

SCHOOL OF ECONOMICS AND MANAGEMENT

How Bumblebees Create Fire

Unraveling Communication Patterns in Innovation Diffusion at a Global Manufacturer of Electronic Devices

> By Sophie Ambrosat Amanda Rondin

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Supervisor: Olof Hallonsten Examiner: Stephan Schaefer

Abstract

Title:	How Bumblebees Create Fire - Unraveling Communication Patterns in Innovation Diffusion at a Global Manufacturer of Electronic Devices		
Authors:	Sophie Ambrosat and Amanda Rondin		
Supervisor:	Olof Hallonsten, Lund University, Sweden		
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Purpose:	The aim of our study is to understand how communication is used to master the challenges of ambidexterity when diffusing innovation in a mature tech company		
Theoretical perspective:	A communication perspective on organizational ambidexterity		
Methodology:	This qualitative study in the interpretivist research tradition takes an abductive research approach, in the form of a single case study. The empirical material consists of fourteen in-depth semi-structured interviews and was analyzed by distilling, categorizing and interpreting.		
Contribution:	Our findings suggest a reflexive approach to communication when diffusing innovation and managing the challenges of ambidexterity that departs from very informal to increasingly formalized ways of communicating to integrate exploration and exploitation.		
Key Words:	ambidexterity, communication, diffusion of innovation		

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Enjoy reading!

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Table of Abbreviations

ed(s)	editor(s)
edn	edition
et al.	et alia = and others
p(p.)	page(s)
e.g.	exempli gratia = for example
i.e.	id est = that is
DCF	Dynamic Capabilities Framework
DOIT	Diffusion of Innovations Theory

1. Introduction

Nowadays, it seems to be common sense in the corporate sphere that, in order to survive on the competitive global market in a rapidly changing environment, companies need to constantly innovate (Lee et al., 2023). On the one hand, they are asked to exploit the potential of existing products. On the other hand, continuous innovation is needed to create a competitive advantage that ensures the survival of the company. This dilemma in which exploitation and exploration need to be addressed simultaneously has been conceptualized as "organizational ambidexterity" (Lis et. al, 2018). To innovate, people in organizations need to be persuaded to adopt new ideas as resources are usually scarce (Dodgson & Gann, 2018). From a research and development practitioner's point of view, the question arises how to communicate new ideas convincingly, so that other relevant stakeholders such as product managers, the sales force as well as the product development team decide to further work with the innovations. Although there is vast research on both ambidexterity and communication as separate fields, limited studies bring both perspectives together. Trying to address this research gap, this study aims to answer the research question:

How is communication used to master the challenges of ambidexterity when diffusing innovation in a mature tech company?

In order to approach this question, our research investigates the current communication flow diffusing new product ideas within a large sized global manufacturer of electronic devices headquartered in Sweden, anonymized as AmasophTech. The case study was conducted with a qualitative and abductive approach to explore how the communication processes influence the adoption and implementation of innovative ideas within the ambidextrous organization. The study resides in one department within AmasophTech, the idea department, which has the task to develop innovative product concepts and convince others to adopt these ideas.

The empirical material was gathered through fourteen semi-structured interviews with internal stakeholders involved in AmasophTech's innovation process. Interviewees ranged from representatives of the idea department to members of product management, product development and sales to account for the diverse perspectives that rather exploration- or exploitation-focused units have when deciding which ideas should be developed further into mass-products. Moreover,

by working at desks at the idea department for nine weeks, a valuable closeness to the mature case organization was created, allowing for casual observations and a chance to create a more holistic picture of the communicative efforts to spread innovative ideas within this particular organizational context.

1.1. Main Findings

Our findings demonstrate that needed communication styles vary throughout the process of handling ambidexterity when diffusing innovations. While the exploration phase was mainly characterized by informal conversations, we could identify an increasing formalization of communication as the innovation approached the exploitation phase. Early in the innovation process, informal conversations in the canteen, hallway or during lunches have been found to contribute to creating personal relationships that help identify relevant stakeholders. Then, more structured prototype demonstration meetings have shown to play an important role when beginning to connect considerations of exploration and exploitation. When key stakeholders get convinced of a new idea through informality, the communication has been identified to become increasingly structured and formalized in roadmap meetings with agendas and written documentations ensuring the coordination of larger exploitation-focused business units. However, even after this official handover point, informal conversations partly continued to be relevant for turning an idea into an actual product. While these findings may seem to portray the communication processes when diffusing innovation within a company as an ideal type, the special story of how a new technology anonymized as "the distance detector" got unveiled outside of AmasophTech will nuance this thesis' argument further. Drawing conclusions from the distance detector revelation will shed light on unanticipated consequences of communication in the context of ambidexterity, namely the need to manage expectations.

1.2. Outline of the Thesis

This thesis is built on six chapters, out of which this first chapter has the purpose to introduce the reader to the background and aim of the research project, and as well present the research question. Furthermore, chapter two addresses previous research on innovation, ambidexterity, and communication, where we end the chapter with a summary that presents which parts of the theory

will be used as analytical tools in our discussion later on. Then in chapter three, before delving into our empirical findings, we present how we collected the data and which approach was used to examine it. There, we do not only describe the data collection process, but also the case study context and the interview process, as well as offering the reader a chance to get acquainted with the interviewees presented in a table. Moreover, chapter four consists of our findings where we begin with introducing our main characters. There, we then guide the reader through various key topics derived from the empirical material, moving from informality to prototype demonstrations further to formal communication processes before ending with the story of the distance detector. Chapter five presents the empirical findings through the lens of our analytical tools presented in the literature review and elaborates on our contributions to the academic debate. Lastly, chapter six ends with conclusions and opportunities for future research.

2. Literature Review

To conduct our research on how AmasophTech uses communication to master the challenges of ambidexterity when diffusing innovation, we will begin with creating a literary grounding on which the research can be established. The following sections present previous literature within the topics of innovation, ambidexterity, and communication. Although introduced as separate research fields, communication and ambidexterity will be brought together by this thesis. Parts of previous research in these fields will be introduced as analytical tools on which we will base the discussion of our empirical findings.

2.1. Innovation in Organizations

The relevance of innovation for the growth and thus stability of our economic system has been acknowledged for more than half a century since Schumpeter (1942) established innovation as being essential for competitive survival. Although there are manifold definitions of innovation, for the purpose of this study, one can simply understand it as "what happens when new thinking is successfully introduced in and valued by organizations" (Dodgson & Gann, 2018, p. 12). In contrast to the term invention which usually describes the generation of new ideas, innovation rather refers to ideas being transformed into marketable products (Vinokurova & Kapoor, 2020). Although thus rather outcome-oriented, Lee et al. (2023) highlight that innovation processes are

seldomly linear but apart from planned sequences of activities typically also involve diversions and feedback loops. Moreover, it is important to notice that many (if not most) attempts to innovate fail. History provides us with numerous examples in which sometimes very good ideas did not succeed to become applied further (Dodgson & Gann, 2018) which makes it even more relevant to investigate how communication processes may contribute to success or failure of an idea. How the communication is embedded in the culture(s) of different stakeholders participating in the innovation process is still understudied as only the recent increasing popularity of open innovation has drawn attention to such people factors (Lee et al., 2023) although they are also relevant in innovation processes that companies conduct internally. When further elaborating on the different facets of innovation, Dodgson and Gann (2018) also vividly describe that innovation "is the theater where the excitement of experimentation and learning meets the everyday realities of limited budgets, established routines, disputed priorities, and constrained imagination" (p. 12), thus emphasizing the tensions inherent in this organizational process.

