strategies and tools in hybrid work environments increases the understanding of these and enables companies to select the most effective practices for strengthening teamwork and fostering innovation across different business units. Moreover, the best practices could serve as a valuable resource for strategy and innovation researchers and people managers, aiding them in ensuring success within a hybrid work framework. Ultimately, exploring how the possibility of a hybrid workplace can enhance the corporate brand image aids in understanding the significance of integrating this modern workplace approach.

## 1.6. Definitions

<b>Term</b>	<b>Definition</b>
<b>Hybrid workplace</b>	A flexible workplace model combining remote work with office-based work, allowing employees to switch between working from elsewhere and working from the office.
<b>Innovation projects</b>	Projects involving developing new products, services, processes and/or technologies that aim to bring improvements or something new to the business.
<b>On-site</b>	Being physically present in the office building.
<b>Remote</b>	Working outside the traditional office location.
<b>Site</b>	The office building.
<b>Virtual</b>	Attending work from online.

## 1.7. Limitations

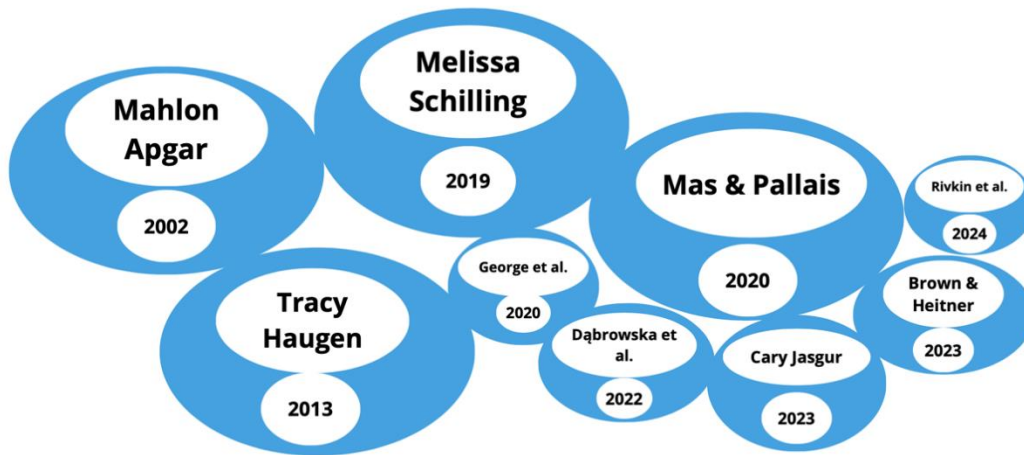
The study's scope is limited by the sample size and the selection of relevant departments for interviews. Given that NN currently employs over 64,000 people worldwide (Who We Are, n.d.), capturing a representative sample of the entire organization through qualitative research methods proves to be an impossible goal. Moreover, due to the high workload of employees within the company, obtaining a comprehensive overview of all relevant departments and employees to select for interviews proves challenging. Additionally, assessing the effect of hybrid workplaces on innovation outcomes presents significant complexity and poses challenges in terms of measurement. Assessing the outcome of innovation projects conducted entirely on-site versus those managed with a combination of on-site and virtual methods is complex. This is because it is difficult to quantify potential improvements or predict alternative outcomes. Moreover, we gathered insights from various employees involved in innovation work, including those that were not directly involved. However, they still participated in team projects, whereas a lot of the work is resembling with innovation work, especially in term of similar challenges and advantages they encountered when collaborating in a team in a hybrid way. Furthermore, we experienced some informants to be somewhat hesitant to disclose negative sides of their projects, maybe due to us not having a formal non-disclosure agreement with the firm and their potential biases could have affected their answers.

## 2. Literature Review

In this literature review, we undertake an extensive investigation, leveraging a wide spectrum of theoretical viewpoints encompassing both older and more modern scholarship within the realm of both Digital Transformation, Innovation and Brand Image theory. We will dive into how hybrid work setups began and have emerged over time, shining a light on the ever-changing world of modern offices. Furthermore, we aim to perceive coherence and potential disparities within the discourse surrounding innovation, covering its origins, different forms and challenges, and make connections to the pharmaceutical industry. Lastly, we investigate the importance of a company’s brand image, delving into how companies strategically enhance their brand image to attract top talent and retain existing employees.

### 2.1. The Shift From a Traditional to a Hybrid Office

In this section, most of our provided literature was collected by these authors in Figure 1 below. While additional authors are included, they plan a secondary role compared to the ones highlighted.



**Figure 1:** Sources referenced in the digital transformation section of the literature review. *Source: Own work.*

Over the years, there have been significant shifts in both how, when and where people work. Initially, most people would work in a traditional office with fixed walls and doors. Conversely, the open-office plan was introduced in the 1960s, going away from individual offices and into open-space landscapes, where the employees were separated by shorter walls or dividers. Initially, this new setup was aimed for enhanced communication and collaboration between employees. Moreover, the setup was believed to save space, be more flexible and let in more daylight compared to traditional offices (Sundstrom et al., 1982). Later, because of technological advancements, the way people work has gone through major transformations, enabling employees to work outside of their offices, such as at home (Hill et al., 2003). During Covid-19, most employees were forced to work from home as required from the government. Despite the absence of governmental mandates for remote work, many organizations have adopted the hybrid model (Ozimek, 2020; Jasgur, 2023).

### **2.1.1 Organizational Change Management**

As outlined by Apgar (2002), companies have for a long time adopted various forms of what they refer to as 'Alternative Work' (AW). Apgar describes it to include open-plan spaces, hoteling for flexible workspace reservation, satellite offices near customers or employees, telecommuting enabling work from anywhere, and home offices. However, work and workplaces are continuously changing, whereas technological advancements have drastically altered the work landscape (Okhuysen et al., 2015; Mas & Pallais, 2020; Jasgur 2023). Several studies indicate that alternative work arrangements have become increasingly prevalent, both in numbers and variety. More individuals are now working outside traditional office settings, with three times as many people working remotely as compared to three decades ago. (Mas & Pallais, 2017; Spreitzer et al. 2017; Mas & Pallais, 2020; Jasgur, 2023).

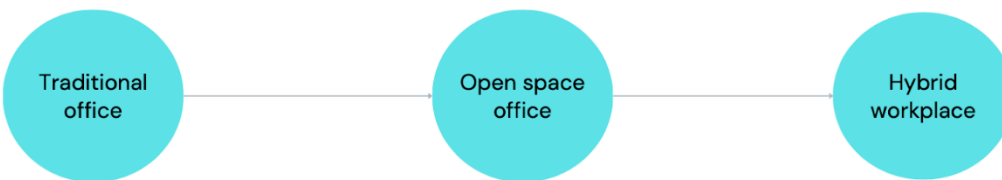
#### ***Tangible assets***

According to Apgar (2002), the primary goal of AW programs is to reduce current costs and avoid future expenses. This accords with research conducted by Haugen (2013), which emphasizes that workplace flexibility should be considered with a business mindset, acknowledging benefits such as cost savings. Spreitzer et al. (2017) also highlight reduced real estate expenses for companies with remote work options. In addition, managers must facilitate the home office. More specifically, the tangible setup costs for the company include hardware, software, training and any equipment or furniture the company provides; ongoing costs include allowances, phone charges, and technical

support. In home offices, employees provide their own space and some, if not all, of the furnishings and equipment (Apgar, 2002).

### ***Intangible assets***

Apgar (2002) state that companies must weigh tangible setup and ongoing costs against benefits, and raises the concern that employees tend to work longer hours and may even experience difficulties leaving their home office. This is also addressed by Mas & Pallais (2017) adding that certain employees are required to be available during evenings, nights, or weekends which may disrupt their personal time and potentially contribute to burnout. Spreitzer (2017) emphasizes that mobile devices facilitate constant accessibility to work, which blurs the boundary between work and personal time, causing stress and conflicts as it invades their “non-work hours”. The flexibility may also inadvertently pressure employees to overwork, as firms may see flexible schedules as difficult to carry out. Hill et al (2003) also state that an incentive to overwork could stem from the rewards shifting from efforts to results, as the managers are not able to directly observe them anymore. Jasgur (2023) emphasizes the significance of recognition in motivating employees and setting standards. The literature highlights that rewards does not need to be monetary; even low-cost incentives can prove highly effective in encouraging employee engagement and performance. Intangible costs for the company and its employees also include the time spent learning new habits and ways of communicating with colleagues and customers (Apgar, 2002).



**Figure 2:** The shift from traditional office to hybrid workplace. *Source: Own work.*

### ***From traditional office to open-space***

The transition from traditional to open-space offices benefits include closer teamwork by removing the walls from the traditional offices (Sundstrom et al., 1982; Apgar, 2002). Other studies indicate that advantages such as lower barriers to reach out to colleagues has facilitated improved social interactions

(Brand & Smith, 2005; Kim & Dear, 2013). Jasgur (2023) also underlines the value of social interactions among employees, advocating for casual discussions on non-work-related subjects during remote work. A more recent study emphasizes that the employee's satisfaction with open-space offices closely correlates with their personality types, whereas those more extrovert tend to be more satisfied with this setup (Marzban et al., 2021). A study by Lindberg et al. (2018) reinforces these arguments, building on that it also fosters greater awareness of others in the workplace in addition to improved health as they have increased physical activity in comparison to private offices, leading to reduced stress.

However, contrasting to these findings, there appears to be limited evidence supporting the perceived advantages of open-space offices. In fact, the majority of the studies suggest that even if there are some positive factors, they get surpassed by the negative impacts. Several studies indicate employees' dissatisfaction towards this change such as increased noise levels and decreased privacy (Brand & Smith, 2005; Kim & Dear, 2013; Bernstein & Turban, 2018). One study conducted by Bernstein & Turban (2018) also revealed that transforming traditional office spaces into open layouts with fewer walls and doors surprisingly resulted in a 70% decrease in face-to-face interactions, while electronic communications such as email and instant messaging significantly increased. The authors suggest that employees lacked the privacy given by traditional office setups, leading them to seek privacy through digital interactions rather than physical ones. Furthermore, another study conducted by Bernstein & Waber (2018) argues that this setup also led to less meaningful interactions between employees.

### ***From open-space to hybrid***

As organizations transition to remote work setups, they accommodate to the diverse preferences of employees, thereby enhancing workplace flexibility. This will in turn benefit the organization in regards to attracting and retaining employees. (Apgar, 2002; Hill et al., 2003; Haugen, 2013; Mas & Pallais, 2017; Jasgur, 2023). It contributes to work-life-balance, such as more time for exercise and family time. Moreover, the personal flexibility offers employees individual benefits, such as increased productivity (Hill et al., 2003; Mas & Pallais, 2017; Schilling et al., 2019; Rivkin et al., 2024). In addition, cutting time on the commute is also considered an advantage. Moreover, enhanced personal

time and control for employees are also intangible benefits that employees appreciate, such as reduced stress and increased autonomy (Schilling et al., 2019).

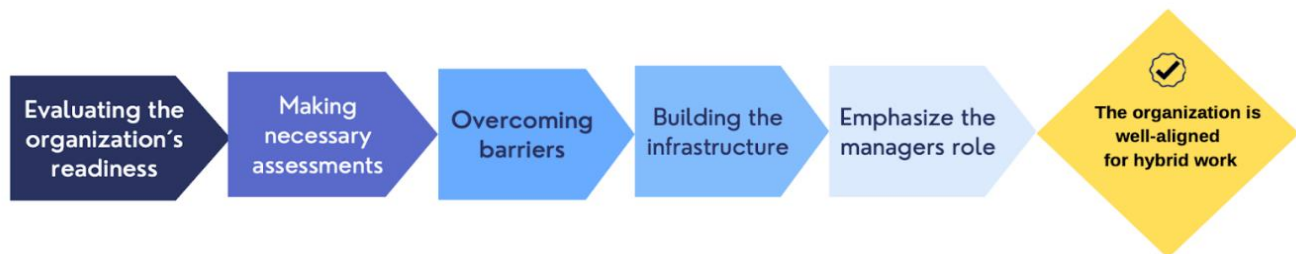
Apgar (2002) also highlight that after a meeting ends, they can immediately go back to work again. Additionally, virtual meetings often enable employees to focus on problem-solving rather than spending time on discussing issues. It is also underlined how they may have fewer distractions and downtime in home offices or remote (Apgar, 2002). When it comes to virtual meetings, an in-depth study by Rivkin et al. (2024) indicate that virtual meetings affect employees' functioning both in their work and home environments. It also aids employees in their need for recovery, especially on days characterized by low emotional dissonance. Furthermore, they observed that engaging in virtual meetings enhanced flow experiences, which in turn minimized daily cognitive exhaustion. (Rivkin et al., 2024). Haugen (2013) also adds the additional value it gives by being able to hire people from other geographical areas. Moreover, Schilling et al. (2019) state the advantage for companies operating globally not having to deal with travel costs and disruption in their lives.

These advantages lead to increased job satisfaction, increased productivity, and organizational commitment, thereby increasing employee retention. (Apgar, 2002; Hill et al., 2003; Spreitzer et al., 2017; Schilling et al., 2019; Kruchten & Gregory; 2024). Jasgur (2023) emphasizes that attending to employee well-being can lead to increased productivity, as employees often return by excelling in their roles. They underscore the significance of focusing on professional development within a framework of transparency and trust. By supporting employees in expanding their skill sets, organizations facilitate their ability to meet or surpass performance expectations.

However, it has also been observed that employees with more flexible schedules tend to work longer hours. Additionally, the increased freedom comes with greater responsibilities, which can heighten stress levels. This leads to adverse effects on work-life balance, which is typically considered beneficial for families (Mas & Pallais, 2020). Jasgur (2023) highlights the concern of overworking and excessive workloads. They advise managers to be cautious about assigning too much work or overly tight deadlines and encourage openness to discussions on these matters. For employees, it is recommended setting limits on continuous work periods and making deliberate efforts to maintain clear boundaries

between work and home life. They also advocate for regular physical activity breaks, such as walking outdoors, to step away from the work environment and refresh (Jasgur, 2023).

Several studies suggest that organizations should opt to customize the approach of organizational change strategies rather than rely on a one-size-fits-all approach, to fit the unique circumstances and needs (Apgar, 2002; Haugen, 2013; Brown & Heitner, 2023). To determine whether an organization is ready to convert to AW, Apgar raised some questions they should consider before making their decision. As these questions are dated, we sought to obtain more current perspectives to determine if they are still relevant and to identify any new factors that should be emphasized. We gathered insights from Apgar (2002), Haugen (2013), Schilling (2019), Gratton (2021), Jasgur (2023) and Brown & Heitner (2023) to update and expand on these considerations. We found it relevant to combine these together to get a more holistic view. Thereby, we categorize them into five sections that determine whether an organization is ready for hybrid work: 1) Evaluating the organization's readiness for a new approach, 2) Making necessary assessments, 3) Overcoming barriers, 4) Building the infrastructure, and 5) Emphasize the managers role. (See Figure 3).



**Figure 3:** Assessing the Organization's Readiness for Hybrid Work. *Source: Own work based on the literature.*

### ***1) Evaluating the organization's readiness for a new approach***

Apgar (2002) suggests that the organization initially needs to do an assessment of whether they are informational or industrial. Industrial organizations is, according to him, relying heavily on face-to-face interaction, with employees tied to specific physical locations, limiting the potential for AW arrangements. In contrast, informational organizations primarily operate through voice and data communications, emphasizing flexibility, informality, and the use of technology to enhance performance.

Building on this, Gratton (2021) suggests it will also differ between the employees: When employees do a lot of individual or focused work, concentration is essential. This is best facilitated through letting them work at their preferred time, allowing undisturbed work for longer periods, regardless of location. For team managers, as they are responsible for feedback and engagement with team members, this necessitates synchronous time to enable effective collaboration in-office and remotely. For product innovators, they thrive on cooperation with place being a crucial factor. Face-to-face interaction in a shared physical space fosters innovation although advancements in cooperative technology may diminish the importance of physical proximity. For many other roles, it requires sustained energy for productivity, where both time and place can impact this. Schilling (2019) also mentions they should possess strong interpersonal skills such as the ability to work independently and have a strong work ethic.

## ***2) Making necessary assessments***

To make the necessary assessments, the organization should update performance metrics to fit evolving work styles, addressing cultural shifts during remote collaboration adaptation, and reevaluating incentives to match diverse work methods. For instance, the shift towards hybrid will result in less observable efforts in the office, indicating a shift from efforts to results. Gratton (2021) also underscore the need to address potential challenges related to taxes, compliance and external reputation. Moreover, Mas & Pallais (2020) mention that various regulations will also impact the different work arrangements such as overtime laws. It is also important to establish a clear plan for required interaction time and the importance of office hours. This evaluation ensures that roles can effectively operate in an hybrid setup (Apgar, 2002; Hill et al., 2003). This aspect is also addressed by Schilling (2019), who indicates that it is easier for employees to hinder interaction when they are distant. Thereby they recommend to; establish standards on how often they will be available for synchronic communication and how quickly they are expected to reply to meetings.

On an individual level, the assessments revolve around assessing employees' needs. This means conducting employee surveys to pinpoint flexibility preferences and consider organizational impacts before rolling out new strategies. Jasgur (2023) recommends using straightforward tools such as pulse surveys to ask targeted questions or track outputs, aiding in the collection of valuable data and the

identification of noteworthy achievements. Conducting regular virtual meetings with employees to discuss the challenges they have overcome or how their colleagues have assisted them can uncover significant opportunities for recognition. Evaluations may reveal minor adjustments that significantly enhance satisfaction without causing disruption (Haugen, 2013; Jasgur, 2023). Moreover, Gratton (2021) highlights that employee preferences, including individual work styles are vital considerations. Factors such as energy levels and productivity may vary based on whether employees work from home or in the office. Additionally, tenure with the company plays a role, with long-time employees potentially needing less office presence for learning and development, while newer employees may require more in-office mentorship and coaching.

### ***3) Overcoming barriers***

Research also highlight that when companies undergo changes, this often leads to negative reactions from employees. While the intention behind initiating changes is to enhance the company's competitiveness, sustainability, and adaptability, a failure to manage these changes properly within the company, can result in a breakdown in communication and lack of understanding the reason of the change. Current literature emphasizes that the lack of effective communication can further escalate employees' distrust towards management, increase their frustrations, and heighten feelings of uncertainty in their daily work. (Kotter, & Schlesinger, 1989; Ahmad & Chowdhury, 2021; Li et al., 2021). Tanner (2024) outlines several key factors from the employee perspective that can hinder organizational change, including fears of job loss, insecurity, misaligned motivations, fear of the unknown, peer pressure, a lack of trust, internal politics, and fear of failure. These concerns align with the barriers identified by Kotter and Schlesinger (1989), such as self-interest, misunderstandings, distrust, differing evaluations of the situation, and a low tolerance for change. These factors collectively contribute to employee resistance towards organizational changes, highlighting the need for careful management of the change process to address these concerns effectively.

It is essential that the organization is prepared for some resistance towards the hybrid arrangement. While younger employees may easily adapt to the change, others accustomed to traditional office set-ups might struggle, which can for instance lead to struggles with self-directed schedules or a feeling of isolation (Apgar, 2002). Schilling (2019) emphasizes the importance of reaching out when employees experience such barriers. Additionally, Jasgur (2023) addresses the challenges related to isolation,

noting its significant impact on personal well-being. Managers are advised not to overlook the importance of one-on-one sessions with employees, as these interactions can reveal feelings and first signs of isolation, stress, and anxiety. It is also important to consider the external barriers as physical and logistical constraints may hinder progress. For instance, limited space in employees' homes can present such challenges. Engaging employees during the planning phase can identify and address such barriers effectively (Apgar, 2002). This argument is later reinforced by Gratton (2021) stating how commuting distance and living arrangements will differ among employees, underscoring the significant value of offering flexibility on where to work.

More specifically, reasons why employees may resist change is their fear of not being able to adapt or upgrade their skills to match the demands of the upgraded organization. This concern is especially relevant in the context of digital transformation and hybrid teams.

#### ***4) Building the infrastructure***

Gratton (2021) proposes that hybrid work requires re-thinking how tasks are managed and coordinated. Companies are, for instance, using technology to streamline processes and enhance remote collaboration. They are also redesigning workflows to eliminate redundancy, automate tasks, and create collaborative office spaces. This proactive approach ensures that hybrid models optimize productivity and creativity. Apgar (2002) early emphasized that investing in the necessary tools, training, and support is crucial for the success of AW initiatives. This includes providing standardized software, accessible technical assistance, and sufficient financial resources. Jasgur (2023) also recognizes that in a remote setting, it is crucial to provide proper preparation and training to support employees in successfully completing their tasks. Partial support often leads to confusion, frustration, and decreased productivity, ultimately risking the failure of the program. Ensuring flawless technology is essential, as employees rely on it to get their work done effectively (Apgar, 2002). Haugen (2013) stresses that one cannot assume that the organization's technology can support virtual workers, therefore a suggestion is to test it with pilot projects in order to uncover potential problems that could frustrate employees (Haugen, 2013).

### ***5) Emphasize the managers role***

It is underlined that the success of implementing a hybrid setup seems to rely on effective management. Dynamic, technologically advanced organizations are more likely to embrace the hybrid model, while traditional ones can also benefit if their managers are receptive to change. Case studies have shown that senior management can often be the biggest hurdle to their own change initiatives. This is because they might not fully incorporate external changes affecting their industry, thus resisting the necessary changes needed for adaptation and improvement. (Brown & Heitner, 2023). The pivotal factor lies in the willingness of managers across all levels to embrace change (Apgar, 2002). Developing talented managers is important as it is their job to identify the employees' roles and assignments and clearly link these to the business goals. They should be able to develop self-directed teams, set clear expectations on what needs to be done, by who and when. Managers may also need to relinquish control. Some may be more traditional in management styles, while younger workers often expect more freedom getting the job done on their own terms. In this way, employees can work as little as necessary, provided that they complete their assigned tasks. When it comes to open culture, supporting transparency is also important in order to create a safe environment for employees to come forward with their specific situation which could be solved with flexibility (Haugen, 2013).

Furthermore, Gratton (2021) adds that inclusion and fairness need to be prioritized when implementing hybrid practices. Research indicates that feelings of unfairness can negatively impact productivity, increase burnout, hinder collaboration and reduce retention. They further state that in the past, flexible work approaches were driven by individual managers, leading to unequal treatment across departments and teams. This resulted in the feeling of unfairness, especially for employees who had time- and place-dependent jobs that made hybrid work arrangements impossible or less optimal.

After assessing the organization using the five outlined steps and implementing the necessary measures, we suggest that the organization is thereby equipped for hybrid work. Going through these steps align with Brown & Heitner (2023) stating that organizations successful change will require having a clear strategy to overcome resistance and adapt to the change (Brown & Heitner, 2023).

## 2.2. Digital Transformation and Innovation

As previously noted, in the period following the pandemic, working from home on some days became more globally widespread and accepted (Choudhury et al., 2022). Berchicci et al. (2015) note that remote work is not a new concept within the holistic innovation community, as remote collaboration has already been employed in open innovation projects (hereafter OI projects). We will refer to digital transformation, remote work and hybrid work depending on the terminology used in the different articles. However, there is still a significant gap in knowledge regarding how to innovate remotely (Yokoi et al., 2022). The term “remote innovation” does not have a definition that fully encompasses the phenomenon as of today. However, as the term relies on the definitions of “open innovation” and “remote work”, Konrad-Maerk (2023) suggests the following definition for the term:

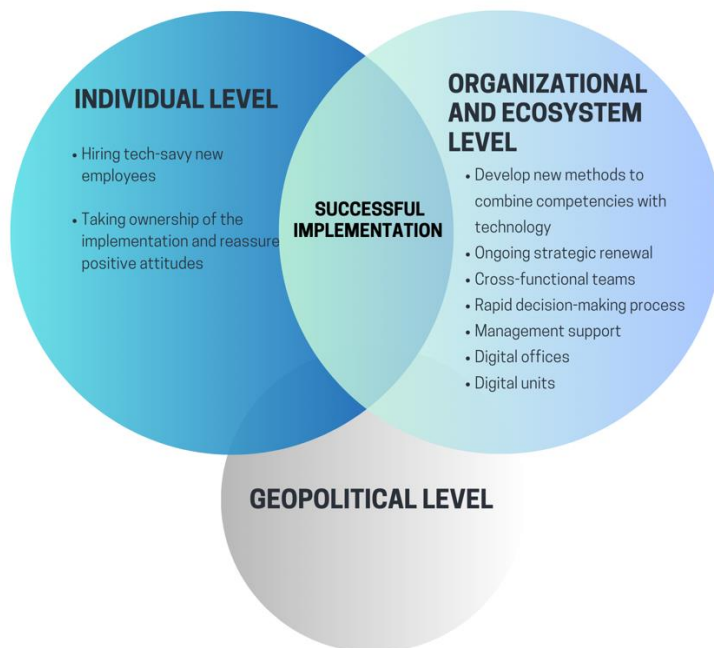
*“Remote innovation is a distributed innovation process based on remotely managed knowledge flows across organizational boundaries, taking place between geographically dispersed actors and institutions that are important for innovation performance, communicating primarily by the use of information and communication technologies (ICT)”.*

According to Fitzgerald et al. (2013), digital transformation involves *“the adoption of new digital technologies (such as social media, mobile, analytics, or embedded devices) to facilitate significant business improvements, like improving customer experience, optimizing operations, or innovating new business models.”* Likewise, Dąbrowska et al. (2022) view digital transformation as *“a socioeconomic shift affecting individuals, organizations, ecosystems, and societies, driven by the adoption and use of digital technologies.”* In essence, the concept underscores the imperative for companies to leverage improved or novel business models to remain competitive in the market.

