Intrapreneurship in Small- and Medium-Sized Enterprises: The Manager's Role in Stimulating Sustainable Innovation from Within

Master's thesis MSc. Sustainable Entrepreneurship
University of Groningen, Campus Fryslân

Sanne Bijma – S4321154
Supervisor: Dr. Berfu Ünal
Co-Assessor: Dr.Emma Folmer

ABSTRACT

Intrapreneurship, defined as entrepreneurial behavior within established organizations, holds significant promise in driving sustainable innovation. While this phenomenon has been widely studied in large corporations, it remains underexplored in the context of small- and medium-sized enterprises (SMEs). Given their limited resources, constrained budgets, and flat organizational structures, SMEs operate in a unique context, presenting both challenges and opportunities for intrapreneurship.

This study investigates how managers in sustainability-oriented SMEs perceive and promote intrapreneurial behavior among employees as a means to foster sustainable innovation. Through twelve semi-structured interviews with SMEs across various industries, the research identified four managerial techniques that support intrapreneurship. These are (1) visual nudging to influence behavior and mindset, (2) strategic human resource management to acquire the needed skills and capabilities, (3) holacracy to empower employees through decentralized structures, and (4) knowledge sharing: internal and external. By integrating insights from the existing literature with the empirical findings of this study, this research contributes to a deeper understanding of the managerial role in enabling intrapreneurship, specifically in SMEs and their organizational contexts. Theoretical contributions and practical implications are discussed.

Keywords: Intrapreneurship, SMEs, Sustainable innovation, Managers

TABLE OF CONTENT

INTRODUCTION

Today's world faces various challenges threatening humanity and the environment (Swart et al., 2004). Climate change, resource depletion, and social inequality are global issues requiring urgent action (Sverdrup, 2019). Various stakeholders expect and demand that organizations act responsibly by actively contributing to solving these global challenges (Waddock et al., 2002). Businesses experience increased pressure from governmental bodies that impose stricter regulations regarding sustainable practices (Berrone et al., 2012). Adopting sustainable practices is therefore no longer a choice, but rather the new way of doing business.

To guide and stimulate more sustainable practices, the United Nations introduced a universal framework, called the Sustainable Development Goals (hereafter called SDGs) (Krannich & Reiser, 2023). These goals stress the need for innovative solutions that balance economic growth, social inclusion, and environmental sustainability (Schmiedeknecht, 2019). Innovative processes allow businesses to reduce their carbon footprint, minimize waste, and optimize resource usage (Lodhi et al., 2024), altogether creating more sustainable practices. Therefore, sustainable innovation has emerged as a vital driver in addressing these global challenges (Adomako et al., 2023). Sustainable innovation is defined as the development of goods and services that meet the needs of current generations, as well as the needs of future generations (Cillo et al., 2019). Businesses that fail to leverage sustainable innovation face the risk of losing relevance in an environment where resources are finite, regulations are stronger than ever, and public expectations for sustainable action are rising (Sarkar, 2013). But how can a business make sure that it creates sustainable innovation?

To answer this question, this research dives deeper into innovation research. Innovation research by Damanpour et al. (2009) suggests that there are two main types of innovation. These are incremental innovation and radical innovation, both having different attributes, determinants, and effects. Incremental innovation involves small adjustments to existing products and services, while radical innovation involves the creation of a new product or service. Both types of innovation require different resources, management techniques, and thrive under different circumstances (Tavassoli and Karlsson, 2015). Incremental and radical innovation can take on various forms; for example, technological innovation and employee-driven innovation. Whereas technological innovation focuses on the use of artificial intelligence to create or improve products and services, employee-driven innovation focuses on human capital to leverage innovation.

Employee-driven innovation refers to ideas and solutions that originate from employees at all levels of the organization rather than from a select group (Flocco et al., 2022). Employees possess valuable insights into how products and services could be improved to become more sustainable. Their position

in the organization, being in direct contact with the products and services, allows them to identify changes that could significantly contribute to more sustainable practices. Nevertheless, traditional, hierarchical structures and risk-averse organizational cultures limit organizations from exploring and experimenting with new ideas (Sheshadri, 2024). Thereby, the full potential of the employees is not captured. Instead, innovation remains confined to top management or specialized teams. While employee-driven innovation has been studied, the effective implementation of employee-driven innovation within small to medium-sized enterprises (hereafter called SMEs) remains unexplored (Høyrup, 2010; Brandi & Hasse, 2012). SMEs make up a vast majority of businesses worldwide (Lukács, 2005). Therefore, their potential for impact should not be neglected.

A promising approach to effectively implement employee-driven innovation is through intrapreneurship, which leverages employees' ideas to achieve innovation from within the organization (Moss et al., 2022). To frame this exploration, this study draws on the theoretical framework of Neessen and colleagues (2018). Via a systematic literature review, they have constructed an integrated framework of intrapreneurship that includes the dimensions, antecedents, and determinants of intrapreneurship. The multilevel nature of intrapreneurship is emphasized by highlighting the link between individual intrapreneurial behavior and the organizational context. The framework highlights management support as one of the organizational enablers of intrapreneurship. This study focuses on the facilitating role of managers in fostering intrapreneurship, taking a broader perspective than managerial support. The research aims to explore how managers in SMEs facilitate intrapreneurial activities and empower employees to embrace intrapreneurship as a means to develop sustainable initiatives and solutions. It includes an in-depth exploration of how managers perceive, experience, and enact intrapreneurial practices of their employees within the organizational context. It seeks to uncover the subjective meanings and experiences of managers in SMEs, acknowledging that the facilitation of intrapreneurship is influenced by individual interpretations of roles, responsibilities, and organizational culture. From this, the following research question arises:

"How can managers in small to medium-sized enterprises empower employees to embrace intrapreneurship as a means to engage in sustainable innovation?"

To answer this research question, the drivers and barriers associated with intrapreneurial behaviors are uncovered to determine the stimulation techniques useful for managers to implement.

LITERATURE REVIEW

The Concept of Intrapreneurship

Intrapreneurship has emerged as a crucial mechanism to foster innovation within organizations. Intrapreneurship refers to entrepreneurial behavior *within* an established organization (De Jong & Wennekers, 2008). Employees are encouraged to take the initiative, develop innovative ideas, and implement creative solutions (Neessen et al., 2018). Intrapreneurship is defined by characteristics such as autonomy, proactiveness, and risk-taking (Antoncic, 2020).

Research highlights a positive connection between employee engagement and organizational performance (Teimouri, 2016; Payambarpour, 2015; Mitchell & Walinga, 2016). Employees who feel neglected are less likely to engage in intrapreneurial activities (Farrukh et al., 2021). This disengagement stems from a lack of autonomy, poor recognition of their contributions, and rigid structures. Consequently, job satisfaction lowers (Chouchane et al., 2021), which in turn negatively affects organizational performance. Employee negligence can therefore erode the foundation for intrapreneurship. In contrast, engaged employees highlight the benefits of intrapreneurship, which include increased organizational growth (Rivera, 2017) and heightened job satisfaction (Antoncic & Antoncic, 2011). Intrapreneurship fosters a sense of ownership and commitment, which is critical to innovation development (Pandey et al., 2020). This sense of ownership makes employees feel more empowered to contribute to organizational goals. Successful intrapreneurial initiatives result in more sustainable products and services (Pellegrini et al., 2019), increased organizational adaptability (Ogbumgbada & Nwachukwu, 2024), and heightened employee engagement (Gawke et al., 2017). Moreover, supportive leadership, open organizational culture, and access to resources have been identified as enablers of intrapreneurship (Ambad & Ali, 2024). Intrapreneurship is essential to capture employee potential, stimulate sustainable initiatives, and increase organizational resilience. Employees who express intrapreneurial behaviors can act as change agents within their organization (Brunåker & Kurvinen, 2006).

By capturing the potential of their employees, intrapreneurship provides a bottom-up approach to sustainable initiatives and innovation (Blanka, 2018), complementing top-down strategies. This is crucial as sustainability requires a systemic change, which can be more effectively driven by those individuals who understand the nuances of their operations and processes. In the realm of sustainability, intrapreneurship provides a pathway to drive sustainable development and innovation by leveraging existing human resources and structures within the organization (Pellegrini et al., 2019). Intrapreneurship is impactful due to its ability to respond quickly to dynamic and fast-changing market conditions and stakeholder expectations (Mansanta, 2020).

Innovation Types

Innovation is a key driver of competitive advantage and long-term success for organizations. However, innovation does not occur uniformly. It can take on different forms, classified into different types based on technology newness and impact on the market (Damanpour et al., 2009). Two primary categories have been identified by previous research. These are radical innovation and incremental innovation (Acemoglu et al., 2022).

Radical innovation involves groundbreaking advancements, representing a significant departure from existing knowledge, products, and operational processes. It is often accommodated by technological breakthroughs, the creation of new industries, and major shifts in market dynamics (Coccia, 2016). Radical innovation is specifically valuable for those industries where organizations must constantly adapt to remain competitive (Chen, 2024). Organizations that embrace radical innovation tend to be open to disruption, hire younger managers, and prioritize entrepreneurial characteristics when hiring new employees. However, due to its high uncertainty, radical innovation requires stronger managerial support and heightened investment in research and development (Engen & Holen, 2014).

On the other hand, incremental innovation refers to small, gradual, and continuous improvements in existing products, services, and processes (Acemoglu et al., 2022). These improvements enhance efficiency, lower resource usage, and increase cost-effectiveness without fundamentally changing the product, service, or process (Rajchamaha et al., 2024). Incremental innovation is more likely to occur in organizations with market-driven growth strategies, as this aligns with their focus on optimization rather than disrupting markets. While this type of innovation poses lower risks, it still provides valuable input for sustainable development.

Intrapreneurs play a crucial role in both types of innovation. Radical innovation requires intrapreneurs to leverage their social capital, in the form of relationships, trust, and influence within the organization, to overcome organizational resistance and to build support for transformative ideas (Fehling & Carlson, 2020). On the other hand, incremental innovation is often facilitated by cross-departmental collaboration and continuous feedback loops (Engen & Holen, 2014). Intrapreneurs utilize their networks to collaborate and gather feedback to implement gradual improvements to optimize existing products and services. Their mindset helps them to identify small but meaningful changes. Intrapreneurship has been proven to be a powerful driver of innovation and sustainability (Pellegrini et al., 2019), but the understanding of its implementation remains limited. Recognizing and understanding the differences between these types of innovations is crucial, as each requires different strategies, resources, and managerial support.

The Role of Managers as Facilitators

To facilitate intrapreneurial behavior per the type of innovation, this study is grounded in the theoretical framework proposed by Neessen and colleagues (2018), which conceptualizes intrapreneurship as a concept occurring within the constraints of the organization. These boundaries can either support or hinder intrapreneurial behavior by shaping the attitudes and actions of the employees working for the organization. They have identified five key organizational factors that influence intrapreneurship. These are (1) management support, (2) organizational structure, (3) reward systems, (4) work discretion, and (5) resource availability. Of these five factors, this study will specifically focus on the role of managers in facilitating intrapreneurial behavior.