Having established the relevance of innovation for companies, this literature review will now introduce the dynamic capabilities framework (Teece et al., 1997) to provide relevant theoretical background that elaborates on the firm level perspective on innovation. Although Dodgson and Gann (2018) clarify that "there is no single, unified theory on innovation" (p. 26), the dynamic capabilities approach has proven to encompass a variety of variables that add to the understanding of innovation processes at the company level. Then, the concept of organizational ambidexterity as one potential dynamic capability will be launched as a central analytical lens that guides this research project.

2.1.1. Dynamic Capabilities Framework

Any theory on innovation faces the challenge to account for the multifaceted nature of the empirical phenomenon. Moreover, as Dodgson and Gann (2018) further elaborate, it must be able to accommodate the intricacy, dynamism and unpredictability of innovation processes which can be further complicated by the involvement of manifold stakeholders with potentially conflicting agendas. Indeed, these diverse stakeholders may not even have fully established their personal objectives yet. Therefore, a theory on innovation needs to encompass the emergent characteristics

of the phenomenon as innovation arises from a collective process in which the final outcome may not be apparent or anticipated at the start.

Addressing these challenges, the dynamic capabilities framework (DCF) that Teece, Pisano and Shuen first introduced in 1997 has nowadays established itself as a major innovation theory, analyzing the sources of companies' wealth creation and capture. For more than 20 years now Teece et al.'s (1997) initial conceptualization of the DCF has become the basis on which much research in the field of innovation has been done and still no sign is noticeable that the relevance of the framework is decreasing (Teece, 2023). Nowadays, this original publication on the DCF is among the most cited papers in all of business and economics studies (Merigó et al., 2016).

With the term "dynamic capabilities", Teece et al. (1997) emphasize the exploitation of internal and external competences of a company as well as the development of new ones with which it addresses an ever-changing environment. Although the framework, thus, encompasses factors that lie inside as well as outside the single organization, the authors suggest that technological, organizational, and managerial processes within the firm are more decisive for creating private wealth than efforts that try to harm competitors. In environments characterized by rapid technological change, a competitive advantage seems to highly depend on internal factors that determine a firm's capability to identify new opportunities and to embrace these ideas through effective and efficient organizing. Therefore, this theory supports the relevance of our research approach to investigate how communication as an internal factor impacts innovation processes. Moreover, the dynamic capabilities view of the firm highlights the importance of moving from the sensing of an opportunity to its seizing and, furthermore, its continuous reconfiguration, alluding to the complex interconnectedness of different dimensions that impact if innovation endeavors become a success (Teece, 2007).

2.1.2. Organizational Ambidexterity

In 2008, O'Reilly and Tushman reviewed and integrated the at the time comparatively novel research streams of dynamic capabilities, originating in research on organizational strategy, and the concept of organizational ambidexterity, deriving from debates on organizational design. The latter refers to, as will become clear in more depth in the following chapters, a firm's ability to

explore and exploit simultaneously. According to the authors, ambidexterity can act as a dynamic capability if it is strategically integrated. The following sections will clarify the meaning of exploration and exploitation and elaborate on tensions that arise due to the two conflicting dimensions. Moreover, organizational antecedents to ambidexterity will present different ways that past research has identified as being capable of reconciling these tensions to orchestrate the trade-off between exploration and exploitation. Finally, we will derive the research gap that exists from a communication perspective on ambidexterity and establish its relevance.

2.1.2.1. March on Exploration and Exploitation

Although Duncan (1976) initially coined the term "organizational ambidexterity", it was March (1991) who is acknowledged for popularizing the concept. According to March (1991), "[e]xploration includes things captured by terms such as search, variation, risk taking, experimentation, play, flexibility, discovery, innovation, [whereas] [e]xploitation includes such things as refinement, choice, production, efficiency, selection, implementation, execution" (p. 71). While exploitation means refining an existing technology, exploration means inventing a new one. Organizations that focus on exploration alone without considering exploitation are argued to face the drawbacks of experimentation without reaping its benefits. They may have many ideas but fail to develop them further to gain a competitive advantage. On the other hand, organizations that solely prioritize exploitation are considered to run the risk of becoming stuck in a suboptimal, stable state that does not hold up to the changing environment. Therefore, March (1991) popularized the idea of balancing exploration and exploitation as being essential for the long-term survival and success of an organization. However, while both exploration and exploitation are nowadays acknowledged to be crucial for companies, maintaining such an ambidextrous balance is challenging as the two aspects are in competition for scarce resources (March, 1991). Consequently, March (1991) finds organizations to explicitly as well as implicitly choose between the two. While explicit choices are evident in calculated decisions made regarding a company's strategy and alternative investments, implicit choices may be concealed within organizational customs, for instance, incentive systems and methods for setting targets.

Moreover, March (1991) elaborates on reasons for which exploitation is often prioritized while exploration is systematically more vulnerable. In comparison to gains from exploitation, returns of investment from exploration are more uncertain, may lay far in the future and are generally

perceived to be more distant to organizational members' current actions. Illustrating these tensions, March (1991) summarizes: "What is good in the long run is not always good in the short run. What is good at a particular historical moment is not always good at another time. What is good for one part of an organization is not always good for another part" (p. 73). Connecting the debate on ambidextrous organizations to the field of organizational learning, March (1991) furthermore remarks that the way companies allocate resources to exploration or exploitation efforts depends on their lessons learned from past experiences. Whereas exploitation is closely tied to its consequences because feedback here is gathered quicker, clearer, and more directly, the results of explorative, new ideas are less certain. Therefore, organizations typically improve exploitations faster than exploration which may cumulatively inhibit exploring new ideas.

2.1.2.2. Organizational Antecedents to Ambidexterity

In their literature review, Raisch & Birkinshaw (2008) identify the diverse literature streams that relate to organizational ambidexterity, ranging from organizational learning, technological innovation to strategic management, organizational adaptation, and organizational design. Moreover, the authors note that since the late 90s researchers have begun to examine the antecedents of organizational ambidexterity which can be categorized into three factors: organizational structures, behavioral contexts, and leadership processes that facilitate ambidexterity. Elaborating further on the implications of these three different approaches, the aim of this chapter is to understand how organizations handle the challenges that ambidexterity imposes on them.

Firstly, one approach to addressing the tensions caused by the paradoxical relation of exploitation and exploration involves the separation of the two activities in separate organizational units. Here, business units concerned with exploration are found to usually be small and working with loose processes while exploitation-focused units are typically larger and have tighter processes in place to ensure the coordination of their activities (Benner & Tushman, 2003). The theoretical debate which has emerged around if and how explorative and exploitative units should be integrated ranges from very loose coupling or even complete separation to tightly coupled subunits or combinations of both approaches (Raisch & Birkinshaw, 2008).

Alternatively, instead of creating dual structures, contextual solutions enable the same unit to carry out both activities. Gibson and Birkinshaw (2004) thus introduced the concept of contextual ambidexterity as "the behavioral capacity to simultaneously demonstrate alignment and adaptability across an entire business unit" (p. 209). Essentially, the assumption is that leaders can develop features of an organizational context so that it encourages and enables individuals to judge for themselves how to best divide their attention to meet the challenges that the conflicting demands of exploitation and exploration impose on them.

