

# UNIVERSITY OF GOTHENBURG SCHOOL OF BUSINESS, ECONOMICS AND LAW

# In Pursuit of Ambidexterity

The ambidextrous nature of a small enterprise and its implications on NPD
- A Case Study

Emil Landén & Emil Tullock

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Supervisor: Daniel Hemberg

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Emil Tullock

Eurl Tullek

## **Abstract**

Innovation is a crucial determinant of success in today's highly competitive and fast-paced climate. This forces organizations to focus on developing future business solutions while still exploiting their existing resources to stay profitable. One way of doing this is through organizational ambidexterity, which is shortly described as the ability of an organization to balance exploration and exploitation for sustained performance. The theory of ambidexterity mostly concerns large companies with enough resources to separate the organizations into different parts, focusing on existing and future businesses respectively. Moreover, the challenge for small companies, without these resources, is thus how to structure their operations to find other ways to balance exploration and exploitation to reach a certain degree of ambidexterity. A gap in the literature that was discovered was the practical implication of organizational ambidexterity in small organizations and how it influences their new product development (NPD), which is the purpose of this study. Furthermore, the connection to the corporate culture of firms that facilitate ambidextrous working was not adequately researched and was thus included in the aim of the research.

To gather an in-depth understanding of the subject, a single case study with a qualitative research strategy was implemented, following an abductive research design. In addition, semi-structured interviews were conducted with managers and engineers to enable different perspectives on the subject. The findings from the interviews were then analyzed in relation to the gathered literature using thematic analysis.

The empirical findings indicated that the organization, consistent with existing literature, faces challenges in achieving structural ambidexterity. Consequently, the case organization adopted a temporal approach to ambidexterity, prioritizing the mobilization of its entire staff for the most critical project at hand. Respondents revealed that this approach was driven by the urgent need for cash, but it ultimately yielded limited financial gains due to relying on existing intellectual property (IP) to meet short deadlines.

**Keywords:** ambidexterity, ambidextrous organization, ambidexterity in smaller organizations, corporate culture, new product development

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## 1. Introduction

## 1.1 Background

No one can underestimate the power of innovation. It has been a critical driving force behind many of the advancements that have shaped modern society. From the development of new technologies and products to the creation of more efficient systems and processes, innovation has allowed us to communicate faster, live longer, and accomplish more with less input. In a paper by Ahlström (2010), it is stated that one hour of work in 1890 took only seven minutes to accomplish in 2000, something which was realized through the process of innovation. Taking into consideration the rise of smartphones and digital technologies that have occurred in recent years, that number is arguably significantly lower nowadays. Considering the highly competitive climate that organizations around the world face, with ever-increasing globalization, digitalization, and connectivity, innovation acts as a crucial determinant of success. Following an increase in competitiveness and innovation are shorter product life cycles which put additional pressure on organizations to focus on NPD. However, as Pisano (2015) describes it, innovation can easily become an infuriating pursuit because more times than not, the failure rates are high. For example, by considering the many rockets that have been launched to the moon historically, there is a greater amount that did not make it (NASA, n.d.), highlighting the inherent risk associated with innovation. Moreover, as stated by Christensen et al. (2008) it is also an expensive effort as both resources and time need to be put into innovation and NPD. Basically, innovation is an expensive process and one that can be tough to sustain without proper funding. Thus, organizations need to make money now to make money later, and one way of doing this is through organizational ambidexterity.

For an organization to be ambidextrous, it has to balance exploration and exploitation for sustained performance, as stated by several authors (Raisch et al., 2009; O'Reilly & Tushman, 2004; March, 1991). O'Reilly and Tushman (2004) state that organizations must continuously look both backward, tending to the past's goods and services, and forward, planning for the innovations that will shape the future. This is related to the Roman god Janus, with two sets of eyes: "one pair focusing on what lay behind, the other on what lay ahead" (O'Reilly & Tushman, 2004, p. 74). Gibson and Birkinshaw (2004) continue this discussion by emphasizing the trade-offs to be made regarding the demands on the organization. There is always some conflict between investments in current versus future projects or differentiation versus low-cost production, and only the most prosperous firms manage them enough to improve their long-term competitiveness. Many agree with this (Andriopoulos & Lewis, 2009; Tushman & O'Reilly, 1996; March, 1991), with the mutual reasoning that ambidexterity is a key characteristic that will affect each company's chance to succeed in a competitive landscape.

One of three common approaches can be used to achieve ambidexterity. The first approach is structural ambidexterity, where two distinct organizational structures are created for different types of activities, such as exploration in research and development and exploitation in

production. The second is contextual ambidexterity, where employees must make decisions during their daily work to find a balance between exploration and exploitation (Holmqvist, 2009; Prange & Verdier, 2011). The third way of achieving ambidexterity is temporal ambidexterity, where organizations switch between periods of exploitation and exploration (Gibson & Birkinshaw, 2004).

#### 1.2 Problem Discussion

When discussing the notion of ambidexterity, the most common interpretation, and what is most prevalent in academic literature, is structural ambidexterity. This is furthermore mostly applicable in larger organizations, where there are enough resources to structure the separate parts of the organization. For example, in a completely structural ambidextrous organization, the operations (e.g. manufacturing, sales, and R&D) are separate in the different scopes of existing and emerging businesses (O'Reilly & Tushman, 2004). The challenge for smaller companies, then, is how to structure the operations to find the balance between exploration and exploitation in a single business unit to reach a certain degree of ambidexterity, while operating with finite resources. Because of this, ambidexterity is less prevalent in smaller organizations, leading to a limited amount of research done on the relationship between smaller organizations and ambidexterity as a general concept.

Chen (2017) develops what he calls dynamic ambidexterity. This could, based on the author's opinion, solve the innovator's dilemma of balancing exploration and exploitation. By adjusting the different parts of the organizations to different (structural, contextual, and temporal) kinds of ambidexterity, companies with finite resources could find this balance. Similarly, Chang and Hughes (2012) mention that structural ambidexterity is largely irrelevant for smaller enterprises and instead propose that they need to utilize their specific knowledge towards balancing explorative and exploitative innovation. This is accomplished through close social interaction between the employees in the firm to promote the quality of knowledge exchanges that take place between people. For the scope of this study, analyzing a smaller organization with finite resources, it is of great importance to find a sustainable way of working which will enable an innovative climate while still utilizing its existing knowledge and skills.

Arguably, there is a lack of consensus on how small enterprises can incorporate ambidexterity into their organization. Scholars argue that small enterprises generally struggle in organizing their operations efficiently and having enough resources, which makes it challenging to commit resources to both exploration and exploitation (Lavie et al., 2010; Raisch & Birkinshaw, 2008). Additionally, there are minimal case studies on how established organizations work with it. Consequently, it is interesting to examine how small enterprises can, and should, work to achieve ambidexterity in practice without allegedly being able to apply complete structural ambidexterity. The topic of ambidexterity and its influence on NPD in small organizations has received limited attention in academic literature. Despite the

growing interest in ambidexterity as a crucial aspect of organizational strategies, the practical application of this concept remains largely unexplored, particularly in small organizations. This knowledge gap is especially pertinent to the process of NPDt, as small organizations often face resource constraints and other challenges that can impede their ability to innovate. Hence, the research problem in this thesis revolves around investigating the relationship between organizational ambidexterity and the process of NPDt within the context of innovation

## 1.3 Purpose

This thesis aims to contribute to theoretical knowledge on the practical use of ambidexterity in small organizations, through a case study of an innovative Swedish organization. Specifically, this study will examine how a small company in the personal electronic devices industry pursues ambidexterity, and how this approach affects their NPD process. Despite the considerable academic attention paid to the concept of ambidexterity, there remains a gap in the literature concerning its practical implications and use among smaller enterprises that often lack the resources to separate their exploration and exploitation activities. Through an in-depth case study, this research seeks to address this gap by providing insights into the practical application of ambidexterity in a small organizational context. The findings of this study will contribute to the existing literature on ambidexterity and offer practical guidance for small firms seeking to enhance their innovation capabilities.

## 1.3.1 Research Question

To achieve the purpose of this thesis, the following question needs to be answered:

How does a Small Swedish product manufacturing company pursue ambidexterity and what are its practical implications on NPD?

#### 1.4 Delimitations

This thesis was limited to creating a deeper understanding of the relationship between organizational ambidexterity and NPD within a small innovative organization in the personal electronic device industry. To narrow and define the scope of this research it was limited to studying one specific firm within the targeted industry in Sweden. The chosen limitation was made due to the complexity of the studied organization and industry in how they conduct business within a highly innovative change of pace. The pitfall of this is the risk of

generalizability, as the studied case organization does not operate in a way that is generalizable in a wider context, and the fact that every organization is mostly unique in the way that they structure their processes and the prerequisites needed.

Thus, it was impossible to provide detailed descriptions of the industry at focus or the specific operations of the organization. Nonetheless, the organization was chosen due to its record of being innovative and constantly bringing new products to market, making it a good fit for the topic of this research. While this may limit the level of specificity in the study, it was important to maintain the confidentiality of the company's information and IP. However, this limitation may potentially affect readers' perceptions, as they may draw subjective connections and conclusions regarding the outcomes, without knowing whether they apply to their own business context. To address this potential issue, the study has provided a thorough and transparent explanation of the research methods employed and their limitations, as well as a comprehensive discussion of this thesis's limitations.

## 1.5 Disposition of Thesis

This thesis employs a coherent and lucid structure, comprising six distinct chapters, which are presented below in a manner that facilitates clarity and comprehensibility for the reader.

The first chapter introduces the reader to the background and problem discussion of the thesis, following are the purpose and ultimately the Chapter 1. research question. Introduction In this chapter, the relevant literature on the subject of this thesis is presented with a focus on ambidexterity, corporate culture, and NPD. Chapter 2. Literature Review The methodology section encompasses the research design, research strategy, data collection, and data analysis, with a focus on the chosen Chapter 3. qualitative data collection method. Methodology In Chapter 4, the empirical findings gathered from the primary data collection through semi-structured interviews are presented. Chapter 4. **Empirical** findings In the discussion chapter, the empirical findings are analyzed and contrasted to the literature on the subject. Chapter 5. Discussion Lastly, the findings from the thesis are concluded and the research question is answered. On top of that, recommendations for the case organization and Chapter 6. Conclusion future research possibilites are presented.

Figure 1. Disposition of Thesis

## 2. Literature review

In this chapter relevant literature on the topic of this thesis is presented. Firstly, the review defines innovation, which is needed to identify the case and provide an understanding of the concept. Secondly, the concept of ambidexterity is introduced and defined and the different ways of achieving it are discussed in detail. This helps in recognizing similarities and differences between literature and the studied organization. Thirdly, the concept of the innovative portfolio is explained as a whole with extra attention on the barriers to innovation, corporate culture, and NPD. This helps connect the studied organization's ambidextrous efforts with its NPD.

2.1 What is Innovation?

The definition of innovation is important for this study as it facilitates an understanding of what an innovative organization is and how it affects its ability to be ambidextrous. It also connects the different levels of innovation to either explorative or exploitative efforts. Innovation, as defined by OECD (2010) is: "The implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations". However, in more easily explained terms it can be recognized as renewing or changing something, which is then applied and has some benefits (Schumpeter, 1934). Innovation acts as a source of competitive advantage for most organizations as recognized previously in the problem discussion, implying that there is a continuous need to renew or change the products you offer or the way your workplace organizes itself amongst other things. One thing to take into consideration when talking about innovation is the many dimensions that exist, for example, and interpretable in the OECD (2010) definition, are dimensions of innovation related to business processes or new business models (Goffin & Mitchell, 2017). However, for this thesis, the theory will henceforth only cover product innovation. This is a result of the operations and given projects of the studied case organization, serving solely as a product manufacturer.

When exploring product innovation, it is important to recognize that different degrees of innovation exist, ranging from incremental to radical innovations. However, due to the lack of a common interpretation in the literature, this thesis has established a limitation on the terminology used to describe the degrees of innovation under investigation. To facilitate a clear and consistent understanding for the reader, Table 1 has been included to provide a framework for the specific terms and definitions used in this study. By establishing this limitation and providing a clear framework for the terminology used, this thesis aims to ensure that the reader can accurately interpret the findings and implications of the study.

| Degree of Innovation                           | Explanation   |
|--|---|
| 1. Incremental/Core innovation (Low)           | Innovation and improvements built upon existing capabilities or serving existing markets. |
| 2. Breakthrough/Adjacent innovation (Moderate) | New products that have unique features or serve adjacent markets.                         |
| 3. Radical/Transformational innovation (High)  | Products for markets that do not yet exist and take a long time to develop.               |

Table 1. Degrees of Innovation Source: Goffin and Mitchell (2017); Nagji and Tuff (2012)

Most often, managers aspire to find the next "best thing" and to launch radical innovation on the market. However, in spite of this a lower degree of innovation is the most common amongst organizations and research shows that as much as 84% of all product innovation taking place in 1997 were basic line extensions, i.e an upgraded model of a car or phone, also known as incremental innovation (Goffin & Mitchell, 2017). Nonetheless, finding the next best thing is hard and often entails substantial resources and time to reach. Because of that, organizations typically need to harvest resources from their current products and services to further be able to innovate their future portfolio. A process that is typically known as ambidexterity.

## 2.2 Defining Ambidexterity

The notion of the ambidextrous organization was first mentioned as a concept by Duncan (1976) who used it to explain an organization's ability to be aligned and efficient in its management of today's demands while also being adaptive to fluctuations in the external environment. Later on, a common sense on organizational ambidexterity was and is now defined as an organization's ability to achieve a balance in two areas, namely their explorative efforts such as searching, risk-taking, and experimentation, and their exploitative efforts, which are more related to refinement and efficiency (March 1991; Tushman & O'Reilly, 2004). A common sense that is in line with Duncan's (1976) reasoning on making money now but also being alert to the external environment. The general agreement is that to flourish in the long run, organizations need to pursue various innovative efforts such as incremental, architectural, and discontinuous ones (O'Reilly & Tushman, 2004; Gibson & Birkinshaw, 2004: Duncan, 1976). Thus, in order to balance these efforts, one must understand that the demands of an organization to some degree are always in conflict, and balancing investments in future or current projects has its different tradeoffs, impacting differently both internally and externally (Gibson & Birkinshaw, 2004). Finding the right balance consequently implies making choices that could affect existing and future customer bases. Existing customer bases could obtain benefits through exploitation, however, this may have a negative impact on the long-term performance and future customer bases if the organization fails to react to changes in the industry environment. Similarly, an excessive focus on explorative efforts may prove beneficial for future customers but have negative impacts on the current ones.