Whereas Neessen et al. (2018) have solely focused on management support, this research will focus on managers. This is a multifaceted construct that not only includes management support but also the allocation of resources, promotion of autonomy, and reinforcement of the organizational culture. This study proposes that managers can act as enablers of intrapreneurship by ensuring that employees have access to the necessary resources and information, feel empowered to take initiative, and have space to experiment. Managers are the primary communicators of the organizational culture, allowing them to convey support and motivation to the employees. Intrapreneurship thrives in an open organizational culture (Yun et al., 2020) that empowers employees to collaborate (Rivera, 2017). Managers can set this tone for workplace behaviors, priorities, and values (Henrico et al., 2014). Their leadership directly impacts operational success, but also the ability to innovate and adapt to changes in the environment (Yukl, 2008). They are responsible for resource allocation (Fraser & Estabrooks, 2008), which means that they can facilitate experimentation by allocating resources correctly. This includes financial resources, such as budgets, but also non-financial resources, such as time and expertise. Risk-taking should be encouraged by the managers, without the fear of failure (Prieto et al., 2020). A culture that fosters innovation, empowering employees to take ownership of sustainable ideas and allowing them to learn from mistakes, should be created (Van der Sijde, et al., 2013). Managers are positioned at the intersection of top-down strategy and bottom-up employee engagement (Neessen et al., 2018). Therefore, they serve as facilitators who can create beneficial conditions for intrapreneurship to thrive.

Intrapreneurial behavior has a significant positive impact on sustainable performance (Duradoni & Di Fabio, 2019). Therefore, intrapreneurship sounds like a promising concept, but implementing intrapreneurship can be challenging as it requires balancing organizational objectives and resources. Current studies have mainly focused on large multinationals, but smaller companies have different amounts of resources available (Loucks et al., 2010). Therefore, the question arises how the role of the

manager might differ in a context where resources are more limited and budgets are tight. To investigate this matter, this research will focus on the role of managers within SMEs.

Focusing on SMEs

Small and medium-sized enterprises (SMEs) are essential contributors to regional economies (Gherghina et al., 2020). SMEs make up a vast majority of businesses worldwide (Lukács, 2005). Therefore, their potential for impact cannot be neglected. They are defined by their size, having fewer than 250 employees (O'Regan & Ghobadian, 2004). Moreover, they often face resource constraints, which cause them to operate with tight and limited budgets and lowered access to expertise. This could potentially impact the effectiveness and implementation of intrapreneurship. On the other hand, their relatively smaller size also translates into greater agility and adaptability (Jafari-Sadeghi et al., 2021), which is beneficial for sustainable innovation. SMEs can implement changes with less bureaucracy, enabling them to experiment with innovative ideas and solutions (Rizos et al., 2016).

Managers play a vital role in capturing the benefits of a smaller organizational size and mitigating the associated risks. In small to medium-sized enterprises, managers often work closely with their employees. This fosters a direct and open way of communication (Kaliannan et al., 2016). The close interactions allow managers to better understand the employees' needs, strengths, and challenges. This improves employees' satisfaction as they are more likely to feel that their opinions are heard and their contributions are valued. Therefore, they feel more motivated and engaged in their work, positively influencing employee-driven innovation (Hansen et al., 2017). Thus, the successful implementation of intrapreneurship lies partly in the hands of the managers. Moreover, managers are in charge of distributing the resources available. Previous research has shown that resource allocation can either impede or stimulate intrapreneurship (Neessen et al., 2018). Consequently, managers need to carefully allocate the resources, especially in SMEs where resources are limited. All in all, highlighting the critical role of managers in mitigating the constraints while leveraging supportive conditions for sustainable innovation.

Research Gaps

The benefits of intrapreneurship have been proven by Huang and colleagues (2021), who show an eighty percent success rate of intrapreneurship, against a twenty percent success rate of entrepreneurship. This highlights the importance of researching intrapreneurship and its promising benefits and outcomes. Nevertheless, research gaps remain, showcasing the need for further exploration.

Firstly, existing research predominantly focuses on large corporations, overlooking SMEs (Loucks et al., 2010). This is problematic because SMEs face different challenges and opportunities due to having fewer resources and a different organizational structure. They operate under different conditions, facing tighter budgets, smaller teams, and fewer formalized innovation frameworks. The role of managers in navigating these constraints and opportunities to empower employees for sustainable initiative-taking remains underexplored.

Secondly, many of the current studies employ quantitative methodological approaches to assess intrapreneurship. While these methods provide valuable insights into general trends, they often fail to capture the underlying, contextual factors and influences (Savela, 2017). Qualitative approaches are needed to explore the in-depth managerial and employee perspectives regarding intrapreneurship. Through this type of research method, the process of intrapreneurship behavior stimulation by managers can be investigated

Given these research gaps, this study focuses on SMEs to explore how managers facilitate intrapreneurial activities, which in turn stimulate sustainable solutions. By addressing the deficiencies in the literature, this research aims to contribute to both the academic and practical fields to support sustainable innovation and employee-driven innovation through the means of intrapreneurship.

Theoretical Framework

While large organizations may benefit from formal innovation structures, SMEs rely more on managers to drive innovation. The decentralized nature of many SMEs can serve as both a driver and a barrier to intrapreneurial behavior. On the one hand, it allows for greater flexibility and faster decision-making. On the other hand, it can also create uncertainty and a lack of structured support for implementing innovative ideas. This is an example of the critical role that managers have in SMEs when it comes to supporting and facilitating intrapreneurial behaviors.

The findings of this study aim to provide practical insights on how managers in SMEs can strategically support employees by allocating resources and creating an organizational culture that encourages intrapreneurship. This is relevant in today's sustainable, dynamic markets where there is a continuous need to innovate. Figure 1 highlights the proposed framework:

Figure 1: Intrapreneurship in small to medium-sized enterprises (theoretical framework made by researcher based on the literature review)
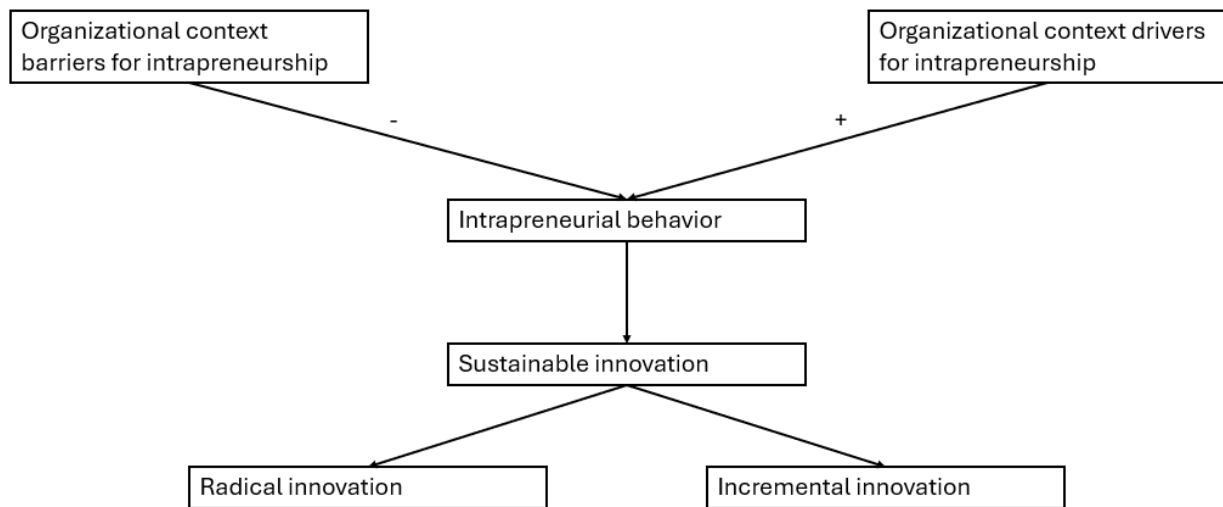
METHODS

Design

This research explored how managers in SMEs can facilitate intrapreneurial activities. A qualitative design allowed for an in-depth exploration of the subjective experiences, perceptions, and practices of managers within their organizational context (Winwood, 2019). It is important to note that the research is about the perceptions of the managers about their employees' behaviors. Actual intrapreneurial behavior within companies has not been measured.

Given the exploratory nature of this research, a qualitative design was employed, utilizing semi-structured interviews to provide a structured framework for investigating participants' experiences. This design was chosen to capture shared, complementary, and contradictory perceptions of managers across different SMEs, all operating within the circular economy. The use of open-ended questions allowed for the capture of rich contextual data (Bearman, n.d.).

Participants

Purposive sampling was used to recruit the study participants. The network of Vereniging Circulair Friesland was used to identify participants, i.e., managers, from SMEs in Friesland. Organizational size was an inclusion criterion for sampling. Small to medium-sized enterprises were identified as organizations with no more than 250 employees (O'Regan & Ghobadian, 2004). Although previous research did not point out any significant differences between industries (Huang et al., 2021), the aim was to recruit participants from a range of different industries to confirm that there are no significant differences between the industries within the circular economy.

In total, 12 participants (10 male) were recruited, representing a diverse range of industries, such as construction, leasing, and architecture. The mean age of participants ranged between 25 and 65. The demographics can be found in Table 1 below.

Table 1: Demographic characteristics of the research participants

Participant	Age range	Gender	Industry	Business function
1	60-70	Male	Wood building/construction	Advisor biobased building
2	40-50	Male	Housing cooperation	Program manager and advisor for innovation and sustainability
3	50-60	Male	Engineering	Location manager
4	40-50	Male	Transport and logistics	Supply chain manager
5	50-60	Male	Engineering	Rayon manager North
6	20-30	Female	Civil engineering	Office manager replacement
7	60-70	Male	Engineering	Office manager
8	40-50	Female	Water engineering	Office manager
9	50-60	Male	Engineering	Director
10	20-30	Male	Engineering	Employee
11	30-40	Male	Leasing	Quality manager (focused on sustainability)
12	50-60	Male	Refurbishing	Director

Procedure

Based on the literature review, an interview guide was developed. The guide included open-ended questions designed to explore themes such as organizational culture, managerial efforts to change mindsets, and learning from failure (see Appendix A). This guide was used during the semi-structured interviews. Using semi-structured interviews allowed to uncover detailed insights while remaining flexible without losing focus on the research aims (Horton et al., 2004).

Before conducting the interviews, a pilot test was done with two participants to test the quality and duration of the interview. After incorporating the feedback given, the interviews were conducted over a period of 6 weeks. The interviews were held between February 27[th,] 2025, and April 9[th,] 2025.