Whereas contextual solutions emphasize the individual's capacity to balance alignment and adaptability, leadership-based solutions, thirdly, assign top management the responsibility for addressing and reconciling the tensions due to ambidexterity. The type of leaders needed to master the challenges of organizational ambidexterity are the leaders that "venerate the past but are willing to change continuously to meet the future" (Tushman & O'Reilly, 1996, p. 27). Furthermore, Mom et al. (2007) describe the effect that the structure of the knowledge flow has on managers' usage of either exploration or exploitation. Knowledge flowing in a top-down manner, from higher management to managers further down the hierarchy, tends to be related to exploitation. Contrastingly, knowledge flowing horizontally or in a bottom-up manner through the hierarchical structure is more connected to exploration. However, Mom et al. (2007) notice an indirect influence of top management on exploration, building on Tushman and O'Reilly (2002) who established members high up in the hierarchy as having a key role in developing ambidexterity. Whereas some researchers conceptualize leadership processes as an independent antecedent of organizational ambidexterity (e.g., Lubatkin et al., 2006), they have also been found to facilitate the implementation of structural (Smith & Tushman, 2005) or contextual ambidexterity (Gibson & Birkinshaw, 2004) and can thus be considered a connecting dimension between the different approaches to reconcile exploration and exploitation.

Even within the dominating literature on structural solutions to ambidexterity, key elements such as how different units coordinate and integrate their work have been found to remain underresearched although acknowledged to be a main challenge when structurally separating exploration and exploitation (Raisch & Birkinshaw, 2008). Hansen (2002), for example, remarks that hierarchical coordination may result in a lack of direct transmission channels that can harm the integration of knowledge between units. Addressing the lack of research that has been noted to exist on how ambidextrous organizations deal with these challenges (Raisch & Birkinshaw, 2008), this study focuses on communication taking place in the innovation process in which different business units interact and balance exploration and exploitation.

2.2. Communication in the Context of Innovation

In order to answer the question how communication is used to master the challenges of ambidexterity, it is firstly necessary to understand the role that communication plays in organizations. Moreover, this chapter presents Weick's (2001) view on communication and organizational systems which will function as a theoretical tool in the discussion, to then narrow down the field further into what role communication plays within innovation. More specifically, Rogers' (1995) theory on the diffusion of innovation will be introduced and as well serve as one of our analytical tools contributing to the discussion of our empirical material in chapter five.

2.2.1. The Role of Communication in Organizations

Communication is key for an organization's existence, as without it, an organization cannot exist (Wiio, 1988). Although there are many definitions of communication taking place in organizations, it can be defined as "an interchange of information between systems which interfaces organizational systems in different situations" (Wiio, 1988, p. 95). Thereby, communication helps to attain organizational and individual goals. Out of the many definitions that exist of organizational communication, this definition is beneficial for our research as we are studying the communication between different departments in an organization. Furthermore, these departments can be linked to being organizational systems within the organization as a whole, which is further extended by Weick (2001) in chapter 2.2.1.1.

Moreover, Wiio (1988) also acknowledges the risk of too much communication leading to information overload, or too little communication causing difficulties in the interchange of information between the systems, negatively impacting the organizational functions. Organizational communication may as well include the external communication that the organization produces. However, for the scope of this thesis, the focus will be on the internal organizational communication as the stakeholders involved in the case organization's innovation

process are organizational members, which will allow us to investigate the internal dynamics within one organization.

Internal communication is, according to Whitworth (2006), made up out of three crucial building blocks. While informal communication is one of them, hierarchical communication and internal mass communication is too seen as crucial blocks. Hierarchical communication is the transferring of information through the structure of the organization, starting from top management and being pushed down the hierarchy. However, today many organizations have flattened their structures, which has led to an unintentional improvement of internal communication (Whitworth, 2006). Moreover, internal mass communication consisting of mediums such as emails and intranets is as well capable of spreading information through the structures of the organization in a strategic manner, but not limited to a hierarchical structure (Whitworth, 2006). Weenig (1999) describes this planned communication as formal communication, whereas contrastingly, informal communication encompasses unplanned exchange among employees that may not follow the official organizational structure. However, for the organization to reproduce and keep existing, there is a need for communicative spaces where both formal and informal communication are allowed to take place, in this case relevant for the spreading of innovation. Of the two, informal communication is oftentimes overlooked, although communication scholars acknowledge it as a great arena for the creation, testing and evaluation of new ideas, as well as sharing of information within the organization (Falkheimer & Heide, 2018).

2.2.1.1. Communication between Organizational Systems

To develop an understanding of how complex organizations function, we firstly introduce Weick's (2001) view on organizations and communication, to further develop into an understanding of the complexity of looking at communication flows. Weick is a leading figure in processes of organizing within organizations where he sheds light on the importance of communication within the processes to create and nurture relationships and systems of meaning. Specifically, this is of relevance for our thesis as it may function as an accompaniment to ambidexterity because it can help understand different parts of an organization and how they are interconnected.

Weick (2001) views organizations as social systems consisting of people and the interactions between them, rather than simply structures. Organizations are not static but always changing, and

they need to be flexible and able to adapt to their environments from where they receive information. To survive, procedures for processing information need to be established to keep up with their environments, e.g., identifying relevant trends, competitors, markets, and technological advancements. When looking at a large organization, the system can be seen as a group of groups that are interconnected with each other, where tension may arise between the groups (Weick, 2001). One case where tension can arise is when several groups compete for available resources, leading to high belief in one's own group and belittlement of the other groups. Although, if a person possesses memberships in several groups, this may function as a solution to reduce the tension between the groups by linking them together (Weick, 1979). However, according to Weick (2001) some differences exist between the disparate systems and subsystems in how much is interpreted on the different levels. Top management is the key interpreter for the system as a whole while processing information, although receiving some input from sub-systems which functions as a basis for the interpretation of information. When the information is to be established and interpreted on an organizational level, top management is the decision maker.

Communication in different forms within and between these systems is key for the function of the organization (Weick, 2001). Eisenberg and Riley (1988) enhance this statement by communication in organizations as not something that only takes place within the organization, but rather as fundamental for organizing to happen. However, the communication taking place is far more complex than a linear process from sender to receiver, as it is happening on different levels in the organizations including "individual, interpersonal, group, system-wide, and inter-organizational" (Downs et al., 1988, p. 171). Further, Downs et al. (1988) state that organizations also have several subsystems of communication with different purposes, such as giving instructions or information, persuading, integrating, or innovating, making the communication processes more difficult to look at. However, as the aim of this study is to look at communication around innovation processes, we will delve into innovation communication specifically in the next section.

2.2.2. Innovation Communication

The importance of communication, not only for an organization's overall goals and values, but also for managing, spreading, and facilitating innovation, has been highlighted many times (Viardot, 2011). Pfeffermann (2011) elaborates on planned communication strategies to spread

innovation within the company, for example by using intranets or social media networks within the organization. However, essential for diffusing innovation within an organization is the role of interpersonal and informal communication to create positive word-of-mouth (Mazzarol, 2011). Additionally, Weenig (1999) contrasts how formal and informal communication influence the adoption of innovation within an organization in different ways. Findings indicate that informal communication ties among employees have a considerably stronger impact than information retrieved from formal communication channels. In summary, Weenig (1999) suggests that the spreading of information within the organization is rather influenced by formal communication sources, whereas informal sources of communication contribute more to the attitudes of employees about adopting the innovation or not. Therefore, both formal and informal communication seem to be relevant in companies' strategies to get innovations off the ground, but in different regards. While Weenig's study was only conducted within one organization and examined the diffusion of only one innovation, Kim & Chung's (2017) systematic literature review suggests that employees in contemporary organizations are faced with a continuous stream of innovations that are presented to them for implementation. They found that most studies neglect the importance of factors that sit on the level of the individual and influence employees' opinions and actions toward innovation.

2.2.3. Rogers' Diffusion of Innovations Theory

With almost 150.000 citations counted in Google Scholar, Everett Rogers' theory on the diffusion of innovations (DOIT) that was first introduced in 1962 can be considered a classical publication on the question how innovations spread and are adopted within a population. As one of the oldest social science concepts, it is especially valuable for our research as it has originated in communication studies and thus combines the fundamental perspectives of our study, communication and innovation.