Organizations that successfully deal with the conflicts arising from an explorative and exploitative approach, while still acknowledging the necessary concessions needed to accomplish a successful balance, can get an advantage over their competitors according to Raisch et al. (2009). Teece et al (1997) agree with this and moreover add that neglecting either exploration or exploitation can have negative long-term consequences on the performance of an organization. Similarly, Luger et al. (2018) elaborate on some of the benefits of achieving ambidexterity, mainly by highlighting the benefits of not having to restructure the organization through periods of radical change but rather building capacities to overcome obstacles during periods of more incremental change. Sarkees and Hulland (2009) take it one step further and propose that ambidexterity can have a positive impact on three different dimensions of performance, namely profits, customer satisfaction, and new product introductions. Conclusively, an organization can accomplish an appropriate balance of ambidexterity through different organizational structures which will further be explained in the following paragraphs.

## 2.2.1 Achieving Ambidexterity

Ambidexterity can be achieved through various types of organizational structures and the following three types are most frequently discerned in the related literature. Namely: structural ambidexterity, separating the exploitative and explorative processes in different units; contextual ambidexterity, achieving both exploitation and exploration within a single unit; and temporal ambidexterity, temporally switching between exploitation and exploration within an organization (Lavie et al., 2010). Lastly, a short introduction is given on Dynamic ambidexterity which is a later theoretical view serving as a mixture of the previous three proposed by Chen (2017).

#### **Structural Ambidexterity**

The most common and applied form of achieving ambidexterity is through a process called structural ambidexterity, which is defined by creating dual structures and in turn separating the explorative and exploitative parts of an organization internally (Gibson & Birkinshaw, 2004; Duncan 1976). The logic in doing so is, according to Tushman and O'Reilly (1996), that the organizational units will become smaller and more autonomous which in turn promotes ownership and responsibility for their own work. A challenge for companies that want to pursue structural ambidexterity is the costs associated with splitting the company into different units. For smaller organizations, this could prove especially difficult since it implies having a larger workforce that could handle a structural separation of units and pursuing

different investment routes which are more common in larger organizations (Wang et al., 2019)

The different units that are formed reside either within the company, typically for exploitative means, or through subsidiaries and start-ups more normally concerned with the explorative approach. The organizational core and the unit more focused on the mainstream products and services are often kept more formalized and structured, while simultaneously being shielded from the explorative work that is often concerned with more complexity and uncertainty (Tushman & O'Reilly, 2004). The organizational unit specializing in the explorative approach is on the other hand often more autonomous and informal which in turn promotes creative thinking and a fail-friendly nature. Similar to how the exploitative unit is shielded from uncertainty, the explorative unit gains from being shielded from the organizational inertia typically residing at the mainstream business unit, more concerned with profit-maximizing efforts (Tushman & O'Reilly, 2004).

Naturally, separating the organization into different units can create fragmentation among the employees as well as communicational problems (Tushman & OReilly, 2004). Thus, in order to avoid creating too many internal barriers in the organization, the senior management level in the structurally separated ambidextrous organization needs to be tightly connected to the overarching goals. A challenge with a structural approach to ambidexterity is as such for a leader to articulate a strategy whilst also managing the tensions inherent to dual organizational units, putting a lot of pressure on top management to manage units with different structures and create new units when required whilst simultaneously pursue effort on efficiently coordinating them (O'Reilly & Tushman, 2011; Chen, 2017).

#### **Contextual Ambidexterity**

Contextual ambidexterity, as mentioned by Gibson and Birkinshaw (2004), is the capacity of an organization to simultaneously demonstrate both exploitative and explorative activities across a singular business unit and in turn achieve ambidexterity. This differs from the other types of ambidexterity in that it is not concerned with any separation in creating dual structures or buffering between the duality of exploration and exploitation (Gibson & Birkinshaw, 2004). Instead, contextual ambidexterity is more about enabling individuals and encouraging them to make their own judgments on how to divide their time between conflicting demands (McDonough & Leifer, 1983). According to Gibson and Birkinshaw (2004), contextual ambidexterity can, when achieved, let every individual in a unit deliver value to existing customers whilst also being on the lookout for new possibilities and changes in their respective areas. An example of how contextual ambidexterity is integrated into an organizational context is how Google enables its engineers to spend 20% of their free time pursuing projects of an exploratory nature of their own choosing (Chen, 2017).

March (1991) mentions some potential pitfalls with contextual ambidexterity as an integrated organization needs to deal with trade-offs of pursuing multiple engagements in their activities, namely resource allocation, and focus. Chen (2017) further highlights the limits of contextual

ambidexterity by arguing that new initiatives that are not radically different from the core business might emerge naturally. In contrast, ideas that are in fact drastically different might need a separate unit for proper incubation.

Bledow et al. (2009) highlight the advantages of contextual ambidexterity, focusing on the decreased cost of integrating parts of the organization that previously was separate. On top of that, increased learning opportunities achieved by working together in exploratory and exploitative activities will also decrease when separating people in different business units (Bledow et al., 2009.). Lastly, Gibson & Birkinshaw (2004) argue that the concept of contextual ambidexterity can be integrated into organizations to help encourage a more supportive context that generates the capacity for both exploitative and explorative efforts.

#### **Temporal Ambidexterity**

The third way in which organizations can achieve ambidexterity is through the concept of temporal ambidexterity. Similar to contextual, temporal ambidexterity concerns itself with the pursuit of a combined approach to exploration and exploitation. However, instead of letting the employees choose themselves, the organization cyclically shifts between periods of duality (Wang et al., 2019). This cyclicality requires managers to make judgments about time periods and specific projects and groups and can in some terms be contrasted to structural separation (Gibson & Birkinshaw, 2004). The most common approach to organizing these shifting periods of exploitative and explorative work is by having the normal stance as exploitative with long periods of stability and then shifting when disruptive forces require, a phenomenon recognized as punctuations (Tushman & Anderson, 1986). Amongst the benefits of achieving temporal ambidexterity in organizations are the cost savings of not having to structurally separate to pursue multiple investment trajectories, the avoidance of over-emphasizing an extreme path of either short or long-term projects, and having to rely on your employees to pursue explorative efforts (Wang et al., 2019).

As companies always face both short-term and long-term demands from their external and internal environment, the application of temporal ambidexterity can prove a challenge due to organizations having to abandon projects and actions related to short-term problems and instead focus on long-term ones (Wang et al., 2019). Thus, as a result, the practical implications for temporal ambidexterity could be a too narrow focus on today's problem due to its urgent nature when organizations lack a proper managerial strategy. Additionally, due to shifting between periods of exploitation and exploration, transition periods occur which require teams to re-organize their day-to-day business swiftly, this also implies switching between and reconfiguration strategies, structures, and processes aligned with each mode. As a result, the changes could cause dislocation and potentially hurt capabilities residing in the organization (Gibson & Birkinshaw, 2004). On top of that, the organization could be struck by inertia after having long periods of stability, potentially hurting the re-organization (Chen, 2017).

#### **Dynamic Ambidexterity**

Chen (2017) recognizes the limitations of the three common forms of ambidexterity and proposes a new practice for realizing the benefits of each through the concept called dynamic ambidexterity. In its proposed form, it is essentially a mixture of the best features stemming from the three common forms of ambidexterity (Chen, 2017). Firstly, adopting structural ambidexterity at the corporate level, allows firms to split their organizations into exploratory and exploitative units to maximize both parameters. This, however, as Wang et al. (2019) propose, may limit the usefulness of dynamic ambidexterity in smaller organizations as it may be too constraining on the resources. Nonetheless, Chen (2017) further takes inspiration from contextual ambidexterity by recognizing its value at a business unit level, creating an environment where employees are motivated to perform exploratory tasks while allowing new ideas to emerge unexpectedly. In this way, less demand is put on executives and thus prohibiting any stress and delay caused by having to intervene in dual units as is the case in the classic definition of structural ambidexterity as mentioned by Tushman and O'Reilly (2004).

Lastly, dynamic ambidexterity takes after temporal ambidexterity at the project level, allowing for exploratory projects to be incubated in a suitable unit where the search for an applicable business model takes place, after which the initiative becomes part of an exploitative unit (Chen, 2017). Through this method, explorative initiatives and projects find their place in either an existing business unit or through the establishment of a new one, in many ways complementing structural ambidexterity at the corporate level, in turn minimizing upper management interference at a project level.

## 2.2.2 Barriers Facing Small Enterprises

He and Wong (2004) argue that large, resource-rich enterprises may be able to better promote ambidexterity by putting efforts into exploration and exploration simultaneously and finding synergies between the two. Furthermore, a larger size often denotes more sophisticated administrative processes that facilitate the management and combination of these contradictory processes (Chang & Hughes, 2012; Lubatkin et al., 2006, Voss & Voss, 2013). There is a contention that these larger firms have more resources, and thus more freedom to devote those resources to different activities. Additionally, they are more likely to have employees with different specializations and to implement differentiated units in their attention to both exploitation of current knowledge and exploration of new possibilities. As a result of these factors, establishing ambidexterity may provide a greater challenge for smaller organizations than for their larger counterparts (Voss & Voss, 2013). In some ways, a larger size can thus be seen as a facilitator of ambidexterity.

Small firms, on the other hand, need to rely on less size-dependent factors in order to achieve ambidexterity in their own ways (Lubatkin et al, 2006). For example, smaller firms will often be more flexible in terms of managing change than bigger firms since they have fewer management levels and less established processes to deal with. Smaller businesses can respond quickly to emerging trends and client requests, which may be a considerable advantage in sectors that are undergoing fast change (Veugelers, 1997; Alcalde-Heras et al., 2019).

## 2.3 Managing Innovation

The management of innovation involves a multifaceted approach that encompasses selecting an innovative portfolio, overcoming barriers to innovation, cultivating an innovative corporate culture, and understanding its implications for NPD. By diligently focusing on these aspects, organizations can position themselves for long-term success in today's dynamic and competitive business landscape.

## 2.3.1 Selecting the innovative portfolio

Any organization is likely to be working on several innovative projects at once. Even more so when certain projects have significant degrees of uncertainty, where allocating resources among them to produce the best value is never uncomplicated. Goffin and Mitchell (2017) present three challenges that confront managers regarding this: selecting the projects that are intrinsically worthwhile in themselves; selecting the portfolio of projects that best meets the needs of the organization as a whole; and maintaining the support and commitment of all parties involved, particularly those whose projects are rejected. Furthermore, due to internal and external factors, innovation projects change as they proceed. Some may need to be pushed forward, others may need to be postponed, and some may even need to be eliminated entirely. Thus, choosing and maintaining a portfolio is a dynamic activity (Goffin & Mitchell, 2017). The portfolio must contain a mix of project types and risk levels to offer the organization the best value (Killen et al., 2008). The number of projects should also be limited to guarantee that all projects can be adequately funded efficiently while still being sufficient to support an adequate flow of projects and new product introductions (Klingebiel & Rammer, 2014; Killen et al., 2008). By adopting certain techniques or developing best practices, the innovative results of the organization can be increased.

Moreover, a company's portfolio can be seen as healthy if it includes a mix of incremental innovations on one hand and breakthrough or radical innovations on the other. This is crucial for each company's future growth and success (Goffin & Mitchell, 2017). According to O'Connor (2008), portfolio management decision-making procedures tend to favor incremental innovation when organizations do not sufficiently differentiate between incremental and radical innovation when constructing their management systems. Goffin and

Mitchell (2017) describe the same issue, saying that many companies get caught in the *incremental trap*, resulting in continuously selecting low-risk projects that match the organization's core business. Three main issues to consider in portfolio management to ensure the best value possible are presented by Cooper et al. (2002). These are project value, meaning that each project should be valuable to the company on its own; portfolio balance, finding balance in the portfolio regarding for example risk, time horizon, or parts of the business; and strategic fit, selecting projects that in addition to value and balance, are in line with the strategic priorities of the organization. Poor portfolio management practices result in sluggish decision-making, a propensity to select only low-impact projects, and an inability to stop projects that have gone astray. The resulting problems could be poor profitability, lost opportunities to gain market share, bottlenecks, waste of resources, etc. (Goffin & Mitchell, 2017).

Nagji and Tuff (2012) also study portfolio management and acknowledge three types of innovation initiatives which together make up the Innovation Ambition Matrix. First are core innovations. These are attempts to improve currently available products incrementally and expand into new markets. Such innovations draw on resources the company already possesses and can take the form of new packaging, slight reformulations, increased service convenience, etc. On the contrary, there are transformational innovations. Transformational innovations aim to develop new products or services to meet the demands of expanding markets. When they are successful, these inventions create news. These types of innovations typically require the company to draw on unproven resources, such as developing capabilities to develop markets that are not yet mature, gaining a deeper understanding of customers, and communicating about products that have no direct antecedents. Between the core innovations and transformational innovations are adjacent innovations, which can share characteristics with the two aforementioned. Adjacent innovations involve utilizing a company's strength in a new area, by finding new purposes for these existing resources and skills. Nagji and Tuff (2012) use the example of Procter & Gamble's "Swiffer", which was based on consumers' beliefs that a long-handled mop is the best cleaning instrument for floors. But in order to reach a new consumer base and create new income streams, it deployed cutting-edge technology to create new revenue streams by reaching new customers.

#### 2.3.2 Barriers to Innovation

If executives of companies believe that there are creative people with good ideas within the organization, what are the barriers that are hindering innovation? Christensen et al. (2008) consider the issues of misusing financial tools to assess potential innovations. One of the main arguments is that the real returns and benefits of moving forward with an investment in a new innovation are underestimated by discounting cash flow and net present value, which are two widely used methods in assessing potential investments. Most executives compare the cash flows from innovation to the default scenario of doing nothing because they wrongly believe

that the company's current state of health would continue indefinitely without the investment. This is illustrated in Figure 2 below.

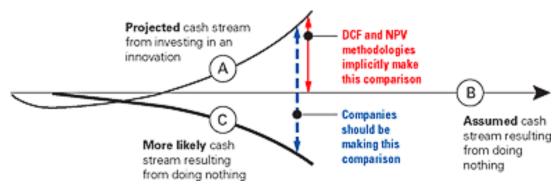


Figure 2: The DCF Trap. Source: Christensen et al. (2008)

To avoid this pitfall, comparing the projected discounted cash flow of innovation with the expected scenario of a decline in performance if the investment in innovation is not made will allow for a more accurate assessment of the value of innovation. According to Christensen et al. (2008), organizations must understand that alternative measurements may be required to encourage and sustain innovation and that conventional financial tools and metrics are not always suited for assessing new innovation initiatives. According to them, businesses should adopt a different set of measures that more accurately capture the particular difficulties and opportunities presented by new initiatives. They contend that the emphasis of these indicators should be on variables like customer engagement, growth, and experimentation. Additionally, the authors stress the need of creating a positive business culture that appreciates innovation and promotes experimentation.