The various digital communication tools and platforms have been around for many years, but it was primarily large corporations that truly utilized it. The pandemic necessitated the replacement of physical contact with digital alternatives, leading to a significant acceleration in technological development, especially for collaboration platforms, such as instant messaging, employee social network platforms, virtual meeting platforms, etc. (Braune et al., 2021). Recent studies estimate that post-pandemic, about 20% of full workdays will be conducted from home, compared to just 5% before the pandemic (Choudhury et al., 2022). According to George et al. (2020), this digital transformation

significantly affects how the corporate world initiates and executes innovation projects, pushing them to rethink and develop new processes for innovation management as development unfolds around them. Additionally, Jasgur (2023) emphasizes the necessity of transparent communication from managers to their employees. By specifying times of high availability, such as mornings or afternoons, employees may feel more encouraged to reach out, even with minor issues. It is also crucial to establish a clear communication framework for the team, setting precise guidelines on how and when to initiate contact for routine discussions versus more critical inquiries.

One article delves into the issues with digital transformation and innovation. The authors emphasize that despite significant developments in digital technologies over recent years, the complexity of successfully implementing these technologies presents substantial challenges for both businesses and society at large. The article elaborates on four lenses through which the authors view digital transformation: individual-, organizational-, and ecosystem- and geopolitical level of digital transformation (Dąbrowska et al., 2022). In the following section, we will focus on two out of three relevant lenses, as the last lense is considered irrelevant for this research.



**Figure 4:** Guide to successful implementation of digital transformation. *Source: Own work based on Dąbrowska et al., (2022)*

### **2.2.1. Individual Level**

The individual level of digital transformation highlights the importance of including the human aspect to prevent the loss of skilled employees during the transition. Employees' well-being and creativity can be significantly impacted by digital transformation, as observed during Covid-19. It is explained that success can be found in how proficient a company's top management teams are at assembling the right mix of necessary competencies, skills, abilities, and/or orientations. (Dąbrowska et al., 2022).

Furthermore, employees' acceptance or resistance towards digital transformation is highly influenced by their own mindset and cognitive processes. Like previously mentioned about organizational changes, many employees view new technology as damaging to their job, as robots and new processes gradually take over administrative tasks. Other documented factors relate to employees' skeptical attitudes towards potential surveillance that could be enabled by new digital technologies. The authors suggest that companies address these challenges by hiring tech-savvy new employees to complement in-house expertise. However, they also emphasize that this could lead to friction between more tenured employees and new hires, potentially creating cultural or generational conflicts within the company.

Secondly, the article discusses who should take ownership of implementing new digital strategies. On one hand, it is crucial for top management to take a front-runner position, for instance, by appointing a Chief Digital Officer to lead the rest of the organization. On the other hand, evidence shows that top management can negatively influence the entire transformation based on their individual attitudes, communication styles, and understanding of digital technologies. (Dąbrowska et al., 2022).

### **2.2.2. Organizational and Ecosystem Level**

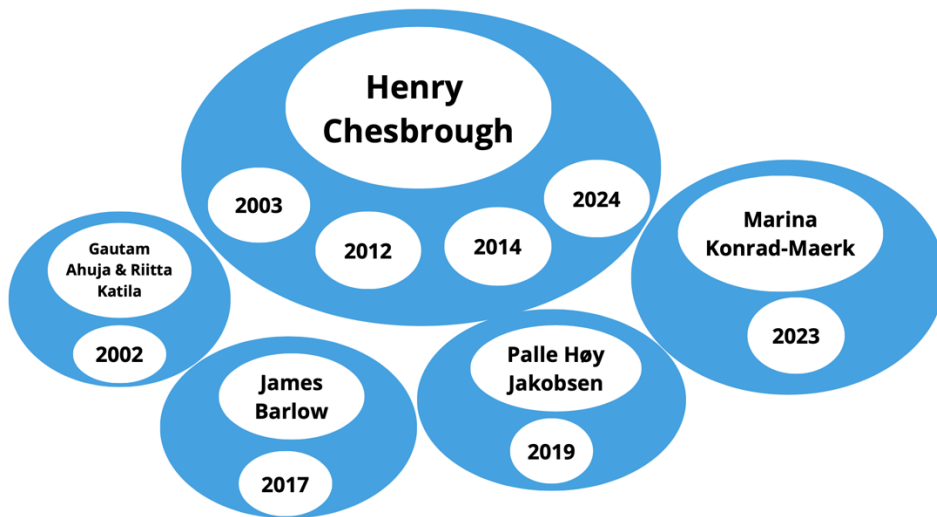
According to Dąbrowska et al. (2022), successful digital transformation relies not only on individual understanding but also an understanding of the organizational and ecosystem levels. They propose developing new methods to combine the company's core competencies with emerging technologies to achieve this. Warner and Wäger (2019) investigated how established companies in traditional industries can foster dynamic capabilities for digital transformation, underlining the critical need for ongoing strategic renewal to remain competitive in a rapidly evolving market. Their study identified certain external factors, such as disruptive innovation and competition, and technological

advancements within the industry, as potential catalysts for a company’s need to renew. Internally, the presence of cross-functional teams, rapid decision-making processes, and management support emerged as essential to achieving digital transformation, while stubborn planning and organizational resistance to change were identified as major obstacles.

Furthermore, they proposed a digital transformation framework to guide leaders in identifying a suitable approach for their organization. This framework underscores the importance of sensing, seizing, and transforming capabilities as fundamental for a company’s successful navigation through the digital landscape. Here it is suggested that benefits can be gained by establishing cross-functional teams, digital offices, and units. The development of new and more open ecosystems enables knowledge-sharing across boundaries. The new digital solutions are not limited by physical boundaries, fundamentally changing the workflows that have historically limited the development of innovative projects. (Dąbrowska et al., 2022).

### 2.3. Innovation at a Glance

In this section, most of our provided literature was collected by these authors in Figure 5 below. While additional authors are included, they plan a secondary role compared to the ones highlighted.



**Figure 5:** Sources referenced in the innovation section of the literature review. *Source: Own work.*

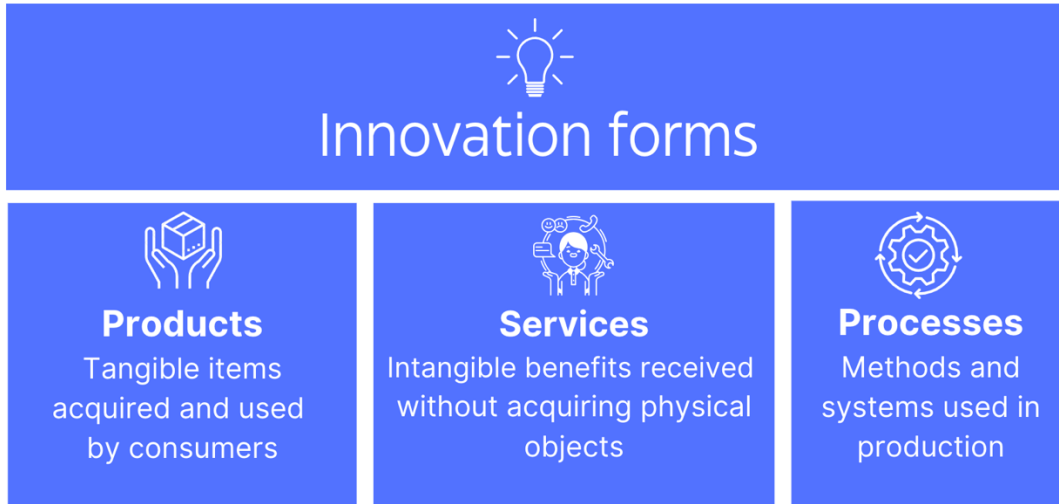
### 2.3.1. Innovation in General

Innovation has various definitions, and the term originates from the Latin words “*in*” and “*novare*” which signify “to make something new, to change”. However, “*invention*” is often referred to as the initial concept; idea, model or finding (Høy Jakobsen, 2019). Schon (1967) describes innovation as “*the process of bringing inventions into use*”, and highlights both its creative and practical dimensions, distinguishing it from being only an invention. Chesbrough (2003) reinforces this idea by making a clear distinction between innovation and invention in his work. Rogers (2003) describes it as “*an idea, practice or object perceived as new by an individual or other unit of adoption.*” In alignment, Chesbrough (2003) and Barlow (2017) argue that many ideas fail to progress beyond the invention phase due to challenges of implementation, particularly in sectors like healthcare. The citation from Chesbrough (2003) highlights this view on the importance of staying innovative.

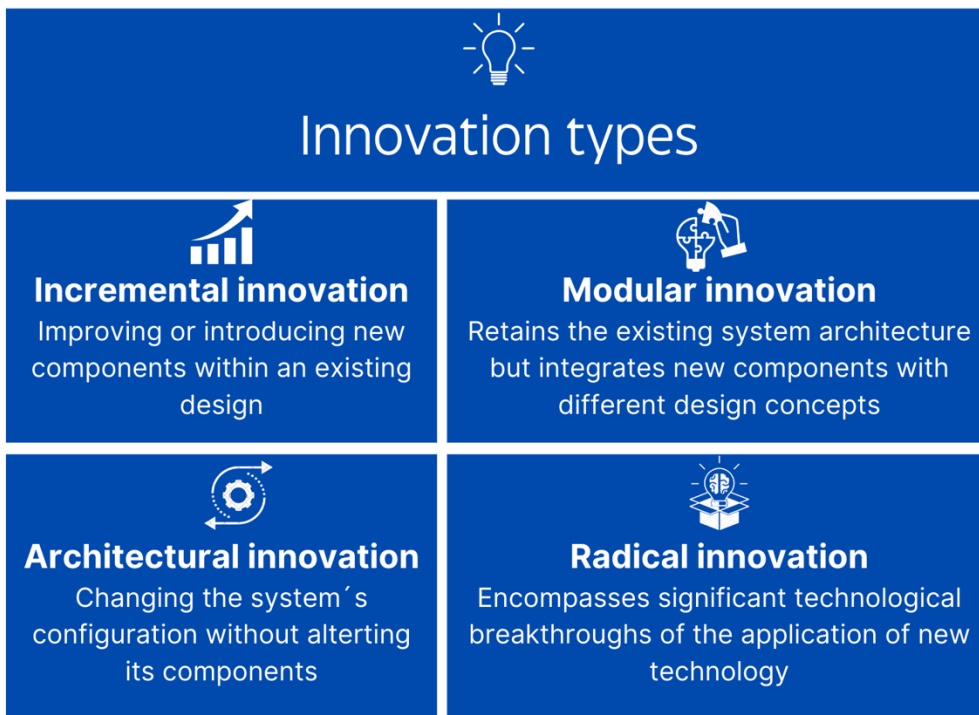
*“Most innovations fail. And companies that don’t innovate die.”*

*- Henry W. Chesbrough, 2003.*

The concept of innovation centers around the idea that it involves a novel creation that generates value. It may involve the development of new viable offerings, qualitative changes or a new combination of products or services (Høy Jakobsen, 2019). However, innovation can be understood from different perspectives. Firstly, it involves evaluating its level of “newness”, which relies on individual perceptions. For instance, innovation can differ among different health systems with a drug being considered as innovative in one system but not in another where it is already in widespread use (Barlow, 2017). Furthermore, consider three different forms of innovation is considered; products, services and processes (See Figure 6). Innovation is also being distinguished into different types, whereas Henderson and Clark (1990) categorizes them into the following; incremental, modular, architectural and radical (See Figure 7). Innovation can occur in any of these forms, resulting in outcomes such as new products, services or business models (Barlow, 2017).



**Figure 6:** The different innovation forms. *Source: Own work based on Barlow (2017)*



**Figure 7:** The different innovation types. *Source: Own work based on Barlow (2017)*

Innovation typically arises as a result from ‘push’ and ‘pull’ factors (Barlow, 2017). “*Technology push*” involves pushing a new invention through R&D, production and sales without assessing its user

needs, whereas “*market pull*” innovation responds to identified market needs (Høy Jakobsen, 2019). In biotechnology, the emphasis tends to be on technology push, with innovation moving linearly from scientific discovery to drug creation and marketing. Science-based industries such as pharmaceuticals, seem to lean more towards the “*science discovers, technology pushes*” (Barlow, 2017). Conversely, in medtech, it is common to rely on market pull, addressing unmet customer needs (Høy Jakobsen, 2019). It is underscored that innovators are market-aware to align with demands but also maintain distance to explore radical ideas unaffected by short-term demands (Barlow, 2017). This aligns with the statement that “*successful innovation requires an interaction between the two*” (Tidd, 2006).

### **2.3.2. Agile Development and Design Thinking**

Schilling (2019) state that in numerous industries, the ability to develop new products swiftly and efficiently, is crucial for a firm’s success. However, despite the emphasis on new product development, the failure rates remain high, with over 95 percent of projects failing to yield economic returns. Consequently, extensive research has been dedicated to enhancing the effectiveness and efficiency of these processes. To address these challenges, new product development must balance three critical objectives: maximizing customer fit, minimizing development time, and controlling costs. Agile development methodologies, commonly used in software, offer a promising approach by breaking down products into smaller components worked on by autonomous teams. These teams rapidly develop features and seek customer feedback, enabling continuous adaptation and improvement. When utilizing this methodology, the team works in ‘sprints’, indicating that they meet often and do step-by-step improvements involving less hierarchy, more efficiency, transparency and faster feedback (Schilling, 2019). Tim Brown (2008) argues that leaders look at innovation as a principal source of differentiation and competitive advantage; and they would do well in incorporating ‘design thinking’ into all phases of the process. This revolves around creating solutions that deeply meets customer needs and drive significant value.

### **2.3.3. Innovation Teams**

Tim Brown (2008) suggests that design thinkers should possess empathy, optimism and willingness to experiment, as well as collaborate across disciplines to tackle complex challenges effectively. In healthcare, this could be collaborating with doctors to develop innovative medical instruments. Furthermore, Schilling (2019) also stresses the importance of cross-functional teams to facilitate

collaboration across individuals in new product development. This underscores the importance of diverse and well-aligned teams to facilitate good innovation collaboration. Furthermore, Høy Jacobsen (2019) builds upon that innovative activities may demand a diverse array of skills, such as creativity, entrepreneurial ability, strategic planning, effective leadership, and seamless teamwork. These essential components collectively drive the success of innovative initiatives. Furthermore, diversity in a team fosters good innovators, leveraging individuals' unique backgrounds and expertise to fuel creativity. Motivation and personality traits like openness to experience are vital, alongside post-experiment discussions for iterative improvement. Effective innovators effortlessly switch between working alone on ideas and collaborating with a team. Key elements such as brainstorming and rapid prototyping are drivers for the innovation process. (Høy Jacobsen, 2019). Hence, it is crucial for innovation teams to comprise individuals possessing these skills and traits.

#### **2.3.4. Search Depth, Search Scope and Absorptive Capacity**

When firms undergo searches to solve problems to create new products, findings suggest that their search efforts vary across two dimensions; search depth and search scope, whereas the last mentioned is greatly connected to absorptive capacity. (Katila & Ahuja, 2002).

Search depth refers to how frequently the firm re-uses its existing knowledge. An increase in search depth can significantly enhance the product innovation through three key effects. Firstly, it reduces the likelihood of errors and false starts, making the search process reliable. Secondly, familiarity with the knowledge being sought and clearer understanding of product requirements make outcomes more predictable. Thirdly, repeated use of concepts fosters deeper understanding. However, there are also drawbacks such as limits to improvements and organizational rigidity, which may eventually outweigh the benefits. (Katila & Ahuja, 2002).

The search scope refers to how widely the firm explores new knowledge. Expanding the search scope in innovation positively impacts product development through two primary mechanisms. First, it enriches the knowledge pool by introducing distinctive variations, essential for offering diverse solutions to problems. Secondly, it enhances re-combinatorial search, increasing the firm's capacity for generating new products. However, extremely high levels of scope can lead to knowledge integration

costs, a decrease in reliability, and ultimately the costs of integration may surpass the benefits. (Katila & Ahuja, 2002).

Today, absorptive capacity is recognized as a key driver of product innovation. It is an important factor in maximizing the use of external searches and broadening the company's scope (López et al., 2023). It involves recognizing the value of new information, integrating it into existing frameworks, and leveraging it for commercial purposes (Cohen & Levithal, 1990). As organizations widen their search scope, it brings us into the realm of open innovation.

## **2.4. The Rise of Open Innovation**

Chesbrough (2003) discusses the potential paradigm shift in how companies commercialize their knowledge. The author explains the traditional model, which is referred to as 'Closed Innovation', as a model based on the premise that "*successful innovation requires control*", meaning that companies need to invent and develop ideas in-house to deliver value to their customers and the company itself. Hereafter, the author introduces a concept called open innovation (hereafter OI), which refers to a model where innovation processes are distributed among multiple actors both internally and externally (Chesbrough and Bogers, 2014; Yokoi et al., 2022). The new model challenges the notion that innovation solely originates from internal R&D efforts and highlight the importance of acknowledging that valuable talent may exist outside of the organization (Barlow, 2017). This novel approach was regarded as a paradigm shift within innovation theory and continues to be widely embraced today (Chesbrough 2003). Particularly during times of crisis, OI enables companies to access a substantial range of external knowledge from various parties, which they otherwise would not have been able to tap into (Markovic et al., 2021). The Covid-19 pandemic has also underlined the importance of open collaboration and knowledge-sharing in developing rapid and innovative solutions to everchanging problems (Konrad-Maerk, 2023).

### **2.4.1. The Three Strategies of OI**

#### ***Outside-in***

The outside-in is the most utilized strategy, and integrates external- knowledge, technologies, and practices into the organization to improve product development, processes or offerings within their existing business model. This can happen through acquisitions, whereas pharmaceutical firms often

acquire biotech companies to diversify markets and accelerate internal R&D growth (Høy Jakobsen, 2019). It can also happen through partnerships with start-ups, or collaborations with research or academic institutions to enhance patient care or operational efficiency (Chesbrough et al., 2024). Moreover, it may involve licensing to access specific technology, or outsourcing, such as contracting clinical trials to contract research organizations due to limited time, knowledge, or resources (Arora, 2003; Stamenovic & Dopraca, 2017). Embracing an outside-in approach enriches resources and capabilities, sharing risks and improving innovation. Ensuring employees understand knowledge needs requires a robust internal knowledge base (absorptive capacity), to foster successful innovation (Katila & Ahuja, 2002; Faems et al., 2008; Bagherzadeh, 2020).

### ***Inside-out***

This strategy focuses on ideas developed internally in the organization and sold to external partners to accelerate ideas into the market (Chesbrough, 2003; Enkel et al., 2009). This requires companies to enable the use of their unused and underutilized ideas outside the company. The knowledge is shared with external entities through licensing, spin-offs or collaborations, that helps creating new revenue streams or markets for the original company. Examples in the pharmaceutical industry are smaller biotech firms who license their technology out to larger pharmaceutical companies, enabling them to focus on their core strengths while securing R&D funding. Simultaneously, the pharmaceutical company gains access to new technology without the associated risks. (Arora & Gambardella., 2010).

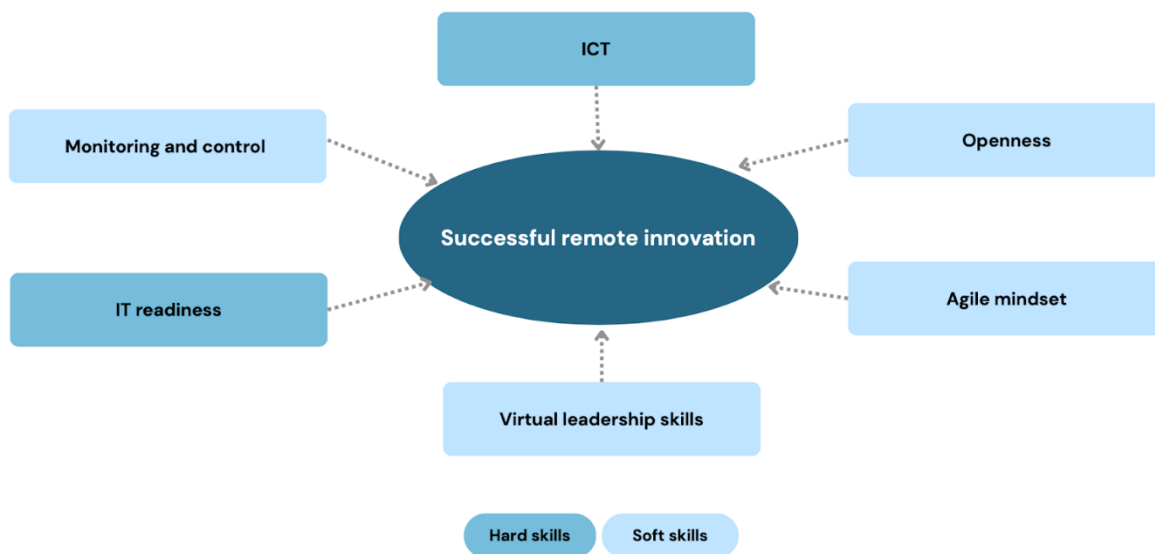
### ***Coupled Innovation***

This strategy combines both outside-in and inside-out strategies and involves a collaborative creation and sharing of information with complementary partners through alliances, partnerships, and joint ventures. (Enkel et al., 2009; Whipple et al., 2010). Examples in the pharmaceutical industry include collaborations with technology companies, research institutions and healthcare providers, to co-create new solutions to address complex healthcare challenges. (Høy Jakobsen, 2019).

## 2.5. Remote Innovation

What distinguishes today from when OI was first introduced is the expanded spectrum of hybrid work within OI communities. Previously, it was mainly external parties (e.g., start-ups, research institutions, academia) who participated online. However, there has been a shift with internal members now also working remotely from diverse locations. (Konrad-Maerk, 2023). According to Lichtenthaler (2021), this shift towards ‘remote innovation’ applies to both incremental and radical innovation in new product development, as well as to service and process innovation.

According to Konrad-Maerk (2023), the following factors are key determinants for successful remote innovation (See Figure 8). They also suggest that these can further be divided into soft skills and hard skills. The hard skills contain all the teachable and measurable competencies while soft skills refers to the cognitive and personality traits



**Figure 8:** Framework for successful remote innovation. *Source: Own work based on Konrad-Maerk (2023)*

### ***Information and Communication Technology (ICT)***

The most crucial determinant is ICT, covering digital and social collaboration tools. ICT serves as a vital resource for OI, particularly in a hybrid work environment, as innovation processes extend beyond the organization’s boundaries. According to Enkel et al. (2020), ICT significantly influences the collaboration between individuals and organizations for innovation.

### ***Openness***

The second most critical determinant is identified as “openness”, referring to individuals described as “imaginative, sensitive, intellectual, and polished”. It is also found by Aronson et al. (2019) that it is essential for individuals to adopt this open approach to effectively share information and knowledge in a virtual setup, both internally and externally.