All interviews were conducted in Dutch. Interviews were held either in person or online, and, after being given consent, recorded for transcription purposes. Each interview lasted between 35 and 60 minutes, with an average of 46 minutes. Notes were taken during the interview to capture initial impressions and to develop key follow-up questions.

Data Analysis

To ensure confidentiality, the interviews were transcribed manually. Identifying information was anonymized to ensure that sensitive data remained secure. Thereafter, systematic coding and thematic analysis were applied based on the six-phase framework by Clarke & Braun (2016). Familiarization with the data was done through manual transcription. Flexible coding was used to analyze the interviews. This is a combination of fixed coding and fully grounded coding. Fixed coding refers to the use of predefined codes based on existing theories and literature. It provides structure. In this case, the framework by Neessen and colleagues (2018) has been used for fixed coding. Predefined codes were, for example, financial constraints, rewards, and hierarchy. Besides this deductive approach of fixed coding, fully grounded coding was also applied. This inductive approach emphasizes building codes and themes directly from the dataset without preconceived notions. By reading the data, the themes emerged naturally, and new unexpected insights were uncovered and captured. Therefore, flexible coding is a combination of a deductive and inductive approach. The hybrid approach enabled to capture insights based on existing theories and unexpected findings that emerged from the data collected. The codebook can be found in Appendix D.

Ethical Considerations

Ethical considerations were central to the design and execution of this study. It was ensured that the research adhered to the principles of respect, integrity, and transparency as outlined by the Ethics Committee of Campus Fryslan (*Ethics Committee Campus Fryslân*, 2024). Prior to data collection, a formal ethics application was submitted and approved Ethics Committee.

Participants were fully informed about the purpose and scope of the research before agreeing to participate. An information letter was provided (see Appendix B). The letter included information about the study's objectives, the voluntary nature of participation, and procedures for maintaining confidentiality and anonymity. Participants were asked to sign a consent form (see Appendix C) prior to the interviews to confirm their understanding and agreement to take part in the research.

To ensure participant confidentiality, unique codes (e.g., P1, P2, et cetera) were assigned to protect their identities. Identifying details within the interview were removed during transcription or generalized to prevent indirect identification. All data, including recordings, transcriptions, and notes, were stored securely on an encrypted university server. Access to the data was restricted to the researcher.

RESULTS

To answer the research question on how managers can stimulate intrapreneurship, the drivers and barriers to intrapreneurship were identified to gain in-depth insights. These results are displayed in the section below.

Organizational Structure and Culture

Hierarchy and flat organizational structure

9 out of the 12 participants explicitly mentioned a flat organizational structure, which aligns with the expectations for SMEs, having fewer than 250 employees, often leading to fewer hierarchical layers. P6 emphasized the benefits of these short communication lines by pointing out that "*We have very short lines of communication since there is no real management layer as we are only with 16 employees in total. This speeds up decision-making and eases communication as everybody in the organization can and is involved in the process.*"

Cultural openness and trust

More than half of the participants described the organizational culture as informal, transparent, and trusting. It highlighted safe spaces where there was room for trial and error. Cultural openness was associated with supportive leadership and industries that have innovation in their DNA and core business operations. P1 emphasized, *"Innovation is in our DNA and greatly supported by the management."* P4 also highlighted the importance of creating these safe spaces by stating that "i*t is important that there is space to make mistakes. There should be freedom and room to do so."* It shows a culture where experimentation is encouraged, and failure is not punished. Nevertheless, observation and interpretation by the researcher suggest that being in more conservative industries, such as the transport and logistics industry, hinders cultural openness as it is more old-fashioned and the structure is more rigid, making innovation more difficult.

Island culture versus open door culture

A divergence was found between organizations that had an 'island' culture versus those with an open-door policy. In four cases, island cultures were mentioned to exist, especially in the larger SMEs, which are more departmentalized. P4 mentioned, "*When looking at the spectrum of no island to island, we are more on the island side, which can hinder our communication.*" The siloed approach restricts collaboration and knowledge-sharing due to longer lines of communication and more difficult communication. On the other hand, P7 described, *"employees can always walk into my office. We call that an open door culture where all employees can come and talk to me."* This highlights the presence of an open-door culture where hierarchical barriers are practically absent. This structure facilitates faster

exchange of ideas and empowers employees to think critically and speak up regardless of their job title and function.

Type of Innovation

Incremental innovation

Most interviewed SMEs primarily pursue incremental innovation, which is small, continuous improvements on existing products or services. For example, P3 said, *"We mostly focus on small adjustments to our existing products"*. Additionally, P11 mentioned, *"In the core, we are a leasing firm, so we do not innovate radically by suddenly leasing a new type of product, but we do try to become more sustainable in our current operations by making small adjustments on a continuous basis."* The predominant focus on incremental innovation by SMEs can be explained by their scarce resources and limited ability to bear to costs of failed innovation.

Radical innovation

Nevertheless, radical innovation is not absent in SMEs. P10 illustrated, *"We can be quite radical. We are the first in the region to make certain sustainability efforts*." Despite these ambitions, such innovation requires a favourable organizational culture and management support, which can be difficult to obtain due to internal resistance and rigid thinking. P2 said, *" I keep encountering resistance because I'm trying to implement several transitions within the organization, new materials, different systems, and often that also goes hand in hand with changes in the way we work. Sometimes it even involves additional expenses or extra costs. That creates a certain organizational tension, and employees in our company are not very willing to change".* As only two participants mentioned radical innovation to be present in their company, and even those two companies highlighted incremental innovation to play a predominant role, this research does not have sufficient data to compare the differences in managerial support between incremental and radical innovation.

Drivers of Intrapreneurship in SMEs

Experimentation support and tolerance for failure

The first driver of intrapreneurship is experimentation support and the tolerance for potential failure during experimentation. Trial and error was particularly encouraged in technical departments such as the R&D department. P5 shared, *"There is room for trial and error in our design lab"*, highlighting an organizational culture where management trust is central. Similarly, P7 mentioned, *"Everybody makes mistakes and that is not an issue, as long as you try and learn from it."* Also, P4 highlighted, *"It is*

critical to have a safe environment where there is room for failure." This aligns with a broader need for organizations to allow experimentation by employees without the fear of consequences, thereby boosting intrapreneurial motivation. To showcase the support for experimentation, P6 mentioned a whiteboard being hung up in the office so everybody could write down their ideas. Moreover, P11 showed similar characteristics in their office, where inspirational quotes, as well as the mission and vision of the company, were displayed as a constant reminder for the employees.

Open-door policy and communication structure

Short communication lines and the open-door policy are a second driver of intrapreneurship. Employees who have a brilliant idea need to be able to communicate this idea to other colleagues and their manager. An open-door policy can help to achieve this. The low hierarchical structure allows for innovative input from all layers, at any time, from all employees of the organization. As mentioned by P3, *"getting your idea out of your mind immediately is important to capture the true value of creativity and innovative ideas."* It is then the responsibility of the manager to listen to the ideas and to put them on the agenda. The weekly meetings with the team provided a platform for idea sharing and also a way for managers to showcase that they listened to the ideas provided during the week by various employees. More than half of the participants mentioned the weekly meetings as the place for employees to voice their opinions or to bring up their own ideas to the table. The meetings encourage collaboration and participation across all levels. Even though criticism is also mentioned during these meetings, intrapreneurial behaviors were not reported to be affected by this.

Working duration and organizational familiarity

Two participants mentioned working duration to be an enabler of intrapreneurship. P7 noted, *"The employees who work here for a longer time have better knowledge of the organizational culture and therefore feel more confident to bring up their own* input." However, the results are contradictory. P4 mentioned, *"those who work at the company for a short period of time are less constrained by the rigid structures"* and therefore more likely to showcase intrapreneurial behavior.

Intrinsic motivation and rewards

Personal characteristics are an indicator of intrapreneurial behavior. When people are intrinsically motivated to change the world for the better and have a sustainability mindset, they will be more inclined to be proactive in their thinking and have a long-term vision, as also reported by P2, who sees themselves as an intrapreneur. The job title is an indicator of intrapreneurship, as employees fulfilling those business functions that require creative thinking, proactiveness, and long-term vision will be more inclined to engage with intrapreneurial activities naturally and organically. In accordance, intrinsic motivation is essential for employees to invest time and effort into creating and developing innovative

ideas. P8 reported, *"Employees feel ownership of their ideas."* Ownership of ideas is a form of intrinsic motivation. Besides intrinsic motivation, rewards are also an important driver of intrapreneurship. Even when an employee is intrinsically motivated, valuation and rewards for the efforts put into the ideas help to keep the motivation up. Moreover, celebrating success not only regards the individual employee but also sends out a message to the rest of the organization and showcases that proactiveness is valued within the company.

External networks

Lastly, the external network in which the SME is embedded influences internal innovation. As reported by P2, *"Intrapreneurship is about getting external knowledge into the inside*." Therefore, the external context can drive intrapreneurship. When there is knowledge spillover from the external network inside the organization, internal innovation is easier to achieve. P5 and P12 reported similar experiences to P2 by saying that organizations that tend to be more open and exposed to innovation in the external network are more likely to use this knowledge for internal improvements. On the other hand, P6 reported to operate in such a small niche market that it is difficult for them to collaborate with others and to obtain external knowledge.

Barriers to Intrapreneurship in SMEs

Rules and procedures

P2 explicitly emphasized, *"rules and procedures restrict the options available*". Two other participants implicitly said the same. In more conservative, highly-regulated industries, innovation tends to be more difficult due to rigid internal structures, while intrapreneurship requires flexibility. Even when an idea is beneficial from all viewpoints, the rules in place can prohibit its implementation. Consequently, employees can feel discouraged from coming up with innovative ideas. Moreover, daily tasks take up all the time available to the employees. Therefore, they are caught up in routinized thinking. P4 mentioned, *"Employees are used to doing their tasks in routinized ways. So if you want to disrupt that cycle, you need to facilitate that from the top down."*

Financial and human capital constraints

SMEs, being smaller in size, have fewer resources available. This leads to limited financial and human capital. P5 shared, *"There is a restricted budget, and therefore we need to prioritize which ideas to implement and which ones have to wait."* The waiting could take up to years, which can potentially reduce the motivation of employees as they will not see any short-term results of their efforts. On the human capital side, limited staff availability means that employees are often *"absorbed in daily tasks,"* as mentioned by P7, which limits the time to think about innovative ideas. Moreover, human capital

constraints are also apparent when hiring new employees. P9 mentioned, "*Given the tight labour market, we have limited options when it comes to hiring.*" This means that even though managers are aware of the beneficial personal characteristics that drive intrapreneurship, they are not always able to select these employees due to scarcity in the labour market.