Moreover, Anthony et al. (2019) discuss other obstacles that stifle innovation in organizations than financial ones, heavily emphasizing day-to-day routines and habits. These issues are exemplified by poorly handled meetings, a lack of slack capacity, few speaking chances, and the idea that changing things is expensive and inefficient. They describe a major impediment managers face that stands in the way of innovation. This is organizational inertia, the tendency of an organization to continue on its current trajectory. Businesses are structured to deliver predictable, reliable results, and that creates the paradox that the systems that enable success with today's model reinforce behaviors that are incompatible with the discovery of tomorrow's model (Anthony et al., 2019).

## 2.3.3 Corporate Culture

This organizational inertia can stem from a shortage of competent (in terms of showing a willingness to be innovative) employees, which according to Coad et al. (2015) is one of the major obstacles to innovation. Tellis et al. (2009) agree by arguing that corporate culture is significantly more important as a driver of radical innovation than for example labor, capital,

or government culture. An innovative culture, moreover, rests on six building blocks, presented by Rao and Weintraub (2013). *These are values, behavior, climate, resources, processes*, and *success*.

Values influence priorities and choices, which are reflected in how the organization spends its time and money. More than in the way they speak, values are thus shown in the way individuals act and how much resources they spend on being entrepreneurial, promoting creativity, and encouraging continuous learning (Rao & Weintraub, 2013). Furthermore, Finegan (2000) shows that for employees to be able to embody their values of creativity and initiative, for example, in the workplace, the organization needs to foster their expressions. The person-organization fit is thus important, meaning that affective commitment is the highest when individuals feel that the organization not only supported but also cultivated similar values.

**Behaviors** are shown in how leaders show their support by replacing old products with new and improved ones, inspiring employees with a clear vision of the future, and breaking down bureaucratic barriers. Employees contribute by persistently overcoming technical challenges, creatively finding resources during tight budgets, and attentively listening to customer feedback (Rao & Weintraub, 2013). Scott and Bruce (1994) state that because ideas build the foundation of innovation, an innovative behavior among both leaders and employees is critical and requires consideration.

Climate has a significant impact on the overall workplace experience. An atmosphere that promotes innovation creates a sense of involvement and excitement, encourages taking calculated risks in a supportive setting, promotes continuous learning, and values independent thought (Rao & Weintraub, 2013). Furthermore, West (1990) argues that there are four team climate factors that promote innovation in an organization. First, vision refers to a shared understanding of the team's purpose and objectives. When team members understand, respect, and adopt the vision, innovation is enhanced. The absence of a common vision may result in a lack of concentration and direction, which makes it challenging to come up with creative ideas. Second, participative safety refers to the belief that team members can bring forth new ideas and solutions without worrying about criticism and rejection. When they feel comfortable sharing their ideas, team members are more likely to take risks and be creative. Third, task orientation includes the team's emphasis on achieving its objectives. Teams that participate in lively discussions and debates about various potential solutions are more likely to innovate because they can examine ideas more thoroughly. Fourth is support for innovation, indicating that the members have the tools and support they need to innovate. Encouraged members are more inclined to take chances and explore new approaches, which can result in creative solutions.

**Resources** include people, systems, and projects. People are the most important of these since they have the biggest impact on the culture and values of the firm. Having a group of people inside the organization that are experts in teaching and implementing innovative practices is thus a crucial innovation resource in any company (Rao & Weintraub, 2013).

**Processes** are the paths that innovations take as they are created. This can involve familiar methods like the "innovation funnel" used to gather and evaluate ideas, or stage-gate systems for evaluating, prioritizing, and prototyping projects (Rao & Weintraub, 2013). Desouza et al. (2009) emphasize that in order to discuss and analyze the innovation processes in a proper way, organizations need a common language. Rather than relying on chance, organizations can maximize their benefit by structuring the initiatives regarding the innovation process. Desouza et al. (2009) further develop a framework of four stages that managers can use as a guideline for structuring their innovation processes. Managers need to pay constant attention to the operational details of innovation projects because of market conditions, technological advances, etc. Second, an organization should use some kind of protocol for evaluating and screening ideas. This helps managers to assess new ideas and their relevance to the current needs of the organization. Third, managers must promptly respond to outside stakeholders, and express their opinions for experimentation purposes. This speedy and transparent approach enhances the effectiveness and significance of innovative experimentation. Last, managers should always prioritize customers' demands, and find ways to facilitate communication with these customers. This communication will work as important feedback to be brought into the innovation process.

**Success** of innovation can be evaluated at three levels: external, enterprise, and personal. External recognition gauges a company's reputation for innovation among customers and competitors and its financial payoff. Enterprise success includes the purpose, discipline, and capabilities of the organization. Furthermore, personal success considers the satisfaction, growth, and reward among employees in the organization (Rao & Weintraub, 2013).

Businesses frequently prioritize resources, processes, and success assessment when fostering innovation. Companies sometimes overlook the intangible, people-oriented parts of creative culture like values, behaviors, and climate because they are harder to measure than the before-mentioned tangible, tool-oriented factors. Because of this, businesses frequently do well managing the more physical components of innovation but struggle with the more human-centered ones (Rao & Weintraub, 2013). The importance of a strong corporate culture is furthermore well-recognized by others. For example, Heskett (2012) demonstrates how an organization can increase its performance by 20-30% with a strong culture compared to culturally mediocre organizations in his book The Culture Cycle: How to Shape the Unseen Force that Transforms Performance, where he quantifies this importance. He continues to describe the differences a strong culture can generate. First, a strong culture results in engaged employees wanting to stay at the company, which in turn decreases hiring costs. Additionally, engaged employees are also more likely to be innovative and work in line with the values of the organization. Ahmed (1998) stretches this further, saying that companies that want to be innovative must put more of an emphasis on the environment they are building than just their product portfolios. The businesses that succeed in creating human communities with the right cultures and climates to foster creativity and renewal will, according to him, be the most innovative ones in the future.

#### 2.3.4 NPD

The so-called sequential model was the first project management paradigm. This breaks the project up into stages, each of which is largely self-contained and ends with a specific deliverable that is transferred to the following stage. The majority of project types still use this approach as their fundamental framework (Goffin & Mitchell, 2017).

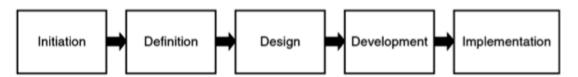


Figure 3: Staged or Sequential Project Management. Source: Goffin and Mitchell (2017)

However, this model is simplified and does not provide a comprehensive view of how projects are managed in organizations. Many organizations employ what is called a Stage-Gate framework, which is simply standard procedures they can follow when driving new products efficiently from idea to launch (Cooper, 2001). The Stage-Gate method is described to provide understanding for readers of what is regarded as NPD in this study and was briefly introduced to the respondents during the interviews when NPD was discussed. The Stage-Gate method plays a crucial function in preventing projects from moving ahead gradually when they actually include major flaws that are not addressed and maybe not completely acknowledged. Of course, this prevalent issue is a result of characteristics like "groupthink" (meaning that a group of people develop the same opinions and assessments) that make risk assessment so challenging (Goffin & Mitchell, 2017). The number of phases necessary and the exact design of the model depends on the organization, the speed and complexity of the project, and sometimes the strength of the project management team. However, the five-stage Stage-gate process developed by Cooper (2001) is often used as a basic framework for companies as a roadmap (Goffin & Mitchell, 2017).

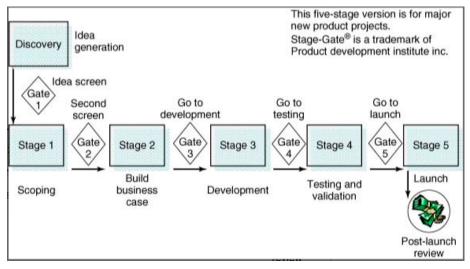


Figure 4. Stage-Gate Framework. Source: Cooper (2001)

The project team is provided with a list of essential duties and benchmarks to adhere to at each stage. The stages of the basic Stage-Gate process are Discovery, Scoping, Build the Business Case, Development, Testing and Validation, and Launch. Discovery refers to the initial effort made to identify options and come up with new product concepts. Scoping is a brief, preliminary analysis that aids in defining the project's parameters. Before moving on to Stage 2, this stage comprises low-cost data collecting, typically through desk research, to reduce the number of prospective projects. Build the Business Case is a comprehensive step that includes identifying the product, supporting the project, and developing a project strategy in order to produce a strong business case. In development, the new product is designed, developed, and tested, resulting in an alpha or lab-tested product. This stage also includes developing production and market launch plans. Testing and Validation includes validating the new product, marketing, and production through market, lab, and plant trials, including field trials, test markets, and operations trials. Launch refers to the process of commercializing a new product and launching full manufacturing, marketing, and sales activities. The market launch, operations, distribution, and post-launch strategies are carried out during this stage (Cooper, 2001; Cooper, 2008).

Furthermore, the product development process involves the utilization of entry gates that precede each stage and act as quality control checkpoints to ensure the proper execution of the project. These gates serve as Go/Kill decision points, where inferior projects are discarded, and the action plan for the next stage is formulated. Senior managers who possess the resources required by the project team for the next stage oversee the gate meetings, and the gates have a set of stipulated deliverables, criteria for Go/Kill decisions, and defined outputs such as a decision, an approved action plan, and a list of deliverables. Different types of gate criteria, namely readiness checks, must-meet criteria, and should-meet criteria, are employed to assess whether the key tasks have been completed and if the minimum business criteria have been satisfied (Cooper, 2001; Cooper, 2008).

## 3. Methodology

This chapter explains the methodology that will be used for the study, including the research strategy and design that will be employed. It also includes a description of the procedures that will be used in gathering and analyzing the empirical data to address the specified research question.

## 3.1 Research Strategy

When conducting research, the general approach that is often applied is referred to as a research strategy (Bell et al., 2019). The research strategy is a phenomenon that can be explained as the process in which to reach an answer to the research question (Williams, 2007). The most common forms of research strategies are qualitative and quantitative strategies (Bell et al., 2019). Choosing which one to pursue requires knowledge about the purpose and its characteristics. A quantitative approach highlights the importance of numbers and is commonly applied to test out a specific hypothesis drawn from existing literature. On the other hand, a qualitative approach, according to Bell et al. (2019), allows for depth and outputs measured in words rather than numbers and is said to be applied to research questions starting with "how". As this study aims to establish an understanding of how the practical implications of pursuing ambidexterity in a small organization affect NPD, a qualitative research strategy was perceived as a suitable strategy for providing a desired descriptive outcome on the answer to the proposed research question (Bell et al., 2019). Henceforth, as the eventual outcome of this topic was unknown, an exploratory approach as granted by a qualitative strategy was advantageous as it permitted a broader research question at the start which in turn narrowed down over time, related to the interpreted data (Bell et al., 2019). This was achieved through flexibility by enabling questions to be adapted to specific situations and aligned with discoveries made during the process of data gathering. For example, early on in the process of data collection, a pattern related to incubation was noticeable among the interviewed employees which was then later on included in the following interviews.

This research further followed an abductive approach, derived from the exploratory nature of the research method needed to analyze the case of how working ambidextrous in a small organization affects NPD. The purpose of this thesis is not to test existing theories or research as commonly related to a deductive approach. Neither is it concerned with developing a new theoretical concept or framework related to an inductive approach. Instead, closely related to how Bell et al. (2019) refers to abductive approaches namely to make sense of puzzling facts, the idea of this thesis is to understand the practical implications and effects of a phenomenon that is poorly defined in theory. By adopting an abductive approach, one can also overcome the limitations commonly associated with the two other approaches. Firstly, an inductive

approach needs an uncertain amount of empirical data to build a theory and prove a theory (Bell et al., 2019). Secondly, a deductive approach has limitations in its dependency on choosing the right theory to explain the phenomenon (Bell et al., 2019). Thus, as a result of the limited amount of empirical data and a lack of proper theories to test the studied phenomenon, an abductive approach was selected as the most suitable option to properly answer the research question of this thesis.

To sum up, the abductive approach in this research is a combined inductive and deductive approach to overcome each of their limitations. By deductively testing the existing literature on the studied topic through a literature-based process of data collection and then using that data to inductively explain and theorize the findings, the limitations related to each approach are minimized.

## 3.2 Research Design

A research design establishes the guidelines and framework for the methodology of the research by conceptualizing how the data collection and data analysis will be carried out (Bell et al., 2019). Several methods can be used to process data when conducting research, some examples are case study, cross-sectional and experimental, with each one dependent on the chosen topic and purpose of the research (Bell et al., 2019). This study will use a case study design to approach the purpose of getting an in-depth view of the practical implications of how working ambidextrous in a small company affects NPD (Yin, 2012).

The study will focus on one specific organization, where an increased depth is desired rather than width. The basic case study comprises an in-depth examination of a particular setting, being concerned with the complexity and distinctiveness of that individual case (Yin, 2012). Thus, in this case, with the specific company under study, the case study design is ideal. As the phenomenon, in this thesis, is related to practical implications which are unclear in academic research, being able to look at specific features of an organization could be beneficial to identify unique and practical outcomes related to them.

The case study design was seen as the most suitable option although it has certain limitations tied to it. For instance, when conducting a case study, Eisenhardt (1989) argues that it may prove harder to assess which results are important and which are idiosyncratic to a particular case so that the research may be unable to raise the level of generality of the theory and rather be related to a specific phenomenon. In contrast, research designs such as cross-sectional studies are nomothetic, as they aim to generate statements that apply to a wider population, regardless of time and place. A nomothetic method, though, is regarded unsuitable since the ambidexterity nature of a firm is made up of processes, something that may change over time, which is not considered if using a nomothetic method (Bell et al., 2019). However, a case study is appropriate when the research does not rely on previous literature and prior empirical evidence but rather provides freshness in perspective to an already researched topic

(Eisenhardt, 1989). As the topic of ambidexterity is extensively researched in academia but arguably lacks the practical view in a smaller organization in the scope of this thesis, the design is suitable for the research topic.

#### 3.3 Data Collection

Presented below are the techniques of both secondary data collection in the form of a narrative literature review and also the primary data collection. To fulfill the objective of this thesis, namely to investigate the practical implications of ambidexterity on a smaller organization's NPD, qualitative interviews were held with employees participating in NPD at the targeted case organization to gather their perspectives on the subject.