### ***Agile mindset***

Furthermore, possessing an “agile mindset” is ranked as the third key determinant for remote innovation, with the competence to “think outside the box” and quickly adapt to new changes being crucial for innovation projects. Furthermore, since virtual teams may lack rich face-to-face communication, Schilling (2019) suggests that teams in virtual environments should incorporate various interaction types into their guidelines, such as regular unstructured chat-sessions, to encourage idea sharing that may not arise in formal settings, in order to contribute to agile working.

### ***Virtual leadership skills***

Virtual leadership skills are also highlighted as vital, given that the lack of physical interactions reduces the chances for trust-building among leaders, employees, and team members, making a trust-based relationship within the team crucial. However, the methods for successfully building trust in a fully remote setting is something that still needs to be researched further in depth. This aligns with findings from Jasgur (2023) about the importance of social interactions in remote settings.

### ***IT readiness and digital literacy***

IT readiness and digital literacy are discussed as important determinants, focusing not on the technology itself but on how it is managed and utilized by users, and the individuals’ capability to locate, evaluate, and communicate information clearly using digital platforms (Chandra et al., 2020; Koltay, 2011). This is backed by another study in the field made by Deschênes (2024), who describes the need for digital literacy due to the reliance on ICTs. This study found that the technical aspects of digital literacy significantly influence the use of collaborative tools. Moreover, employing collaborative technologies contributes to a sense of familiarity among team members. This underscores the critical role of technical skills in leveraging digital tools for maintaining social connections within hybrid work environments.

Additionally, Tanner (2024) states that the latest generations, having grown up with technology, are presumably better prepared and more adept at navigating a digital world than their forerunners, leading to a gap in adaptability and comfort with technological advancements.

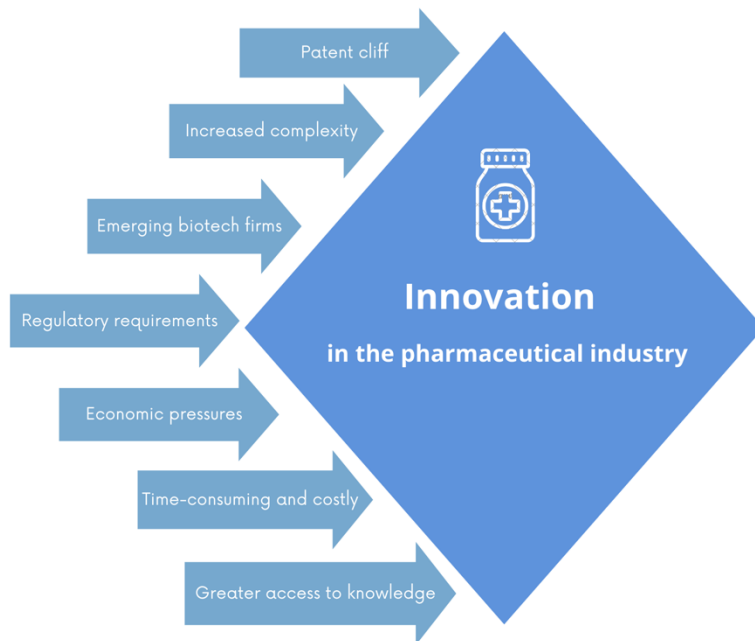
### ***Monitoring and control technologies***

The literature also suggests that specific monitoring and control technologies are important, and these should not act merely as control measures but as tools to make performance in a hybrid setting visible to all (Chandra et al., 2020). It is critical, however, that these technologies are not employed for micromanaging employees, as studies suggest this could significantly reduce motivation and creativity among collaboration teams (George et al., 2020). Jasgur (2023) proposes that managers adopt a mentorship approach rather than a supervisory one, avoiding the need to constantly oversee employees' activities, whether in-person or remotely. They recommend regular one-on-one check-ins to prevent micromanagement, while still monitoring employee progress and facilitating mutual feedback.

## **2.6. Innovation in the Pharmaceutical Industry**

With annual prescription drug sales exceeding USD 1 trillion and a growth rate of 2,4%, the pharmaceutical industry serves countless individuals worldwide, providing essential medications and healthcare necessities for various diseases and conditions. Despite its dominance, the industry faces challenges in innovation. Innovation in this industry often comes with high costs and low success rates, posing significant challenges to companies. Research indicates that the success rate of drug candidates from clinical trials to marketing approval remains relatively low, where estimates indicating as low as 10% (DiMasi et al., 2016). This low success rate means that they invest substantial resources in research and development (R&D) with no guarantee of bringing a product to market. Despite their industry has low success rates, following Chesbrough (2003), it is important to keep innovating, otherwise they will not survive. Moreover, given its time-consuming and expensive nature, this underscores why the pharmaceutical industry should engage in OI.

We will now explore characteristics inherent in the pharmaceutical industry and link these to the reasons why the industry focus on innovation, illustrated in Figure 9 below.



**Figure 9:** Innovation in the Pharmaceutical Industry. *Source: Own work*

### ***Patent cliff***

Pharmaceutical companies heavily rely on IP protection to ensure exclusivity rights for their innovations, preventing competitors from copying their assets. They can get exclusivity rights such as patents, trademarks, copy rights and trade secrets. When it comes to protection of new inventions, a patent would be the legal right they need, which is a right to exclude others from commercial use of the invention. Getting a patent requires application and examination to grant it, and the duration lasts for 20 years (Høy Jakobsen, 2019). One of the most significant challenges the industry faces is the “*patent cliff*”. This refers to the sharp revenue decline when leading products of a firm loses patent protection, which may decrease the sales to 90%. Expiry of patent protection enables other firms to begin selling generics, meaning similar drugs. This often leads to cheaper competitor alternatives. This is an incentive for the companies to extend their focus beyond pharmaceutical drugs to other related services and solutions. (Hayes, 2022; Barlow, 2017; Høy Jakobsen, 2019).

### ***Increased complexity and emerging biotech firms***

The increasing complexity of drug discovery and a shift in focus towards chronic diseases poses

another challenge (Barlow, 2017). Drug research was initially powered by chemistry but is now incorporating pharmacology and clinical science, which has pushed the medical progress forwards. Advances in molecular biology and genomics are changing how drugs are discovered, where new proteins and antibodies lead us to discover more drugs. This complexity has reshaped the institutional landscape of drug research, with biotech firms serving as vital intermediaries between academia and large pharmaceutical companies, facilitating knowledge transfer (Drews, 2000).

### ***Regulatory requirements and economic pressures***

Regulatory and economic pressures add further hurdles, prompting pharmaceutical companies to rethink their approach to innovation and enhance the efficiency of their R&D framework. In healthcare, innovation encounters unique complexities shaped by a multifaceted system and high level of regulations leading stakeholders to being more cautious about new approaches. Developing new drugs requires significant resources and adherence to strict regulations. Moreover, it has become increasingly acknowledged that the process has become overly expensive and complex for pharmaceutical companies to handle alone. This realization, along with a research productivity crisis has spurred exploration into different alternative innovation models, including OI. (Barlow, 2017; Martínez-Noya & Narula, 2018).

### ***Time consuming and costly***

The cost of bringing a new drug to market has been steadily rising over the years, with estimates ranging from hundreds of millions to billions of dollars per drug (Paul et al., 2010). These high costs are attributed to various factors, including rigorous regulatory requirements, lengthy clinical trial processes, and the complexities of drug development. (Paul et al., 2010; DiMasi et al., 2016; Balow, 2017). More specifically, clinical trials are assessing interventions in humans for efficacy and safety against a control group, potentially improving healthcare quality and cost-effectiveness through meticulous treatment comparison. Typically spanning three or four phases, these trials involve extensive participant data collection, strict criteria, quality assurance, and diverse outcome measurements. Therefore, these trials demand substantial resources and time (Friedman et al., 2015). Moreover, certain predictions indicate that it requires approximately 14 years from initial research stages until a new drug is officially licensed and enters the market. Moreover, the expenditure to

introduce a new compound to its initial marketing phase in the U.S. could cost USD 1 billion (Barlow, 2017).

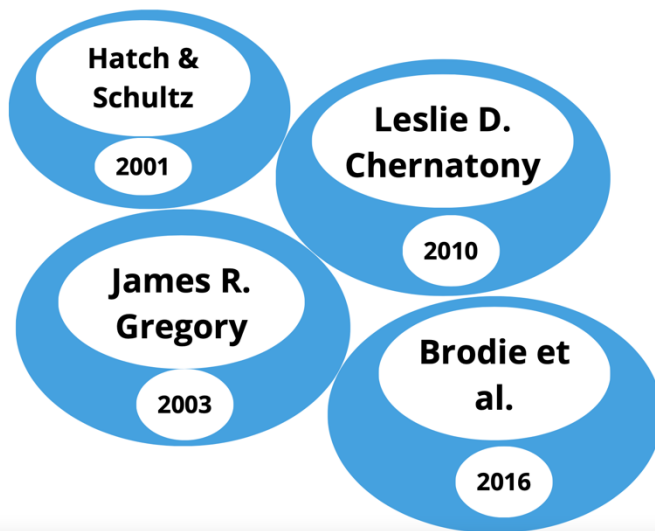
### ***Greater access to knowledge and knowledge-sharing***

Chesbrough (2003) argued that in the pharmaceutical industry, a greater access to knowledge and knowledge-sharing than ever before, contributed to a shared understanding of disease areas and treatment opportunities, which in turn contributed to an enhancement of health across the population. Collaborations in the past followed a more linear structure which led to inefficiencies and duplicated efforts, and it has become a shift towards a more agile and innovative approach, resembling, similar to how smaller biotech firms operate. The shift towards OI is driven by the understanding of the advantages associated with open R&D architectures, where collaboration and sharing of ideas are encouraged. (Barlow, 2017).

## **2.7. Corporate Brand Image**

Traditional branding studies focus on identifying elements that, when effectively leveraged, can offer substantial value and a competitive edge to a company. These elements enable consumers to foster meaningful and diverse perceptions of the brand. Gregory (2003) highlights the importance of having a strong corporate brand, as this yields numerous advantages, including improved business outcomes like increased sales, earnings, and cash flow, enhanced financial performance such as stock price, and greater loyalty that helps attract and retain employees. Furthermore, a robust brand differentiates the company from its competitors and enhances its resilience.

In this section, the following literature will be used:



**Figure 10:** Sources referenced in the brand image section of the literature review. *Source: Own work.*

Brodie et al. (2016) observe that branding research has traditionally concentrated on the visible aspects of a brand, with recent studies beginning to explore the underlying organizational processes that contribute to brand significance in the market. They also state that prior studies primarily viewed branding through the perspective of the seller, portraying them as the active creator of the brand and the consumer as a passive recipient of brand messages. This approach portrays the brand as an external image, with its identity almost entirely crafted, maintained, and modified by the company itself.

Historically, branding research was guided by microeconomic and psychological theories, neglecting the ongoing and evolutionary process of building a brand. The economic perspective relies on theories explaining identity formation, while the psychological perspective is based on theories of associative memory and consumer brand knowledge. However, this approach lacks insight into how a company can gain strategic advantages, a limitation that becomes more pronounced in a dynamic and interconnected business landscape.

As a response to the traditional perception of brands, Chernatony (2010) introduced a practical tool for managers to distinguish between processes that are visible (“above the waterline”), or hidden (“below

the waterline”) to externals (See Figure 11). Visible elements include the brand name, logo, and packaging, while hidden elements comprise value-adding processes like quality assurance systems, corporate culture, admired R&D departments, sustainability, flexibility and dedicated personnel. Achieving a unified brand identity requires a strategic approach that aligns the tangible aspects of the brand with its intangible elements. Without a common understanding within the organization of the brand’s core values, there is a risk that various departments may accidentally weaken the brand’s coherence. This underscores the importance of an efficient internal knowledge flow-process to ensure that all employees can contribute to fulfilling the company’s value propositions.



**Figure 11:** The Brand Iceberg. *Source: Chernatony (2010)*

Chernatony (2010) also emphasizes the significance of adopting a customer-centric strategy to improve a brand’s image, explaining that an individual’s set of associations with a brand, whether internal or external, evolves through both direct and indirect interactions. These associations can relate to the brand’s functional qualities, people associated with the company, or events organized by the company. While brand image perceptions will vary among individuals, commonalities may emerge that are either positive or negative. They underscore the need to explore how external individuals perceive the brand image, enabling the company to either address or capitalize on these perceptions to foster the most favorable image. Recent research suggests that brands are socially constructed entities, with their identities laying the groundwork for the development of meanings. (Brodie et al. 2016).

Gregory (2003) also indicates a significant link between corporate communication, both internal and external, and what they call ‘the core brand power’, which they define as “*the sum of familiarity with*

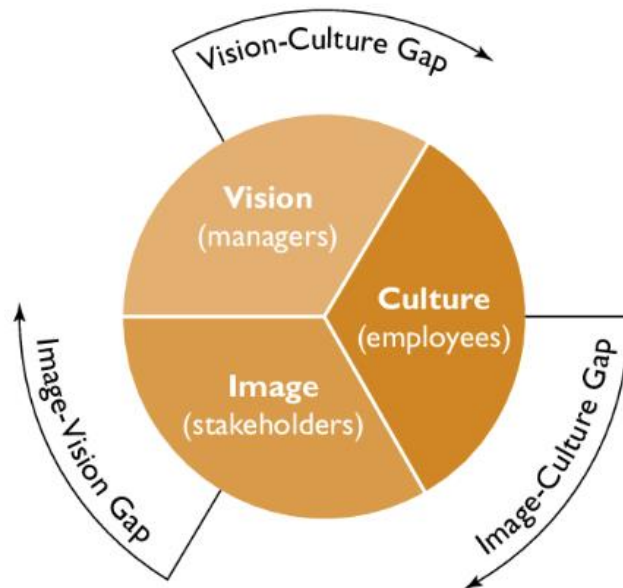
*the brand, plus favorability toward the brand.*” They suggest that individuals familiar with a company are more inclined to hold positive feelings towards it. These positive perceptions, in turn, prompt actions, such as applying for a job or engaging with the company in other ways.

### **2.7.1. The Corporate Brand as a Strategic Advantage**

As noted by Brodie et al. (2016), traditional branding research concentrated on visible brand aspects, and has more recently shifted focus to organizational processes “below the waterline”. They found that these underlying processes play a crucial role in shaping the brand’s meaning in the market and provide insights into how the brand achieves and sustains its strategic advantage. Moreover, Chernatony (2010) suggests that organizational culture, especially within corporate brands, is a significant marker of the values that define the company. Each organizational culture is distinctive, providing cues for employee behavior that is unique to the company. This aspect of culture is particularly beneficial for companies operating globally, as it fosters a unified perspective on respect, quality, and safety, encouraging consistent behavior across diverse locations. Moreover, Chernatony points out that a strong organizational culture can strengthen stakeholder relationships with the company, enhancing trust and, subsequently, performance levels.

### **2.7.2. The VCI-model**

Hatch and Schultz (2001) propose a useful framework (see Figure 12) for analyzing the three elements, that is important for the corporate brand image: 1) Vision, as defined by senior management’s aspirations for the organization, 2) Culture, reflecting the values experienced and shared by all employees, and 3) Image, the perception or impression held by external stakeholders. Misalignments and gaps among these three elements could harm the overall brand image. For instance, due to decisions made in isolation or ‘silos’, there is a significant risk of the brand losing its competitive edge and spiraling downward. (Hatch and Schultz, 2001; Gregory, 2003). Therefore, it is crucial for organizations to constantly monitor the alignment between these elements to make necessary adjustments. All three interfaces hold equal importance for an organization to ensure that the identity or image projected to stakeholders is supported by both senior managers (vision) and employees (culture) and is also understood and valued by stakeholders (image). (Cornelissen, 2020).



**Figure 12:** The VCI-model. Source: Hatch & Schultz (2001) from the book: *Corporate Communication* by Joep Cornelissen (2020)

Other research underscores the critical link between employee perception and customer perception of a brand. Ideally, the company's image and culture should be unified, ensuring that employee behavior and values reflect the desired attributes of the corporate brand. Minimizing any discrepancies between these two is essential. When image and culture are interconnected, a change in one can significantly influence the other. It is argued that culture has a greater impact on image than vice versa. This implies that a strong organizational culture can more effectively influence the external brand image positively than a strong external brand image can enhance internal culture. Employee behavior directly impacts a company's reputation, as external stakeholders often form their impressions of the company based on their interactions with and perceptions of its employees. (Davies & Chun, 2002).

## 2.8. Sub-conclusion for Literature Review

The literature review explored the shift to a hybrid workplace, addressing both the professional and personal challenges this transition entails. It also highlighted potential employee resistance due to fears associated with change. Additionally, the review introduced a model, derived from literature published between 2002 and 2024, which serves as a guide to determine if an organization is ready to transition to

a hybrid model. The review then explored digital transformation in relation to innovation, before diving deeper into various innovation strategies, forms, and types. It also outlined key factors necessary for successful remote innovation. The importance of innovation for pharmaceutical companies was emphasized, given the numerous challenges common in this industry. Finally, the review addressed the concept of corporate brand image, underscoring its importance for maintaining a strong presence globally for large businesses.

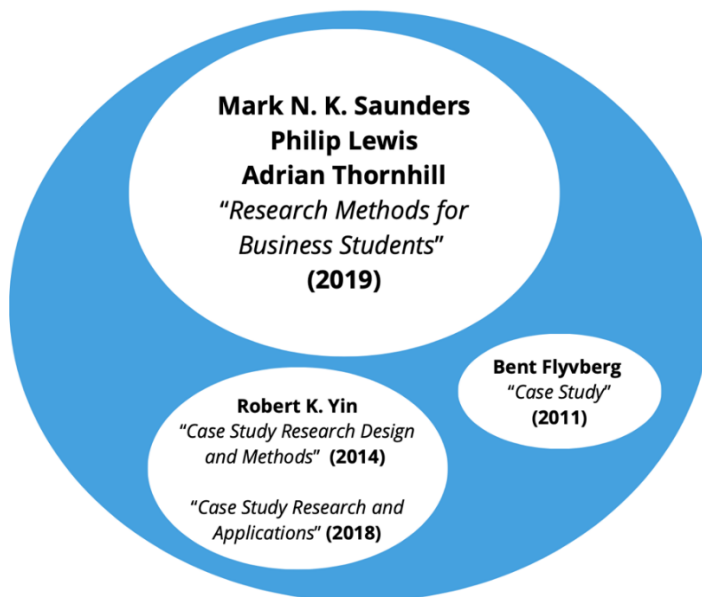
### 3. Methodology

This chapter aims to clarify the methodology employed in the thesis. Initially, we will review our initial thesis process. Thereafter, we will explore the layers of the ‘Research Onion’ which we have adopted as our foundational framework, introduced by Saunders, Lewis and Thornhill (2016). The Research Onion serves as a tool to enhance the structure and organization of our methodology. Finally, we will address privacy and ethics, reliability and validity, and limitations. The research question we are addressing in this study is:

#### Research Question:

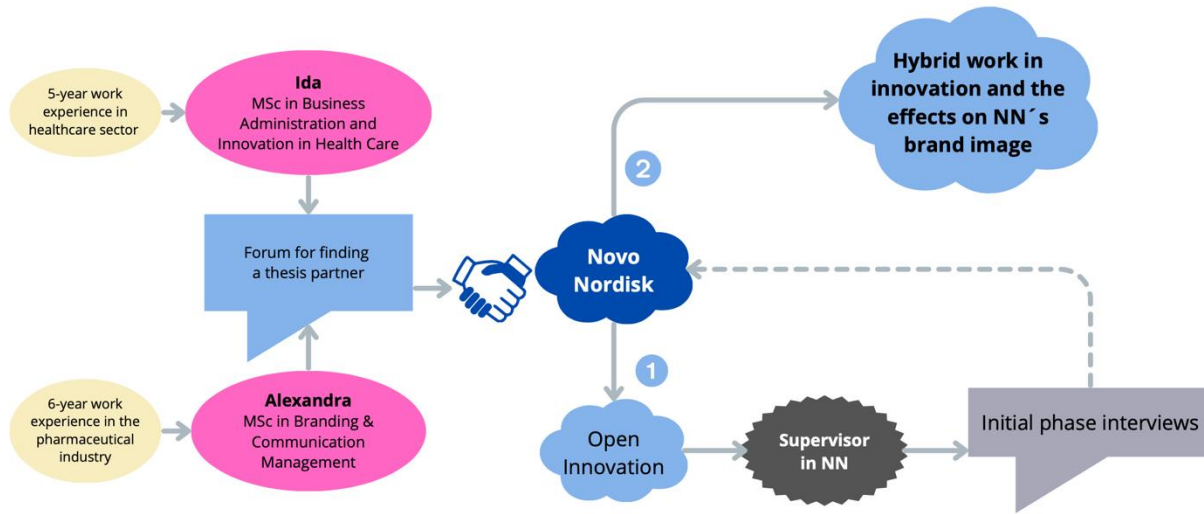
*How does the integration of hybrid working environments impact the innovation projects within Novo Nordisk, and how is the corporate brand image affected by the change?*

In this section, we will draw upon the literature utilized by the below mentioned authors. We mostly focus on Saunders et al. (2019). We use literature from Yin (2014) & (2018) who is well-known for his research on qualitative design as well as case study research, together with Flyvbergs (2011) article about case studies.



**Figure 13:** Sources referenced in the methodology section. *Source: Own work.*

### 3.1. Preliminary Process



**Figure 14:** Topic Delimitation Process. *Source: Own work.*

At the beginning of our Master’s Thesis Project, we connected through a discussion forum on CBS’s website. Despite coming from two different concentrations, we shared a common interest in innovation and the pharmaceutical industry. Ida’s five-year engagement in the healthcare sector alongside her program in ‘Innovation in Health Care’ contributed to her competence. Alexandra’s extensive experience gained from working in NN before pursuing her master’s degree, coupled with her minor in ‘Marketing and Innovation’, further enriched our aligned interests and knowledge about the field. Thus, our project naturally focused on NN, encompassing facets of innovation.

Beginning with ‘open innovation’ as our central theoretical framework, as stated in our topic delimitation (See Figure 14), we delved into this literature. We aimed to formulate questions guiding us toward identifying a particular issue within NN. We initiated the project with an exploratory phase which involved conducting two interviews. The purpose of these was to obtain a comprehensive understanding of how employees at NN perceived the topic and engaged with both closed and open innovation, aiming to uncover potential challenges. After transcribing and coding the interviews, we uncovered recurring themes in their responses. These patterns illuminated the complexities of the ‘hybrid workplace’; a topic that was already familiar to us. In search of new literature to enhance our understanding of this subject, we discovered that published material was somewhat scarce, with most

academic articles emerging post-Covid-19. The literature thus requires further exploration in many areas of this topic. This realization confirmed our decision to delve deeper into this field, beginning our process of seeking potential interviewees from NN and individuals knowledgeable about digital transformation.

The two informants we initially engaged with specialize in ‘open innovation’, and one of them agreed to be our supervisor for the project. As noted by Saunders et al. (2019), research interviews may also serve as a purpose of refining ideas in situations where a research question and objectives have not been fully formulated yet. This aligns with how these initial interviews helped us in our process. As we delved deeper into our focus on innovation in hybrid work, it became evident that this was not their area of expertise. Consequently, they directed us to other contacts, as we proceeded without a designated supervisor. While this decision distanced us from NN and the advantages of having a supervisor, it also opened an unexpected avenue for exploration. This shift allowed us to investigate a challenge we had not previously considered.

### **3.2. Literature Collection**

In our search for literature, we tapped into a variety of sources. These encompassed physical and digital books sourced from CBS library, sections from books, book chapters, research articles, and consultancy reports. Our approach to gathering literature involved avenues such as professor-provided readings, exploration of the CBS library, recommendations from our supervisor, and searches through databases. Notably, we heavily relied on platforms like ‘Scopus’ and ‘Google Scholar’ for our searches. Additionally, we leveraged generative AI, specifically ChatGPT, for language refinement, which is in alignment with CBS guidelines.

In our independent searches, we deliberately sought out both recent and historical literature to gain a holistic insight into the evolution of relevant topics. We moved towards articles with high citation counts, recognizing their potential significance and influence. Moreover, we utilized scholarly databases because they include literature authored by experts in the field, ensuring content undergoes review for accuracy and relevance; especially written for academics.

### 3.3. Research Onion

We will now delve further into our methodology using the original “Research Onion” as the foundation. We have customized it to better align with the specific choices we have made for our methodology (See Figure 15).