Unaware of potential

Another barrier, mentioned by four of the participants, is the perceived unimportance of the employee's worth. Even though the managers reported to value the inputs of their employees, they also recognized that employees still tend to feel unheard or incapable of initiating change. P4 noted, *"A supportive leadership approach and the right organizational culture are needed to stimulate bottom-up intrapreneurship. Employees are often not aware of their own potential, so top-down, we need to change the conditions to showcase our appreciation for their initiatives. Nevertheless, achieving these desirable conditions for everybody in the organization is difficult to obtain."*

Resistance to change

Resistance to change is another barrier, particularly in more established teams and conservative industries and companies. P2 explained, *"especially for radical innovation, employees are unwilling to change because of personal reasons."* P4 expanded on this, *"Employees with a longer working duration are more rigid and have more difficulty changing because they are stuck in the 'we have always done it this way' type of thinking."* These quotes highlight that structural change can be difficult when not everybody is on board.

DISCUSSION

This study aimed to explore how managers in small to medium-sized enterprises can empower employees to embrace intrapreneurship as a means to engage in sustainable innovation. The findings indicate that managers play a crucial role in fostering intrapreneurship within their organizations by stimulating the drivers and mitigating the barriers to encourage intrapreneurial behavior among their employees. Notably, four managerial techniques have been identified, based on the empirical findings, that can be used to stimulate intrapreneurial behaviour. The main findings are mapped in an updated theoretical framework. The updated theoretical framework is presented below in Figure 2.

Figure 2: Updated theoretical framework based on the empirical findings
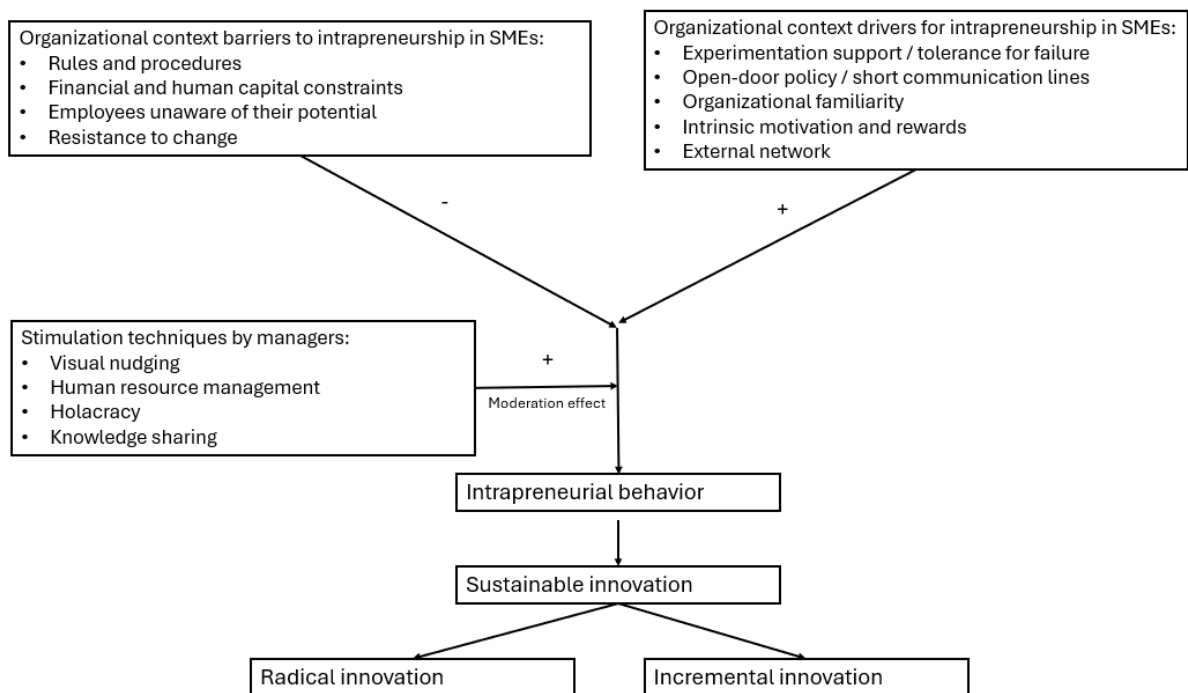
Visual Nudging

The first stimulation technique is visual nudging. Visual nudging is a concept rooted in behavioural economics. It involves subtle modifications to the physical or digital environment to influence behavior without restricting choice (Seo, 2020). It is a technique used in marketing, but it can also be applied to an organizational setting. Visual nudges can serve as a powerful tool to encourage employees to contribute to ideas and to engage in innovative behaviors. The findings indicate that using visual cues, such as whiteboards, to display ideas, inspirational quotes, or the mission and vision of the company could be used within the office to increase visibility of organizational values and thereby trigger creative thinking and showcase the openness to innovation.

Visual prompts highlight social norms (Ye et al., 2021). Visual nudges can therefore create psychological safety (Fleischmann et al., 2023) by signalling openness to new ideas without punishments for potential failure, stimulating intrapreneurship. Studies have shown that environments where psychological safety is high, more creativity and innovation sparks (Hu et al., 2017). Visual cues can affirm an employee's creative identity, which boosts their willingness and increases the likelihood of proposing new, creative, and innovative ideas (Agogué &Parguel, 2020). Therefore, the psychologically safe space will make employees more likely to share their thoughts and ideas and increase the likelihood of sustainable innovation.

All in all, visual nudging is an effective tool that can be used by managers to highlight their support for experimentation, increase perceptions of ownership, and lowering employees' perceptions of being invaluable. This technique is especially valuable for SMEs as they are smaller in organizational size and therefore also tend to be geographically less dispersed. Managers will be able to exert influence, through visual cues, throughout all the organizational spaces. Whiteboards to showcase your ideas and inspirational quotes were reported as two beneficial ways to implement visual nudging.

Strategic Human Resource Management (HRM)

The second stimulation strategy is based on talent acquisition. Previous studies, as well as the empirical findings of this study, have highlighted personal characteristics as a driver of intrapreneurship (Ambad & Ali, 2024). Although managers cannot influence personal characteristics, they do have the ability to be selective about personality traits when hiring new staff. By hiring those individuals who possess traits such as proactiveness, long-term vision, and risk-taking (Neessen et al., 2018), managers can influence the likelihood of intrapreneurship emerging organically. Managers need to take into consideration what the organizational culture in their company is. The results have indicated that in those organizational cultures that are more conservative and traditional, employees with a shorter

working duration are more likely to showcase intrapreneurial behavior due to being less restricted by the organizational culture, as they are not fully embedded yet (Al-Khatib et al., 2021). On the other hand, in those cultures where innovation is part of their DNA, employees who have a longer working duration showcase more intrapreneurial behaviors due to better knowledge of the organizational culture and knowing that their contribution is being valued. Therefore, working duration can have different effects based on the organizational culture. Managers should consider this to determine the frequency of hiring new employees.

That being said, the results of this study also revealed that there is no need for every employee to be an intrapreneur. Rather, the results have indicated that managers prefer to have a couple of intrapreneurs, and the rest of the employees should follow their initiatives. When everybody were an intrapreneur, there would be complete chaos. To illustrate, P2 stated that only 25% of the group needs to actively follow the change, and the latter 75% will follow automatically. Therefore, the extent to which the focus during recruitment is on intrapreneurial behaviors depends on the current employees working for the organization. When there are already numerous employees with intrapreneurial behaviors working for the organization, there is no need for extensive focus on the possession of intrapreneurial behaviors, whereas in an organization where intrapreneurial characteristics among employees are largely absent, a focus on intrapreneurial behaviors during recruitment is required. For all employees recruited, it is important to select on traits such as openness to change and adaptability. These traits are necessary in environments where the context is dynamic and constantly changing, as is the case for sustainable innovation and markets (Harsch & Festing, 2020).

Besides focusing on personal characteristics during recruitment, managers should focus on allocating rewards. Reward allocation shapes and motivates employees' behavior patterns by recognizing and rewarding particular behaviors, such as creativity, risk-taking, and proactive behavior (Sanders et al., 2018). Managers can therefore use rewards to encourage employees to act as intrapreneurs. When employees know that their innovative efforts will be acknowledged and rewarded, they are more likely to invest time and energy into developing new ideas.

Holacracy

A third stimulation technique is holacracy. The core principle of holacracy is the redistribution of authority from a centralized hierarchy to self-organizing teams (Robertson, 2007). Holacracy is, therefore, a decentralized management system. By redefining traditional hierarchies and emphasizing autonomy, structured communication, and collaborative decision-making, holacracy creates an environment of innovation and employee ownership. Each team operates autonomously with members taking on roles that align with their skills and the organization's needs. Autonomy is instrumental in

encouraging intrapreneurial behavior as the employees will feel directly responsible for their contributions and outcomes (Linder, 2019). This is in line with the findings of this research, which highlight low hierarchical structure and an open communication culture as drivers of intrapreneurship. Moreover, the literature review highlighted supportive leadership as one of the enablers of intrapreneurship (Ambad & Ali, 2024). Managers who adopt holacracy as a management system will be able to showcase supportive leadership through the autonomy and employee ownership characteristics of holacracy. Collective decision-making will make employees feel heard and valued, making them more likely to voice their opinions and ideas.

Previous research has not only pointed out that empowerment, created by holacratic structures, leads to increased engagement, but it also leads to increased job satisfaction. The study by Weirauch et al. (2023) found that employees in holacratic organizations reported higher levels of employee well-being compared to those organizations with hierarchical structures. The absence of rigid hierarchies allows for more meaningful participation, where employees' ideas and efforts are recognized and valued, further motivating them to innovate and take initiative.

Another advantage of holacracy is the elimination of traditional departmental boundaries, promoting cross-functional collaboration (Robertson, 2007). Holacratic structures bring employees from different departments together in one team, creating a diverse perspective and enhancing creativity and innovation. This approach directly addresses one of the barriers found in this study, which is the island culture, where siloed departments hinder knowledge exchange and innovation. The holacratic framework introduces structured meetings to facilitate communication and decision-making (Robertson, 2007). Regular meetings provide clarity about when and how employees can propose new ideas.

Although holacracy offers an appealing structure, it should be taken with caution by managers as implementation can be very demanding and, in some cases, unfeasible for SMEs. Successful adoption demands a high degree of organizational maturity, strong managerial commitment, and employee training (Bernstein et al., 2016). For SMEs, being limited in financial resources, effective implementation of holacracy may be hindered. This is a barrier that cannot be overcome by managers. Moreover, the self-organizing structure requires a high tolerance for ambiguity and change, which can be difficult to achieve in those industries that are very conservative and where resistance to change challenges are already present (Bernstein et al., 2016).

Knowledge Sharing: Internal and External

Intrapreneurship thrives in environments where knowledge flows freely, both within the organizational boundaries and across external networks. Knowledge-sharing practices are essential for fostering sustainable innovation, enhancing employee engagement, and maintaining a competitive advantage. Internally, an organization can promote intrapreneurship by establishing structures that facilitate knowledge exchange and sharing among employees.