## 3.3.1 Secondary Data Collection

Bell et al. (2019) define secondary data as primary material that has been gathered by other researchers and is made available. In this thesis, the secondary data collection was done through a narrative literature review to present the existing literature on ambidexterity and NPD in smaller organizations. The existing literature, consisting of theories and knowledge regarding matters related to the topic of this thesis was then used as the basis for the primary data collection by forming the questions that make up the interview guide and later on to additionally explain and theorize the findings.

#### 3.3.1.1 Narrative Literature Review

As mentioned in the above paragraph, a narrative literature review was conducted for this thesis to gather an initial understanding of what is already known about the targeted area of ambidexterity and NPD. The gathered knowledge was then used to formulate the research question and to build an initial theoretical framework which was later on used to prepare the interview guide.

When conducting a literature review, there are two ways to proceed according to Bell et al. (2019). Firstly, a systematic literature review can be defined as an academic process in which the literature review is replicable and transparent by minimizing any bias (Tranfield et al., 2003). This is achieved by thoroughly reviewing all articles relevant to the subject and describing all the search terms to allow for full transparency in replicating the process. Additionally, through a systematic literature review, all the main theoretical and conceptual definitions are established before data collection. As a result, the systematic literature is time-consuming but ultimately generates less bias than the more traditional narrative literature review (Bell et al., 2019). The narrative literature review, contrary to its systematic counterpart, is more concerned with being a means to gather a preliminary impression of the topic that the researcher wants to understand better (Bell et al., 2019). As previously

mentioned, the research strategy in this thesis is abductive, which in turn is not concerned with testing existing literature but rather looking at that literature to gather an initial impression on the subject, making a narrative literature review more suitable. To further motivate the chosen narrative review, the abductive approach implies flexibility in literature by going back and forth between theory and collected data to enable a dialogue between the two. As systematic literature reviews require all theoretical definitions to be clear prior to the collection of data, this would not support the chosen abductive approach as suitable to the research. Another thing that sets a narrative literature review apart from a systematic one is a lesser focus on the inclusion and exclusion criteria, making it more appropriate for this exploratory case study where broad concepts are gathered to help ease the explanation of the practical implications of ambidexterity on NPD in smaller organizations (Bell et al., 2019).

#### 3.3.1.2 Secondary Databases

To discover information about the relevant subjects of this study, sources were gathered from the digital library sources of the University of Gothenburg, Google Scholar, and Business Source Premier. To obtain articles with high attractiveness, the following keywords were used: *ambidexterity, ambidextrous organization, ambidexterity in smaller organizations, corporate culture,* and *new product development*.

Furthermore, said articles were only considered if they were peer-reviewed. Peer-reviewed articles are a way to make sure that the research used in a thesis is of the highest quality and has undergone a careful examination by subject-matter specialists. The peer-reviewing procedure improves the credibility and validity of the research presented in the thesis by assisting in the detection of biases, errors, and improper research methods. Peer-reviewed articles were used to show their expertise in the field, increase the value and relevance of the research, and increase the likelihood that it will be acknowledged and accepted by the academic community (Bell et al., 2019).

#### 3.3.1.3 Inclusion and Exclusion Criteria

Bell et al. (2019), explain that the gap between a systematic and a narrative literature review is becoming more and more narrow as some of the key procedures of the systematic literature review such as exclusion and inclusion criteria are being adopted into the narrative review. By combining these procedures with a narrative approach, the research becomes transparent and replicable which in turn can be argued to increase the quality. As the literature review in this thesis is narrative, broader inclusion and exclusion criteria were adopted and are presented below.

| Inclusion Criteria                                    | Exclusion Criteria  |
|---|---|
| Peer-reviewed articles                                | Articles in other languages than English or Swedish             |
| Articles including at least one of the keywords       | Articles with few quotations                                    |
| Articles about the process assessing innovative ideas | Articles about innovation in general                            |
| Articles about ambidextrous organizations             | Articles about structural ambidexterity in larger organizations |

Table 2: Inclusion and exclusion criteria

## 3.3.2 Primary Data Collection

The primary data collection in this research is the empirical data collected by the researchers. Based on the chosen qualitative research strategy, interviews were chosen as the method for primary data collection to assure an in-depth conception of the research topic. When conducting qualitative interviews, there are two common approaches, namely unstructured and semistructured (Bell et al., 2019). Unstructured interviews, similar to the name, do not follow any structure and are more suitable when the research does not follow a certain topic. On the other hand, semi-structured interviews follow a pre-determined focus related to the secondary data whilst simultaneously allowing for additional questions based on the answers of the respondents (Bell et al., 2019). For this thesis, semi-structured interviews were chosen due to their ability to allow for certain flexibility whilst still following a pre-determined focus. As this research is based on a pre-specified topic, namely ambidexterity in smaller organizations, the interviews followed the material presented in the theoretical framework, something which is further explained in section 3.3.2.2. Lastly, by choosing to conduct semi-structured interviews, partial comparisons can be made between the respondents which would further enrich the discussion of the research (Bell et al., 2019).

#### 3.3.2.1 Case Organization

The studied case organization in this thesis was primarily concerned with the creation of personal electronic devices related to the creative industries as defined by Flew (2011). However, due to anonymity requests, any further description could not be included. Nonetheless, the organization falls under the European Commission's (2020) definition of a small enterprise, having between 10-49 employees and a turnover of less than €10 million. Due to this fact, the population was minimal and the employees that fall under the right criteria were few. Thus, the targeted main sampling consisted of 7 employees at the focal

organization being researched. Noteworthy is that this was below the minimum levels of acceptance according to Warren (2001), who argues that the minimum sample size in a qualitative study should be above 20, but as the thesis is a case study of a small organization, a bigger sample size was unreachable. Warren's (2001) argumentation is however not agreed upon by every researcher, as some point out the fact that the minimum sample size should vary for each situation (Bell et al., 2019). For instance, Saunders (2007) emphasizes that insights derived from interviews are more connected to the analytical skills of the researcher rather than the sample size. A fact that could allow for generalization to be made on a smaller sample size similar to this research.

## 3.3.2.2 Selection of Respondents

The sampling of respondents was done primarily through a small purposive sampling via suggestions from upper management based on their knowledge of NPD and from taking part in both explorative and exploitative processes. This was done due to the qualities of the respondents in that they are well-informed about the phenomenon of interest and can contribute to a better understanding (Etikan et al., 2016). Based on the purpose of the research, namely to investigate the practical implications of pursuing ambidexterity on NPD, a criterion on knowledge regarding the topic was constructed. To meet respondents with that criteria, initial contact was taken with the CEO of the company who in turn directed attention further down the organization to employees who met that criteria and were well-informed on the subject. This could be disadvantageous since it shares the same problem as that of a convenience sample, namely that the more purposive the sample, the more limited the external validity becomes (Andrade, 2021). Granted this argumentation, the purposive sampling made by persons of authority at the studied firm might limit the possibility of generalizing the result of this thesis, as the persons of authority might limit the sample to employees they deem appropriate. However, due to the complexity of the studied topic, a purposive sample was deemed necessary to meet the criteria of the sample.

Maintaining anonymity is a crucial aspect of conducting research, particularly when the study involves sensitive information or data that may be used to identify participants. In the case of this particular research, both the company and the selected respondents have expressed a desire to remain anonymous. As such, a full list of their roles and the specifics of the interview scenario cannot be presented. To ensure transparency, however, it is important to provide a comprehensive overview of the overall sample. This has been achieved through the presentation of Table 3, which contains basic information about the demographic characteristics of the participants.

| Respondent | Company role            | Length of interview |
|------------|-------------------------|---------------------|
| X          | Hardware engineer       | 52:53               |
| X          | Chief Technical Officer | 50:55               |
| X          | Hardware engineer       | 33:57               |
| X          | Software engineer       | 33:40               |
| X          | CEO, former CPO         | 1:14:54             |
| X          | Sales manager           | 39:40               |
| X          | Software engineer       | 40:46               |

Table 3: Information About Interviews

#### 3.3.2.3 Interview Guide

When conducting a semi-structured interview, there are pre-requirements on a certain level of theoretical study because the questions are based upon previous knowledge on the topic (Kallio et al., 2016). Because of this, the questions are determined beforehand and formulated using the interview guide. The guide then covers the main topic of the study by offering a focused structure that can be abandoned for follow-up questions (Kallio et al., 2016). For this research, the interview guide is divided into three parts, beginning with introductory questions aimed at giving comprehensive background information about the respondent. Following the introductory questions, the interview guide narrows down on a previous explorative project done at the company and how the respondents act during NPD. On top of that, simultaneous processes and exploitative businesses during the explorative project and previous projects were mapped to conclude the impact of working ambidextrous. The last part of the interview guide focuses on the innovative climate and the process of bringing new ideas to the table and how they work with ideation internally, to get a suitable overarching idea of how new projects typically take shape.

All of the questions in the interview guide were formulated with the purpose in mind, which according to Bell et al. (2019), ensures appropriability and plausible data to answer the research question. The full interview guide can be found in Appendix 1.

#### 3.3.2.4 Conducting the Interviews

Before the interviews, the respondents were informed about the subject to be able to come prepared for the topic of discussion. This was done through a joint workshop with all the respondents on-site at the organization. The interviews were all conducted as semi-structured,

meaning that they followed a general interview guide but, when significant details allowed, diverted from that (Bell et al., 2019.). Those significant details could include topics and areas that have unintentionally been left out of the interview guide and literature review which could be important for the analysis. The sought-after duration of the interviews was at least 30 minutes or more to allow for in-depth discussions with the respondents. It was important to find a good balance when asking for time because asking for too much time might have led to respondents choosing not to participate and too little time might have an effect on the overall quality and quantity of the data provided (Harvey, 2011). The respondents at the organization were then later on contacted and asked if they wished to perform their interviews face-to-face or through a video meeting using tools such as Zoom or Microsoft Teams. Bell et al. (2019) mention that online meetings and technologies linked to them are becoming more natural for interacting and that concerns linked to them should be treated as less important than previous research has shown. However, for this thesis the preferred method of interviews was to be held through face-to-face interactions as it allowed for visual cues to be picked up easier such as nods and smiles which could have helped to gain and maintain rapport, meaning the connection formed by the spoken and unspoken words between the interviewer and the interviewee (Bell et al., 2019). Ultimately, in the end, all respondents chose to attend their interviews through physical face-to-face meetings.

Five out of the seven conducted interviews were held in Swedish, as this was the native language of both the authors and in five cases the respondents. The underlying reason for doing so was to minimize misunderstandings and to make the situation feel as comfortable as possible for everyone involved, as these five respondents explicitly stated that they preferred the interviews to be conducted in Swedish. To further make the situation comfortable, initial greetings and small talk were held to build trust. Although explained in the workshop, all respondents were once again told that they were free to leave at any time and if they left consent to being recorded. All respondents ultimately agreed to be recorded which in turn helped the interviewer to focus all attention on the interview rather than taking notes. However, in every interview, both authors were able to attend which successively led to one focusing on the guide and the other one taking notes about interesting topics and elaborating on potential follow-up questions.

One of the potential pitfalls when conducting an interview is having some sort of bias. Bell et al. (2019) mention interviewer bias as when an interviewer due to personal characteristics or the way they ask the question, affects the answer given by the respondents. This was avoided by following the interview guide to the fullest extent possible and in doing so, trying to replicate the way questions were asked for each of the interviews. All respondents were asked if they felt comfortable being recorded to allow the interviewer to fully indulge in interviewing rather than taking notes. Conclusively the interviews being recorded were set out to be fully transcribed as soon as possible from the point that the interview was conducted as a way to make sure that no data was lost and so that all the feelings which may have occurred during the interview were put in writing (Bell et al., 2019). Thomas (2006) argues that to make abductive findings usable, the people analyzing the data must make decisions about what is important and what is not, thus implying subjectivity and non-replicability, which

could, in turn, impact the possibility of generalizing the results in a wider aspect. For example, non-verbal communication could affect how the interviewer interprets what was being said, making assumptions that sometimes might not be right.

## 3.4 Data Analysis

To gather the empirical data for this qualitative study, semi-structured interviews were as previously mentioned performed. Bell et al. (2019) emphasize the significance of adopting a data analysis approach that is appropriate for the study's overall aim. Data from qualitative research is often rich, detailed, and unstructured since it seeks to grasp each person's particular social reality. The information gathered is often unstructured, even in semi-structured interviews, and the responses may differ when aggregated. To find the underlying patterns and meanings in the respondents' responses, it is crucial to employ a flexible approach to data analysis (Bell et al., 2019). The two most common methods for examining qualitative data are thematic analysis and grounded theory (Bell et al., 2019). As a generic method for doing qualitative research, grounded theory concentrates on formulating theories through an iterative process (Bell et al., 2019). On the other hand, the thematic analysis focuses on locating and examining patterns in the data to discover overarching themes (Bell et al., 2019). Due to the time frame and need for flexibility of this study, a thematic analysis was considered the most suitable. It is considered flexible in its way to enable systematic organizing of vast volumes of unstructured material collected from interviews. First, the authors familiarized themselves with the collected data. This involved reading through the transcripts several times and obtaining a comprehensive view of what was said in the interviews. The vast volumes of materials were then structured, labeled, and organized by color coding. This involved finding words, phrases, or data segments that were related to the research question or that stood out in some manner. These codes were then arranged and similar codes were grouped into themes that related to the primary purpose of the study.

Furthermore, in thematic analysis, Ryan and Bernard (2003) argue that what should be looked for is repetitions, indigenous typologies or categories, metaphors and analogies, transitions, similarities and differences, linguistic connectors, missing data, and theory-related material. These factors were well suited for the research strategy and design of the study, as they further facilitated qualitative research, finding depth when analyzing the data. As the study aimed to analyze the experiences of the respondents, together with relevant literature on the subject, the thematic analysis seemed well-suited. The results of the thematic coding are shown in Figure 5 below. The identified themes were initiating new projects, stages of projects, balancing exploration and exploitation, and innovative climate. These themes were later used as the structure of the empirical findings.