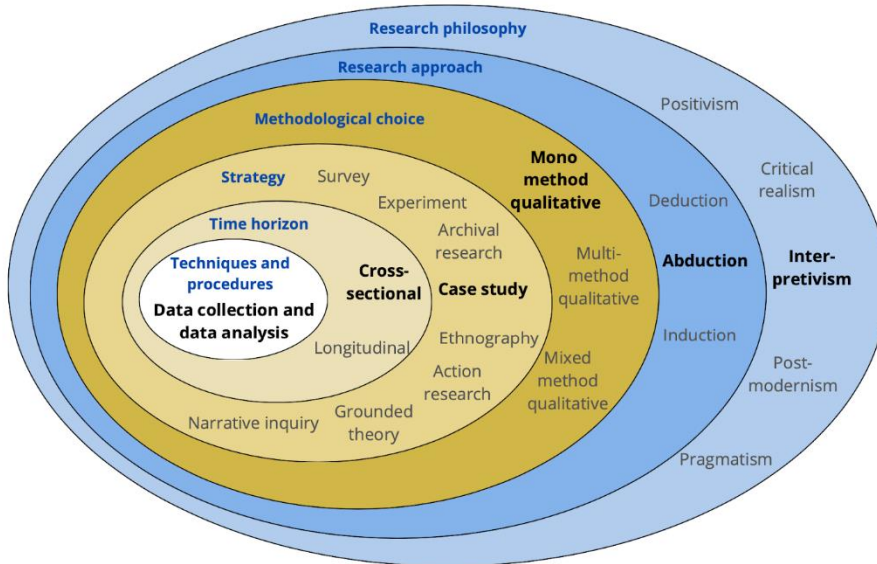


Figure 15: The Research Onion. Source: Own work based on Saunders et al., (2015)

#### 3.3.1. Research Philosophy

##### *Ontology, epistemology, and axiology*

The research philosophy refers to beliefs and assumptions that are made whilst developing knowledge. These include how we perceive and study reality in research (ontology), how we understand and communicate knowledge in research (epistemology) and how we handle values and ethics during our research (axiology).

Ontology influences our understanding of organizational phenomena. For instance, the traditional views saw resistance as harmful to an organization, whilst newer perspectives see resistance as inherent and potentially beneficial, leading to research on how to utilize it for organizational improvement. In our matter, this approach prompts us to reconsider the definition of a workplace as the traditional

offices have been changing and are moving towards hybrid workplaces, indicating that the office could, potentially, be anywhere.

Epistemology concerns assumptions on what involves acceptable, valid, and legitimate knowledge (Saunders et al., 2015). It involves asking questions such as “*how do we know what we know?*”. (Slevitch, 2011). There are various types of knowledge accepted, from numerous data to interpretations and narratives. As researchers, we choose different epistemologies which in turn influences the method selection and research outcomes. Our epistemological stance in this study is experiences, stories and interpretations, and focuses on the creation and dissemination of knowledge among team members. This is what we believe leads to the production of meaningful and valid data.

Axiology concerns values and ethics, which guides us in how we handle our own values in addition to the participants. It is argued that values shape every stage of the research, which again affects credibility. This is why we consider it important to demonstrate our axiological skills, as this guides our research decisions. As we are prioritizing interviews for our research confirms that we value personal interaction over questionnaires.

### ***Interpretivism***

The research onion encompasses the five prevalent research philosophies embraced by researchers; positivism, critical realism, interpretivism, postmodernism and pragmatism (Saunders et al., 2019).

This study adopts an interpretivist approach, challenging positivism by emphasizing that humans create meanings, making social science research different from natural science. It criticizes the idea of universal ‘laws’, recognizing that people from different backgrounds experience and interpret social realities differently. Instead, interpretivists aim to uncover richer understandings of social worlds by considering various perspectives. It is highly relevant in business and management research due to the complexity and uniqueness of organizational contexts. (Saunders et al., 2019).

In our research study, we employ interpretivism to understand how employees interpret the company’s norms and values, and how this impacts the individual behavior and the overall work culture. This approach can provide insights into how a collective strategic decision about a hybrid workplace might be interpreted and implemented differently, depending on the unique cultural structure of each

department. Furthermore, we employ a phenomenology approach to understand the lived experiences of employees navigating in the hybrid work environment and what impact this has on the brand image of NN perceived by their stakeholders.

### **3.3.2. Research Approach**

Saunders et al. (2019) outline three research approaches: deductive, inductive, and abductive. We are employing an abductive approach, which involves moving back and forth, essentially combining deduction and induction. This is because we are not proceeding directly from theory to data (as in deduction) or from data to theory (as in induction). Utilizing an abductive approach in our investigation of how hybrid work impacts innovation and brand image entails gathering detailed and rich data to explore the phenomenon, identify themes, and explain patterns. We integrated these insights into a comprehensive conceptual framework, thereby developing a theory of what factors contribute to effects. We lastly validate this theory using evidence from existing and new data and revise if needed.

### **3.3.3. Research Design**

We have made use of qualitative methodology, which is according to Yin (2014) and Saunders et al. (2019) favorable as we have chosen interpretivism as our philosophical approach. It is associated with interpretivism because the researchers need to interpret the subjective meaning regarding the phenomenon under investigation. This type of research is also known as naturalistic because researchers need to navigate within a natural setting to foster trust, encourage participation, get access to meanings, and achieve in-depth understanding. The effectiveness of us as qualitative researchers depend not only on getting access to the participants but also establishing a relationship, in addition to the ability to approach them in a way that respects their perspectives, thoughts, and feelings so that they feel comfortable in sharing these. (Saunders et al., 2019).

In contrast, quantitative data focuses on analyzing the relationships between variables, employing numerical measurements, utilizing statistical and graphical techniques for analysis. While qualitative data provides detailed insights, quantitative data offers numerical accuracy, making standardization of data collection processes important. Researchers also tend to maintain an independent stance from participants. In our research, we favored qualitative methods to explore dimensions of human

experiences that are not easily quantified, unlike quantitative approaches. This has yielded deeper insights into unique perspectives (Saunders et al., 2019).

### **3.3.4. Methodological Choice**

We make use of one single data collection technique, focusing solely on semi-structured interviews, hereby making a mono method qualitative study. By utilizing this approach, it allows for flexibility in the questions, procedures and focus to evolve organically throughout the interview. Given that meanings, in a qualitative approach, are extracted from words rather than numerical data there might be ambiguity and multiple interpretations, making it essential to engage the participants in exploring and clarifying these meanings. (Saunders et al., 2019).

By utilizing this technique, we gain insights into a topic by asking some open-ended questions to help clarify the understanding of certain issues and phenomena, indicating that we are making use of an exploratory study. We began with a predetermined list of themes and key questions related to these themes to guide each interview. Our handling of these predetermined themes was somewhat flexible, indicating an exploratory study with an interpretivist approach as it is adaptive and responsive to emerging findings. The order in which we addressed these themes during interviews varied based on conversation flow and shared data. The origin of the interview themes was also impacted by the nature of the semi-structured interviews, potentially stemming from previous interview findings or discussions with each other. This reflects the inductive approach to our research. However, as some themes are derived from existing theory, it indicates a more deductive approach. (Saunders et al., 2019).

### 3.3.5. Research Strategy

This study employs a case study research strategy, using NN as our case. Yin (2018) defines a case study as “an in-depth inquiry into a topic of phenomenon within its real-life setting”, whereas Flyvberg (2011) states that the ‘case’ can refer to a person, group, or organization as well as many other types of case subjects. Once the case is selected, Saunders et al. (2019) state that the research then “sets out to understand the dynamics of the topic being studied within its setting or context.” Our study utilized an exploratory case study approach to delve into the dynamics of hybrid workplaces and the processes of innovation projects within the pharmaceutical sector. The case study distinguishes itself by studying cases within their real-life contexts. For instance, it differs from methods such as experiments, which intentionally isolate the phenomenon from its context, often within a controlled clinical laboratory setting. It also differs from historical research, which examines phenomena and complex situations but often focuses exclusively on non-contemporary events. (Yin, 2014; Saunders et al., 2019).

A case study, as described by Yin (2014), is also particularly suited for research focusing on ‘how’ questions where the researcher has minimal or no control over the events being studied. This method proves valuable for delving into the complex issues that occur in real-life cases. Our investigation of how hybrid work implementation influences innovation projects and its effect on the organization’s brand image adheres to the criteria Yin (2014) established, given our limited ability to manipulate or sway these results. The approach also provides a deeper understanding of the dynamics and effects of the processes in their natural setting however in different parts of the organization. This contributes to a valuable understanding and knowledge to the field of hybrid work.

Flyvberg (2011) highlights the paradox of case study research and states that some critics often question its ability to yield generalizable, reliable, and theoretical insights. This critique challenges the use of small samples and qualitative, interpretive methods. However, such criticism is gradually diminishing as the value of qualitative, mixed method research has become increasingly acknowledged.

Yin (2014) distinguishes the different types of case studies into ‘single-case’ and ‘multi-case’, and thereafter ‘holistic and ‘embedded’ studies. Our approach is a ‘single-case holistic design (See Figure 16).

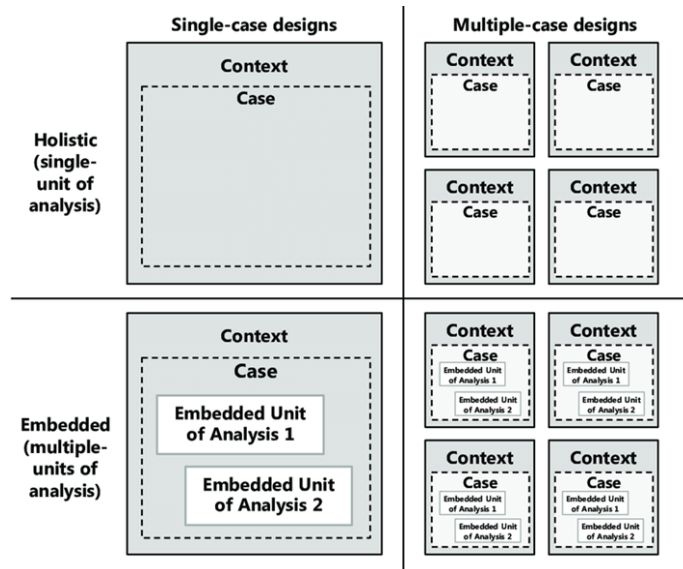


Figure 16: Basic types of designs for case studies. Source: Yin (2014)

**Single versus Multi Case Studies**

We are making use of single-case study as this represents one unique case, compared to multiple cases. As suggested by Yin (2018) and Saunders et al. (2019), a single case may be purposefully chosen because it provides the researchers with the possibility to analyze a phenomenon that has received little attention. A single-case study offers substantial contributions to the field’s knowledge base, either by supporting, challenging, or expanding upon existing theories. It also holds the potential to guide future research within the wider field or industry (Yin, 2014). Our decision to concentrate on a single company rather than the broader industry was made due to its manageable scope and focus. We considered conducting two case studies, but the challenge of accessing all relevant stakeholders within the given time frame led us to perceive it as superficial. Additionally, we recognized the significant advantage of having established contacts in facilitating communication with potential informants, a point we delve into further in this section.

**Holistic versus Embedded Case Studies**

Moreover, there are distinctions made between “holistic” and “embedded” case studies (Yin, 2018;

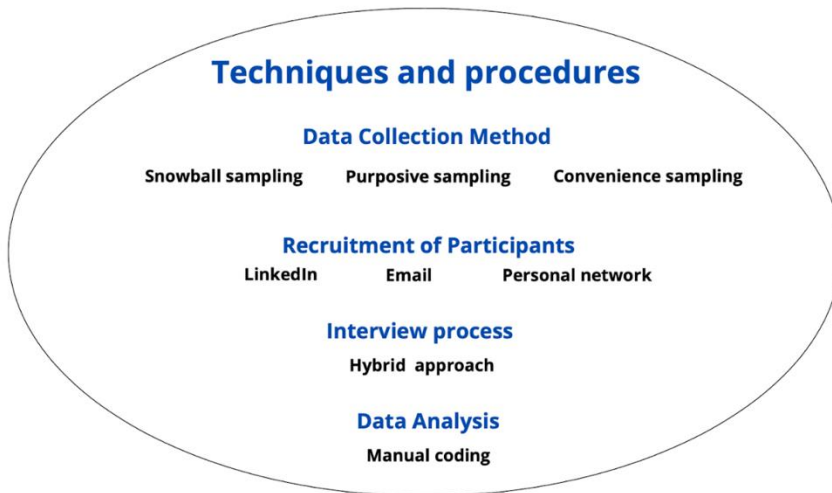
Saunders et al., 2019). For our investigation into the hybrid workplace phenomenon and its influence on innovation projects, we opted for a holistic design. This means that the entire entity under investigation serves as the unit of analysis, compared to embedded case study where the focus is on specific sub-units or components within the larger entity. Even though our approach attempts to include various departments and teams, indicating similarities with the embedded approach, it would require a larger focus on distinguishing these in order to determine them as separate units of analysis. Moreover, comprehensive interviews with entire teams, either individually or in focus groups would be relevant to capture a detailed understanding. (Yin, 2014; Saunders et al., 2019).

### **3.3.6. Time Horizon**

The research employs a cross-sectional approach, gathering data from a chosen group of informants at a specific point in time. This differs from a longitudinal study, which seeks to collect data from the same individuals repeatedly over an extended duration (Saunders et al., 2019) The rationale behind selecting this approach for our study is that we were constrained by a limited timeframe within the project. This also echoes the sentiment of Saunders et al. (2019), stating that academic research often operates within strict time limitations. Nonetheless, they highlight that many academic programs offer sufficient timeframes enabling longitudinal studies as long as research is begun early. However, we anticipate minimal significant changes occurring during this period, which diminished the necessity of following up with the same individuals to gather additional relevant data.

### 3.3.7. Techniques and Procedures

As we transition to the ‘techniques and procedures’ section, Figure 17 outlines the aspects we have taken into account for this section, showing the inner section of the research onion.



**Figure 17:** Techniques and procedures. *Source: Own work.*

### 3.3.8. Data Collection Method

In terms of empirical data, we combined ‘purposive sampling’ and ‘snowball sampling’ with ‘convenience sampling’ to recruit participants. Initially, we selected participants from our network, indicating convenience sampling. Furthermore, we also researched to find relevant people based on their expertise, particularly within innovation, organizational change, and in the pharmaceutical industry, which is a characteristic of purposive sampling. During interviews, we asked for referrals from participants for colleagues who could provide insights beyond their expertise, resembling snowball sampling. This approach helped us reach individuals who may be hard to locate through traditional methods (Obilor, 2023).

### 3.3.9. Recruitment of Participants

Recruitment for interviews was multifaceted, primarily conducted via Email and LinkedIn, with some participants engaged through personal networks. Our initial network comprised former colleagues, friends and family working in NN. On LinkedIn, we established connections with numerous individuals, expanding our outreach beyond our immediate network for interview opportunities. We aimed to increase the number of participants to enhance the representativeness further; additional details are provided in section 3.11. “*Limitations*”.

### 3.3.10. Participants

<i>Informant</i>	<i>Profession/position</i>	<i>Company</i>	<i>Work experience</i>
<i>Informant 1</i>	<i>System Engineer Manager</i>	<i>Novo Nordisk</i>	<i>31 years</i>
<i>Informant 2</i>	<i>Head of department within the scope of Innovation &amp; Partnerships</i>	<i>Novo Nordisk</i>	<i>8 years</i>
<i>Informant 3</i>	<i>Digital Transformation Consultant</i>	<i>Novo Nordisk</i>	<i>2 years</i>
<i>Informant 4</i>	<i>Vice President of an area within the scope of Drug Discovery Innovation Projects</i>	<i>Novo Nordisk</i>	<i>11 years</i>
<i>Informant 5</i>	<i>CVP Communication Partner</i>	<i>Novo Nordisk</i>	<i>15 years</i>
<i>Informant 6</i>	<i>Senior Manager within the scope of IT, Data &amp; Digital Innovation Projects</i>	<i>Novo Nordisk</i>	<i>8 years</i>
<i>Informant 7</i>	<i>Director of an area within Supply Chain</i>	<i>Novo Nordisk</i>	<i>6 years</i>
<i>Informant 8</i>	<i>SVP Communication Partner</i>	<i>Novo Nordisk</i>	<i>4 years</i>
<i>Informant 9</i>	<i>Innovation Project Director</i>	<i>Novo Nordisk</i>	<i>32 years</i>
<i>Informant 10</i>	<i>Professor in Economics and Management of Inventive Processes - Department of Strategy and Innovation</i>	<i>Copenhagen Business School</i>	<i>-</i>
<i>Informant 11</i>	<i>HR Director within R&amp;D &amp; Business Transformation</i>	<i>Leo Pharma</i>	<i>9 years</i>
<i>Informant 12</i>	<i>Senior Vice President</i>	<i>Zealand Pharma</i>	<i>5 years</i>

**Table 1.** Demographics of informants. *Source: Own work.*

As illustrated in Table 1 above, we included a diverse sample comprising nine individuals employed at NN. This selection was deliberate to encompass varied experiences and knowledge within NN including both seasoned veterans and newcomers, ensuring a comprehensive perspective. Aiming to interview both managers and non-managers allowed us to gain a holistic perspective on team management in a hybrid environment and employee perceptions of such settings. We also tried to include individuals closely associated with production sites and drug development laboratories, who are required to work on-site, as well as those in office environments with fewer restrictions on hybrid working arrangements. This strategy has granted us a thorough understanding of the varied challenges encountered by different business units, including their occurrence, reasons, and current handling methods.

Moreover, we included two informants from other pharmaceutical companies as well to gain broader insights into the industry from another perspective. By involving representatives from competitors also facilitated the exploration of fresh perspectives and contradictory experiences. Lastly, we included a professor specializing in innovation and hybrid work research. The inclusion of external experts was aimed at obtaining unbiased insights and potentially conflicting viewpoints.

### **3.3.11. Interview Process**

The setting for the data collection in this study was a flexible approach. We offered participants the choice between virtual or in-person interviews, allowing them to select the option that best suited their schedules and preferences. Additionally, we informed them that we could visit their office if located in Denmark. Originally, four interviews were planned to be conducted in person. However, one participant fell ill on the scheduled day and opted for a virtual interview, while another participant became too busy and therefore chose to participate from home instead. Consequently, only two of the interviews took place physically, one at NN's facilities in Hillerød and one at NN's Digital Innovation Hub at the IT-university of Copenhagen.

Literature suggests that while digital tools such as Teams, which we used, offer numerous efficiencies and open new possibilities for qualitative research, their impact on data quality and the dynamics between researchers and participants requires careful consideration. (Oliffe et al., 2021). Saunders et al.

(2019) also addressed advantages to ‘telephone-interviews’ whereas the first mentioned is access. Interviews can be conducted with individuals who would otherwise be difficult to reach out to due to geographical distance, costs, or constraints. This advantage is one we acknowledge and experienced. For instance, one participant was located in another country, rendering physical meetings impossible. In addition, two were home due to illness which could have necessitated canceling an in-person meeting if required that day.

Additionally, flexibility is mentioned where the individuals can choose a convenient time and location for the interview, allowing for increased participation and comfort, especially when discussing sensitive topics. We also hold the view; that offering this choice made individuals inclined to meet with us within a short timeframe, as they perceived the 30-minute commitment as a manageable break in their busy schedule or were simply just encouraged by this prospect. As suggested by Saunders et al. (2019) it is important to carefully consider the amount of time required to conduct an interview, and this should also be clearly stated in any initial contact so that the participant sets aside sufficient time. This is also something we communicated to the informants in our initial communication to potential informants. Furthermore, another advantage stated by is that virtual interviews can provide the feeling of anonymity, leading to greater openness and willingness to discuss personal matters, as they feel less inhibited compared to face-to-face interviews. They may also find it easier to participate and express themselves freely (Saunders et al.,2019). Most participants were based in home offices at the time of the interview, which also contributed to the feeling of comfortability.

However, virtual interviews also present several challenges. As the importance of establishing a relationship and trust is emphasized, this can be challenging in telephone interviews due to limited personal contact. The lack of physical presence can lead to the loss of important nuances such as body language and facial expressions, which might be overlooked due to connectivity issues or the limited view provided by the small video frames (Olliffe et al., 2021). Saunder et al. (2019) adds that these interviews heavily rely on verbal (what is being said) and paralinguistic signals (how it is being said) as there may be reduced visual clues. In order to reduce this potential challenge, in our virtual meetings, all three parties were online with cameras and microphones enabled, in contrast to having us (as the interviewers) sitting together with only the interviewee online. We believed this approach would create the most professional and comfortable atmosphere for the informant. Furthermore, it enabled us to

capture facial expressions, immediate thoughts, and vocal nuances in addition to capturing their engagements, fostering a more authentic atmosphere that potentially enhances our comprehension of the participants' perceptions.

Additionally, the digital literacy and IT readiness of participants can pose barriers, particularly if they are unfamiliar to technical issues with connection, microphone, or video setup, potentially starting the interview on a negative note and affecting the flow and quality of data collection. (Olliffe et al., 2021). During some of our interviews, we encountered issues with poor connectivity, occasionally disrupting the flow of conversation. In one instance, we had to restart an interview after a few minutes because one of us could not capture all that was being said, necessitating a call-back and meeting restart. This situation could potentially have led to the participants not repeating their entire initial statements. However, since this disruption occurred early in the meeting, it primarily affected the introductory questions and did not impact the responses to our thematic inquiries. Additionally, we encountered issues with meeting links where some informants ended up in separate Teams meeting rooms from us. This consumed valuable time from our already constrained 30-minute interview slots.

### **3.3.12. Data Analysis**

The transcription process began with utilizing the 'transcription' function within Microsoft Word to transcribe all interviews. Subsequently, each interview was carefully reviewed while simultaneously listening to the audio to ensure accuracy. Manual adjustments were made to correct inaccuracies in words, sentence structures, and to include any additional information missed by the transcription function.

Simultaneously as listening to the interviews, a document for each one was created and continuously updated to capture interesting comments, themes, and quotes from the interviews. This methodological approach is very similar to 'grounded theory', focusing on developing theoretical explanations of social interactions and processes. More precisely, this is a procedure that organizes data into categories. (Saunders et al., 2019). Through repeated iterations, a set of codes emerged, which were initially categorized into different sections to reorganize the data into categories, indicating 'open coding'. Examples of this could be 'freedom', 'access to workforce' and 'confidentiality'. Furthermore, we aimed to see how these codes could be grouped together, and attempted to recognize the relationship

between the categories, indicating ‘axial coding’. For instance, some were talking negatively about hybrid work and others positively leading to “*challenges of hybrid work*” and “*advantages of hybrid work*”. Lastly, they were categorized into broader categories such as “*open innovation*”, “*closed innovation*”, “*innovation challenges*”, “*brand image*” and “*hybrid work*”, indicating ‘selective coding’, where we tried to integrate the categories to the theory we are using. These broad codes were further subdivided into smaller sections within each theme, such as specific challenges within “*hybrid work*” like “*culture*”, “*collaborations*”, and “*personal preferences*”.

After conducting all the interviews, all the individual documents containing relevant codes were compiled into a comprehensive document. To ensure comprehensive coverage, we revisited the interviews individually a couple of weeks after initially coding them. During this review, we highlighted relevant aspects and made additional notes, seeking to identify any potentially overlooked elements. As we approached the analysis phase, certain codes gained prominence, prompting us to pay closer attention to specific details. Subsequently, we convened to collectively review and compare our findings against the integrated coding document. To maintain independent perspectives, we conducted this process individually, prioritizing individual insights over group influence. Through collaborative discussions and document creation, we established a robust foundation for our analysis.

### **3.4. Research Ethics, Data Privacy, Validity and Reliability**

Several measures were implemented to uphold good research ethics. Initially, we informed the participants about the objectives of the study before the interviews. We provided introductions including our names, backgrounds, and current educational paths along with a tentative timeline of our thesis process and associated deadlines. Moreover, prior to each interview we sought explicit consent for audio recording, clarifying that it would be used for transcription purposes only. Participants were ensured that recordings would be deleted after thesis submission on May 15th. Additionally, we committed to completing transcription within a short time and offered to share the transcript with participants for review to address any misunderstandings or unclear passages.