According to Rogers (1995), the rate of adoption is influenced by several factors. Not only does it depend on characteristics of the innovation itself, but also on the communication channels through which information on the new idea is spread, as well as the specificities of the social system in which the innovation is being diffused. Moreover, Rogers' theory classifies adopters into five different categories: innovators, early adopters, early majority, late majority, and laggards. In summary, innovators are the first to adopt new ideas. They are followed by early adopters who are

often opinion leaders within their social networks. The early majority and late majority adopt an innovation once it has been proven successful by the early adopters. Finally, the laggards are the last to adopt. Combining these analytical categories, the theory highlights the importance of understanding the needs, motivations, and specific behavior of different types of adopters for a successful introduction of innovations.

Rogers (1995) defines diffusion as "the process by which an innovation is communicated through certain channels over time among the members of a social system" (p. 10). Therefore, central elements of this process perspective are the innovation itself, the communication channels, time, and the social system. Although Rogers' theory has primarily been popularized in marketing research where the focus lies on the adoption of an innovation within the market after it has been launched as a new product, his initial publication addresses all kinds of social systems. Rogers' definition (1995) of a social system encompasses "a set of interrelated units that are engaged in joint problem-solving to accomplish a common goal" (p. 23). Following this understanding of a social system as the collaboration between distinguishable units to achieve a mutual goal, Rogers' diffusion theory can as well be applied to our case study in which different departments of a technology firm interact with each other to develop innovations. Interestingly, however, Rogers (1995) notices a lack of studies investigating how the social or communication structure affects how innovations diffuse and are adopted in a system, compared to the extensive research on other aspects of innovation diffusion.

2.3. Summary of Literature Review

Innovation has been established as crucial for a company's survival in nowadays' competitive environment. However, while exploring new ideas can create opportunities to grow, the concept of organizational ambidexterity has been introduced to raise awareness that a paradoxical relation between exploration and exploitation requires attention and coordination. Although communication has been found to contribute to the adoption of innovations within an organization, it has to date not sufficiently been addressed in the context of ambidexterity. Therefore, this thesis project investigates how a mature tech company uses communication to master the tensions of ambidexterity when diffusing innovation. To address this challenge, Weick's (2001) perspective of communication through organizational systems will serve as an analytical tool to understanding ambidexterity as summarized by Raisch & Birkinshaw (2008). Furthermore, Weenig's (1999) findings on the impact of formal and informal communication on the adoption of innovation will be discussed later in the thesis. Moreover, Rogers' (1995) diffusion of innovation theory has been introduced to further examine the process of adopting new ideas when analyzing the empirical findings of this research.

3. Methodology

With this chapter we intend to describe the methodological approach undertaken to answer our research question and conduct our qualitative study, beginning with an explanation of the adopted approach and research tradition. Further, to broaden the understanding of the scope of the study, an explanation of the case study and case context is provided, where we describe the setting of the case and one of the product concepts we set our focus on. Lastly, the section finishes with information on how we collected and analyzed the data, including some general reflections on the data collection as an insider to the company.

3.1. Research Approach

This study adopts a qualitative and abductive approach, moving between theory and empirical material (Alvesson & Kärreman, 2007). The abductive approach is especially relevant for an interpretative perspective as it allows shifting between the social world, where the empirical material is gathered to create a theory and collecting information from literature to understand the phenomenon (Bell et al., 2022). As our study is building on a phenomenon of social reality, more exactly human interactions within an organization, drawing on qualitative research with an interpretative tradition is suitable (Prasad, 2018).

Moreover, the interpretative approach was chosen because the communicated product concepts and new ideas were assumed to hold different meanings for different stakeholders. Suitably, interpretative traditions put human interpretations in the center and acknowledge that organizational reality is socially constructed (Prasad, 2018), rather than assuming reality to exist objectively as in positivistic traditions. Further, the interpretative approach seeks to *understand* something, rather than *explain* something (Bell et al., 2022), which is relevant for our thesis as we

aimed to understand peoples' experiences of communication. By embracing the interpretivist perspective that, in fact, there may even be multiple realities present simultaneously, we were sensitive to different perceptions by different stakeholder groups for a more nuanced understanding of the communication processes within innovation work.

3.2. Case Study

Lis et al. (2018) found in their systematic literature on organizational ambidexterity that the case study research dominates when focussing on the topic in the context of organizational management. Further, Bell, Bryman and Harley (2022) state that the case study often is used in research within the field of business, allowing an in-depth analysis of one particular case, thus aligning with Flyvbjerg's (2006) view on the beneficial closeness to real-life situations that emerges from case studies. As we explored individuals' experiences and interpretations of communication around innovation within one company by doing in-depth interviews, the single case organization added to a deeper understanding of the interviewees' realities due to the closeness to these real-life situations. In addition, Yin (2014) comments on the benefits of a case study while adopting an interpretivist approach, as it may add to the understanding of the multiple realities arising from the interviewees' answers.

Apart from conducting interviews to collect empirical material (see 3.3.), receiving two desks at the company headquarter allowed us to immerse ourselves into the real-world setting of the case and opened up for direct observations, which Yin (2014) means is another way to gather empirical material and add to the understanding while conducting a case study. Although not conducting an ethnographic study with formal observations, becoming insiders of the organization authorized us to get indications of the culture, listen to conversations, ask questions, and understand the functions of the distance detector, the project that adds a twist to our empirical findings in 4.4. Thus, we were enabled to understand the interviewees' answers better, and put them into context. Further, accessing intranets and documents with company internal information served as a continuously accessible source of information that helped develop our understanding of the organization and its processes over time. For example, we often drew on organizational charts to understand the official position of an interviewee and their hierarchical relation to other interviewees. However, acknowledging that the formal organizational structure may not represent the social dynamics of

the organizational reality, we saw this information as supportive documents and kept an open mind when encountering the interviewees. Finally, Flyvbjerg (2006) acknowledges that a case study may direct future research, as well as Yin (2014) explains the case study as a way of shedding "empirical light about some theoretical concepts" (p. 40). Applying the case study methodology, we investigated communication processes in the context of ambidexterity at AmasophTech which will be introduced as our case organization in the following section.

3.2.1. Research Context - Introducing AmasophTech

This research investigates a global manufacturer of electronic devices, more specifically the headquarter in Sweden, where around 2500 of AmasophTech's employees reside. The mature firm is well-established in its industry and still continuously growing, which is increasing the complexity of the organization. This case is especially relevant for research investigating organizational ambidexterity as companies in that business strongly depend on the development of electronic technology to gain or maintain a competitive advantage (Lis et al., 2018). Here, being innovative is crucial for the company's survival on the market. Moreover, in order to protect the firm's competitive edge, ensuring anonymization was necessary for gaining access to the organization. Therefore, we chose to use the pseudonym "AmasophTech" when addressing the case company in the following chapters.

To investigate how communication is used to master ambidexterity when diffusing innovation at AmasophTech, we first got in touch with one department which is anonymized as "the idea department". This unit of AmasophTech, consisting of around ten engineers, develops new products and features within existing product segments, although admittedly not being the only source of innovation in the company. Our research resides at the idea department because this unit is entirely dedicated to exploring new ideas and trying to convince other necessary stakeholders of their potential.

Furthermore, although AmasophTech implements and investigates multiple innovations simultaneously, we have focused on one project more than others which we anonymize as "the distance detector". This special case adds a peripeteia to the narrative we develop in our empirical findings and thereby helps us paint a more nuanced picture of the communication processes and

their consequences examined in the organization. The distance detector is, moreover, a suitable example for our analysis as it has been going on for several months already, so people have gathered lots of experiences while the happenings are still fresh on the interviewees' minds. Even when not explicitly asking about it, the distance detector case was often brought by the interviewees, adding to the relevance of this project for answering the research question.