Apart from internal knowledge sharing, getting external knowledge inside the organization is important to foster sustainable innovation. Intrapreneurs play a critical role in bridging external knowledge, identifying emerging trends, and connecting internal employees with external stakeholders (Wunderer, 2001). By engaging with external ecosystems, organizations can access new ideas, technologies, and markets. The ecosystems consist of various actors such as government agencies, academic institutions, customers, and suppliers. Altogether, they provide a fertile ground for knowledge exchange and innovation (Hult et al., 2025). External collaboration can lead to knowledge spillovers that can inspire new ideas and approaches within the organization (Polidoro et al., 2022), fuelling intrapreneurial behavior. By participating in external ecosystems, organizations expose themselves to capitalize on these opportunities.

To capture these opportunities effectively, managers should invest in training programs that build employees' boundary-spanning capabilities (Haas, 2017), establish partnerships with external stakeholders and ecosystems, and create a platform for (internal) knowledge sharing. By doing so, managers reduce the barrier of island culture as internal knowledge sharing eliminates the siloed approach. Moreover, external networks were pointed out as one of the drivers of intrapreneurship due to knowledge spillovers.

The proposed stimulation techniques are summarized in Table 2 below.

Table 2: Summary of the stimulation techniques

Stimulation technique	Drivers stimulated	Barriers overcome	The role of managers in SMEs
Visual nudging	• Experimentation support • Short communication lines • Ownership (intrinsic motivation)	• Unaware of potential	Visually display motivating quotes to showcase support; provide space to voice opinions in a public space
Human resource management	• Personal characteristics (intrinsic motivation) • Organizational familiarity • Rewards	• Resistance to change • Rules and procedures (routine thinking)	Focus on personal characteristics during recruitment; recognize and reward innovative behavior
Holacracy	• Ownership (intrinsic motivation) • Short communication lines • Internal network (cross-departmental collaboration)	• Resistance to change	Act as a coach rather than a traditional supervisor; facilitate self-management to foster autonomy and cross-departmental collaboration
Knowledge sharing	• External network	• Island culture	Encourage open communication; create platforms and incentives for knowledge sharing, both internal and external

Nevertheless, managers are not able to overcome all barriers identified in this study. Human capital scarcity cannot be overcome by managers. The best they can do is hire the right employees, but this is within the given constraints. Similarly, financial constraints remain apparent in SMEs. Their smaller budgets require them to prioritize which initiatives by employees are, given the time and money, available to develop the innovation, and which ones will have to wait a bit longer. Lastly, rules and procedures cannot always be changed by a single SME alone. Often, the rules are industry-wide or on a national level.

Besides, the stimulation techniques are not standalone techniques. Combining two or more techniques can create synergies, creating a more fruitful organizational context for intrapreneurship to flourish. Managers need to identify those techniques relevant and feasible to their specific organization.

CONCLUSION

This study examined how managers in small and medium-sized enterprises (SMEs) can stimulate intrapreneurial behavior. Drawing on the qualitative data gathered from managers in sustainable SMEs in Friesland, four stimulation techniques were identified: visual nudging, strategic human resource management (HRM), holacracy, and knowledge sharing. These techniques promote the drivers of intrapreneurship and eliminate the barriers to intrapreneurship to the greatest extent possible. Nevertheless, certain barriers cannot be overcome by SMEs and are part of their contextual environment.

Theoretical Implications

This study responds to several research gaps in the existing literature on intrapreneurship, particularly in the context of SMEs. As established by Huang et al. (2021), intrapreneurship offers significant benefits, with a proven eighty percent success rate compared to the twenty percent success rate of entrepreneurship. However, despite the promising outcomes, several gaps in the research literature remain, which this study seeks to address. Firstly, the current literature on intrapreneurship focuses predominantly on large corporations, neglecting SMEs, which face unique challenges and opportunities. This study responds to this gap by focusing on SMEs and examining how managers stimulate intrapreneurial behavior within this specific context. The findings contribute to a broader understanding of how smaller organizations can create an environment that supports innovation despite different circumstances. Secondly, the literature on this topic is predominantly based on quantitative methods. To get a richer understanding of the contextual factors influencing intrapreneurial behavior and to uncover managers' perceptions regarding intrapreneurship and intrapreneurial behavior, this study focused on qualitative measures. By focusing on the bridge between individual and organizational elements of intrapreneurship, this study aimed to offer a more comprehensive understanding of the challenges and opportunities that managers face when attempting to stimulate intrapreneurship within SMEs. Lastly, this research adds to existing literature by extending the theoretical framework of Neessen and colleagues (2018). Whereas their study focuses on the dimensions, antecedents, and determinants of intrapreneurship, this study dives deeper into different stimulation techniques that can be utilized by managers to stimulate sustainable innovation through intrapreneurship. As a result, this research adds to the previous literature by proposing four stimulation techniques.

Practical Implications

From a practical standpoint, this study provides actionable insights for managers in SMEs aiming to foster intrapreneurial activity. Firstly, visual nudging can shift the cognitive focus of employees towards innovation-related behaviors (Ye, et al., 2021). Likewise, strategic HRM practices, including targeted reward allocation, can create an environment that incentivizes proactivity, risk-taking, and innovation (Sanders et al., 2018). Nevertheless, this approach requires realistic adaptation to the SME context where financial capital as well as human capital is often scarce. In practice, prioritizing initiatives is needed to ensure the financial sustainability of the organization. Moreover, constraints on the labour market may limit the feasibility of ambitious HRM strategies. It is essential to acknowledge that SMEs face inherent limitations regarding financial and human capital. Another aspect that should be taken into consideration is the organizational culture and its effect on proactiveness based on working duration. Specifically, this study suggests that shorter working durations may facilitate intrapreneurship in conservative cultures by limiting conformity and routinization (Al-Khatib et al., 2021), while longer tenure can be advantageous in innovative, flexible cultures where employees possess tacit knowledge and internal networks that support entrepreneurial action. These nuanced findings suggest that one-size-fits-all approaches are unlikely to yield optimal results, reinforcing the need for contextual sensitivity in managerial strategy. Additionally, holacracy, a decentralized organizational model, could enhance intrapreneurial behavior by distributing responsibility and decision-making power across the organization (Robertson, 2007). However, this does require a certain level of organizational maturity to successfully implement the cultural shift. SMEs where conservative cultures and resistance to change are very apparent might therefore not be suitable for this technique (Bernstein et al., 2016). The finding highlights once again the need for managers to remain critical and aware of their contextual factors. Lastly, knowledge sharing is critical to encourage collaborative innovation through cross-pollination. By facilitating a free flow of information across departments and networks, managers can ensure that employees have access to diverse perspectives and expertise needed to spark creative ideas (Polidoro et al., 2022). This technique can help to break siloed departments.

Limitations and Future Research

Several limitations must be acknowledged. Firstly, the study relied almost exclusively on the managerial perceptions, without triangulating with employees' views. This introduces potential bias since managers may overestimate the effectiveness of their own stimulation techniques, or they may misinterpret employee behavior. Future research should incorporate the employee perspective to provide a more holistic understanding of intrapreneurial dynamics (Lauri, 2011).

Secondly, the study lacks a quantitative measure of intrapreneurial behavior, limiting the ability to assess causality or generalizations of the findings (Van Der Laan & Petersen, n.d.). Future research should look into quantitative intrapreneurial behavior changes before and after the implementation of the stimulation techniques to test the effectiveness of the strategies in practice. A case study would be a suitable and complementary approach.

Lastly, this study categorized SMEs are organizations smaller than 250 employees, overlooking intra-group heterogeneity. A firm with 15 employees operating in a niche market faces fundamentally different managerial, structural, and resource conditions than a mainstream organization with 250 employees. Similarly, this study does not provide industry comparison, but the results suggest that variability between industries may exist. This variability may undermine the specificity of the findings. Therefore, future research should compare intra-group homogeneity and industry sectors in terms of the degree of cultural conservatism or innovation openness. Further exploration should define if and to what extent contextual factors shape the efficacy of the stimulation techniques.

Reflection on the Transdisciplinary Dimension

Collaborating with managers from sustainable SMEs highlighted key differences between academic and practical perspectives. From an academic standpoint, intrapreneurship and sustainable innovation are often discussed in abstract terms. They are linked to frameworks, theories of organizational behavior, and change management. However, from a manager's perspective, these concepts are deeply embedded in day-to-day operations, team and industry dynamics, and resource constraints. They tend to speak from experience. This required the researcher to balance academic knowledge depth with practical relevance.

Related to this, a key challenge emerged around what constitutes useful knowledge. While this study sought to develop conceptual clarity by discovering patterns and drawing connections, many managers were more interested in concrete strategies, tools, and advice directly applicable to the organization. As a result, the researcher needed to rethink how the findings could be communicated in a way that speaks to both audiences. This involved translating themes and concepts into accessible, action-oriented language while preserving analytical depth.

Importantly, engaging with managers revealed how intrapreneurial initiatives often emerge not only through formal programs or policies, but also through informal cultures of trust and shared purpose. This insight challenged the researcher to think beyond predefined academic categories and to have a close look at the subtle, relational dimensions of empowerment within organizations.

REFERENCES

Acemoglu, D., Akcigit, U., & Celik, M. A. (2022). Radical and incremental innovation: the roles of firms, managers, and innovators. *American Economic Journal Macroeconomics*, *14*(3), 199–249. https://doi.org/10.1257/mac.20170410

Adomako, S., Gyensare, M. A., Amankwah-Amoah, J., Akhtar, P., & Hussain, N. (2023). Tackling grand societal challenges: Understanding when and how reverse engineering fosters frugal product innovation in an emerging market. *Journal of Product Innovation Management,* 41(2), pp. 211–235. https://doi.org/10.1111/jpim.12678

Agogué, M., & Parguel, B. (2020). Nudging individuals' creativity using social labeling. *PLoS ONE*, *15*(2), e0228961. https://doi.org/10.1371/journal.pone.0228961

Ambad, S. N. A. and Ali, M. M. (2024). A systematic literature review on strategies for enhancing international smes' performance in malaysia and future research agenda. Advances in Business Strategy and Competitive Advantage, 49-76. https://doi.org/10.4018/979-8-3693-3518-5.ch003

Ambad, S. N. A., & Ali, M. M. (2024). Drivers for intrapreneurship. In *Routledge eBooks* (pp. 14–29). https://doi.org/10.4324/9781003348825-2

Al-Khatib, A. W., Al-Fawaeer, M. A., Alajlouni, M. I., & Rifai, F. A. (2021). Conservative culture, innovative culture, and innovative performance: a multi-group analysis of the moderating role of the job type. International Journal of Innovation Science, 14(3/4), 675–692. https://doi.org/10.1108/ijis-10-2020-0224

Antoncic, J. A., & Antoncic, B. (2011). Employee satisfaction, intrapreneurship and firm growth: a model. *Industrial Management & Data Systems*, 111(4), pp. 589–607. https://doi.org/10.1108/02635571111133560

Antoncic, B. (2020). Entrepreneurship/Intrapreneurship, Personality Correlates of. *The Wiley Encyclopedia of Personality and Individual Differences*, pp. 143–147. https://doi.org/10.1002/9781118970843.ch201

Bearman, M. (n.d.). *Eliciting rich data: A practical approach to writing semi-structured interview schedules*. Informit. https://search.informit.org/doi/abs/10.3316/informit.002757698372666

Bernstein, Ethan, John Bunch, Niko Canner, and Michael Lee. "Beyond the Holacracy Hype: The Overwrought Claims—and Actual Promise—of the Next Generation of Self-Managed Teams." Harvard Business Review 94, nos. 7-8 (July–August 2016): 38–49.