The validity of a study refers to the extent to which a test accurately measures what it intends to measure and if variations in the attributes being measured also cause variations in the outcomes

(Borsboom, Mellenbergh & van Heerden, 2004). According to Flyvbjerg (2011) one of the strengths of case studies is the high conceptual validity it provides which is due to its rich data and depth of analysis. Moreover, according to Saunders et al. (2019) it is important that the interviews are conducted carefully, asking clarifying questions, exploring for deeper meanings, and allowing participants to verify the accuracy of data. Again, the importance of building relationships and trust is emphasized.

Reliability can be defined as “*the extent to which a measurement procedure yields the same answer however and whenever it is carried out*” (Kirk & Miller, 1986). Saunders et al (2019) also mention that the findings from semi-structured interviews may not be repeatable as they reflect reality at the time they were collected, which can be subject to change. Therefore, they emphasize the importance of providing detailed information of how we collected the data to demonstrate the thoroughness in the study and ensure others understand how the findings were obtained, as we are also doing in this methodology section.

### 3.5. Limitations

**Single-case study:** If we had more time for the project, conducting a multi-case study would be considered, as it could provide deeper insights into the pharmaceutical industry. Expanding our scope would likely yield results with broader applicability and increased generalizability. On the other hand, while a single case study offers valuable insights, it inherently lacks the ability to replicate findings across different contexts. Choosing one case may unintentionally limit the generalizability and robustness of the study’s conclusions. This is because researchers may struggle with whether the observed patterns are consistent across different contexts or merely specific to the chosen case. They have the possibility to carefully select cases where similar results are expected (literal replication) and cases with deliberate contextual differences, (theoretical replication) enabling to test theoretical hypothesis. Therefore, relying solely on a single case study may not fully capture the breadth of variation and complexity inherent in real-life phenomena (Saunders et al., 2019).

**Semi-structured interviews:** Alternative methods such as structured interviews or surveys were considered. However, they were ultimately considered unsuitable for our research objectives as they

may have limited depth of qualitative insights we sought to gather. It is also important to acknowledge the weaknesses inherent in this method, including non-anonymity, potential interviewer bias and variations in participant responses. To mitigate this, we highlighted the anonymity of the participants, assuring them that their identities would remain undisclosed, potentially leading to greater openness. Additionally, this influenced our decision to include individuals from diverse companies.

**Qualitative data:** The decision entailed excluding quantitative data, which could have broadened our scope by involving more informants. For instance, we could have utilized surveys. Nonetheless, surveys are limited by the predetermined nature of questions and the inability to ask follow-up questions, constraining the depth of understanding that can be achieved (Yin, 2014). As our aim was to delve deeper into the responses rather than a large quantity of data, we chose to prioritize depth over breadth.

**Variations in pre-interview preparation:** Some participants requested access to the interview guide beforehand, a request we accommodated. We took this approach because we were appreciative of their willingness to participate in our research. Therefore, we believed that if this aspect became a significant concern for them, they might opt to withdraw their participation. Considering that some had access to the interview guide before while others did not, this could also influence their answers because some would have more time to think about their answers, perhaps giving us more aspects than if they were to think immediately. However, those who did not get it beforehand, might have given more genuine answers, because they had to answer immediately.

**Manual coding:** We experimented with NVivo during the days of our physical meetings. We went through the coding individually, and we found that coding two interviews took several hours, requiring us to be physically present as only one of us could access NVivo at a time. Recognizing the time commitment required to collectively analyze all interviews, we kept what we had done manually, as initial attempts did not yield significant new insights. However, we acknowledged NVivo's efficiency and its ability to provide a clear overview of all informants, which could have streamlined our process. We realize that using NVivo immediately after conducting interviews could have been beneficial. However, we prioritized conducting the transcription as shortly as possible after conducting the

interviews, due to its time-consuming nature. Also, it requires individual effort to transcribe interviews, thereby making it more convenient doing it alone and coding at the same time.

**Representability:** One threat to the representability of the study could be selection bias, which could potentially happen from selecting individuals for analysis in a way where proper randomization is not achieved, and thereby failing to ensure that the resulting sample is representative to the population to be analyzed.

**Reliability:** A potential challenge to the reliability of this study might stem from the absence of a larger, more representative sample. To increase the reliability of the study, efforts were made to gather an extensive amount of data, numerous informants were contacted who were considered as relevant. When it comes to LinkedIn, a limitation is that mutual connection is required to send messages to many individuals, thus preventing us from reaching out to certain individuals who could have contributed to our research. Several individuals we reached out to did not accept our requests or to connect or reply even though these were sent early in the process. Furthermore, we sought relevant researchers affiliated with CBS by examining various departments, their staff, and areas of expertise. In total, we reached out to 27 potential informants, received 18 responses, and ultimately conducted interviews with 12 participants. We reached out to a total of 15 individuals from NN, 5 research professors from CBS, and 7 professionals from other pharmaceutical companies. However, we did not hear back from many of them in time.

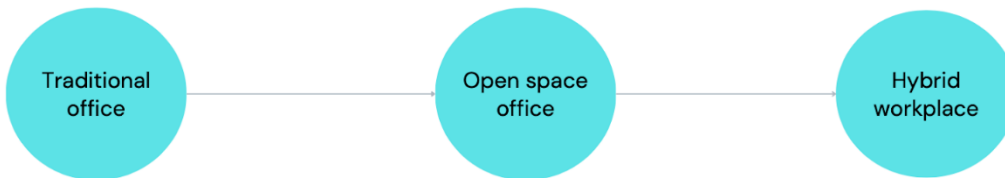
### **3.6. Sub-conclusion for Methodology**

We adopted the “Research Onion” model from Saunders et al. (2015) to navigate through our research process. Given the diverse backgrounds and experiences that shape individual perceptions of the hybrid work model, we chose an interpretivist research philosophy. Our study employed an abductive approach, not strictly adhering to a theory-first or data-first methodology, and our research design is structured as a case study. We conducted semi-structured qualitative interviews with 12 informants, both from NN and external entities, to explore various strategies currently employed in the field.

## 4. Results and Analysis

In this section, we will go through our interview findings. We will begin by presenting the data related to the hybrid workplace model as it is in NN today, and we will explore the challenges and opportunities identified by our informants when working in or managing a hybrid team. Further, we will explore how NN engages with innovation today. We will also provide insights to the informants' best practices on how to facilitate hybrid teams. Finally, we will go through the collected thoughts on how the hybrid workplace impacts NN's perceived brand image.

### 4.1. The Shift from Traditional to Hybrid Office in NN



**Figure 18:** The shift from traditional office to hybrid workplace. *Source: Own work.*

#### ***Traditional Office***

We were interested in exploring how the transition from the traditional office setting to the new hybrid approach has evolved. We found that, in the past, it was common for all employees in NN to have their own offices or share an office with just one other colleague, with each office equipped with teleconference facilities. (Informant 12).

#### ***Open Space Office***

We discovered that before Covid-19, NN had implemented a flexible seating arrangement in some parts of the organization, where not every employee had an assigned desk. Instead, there were only enough desks for about two-thirds of the team, based on the observation that not all employees were in the office simultaneously each week due to travel, meetings in meeting rooms or simply working from other sites. This landscape, which is still in use in many departments today, features an open design organized into various zones, such as areas for collaboration and quiet zones, thereby reducing the need for a desk for each employee. (Informant 12). However, this setup presents challenges during staff

meetings or celebrations when all employees are present in the office, as there are insufficient workstations for everyone. This challenge was also observed by our informant from Zealand Pharma who explains their similar setup due to a limited office capacity: *“So we have this zone seating that usually we share a number of desks..fewer desks than the actual number of people. And going forward, we will be doing more of that because we cannot expand seats in the office (...)”* (Informant 12, SVP at Zealand Pharma).

### ***Hybrid Workplace***

All informants from NN confirmed the adoption of a hybrid model in their area of the organization. The necessity of remote work during the pandemic, initially mandated by the government, has continued in many organizations even after easing the restrictions, including NN. However, the reason behind NN introducing the hybrid model was not solely due to the pandemic, but rather by the company’s expanding global presence: *“We have sites all over Denmark and also all over the world, online meetings have always been a thing. But now even more.”* (Informant 5, CVP Comm. Partner). Thus, the informants acknowledge that the pandemic has certainly accelerated the utilization of hybrid work leading to numerous opportunities as well as significant challenges. The number of days an employee can work from home is not standardized within the organization, as confirmed by all informants working in NN. Informant 2 points out that; the rule in NN today is that they can work wherever they want, however within Denmark. Typically, it is up to the manager to determine who can work remotely and for how many days, based on their specific tasks and projects.

### ***Current arrangements***

Flexibility in working hours and locations, termed as ‘flex-time’, is emphasized by several of the informants, with arrangements varying based on individual roles. Employees create workplace assessments with their managers based on individual needs and team requirements. This written agreement is completed by both the employee and the manager, who must ensure that the employee has all necessary equipment at home, such as an ergonomic desk and chair, adequate lighting, a large screen to connect to the laptop, and a keyboard and mouse. It is common to make written agreements on this, especially since setting up a proper workstation for remote work is crucial to prevent physical strain, such as back injuries (Informant 3).

### ***2+3 approach***

We found that most teams make use of a more general arrangement, whereas a 2+3 approach was mentioned by many. More specifically, this means allowing two self-chosen days from home and three days on-site. In this matter, employees need to make an effort themselves to coordinate with their team members to ensure that they are all in the office at the same time when necessary. While flex-time and flexible work agreements offer employees the freedom to choose when and where to work, there are specific and strict rules that require them to remain within Danish borders. The informants highlighted that the restriction requiring employees to work only within Denmark, rather than from international locations such as a summerhouse abroad, is enforced due to strict Danish legal and tax regulations. In addition, it is also mentioned that occupational accidents can happen, which may lead to insurance trouble if they are not present in Denmark. (Informant 5; Informant 6; Informant 7). Informant 5 suggests that this may be a dealbreaker for some individuals who prefer the flexibility of remote work from any location in the world.

To avoid coordination hassle, some teams make agreements where they designate specific days for all team members to be present in the office, while allowing flexibility for remote work on other days. These days are typically planned for team meetings or weekly breakfasts. This approach helps everyone know when they can expect to meet their colleagues in person, avoiding confusion over differing remote work schedules. Not everyone agrees that this is the best solution: *“setting up a rule saying you have to be there Tuesdays and Thursdays or whatever it might be. That limits people or doesn’t give them what I believe is the upside of the hybrid workplace and the flexibility and the possibility to adapt to your life, whatever that might be, which, yeah, hopefully it’s not all work right?”* (Informant 6, Sr. Manager).

### ***Digital Communication Tools***

Efforts are put in to foster unity among employees and share information through various initiatives. Given the dispersed nature of the workforce, with international collaborations and a hybrid work model, communication is crucial. NN employees commonly utilize Microsoft Teams (hereafter Teams) for communication, alongside other platforms such as Yammer, and Outlook. One informant highlights the complexity of constantly keeping themselves updated on the different platforms: *“it sort of creates a situation where there’s like almost a handful of different communication channels, and if you need to*

*sort of monitor all of those at the same time, right. And “oh, do I need to..? Did I catch something there, or do I get something there that needs a response” to everything across these different platforms. It just doesn’t make life easier really, is my view.” (Informant 4, VP).*

Informant 5 discussed the approach of sharing a brief 2-3 minute video to effectively engage with employees. They have adopted this approach for distributing information that needs to reach everyone, finding that instead of sending lengthy emails, embedding a video within the email increases the likelihood that employees will engage with the content. They highlighted that many production employees do not have the time or preference to read long emails, making videos a more effective means of capturing their attention.

### ***Digital Collaboration Tools***

For more collaboration and creativity work, many informants mention Miro as one of the digital collaboration tools. However, a common challenge is the practical use of these tools, in comparison to using physical tools: *“It needs to be natural. As natural as drawing on board. Then you need to basically draw on a virtual whiteboard and it’s just not as natural. I’ve drawn a lot of good drawings on my board. It becomes weird, right? And it doesn’t look as beautiful as you thought it would on the boards, the virtual. [...] I think that’s the challenges. It’s not the lack of tools, it’s the preparation and training and getting used to using those kind of tools that’s available.” (Informant 6, Sr. Manager).*

One informant also noted that the new digital collaboration tools make it challenging for facilitators to use interactive tools like drawing on boards or placing post-it notes seamlessly. They explained that they have to pause the entire discussion to write things down on a digital board, which disrupts the flow unless the facilitator is exceptionally skilled and trained in managing these types of digital workshops. (Informant 7, Director).

When the informants brought up issues with using the tools, we followed up by asking about the training and whether they received assistance and knew whom to ask for help if needed. We found that resources were not allocated to such efforts, leaving employees to essentially manage to learn these skills by themselves, if needed: *“(.) it’s very much, how do you say.. a pull-approach. So you’re not.. It’s not a push approach; “here you can get all this”. It’s basically “go and watch a video and see how you do it”.* (Informant 8, SVP Comm. Partner). However, they stress that the majority of

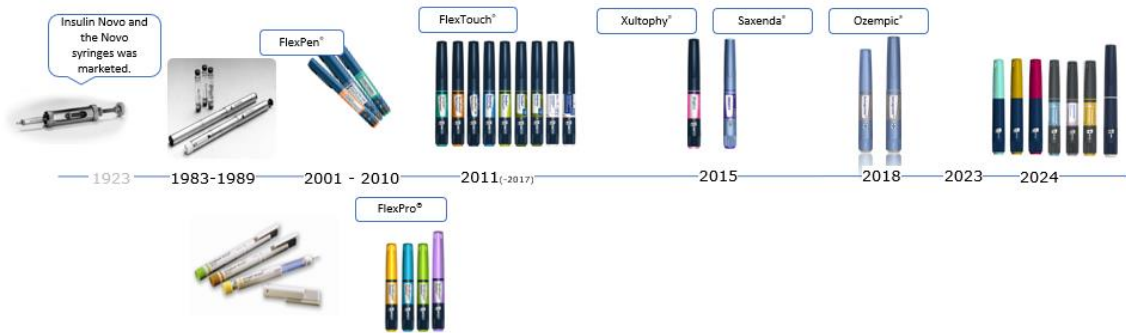
employees are familiar with this, and those who may struggle can seek assistance from a colleague. The aspect of mastering new digital tools entails not only the theoretical understanding of the application, but also the practical parts: “(...)If you want to learn something new, then there can be a gap between having knowledge and actually doing the things. So the travel from there sometimes do that you have to work with it in another way than just watching a video”. (Informant 8, SVP Comm. Partner).

## **4.2. Innovation in NN**

Next, we will explore our findings directly related to innovation projects at NN. This exploration is essential to separate from the impact of hybrid work, as comprehending the foundational elements of these business projects aids in recognizing the challenges and opportunities they encounter within a hybrid setting.

During our investigation, we discovered that NN actively engages in both open and closed innovation, aligning with our initial assumptions about their strategy; “We do that both through some internal projects where we have our own people that develop stuff. But we also do it together with partners in industry and in academia, where we try to together utilize and leverage the capabilities and ideas and technologies they have and explore whether they can somehow be internalized as a noble solution in the future.” (Informant 2, Head of Department). The reason for this is driven by several factors. First of all, it could be a shift in their drug portfolio where drugs potentially get produced in larger volumes than their current devices can deliver, which may prompt the initiation of new projects. Additionally, there is a drive to improve patient convenience by improving the drug administration method, thereby emphasizing personalized treatment. During our discussion with informant 2, they showcased the evolution of diabetes pens over the last 100 years, highlighting the efforts to enhance user experience, such as creating more colorful pens for children and transitioning to single-use pens for increased personalization (See Figure 19).

## The Development History



**Figure 19:** The development history of NN drug development. *Source: Internal NN PowerPoint.*

However, the growing emphasis on sustainability presents a challenge, necessitating exploring more novel solutions to meet both patient needs and sustainability goals. One informant shared the current sustainability goals and the challenges they face living up to their own strict goals: “(...) *products launched at a certain date cannot have more than a certain amount of plastic waste and a certain amount of CO<sub>2</sub> footprint per patient year. And that requirement is becoming more and more strict. So by 2030 it’s very limited how much waste we can generate, or a patient can generate if they use our products. And to live up to that; that is totally changing how our device delivery landscape will look because things today are far from fulfilling those requirements, so it will require a dramatic change in our portfolio.*” (Informant 2, Head of Department).

Furthermore, they mentioned that currently, patients need to inject themselves between five to eight times a day, or once weekly, to manage their medication. This schedule imposes significant burdens on both the patient and the environment. For patients, there is the mental burden of obtaining prescriptions, purchasing the medication from pharmacies, and administering injections daily or weekly. Environmentally, there is a substantial impact from the waste generated by producing medications that are used daily or weekly. We learned that NN’s annual production of diabetes pens reaches 800 million devices, equivalent to approximately 1500 devices per minute. The informant further elaborates: “*And we want to somehow not have that heavier footprint on the world. So we have some very, very ambitious targets for how much waste a person using our products in the future can generate per year*” (Informant 2, Head of Department).

#### 4.2.1. Origin of OI

We sought to determine the proportion of innovation originating internally versus externally and it was stated by Informant 2 that approximately 90% of innovation is generated internally, and only 10% was perceived as coming from OI projects today. When asked about the value of different innovation approaches, one informant stated: *“one is not better than the other, the key thing is to get things in and evaluate it and see if you think it can generate value for the patient, because that’s what it’s all about; it’s the matter of doing something that’s valuable for the patient, otherwise it’s not interesting for us.”* (Informant 1, System Engineer Manager).

NN’s engagement with OI was initiated because, as informant 2 puts it *“we are not the experts in everything”*. A big reason for beginning to broaden their scope for problem-solving, is that NN has moved into new therapy areas in addition to data, diagnostics and digital solutions. One informant shares their definition of open innovation: *“Open innovation is where we define a problem space, a problem statement”* (Informant 2, Head of Department). They further delve into specific topics related to OI-projects, possible for their department: *“[H]ow can we deliver drugs with no impact on the environment? How can we take away the needle from drug delivery? [...] together with either an academic or the company, we try to solve that problem.”* (Informant 2, Head of Department).

OI is implemented through specialized OI teams within the company, each focusing on different stages of the innovation process, including initiation, execution, and follow-up. In the initiation stage, ideas are sourced from various channels, such as collaborations with master’s and PhD students, and through partnerships or acquisitions of biotech startups. Additionally, they co-create with leading technology firms to develop internal web-applications for employee use (Informant 6, Sr. Manager).

One significant initiative related to this is the NN Digital Innovation Hub located at ITU. This hub acts as a major employer branding tool for NN, aimed at attracting students with specific interests in Data, Digital, and IT. At the hub, NN presents real-life challenges they are encountering, which students can help address in close collaboration with NN employees. The environment is designed to mirror the NN offices, and they attract students by offering free coffee, meeting rooms, desks, and assistance with their theses and job searches. (Informant 3, DT Consultant).

Informant 4, who is deeply involved in OI within early-stage drug discovery, explained that external stakeholders in these projects often come from universities, small biotech companies, or similar entities. Consequently, the location of participants does not impact the initial phase of the OI project since meetings are normally conducted virtually regardless of whether participants are co-located or dispersed. This makes certain aspects of their work well-suited for remote execution.

### ***Confidentiality***

We assumed that the significant level of secrecy and confidentiality within the pharmaceutical industry could be a challenge when transforming into hybrid work. Informant 4 describes their work in external innovation within NN, highlighting differences in confidentiality requirements. While more mature stages of innovation necessitate strict confidentiality due to mature stages of development and potential acquisitions, early-stage innovation pursued by the informant often does not require the same level of secrecy. They emphasize the use of digital platforms to control access to sensitive information, noting that confidentiality concerns are less influenced by whether one works in-office or remotely. They clarify that confidential information typically involves scientific data or drug molecule structures, primarily communicated through written or graphic material rather than verbal exchanges in the office.

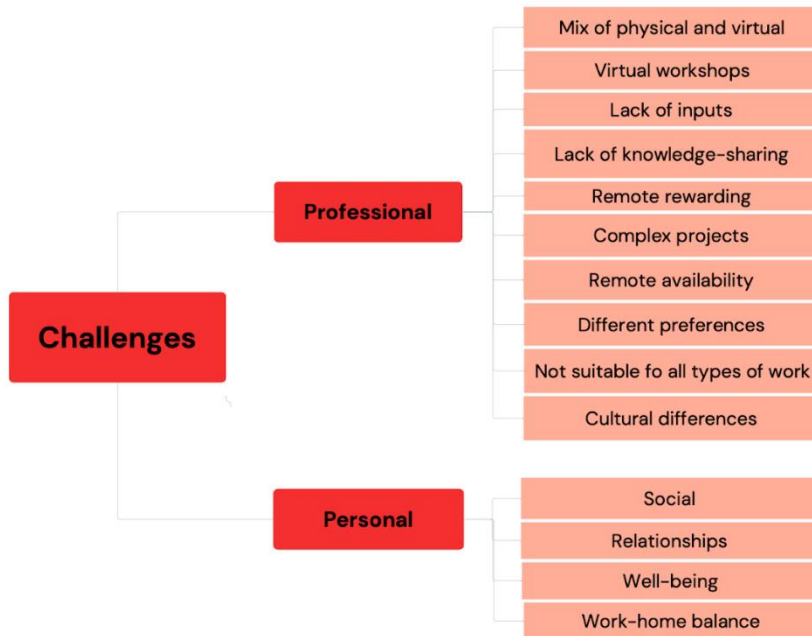
## **4.3. Challenges and Opportunities of Hybrid Work**

After assessing the transformation of traditional office spaces and the elements of innovation within NN, we will now connect these topics to illustrate the challenges and opportunities identified. However, it is important to note that not all informants were directly involved in innovation projects. This approach will provide a more generalized view of the impact of hybrid work on dynamic teams. In these instances, we discussed business projects, conducted by teams of hybrid workers. We recognize that these views represent personal opinions and that measuring the outcomes of hybrid innovation projects can be challenging. This is often because such projects are unique and have not been implemented previously in an all-physical matter.

For the challenges and opportunities of hybrid work, we have categorized these into professional and personal aspects. This division provides a clear overview of the benefits employees can experience both in their work and home lives, as well as the potential challenges they may encounter in both places.

### 4.3.1. Challenges with Hybrid Work

*“Innovation works best in the same room”*  
*(Informant 2, Head of department)*



**Figure 20:** The identified challenges. *Source: Own work.*

#### Professional Challenges

##### *Mix of virtual and physical attendance*

*“If you have 50/50, you have a lot of people in one room and then you have some online. That can kind of [challenge] dialogues and discussions... It becomes a little bit, I would say, broken and interrupted, in a bit.”* (Informant 5, CVP Comm. Partner).

Navigating the hybrid setup where some colleagues are physically together while others are not, poses ongoing challenges, as reported by numerous informants. One issue addressed was difficulties in seeing the facial expressions of the remote participants. Furthermore, those physically present seemed to dominate the interaction, potentially overlooking or paying less attention to those on the screen: “of

*course when it's hybrid then you have the issue of getting everyone heard"* (Informant 6, Sr. Manager). They also acknowledge complications as sound feedback in the meeting room. To address this, they have found it necessary for everyone in the room to have their computers open in the same Teams meeting, and engage with the online participants via camera, ensuring a more inclusive and balanced discussion.

### ***Virtual workshop***

Another challenge is the difficulty in examining facial expressions or noticing if participants 'zone out' during meetings, especially if they turn off their cameras and microphones. Multiple informants highlighted this issue, emphasizing the limitations of virtual meetings. One informant pointed out the drawbacks particularly in workshops or problem-solving settings. They mentioned, *"especially in a workshop or problem-solving setting. There's just something about the energy that you cannot get through a screen. [...] when you facilitate something, you really need to be able to read the room and understand: 'OK, so that person over there looks a little bit sick and tired of what I'm talking about, ok so maybe I need to...focus my attention more [on] getting him or her into the workshop' and that you cannot do over a screen."* (Informant 7, Director).

Informants also emphasize the significance of employees being in the same physical space to touch and assess, for instance prototypes. This is particularly in the context of innovation concerning physical products, as opposed to non-physical products: *"The synergy effect of having people in the room and being active and feeling with their fingers on textile, you know, prototypes and things like that. That part is to me missing when you have a hybrid working environment."* (Informant 9, Project Director).