3.3. Data Collection

The following chapter describes the process in which we gathered our empirical material, beginning with a presentation of interviews as a method, to further elaborate on the technique used to select interviewees. We also provide the reader with a table of the interviewees to get acquainted with them early, which is further elaborated on in section 4.1., where the participants are introduced more in-depth. Lastly, we give some information about the interview guide used to conduct the interviews and finalize the chapter with a reflection on insider bias.

3.3.1. The Interviews

We conducted fourteen interviews with a duration of approximately one hour from 22.03.23 to 21.04.23 to gain an understanding of individual perspectives. In interviews, it is important to create an atmosphere where participants feel like they can share their true experiences without being forced and led into different categories, and not being judged on their answers (Magnusson & Marecek, 2015). However, to create an open atmosphere while ensuring comparability, it is beneficial if the interviewer has prepared a guide on topics that they would like to cover. Therefore, we conducted semi-structured interviews, which allowed for a free order of categories or questions and opened the possibility to ask follow-up questions if topics arose that were not anticipated when developing the catalog of questions (Kvale & Brinkmann, 2014). Both researchers were present in all interviews to capture more details. Moreover, most interviews were conducted face-to-face in rooms within the company to ensure confidentiality, preferably with windows letting in daylight, comfortable chairs and not being too big to make it feel more intimate. Thereby, the goal was to create trust and comfortability. However, due to geographical separation, two of the fourteen interviews were held through a video call, impacting the possibility of doing the drawing exercise that will be explained in chapter 3.3.3. Therefore, these interviews ended up a little shorter than those being done in person.

Only the audio of the interviews was recorded to reduce the pressure on the interviewees, but for us to still be able to capture everything that was said in detail. By not having to take extensive notes, the advantage was that we could keep our full attention on the interviewee and listen, creating a more relaxed dynamic and atmosphere. Additionally, written notes on the atmosphere and specific words were however taken during the interviews to focus follow-up questions. It is to be noted that all interviews were conducted in English, although this was neither the participants', nor the researchers' primary language. However, everyone involved in the research showed confident English language proficiency. Nevertheless, conducting the interviews in a foreign language may have impacted the fluency of the conversation and the ability to express oneself, which also adds further to the importance of creating a comfortable atmosphere. However, in each interview, at least one of the researchers was fluent in the interviewes' native language, allowing the participant to ask for translations of words if needed.

3.3.2. Selection of Participants

To find suitable participants for the interviews, we used purposive sampling, meaning sampling with the research goal in mind, and being strategic about who to interview to ensure relevance in regard to the proposed research question (Bell et al., 2022). In our case, this was done by a mixture of gatekeeping and the snowball technique. As a starting point, the head of the idea department helped us identify and approach relevant stakeholders, functioning as a gatekeeper. According to Ritchie et al. (2014), a gatekeeper is an important figure who approaches potential participants and gains their initial consent to participate in interviews. As much as this gatekeeping helped us to get access to interviewees because the manager's support highlighted the importance and legitimacy of our research, it was also limiting as he guided our focus and decided which people to include. However, this limitation was addressed by critically questioning the suggestions made by the manager and developing the list of interviewees in collaboration with us as researchers. For example, we specifically asked for some contacts who were approached with an idea that did not make it to the market to include perspectives of failure as well. Moreover, the snowball technique, asking existing interviewees for recommendations on potential additional interviewees (Bell et al., 2022), was applied to a certain extent to identify relevant stakeholders that may be less directly connected to the idea department. Moreover, it was of importance for us to interview several

people within the same department or role to avoid too narrow perspectives, and also to anonymize the interviewees to decrease the traceability of the source of the quotes used in the analysis. These interviewees are presented in the following section with fictitious names and anonymized role descriptions.

Fictitious Name	Title	Department	Length of Interview
Nils	Engineering Manager	Idea Department	0:55:42
Per	Sales Support EMEA	Sales	0:57:24
Björn	Director Product Development	Product Development	0:51:06
Lars	Manager Product Introduction, former Product Manager	Product Introduction	0:56:36
Fabian	Product Manager	Product Management	0:42:26
Henrik	Product Manager	Product Management	0:50:59
Magnus	Concept Development Engineer	Idea Department	1:32:20
Sven	Product Manager	Product Management	0:48:11
Oskar	Director Product Management	Product Management	0:59:37
Astrid	Engineering Manager	Product Development	0:43:09
Elsa	Engineering Manager	Product Development	0:45:44
Emil	Director Product Development	Product Development	0:54:08
Anton	Senior Expert Concept Development	Idea Department	1:02:50
Dagmar	Manager Sales Nordic	Sales	0:45:03

3.3.2.1. Overview of Interviewees

3.3.3. Interview-Guide

After welcoming the participant and explaining the interview process as well as the context of the research, we obtained consent to record the audio of the conversation. In this initial briefing, we explained the purpose of our study, highlighting voluntary participation and anonymization. According to Kvale and Brinkmann (2009), this is an important step to set the stage and establish a good contact with the interviewee. For a smooth start into the interview situation, the questionnaire started with simpler questions, for example asking the interviewees to introduce themselves and describe their role within the company. Then, the main part of the interview centered around questions that asked the interviewees to share their perspective on the idea department's role in innovation processes at AmasophTech, and more specifically on the communication that took place between their units.

Thereby, one exercise in particular was proven to facilitate a focused conversation on the flow of communication and to trigger meta-reflections. Around half an hour into the interview, at a point in time when the interviewe had already acquainted him-/herself with the interview situation and openly shared their experiences, we asked them to visualize how different organizational units interact in the innovation process on a scale from initial idea to final product. The timeline had already been provided on an A3 sheet of paper. Additionally, the interviewees received several prepared labels in the shape of an arrow that contained the title of several units involved in the innovation process, a pre-understanding developed in collaboration with the idea department's manager. As the gatekeeper's definition of key stakeholders may be limited, the visualization task also offered pens and empty labels in different shapes so that the interviewees would feel free to add relevant organizational members to the map. Furthermore, we highlighted that there is no right or wrong to this mapping exercise but that the participant's perspective is at the core of the task. This simplicity of pen and papers as materials seemed to make the task accessible as some interviewees energetically made use of the additional empty labels and drew connections on the white paper.

By including the visualization task, the interview gained depth and structure. Therefore, the drawing task is, according to Ritchie et al. (2014), one "enabling technique" (p. 169) which may start or deepen discussions as well as facilitate views that cannot as easily be verbally described. By letting the interviewees visualize the interaction between different departments, we accessed information that might have been more difficult for the interviewees to verbally communicate in such an exhaustive and structured manner. Moreover, having something tangible seemed to make the interviewees relax as everyone engaged in the visualization task with a smile. Furthermore, the task naturally gave the interviewees more time to think while placing the labels. Although taking a moment to think before answering was always possible, this task notably broke the interviewees' urge to always respond immediately to our questions. Once the labels were placed, the participants may have been asked to talk the researchers through this visualization if they did not start the explanation independently. Interestingly, some participants moved around labels during their explanation to illustrate the dynamic nature of interactions and added more labels when they noticed shortcomings of their initial positioning. Thus, their verbal expressions compensated for the intangible aspects that may have been more difficult to include in the map. Further, talking us through their visualization, we got to hear their interpretation of the interaction between departments, and we also set aside enough time for the task to be fully completed, which are both important aspects when using this technique (Ritchie et al., 2014). Furthermore, the visualized interaction of organizational units served as a fruitful basis for follow-up questions as the researchers could point to specific parts of the drawing and ask, for example, how the communication flows in this context.