Berrone, P., Fosfuri, A., Gelabert, L., & Gomez-Mejia, L. R. (2012). Necessity as the mother of 'green' inventions: Institutional pressures and environmental innovations. *Strategic Management Journal,* 34(8), pp. 891–909. https://doi.org/10.1002/smj.2041

Blanka, C. (2018). An individual-level perspective on intrapreneurship: a review and ways forward. *Review of Managerial Science*, 13(5), pp. 919–961. https://doi.org/10.1007/s11846-018-0277-0

Brandi, U., & Hasse, C. (2012). Employee-Driven innovation and Practice-Based learning in organizational cultures. In *Palgrave Macmillan UK eBooks* (pp. 127–148). https://doi.org/10.1057/9781137014764_7

Brunåker, S., & Kurvinen, J. (2006). Intrapreneurship, local initiatives in organizational change processes. *Leadership & Organization Development Journal*, 27(2), pp. 118–132. https://doi.org/10.1108/01437730610646624

Chen, X., Xie, H., & Zhou, H. (2024). Incremental versus Radical Innovation and Sustainable Competitive Advantage: A Moderated Mediation Model. *Sustainability*, *16*(11), 4545. https://doi.org/10.3390/su16114545

Chouchane, R., Fernet, C., Austin, S., & Zouaoui, S. K. (2021). Organizational support and intrapreneurial behavior: on the role of employees' intrapreneurial intention and self-efficacy. *Journal of Management & Organization*, 29(2), pp. 366–382. https://doi.org/10.1017/jmo.2021.14

Clarke, V., & Braun, V. (2016). Thematic analysis. The Journal of Positive Psychology, 12(3), pp. 297–298. https://doi.org/10.1080/17439760.2016.1262613

Cillo, V., Petruzzelli, A. M., Ardito, L., & Del Giudice, M. (2019). Understanding sustainable innovation: A systematic literature review. *Corporate Social Responsibility and Environmental Management,* 26(5), pp. 1012–1025. https://doi.org/10.1002/csr.1783

Coccia, M. (2016). Sources of technological innovation: Radical and incremental innovation problem-driven to support competitive advantage of firms. *Technology Analysis and Strategic Management*, *29*(9), 1048–1061. https://doi.org/10.1080/09537325.2016.1268682

Damanpour, F., Walker, R. M., & Avellaneda, C. N. (2009). Combinative effects of innovation types and organizational performance: A Longitudinal study of service organizations. *Journal of Management Studies*, *46*(4), 650–675. https://doi.org/10.1111/j.1467-6486.2008.00814.x

De Jong, J. P., & Wennekers, S. (2008). Intrapreneurship; Conceptualizing entrepreneurial employee behaviour. *ResearchGate*. https://www.researchgate.net/publication/5012628_Intrapreneurship_Conceptualizing _Entrepreneurial_Employee_Behaviour

Duradoni, M., & Di Fabio, A. (2019). Intrapreneurial Self-Capital and Sustainable Innovative Behavior within Organizations. *Sustainability*, *11*(2), 322. https://doi.org/10.3390/su11020322

Engen, M., & Holen, I. E. (2014). Radical versus Incremental Innovation: The importance of key competences in service firms. *Technology Innovation Management Review*, 4(4), 15–25. https://doi.org/10.22215/timreview/781

Ethics Committee Campus Fryslân. (2024, March 12). University of Groningen. https://www.rug.nl/cf/onderzoek-gscf/ethics-committee/ethics-committee-campus fryslan

Farrukh, M., Meng, F., & Raza, A. (2021). Believe they can succeed, and they will: intrapreneurial behavior and leadership. *European Journal of Innovation Management*, 25(3), pp. 661–679. https://doi.org/10.1108/ejim-10-2020-0393

Fehling, J., & Carlson, A. (2020). How intrapreneurs build social capital to overcome barriers for radical innovation. In *Master's Programme in Corporate Entrepreneurship and Innovation* [Master's Thesis]. Lund University. https://lup.lub.lu.se/luur/download?func=downloadFile&recordOId=9014874&fileOId=9014886

Fleischmann, C., Seeber, I., Cardon, P., & Aritz, J. (2023, January 3). *Fostering Psychological Safety in Global Virtual Teams: The role of reminder nudges and Team-based Interventions*. https://scholarspace.manoa.hawaii.edu/items/789a6414-1ada-48be-8cfe-3359364fd62d

Flocco, N., Canterino, F., & Cagliano, R. (2022). To control or not to control: How to organize employee-driven innovation. *Creativity and Innovation Management*, 31(3), pp. 396–409. https://doi.org/10.1111/caim.12500

Fraser, K. D., & Estabrooks, C. (2008). What factors influence case managers' resource allocation decisions? A Systematic review of the literature. *Medical Decision Making*, *28*(3), pp. 394–410. https://doi.org/10.1177/0272989x07312709

Gherghina, Ș. C., Botezatu, M. A., Hosszu, A., & Simionescu, L. N. (2020). Small and Medium-Sized Enterprises (SMEs): The Engine of Economic Growth through Investments and Innovation. *Sustainability*, 12(1), p.347. https://doi.org/10.3390/su12010347

Gawke, J. C., Gorgievski, M. J., & Bakker, A. B. (2017). Personal costs and benefits of employee intrapreneurship: Disentangling the employee intrapreneurship, well-being, and job performance relationship. *Journal of Occupational Health Psychology*, 23(4), pp. 508–519. https://doi.org/10.1037/ocp0000105

Haas, A. (2017). From information to opportunity: the role of boundary spanners in sensing and seizing opportunities. In *Research Handbook on Entrepreneurial Opportunities* (pp. 212-240). Edward Elgar Publishing.

Hansen, K., Amundsen, O., Aasen, T. M. B., & Gressgård, L. J. (2017). Management practices for promoting Employee-Driven Innovation. In *Aligning perspectives on health, safety and well-being* (pp. 321–338). https://doi.org/10.1007/978-3-319-56333-6_19

Harsch, K., & Festing, M. (2020). Dynamic talent management capabilities and organizational agility—A qualitative exploration. *Human Resource Management*, *59*(1), 43-61.

Høyrup, S. (2010). Employee-driven innovation and workplace learning: basic concepts, approaches and themes. *Transfer European Review of Labour and Research*, 16(2), 143–154. https://doi.org/10.1177/1024258910364102

Henrico, A., Kroon, J., Henrico, A., & Kroon, J. (2014). Investigating the role of managers *in enhancing performance culture*. https://repository.nwu.ac.za/handle/10394/11527

Horton, J., Macve, R., & Struyven, G. (2004). Qualitative Research: Experiences in using Semi-Structured Interviews. In Elsevier eBooks (pp. 339–357). https://doi.org/10.1016/b978-008043972-3/50022-0

Hu, J., Erdogan, B., Jiang, K., Bauer, T. N., & Liu, S. (2017). Leader humility and team creativity: The role of team information sharing, psychological safety, and power distance. *Journal of Applied Psychology*, *103*(3), 313–323. https://doi.org/10.1037/apl0000277

Huang, L., Lin, S. Y., & Hsieh, Y. (2021). Cultivation of Intrapreneurship: A Framework and challenges. *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.731990

Hult, G. T. M., Gonzalez-Perez, M. A., & Lagerström, K. (2025, January 22). *How the International Business Ecosystem Drives Business Success*. California Management Review. https://cmr.berkeley.edu/2025/01/how-the-international-business-ecosystem-drives-business-success/

Jafari-Sadeghi, V., Mahdiraji, H. A., Busso, D., & Yahiaoui, D. (2021). Towards agility in international high-tech SMEs: Exploring key drivers and main outcomes of dynamic capabilities. *Technological Forecasting and Social Change*, *174*, 121272. https://doi.org/10.1016/j.techfore.2021.121272

Kaliannan, M., Abraham, M., & Ponnusamy, V. (2016). Effective talent management in Malaysian SMES: A proposed framework. *the Journal of Developing Areas*, *50*(5), 393–401. https://doi.org/10.1353/jda.2016.0071

Krannich, A., & Reiser, D. (2023). United Nations Sustainable Development Goals 2030, the. *In Springer eBooks* (pp. 3862–3867). https://doi.org/10.1007/978-3-031-25984-5_178

Lauri, M. A. (2011, October 17). *Triangulation of data analysis techniques*. https://psr.iscte-iul.pt/index.php/PSR/article/view/449

Linder, S. (2019). Autonomy and Leadership Support as Antecedents to Intrapreneurship: Value of Vignette Experiments for Research on Strategic Responsiveness. In *Strategic Responsiveness and Adaptive Organizations: New Research Frontiers in International Strategic Management* (pp. 41-59). Emerald Publishing Limited.