### ***Lack of inputs***

It was noted that networking and having informal discussions over a cup of coffee with colleagues was much simpler when everyone was physically present in the office. Two informants highlighted that during informal *"coffee chats"*, people often let their guard down and open up about small challenges they are facing in their daily tasks. This creates opportunities for colleagues from other departments to offer solutions or assistance. They added that this kind of informal problem-solving and support is not feasible when interactions are limited to virtual meetings, and with this also emphasized that networking is notably more challenging in a hybrid workplace environment. Furthermore, Informant 9

points out a potential divergence in employees' understanding of the problem, which is a crucial part of the initiation of the innovation process. Furthermore, it is addressed that the chances of people working from home, and working on projects by themselves, tend to end up on their own track, as they do not have the daily interactions with their employees, and it can be hard to get them back on the right track. They specifically referred to this problem when they were working in 'sprints', which could be 2-week periods where they are working with a prototype and then meeting after to share their ideas. By not meeting at the coffee machine seemed to hinder the exploration of multiple concepts, decreasing their efficiency of participation and ideation.

### ***Lack of Knowledge-Sharing***

In early-stage research, expressing all types of ideas is crucial. Here, introverted remote individuals may face challenges. However, during later analytical phases, working alone is more acceptable: *"I'm saying that where we see a lot or where I've seen the most challenges is in this early-stage environment where this part about being a part of active and being expressive is important to get the best results. Then those that are sitting remotely or are introvert by person have a challenge just sort of, yeah. And so..so I think (...) it requires that you are sort of..able to kick the door in actually."* (Informant 9, Project Director). Informant 12 also points out that innovation is difficult in the early stages and refers to the CEO of Nike who have stated; *"You cannot innovate a new tennis shoe on Teams, you have to be together."* (Informant 12, SVP at Zealand Pharma). Another informant also recognized that most innovation projects benefit significantly from direct interaction between individuals. They explained that for creativity, the process tends to be more effective offline than online, as it requires individuals to integrate their existing knowledge of products and processes with new insights from beyond their immediate experience. (Informant 9, Project Director).

The concept of cross-contamination is highlighted as more achievable when employees are physically together, which is a critical component of brainstorming and discussion in innovation-related work. Here, cross-contamination refers to the evolution of ideas that build upon others' ideas. *"I can't remember a session where everybody that are part of the project have been in the same room at the same time. And you could say, why is that a challenge? You know, this part of ideation, brainstorming and things. Sometimes it's important to see the body language of those that are giving their ideas and also [...] The cross contamination of good ideas so that you finish it."* (Informant 9, Project Director).

### ***Remote Rewarding***

We found another significant challenge connected to the acknowledgement and rewarding of employees' achievements from afar to prevent demotivation and disengagement. Informant 10 provided an illustrative example stating: “(...) *if someone gets promoted, then it's typically one who is in the office. Because you see that people contribute to the company, but you only see that if you see them in the office and if they work from home, even if they contribute to the company, people sometimes just don't know*” (Informant 10, Professor).

### ***Complex Projects***

“*Sometimes you have to meet for a variety of reasons*”

(Informant 4, VP)

Several difficulties in collaboration were addressed when it came to hybrid work. Informant 2 stated the difficulties in reaching agreements on tasks and defining clear milestones. Multiple informants also addressed a similar concern regarding the complexity and scale of projects, emphasizing the significance of being physically present in these contexts: “*it really depends on the project team. So if you have a project where the end-target, the end-goal is clear and people understand what their role in the project is and all of that, then you can, as I said, then you can move along faster in a hybrid setting. But if it's a complex project with, you know, a lot of open doors and unclarities, we don't really know if we should say a A, B or C or go to the left or to the right, and the general level of the project is higher, then, you know, the level of communication also needs to be higher.*” (Informant 7, Director). This statement aligns with one from Informant 11, who pointed out that for ‘chaotic’ projects, that necessitate extensive brainstorming and alignment, achieving a successful outcome can be particularly challenging in a hybrid setting.

### ***Remote Availability***

Team communication appears notably more efficient when all members are physically present in the office. Multiple informants discuss the ease of communication when colleagues are physically present in the office compared to arranging virtual meetings or sending emails. They agree that the convenience of simply approaching a colleague for assistance is significantly higher in person, as

opposed to the effort required to initiate a phone call. Being able to visually confirm a colleague's availability is also stated as a huge advantage of in-office collaboration. This point was further reinforced by Informant 10, who observed that communication, both professional and personal, tends to decrease when employees work remotely as it is challenging to see whether the person they wish to interact with is busy or available to talk. Moreover, they find it easier to approach nearby colleagues for quick questions or feedback. However, they worry this preference may unintentionally exclude distant colleagues, potentially fostering a sense of isolation or creating silos. Despite their concerns, they have found that remote colleagues generally feel included, but they acknowledge the inherent distance that comes with working remotely.

### ***Different Preferences***

After talking to all the informants, it became apparent that they had varying preferences regarding virtual versus physical presence among them. One statement from an informant confirms this; *“Some individuals have taken a much greater liking to working from home than others. And I think I have colleagues that would be perfectly happy, you know, showing up at the office twice a year or something, you know, haha, but.. and being sort of working from their home the rest of the time and others, you know, are going crazy, and climbing the walls after working from home 2 days in a row. So, you know, it's very much aligned, I think, with personality types”*. (Informant 4, VP). This perspective is also supported by the professor specializing in Digital Transformation and Innovation. They noted that many leaders across various industries are eager for their employees to return to the office, although employees are reluctant to give up the flexibility of working from home. They emphasized that leaders are aware of this sentiment and take it seriously, as *“if people are unhappy with their work environment they get demotivated and if people are demotivated, then they put less effort into their task and they become less productive.”* (Informant 10, Professor).

Informant 10 furthermore noted that while many employees desire to work from home, not all possess the personal skills and characteristics required for effective remote work. They often require guidance on how to plan and structure their tasks and days to ensure they can perform effectively in their roles. Additionally, Informant 11 emphasizes that leaders play a major role in helping employees with

guiding them with this. In addition, in order to support their employees most effectively, they must also be available for constructive feedback on their leadership style.

### ***Not suitable for all types of work***

The differences extend beyond only preferences, but also their role and type of work in the company. The distinction between “desk-workers” and “lab/production-workers” was made, where those engaged in innovation primarily do desk-work, which means they spend a lot of time on their computer, whilst scientists work at labs where there is a need to be physically present at the office. This clearly specifies who has the option to work remotely and who does not. NN’s work extends beyond drug discovery and technology to include all aspects surrounding the product. For example, they focus on delivery solutions, which involve how NN gets the product into the patient’s body in the easiest, least painful, and most importantly, safest way possible. These innovation projects involve a lot of design thinking, where prototypes are tested, measured, and evaluated in their laboratories. It is these types of projects that cannot be conducted in a hybrid manner, as the actual conditions do not permit it. For instance, maintaining a sterile environment and preventing external factors from influencing measurements are crucial. One informant however noted that even production and lab- workers occasionally need to engage in computer-based training (Informant 5, CVP Comm. Partner).

### ***Cultural differences***

Working in a global company necessitates collaboration with individuals from various countries and cultures, which can sometimes be challenging. One informant provided a real-life example from their department on how they tried to mitigate such a challenge: *“To give a concrete example from our area, we are working with our Chinese manufacturing site in Tianjin on how we can maximize the capacity on some of their production lines. And, you know, the PM [project manager] who is there, we just agreed to send him for two weeks to China because, you know, there are some small details, also some cultural differences when a Dane speaks with a Chinese person. And it’s just become more complicated when it’s over a screen, then it’s better to have some face-to-face time.”* (Informant 7, Director).

### **Personal Challenges**

#### ***Social***

Employees highlight the social aspect of the workplace as a significant factor for their physical presence in the office, indicating that this is missing when working from home: *“you don’t get the small talk, you don’t get the small jokes on the side of one table right?”* (Informant 6, Sr. Manager). Moreover, an informant addresses the challenge of remote participants to feel included in pre-meeting conversations, which is common when meetings are held in person; *“ [W]hen you go into a meeting you would not not talk before you join the meeting, right?[...] We would have a conversation already going before we’d call up to another or multiple persons of being online. So immediately you feel excluded because you..you’re not part of that conversation and you know, we can come in laughing or joking or telling stories about the weekend or whatever, and you have to kind of either be extroverted enough to actually say, “hey, let me know the story as well” which is difficult for some, and not a reason of/or demand, I would say. Or otherwise you get kind of decoupled from the conversation”*. (Informant 6, Sr. Manager).

Another informant suggests that this aspect is a key motivator for many individuals returning to the office post-Covid. This is also something that is encouraged by the CEO of NN, addressing the need for physical presence; *“Our CEO actually at one point sort of made a statement saying that he thought that..again, the social coherence and the sort of feeling of unitedness in the team is actually dependent on physical presence. And so, from that perspective, he sort of encouraged, you know, his organization to make sure that [...], there is actually attendance in the office.”* (Informant 4, VP). Informant 12 highlighted their significant emphasis and pride in their organizations social culture. They mentioned various activities such as knitting and wine-drinking, beer brewing club and a football club. The informant underscores the importance of the social aspects, and highlights that fully remote employees might miss out on these bonding opportunities.

### ***Relationships***

Additionally, another informant expressed concerns about losing the closeness and general relationship between employees due to decreased in-person interaction, highlighting the notable difference in relationships between colleagues who sit together daily compared to those in different locations; *“it will always create a bit of a distance. [...] you know, the atmosphere, the group feeling. I had the*

*colleagues that I sit with every day versus the ones I have that are on different sites from where I am. I'm just closer with the ones I sit next to"* (Informant 5, CVP Comm. Partner).

Among those we interviewed was an informant, who was hired during Covid-19, a time when everyone was forced by the government to work from home, making it impossible to physically meet colleagues at the office for an introduction: *"it's different coming to the office and meeting the colleagues and getting to know each other, especially in the beginning."* (Informant 3, DT Consultant). Thus, Informant 11 suggested how this issue of not getting to know their colleagues could be eased by adopting a specific mindset. More specifically, if you already know that you will not be meeting your colleagues in person, you tend to place more value and energy into your online meetings: *"when you are in the same country for example, or in the same city, you are not conscious to build the trust upfront, while when you are geographically dispersed, this is the way you work"* (Informant 11, HR Manager).

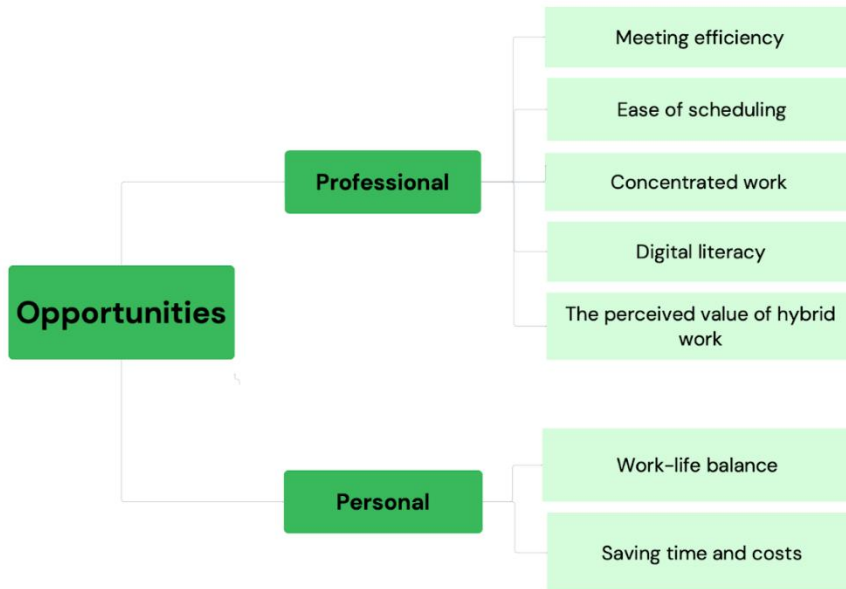
### ***Well-being***

From a people manager's standpoint, there is also a challenge in understanding the employees' well-being when they are not physically present. This is particularly true for leaders who are people-oriented. Informant 5 highlights that while they are flexible about when and where employees work, there is a critical need to monitor their well-being, both in terms of task completion and physical strain. Should there be indications of employees struggling with their tasks or physical well-being, action is necessary to assist them in prioritizing their work. This support is most effectively provided when they are physically present in the office for extended periods they explain. (Informant 6, Sr. Manager).

### ***The work-home balance***

As previously noted, NN operates globally with employees dispersed across numerous locations worldwide. Consequently, there is considerable collaboration among employees working from different places, presenting challenges related to time-zone differences. Multiple informants highlight this issue with coordination work across different time zones, and that it can create difficulties when some team members are working late at night while others are early in the morning. Furthermore, Informant 9 also state it is less favorable for the *"social recognition and awareness of each other's well-being"*.

### 4.3.2. Opportunities with Hybrid Work



**Figure 21:** The identified opportunities. *Source: Own work.*

#### Professional opportunities

##### *Meeting efficiency*

In contrast to situations where some participants are virtual and others are physically present, it is noted that when everyone is virtual simultaneously, there can be actual advantages. One informant highlights this aspect, noting that the likelihood of focusing only on relevant topics for the meeting increases, as a result of “*less chit chatting*”. They further acknowledge it as positive for “*professional efficiency*”, (Informant 9, Project Director). Informant 12 observed that in physical meetings, if issues are resolved 15 minutes before the calculated time, this extra time often becomes filled with casual conversations or personal stories. Conversely, in a virtual meeting, if it ends 15 minutes early, participants typically log off immediately, utilizing the spare time for other work tasks or taking a brief break before their next meeting.

Informant 6 further expands on this argument, and especially highlights the advantages of virtual workshops, proposing that smaller, more focused sessions can be conducted efficiently, potentially leading to quicker idea generation: “(..) *If you then also kind of design it to be a virtual workshop instead. So maybe we are actually a little bit more efficient in getting ideas running faster and sooner than we were before. (...) it could be that people are less hesitant to just call in a quick session to discuss something rather than establishing the big workshop that you might have done before, right? And you can discuss things more efficiently in the hybrid setting.*” (Informant 6, Sr. Manager).

### ***Ease of scheduling***

An advantage of hybrid work includes the ease of scheduling frequent meetings, which was noted by several informants. Moreover, gathering colleagues without the constraint of a specific physical location is also addressed. “*It certainly has a positive impact in the way that you can, with a much higher degree of flexibility, collect the people that you want. You’re not bound by the same kind of physical constraints and everyone had to.. and you have a need to have a big meeting room to do everything.. You can make do with smaller things.*” (Informant 6, Sr. Manager). Informant 9 pointed out that booking meeting rooms can be challenging due to a limited number of spaces available for larger groups, often resulting in the need to postpone physical meetings. This issue, however, is mitigated by the option of holding virtual meetings.

Another real-life example highlighting the advantages virtual collaboration made possible by the new technology was detailed: “*last year where we had daily calls with our US factory, our French based factory, our Chinese factory and our personal factory. Where we could do a follow-up a problem-solving root cause analysis a lot faster and a lot better because we could meet every day even though we were [in] different time zones and everything, all together. And that couldn’t, I mean, that couldn’t have happened just five or ten years ago.*” (Informant 7, Director).

### ***Concentrated work***

The nature of the work also affects whether it is preferable to work from home, especially for tasks requiring concentration or focus. This is something stated by numerous informants. One informant

points out that it is easy to tap someone on their shoulder and ask them a question when they are in the office. As earlier stated, NN employs a ‘flexible seating arrangement’, where various of the locations on the sites are tailored to different types of work, intended to facilitate this. Informant 8 elaborates on this concept: “*We have for example, here I sit at the site Søborg, we have different zones. There are quiet zones, there are focus zones, and then there are, you know, project area zone. So they have very good possibilities where the physical environment somehow offers ways that you can connect with people and get more input, right?*”. This presents an opportunity for hybrid work due to the favorable options for on-site work.

However, Informant 12 mentions that even when they are sitting with their headphones on, clearly indicating they are concentrating, many colleagues approach them with questions. This could be attributed to their managerial role and the number of people they oversee, but it slightly contradicts the notion of employees checking if someone is busy before seeking assistance, which is mentioned as an advantage of everyone being in the office. Furthermore, it might indicate that despite the different zones (e.g. quiet zones), interruptions can be expected when being physically in the office. Conversely, if social interaction or quicker access to others is important, coming to the office is preferred.

### ***Digital Literacy***

Informant 4 elaborated on the initial reluctance to use video in virtual meetings during Covid-19, stating that; “*the whole concept of having the camera on made people uncomfortable*” They further explained that the level of sophistication in terms of how to use and engage with people with the digital tools has increased a lot. It also became evident that employees in Zealand Pharma were reluctant to use Teams before as they were more accustomed to Skype. However, the pandemic familiarized people with Teams, and now, according to Informant 12, “*everyone knows how to use it*”. Therefore, remote participants’ attendance in meetings has become higher.

### ***The perceived value of hybrid work***

There were considerable difficulties in effectively engaging employees virtually prior to the pandemic, getting everyone to see the value of it. This perception has certainly shifted now, whereas Informant 8

mentions Covid-19: *“It’s a good push towards leadership seeing it, that it’s actually OK to work from home.”* They add on that leaders previously perceived employees as *“out of sight, out of mind”*, they wanted them to be close physically, which has now changed with the embracement of the hybrid work model. This argument is further reinforced by Informant 8 being asked not to participate remotely as they could not meet physically, a situation that occurred prior to Covid-19: *“one day I had to stay at home because I actually was a little sore throat, but I could stay on a meeting, right? Virtually I could participate. But the EVP communication partner said, “but it’s too difficult, then you just don’t participate”, haha. It’s like “what?”* (Informant 8, SVP Comm. Partner).

Another argument is that one key take-away from Covid-19 is that *“we didn’t stop everything because people weren’t at the offices”* and add about daily work that: *“it could actually be done”*. (Informant 6, Sr. Manager). What is meant by this is that they could still work effectively without the need for physical presence in terms of meeting in the office or traveling to different production sites. They also state that; *“working from home or working anywhere other than the office doesn’t necessarily mean that you are less efficient or not. You know, I do think that when was the Covid-19 back in 2020, it probably perceived that it was almost half a day off if you will work from home right, and I think that has changed significantly”* (Informant 6, Sr. Manager).

## **Personal opportunities**

### ***Work-life balance***

Several informants highlight the ease of managing personal responsibilities, due to the flexibility offered by their workplace. They can adjust their work hours to accommodate family needs; *“So I have to put my kids in kindergarten. Well, then I go in and like, I can just meet at the office at 9:00 or 10:00 and then I’ll work a few hours on the other end after the kids go to sleep. You know that that flexibility, it’s.. it makes life a lot easier just in general”* (Informant 5, CVP Comm. Partner). This flexibility is widely perceived and appreciated among colleagues. In this way, they value remote work facilitated by tools as Teams to be beneficial. They also emphasize the supportive and understanding work culture, where leaving early or working from home is accepted without question, as long as employees fulfill

their responsibilities. This flexibility is balanced by the expectation of demonstrating productivity and accountability in completing tasks.

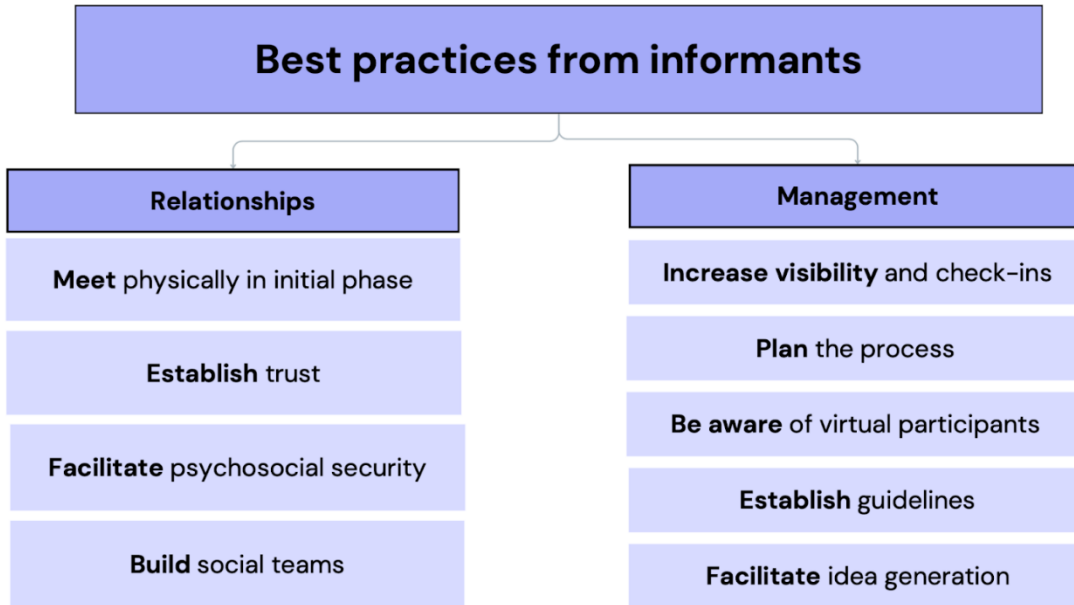
### *Saving time and costs*

A benefit highlighted is the reduction in time and costs associated with commuting. For instance, employees do not always need to travel long distances across international borders or commute between different national sites. Even though Denmark is a small country, there are also employees who live far away from their respective office site, who can be experiencing time-consuming traffic, and who are particularly benefiting from the hybrid work model. Furthermore, daily commuting may also interfere with daily routines, particularly for those with family responsibilities. This could involve managing childcare duties, household chores or simply spending quality time with their family. Moreover, it might also decrease employees' own personal time, which might otherwise be spent on leisure activities, exercise or hobbies.

We also found that NN is establishing an internal hub in Copenhagen, an effort especially designed for creativity and collaboration work amongst employees. Informant 8 emphasizes the advantage of this hub being located in Copenhagen, especially considering the employees living in the city, further away from the northern sites, now have the opportunity to go to the hub instead and save hours on commute.

### **4.3.3. The Informants' Best Practices in Managing Hybrid Teams**

Given that multiple informants raised various challenges regarding hybrid work, we also asked them about their opinions on best practices for managing a hybrid team effectively to mitigate these challenges. We categorize best practices into two sections: relationships and management. The first focuses on establishing a team capable of functioning effectively in a hybrid environment, while the second addresses the strategies for managing such a team.



**Figure 22:** The identified best practices from informants. *Source: Own work.*

**Relationships**

***Meet physically in the initial phase***

Informant 2 emphasized the importance of initiating physical meetings early in the collaboration process as a beneficial strategy for managing hybrid teams and mitigating potential challenges; “(..)we try to, as much as possible also with travel restrictions on in terms of CO2 and so on to have that physical contact and have that physical meeting very early in the collaboration and either they come to us or we come to them to somehow mitigate some of the barriers that could be”. The importance of meeting physically in the beginning of the collaboration is also addressed by Informant 9; “I think in the startup phase you recommend (...)“now we’re forcing ourselves to be here because so we get to know each other and so that we have sort of can look each other in the eyes and feel the sense in the room: do we have the same understanding of the problem to solve? and then we can move out working separately because that we are doing anyways now.” (Informant 9, Project Director). One informant also strongly advised against virtual work for critical parts of projects, as they require full team engagement; “if you really want to do something that’s super important, that requires everybody’s attention, then it’s important to be in the same room.” (Informant 12, SVP at Zealand Pharma). Informant 6 stresses the importance of meeting with workers at various stages during the development

of new technology for existing production sites, in order to thoroughly understand the challenges, they encounter in their daily operations.

A contradicting viewpoint about the necessity of meeting physically highlights the importance of having a clear goal and scope prior to the execution, including everyone knowing their role and tasks: *“And before when, you know, we had an improvement project or whatever, then often it would require, you know, a face-to-face meeting to initiate something. But now, with the technologies that we have with Teams and all the other applications and so forth, and you know, the acceptance that you can actually take those kinds of meetings online, you can get things done much more quickly. And get things started much more quickly.”* (Informant 7, Director). Otherwise, they argue that it would have been more difficult to succeed fully virtually.

### ***Establish trust***

*“I think there’s one thing that rules over them all, that’s trust. So yeah, you can train, you can use visibility and stuff like that. There are a lot of common things, but you still need to trust people in the other end, right? That they are working hard and diligently as if they were in the office, right?”*

(Informant 8, SVP Com. Partner)

Trust is frequently brought up by informants as a key concept in discussions of best practices. We discovered that it is crucial for people managers to establish clear guidelines and boundaries within which employees can navigate. This relies heavily on mutual trust between the manager and the employee. Managers demonstrate trust by setting a clear framework that allows for flexible working, while employees trust that their managers will not micromanage their activities on days they work from home. Maintaining this balance can be particularly challenging, especially with new team members. However, our informants emphasized that establishing this trust is vital for encouraging creativity and innovation within hybrid teams. Furthermore, managers need to enforce these rules consistently and bring people back into the office if there is a noticeable decline in performance within the established boundaries.