In the final part of the interview, the questions got more general asking, for instance, for improvements that could generally be made in regard to the communication around innovations. Overall, it is to be noted that the semi-structured interview guide was always slightly adapted to the specific roles of the interviewees. In this process, our goal was to balance comparability in the topics covered in the interview with gaining insights into the specificities of different stakeholder groups. Moreover, we did not include "formal" or "informal" communication in the questionnaire as the terms might be biased and contain different meanings to different people. Nonetheless, at times interviewees initiated a use of the words. Then, we took the chance to elaborate the topics of informal and formal communication further.

3.3.4. Insider Bias and General Reflections on the Data Collection Process

As mentioned previously, we received desks at the idea department and, thereby, immersed ourselves into the setting of the case. Spending our days at the head office, going to breakfasts, attending meetings, having coffee together, and being introduced to people in the hallway, led to us calling people around us our "colleagues" rather than our "study subjects". Bell et al. (2022) allude to the challenge of staying objective when collecting, analyzing and interpreting data if researchers get closely acquainted with their case organization. The closeness developed between researchers and people subject to study, especially in participant observation or interviewing, may aggravate the researchers' interpretation as they may have a more difficult time in detaching their viewpoints from those of the interviewees. However, Prasad (2018), on the other hand, acknowledges the importance of keeping a closeness to what is being studied by immersing oneself into the setting while consciously aiming to avoid biased interpretations.

Especially being a part of the organization while conducting research can, according to Bell et al. (2022), affect the data collection as the researchers have a pre-understanding of the case study context, such as the organizational jargon or where to find information. However, our access to formally communicated documents such as posts on the intranet, presentation slides and videos, allowed us to develop a more holistic picture of the company's communicative efforts to share innovative ideas. Further, access to information about the distance detector helped us create an understanding of how it works, which was a benefit when interpreting the technological language during interviews. Although experiencing this closeness, we were reflexive on the risks of insider bias. Further strengthened by the idea department not being our only subject of study, getting acquainted with them did not impact our objectivity in the data collection and analysis. Building on the closeness, we experienced another hurdle in receiving a lot of input from co-workers that tried to convince us that their ideas or main projects at the time were the most interesting to investigate. By receiving all this input, we had to narrow down the internal stakeholders who were of interest to our study, and how far along the chain we wanted to follow the communication flow from idea to final product, as we had access to a lot of interesting people. Therefore, being present in the organization opened many doors to different projects and challenged us to narrow the research down to fit the time frame.

3.4. Data Analysis

Although a first analysis of the material already begins during the interviews, the main analysis takes place afterwards which helps the researcher select relevant empirical material to answer the research question. Brinkmann and Kvale (2015) suggest using the method of distilling, categorizing, and interpreting, which is done by identifying relevant themes and quotes, and therefore reducing the material from the transcribed interviews, referred to as distilling. Further, the categorization takes place both before and after the interviews, for us firstly by creating the interview guide in which overall categories began to be developed. During the process of analyzing the data, the previous categorization was helpful as it let us create sub-categories derived from the interview guide.

More practically, the reducing and distilling was done with the help of the software NVivo where entire written transcripts of the interviews functioned as the basis of our analysis. When examining the transcripts, we were able to systematically categorize statements that we found to be relevant within the scope of our thesis. Applying our abductive research approach, the category system, which served as the basis for the coding of our interview material, was created by firstly building on our research question and findings of previous studies, reflecting the structure of our interview guide. Moreover, the coding system was continuously refined when identifying common themes in the empirical material. Although the software helped us with choosing and structuring our findings, the interpretation of the interview material still was made by us (Kvale & Brinkmann, 2009). In this process of interpretation, the researchers aim at understanding the material in a deeper manner than what is explicitly being said during the interview (Brinkmann & Kvale, 2015). By voice recording all interviews, we had the chance to go back and listen to certain parts that we found interesting, giving us a chance to hear the tone of the interviewee, pauses etc. for a deeper understanding of what was said.

4. Empirical Findings

The analysis of our empirical findings starts by acquainting the reader with the most relevant roles for understanding the communication processes around innovation at AmasophTech. After that, a brief portrayal of challenges that arise due to the company's ambidextrous structure will set the scene to further examine which role different communication processes play in this regard. Moreover, the findings elucidating how communication contributes to the adoption of an idea so that it can move from an exploration phase to being exploited as a mass-producible product will be presented in a chronological order that, building on the fourteen interviews, seems to describe a typical process at AmashopTech. However, before summarizing the main findings, another chapter will act as a peripeteia to our previous analysis to avoid the impression that we would present a simplistic depiction of ideal type communication processes to work through ambidextrous tensions. As a turning point in our analysis, the special story of how the distance detector product concept was unveiled outside of AmasophTech will illustrate that communication cannot only integrate exploration- and exploitation-focused units but also harm their cooperation. Essentially, presenting innovations will be shown to create expectations that can hardly be managed.

4.1. Introducing Main Characters

To understand the analysis of the interview material gathered in the case organization AmasophTech, it is important to first get to know the central stakeholder groups involved in the innovation processes. Therefore, this chapter will provide the reader with an introduction of these people and their roles in the ambidextrous organization.

4.1.1. The Idea Department

This unit of AmasophTech has the mission to build powerful arguments for new products. The idea department consists of around ten full time engineers with competences within hardware, software, user experience and mechanical design. This innovation team provides proof of concept through prototypes and demonstrators for further assessment evaluating customer desirability, technical feasibility and business viability. Anton, one of the idea department's engineers, labeled his business unit as a "Santa's Workshop" and further described:

"We try to find things that we can sell in two, three, four, five years. [...] It's quite chaotic. It's not so much structure. To me, it's a bit of having wild brains who can combine all things." - Anton By drawing on the metaphor of a Santa's workshop, Anton conveys that the idea department for him is a fun place to work. It may seem chaotic but, apparently, some pleasant products have come out of their work. A number of nowadays successful products had their origin in this department. Maybe sometimes input for new ideas comes from outside the innovation unit, which could be customers or product managers requesting something new on a wish list that they approach the idea department with. Most commonly, however, it is the idea department that tries to keep eyes and ears open to many sources of information and then combining these different inputs into new product concepts. Moreover, as one would expect from the magical things happening in the village of Santa Claus, this metaphor also tries to mystify the idea department a little bit.

Although this may be a stimulating metaphor to begin with the characterization of the idea department, it does not cover a second, and for this thesis more important, dimension of their work. They do not only develop new ideas and build prototypes. Their task is also to convince other people in the organization that these new product concepts are valuable and should be adopted for mass production. One of the product managers, that will be introduced in the following subchapter, depicts the members of the idea department as, from an outside perspective, surprisingly communicative:

"In general they are much better in communicating than I would expect if I came from the outside. Here you have a team of brilliant engineers that invent a lot of new stuff all the time. I wouldn't maybe think that they were as outgoing as they are. Like, 'it's probably a bunch of introvert, really smart people, high IQ and probably can't behave themselves in public', and that's not at all the case. But it's very open and a very positive environment." -Lars

As this excerpt illustrates, although the idea department holds many technical skills, Lars thinks that they break the stereotype of extraordinarily smart engineers as they also seem to possess high social skills. The latter will become relevant in fulfilling the idea department's self-ascribed role of being internal "influencers", a metaphor introduced by two of its representatives independently. Similar to well-known online influencers that nowadays try to make the many followers they gathered on social media over time buy certain products, the idea department pitches their new product concepts to other parts of the organization who are then asked to take on the innovation

for mass production. As one member of the idea department nicely summarizes his job: "You have an idea, prove it. That's the whole premise. Prove it and sell it to [product managers]" (Magnus).