Lodhi, S. K., Gill, A. Y., & Hussain, H. K. (2024, August 26). Green Innovations: artificial intelligence and sustainable materials in production. https://journal.mediapublikasi.id/index.php/bullet/article/view/4474

Loucks, E. S., Martens, M. L., & Cho, C. H. (2010). Engaging small- and medium-sized businesses in sustainability. *Sustainability Accounting Management and Policy Journal*, 1(2), pp. 178–200. https://doi.org/10.1108/20408021011089239

LukáCs, E. (2005). The economic role of SMEs in world economy, especially in Europe. *Questa Soft*. https://www.ceeol.com/search/article-detail?id=110801

Mansanta, C. (2020, March 13). Intrapreneurship Discovery: Standard Strategy to Boost Innovation inside Companies. https://iris.univpm.it/handle/11566/274454

Mitchell, I. K., & Walinga, J. (2016). The creative imperative: The role of creativity, creative problem solving and insight as key drivers for sustainability. *Journal of Cleaner Production*, *140*, 1872–1884. https://doi.org/10.1016/j.jclepro.2016.09.162

Moss, P., Hartley, N., & Russell, T. (2022). Integration intrapreneurship: implementing innovation in a public healthcare organization. *Journal of Innovation and Entrepreneurship*, 11(1). https://doi.org/10.1186/s13731-022-00248-x

Neessen, P. C. M., Caniëls, M. C. J., Vos, B., & De Jong, J. P. (2018). The intrapreneurial employee: toward an integrated model of intrapreneurship and research agenda. *International Entrepreneurship and Management Journal*, 15(2), pp. 545–571. https://doi.org/10.1007/s11365-018-0552-1

O'Regan, N., & Ghobadian, A. (2004). Testing the homogeneity of SMEs. *European Business Review*, *16*(1), pp.64–77. https://doi.org/10.1108/09555340410512411

Ogbumgbada, O. V., & Nwachukwu, I. (2024). INTRAPRENEURSHIP AUTONOMY AND ORGANIZATIONAL ADAPTABILITY. *gphjournal.org*. https://doi.org/10.5281/zenodo.10803008

Pandey, J., Gupta, M., & Hassan, Y. (2020). Intrapreneurship to engage employees: role of psychological capital. *Management Decision*. https://doi.org/10.1108/md-06-2019-0825

Payambarpour, S. A. (2015). The impact of talent management and employee engagement on organisational performance. *International Journal of Management Practice*. https://www.inderscienceonline.com/doi/abs/10.1504/IJMP.2015.073483

Pellegrini, C., Annunziata, E., Rizzi, F., & Frey, M. (2019). The role of networks and sustainable intrapreneurship as interactive drivers catalyzing the adoption of sustainable innovation. *Corporate Social Responsibility and Environmental Management*, *26*(5), pp. 1026–1048. https://doi.org/10.1002/csr.1784

Polidoro Jr, F., Lampert, C. M., & Kim, M. (2022). External knowledge sourcing, knowledge spillovers, and internal collaboration: The effects of intrafirm linkages on firm-university co-authorship linkages. *Strategic Management Journal*, *43*(13), 2742-2776.

Prieto, L. C., Phipps, S. T., & Kungu, K. (2020). Facilitating a culture of intrapreneurship: an employee involvement approach. *Strategic HR Review*, *19*(2), pp. 93–95. https://doi.org/10.1108/shr-04-2020-181

Rajchamaha, K., Pornparnomchai, M., Vorrakkatham, K., Pichyangkul, C., Otakanon, B., Raungpaka, P., & Saengpradab, A. (2024). Sustainable business model strategy for resilience among pisciculture firms in Thailand. *International Journal of Agricultural Sustainability*, 22(1), 2303894.

Rizos, V., Behrens, A., Van Der Gaast, W., Hofman, E., Ioannou, A., Kafyeke, T., Flamos, A., Rinaldi, R., Papadelis, S., Hirschnitz-Garbers, M., & Topi, C. (2016). Implementation of Circular Economy Business Models by Small and Medium-Sized Enterprises (SMES): Barriers and enablers. *Sustainability*, *8*(11), 1212. https://doi.org/10.3390/su8111212

Rivera, M. J. (2017). Leveraging innovation and intrapreneurship as a source for organizational growth. *International Journal of Innovation Science*, 9(2), pp. 137–152. https://doi.org/10.1108/ijis-12-2016-0057

Robertson, B. (2007). Organization at the leading edge: Introducing holacracy™ Evolving Organization. *Integral leadership review*, *7*(3), 1-13.

Sanders, K., Jorgensen, F., Shipton, H., Van Rossenberg, Y., Cunha, R., Li, X., Rodrigues, R., Wong, S. I., & Dysvik, A. (2018). Performance-based rewards and innovative behaviors. *Human Resource Management*, *57*(6), 1455–1468. https://doi.org/10.1002/hrm.21918

Sarkar, A. (2013). Promoting eco-innovations to leverage sustainable development of eco-industry and green growth. *European Journal of Sustainable Development*, *2*(1). https://doi.org/10.14207/ejsd.2013.v2n1p171

Savela, T. (2017). The advantages and disadvantages of quantitative methods in schoolscape research. *Linguistics and Education*, *44*, pp. 31–44. https://doi.org/10.1016/j.linged.2017.09.004

Schmiedeknecht, M. H. (2019). Social Innovation and Entrepreneurship Supporting the Sustainable Development Goals (SDGs)–Fostering social value creation. In *CSR, sustainability, ethics & governance (pp. 211–225*). https://doi.org/10.1007/978-3-030-21154-7_10

Schiuma, G., & Santarsiero, F. (2024). WHAT: Understanding Open Innovation Labs. In *Open Innovation Labs* (pp. 1-40). Springer, Cham.

Seo, H. (2020). Sensory Nudges: The Influences of Environmental Contexts on Consumers' Sensory Perception, Emotional Responses, and Behaviors toward Foods and Beverages. *Foods*, *9*(4), 509. https://doi.org/10.3390/foods9040509

Sheshadri, S. (2024). The role of self-organisation in overcoming the barriers for the employee-driven innovation in the Swedish multinational company. https://epubl.ktu.edu/object/elaba:197842065/

Sverdrup, H. U. (2019). The global sustainability challenges in the future: the energy use, materials supply, pollution, climate change and inequality nexus. In *Edward Elgar Publishing eBooks*. https://doi.org/10.4337/9781788975209.00013

Swart, R., Raskin, P., & Robinson, J. (2004). The problem of the future: sustainability science and scenario analysis. *Global Environmental Change*, *14*(2), pp. 137–146. https://doi.org/10.1016/j.gloenvcha.2003.10.002

Tavassoli, S., & Karlsson, C. (2015). Persistence of various types of innovation analyzed and explained. *Research Policy*, *44*(10), 1887–1901. https://doi.org/10.1016/j.respol.2015.06.001

Teimouri, H. (2016). Study of the relationship between employee engagement and organisational effectiveness. *International Journal of Business Excellence*. https://www.inderscienceonline.com/doi/abs/10.1504/IJBEX.2016.077617

Van Der Laan, M. J., & Petersen, M. L. (n.d.). *Estimation of direct and indirect causal effects in longitudinal studies*. Collection of Biostatistics Research Archive. https://biostats.bepress.com/ucbbiostat/paper155/

Van der Sijde, P., Veenker, S. & During (2013). INTRAPRENEURSHIP IN SMES: ABOUT THE ROLE OF MANAGEMENT AND R&D. Ejbss. https://www.academia.edu/6298499/INTRAPRENEURSHIP_IN_SMES_ABOUT_THE_ROLE_OF_MANAGEMENT_AND_R_and_D

Venkatesh, V., & Bala, S. a. B. a. H. (2013). Bridging the Qualitative-Quantitative Divide: Guidelines for conducting mixed methods research in information systems. *MIS Quarterly*, *37*(1), 21–54. https://www.jstor.org/stable/43825936

Waddock, S. A., Bodwell, C., & Graves, S. B. (2002). Responsibility: The new business imperative. *Academy of Management Perspectives*, 16(2), pp. 132–148. https://doi.org/10.5465/ame.2002.7173581

Weirauch, L., Galliker, S., & Elfering, A. (2023). Holacracy, a modern form of organizational governance predictors for person-organization-fit and job satisfaction. *Frontiers in Psychology*, *13*. https://doi.org/10.3389/fpsyg.2022.1021545

Winwood, J. (2019). Using interviews. In Routledge eBooks (pp. 12–22). https://doi.org/10.4324/9781351188395-2

Wunderer, R. (2001). Employees as "co-intrapreneurs"–a transformation concept. *Leadership & Organization Development Journal*, *22*(5), 193-211.

Ye, N., Xiao, Z., Zhang, M., Atherley, J., & Hou, L. (2021). Could visual cues moderate the normative influence in promoting energy conservation? a perspective from the

construal level. Resources, Conservation and Recycling, 174, 105808. https://doi.org/10.1016/j.resconrec.2021.105808

Yukl, G. (2008). How leaders influence organizational effectiveness. *The Leadership Quarterly*, *19*(6), pp. 708–722. https://doi.org/10.1016/j.leaqua.2008.09.008

Yun, J. J., Zhao, X., Jung, K., & Yigitcanlar, T. (2020). The culture for open innovation dynamics. *Sustainability*, 12(12), 5076. https://doi.org/10.3390/su12125076

APPENDICES

Appendix A – Interview guide

Introduction

Thank you for participating in this interview. The purpose of this research is to explore how sustainable initiatives and solutions can be promoted within organizations. It is of particular interest to understand the strategies, practices and mindsets that help to foster an environment where employees feel encouraged and equipped to take initiative, to innovate, and to contribute to sustainability efforts within the organization. This ties into the concept of *intrapreneurship*. Your insights and experiences are invaluable in gaining a deeper understanding of this process.

The interview will take approximately between 30 and 45 minutes. I will ask you a series of open-ended questions. Please feel free to share your thoughts. There are no right or wrong answers. If you wish to not answer a question, that is fine. I would like to remind you that all information shared will remain confidential and all the data will be anonymized.

You should have received an information letter and an informed consent form. Are there any questions regarding these documents? If not, may I proceed with audio recording this interview for transcription purposes?

Section 1: Demographics

Before diving into the topic-specific questions, I would like to gather background information to provide context for your responses.

1. I would like to start by asking about your age and the gender you identify with?
    a. Note: for the results, an age range will be reported to have better anonymity
2. How large is the organization you work for?
    a. How many employees are working at the company?
    b. What types of employees work there? Freelance, parttime, fulltime, etc.
    c. In which industry does the organization operate?
3. What is your current role within the organization?
    a. How long have you been working for this company?
        i. Has this always been in the same role?

   b. What types of tasks and responsibilities belong to this role/job description?

   c. What do you enjoy most about this role?

     i. And are there also things that you dislike?

  4. How would you describe the culture of your organization?

   a. What are the key values and goals of the company that you believe are the most important?

     i. Do your personal values align with the company values?

     ii. Do these goals align with the company's actions?

Section 2: Sustainability and Innovation

Thank you for sharing contextual information. The second part of this interview will consist of more topic-specific questions to better understand what role sustainability plays in your organization and how it is promoted internally. I would like to remind you that you are free to skip a question or opt out of the interview without consequences or having to give a reason.

  5. To dive deeper into sustainability; I would like to ask what role innovation plays in the company's strategy and business processes?

   a. Are there specific programs or tools in place to foster innovation?

   b. Is innovation driven by a separate department or is it diffused throughout the whole organization?

   c. Are innovation and sustainability seen as interlinked in your organization or as separate units?

Section 3: Intrapreneurship

In the introduction, I already briefly mentioned the concept of intrapreneurship. You might be familiar with the concept, but to make sure we are on the same page I would like to share my understanding of this term. For this research, intrapreneurship is defined as entrepreneurial behavior *within* an established organization. Employees are encouraged to take the initiative to identify new opportunities, develop innovative ideas, and implement creative solutions. Intrapreneurship is defined by characteristics such as autonomy, proactiveness, and risk-taking. In other words, intrapreneurship refers to employee-driven innovation (bottom-up).