### ***Facilitate psychosocial security***

*“Nothing beats when you know each other when it comes to collaboration.”*

(Informant 7, Director)

The significance of knowing their colleagues is underscored, suggesting that this aspect could potentially influence the outcomes of projects. Several informants noted that when team members know each other well, they feel more comfortable sharing ideas, giving and receiving feedback, and engaging in discussions; *“It’s not being together in a room that impacts creativity. [...], it’s more the connection that you have in the room and the security you have about bringing new ideas to the table.”* (Informant 6, Sr. Manager). They also emphasize the importance of psychosocial security: *“[...] if you have a team where you have this, what we call psychosocial security that you feel secure about speaking up and speak your mind and discuss things with people and you can disagree and you can play ball and so on. If you build that up, then it shouldn’t matter if there’s a hybrid team or not, in my opinion.”* (Informant 6, Sr. Manager). Moreover, even if this is not as important for everyone, it is crucial to acknowledge the diversity among employees; *“Some doesn’t care. Some are just throwing out there with their ideas and love everything about it. Others need that security and that’s why I feel like it’s impacting connectivity”* (Informant 6, Sr. Manager).

The aspect of knowing each other also applies even if they have just met briefly. Creating such a collaborative environment often leads to the generation of better, more innovative ideas. (Informant 5; Informant 6). Informant 12 builds upon this argument, stating that they think it is important to kick off a collaboration in-person and rather continue working afterwards virtually. Furthermore, Informant 6 also noted that hybrid innovation teams tend to achieve better results if the team members have previously worked together in a physical setting compared to teams that operate entirely in a hybrid manner and thus lack the same level of interpersonal relationships.

### ***Build social teams***

When we asked how they build the psychosocial security up, it was suggested that it involves spending quality time together, for instance through dinner and drinks. (Informant 6; Informant 12). However, they also acknowledged that not everyone may prioritize socializing with colleagues outside of work

due to family commitments. Therefore, it is also important to accommodate such efforts at the workplace: “[...] and it’s not everyone who wants to take anything out of the calendar away from the family to be with their colleagues, right? Then it has to be at work that you kind of bring people together.” (Informant 6, Sr. Manager).

Bringing the team together at least once or twice a year for face-to-face interaction is one effort mentioned. This helps build strong relationships, fostering collaboration and idea generation. Incorporating both work-related activities and social events during these gatherings can enhance team cohesion, an effort suggested by Informant 5. After interacting face-to-face, reaching out to someone for assistance or discussion feels more natural, as there is already a level of familiarity established. Maintaining these relationships, even when team members are geographically dispersed, is essential for fostering creativity and innovation within hybrid teams: *“the more people get to know each other, the easier it is to come up with the good ideas, to have the good work sessions, to have the good dialogues and so the better the relation, the better the work.”* (Informant 5, CVP Com. Partner).

## **Management**

### ***Increase visibility and check-in’s***

It became clear that NN is in the current process of implementing a mobile video setup. This is supposed to enable their management team to participate in meetings from different locations, as many are *“are always on the go”* is something mentioned by one of the communication partners. This setup aims to increase flexibility and visibility for employees, as it is crucial for them to see top leaders and management occasionally. Although still in progress, the informant emphasizes the importance of visibility for fostering connection and engagement within the organization: *“It’s important to be present. We really noticed that it’s really important for our employees to see our.. at least our top leaders and see our management team once in a while...So the visibility, yeah, the visibility makes a lot of difference”* (Informant 5, CVP Comm. Partner). This suggestion as a best practice is also visibly implemented at Zealand Pharma: *“I see that most of the managers are more in the office than at home because they want to be accessible for the employees.”* (Informant 12, SVP at Zealand Pharma). Another informant highlighted the challenges associated with a manager’s role when working from home, especially when employees have the option to work remotely. They pointed out that employees expect to meet and receive support from their manager when they come into the office. If the manager

is also working remotely, it can complicate and delay the support needed in various situations. (Informant 10).

Additionally, Informant 8 shared that in their previous team, a remote team member abroad required frequent virtual check-ins to compensate for the absence of daily face-to-face interactions. They also noted that for managers, spotting emerging challenges can be more difficult in a remote setting due to the lack of physical cues.

### ***Plan the process***

*“I think it requires some planning to get most out of [...]such a session”*

(Informant 9, Project Director)

Particularly in the initial phase, it was emphasized that during the pandemic when everyone was remote, progress was slower than usual. Once more, the issue arises of not everyone sharing the same grasp of the problem. Another informant emphasized the importance of *“knowing the business”* (Informant 6, Sr. Manager). They explained that in a complex production company like NN, it is crucial for all project members to understand the business, including who the customers and stakeholders are, and whom to approach with questions. This knowledge is often acquired more quickly and effectively through physical interactions. Therefore, they suggested strategically planning in-person interactions throughout the project’s duration. They proposed that these could be brief sessions but should be scheduled throughout the entire project to reassure the project team members’ understanding of certain issues. The informant also mentioned that mastering the understanding of when virtual interaction is beneficial and when physical presence is necessary, is key to taking appropriate actions. (Informant 6; Informant 9).

### ***Be aware of virtual participants***

The role of the facilitator of the meeting is something that is mentioned as important. That means that they have to be extra mindful of those who are not physically present, and perhaps even pause discussions occasionally to gather their input. However, it can be challenging when conversations and topics are rapidly progressing: *“if I as a director am aware that we have people sitting online, you should pay attention to actually sometimes pause the discussion in the room and then state, “OK, let’s*

*just hear what the other guy has have to say”* (Informant 9, Project Director). Another informant noted that many innovation projects begin with a workshop. They described how these sessions typically involve extensive use of whiteboards, posting materials on walls, and collective brainstorming, which are challenging to replicate in a virtual environment. The informant further stated: *“So you need to re-think it. And I haven’t experienced it where it just works perfectly, but we are getting better at it and making sure that people are heard in that sense.”* (Informant 6, Sr. Manager). This highlights the ongoing adjustments and improvements being made to ensure effective communication and collaboration in hybrid or virtual workshop settings.

### ***Establish guidelines***

We realized that different departments in NN have their own rules. This could potentially lead to perceived unfairness among employees: *“I know that some departments have their own rules. Other departments have other rules. And then when you need to work together across departments with different rules, then it becomes, you know, some people get annoyed. And maybe somebody will actually envy the other guys.”* (Informant 9, Project Director).

Many informants highlighted the need for the manager to use their own preference in deciding how to lead their team in a hybrid manner: *“I think as a manager, you need to sort of take a stance yourself to find what you want to play it.”* (Informant 4, VP). We also learned that there is a frequent shift of management within the organization. If new managers employ different approaches than the previous, the established rules could potentially be disrupted and lead to dissatisfaction among employees: *“it’s hard if you have gotten used to one set of rules. You actually believe you have earned a right to have it this way, and then the new manager comes in and then the he or she changes the whole way of perceiving that and then it can only lead to one thing, and that is this dissatisfaction.”* (Informant 9, Project Director).

Informant 10 also pointed out about employees that; *“if you give them the full freedom and they can really work from wherever they want and they do not coordinate, then they will probably never meet.”* (Informant 10, Professor). They suggested that establishing basic guidelines, such as specific hybrid days or designated office days, could be an effective solution to ensure regular face-to-face interactions

and coordination among team members, for them to engage with each other.

### ***Facilitate idea generation***

A term that we learned from the interviews is “brainwriting” which is an idea generation method employed in NN, according to Informant 4. This method, which they describes as “*simple, yet effective*” is somewhat different from traditional discussions in meetings. This is where participants allocate a specific duration of time, for instance, ten minutes in a virtual setting where they all mute their microphones, brainstorm and write down their thoughts independently. Subsequently, everyone shares their ideas with the rest of the participants. This method facilitates contributions from all participants and ensures a diverse range of perspectives, and is confirmed as “*surprisingly effective in practice*”. This is an effort to improve inclusivity, as they note differences in behavior, with some individuals being very outgoing while others remain quiet and ensuring that everyone has sufficient time to focus on the specific topic and gets to express their ideas.

## **4.4. Brand Image Impact**

### **4.4.1. General Reputation**

To gain a better understanding of NN’s brand image and how it may have evolved following the adoption of a hybrid model, we initially intended to explore whether any of the respondents had experienced a certain perception towards NN during job interviews, fairs or other events where they meet external stakeholders, whether positive or negative. From our interviews, we discovered that all participants viewed the hybrid work approach as having a positive effect on the perceived brand image of NN, whether viewed internally, externally, or in both contexts.

We discovered that informants perceived the company as growing, which in some eyes might lead to a built-in distrust commonly associated with large corporations: “*(...) because we have a feel that they are only operating based on financing. Maybe Novo Nordisk is getting into a league now where there is, you know, some concern that can tie to our brand also. I don’t think it’s fair, but, this is not about fairness, it’s about perception.*” (Informant 1, System Engineer Manager). Informant 2 also highlights the same argument; “*it’s easy to...to get the impression that pharma companies are the bad guys and. I*

mean.. I can meet that at the, you know, a dinner party with speaking with friends, but I don't meet it with the partners we work with". Informant 7 noted that, to their knowledge, externals often perceived NN as a conservative and traditional company. They believe that offering hybrid work options has positively influenced NN's brand image, making it appear more modern and attractive as an employer. The informant also mentioned that questions about hybrid work opportunities frequently arise during job interviews, indicating strong interest from potential employees, and this was also acknowledged by other informants (Informant 5; Informant 6; Informant 8; Informant 12).

Additionally, the innovation hub at ITU is viewed more as an ongoing process rather than a short-term collaboration, with the aim of shifting the overall brand perception of NN. Informant 3, who is directly involved with the hub, shared their experiences with students, noting that many students did not see NN as an attractive employer and were unaware of NN's size and the existence of its substantial IT department within the organization.

#### **4.4.2. Flexibility**

We discovered that employees view the hybrid work model as a significant advantage, often discussing it with each other and with others outside of the company. This positive perception potentially contributes to improved attitudes towards NN, thereby enhancing the company's corporate brand image. Informant 5 reflects on NN's brand image regarding flexibility in work arrangements. They emphasize the positive impact of this flexibility on their own experience and note that it is a common topic of discussion among co-workers, friends, and family. "*Flexibility under responsibility*" is seen as a key aspect of working at NN although its extent may vary based on individual roles and the manager's decision. Furthermore, some informants emphasized that the hybrid work model has enhanced work-life balance for their employees, which has also contributed to increased motivation among them.

#### **4.4.3. Using Hybrid to Attract New Employees**

##### ***Increased talent pool***

The talent pool has expanded with the implementation of hybrid work, which is beneficial for attracting new, talented people. This approach also fosters greater openness and resourcefulness in identifying

talented individuals, with leaders generally becoming more willing to hire people from other countries. It broadens the appeal beyond individuals residing in Denmark or nearby the sites, placing less emphasis on geographical location. As stated by Informant 8; “(...) *people come from all over. So you can get great people and good talents when you offer them this hybrid workplace*”. (Informant 8, SVP Comm. Partner).

### ***Employment candidates expectations***

As students who have experienced schooling and studying throughout Covid-19 and post-Covid, it would be reasonable to assume that we, like many others in similar situations, might value flexibility, such as remote work options, in potential workplaces. This is not only the situation for NN but also other companies in the industry: “*You could see that the candidates, they ask if there is a hybrid model there and they if they can work from home, and what are the policies of the company? So of course it helps and it’s a positive thing (...) I think this flexibility has been positive for employees, at least based on their feedback*” (Informant 11, HR manager). However, as highlighted by informant 6, this does not apply to everyone; “*I think it’s super individual (...) I just hired a young guy, 25, I think, just finished his schools and I would expect that it would be a huge deal for him. He’s the one that’s most at the office because he is super social and loves being at the office*” (Informant 6, Sr. Manager). This is also an argument coming from Informant 12, who also attract people from other countries who have a pre-understanding of the hybrid model, which does not require certain employees to travel many hours on commute every day.

Furthermore, we asked about whether they believed that NN’s flexibility had influenced job applicants or if advertising this flexibility was something they did in their current job postings. We got the impression that although it is not explicitly stated in job ads, it is something the informants view as beneficial for potential new employees, and even anticipate as an expectation. “*I don’t see Novo using it as kind of a branding, and I don’t use it as a branding when I put up a job offer, or whatever I do, it’s...But people ask, of course, at job interviews and then I’m happy to say that “yeah, sure, it’s fully flexible”. [...] I believe that it’s a selling point.*” (Informant 6, Sr. Manager).

#### **4.5. Sub-conclusion for Results and Analysis**

NN has transitioned from a traditional office environment to an open office layout, subsequently integrating a hybrid work model. This shift has fostered distinct challenges and opportunities, particularly within innovation projects that rely heavily on knowledge-sharing and social interactions among employees. A significant challenge is conducting workshops that accommodate both in-person and virtual participants. Additionally, fostering social relationships among employees has proven more complex in a hybrid setting. Some informants believe innovation thrives in a shared physical space due to the dynamic of ‘cross-contamination’ of ideas, essential for brainstorming and ideation. The lack of body language cues and engagement with materials, like prototypes, is felt to be a significant loss in a hybrid environment. Concerns were raised about the potential misalignment in problem-understanding when team members work in isolation, leading to divergent tracks in project development. A common theme among the responses is that the success of remote and hybrid settings greatly depends on the type of project, the dynamics of the project team, and the project manager’s approach.

Moreover, others argued that creativity and innovation are not bound by co-location, emphasizing the importance of pre-established social connections among team members. Initiating collaborations in-person and continuing them virtually is considered effective. The hybrid model is acknowledged for enabling more efficient meetings and rapid project initiation, dependent upon a clear project scope and well-understood roles. Furthermore, the increased flexibility has enhanced employee well-being and provided time and cost savings, particularly for those residing far from NN locations.

Building upon this, we compiled best practices from all informants into a practical framework that aids leaders in forming and managing hybrid teams effectively. Lastly, they indicate that the shift to hybrid work has influenced NN’s corporate brand image, by enlarging the amount of potential employees. Despite NN not prominently advertising this flexible working approach in job postings, it remains an attractive feature for job seekers.

## **5. Discussion**

In this section, we will combine the theoretical insights derived from our literature review with the empirical data gathered from our results and analysis. Throughout the discussion, we will also show our own model, which we developed by integrating elements from the ‘organizational readiness for hybrid work’ model and the ‘remote innovation’ model identified in our literature review. This new model provides specific aspects to consider when evaluating whether an organization is prepared for remote innovation, thereby leading us into answering our research question.

### **5.1. Reasons Behind the Change to a Hybrid Workplace**

During our research, we found that the reason for NN to change into a hybrid workplace, was not due to tangible factors, such as cost reduction suggested by various researchers (Apgar 2002; Haugen, 2013; Spreitzer et al., 2017), but rather due to intangible factors like employee satisfaction; another reason suggested by Apgar (2002) and Jaszur (2023). Additionally, NN’s adoption of hybrid work seems to be driven by their extensive international operations and the increase in remote work due to Covid-19. Conversely, aligning with the first aspect of the theory, Zealand Pharma’s implementation seems to be a cost-driven initiative, attributed to limited office space, which would require significant expenses if they were to expand their location. None of the informants indicated that the hybrid work model at NN, in Denmark, was implemented due to a lack of space.

Moreover, other reasons why NN have moved further towards the hybrid model include sustainability and flexibility reasons. First, sustainability efforts has made them reduce travelling, like flights, in general. As revealed in our interviews, sustainability is a primary focus for NN, making these reductions on flights and unnecessary travel by car, highly relevant for NN, in order for them to achieve their goals.

## **5.2. Innovation in NN**

NN actively embraces innovation and open innovation practices, aligning with organizational theories that recommends this to maintain competitiveness (Chesbrough, 2003; Brown, 2008). Their focus on drug discovery and pen development as shown by Informant 2 underscores their commitment to innovation in product offerings, one of the three innovation forms (Barlow, 2017). Furthermore, the evolution of their insulin pens serve as a clear demonstration of their innovative work, showing customizations reflecting a modular approach to innovation, as one of the four types (Henderson & Clark, 1990). Furthermore, references to agile development and design thinking further highlight their dedication to enhancing patient convenience, emphasizing a collaborative process that involve close engagement with patients or individuals knowledgeable about the patients' needs (Brown, 2008; Shilling; 2019).

## **5.3. Benefits and Challenges of Remote Work**

### **5.3.1. Benefits**

#### *Flexibility and efficiency in virtual meetings*

One of the benefits highlighted was the increased employee flexibility. This entails better time management, resolving issues efficiently during meetings, minimizing distractions, and reducing commuting time. (Apgar, 2002; Spreitzer, 2017, Gratton; 2021). Managing time efficiently and resolving issues on time were emphasized, correlating with meeting effectiveness, especially in virtual settings where meetings conclude rather than extending into informal discussions. Informants also noted fewer distractions while working from home, aligning with the found theory. Additionally, they highlighted that with the new model, there is no need to book meeting rooms well in advance or ensure everyone is physically present in the same location, even if they reside in different counties. Meetings can be seamlessly conducted regardless of geographical constraints.

#### *Increased work-life balance*

Additionally, significant time savings on commuting were highlighted, particularly for employees living in distant cities or countries. The literature review highlighted that the new hybrid model

enhances work-life balance and boosts motivation. This is consistent with our data, where many informants expressed a positive view of the hybrid arrangement, observed both with internal employees and during external interactions at job interviews and fairs. Building on the previously mentioned benefits of extended family time, informants also highlighted how the ability to manage their work schedules flexibly, allowing them to spend time with their families in the afternoon, significantly enhances work-life balance. (Informant 5).

### **5.3.2. Challenges**

#### ***Reduced work-home balance***

A challenge of hybrid work included challenges in transitioning from traditional office settings, as a difficulty in “logging-off” at the home office. (Apgar, 2002; Mas & Pallais, 2017; Jasgur, 2023). We did not get any viewpoints regarding these difficulties throughout our interviews, which could suggest that this is not a top-of-mind challenge. However, even though the informants did not mention this as a challenge, we assume that this could be the case for some employees. Additionally, as Mas & Pallais (2017) indicate, certain employees are required to work during evening, nights or weekends, thereby disrupting their personal time. These situations were especially widespread in some teams within NN, where a number of participants in the meetings were located in different countries with other timezones, meaning that some have to participate at a very inconvenient time. (Informant 7, Informant 12).

#### ***Physical barriers***

When it comes to overcoming the external barriers proposed by Apgar (2002) and Mas & Pallais (2017) such as limited space within the home office, this is thought out by NN, through the workplace assessments and by offering the necessary tools to work from home. (Informant 5, Informant 7, Informant 8). Moreover, employees do have the option to work on-site, overcoming potential home-related barriers such as limited space or distractions at home. In this context, reliance is not solely on the home office; rather, the hybrid approach prioritizes flexibility by making it an option rather than a requirement. In this way, we consider NN to overcome external barriers.

### 5.4. Successful Remote Innovation Framework

Our theoretical research revealed that organizational changes, whether physical or digital, often cause a range of responses from employees, both positive and negative. Interviews highlighted significant variations in employee readiness to return to the office post-Covid-19. (Informant 4). Some were eager to return, while others preferred working from home. We attributed these differences to various personality styles and preferences without identifying specific reasons or generational gaps.

In this section, we have made a new model which we will use to evaluate the possibilities for successful remote innovation (See Figure 23). This model is derived from both literature and interview findings. It comprises four key pillars: organizational assessment, infrastructure, the manager’s role, and innovation team characteristics. These pillars are not intended as ‘steps’ instead, they allow for flexibility to move back and forth between them as needed. Additionally, our research highlighted the significant role of social bonding and strong relationships in all aspects of the model, positioning them as a foundational layer that influences each pillar, underscoring the importance of considering these elements throughout the process.

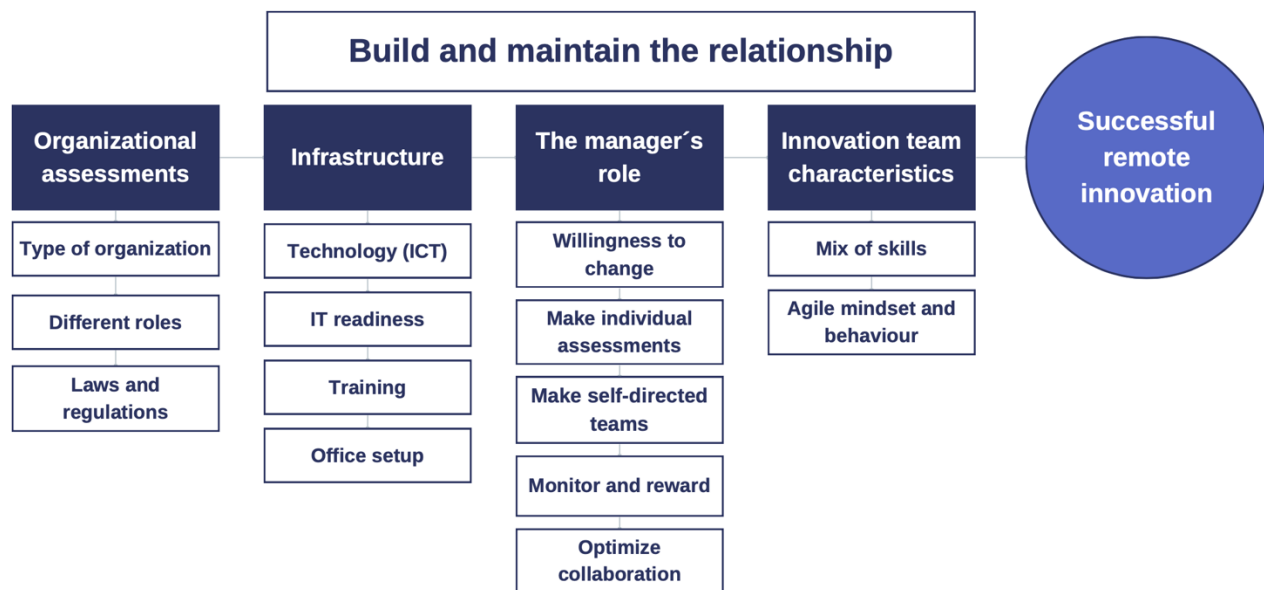


Figure 23: Framework to facilitate successful remote innovation. Source: Own work.

### **5.4.1. Organizational assessments**

#### ***Type of organization***

The literature highlights a distinct separation between industrial and informational organizations (Apgar, 2002). However, we argue that NN, traditionally viewed as an industrial entity due to its extensive production facilities worldwide, could also be classified as informational. NN encompasses various departments such as IT, quality, marketing, and corporate communication, which primarily operate from office settings rather than production sites. It is also emphasized that the difference between the two types of organizations also indicate whether they are more suited for face-to-face interactions rather than a hybrid approach. This is something we would like to challenge, as while production and laboratory staff require physical presence for certain tasks, other responsibilities like research, report analysis, and some trainings often take place in an office environment. We believe these activities can be effectively managed in a hybrid format, thus extending the feasibility of hybrid work arrangements to a broader segment of NN's workforce. This also implies that it is not the entire company that should be classified as either industrial or informational, but rather the specific department should be considered based on its functions and responsibilities (Informant 5).

#### ***Different roles***

Moreover, Gratton (2021) makes a distinction between the employees. It is indicated that time and location are crucial for managers, who are responsible for fostering engagement and providing feedback to their employees. Our observations align with this, noting that managers tend to be more visible and accessible to support their teams in the office (Informant 12). The importance of managerial presence is underscored by employees who prefer their managers to be physically present. In addition, for more focused work, it is best to accommodate this by letting employees work at their own time and preferred place, also aligning with our findings weighing this as important for their concentrated work. Lastly, Gratton (2021) also points out that employees working with innovation requires a lot of face-to-face interactions; either virtual or physical, thereby it is important to be aware and facilitate for this; which is also something that they do (Informant 7).

#### ***Laws and regulations***

Gratton (2021) brought up the importance of compliance, including tax and regulations. We discovered that NN employees are restricted to work outside of Denmark due to Danish legal and tax regulations.