#### 1st order theme > 2nd order theme **Codes** The need for creating a product now · Need for cash flow · Emergency rockets · Need to find a way to fix the cash flow gap Iniating new · Innovation and speed to market are crucial · Unanticipated issues and delays • Tight deadlines projects · Calculating required time and money • Spinoff products of their existing portfolio · Combine existing IP with new Enablers · Working pragmatically · Increased attention towards a more finished product · Rigid and non-flexible · Employees don't pursue multiple projects or leave process when finished Stages of projects · Lack of time for creating new ways to overcome issues Similar team and · Need for cash and strict deadlines definition throughout · Little to no room for input in decisions about NPD the process · Management decides upon new projects • Attempts to separate the organization in different · Pursuit of clear structure to achieve balance in Structural exploration and exploitation ambidexterity · Lack of employees and financial assets **Balancing** · Focus on the most pressing deadline Temporal exploration and · After product launch, fixing problems that haven't ambidexterity been prioritized previously exploitation • Organizationally wide-focus on one project Contextual • Perform exploratory efforts at home/after hours ambidexterity · participate in meetings and projects when unnecessary/already finished Incubate new ideas before presenting them · People have a lot of ideas · Creativity is valued · Ability to be · Employees with expertise innovative · No concrete organizational support Innovative · Fewer discussions of new ideas · Dependent on existing IP Disabling factors climate · Hard to think outside the box · Deprioritizing innovation work • Treatment of ideas · Need for better ideation process · Position or status could influence Lack of feedback

Figure 5. Coding Tree

## 3.5 Quality Criteria

The traditional quality criteria used when conducting business research are reliability, validity, and replicability (Bell et al., 2019). However, qualitative research is not concerned with measurement, and therefore some claim that the criteria of reliability and validity are not relevant. Instead, Lincoln and Guba (1985) and Guba and Lincoln (1994) introduced a proposal that suggests the need to establish and evaluate the quality of qualitative research using alternative methods for reliability and validity. They presented two main criteria, which are also described by Bell et al. (2019) to assess the quality of a qualitative study: trustworthiness and authenticity. Trustworthiness is moreover made up of four criteria: credibility, transferability, dependability, and confirmability.

#### 3.5.1 Trustworthiness

#### 3.5.1.1 Credibility

Credibility is the degree of confidence a qualitative researcher has in the authenticity of the findings of their study. The key question is how the researchers verify the authenticity and correctness of the results. According to Bell et al. (2019), there are many different interpretations and points of view about social reality. To make sure that the findings are consistent with the study participants' viewpoints, the research must adhere to ethical standards and communicate empirical findings to them. Furthermore, by building an early knowledge of the subject and participants, credibility may be established (Shenton, 2004). To achieve this, the authors conducted a workshop together with all respondents before the interviews were held, where the main purpose of the study and the overarching literature were presented. This resulted in a mutual understanding among the respondents, where everyone was given the same introduction, thus mitigating the risks of misunderstandings and different interpretations. The authors allowed the respondents the opportunity to reject participating at any time before or during the interviews, and they were assured total anonymity to assure that they felt free to be authentic in their answers.

#### 3.5.1.2 Transferability

Transferability is the process by which a qualitative researcher demonstrates that the conclusions of their study may be transferred to different contexts, such as populations, phenomena, or circumstances that are similar (Bell et al., 2019). Shenton (2004) argues that in qualitative research, in contrast to quantitative research, transferability is difficult to achieve since interview insights are context-specific and may not be transferable to other groups or circumstances. This could be challenging for this study as the results will only be completely accurate concerning the studied organization. However, the results of the study could be applied to other small companies in similar industries showing similar challenges as the one

in focus. While still giving the studied organization the anonymity desired, the study aims to apply to different contexts as much as possible.

## 3.5.1.3 Dependability

Dependability is the extent to which a study can be repeated by other researchers and provide similar results. Thus, the research report should provide enough details for someone to be able to duplicate the study and get the same results (Bell et al., 2019). To ensure this, the research strategy and design of this thesis are clearly defined and described by the authors to facilitate an understanding of the research process. However, a complete transcription of the interviews could facilitate the understanding of readers even further, but since the studied company desired to be as anonymous as possible, only specific quotes were presented in Chapter 4. Despite this, the authors have attempted to be as comprehensive as they can be while yet maintaining the confidentiality of the firm being investigated. This illustrates the authors' efforts to increase the dependability of the research. Nevertheless, the chosen narrative literature review, rather than a systematic literature review, can reduce the dependability of the study (Bell et al., 2019). The interpretation and study selection of the authors plays a significant role in a narrative literature review, which might bring biases and subjective judgments. It may not be clear how studies are chosen, assessed, and synthesized, which makes it challenging for other researchers to reach similar results.

## 3.5.1.4 Conformability

The conformability of a study has to do with how objective the conclusions are. It includes the idea that the results are based on the responses of the participants and are not influenced by any researcher biases or personal objectives. The researcher must take steps to prevent any biases from changing how the participants' words are interpreted to fit a preconceived narrative to achieve confirmability (Bell et al., 2019). The authors of the current study have taken precautions to assure impartiality by following the research method and refraining from any behaviors that would taint the study's objectivity. This involves preventing respondents, the cooperating firm, theoretical preferences, personal beliefs, or other factors from influencing the study. Also, throughout the study process, the writers have cooperated, having critical discussions and thoroughly evaluating each other's choices and actions.

## 3.5.2 Authenticity

The social and political influence that may be shaped by the depiction of various points of view within a given social environment is the main emphasis of the idea of authenticity in research (Bell et al., 2019). The writers of this study are aware of their duty to fairly portray many viewpoints. To do this, a diverse array of respondents in various positions were interviewed. The authors have also ensured that the results are presented honestly by treating all respondents' responses in the study equally. No point of view has received special

consideration or been valued higher than others. A trusting relationship was furthermore created by informing the respondents of the purpose of the interview beforehand and giving them the choice to decline.

# 4. Empirical Findings

In this chapter, the empirical findings stemming from the primary data collection are presented. To allow for an easily followed structure, the findings are presented according to the structure established by the thematic coding. The section is starting with a part on project initiation which is later on followed up by project stages, working ambidextrous, and then lastly a part on the innovative climate.

### 4.1 Initiating New Projects

"It was a meeting with me, X, and Y where we discussed whether we could make something out of parts of product A in some new combination and we envisioned some kind of basic architecture that you can work on and get something new." - R1

The creation and early stages of development of a new product, referred to as product XYZ, were topics of discussion among all respondents. For many years, the team searched for spinoff products of their existing portfolio. They discovered that technological scaling problems made it difficult to come up with workable solutions. Nevertheless, they discovered during a meeting that they could use a portion of an existing component in their current IP and combine it with others to make a new product. This innovative combination of technologies resulted in a minimalistic version of the technology, which was groundbreaking. The development process became a complex hybrid, something the team first underestimated. However, they ultimately produced a better product than they had imagined.

"In the beginning, we had another product that we were going to make, but it was delayed and from a cash flow perspective, we really got a hole in the financials and then it was necessary to bring out an emergency rocket." - R6

"Yes, I guess that budget-wise and financially they must already have it (deadline) ready. It's some kind of emergency rocket. We must have a certain income within so and so many months." - R1

The product was created because the company had another product in the pipeline, but it was delayed. As a result, the team needed to find a way to fix the cash flow gap. They decided to repackage existing in-house things, which led to the idea of creating a new product. These financial issues were furthermore discussed by several respondents, for example by R4, who stated that because of cash flow concerns, people in the organizations "envisioned the whole idea around product XYZ from just having a requirement that we have to do something because we have to release a product". Despite the project taking longer than expected,

causing some financial difficulties, the team eventually created a better product than they had initially hoped for, stated both by R1 and R6. As seen in the quote from R1 above, the initiation of NPD is closely related to deadlines. Multiple respondents defined these "emergency rockets" as critical solutions to a problem or challenge that needs to be addressed quickly, where hard-to-reach deadlines are set to solve the aforementioned cash flow urgencies.

"You have to know some kind of time horizon. Actually, if you had all the money in the world, then you wouldn't need to know when it's finished, then you can just buy components and keep them on the shelf until you're done, but unfortunately it doesn't work that way." - R6

Nevertheless, R6 especially stressed the importance and usefulness of these deadlines. The respondent suggested that planning and deadlines are crucial aspects of a project, especially when it comes to production and the procurement of components. The respondent further noted that a time horizon is necessary to ensure that the project is completed within a certain timeframe. Furthermore, the respondent discussed that the availability of money can affect the planning and timing of a project. If money were not an issue, the respondent suggested, it would be possible to simply purchase components and keep them on the shelf until they are needed. However, this is not a realistic scenario, and the respondent seemed to be acknowledging the practical constraints that come with a finite budget.

"Often we have failed to guess how long something takes to develop, it is difficult to predict." - R2

R1, R2, R5, and R6 further emphasized the difficulties in precisely calculating the amount of time and money required to produce a product. This is, according to them, a widespread issue that many businesses deal with, especially in the technology sector where innovation and speed to market are crucial. There are always unanticipated issues and delays that might affect the development process, despite project managers' and development teams' best attempts to plan and set deadlines. These could involve problems with staff, technology, or money, among other things. As a result, it may be challenging to complete a project on time and within budget. The respondents additionally highlighted the possibility that when faced with cash flow issues, some businesses, including their own, may attempt to create new products to generate money right away. The respondents stated that this strategy may help with short-term financial issues, but it may also cause attention to move away from innovation and toward technical and economic issues. Therefore, rushed products may be of lower quality or feel stressed out.

"We are small enough that the whole team is in a product and when it is finished, you move on." - R2

All respondents agreed that the team that worked on product XYZ was a constellation of around 10 to 15 people. R2 discussed the challenges that the company faces due to its small size and limited resources. R2 further mentioned that the company has always had to operate

pragmatically, rather than following all of the rules and best practices that larger companies may be able to adhere to. The company has only three teams, and they cannot, according to R2, afford to have every function or role duplicated across all three teams. This means that some people may switch between teams, and there may be some shared functions between them.

### 4.2 Stages of Projects

When considering the various stages involved in NPD in terms of involvement and discussion, a number of respondents put forth the notion that the process had become increasingly rigid, with little room for flexibility in terms of project initiation and definition. This trend could be linked to the aforementioned emergency projects, where strict deadlines were imposed early on in the development cycle to ensure that products could be released to the market within a given timeframe and generate much-needed revenue.

"The way we usually work with our emergency projects, it has to become something... We can't afford to cancel and do something else that we think is better, you have to continue with what you have chosen because you are doing it for future financial needs rather than because you have a good product." - R1

However, R1 did not believe that this was the best practice for NPD but rather wished that the company would "be able to pursue a part of a project a little more organically before deciding to make a product out of it or deciding when the product will be ready or exactly what will be included in the project." This wish was common amongst other respondents who agreed that rather than letting cash and a foreseeable deadline define the circumstances of an upcoming project, innovativeness, and thorough research should. R2 did however propose a slightly different version of how projects typically were initiated and emphasized that although it sometimes stemmed from a bottom-up idea, it was mostly based on one person's concept, albeit not a specific one.

"It's still on some level that someone pitches an idea and we move forward with it, as well as either building something new or using existing IP to piece together something of what we already have here." - R2

When the respondents further scrutinized about the stages of NPD residing at the company, they were mostly in agreement that the process was quite rigid all over the project's life cycle. R2, R3, and R4 did however mention that some of the phases typically involved in their NPD were quite repetitive and that it did not follow a linear curve as typically depicted in literature and as in Figure 3.

"In general, it's quite mixed, you don't go through these traditional steps linearly but they rather overlap and you go between them quite a lot." - R7

"When we typically start with the implementation of ideas, we sometimes discover that no, we don't have control over the parts of the product that we thought we would have control over from the beginning, so then we need to go back to the development block." - R3

"A linear process is very good, even if you want it to be more iterative, that you want to work sort of like: Here is a function, now we make it and finish writing it and then we test it. But it is very difficult in a hardware project because you are so dependent on, well that the base is there." - R4

Conclusively it was noted that a common trend was observed whereby the same team members tended to maintain their positions throughout the entire NPD process, with changes occurring closer to the launch date when more employees within the organization became involved in the project. This will be explained in more detail in the following section.

### 4.3 Balancing Exploration and Exploitation

The respondents expressed concerns regarding the challenging process of balancing exploitative business practices while pursuing explorative projects. All respondents emphasized that the pressing deadlines associated with the former often consumed the majority of their time, leaving minimal resources for explorative endeavors. The respondents further elaborated that the exploitative efforts were primarily centered around addressing critical issues in existing products and projects. This approach, commonly described among the respondents as "putting out fires," was a reactive strategy that focused on resolving problems rather than developing new products or services.

"We had, for example, in 2019 a fire in a factory so we could not get a specific component. Then we had to look for alternatives and more expensive emergency solutions. It was a key component that was no longer there when it burned down. As a result, we had to redesign the whole product with a different more expensive component. This is the kind of thing that can happen afterward in an existing product. Then it will be a new hardware version and product." - R1

For example, and as seen above, respondent R1 cited an event in 2019 with an actual fire, where one of their suppliers was unable to deliver components. This unexpected issue required the organization to divert significant resources toward finding a suitable replacement, ultimately resulting in delayed production timelines and increased costs. Such scenarios highlight the challenges of balancing short-term goals, such as addressing issues in existing products, with long-term explorative projects that require sustained investment.

Some respondents further mentioned times when exploitative matters were not prioritized due to pressing deadlines on explorative projects. For example, a common perception was that

when a deadline is closing in and the project is not ready to meet the market yet, all employees who once were part of the product development process stepped in to make sure the set-out deadline was met. Rather than prioritizing between exploitative and explorative efforts, prioritization was then made to work fully with the most pressing matters. The respondents argued that it was natural to feel the pressure to focus on the most critical tasks and finish them quickly. They further emphasized that it could be challenging to allocate sufficient time and energy to other important tasks or side jobs that were not immediately pressing.

"It can often be the case that if you are in a hurry to get something done, then it is quite difficult to keep another side job as a priority that you make progress there as well. It becomes easy to lean towards what burns the most. That which is proven to have a deadline. Where someone asks when you can be done with this and that. It becomes easy to do it and not the side thing." - R1

Along with this prioritization and as a result of the products becoming more finished, a noteworthy trend identified by the majority of respondents was the increased interest among employees to contribute to the product as it became more refined. Something which R2 and R4 illustrated in the following quotes:

"When you start to see that it becomes a working product then the whole company comes and throws their fingers at it and comes with input and such." - R2

"There was, for example, a large turnout around the project at the end where the entire company contributed new ideas, some of which were too late however." - R4

Of course, with increased interest and additional input, the respondents also insinuated an added extra pressure on the already tight deadline. The consequences of the organization having to fully prioritize the most upcoming project were, according to R7, R4, R2, R6, and R5 that it may also lead to neglecting important aspects of other ongoing projects that require attention. This may cause quality issues or missed opportunities for improvement, ultimately affecting customer satisfaction. For example, R6 argued that when new projects become the sole focus, existing products/business gets negative consequences because "late in the process when it is more stressful with the launch, the sales won't be as good on the others products and they lose quality as an effect".