  6. Based on this definition, to what extent is intrapreneurship present in your company?

a. If not present, does it sound promising? Have there been attempts to implement it? If so, why was unsuccessful?

b. If yes, what types of initiatives or projects in your company do you consider as an example of intrapreneurship? Could you share a recent example?

7. On a day-to-day basis, what would intrapreneurship look like for your organization?

   a. Are there certain behaviors or practices in place that you link to intrapreneurship?

   b. Would you (as a manager) feel the responsibility to foster intrapreneurship daily?

Section 4: Empowering employees

Intrapreneurship is also about empowering employees to take initiative and positively enhance their engagement and, consequently, organizational performance.

8. In your experience, what factors or practices help employees to feel empowered to take initiative? This does not necessarily have to relate to sustainable initiatives, it can be initiatives of any kind.

   a. Are there specific behaviors or characteristics of employees who are more inclined to engage in initiative-taking? What are these behaviors or characteristics?

   b. How does the size of the organization influence initiative-taking? Do you think that larger organizations have different empowerment dynamics?

9. What are the most common barriers employees face when attempting to take ownership or propose new ideas?

   a. How do you as a manager address these challenges?

10. Are there processes or practices in place that create organizational support for employees to develop the skills needed to take initiative (intrapreneurial behavior)?

    a. Are these specifically related to sustainability?

Section 5: Leadership practices

Managers are seen as important players in facilitating intrapreneurship. The following questions will ask about your role as a manager in promoting intrapreneurship. Please share your personal experience.

11. How do you, as a manager, encourage the intrapreneurial mindset within your team? i.e. How do you foster initiative-taking and allow for failure?

    a. What strategies or behaviors do you employ to foster initiative-taking and allow for experimentation (+ failure)?

    b. Are there specific employees that require more encouragement or stimulation?

    c. Are there specific behaviors that require more encouragement or stimulation?

12. How do you balance giving employees the freedom to innovate while also ensuring that their projects align with the company's goals?

    a. Are there rules and guidelines for this?

13. If an initiative does not go as planned, how do you stimulate learning from failure?

14. Are you able to manage and allocate organizational resources?

    a. If so, do you allocate resources and time towards intrapreneurial activities?

    b. If not, who is in charge of this?

Section 6: Organizational support

Besides managerial support (leadership practices), organizational support is also important.

15. Does your company provide programs or other resources to support intrapreneurial projects?

    a. What do these programs or resources look like?

    b. If such programs are not in place, what would you propose as beneficial to support intrapreneurship?

16. How is cross-functional collaboration or idea-sharing among employees stimulated?

    a. How closely do the different departments work together?

    b. Are there regular meetings to share ideas? Or are there other metrics in place?

17. Overall, what influence does the organizational culture have on facilitating intrapreneurship in your opinion?

    a. What is positive about it?

    b. And what could be improved?

Closing remarks

Thank you for sharing your insights. They are really helpful for this study. Is there anything else you would like to add that we have not discussed yet? Do you have any final thoughts or suggestions? If not, I would like to thank you for your time and input. Enjoy the rest of your day.

Appendix B – Information letter

INFORMATION SHEET - <u>Topic: Fostering sustainable intrapreneurship</u>

<u>Topic: Fostering sustainable intrapreneurship</u>

Dear (insert name)

Thank you for your interest in participating in this research. This letter explains what the research entails and how the research will be conducted. Please take time to read the following information carefully. If any information is not clear, please send an email to the main researcher by using the contact details provided at the end of this letter.

WHAT THIS STUDY IS ABOUT?

This study focuses on understanding how employees can be encouraged to adopt more sustainable mindsets and behaviors. The aim is to foster sustainable intrapreneurship within small to medium-sized organizations. The study is conducted as part of a master's thesis project at Campus Fryslân, Rijksuniversiteit Groningen, and is not sponsored or funded by external parties.

You have been invited to participate in this research because of you role in the organization. Your perspective will provide valuable information for studying the topic of intrapreneurship.

WHAT DOES PARTICIPATION INVOLVE?

Participation involves a face-to-face interview taking between 30 to 45 minutes. The interview will include open-ended questions about sustainability-related practices and employee behaviors within your organization.

DO YOU HAVE TO PARTICIPATE?

Participation is voluntary, and you can withdraw at any time without providing a reason. You can also choose not to answer specific questions without facing any consequences.

ARE THERE ANY RISKS IN PARTICIPATING?

There are no foreseeable risks associated with participating in this study. However, if you feel uncomfortable answering any question, you may skip it without explanation.

ARE THERE ANY BENEFITS IN PARTICIPATING?

There are no direct benefits for participants. However, your participation will contribute to a better understanding of the topic, which may support future sustainability efforts in organizations.

HOW WILL INFORMATION YOU PROVIDE BE RECORDED, STORED AND PROTECTED?

The interviews will be recorded with your consent. The data will be anonymized, ensuring no personal or identifying information is included in the research output.

Only the researcher and supervisor will have access to the data. Data will be securely stored on the drive of the University of Groningen server, for a period of 5 years. After this period, the data will be deleted permanently.

WHAT WILL HAPPEN TO THE RESULTS OF THE STUDY?

The results of the interview will be included in the researcher's master's thesis and may be used for publication in academic journals. Upon request, you can receive a summary of the research findings.

ETHICAL APPROVAL

This research has received ethical approval from the Campus Fryslân Ethics Committee. The researchers will adhere to the university's ethical guidelines and standards throughout the study.

INFORMED CONSENT FORM

If you agree to participate, you will be asked to sign the informed consent form, which confirms your intention to participate. After signing, you can still withdraw at any time

WHO SHOULD YOU CONTACT FOR FURTHER INFORMATION?

To ask questions you can contact the researcher: Sanne Bijma (s.bijma.2@student.rug.nl)

Thank you for considering participating in this research.

Appendix C – Informed consent form

INFORMED CONSENT FORM

Title study: Fostering sustainable intrapreneurship

Name participant:

Assessment

- I have read the information sheet and was able to ask any additional questions to the researcher.
- I understand I may ask questions about the study at any time.
- I understand I have the right to withdraw from the study at any time without giving a reason.
- I understand that I can refuse to answer any question without any consequences.
- I understand that I will not benefit directly from participating in this research.

Confidentiality and Data Use

- I understand that none of my individual information will be disclosed to anyone outside the study team and my name will not be published.
- I understand that the information provided will be used only for this research and publications directly related to this research project.
- I understand that data (consent forms, recordings, interview transcripts) will be retained on the Drive of the University of Groningen server for a maximum of 5 years.

Future involvement (this is optional: yes / no)

- I wish to receive a copy of the scientific output of the project.
- I consent to be re-contacted to participate in future studies.

Having read and understood all the above, I agree to participate in the research study: yes / no

Date

Signature

To be filled in by the researcher

- I declare that I have thoroughly informed the research participant about the research study and answered any remaining questions to the best of my knowledge.
- I agree that this person participates in the research study.

Date

Signature

Appendix D – Codebook

Table 3: Codeboook

Theme	Code	Explanation	Quote example
Organizational culture and structure	Hierarchy*	The number of layers between the highest staff and lowest staff.	"We are a very flat organization" P9
	Cultural openness	A culture where trust, transparency, freedom, and experimentation are valued. It creates a safe space.	"It is important that there is space to be able to make mistakes. There should be freedom and room to do so." P4
	Island culture	Siloed departments operating independently from one another, limiting collaboration.	"When looking on the spectrum of no island to island, we are more on the island side which can hinder our communication" P4
	Open door culture	A culture where the door is metaphorically speaking always open meaning that no matter your job title you can always enter the directors office to ask your questions or to give your opinion.	"Employees can always walk into my office. We call that an open door culture. It doesn't matter what your position in the organization is, all employees can come and talk to me." P7
Innovation dominance	Innovation DNA	Innovation is central to the company's identity and core business operations.	"Innovation is in our DNA and greatly supported by the management." P1
	Incremental innovation*	Small, continuous improvements in existing products or services.	"We mostly focus on small adjustments." P3

Intrapreneurship drivers	Radical innovation*	New products or services being introduced in the company's portfolio.	"We can be quite radical. We are the first in the region to make certain sustainability efforts." P10
	Experimentation support*	Room for trail and error with potential failure without consequences. It is a form of management support by trusting employee that they will be able to make the right choices themselves.	"There is room for trial and error in our design lab." P5
	Open door policy	As an employee, you are always able to speak to any supervisor in the hierarchy, as the door is metaphorically speaking always open.	"We try to adopt an open door policy as much as possible, but we see that in reality peple tend not to walk into someone else's office" P4
	Working duration	The number of years an employee works for the company.	"The employees that work here for a longer time have better knowledge of our organizational culture and therefore feel more confident to bring up their own input." P7
	Communication structure	The length of the communication lines between and within different departments.	"We have very short lines of communication since there is no real management layer in between." P6
	Ownership perception	The degree to which an employee feels themselves as the owner of their own idea.	"Employees feel ownership of their own ideas" P8

	Frequency of group meetings	The consistency and number of meetings being held with the group.	"We have meetings on a weekly basis on all levels of the organization. We then sit together with all employees as a team." P12
	Personal characteristics*	The individual characteristics that influences their behavior.	"Personal characteristics determine the likelihood of intrapreneurial behaviors" P12
	Business function	The job title, with corresponding tasks and responsibilities, within the company being fulfilled by an employee.	"It is part of my function to take initiative" P2
	Rewards*	Success being celebrated and rewarded, either in financial or non-financial form.	"It is important to have a culture where intrapreneurship is rewarded." P2
Intrapreneurship barriers	Rules and procedures	The restrictions, in the form of rules and procedures, being put on the ideas by the company or industry. The more rules and procedures, the more rigid the structure.	"Rules and precures restrict the options available." P2
	Financial constraints*	The extent to which financial resources and capital is available to the company. Fewer resources means a greater extent of prioritization is needed.	"There is a restricted budget, and therefore we need to prioritize which ideas to implement and which ones have to wait." P5

	Routine daily operations	The standardized daily tasks that need to be executed by an employee per day.	"A potential barrier is the business of everyday operations" P7
	Feeling invaluable	Employees being unaware of their potential influence or not having the feeling they are being listened to by their supervisors.	"Employees need awareness that they are able to influence the business operations. It sounds very simple but not every employee has this awareness." P7
	Human capital market*	The extent to which human capital, i.e. new employees, are available of the labor market.	"When you look at education in the industry it is 1 female per 50 male students so we are limited." P5
	Resistance to change	Unwillingness of employees to change their current way of doing their work.	"Especially for radical innovation, employees are unwilling to change because of personal reasons." P2
	Working duration	The number of years an employee works for the company.	"Employees with a longer working duration are more rigid and have more difficulty to change because they are stuck in the we have always done it this way type of thinking." P4

*: Deductive code based on framework by Neessen and colleagues (2018)