4.1.2. The Product Managers

As already alluded to by the quote above, the product managers are the idea department's main target for communicating new product concepts. Most of the time, they are the ones who can decide about the adoption of an idea. The idea department's goal is to find a product manager who they convince to add the new idea to their product portfolio. By first placing the new idea into their product roadmap, a process elaborated further in chapter 4.3.5., they contribute essentially to letting something new grow from an idea into a final product. Nils from the idea department clarifies:

"[The product managers] are actually the gatekeepers in a way. These product managers, for development they have basically their own resource pool. So they have a fixed number of employees which they can make use of in order to make this product come to real life." -Nils

As this excerpt shows, product managers are considered crucial for making ideas come to life as they have a big impact on the allocation of resources for innovations. If they are convinced of a new product concept that the idea department introduces, they take over much ownership for the innovation because it becomes part of the continuously developing product portfolio that they manage. As will become clear in later chapters, when they are persuaded, the product managers are the ones to further fight for the realization of a new product concept and to coordinate, together with representatives of the product development organization, that an idea transforms from a prototype to a mass-producible product.

4.1.3. The Product Development Organization

To put it in the simple words of one interviewee: "*The role [of product development] is to take the concept from [the idea department] and actually turn it into a real product*" (Astrid). The product development organization consists of over 1000 engineers that further develop innovations in every detail so it can be successfully exploited. When it comes to assessing a new idea, several

interviewees characterize representatives of this business unit as critical and facts-driven. Elsa, an engineering manager from product development, portrays their role like this:

"And then we should productify it and try to think like being the critical ones. We can be the boring ones. Like, okay, can we really do this? What does it mean? What does it cost? And this is a risk. And this is a risk." -Elsa

In sum, product development takes on the innovative idea and prepares it for mass production so it can be introduced to the market. While the phase of idea development that resides at the idea department has been described as fun, the latest at the hand-over phase to product development is the moment when different kinds of critical questions arise that can negatively impact excitement as considerations get increasingly serious. For example, potential risks are emphasized. Moreover, Elsa is aware that the realistic, critical perspective that their organization brings in may, thus, sometimes be perceived as boring.

4.1.4. Featuring: The Sales Organization

Although the sales organization at AmasophTech turned out to have a rather complex structure, the only relevant roles for understanding the analysis in this thesis are the sales role here anonymized as sales support and the manager of a sales region. While the latter can simply be understood as a managerial role to typical salespeople interfacing customers and promoting products, Nils describes the special role of sales support as follows:

"We have one [sales support] for Americas and one for Europe and one for Asia. So they keep their ears towards the customer and also inwards to the company. So they try to translate customer needs. They can also ask for information from customers: 'Do you think that this could be valuable?'." -Nils

The sales supporters have been portrayed as an important source of input for the idea department's development of new product concepts. As they sit between AmasophTech and the customers, they can help to build a strong argument for a new idea if they identify potential customers for the new product. Moreover, this quote highlights that the special capability of the sales support role is that they summarize the input from across the sales organization so that not every salesperson directly approaches AmasophTech's headquarters.

4.1.5. Summary of the Cast

As has come across in the subchapters above, the idea department, product management, product development as well as sales have different roles in the innovation process. If the idea department is concerned with exploration, product development is concerned with exploitation. Furthermore, product managers are the ones who hold both pieces together and are involved closely from beginning to end. As Lars puts it:

"I think that the product manager role is probably a glue around this quite a lot as well. Because the product manager is talking to everyone, and then can connect people when it's needed or suitable." -Lars

Drawing on the metaphor of glue illustrates that product managers seem to have a close connection to both the idea department and the product development organization. At a later stage, they are also in direct contact with parts of the sales organization. As the connecting element, the product managers have the role of translating the initial product concept or prototype to something that is capable of coordinating many more people.

Moreover, if this is the story of how AmasophTech communicates to navigate new ideas through the challenges of ambidexterity, the sales organization can be understood as an occasional but significant featured part providing feedback and input. Of course, this may be a simplified depiction of the organizational structure. It is not exhaustive and does not convey the complexity of organizational reality in which there are overlaps, deviations, diverse personalities, and occasional changes to the organizational structure. Yet, getting acquainted with these different types of internal stakeholders involved in the innovation process sets the basis to understand the following analysis of our empirical findings concerning our research question: "*How is communication used to master the challenges of ambidexterity when diffusing innovation in a mature tech company*?".

Overall, Sven remarks:

"We have certain links in between, but we are divided as an organization." -Sven

Therefore, now that we got to know the main characters in the case of AmasophTech, let us try to understand which tensions arise within the organization due to its structurally ambidextrous setup and let us examine which role communication plays in coordinating their work.

4.2. What Ambidexterity looks like at AmasophTech

In the literature review, ambidexterity has been shown to be about the coordination of simultaneous exploitation of existing products and ideas as well as the exploration of new opportunities. In the case of AmasophTech, achieving this balance is most significantly challenging in the allocation of resources to certain projects. It is about prioritizing. Oskar, a product manager, summarizes this process of constantly balancing exploration and exploitation:

"And then of course [the idea department] is coming up with a lot of ideas and concepts that we sometimes take into the product portfolio. And sometimes I think that they might be a little bit frustrated in that we are not taking on more of the things that they're coming up with. But I think we always need to have kind of a longer term approach, and really if we do something we need to do it properly and we need to make sure that we are staffed accordingly and that we can over a period of time put resources on doing the things we want to do when we start something new. Because it's not just to develop one product and then you're finished. You need to continuously develop and all of that. But we take in new ideas of course, but when we choose to do something new we also have to choose to do something less or not at all, so it's a balance. We don't have unlimited resources to do new things." -Oskar

As this excerpt portrays, decisions for or against new ideas go along with both emotionality and rational thinking. The idea department may feel frustrated every time one of their new ideas is rejected, an assessment that has been equally made by many interviewees. However, this excerpt also shows that decisions to take on a new idea need to be thought through as the process of exploitation has a long-term orientation and may require continuous investments that already need to be considered. As resources are scarce, the idea department needs to convince decision-makers of the potential of their product concepts for them to come alive. As the manager of the idea department, Nils, notices:

"But that is usually the conflict in between what we call an exploration phase and the phase where we're exploiting the idea. [...] [W] hen we move ourselves from the exploration phase into the exploitation phase, [...] some degrees of freedom, they just disappear. The degrees of freedom that we had, suddenly, they are basically freezed, so we cannot do much of changes, for example. And when we are going into the exploitation phase, we start to engage a lot of more people. The innovation team, we are a couple of people, 1, 2, 3 people maybe. And then we start off a new product, maybe we engage 50 people. So it's so much higher degree of inertia." -Nils

Here, the focus is on how one new idea moves from its initial development in the exploration phase to its development for mass production which is in this organization understood as exploitation. Many more people start to get involved in the productification-phase which, according to Nils, results in a loss of freedom to adapt the idea further. Moreover, Nils experiences this transition as a conflict. How these struggles can potentially be solved through communication will be elaborated in the next chapter.

4.3. How to get an Idea through these Tensions?

When studying how communication contributes to moving an idea from exploration to exploitation, this research has identified interpersonal exchange as the most important basis on which the different business units coordinate their work. Beginning with very informal encounters over lunch or breakfast, the idea department identifies and, subsequently, targets the gatekeeping product managers on a personal level and creates excitement for their new ideas. Once interest has been established, they invite the respective product managers to demonstrations at their lab that make the informal talk about new ideas tangible and facilitate further discussion. The increasing formalization of meetings with decision-makers reaches a peak at so-called roadmap meetings that set the basis for making innovations scalable.