Upon being asked about the possibility of achieving balance in a different way, the majority of respondents displayed a sense of hesitation whilst still acknowledging the existence of issues within their current work methodology. Apart from R4 who mentioned that he thrived on: "trying to spend longer periods focused entirely on one thing and then maybe a longer period focused entirely on another thing". The vast majority of the respondents recognized the need for a more balanced approach but were uncertain about how to achieve it with their current tight deadlines and need for rapidly recurring cash flows. Respondents mentioned how previous attempts have been made to work more structurally separate with exploitative and

explorative businesses but that they have ultimately failed as they lack the necessary amount of employees to undertake such a structure. R2, who had been at the company since 2009, explains the dilemma that historically has been and remains, through the following sentences:

"It's probably quite simply that we've always really been a bit too small in terms of personnel to do everything according to the tricks of the trade so to speak. We have always been forced to do things a little more pragmatically. We simply cannot afford to have all functions duplicated in two." - R2

There remains however, as previously mentioned, desires to work more balanced. R3 mentioned that through having a more balanced approach "it's usually what gets people most interested and most engaged (..) but either there is no interest or that you don't have the time to do it." According to the responses received, several individuals acknowledged the existence of issues associated with their present organizational structure, and as a means of coping with these problems, many respondents resorted to additional exploratory or exploitative efforts in their free time, often even after regular working hours. R2 explained this through the reasoning that most of the company's employees use the products they make themselves, and by doing so have a self-interest in constantly making them better functioning.

"People who work here use our products in their free time as well. And then you have a lot of ideas and you fix it to make your own workflow a little better and then maybe you suggest this as an improvement to the project." - R2

Related to the topic of having an interest in the products, R3 and R6 admitted that they continuously participated in meetings and parts of projects despite the completion of their designated tasks, due to their self-interest in the success of the project or product. They explained that they were both so involved in the process and that it eventually would lead to them choosing to sit in, even when they were finished or sometimes even after working hours as R2 mentioned previously.

"I would like to be involved, in some way until the start of production in any case, and preferably also during the start of production to see that no new childhood diseases are discovered in things that have to do with my stuff." - R3

"Absolutely that one can balance it to more 50-50 by not pulling things yourself in any way. but it was also at my own risk." - R6

However, working after hours was not something that was sought after by the company and R2 joined in on the other respondents by stressing the importance of achieving a structure that is more balanced in both explorative and exploitative efforts. He explained that while it was true that many novel ideas and innovations emerge from individuals exploring and experimenting with new concepts during their own personal time, it was imperative that employees were granted the opportunity to engage in such endeavors during paid working hours.

"People have made concepts in their spare time because they haven't been able to do it during working hours, that then leads to them getting the opportunity to do it during working hours." - R2

"A lot of innovation has come from own initiatives that employees have been testing on their own time and that is the problem that it needs to be encouraged so that you can do such things on the company's paid time instead of having to sit at home and knocking together cool stuff." - R2

According to a large majority of the respondents, the greater part of exploitative efforts were directed towards products that had already been released. The primary underlying reason for this trend was that after the hardware development phase was completed, the scope for improvements was limited primarily to software-related modifications. Following the views expressed by the respondents, another reason for being unable to fully complete exploitative efforts during periods characterized by tight deadlines was the lack of adequate time. This constraint precluded the possibility of accomplishing all the necessary tasks within the stipulated timeframe, necessitating the need to postpone their completion to a later time.

"Those who already have our products, we make it sell well for a long time by making it better and better. But then the hardware is the same since the first day of sale." - R1

"It becomes an even better product when we come up with new features and add them both during product development and later on in new software updates." - R7

"You put a lot in the backlog and come back to it later. Then maybe add them as improvements you make after the launch." - R2

The respondent identified as R5 posited a parallel between the post-launch improvement process of the organization and the video game console industry, noting that the majority of exploitative efforts in the latter domain tend to focus on enhancing the quality and diversity of games available on the console rather than the console itself. This comparison may be indicative of a broader trend within the technology industry, whereby innovation and growth are largely driven by the development of complementary products and services, rather than the primary product or service itself.

"Nintendo as a business is very standardized, one fixed console, one portable console, one extra controller, boom. And then you have hundreds of games, and you don't create all these games. You provide some code and the operating system, but then what happens after is all the games." - R5

### 4.4 Innovative Climate

"Most of the time, everyone understands that it becomes an even better product when we come up with new features and add them both during the development of the product and later in new updates." - R1

R1 claimed that creativity is valued culturally in their company and that it frequently results in superior products and functionality, even if it means deviating from the project's original scope. R1 furthermore showed awareness that these actions could nevertheless necessitate extra labor and extended deadlines and that this demonstrates the conflict between the need for innovation and the obligation to complete projects on time and on budget.

"I think that people have quite a lot of ideas and they need time and attention and after a long time maybe you have found something that you can pitch and take it on to something that we can build on." - R2

"But it probably requires that we not only have planned activities but try to find a framework around it, I don't know which framework is best, but one idea is that you work, for example, a certain part of your time on your own ideas or on activities which are outside of planned."
- R2

"So we probably need to find a system for that. And it can be different depending on the department. Some may need to have it scheduled. One hour a week when you do things and then report them." - R6

R2 argued that while individuals inside of the organization have a lot of ideas, it takes time and effort to turn those ideas into something worthwhile. Before they can be pitched and grown into something the firm can expand on, ideas might need to be fostered and developed over a longer period of time. R2 moreover suggested that a framework could be developed to let employees work on their own initiatives or projects that fall outside of their assigned tasks. R6 agreed and claimed that a system needs to be put in place to ensure that employees have the time and resources to work on their own projects. This would, according to R2, encourage innovation within the business and thus result in fresh, original ideas that might ultimately bring value. Finding the ideal framework may be difficult, but R2 and R6 recommended that setting aside a specific amount of time for workers to concentrate on their own concepts or on activities outside of assigned tasks might, maybe varied between departments, be a good place to start.

"I wouldn't say there's any organizational support for it." - R3

"You have much less time to think about future ideas if you have a lot of other things to do, obviously. And who to talk to? Usually, I just talk to my colleagues." - R4

However, R3 and R4 expressed challenges of creating a framework for employees to work on their own ideas and/or activities that are outside of their planned work. First, R3 argued that there is no concrete organizational support for employees to be innovative and come up with new ideas. R3 moreover suggested that while there may be a general awareness of the importance of innovation, there is no concrete action being taken to support it, and therefore, there is no overarching focus on it within the organization. Additionally, R6 claimed that innovation is not really fostered or discussed in the organization, rather is creativity the subject more frequently in focus. Accordingly, R4 agreed that it is challenging to find time to think about potential ideas when there are many other tasks to complete. R4 further noted that they mostly discuss their ideas with colleagues but do not mention any organizational support or encouragement for innovation.

"So there is much less unplanned talk, and I can feel that has reduced discussions of new ideas." - R1

"I can imagine that there has never been a need from the company before to try to solve it, because it has come anyway." - R3

Concerning the obstacles that impede the introduction of new ideas, the respondents offered personal insights. First, R1 mentioned that since employees started working from home due to the covid-19 pandemic, there has been a decrease in informal meetings and talks with colleagues, which has resulted in a reduction in idea discussions. Furthermore, the company moved to a new office space a few years ago, and R1 argued that no "coffee corner" has developed in this new location. R1 had noticed that as a result of this, there have been fewer spontaneous talks which in turn has also decreased the frequency of idea generation between colleagues. R1 expressed this by saying that "that aspect of remote work is already noticeable, we have almost no new ideas on the table at the moment." This was moreover touched upon by R2 as well, who stated that "...especially when we sit in our home offices only focusing on that specific project without having spontaneous chats with our colleagues." In a similar discussion, R3 argued that there had never been a need for the company before to try to solve this idea generation problem because it had always come for free. R3 moreover argued that the main impediment hindering people from bringing forward ideas is the concern of short-term financial gain.

"We are very dependent on continuing to work on our existing IP, and that is natural in a development company like this, but the barriers are such that it is difficult to think outside the box sometimes because you have to relate to this hard platform." - R4

Followingly, R4 suggested that the fact that the employees are very dependent on continuously working on their existing IP, and argued that it is natural in a company of their nature. R4 stated that this makes it difficult to think "outside the box" because financial and time constraints force them to rather ideate within the confines of their existing IP, or "inside the box." This is explained by R4, in that they are encouraged and motivated to be innovative,

and to present new ideas, but that these financial and time constraints are potentially impeding their ability to innovate in a radical way.

"But if you feel that this idea might not be easy to grasp, then there is no point in posting it because then I feel that I will be misunderstood. So unfortunately it won't be published and it could be the best idea." - R6

Furthermore, R6 mentioned the risk of being misunderstood when coming up with complex ideas. R6 claimed that although there is a "bank of ideas" in their intranet where employees can upload their ideas, there is a risk of being misunderstood or even judged, resulting in a reluctance to put one's ideas there. Due to this, R6 argued that the company might miss out on the "craziest" and best ideas, implying that there is a need to find a way to include more of these creative ideas.

"It's not that we don't want to. But it is the case that there is always something that is urgent or burning because of course it is also about focus. To do what is most important at the moment." - R2

"I mean if we constantly de-prioritize that type of work for a longer period then it's all of a sudden very bad for the company because we've lost a lot of innovation power so that you can, I'm sure, quantify the value in the innovation work." - R7

R2 described the challenges of balancing demanding responsibilities with creative endeavors in a corporate setting. R2 contended that the problem is not a lack of interest in discussing ideas, but rather an overwhelming number of urgent issues that demand prompt response. The core of the problem, according to the respondent, lies in focus and priority. This means that the most essential activities must always receive the most strategic attention if resources are to be used effectively. As a result, R2 recognized that there are conflicting demands on the company's time and resources and stressed the significance of taking a balanced approach to attaining their objectives. Furthermore, R7 showed concerns regarding the negative effects of consistently deprioritizing innovation work inside the organization. R7 emphasized that such disregard might result in a significant decline in the company's capacity for innovation, which can have devastating repercussions for the company. R7 asserted that innovation work's worth can, and maybe should, be measured, emphasizing its critical role in fostering the company's long-term success. To maintain the company's competitive edge and guarantee its continuous sustainability in the market, the issue consequently centers on the necessity of continually committing enough resources and attention to innovation activity, according to the respondent.

"I think what is missing is that you carry on a discussion around all the ideas that are brought forward, otherwise we have a problem because then you have spent a lot of time putting something together, but you don't get much feedback on your work. That is where we can also hopefully help by having a clearer framework around it." - R2

R2 argued that once ideas are actually presented, there is a need for a more thorough and rigorous system for ideation processes. According to R2, the main problem at hand is the lack of discussion surrounding the ideas that are put forth, which ultimately results in a lack of feedback for the ideator. The respondent emphasized that there is a genuine risk that the time and effort put into developing ideas would be wasted due to the lack of actual discussion of these ideas. To solve this problem, R2 argued for the creation of a clear framework for idea exchange that would encourage fruitful debate and provide a suitable means of feedback.

"In general, ideas are usually interesting and are appreciated, but I could imagine that over the years there have been some complaints that some people's ideas aren't listened to as much as others." - R1

"But also, how do we work with ideas and how do we make everyone feel involved and able to connect with an idea." - R4

After being asked whether or not all ideas are being treated equally, R1 suggested that there may be differences in how various individuals' ideas are appreciated or acknowledged throughout time. R1 believed that specific roles or positions may have a larger impact on the development of concepts and outcomes. The respondent also made the argument that ideas coming from those who are not generally involved in product design might not always be incorporated into the development process. As a result, R1 emphasized the value of inclusion and providing everyone with an equal opportunity to offer ideas, regardless of their position within the organization. This issue was also discussed by R4, who claimed that there is some uncertainty regarding the process of working with new ideas and who one should discuss them with, in the first place.

"...you would obviously like all ideas to be handled equally, but we have been forced to take shortcuts a bit too, just like for firefighting purposes so to speak." - R2

Moreover, R2 postulated that the organization has resorted to ad-hoc measures, possibly due to time constraints or other external factors, which could account for discrepancies in the treatment of ideas. However, it was argued that in some cases where time is of the essence or there is a compelling need for money, such expediency may be justified. In contrast, when things are calmer, R2 claimed that the organization inherently strives to be inclusive and open to suggestions from all parties, without taking shortcuts. This inevitability of shortcuts was also mentioned by R5 when talking about finding the balance between delivery and exploration.

"But I have the perception that it is rather that in recent years the ideas have come from the management because we need to get a product out. And then the question has been: what is the minimum effort to be able to make a product? And then is the fact that the discussion was led rather based on that than it being idea-based from the beginning." - R3

R3 argued that in recent years, ideas have often come from the management level rather than from further down the organization. R3 emphasized that management thus has had a more significant role in driving the ideation process. The respondent further mentioned that the focus has rather been on bringing a new product to the market with minimum effort than on those products based on a genuine idea process. Moreover, R1 mentioned that this can result in an unequal treatment of ideas based on whether they are presented by management or not. Finally, R3 suggested that this implies a prioritization of speed and effectiveness above creativity and imagination.

## 5. Discussion

In the discussion section, the respondents' perspectives and views are presented and compared to how they correspond with the literature on the subject. First, the discussion takes aim at how to find the right balance between exploration and exploitation in smaller enterprises and how it affects the studied case organization's ability to work ambidextrously. Next up, the discussion touches upon the disabling factors and ultimately ties it all together with an analysis of the ambidextrous implications on NPD.

## 5.1 Finding the Right Balance

Attaining the right balance between exploration and exploitation, as widely discussed in the literature, is not a straightforward task. As identified through the data collection, several factors determine the optimal balance such as the availability of resources and the accepted levels of uncertainty. Similar to how Gibson and Birkinshaw (2004) explain that the demands of an organization to some degree are always in conflict, the studied case organization faces conflicting demands internally. There is an expressed inquiry for achieving a more structured balance amongst the employees whereas pressing cash flow demands call for attaining the current status. To further contrast with the definition of exploration, namely searching, risk-taking and experimentation and ultimately being alert to the external environment, the respondents expressed that the efforts currently taking place in the organization are all inclined towards making money now which is more in line with the definition of exploitation (March 1991; O'Reilly & Tushman, 2004; Duncan, 1976). As such, there seems to be a discrepancy in the balance between the two. Although cash injections are needed in the studied case organization, Raisch et al. (2009) argue that organizations need to pursue both to get a long-term competitive advantage over their competitors.