This is because, upon being hired in Denmark, they are required to remain in the country for tax purposes. Additionally, there are occupational considerations; if a work-related incident occurs, it may complicate insurance matters if the employee is not present in the country. (Informant 5, Informant 7). To clarify, this restriction means they cannot travel to another country for a week of remote work. Furthermore, they cannot extend their stay by working remotely the week before or the week after their holiday.

#### **5.4.2. Infrastructure**

##### ***Technology (ICT)***

As building the infrastructure is crucial to ensure that the organization's technology can support virtual workers; this needs to be in place (Apgar, 2002; Haugen, 2013; Gratton, 2021; Konrad-Maerk, 2023). NN appears to have implemented various efforts to establish the appropriate infrastructure for hybrid work, focusing on enhancing their ICT. We discovered that NN is actively developing internal applications for employee use, which supports the current literature about the necessity for cohesive collaboration tools in managing remote innovation. This includes: communication platforms; to ensure effective and high-quality meetings and share information, and collaboration tools; to ensure a smooth collaboration process.

However, the many different platforms seem to pose challenges in order to manage them effectively, as informants suggested that managing feedback can be challenging when comments and ideas are dispersed across multiple posts. Thus, ensuring ICT efficacy is not only about having the right tools in place but also involves selecting the most suitable ones. Moreover, since there are certain times when everyone requires specific information, it would be beneficial to find methods of delivering shorter, more engaging content. This approach could help maintain employee engagement and ensure that all critical information is effectively communicated. An example was given by Informant 5, who suggested to make 2-3 minutes long videos and send them by email to engage all levels of workers. It was highlighted that many production employees do not have the time or preference to read long emails, making videos a more effective means of capturing their attention.

### ***IT Readiness***

When it comes to IT readiness, we refer back to the literature about whether the employees can manage the technology (Apgar, 2002; Haugen, 2013; Konrad-Maerk, 2023). Our findings suggest that Covid-19 had a significant impact on how employees adapted to virtual tools. This ranged from being comfortable in having their cameras on, which enhances virtual interaction, to effectively utilize digital platforms such as Teams. It was further explained that employees had become increasingly better at using Teams and digital platforms to engage with each other, and furthermore increasing the number of remote attendees in meetings. (Informant 4, Informant 12).

### ***Training***

Within IT readiness, we also consider training as essential, as suggested by Apgar (2002), Haugen (2013) and Jaszur (2023). While NN has the necessary collaboration tools available, there is a notable lack of training on how to effectively use these tools. It requires that the employees need to independently learn their use, aligning with literature suggesting that effective use of tools is not just about access but also about appropriate training on when and how to use them. At NN, the process of training in new tools or updates follows a 'pull' approach, which can be problematic as the large inflow of new hires may struggle with locating the right resources for training and information. While employees are expected to take responsibility for their own training and practice, videos are available for guidance. This self-directed approach applies to familiar tools and updates, whereas larger, new platforms or tools seem to receive more substantial training investment, which is aligned with the literature recommendations. There may be some employees, who need additional assistance other than videos, and for them, the current approach at NN seems to rely on informal peer support. This emphasizes the need for relationships between employees, to minimize the barrier of reaching out. The literature advocates for structured training and support to identify and address challenges effectively. Without formal training, employees may experience frustration and decreased productivity. It was evident that preferences for using physical tools, e.g., when conducting workshops, varied significantly among employees, and expecting them to learn to master these tools in their spare time may not be realistic.

Nevertheless, although not clearly stated by our informants, this may indicate that situations with confusion or frustration for certain employees could occur. Additionally, if they do not manage this, it could potentially lead to decreased productivity (Apgar, 2002; Haugen; 2013).

### ***Office setup***

Physical barriers in terms of space and all necessities to facilitate a home office is something we consider as highly addressed and therefore not a concern within NN. First of all, they have the workplace assessments which give them an overview of what tools are needed for the individual employee's home-office. Furthermore, NN have various sites across Denmark, where the employees can work from, if they have difficulties working from home. Moreover, as some of the sites are designed with designated work-zones, such as focus- and collaboration zones, that allows for both quiet and concentrated work, this also aids in reducing the physical barriers. Our research also uncovered that resistance to change can stem from fears of failure in a new work setup. To address this, we discovered that NN accommodates these concerns by allowing employees the flexibility to work from the office as frequently as they prefer, without mandating remote work. This flexibility is made possible by the extensive number of buildings that NN owns.

However, one fact that many informants addressed, was the issue of being interrupted in the office. This is especially difficult to avoid when working in open-space landscapes, and it also accords with what several studies have found; designing open-space offices do not necessarily enhance collaboration among employees. (Bernstein & Turban, 2018) and (Informant 12). Therefore, we also view this as a key reason why organizations should offer employees the flexibility to work from home several days each week, to get the time they need to concentrate.

### **5.4.3. The Manager's Role**

#### ***Willingness to change***

The literature by Brown & Heitner (2023) points to managers as potential obstacles in the face of change, yet our findings reveal that many leaders have embraced the new hybrid work model, thereby facilitating adaptation and continuous improvement. Multiple authors especially emphasize the importance of effective management as their role will play a major role in ensuring the success of the new way of working (Apgar, 2002; Haugen, 2013; Jasgur, 2023; Konrad-Meark, 2023). We

acknowledge that there are different individual preferences from managers towards how often they consider it important to be physically present. Despite this, most managers seemed to embrace the hybrid work model, even if their own preferences would be for everyone to come to the office every day. They see the value in offering flexibility, showcasing their willingness to embrace change towards their employees.

Fairness is a critical concern in implementing hybrid work practices, brought up by Gratton (2021), which is also the case in NN, especially as different teams may have varying approaches that could lead to perceived unfairness (Informant 9). This issue becomes pronounced when employees transition between departments, considering the different expectations and potentially facing less flexibility. Organizational changes further compound to this problem, disrupting established work arrangements. As there is a frequent reshuffling of leadership and personnel within the organization, it can cause disruption if employees are thriving with their current team dynamics, only for a new manager to alter the established approach. It is therefore crucial for new managers to understand and accommodate existing work setups, striving for fairness and compromise to ensure satisfaction among team members, as it could lead to negative effects regarding their productivity and collaboration. This aligns with the theory from Gratton (2021) which states that feelings of unfairness can negatively impact the productivity and hinder collaboration. They further mentioned that this was especially the case for employees with time-and-place dependent jobs similar to the workers in production areas in NN.

### ***Make individual assessments***

As found in the literature, it is common to experience employee resistance when organizations undergo change (Kotter & Schlesinger, 1989; Ahmad & Chowdhury, 2021; Li et al., 2021). Therefore, an individual assessment is suggested to be made in regards to taking their preferences and work styles into account (Haugen 2013; Gratton, 2021; Jasgur 2023). This aligns with Apgar (2002) suggesting that engaging the employees in the planning phase can contribute to overcoming the barriers of resistance. However, it appears that teams enforce equal rules for everyone, suggesting that individual preferences are not heavily considered, we argue that it would be beneficial for team managers to give more attention to these preferences. While it is acknowledged that those who prefer office work can come in as often as they like without restrictions, those who prefer working from home face limitations. The

standard 2+3 approach implies a limit on remote work days, which may not fully accommodate all individual preferences.

### ***Virtual leadership skills***

Our research uncovered a significant aspect that appears underrepresented in existing literature: the critical role of social relationships in facilitating knowledge sharing within and between departments. They emphasized the value of nurturing personal connections among team members. We observed that teams familiar with each other are better positioned to collaborate on projects in a hybrid setting subsequently. (Informant 6). From the employees' perspective, familiarity breeds comfort in interactions and reaching out for help and encourages more frequent interactions and idea-sharing in a hybrid work environment. Thus, building relationships is a crucial component in the framework of successful remote innovation. Our findings indicate that some managers recognize this necessity, particularly emphasizing soft skills (Informant 7). Regular check-ins with employees who work remotely are a beneficial practice for strengthening relationships, in addition to spending time to build up trust.

The potential issue of isolation was also discussed by informants, echoing thoughts from Apgar (2002), Gratton (2021) and Jaszgur (2023). However, none of the informants experienced isolation themselves. Instead, they expressed concerns about their colleagues potentially feeling isolated, particularly those who primarily work remotely due to them living in another country. Despite their colleagues' assurances that they did not feel isolated, our informants still had some worries about this. One advice was to use the one-to-one sessions with employees, to reveal any signs of isolation, stress or anxiety caused by remote work.

### ***Make self-directed teams***

Apgar (2002) and Schilling (2019) also highlighted self-directed schedules as a potential challenge, and the importance of reaching out if necessary. This was confirmed by our findings; that some employees need additional guidance to effectively plan and structure their days. Here it was also suggested to establish clear communication guidelines from managers to employees and between employees, to encourage them to reach out, even with minor questions. This is consistent with insights from

Informants 10 and 11, who noted that although many employees prefer working from home, not all have the necessary skills and traits for effective remote work. These employees frequently need guidance in planning and structuring their tasks and schedules to perform their roles effectively. Furthermore, the informants emphasized the crucial role of leadership in providing this guidance.

Moreover, the literature states that; how much to interact and the importance of office hours should be assessed. Our findings that there are no universal rules, indicate that the decisions about flexibility are solely up to the managers of each department. Most seem to be familiar with the 2+3 approach, where two days at home are acceptable and the remaining three days should be from the office. However, it does not seem as if specific office days are planned in the teams, meaning that potentially, an employee could turn up in the office three days and only meet colleagues on one of these days, as the two other days everyone in the team is working from home. This could lead to adverse effects of the importance of physical proximity at the office. However, we realized that if employees are expected to come to the office on specific days, this could undermine the benefits of flexibility. Therefore, a balanced approach is necessary, neither too strict or too flexible, to avoid negative outcomes.

One approach to maintain effective coordination is to introduce a monthly timesheet for all team members to use. This timesheet would detail whether each employee plans to work from home, the office, or if they will be traveling for work. This allows team members to plan their schedules accordingly and know which desks are available in the office. It is crucial that this system is easy to maintain and update so that employees consistently remember to update it. If only some employees regularly update the timesheet, the effectiveness of this system could be compromised.

### ***Monitor and reward***

Furthermore, as literature stresses the importance of monitoring and control (Chandra et. al, 2020; George et. al, 2020), our data sympathize with their argument, that a micromanaging leadership approach is very demotivating on employees and could lead to dissatisfaction and a feeling of reduced flexibility. Therefore, finding a balance between trusting the employees with the flexibility and keeping an eye on their professional performance and personal well-being was emphasized as essential for managing hybrid teams.

When it comes to new performance measures and rewards, the literature from Jasgur (2023) suggests that recognition is crucial in motivating employees and sets an example for others to follow. Here it was found that it does not necessarily have to involve monetary rewards, low-cost incentives can be highly effective as well. This aligns with our findings that remote employees need to be rewarded to avoid feelings of demotivation (Informant 10).

In the context of remote work where visibility is reduced, it is important to enhance monitoring strategies and strengthen relationships. According to Jasgur (2023), employing simple tools like pulse surveys to pose specific questions or monitor outputs can help gather valuable data and identify notable achievements. Regular virtual meetings with employees to discuss challenges they have overcome or ways in which their colleagues have supported them can reveal key opportunities for recognition. Therefore, visibility was emphasized as important by people managers, to keep track on the interactions between employees. In order to making the necessary assessments, new performance measures and readdressing incentives and rewards should be customized to the new work approach. Our findings suggest that reward systems need to be customized for each department, recognizing that some projects may be more time-consuming than others. For instance, implementing a reward system in the end of a project could be demotivating for those engaged in year-long innovation projects where milestones may extend over longer periods.

### ***Optimize collaboration***

It is evident that face-to-face interactions in the initial phase of a collaboration project are highly valuable for achieving a mutual understanding of the problem. Furthermore, we observed that conducting workshops with both online and offline attendees present difficulties. Therefore, it will be more effective for teams to meet in person at the project's beginning. If this is not possible, the workshop should be held entirely virtually to ensure all participants engage on an equal level.

As stated by Konrad-Meark (2023), openness is essential to effectively share information and knowledge in a virtual setup. Moreover, in a situation where everyone is virtual, this seems to be somewhat facilitated through "brainwriting", indicating a very effective way to get everyone included

in situations where it is usually difficult to get to the word (ref. cross-contamination). However, it imposes a challenge when there is a mix of physical and virtual attendees. As it was easy to unintentionally create a social atmosphere in the physical room, this leads to forgetting the attendees online. (Informant 6, Informant 9). Thereby, it becomes clear that the facilitator's role is essential in these situations by making sure the virtual participants are being heard.

#### **5.4.4. Innovation Team Characteristics**

##### ***Mix of skills***

The literature from Schilling (2019) and Høy Jakobsen (2019) highlights the importance of diverse teams in fostering successful innovation. They note that innovation requires a mix of skills like creativity, entrepreneurship, strategic planning, and effective leadership. Diversity in a team enhances innovation by leveraging unique backgrounds and expertise, which fuels creativity. Traits like openness to experience, motivation, and the ability to switch between individual work and team collaboration are crucial. Therefore, it is important that virtual work do not come in between this. As Gratton (2021) suggests, face-to-face interaction is crucial for fostering innovation, but the digital tools make it less necessary with physical proximity. This view is consistent with the opinions and experiences from our informants. With the integration of communication platforms like Teams for video, chat and file sharing, it has become easier to maintain contact with the team members. While the meetings remain essential, the location of the meeting is becoming less critical. (Informant 2, Informant 4, Informant 6).

##### ***Agile mindset and behaviour***

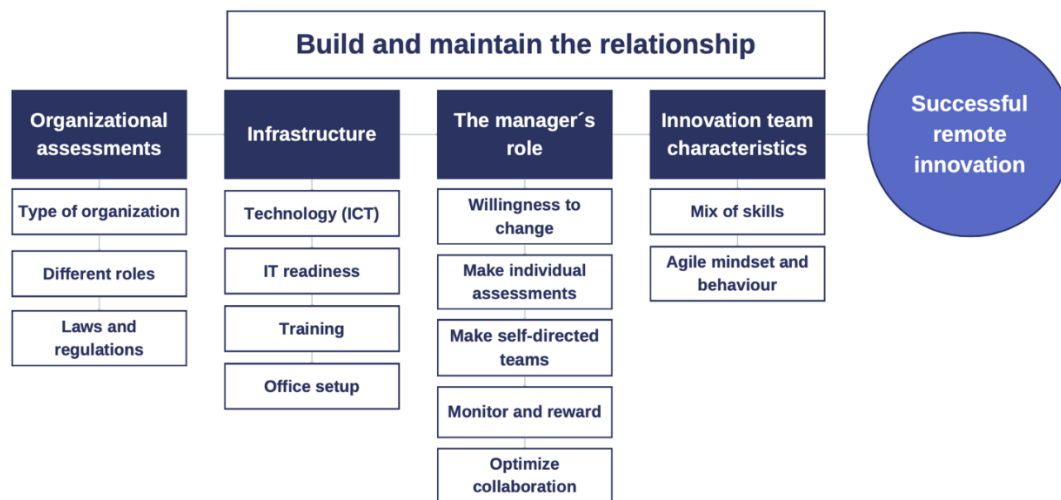
In addition to the personality traits mentioned, Konrad-Meark (2023) emphasize the importance of possessing an agile mindset which is determined as crucial for innovation projects. Moreover, as Schilling (2019) also suggest when it comes to developing new products; an agile methodology should be utilized to reduce the failure rates, which Informant 9 confirmed that they are doing, by utilizing 'sprint' format for projects. This led to some challenges as certain employees working remote during the sprint period tended to stick to one idea, as they lacked the daily interactions with their colleagues.

However, we argue that it is insufficient to merely have an agile mindset; it is also essential to implement agile behaviors in daily work activities. Therefore, our interpretation also involves flexibility and rapid communication among the employees while working from home. Knowledge-

sharing between employees becomes even more crucial when team members are not physically present, underscoring the need for effective strategies to maintain information flow and collaboration among remote workers. Specifically, team members should promptly respond to calls on Teams, in order to actively keep each other updated on new thoughts, solutions or challenges. At the very least, they should inform the caller of a suitable time for a callback. This practice prevents the accumulation of questions for face-to-face meetings, which could lead to forgotten queries or project delays until team members meet. We recommend this approach as a way to sustain agility in a hybrid team, which is further facilitated by strong social connections among team members.

### 5.5. Recommendations

Based on the section above, this is a summary of our recommendations for facilitating successful remote innovation, as seen earlier in Figure 23.



**Figure 23:** Framework to facilitate successful remote innovation. *Source: Own work.*

#### Organizational assessments

To assess an organization’s readiness for a hybrid approach, first determine if it is informational or industrial, as informational organizations are typically more prepared for remote operations. Then, evaluate the roles of employees, distinguishing between leaders and regular employees, to understand their capability for remote work. Finally, consider the specific regulations and laws governing remote work within the industry.

**Infrastructure**

To assess your organization's infrastructure for digital collaboration and communication, ensure you have the appropriate platforms and limit this to reduce the time required for employees in checking the various ones. Verify that employees are comfortable using these tools and provide necessary training. Additionally, equip both home and office setups adequately to enable effective work environments.

**The manager's role**

Ensure the manager is prepared for and embracing the hybrid work model, promoting fair treatment of all employees to minimize resistance. Assess individual preferences to tailor management approaches accordingly. The manager should possess strong virtual leadership skills to facilitate knowledge-sharing and strengthen relationships across departments. Regular check-ins with remote employees are crucial to prevent feelings of isolation. Establish self-directed teams with clear guidelines on outreach and interaction among members and set clear practices for when physical presence is essential. Avoid micromanagement while maintaining oversight, and consistently recognize the contributions of remote employees. It is advisable to meet physically at the start of projects to ensure alignment; if this is not feasible, conduct meetings entirely virtually to ensure inclusivity. Employ brainwriting as a strategy to boost brainstorming sessions in virtual setups.

**Innovation team characteristics**

It is important that teams consists of a diverse set of skills, coupled with an agile mindset that encourages thinking outside the box. Additionally, in a hybrid setting, it is recommended that team members demonstrate agile behavior by being easily available and approachable, and behaving consistently.

**Build and maintain the relationships**

Building and maintaining strong relationships within teams is essential, as it significantly enhances collaboration and knowledge-sharing. When team members form close connections, they are more likely to engage in discussions, especially in virtual settings. This improved engagement is vital for successful collaboration, particularly in innovation projects where collective input and varied perspectives drive progress.

## 5.6. The Brand Image

The literature from Brodie et al. (2016) indicates that achieving strategic advantages for brands has become increasingly challenging in today's dynamic business landscape. Our interviews revealed that many employees perceived an enhanced brand image of NN following the implementation of hybrid work, attributing this to the flexibility it provides. (Informant 5, Informant 8). They also noted a positive impact on the external brand image, evidenced by increased inquiries from job seekers. (Informant 6, Informant 7). This suggests that NN could leverage this aspect as a strategic advantage to attract talented employees who prioritize flexibility in their daily lives. We would argue that this could position NN as a more customer-centric, modern and inclusive brand, enhancing its image among both internal and external stakeholders.

NN using flexibility as a strategic advantage, will accordingly with Gregory (2003) also help attract employees from the outside. This aligns well with the theory suggesting that individuals working with innovation should possess diverse skills; indicating that NN requires to have people from all over (Schilling; 2019; Høy Jakobsen, 2019). Our research indicated that NN is highly innovative, and that this is a key factor for their continuous success. (Informant 1, Informant 2, Informant 6, Informant 7). Interviews with several informants also revealed that NN now has the capability to hire people from all over the world without requiring them to reside in Denmark. (Informant 7, Informant 8, Informant 9). This ability to tap into a global talent pool likely enhances NN's capacity for innovation.

## 5.7. Sub-conclusion for Discussion

Throughout the discussion, we have connected our results to existing literature, noting areas of alignment such as the reasons for adopting hybrid work models. We explored both the benefits and challenges of remote innovation to provide a comprehensive perspective. Additionally, we created a model based on the literature, incorporating our own insights to enhance its relevance in 2024. We detailed how companies can evaluate their readiness for hybrid work, which could lead to successful remote innovation. We also discussed how NN could leverage the flexibility of hybrid work as a strategic advantage, to attract new talent, emphasizing its significant impact on innovation within the company.

## 6. Conclusion

We will now revise our research questions and answer them below.

### **How does the integration of hybrid working environments impact the innovation projects within Novo Nordisk, and how is the corporate brand image affected by the change?**

To evaluate the impact of integrating hybrid work environments on innovation projects at NN, we developed a model to guide for successful remote innovation. Our discussion suggests that NN generally scores high on many aspects of this model, indicating that the hybrid setup likely has minimal negative impact on their innovation efforts, as they have robust systems in place. However, we identified some areas of concern that could potentially hinder innovation. These include insufficient training on collaborative tools, which may hinder effective teamwork, and challenges related to managing both physical and virtual participation, which could lead to unintentional exclusion of valuable employee input. Additionally, perceptions of unfairness among employees could negatively influence collaborative efforts. It is important for employees to demonstrate not just an agile mindset but also agile behaviors to enhance collaboration and idea sharing, which is vital for leveraging the diversity within innovation teams. A recurring theme across our findings is the critical role of building strong relationships to boost collaboration and thereby enhancing innovation. This emphasis is aligned with the need to ensure all team members have a common understanding and feel comfortable reaching out to each other, thereby minimizing barriers to communication, and maximizing the creative and open-minded potential necessary for innovative projects.

Furthermore, we discovered that the adoption of the hybrid work model has favorably influenced the corporate brand image of Novo Nordisk. This positive perception stems from internal employee satisfaction that enhances the company culture, as well as the inquiries from external stakeholders who value the flexible work options. Specifically, offering hybrid work seems to align with potential candidates' expectations. Furthermore, this strategy is in line with the organization's management vision to leverage hybrid working as a means to foster flexibility. This approach not only enriches their innovation projects by expanding the talent pool but also attracts a diverse range of individuals

globally, enhancing overall innovation competence.

**Sub-question 1: What are the key challenges and opportunities associated with innovation in a hybrid work setting?**

Our research indicated that hybrid work environments negatively affected social bonding and relationship building, particularly in newly formed teams where members were unfamiliar with each other. This lack of familiarity often hindered interpersonal connections, potentially leading to feelings of isolation and employees working in their own track. Challenges were notably pronounced in workshops involving both physical and virtual participants, especially when projects lacked clear goals and defined scopes. Additionally, remote work arrangements made it difficult for colleagues to engage and share knowledge as seamlessly as they might during casual interactions, such as those around the coffee machine.

Many employees appreciated the efficiency provided by the hybrid work model, noting that meetings could be scheduled more easily due to the reduced demand for physical meeting rooms and that virtual meetings tended to be quicker than in-person ones. They also valued the enhanced focus and concentration achievable when working from home, which was often challenging in the physical office environment. Additionally, the hybrid model positively impacted their work-life balance by reducing both the time and costs associated with daily commuting.

**Sub-question 2: How do communication and collaboration tools, and leadership approaches differ in hybrid work environments compared to traditional office settings?**

Our research revealed significant differences in communication and collaboration tools due to the shift to a hybrid work setup, compared to traditional methods. Instead of relying on physical tools like post-its and whiteboards for workshops, Novo Nordisk now utilizes digital platforms such as Teams, Miro, and Yammer to facilitate communication and collaboration with remote colleagues. Additionally, we observed that leadership approaches have adapted to reflect the hybrid environment, focusing on increasing interaction among team members while carefully avoiding micromanagement, to support the new dynamic effectively.

## **6.1. Further Research**

If we were given more time to explore this topic, we could have conducted a more extensive investigation, leading us to a more generalizable study that included various companies within the pharmaceutical industry. We also hypothesize that hybrid work likely shares common characteristics across sectors, and may present unique challenges depending on the industry. Therefore, it could also be intriguing to conduct an even more extensive investigation spanning across diverse industries. It would have been insightful to identify when these unique traits manifest and how varying leadership styles could promote success. Additionally, we would have liked to carry out a survey reaching a broader audience, providing complete anonymity to collect a wider range of honest responses. This would have allowed us to more comprehensively assess how hybrid work impacts the professional and personal lives of employees. Additionally, it would have been insightful to investigate how motivational attitudes toward hybrid work vary across different generations. This aspect could reveal significant differences in preferences and adaptability, enriching our understanding of the hybrid work model's impact on diverse age groups.

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