While exploration would allow the organization to discover new opportunities, create new markets, and develop innovative products or services, exploitation on the other hand enables them to optimize and refine their existing resources, processes, and products. By balancing both, the studied case organization could create a sustainable advantage that allows them to adapt to changing market conditions, stay ahead of competitors, and drive long-term growth (O'Reilly & Tushman, 2004). It is however important to note that the optimal balance between exploration and exploitation may vary depending on the organization's industry, size, and competitive environment. As the empirical findings also showed, there are some minor conflicting demands internally as to how a perfect balance would look like. For example, one of the respondents argued that they would prefer to work 100% with one project at a time, in turn dismissing the potential to pursue contextual ambidexterity. The problem, however, still remains, because as Teece et al. (1997) suggest, neglecting either exploration or exploitation

can lead to missed opportunities or a decline in performance over time, indicating that the studied case organization should rethink its current balance.

Based upon the results, it is further evident that, similar to how Goffin and Mitchell (2017) emphasize that possibly as much as 84% of all product innovations are incremental, related patterns are visible in the studied case organization. While it is true that most of the employees yearn for more time directed towards explorative efforts, they also need to harvest resources from their current product portfolio simultaneously. Many of the respondents highlighted the fact that as the company is structured right now, with an increased focus on expanding its portfolio through existing IP, one can distinguish that the outcome is naturally inclined to result in limited amounts of exploration and more exploitation through incremental innovation. A fact that, when contrasted with the arguments of Luger et al. (2018), can imply that the organization will build fewer capacities to overcome periods of more radical change.

### 5.2 Working Ambidextrous

Based on the analysis of the studied case organization, it can be observed that the company's ambidextrous initiatives are not functioning efficiently. The consensus among the respondents is that the organization lacks a suitable structure to facilitate ambidextrous working. Additionally, the balance between exploration and exploitation was not a deliberate strategy but rather seen as a byproduct of internal deadlines. These findings are significant as they indicate that the organization is not fully embracing the principles of ambidexterity.

The findings of the studied organization reveal that pressing deadlines heavily influence the prioritization of tasks within the organization. Respondents reported that they often resort to prioritizing the most pressing process at hand, with managers setting strict deadlines for specific projects and as such determining the project team composition. This approach contrasts with the concept of temporal ambidexterity, which suggests that organizations should balance short-term and long-term objectives and make judgments unit-wise regarding time periods of specific projects (Gibson & Birkinshaw, 2004; Wang et al., 2019). Based on the respondents' answers, the main stance of the organization was having longer periods of exploitative efforts, similar to how Tushman and Anderson (2018) describe it but with minimal shifts towards more explorative stances when finished with certain deadlines, resulting in a somewhat solid state rather than a shifting one. This could be the result of a lack of proper managerial strategy, as the respondents frequently mention that they are tasked to deal with the most urgent situation firsthand. The respondents however, although not currently as much, have previously engaged in more explorative efforts and kept the same structure since, possibly taking advantage of not having to structurally separate to pursue multiple efforts. A fact that can be extracted by the shift that the company currently pursues where after a product has been finished, for a short time focuses its attention on existing products and processes that have been ignored during NPD whilst simultaneously searching for new product opportunities.

Wang et al. (2019) have further highlighted the potential limitation of a myopic perspective toward present-day challenges when considering the practical implications of temporal ambidexterity. This concern has also been echoed by the organization under study, which stressed that the deadlines set by the management team allow for little to no capacity for long-term problems. It was further apparent that even some of the more pressing problems, typically phrased as "putting out fires" in the empirical findings, were delayed to the largest extent possible. One could potentially contrast this to how Wang et al. (2019) explains transition periods which implies reorganizing strategies and structures currently in place, where the studied case organization was risking more delay due to reconfiguration than actual problem-solving.

Apart from showing tendencies of temporal ambidexterity, some of the respondents showed signs of working contextually ambidextrous. While the most pressing deadline was the main priority, some respondents told of times when they would conduct exploratory efforts after office hours or on their own time. Although not part of a structured effort stemming from the organization itself, this was according to the respondents a common source of ideas for new products. It is worth noting that this finding raises questions regarding its similarities to the definition of contextual ambidexterity put forth by literature. While McDonough and Leifer (1983) define contextual ambidexterity as enabling and encouraging individuals to make their own judgments on how to divide their time between conflicting demands, the respondents in this study seemed to engage in exploratory efforts voluntarily and without any encouragement from the organization. Therefore, it remains unclear whether the efforts of the respondents can be classified as contextual ambidexterity in the traditional sense. On one hand, such exploratory efforts may lead to new and innovative product ideas, which can enhance the organization's competitiveness and performance. On the other hand, engaging in such activities outside of regular work hours may lead to burnout or work-life imbalance, which can negatively affect employees' well-being and productivity.

Nevertheless, it is worth noting that the respondents all enjoy the products that the organization makes and thus are self-interested in improving the products at home and after hours. In addition, the arguments of Chen (2017) suggest that a limitation of working contextually is that new initiatives that are not radically different from the core business might emerge naturally in the organization, while those that are very different in their nature might need separate incubation. Therefore, doing exploratory work after hours might act as a natural way for employees to let ideas, that are different from the core business and thus more explorative in their nature, incubate until they are fit to become new products. Something that can be further backed up by the arguments by March (1991), who mentions that a pitfall with contextual ambidexterity is a lack of focus, which in turn might affect exploratory efforts negatively at the workplace. As O'Reilly and Tushman (2004) explain, explorative processes tend to thrive in less formalized and structured formats. Therefore, the organization may benefit from encouraging and supporting employees' exploratory efforts, even if they occur outside of regular working hours or at home.

Based on the findings regarding the respondents' behaviors, it is possible to draw a conclusion that the current structure of the organization, with its emphasis on strict deadlines and the need for cash injections, may limit the potential for explorative ideas to gain traction amongst upper management. As a result of that, and similar to how Bledow et al. (2009) argues, employees may engage in exploratory efforts outside of their main work responsibilities in a low-cost manner, often on their own separate time, in order to allow ideas that may be deemed too risky to incubate and develop in a more realistic and hands-on manner before presenting them to the organization. Overall, these findings highlight the tension between the need for efficiency and the desire for innovation within organizations. It suggests that to foster a culture of innovation, organizations should consider providing employees with more opportunities and resources to engage in exploratory efforts within the workplace, rather than relying solely on individual initiative and outside efforts. This can help ensure that innovative ideas are nurtured and developed in a collaborative and supportive environment, rather than being relegated to the sidelines due to concerns around risk and feasibility.

Lastly, the interviews touched upon the subject of doing a structural separation to find a better balance of exploration and exploitation. As noted by the respondents in the studied case organization and corroborated by the findings of Wang et al. (2019), a key challenge with structural separation is the associated cost. Creating dual structures can require the hiring of additional employees, the duplication of resources, and the increase of overhead costs. For organizations with limited resources or in challenging economic conditions, these costs may be prohibitive and make structural separation untenable as a solution. As noted by the respondents, they simply cannot afford to have two employees doing the same thing but on different projects. Partially due to financial constraints, but also due to the constraints set by the deadlines which mostly require all available employees to contribute.

Furthermore, as noted by OReilly and Tushman (2004), there is the potential for structural separation to result in siloed units that are too focused on their own goals and do not coordinate efforts across the organization effectively. For the studied case organization, this could lead to duplicated efforts, a lack of shared knowledge, and a decrease in overall organizational efficiency, something that could have negative effects when working on an already tight deadline. On top of that, it could further emphasize why efforts to pursue structural separation have not worked out.

Conclusively, the studied case organization most often opts for a temporal approach to ambidexterity due to the company-wide span of attention needed on upcoming deadlines. However, minimal parallels can be drawn to Chen (2017) and the benefits of using a dynamic approach to ambidexterity. For example and as proposed by Chen (2017), the usefulness of incubating new ideas, although not explicitly mentioned as intentional by the respondents in the empirical findings, acts as a useful way for the studied organization to pursue new exploratory efforts, whilst also minimizing managerial inference at the specific project level.

### 5.3 Disabling Factors

Goffin and Mitchell (2017) emphasize the crucial part effective strategy and execution play in the process of innovation. The case study, however, demonstrates that the company's innovation approach appears to be largely motivated by the desire to resolve current financial concerns and adhere to strict timelines. This outcome-driven strategy may put short-term financial success ahead of long-term strategic alignment, as shown by the choice to create product XYZ, a new exploratory product, in order to close a cash flow gap brought on by the delay in another product. This might make it difficult to create a balanced project portfolio with a variety of project kinds and risk levels, as advised by Killen et al. (2008), since the organization may emphasize short-term financial rewards over a more strategic and holistic approach to innovation management. According to Klingebiel and Rammer (2014) and Killen et al. (2008), the organization's strong emphasis on meeting deadlines and its strong preference for one major project at a time may also hamper the flow of projects and project innovations. The company might have to meet deadlines to get products to market and address cash flow problems often because of this shortage of flow.

This finding is consistent with the research of O'Connor (2008) and Goffin and Mitchell (2017), who argue that portfolio management decision-making procedures often favor low-risk incremental innovation that aligns with the organization's core business. The company's NPD procedures tend to focus on low-risk initiatives that are pushed by management, with an urgency to bring "safe" products to market without undertaking too many risks or incurring delays, according to interviews with respondents from the studied organization. According to Cooper et al. (2002), employees frequently develop ideas within the boundaries of preexisting IP, which reduces prospects for "outside the box" thinking. This preference for ideas based on deadlines rather than pure creativity might further stifle radical innovation. This is connected to the idea of portfolio balance raised by Cooper et al. (2002), where taking temporal horizons into account is essential. For sustainable development and innovation, a portfolio with a well-balanced mixture of short-term and long-term projects is necessary. However, if the company's time horizon is consistently short, it may miss out on the advantages of a diversified portfolio with a greater balance between short-term and long-term projects.

Additionally, the reliance on existing IP for new product ideas and the preference for low-risk projects based on management-driven deadlines may contribute to a lack of diversity and innovation in the company's product portfolio. This may make it more difficult for the organization to explore new markets, technologies, and consumer demands, which might harm its prospects for long-term development and competitiveness. Furthermore, the ongoing requirement to meet deadlines quickly in order to address cash flow issues brought on by for instance delays in product development suggests a reactive rather than a proactive approach to innovation. This reactive method may result in a cycle of short-term fixes and immediate cash flow at the price of long-term strategic planning and innovation. As emphasized by Cooper et

al. (2002), neglecting long-term projects in favor of short-term gains may result in missed opportunities for future growth and innovation.

An additional noteworthy aspect pertaining to the company's dependence on existing IP is that it may hinder its ability to achieve transformational innovation, as conceptualized by Nagji and Tuff (2012) in their *Innovation Ambition Matrix*. According to this framework, transformational innovation necessitates the organization to leverage unproven resources. However, one could argue that this may be challenging for the company, as they are constrained by financial and temporal limitations, which compel them to rely on existing resources in the form of IP during the process of developing new innovations. As a result, the company may only be able to attain adjacent innovations rather than truly transformative ones. This may also be linked to organizational inertia, the tendency of an organization to continue on its current trajectory, as discussed by Anthony et al. (2019). This will be more likely to occur especially if this reliance on existing IP becomes imprinted in the organization's way of working. Anthony et al. (2019) further state that businesses are often structured to deliver predictable, reliable results, which could be a plausible consequence of this over-reliance on existing IP.

Concludingly, the results of the interviews show that the organization can manage to balance the exploitation of existing resources and the exploration of new opportunities to bring new products to the market. However, strict deadlines and financial urgencies force it to take shortcuts and use existing IP, resulting in a barrier to the utmost explorative ideas. As a consequence, if this continues long-term, employees may believe that they are engaged in exploratory efforts without fully considering the opportunities that may exist beyond the confines of their existing IP. By limiting their thinking to existing IP, employees may miss out on the potential for truly novel and innovative ideas that could significantly benefit the organization. Therefore, it is imperative for the organization to recognize the potential limitations of existing IP on exploratory efforts and to encourage, and maybe most importantly enable, employees to think beyond the boundaries of their current IP.

#### 5.3.1 Corporate Culture

Furthermore, the barriers to being innovative, and not least the question of whether all ideas are treated equally, could be analyzed with the theory of corporate culture, as an inadequate corporate culture might pose one of the biggest obstacles to innovation (Coad et al., 2015; Tellis et al., 2009), and is crucial in terms of creating a positive business culture that appreciates innovation and promotes experimentation (Christensen et al., 2008). The corporate culture of the studied organization will be analyzed with the six building blocks of an innovative culture, presented by Rao and Weintraub (2013).

Values influence an organization's priorities, choices, and resource allocation, and are demonstrated through actions rather than just words. Creating an organizational culture that

fosters the expression of individual values and aligns with the values of its employees is important for fostering commitment and engagement in the workplace (Rao & Weintraub, 2013; Finegan, 2000). There were claims that creativity is highly valued culturally in the company and that ideas are in general interesting and appreciated. However, these values seem to be, at least to some extent, demonstrated in words and not always in actions. This implies that there may be a gap between what the organization professes in terms of valuing creativity and innovation, and how these values are practiced in reality. Managerial inconsistencies can have a detrimental effect on employees' creativity and motivation. Employees may be less likely to take risks and propose innovative ideas as a result of such inconsistencies, which can lead to a loss of trust and skepticism. Employee disengagement can inhibit creativity and innovation because workers may feel their efforts are underappreciated or ignored. Therefore, consistency in the alignment of what is being said and done is significant for maintaining trust, motivation, and creativity within the organization.

Behaviors are critical for firms and need both leaders and people to contribute. Employees should consistently overcome obstacles, be resourceful, and pay attention to consumer feedback. Leaders should show support by replacing outdated goods, motivating with a clear goal, and removing barriers. Innovation in companies is cultivated by innovative behaviors (Rao & Weintraub, 2013; Scott & Bruce, 1994). Regarding innovative behavior at the studied organization, not too many issues were discovered, as most respondents argued that there is an overarching behavior toward innovation. New products are presented consistently, and employees are critically studying technical challenges and listening to consumers' demands. Although concerns about the actual output of exploratory products exist, the company seems to adopt an innovative behavior, with the ambition to keep bringing exciting solutions to the market.

The climate in the workplace has a significant impact on innovation. A supportive atmosphere that fosters involvement, excitement, calculated risk-taking, continuous learning, and independent thought promotes innovation (Rao & Weintraub, 2013). Regarding climate, some concerns have been discovered. For instance, as discussed in Chapter 4, one respondent claimed that due to working from home after covid-19, it has been harder, or less natural, to discuss new ideas with colleagues. Furthermore, the relocation to a new office space seems to have impeded informal, relaxed discussions about new ideas. This has probably affected the task orientation, presented by West (1990), negatively. If employees do not participate in lively discussions and debates about potential solutions, they lose a tool to examine ideas thoroughly, and thus the innovative climate is weakened. Moreover, participative safety, referring to the employees' possibility to bring forth new ideas without worrying about criticism and rejection (West, 1990), might not be completely intact in the organization. As two of the respondents claimed, there might be reluctance against bringing forth new ideas because of a fear of being misunderstood or not taken seriously. These are areas that may need attention in order to foster a more conducive climate for innovation in the organization.

Resources, in the study by Rao and Weintraub (2013), include people, systems, and projects. Of these, people are the most important since they are what really matters in the end. Without expertise in the industry, a company will not flourish. The organization under study demonstrated a high level of expertise and a willingness to innovate, as evidenced by the respondent's awareness of the company's innovation level and their concern for its product portfolio. However, if money and time are considered resources of this kind, that is where the issues exist. As described several times in this study, the company constantly faces financial and time-related challenges, forcing quick fixes and products that are not as exploratory in their nature as they maybe could have been if more money and time were available.

Processes might be where most concerns related to the case organization were discovered in this study. Processes are the paths innovations take when they are created, which can be followed using different methods (Rao & Weintraub, 2013). With the organization in focus, these processes are inadequate. Respondents explicitly claimed that there needs to be a clearer framework around the discussion of ideas, showing that there is no straightforward process to follow that is clear for all employees. Furthermore, one respondent argued that ideas are not always treated equally and that the handling of a new idea could vary depending on the position of the employee. The root cause of this disparity, whether stemming from a lack of awareness or constraints in financial and temporal resources, remains inconclusive. Nevertheless, it is unmistakable that a well-defined and universally applicable process for managing and evaluating new ideas is conspicuously absent within the organization.

Lastly, success as discussed by Rao and Weintraub (2013) was not touched upon enough to be thoroughly discussed in this chapter. However, a potential avenue for further analysis could be an exploration of personal success, which appears to be of significant interest to the respondents. The respondents indicated a strong desire for their own personal development, as seen by their reported comprehension and interest in the company's products. This shows that the respondents' perceptions of personal achievement may include not only career progress inside the organization but also a sincere interest in and passion for the products offered by that company.

### 5.4 Implications on NPD

In order to fully illustrate the implication that the current structure of the company's ambidexterity has on NPD, Figure 6 has been created by the authors and is explained in detail below. It shows the vicious circle of factors that the studied organization is exposed to, which impede its ability to become ambidextrous.

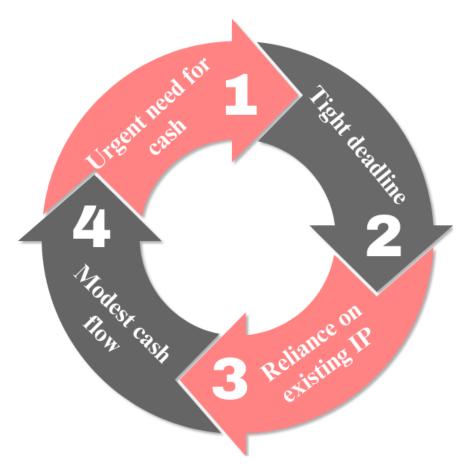


Figure 6: The vicious cycle of NPD. Developed by authors

1: As established in previous paragraphs, the studied case organization mostly works on a temporal ambidextrous structure. This approach enables the organization to make the best use of its employees in the short term by engaging them in the most critical projects at any given time. Something that stems from the cash flow needs of the organization which are influenced by the demands of NPD, which in turn requires significant investments in research and development, marketing, and other related activities. However, the present structure of the organization often leads to short periods of modest cash injections during new product launches, followed by a decreasing flow of cash over time. This can create challenges for sustaining ongoing operations and future NPD efforts, as the organization needs to constantly seek new sources of cash flow to support its activities.

- 2: Following the need for rapid cash injections, tight deadlines are set for NPD, as the organization seeks to sustain its current structure and meet the demands of the market. However, this also creates pressure for NPD teams to deliver new products quickly and efficiently, often at the expense of quality or long-term strategic planning.
- 3: The approach of utilizing existing IP for the development of new products has been adopted to facilitate the setting of realistic deadlines for the employees to meet. Something which, in turn, results in the production of incrementally innovative products, which are a hallmark of the organization's product portfolio. By capitalizing on the strengths of its employees and leveraging existing IP, the case organization is able to create a sustainable and dynamic product development process. However, although these products are often argued to be fairly incremental, they are as explorative as they can be considering the constraints due to being reliant on existing IP. The long-term implication associated with a continuous outcome of incremental products is a potential loss of competitive advantage in a fast-changing environment.
- 4: After bringing an incrementally innovative product to the market, with modest improvements compared to existing products offered by the company itself and its competitors, the cash flows that are generated may also be modest. If customers do not see this new product as being significantly different than earlier models, they might think again before buying the product or wait for a better substitute.

After these modest cash flows, the company will soon again find itself in urgent need of cash injections, restarting the cycle once again. Unless the company finds other ways to generate cash flow, it risks in sight being caught in this cycle.

## 6. Conclusion

In the last chapter, the research question of the thesis is answered and a conclusion is drawn regarding the implications of the studied phenomenon. Furthermore, recommendations to the case organization are proposed as well as suggestions for future research on the subject.

### 6.1 Answering the Research Question

This thesis aimed to contribute theoretical knowledge regarding the pursuit and practical use of ambidexterity in the operations of a smaller organization, and how that, in turn, affects the outcome of the company's NPD. For this purpose, the following research question was formulated:

How does a Small Swedish product manufacturing company pursue ambidexterity and what are its practical implications on NPD?

The studied case organization often opted for a temporal ambidexterity structure to fulfill the need for an organizationally-wide focus on the most pressing deadlines. This approach thus enabled the organization to meet short set-up product launch deadlines by leveraging its existing competencies to develop and introduce incremental innovations quickly. The motive, which appeared to be largely driven by short-term financial concerns and deadlines, would in turn hinder its ability to achieve long-term strategic alignment and portfolio balance. The company's preference for low-risk incremental innovation based on existing IP and management-driven deadlines would limit its ability to pursue radical innovation and explore new markets, technologies, and consumer demands.

Another consequence of the temporal structure currently in place is the limited opportunities for the employees to pursue explorative efforts associated with NPD during working hours. This was reported as partially due to the trailing implication of temporal ambidexterity, namely a full focus on the most pressing project, but also due to the reliance on existing capacities in NPD. Therefore, a number of the respondents reported that they would often resort to performing explorative efforts after hours and when doing so, let the originated ideas incubate until they were fit to be presented with a reliable deadline in sight. This phenomenon is currently taking place due to the employees enjoying the products they make and therefore having a self-interest in finding new ways to improve them. However, a company should not be reliant on their employees finding solutions after hours, as it may impact any effort to build sustainable long-term growth.

The study also identified several key areas within the corporate culture that may pose barriers to becoming a more balanced ambidextrous organization. These include values, behaviors, climate, resources, processes, and success. While there were positive aspects identified, such as an overarching behavior towards innovation and a high level of expertise among employees, there were also concerns raised. There were indications that the organization's values may be more evident in words than in actions, and that there may be reluctance among employees to bring forth new ideas due to fears of being misunderstood or not taken seriously. Additionally, there were challenges related to financial and time resources, inadequate processes for managing and evaluating new ideas, and a potential need for further exploration of personal success as a motivator for innovation.

To concludingly visualize for the reader the implications that the case organization's structure of ambidexterity has, the following model was developed.

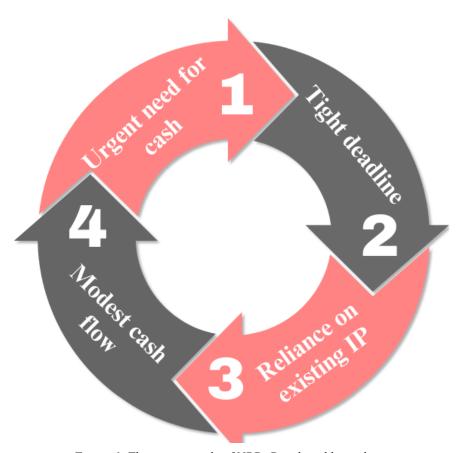


Figure 6: The vicious cycle of NPD. Developed by authors

### 6.2 Practical Implications and Recommendations

Innovation is a crucial aspect of organizational success and growth. However, pursuing exploratory innovations is often challenging for organizations due to financial and time constraints. In this context, it is essential for organizations to identify and pursue alternative strategies to promote exploratory innovations.

One potential strategy is to create different teams focused on projects with varying risk levels. This would make it feasible for the company to have a well-balanced product portfolio that includes both new and existing products. By allocating resources to explore new ideas and products, the company may identify new areas for growth and success. However, due to financial and time constraints, creating such teams may not always be feasible.

Implementing a subscription-based service model is an alternative strategy to encourage exploratory innovation. This could be done in some parts of the organization's existing product offerings. A steady and regular cash flow would result from this, which could reduce the pressure on the organization to meet tight deadlines and hurry the launch of new products. This strategy would provide employees more time during regular working hours to explore new ideas and products, encouraging more creative and innovative thinking, and leaning towards more of a contextual approach to ambidexterity during regular working hours. Additionally, a subscription-based service model can help the company reduce its reliance on existing IP, which is a significant barrier to innovative thinking. By having a stable and predictable cash flow, the organization can focus on exploring new areas of growth and success, leading to sustainable and long-term success.

In addition, if a subscription-based model is deemed inappropriate or unachievable, another alternative is to allocate more time towards improving existing products and a little less towards exploratory projects (or at least new products). Respondents have noted that a high degree of focus on new products can decrease the possibility of gathering steady cash flows on existing products. By prioritizing cash flow, the company can work longer on new products without the constant stress of meeting tight deadlines, leading to greater innovation and creativity.

In order to maximize its innovation efforts and achieve sustainable innovation outputs, the company could benefit from aligning its innovation strategy with long-term strategic goals, considering factors such as market trends, customer needs, and competitive positioning. Balancing the exploitation of existing resources with exploration of new opportunities, and adopting a more proactive rather than reactive approach to innovation may also be beneficial. This could involve fostering a culture of creativity and "outside the box" thinking, diversifying the project portfolio to include a balance of short-term and long-term projects, and prioritizing strategic alignment over immediate financial gains.

### 6.3 Theoretical Implications and Future Research

As highlighted in the introduction of this thesis, the ambidextrous nature of small organizations has received limited attention in the literature. The reasons for this gap in research are not entirely clear. Still, they may be attributed to the challenges small firms face in pursuing structural ambidexterity, or a lack of available data. Nevertheless, this study has offered a unique perspective on the topic through an in-depth case study of a small Swedish organization and the challenges it encounters in its ambidextrous efforts. To build on these findings and further advance knowledge on the topic, future research could explore multiple cases in a quantitative study design, allowing for more generalizable results. By doing so, researchers can gain a better understanding of the factors that facilitate or hinder ambidexterity in small firms, and provide practical recommendations for enhancing innovation capabilities in these organizations.

It was further proven throughout this thesis that alternative approaches to ambidexterity, such as the notion of dynamic ambidexterity presented by Chen (2017), might prove unfit for smaller enterprises as they are based on a structural approach that is too costly. However, as noted in the studied case organization, having a unique approach to ambidexterity where you reap the benefits of for example contextual and temporal approaches could be beneficial when more traditional approaches are not sufficient. Additionally, by contrasting the empirical results of this thesis with the reasoning of Chang and Hughes (2021), it is evident that close social interaction is needed for the employees to promote qualitative knowledge exchange. Something which was highlighted through the amount of missed opportunities amongst employees at the case organization for informal discussions about new projects. Thus, by abandoning an overall focus on achieving ambidexterity through structural separation and instead focusing on the interaction amongst employees, smaller enterprises, as Chang and Hughes (2021) emphasize, may benefit more from less standardized forms of achieving ambidexterity.

By concludingly contrasting and comparing the empirical findings in this thesis to different topics for future research, a number of ideas were generated and presented down below:

- 1. To build a deeper understanding of how a small organization can become ambidextrous, it would be insightful to consider the leadership and management styles that help small organizations be ambidextrous. By looking at the precise actions, selection procedures, and planning techniques leaders use, one could chart behaviors that enable ambidextrous working.
- 2. In-depth study of how small organizations distribute their resources to facilitate ambidexterity. By looking at the difficulties they have while splitting available resources between exploration and exploitation operations, and through that find efficient resource allocation techniques.

- 3. Evaluating the ambidextrous pursuits of small firms in terms of performance results. In the context of small organizations, looking into the effects on innovation, financial performance, growth, and competitive advantage compared to companies not currently engaged in similar pursuits.
- 4. Taking into account how ambidexterity in small enterprises is impacted by external factors. Examining how ambidextrous pursuits and outcomes are influenced by industry dynamics, market conditions, technology developments, and regulatory settings.
- 5. The challenges associated with transitioning from a startup to an established enterprise. One such challenge could be the shift from being able to be fully explorative and dedicate resources to NPD without being constrained by existing products or costs, to a situation where the focus shifts towards addressing ongoing operational issues, improving existing products and services, and managing higher costs.

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## 8. Appendix

## Appendix 1: Interview guide

#### **Background information**

1. Please introduce yourself. What is your position at this workplace? How long have you been here and what are your responsibilities?

#### **Explorative - Product XYZ**

- 2. Could you tell us a bit about the development of product XYZ?
  - a. How did it begin?
  - b. What was your involvement? What was the first thing you did in this project and what came after?
  - c. Is this how it usually works when you're developing a new product?
  - d. How many worked on this?
  - e. How much of your time did you spend on this? Was there a clear strategy/directive telling you to do so?
- 3. Did you have any other business or projects to take care of simultaneously? (That is, throughout the whole of the development)
  - a. What was that?
  - b. How did you balance the two things? Did that work the same way during the whole process?
  - c. Was there any prioritization?
    - i. Could this be done in any other way?
- 4. If you were to look at the development of product XYZ in different phases, would you say that the organizational priorities change throughout or did they remain the same...
  - a. Did your priorities change?

### **Innovative climate/environment**

- 5. Are you encouraged to be innovative and come up with new ideas? In what ways?
  - a. Is there an overarching focus on innovation and new products in the organization? If so, how is this shown?
- 6. Do you experience any troubles or barriers to bringing new products to the table?
  - a. If yes: follow-up question related to how
  - b. Are all ideas treated equally?