4.3.3. The Importance of Informality in the Exploration Phase

To start off the analysis of our empirical findings regarding the role of communication for turning an idea into a mass-producible product, a first somewhat surprising finding appeared to be the importance of informality when exploring and presenting new ideas. Interviewees repeatedly highlighted how talking to colleagues from other departments at lunch, for example, allows them to build relationships that fuel their cooperation on innovation projects. Moreover, informal
settings were found to contribute to inspiring targeted stakeholders and getting them excited for a new idea.

4.3.3.1. What is Informality at AmasophTech?

Before delving into the findings to explain what informality does for the exploration phase, we will begin by displaying how informal communication looks and is experienced at AmasophTech in the following excerpts. After a first introduction of the context in which interactions are understood as informal will demonstrate that this classification is reasonable, this section will present the characteristics of informality at AmasophTech further to start elucidating how it has been found to impact innovation processes. The following excerpts portray a number of settings where these informal conversations usually take place:

"It could be everything from our traditional fika to having dinners, walks, whatever, you run into each other in the corridor. It could be that walking out from a meeting you realize, 'Oh, that was a bad idea. If they would have done it this and this and this and that would be even nicer'. [...] If it's more informal, then it's more discussion." -Henrik

"Informal is more... You don't have a PowerPoint. You don't have an agenda. You typically meet over lunch or coffee." -Anton

The excerpts show that informal conversations take place within different contexts: in the hallway, during fika¹, dinner, lunch, over a cup of coffee or during walks. The variety of settings in which employees get together informally surprises us and emphasizes the importance that is ascribed to socializing outside of traditional office environments at the company. The regular fika that Henrik mentions refers to the "fredagskaka", the pastry that is offered for all employees to get together every Friday afternoon. This routine gives insights into elements of the organizational culture in which taking a break with colleagues is valued and facilitates exchange. Moreover, it seems that Henrik sees informal communication as a means to further discuss more formalized meetings. It appears to allow for further reflections on the meetings. Moreover, the interviewee claims that leaving the meeting room enables more dialogue among colleagues than is possible in formal settings.

¹ To take a break, drink coffee and at times eat cookies, cake or snacks. An essential part of Swedish culture.

Moving on, the second excerpt presented above does not only introduce us to informal meeting settings but, moreover, provides a starting point for elaborating on the characteristics that AmasophTech's employees ascribe to informality. There is no set agenda or presentation slides guiding these rather unstructured encounters. Additionally, Nils confirms this description and explains further how informality contributes to his work at the idea department:

"Usually we have just initial over the breakfast meetings. [...] Informal communication for me is that we have mostly verbal meetings. We don't write any protocol or meeting minutes. [...] So it is at least some kind of unrecorded information. It's more: We are here and now. We try to pitch more of a kind of mindset." -Nils

"The informal communication is more that we talk about the mindset, an opportunity that we could grasp in a way. Ultimately, we would like to create a feeling on the receiving part that this is really something, to engage people. [...] It's much more rapid in a communication style where we are having these hallway or canteen talks over a cup of coffee. Especially since we're so used to it within [our company]." -Nils

The interviewee implicitly describes that what he classifies as informal encounters with stakeholders, above all, needs to feel informal. This is achieved, for example, through choosing to meet for breakfast to discuss ideas. For the analysis in this chapter, it is important to know that the company offers free "morgonfika" every day that all employees can join at the office canteen. One day every week the idea department hosts breakfast meetings with different themes at which the food will be taken to their open office landscape and guests can be invited. This classification as informal is interesting because the breakfast meetings that Nils refers to are nevertheless scheduled in advance and approached by the idea department with certain intentions as the goal to pitch a certain mindset indicates. Moreover, in times where writing meeting minutes is usually perceived as adding to an organization's efficiency, it seems surprising that no documentation is preferred. The interviewee states that he refuses to write a protocol for these informal meetings to increase everybody's presence in the moment. Thereby, participants' free exchange of thoughts may be facilitated because no comments are being recorded. In that way, informality may contribute to open discussions that help to explore initial ideas further.

Moreover, the description of informal communication is highlighting emotional aspects as it seems to be aimed at inspiring, discussing, developing and creating feelings on the receiving parts about

new ideas. It is also argued to add to developing an understanding of why the new idea has the potential of becoming successful. Finally, informal communication is portrayed as more flexible and reactive to situational needs, suggesting that there are different dimensions of informal communication within the organization, some more planned than others as will become clear in the following chapters. However, the interviewee also highlights that the company culture which he experiences as flexible and open could be a potential prerequisite that allows informal communication to happen productively.

4.3.3.2. Finding relevant Stakeholders through Informal Communication

The informal communication taking place in the canteen, hallway or over a cup of coffee has been identified to facilitate networking, where people build relationships and get to know each other better. Most interviewees highlighted that they have been at the company for many years and have seen it grow. Therefore, even if the complexity of the company is increasing, they can rely on the network that they have been building and cultivating for many years. Moreover, informal communication has been identified as the basis for such networking and maintaining relationships. This is illustrated in the following statement:

"We took a lunch walk. And so I got a piece of information that is not necessary to know. But it will, combined with everything else, help me also to be interesting so people can come to me because I can tell them things. [...] So I'm kind of a bumblebee going from flower to flower, getting information, leaving information." -Anton

The informal lunch walk that Anton from the idea department refers to gave him insights that did not immediately appear to be useful. However, from experience the interviewee has learned that these bits of seemingly irrelevant information can turn out to be beneficial in a different occasion. By gathering knowledge on happenings in the organization, Anton sets a foundation for networking because he will be able to share this information with someone for whom it could be relevant. The bumblebee metaphor is particularly interesting as it displays the informal communication culture in a way that important things are not found in formal documents, but rather within the employees at AmasophTech. Deciphering this metaphor, it becomes clear that the bumblebee is an important pollinator for many plants while personally receiving energy from the nectar it extracts. Thus, the spread of information through informal networking can be seen as generally fueling the work of individuals involved in it. Moreover, Anton in particular has also been mentioned repeatedly in nearly all interviews as being an information spreader when it comes to new ideas, living up to the metaphor of the bumblebee.

Although strolling around and gathering information functions as a way to become interesting and by that attract stakeholders in general, informal networking also has another function. These relationships seem to matter for finding the right stakeholders to approach when introducing new ideas. Through cultivating relationships by regularly interacting with different people in informal settings, the idea department gets to know who might be interested in taking on their product concepts. Magnus explains his approach as follows:

"I have a big network at [AmasophTech]. [...] I go around and fika with people and that's where people mention sort of stuff. And you can poke a little bit and you get names. You can poke a little bit more there and you get more info. [...] So yeah, gossip is a big thing and we do it a lot. I do it a lot. Not to find out bad things about people, but it's more about knowing where people are at and what is important for them so that you can shift and adjust the pitch to address what's important for them or actually just skip people because then we know that they will not be interested. So it's about creating win-wins rather than trying to force ideas upon people." -Magnus

As becomes apparent, Magnus chooses to meet people in a rather calm moment over a cup of coffee to get useful information that does not seem accessible to him in other business contexts. Describing these conversations as poking suggests that the outcome of the network activity might not be clear, yet it is intentional. Interestingly, Magnus displays a rather unconventional understanding of usually negatively connotated gossiping when he elaborates how it brings value to his innovation work. Through the informal talks, he discovers information that contributes to making his communication efforts more effective. In that way, the idea department identifies targets at which they can direct the presentations of their new product concepts and gets an indication when in time would be a good chance to do so. Their aim is to create mutually beneficial situations in which product managers, earlier identified as primary gatekeepers for turning ideas into final products, can profit from. Concluding, Nils summarizes:

"It's very much about approaching the right people, knowing which strings you should actually pull to make things happen. So, it's very much a political way of doing things." - Nils

Even though having lunch, breakfast or coffee with different people may seem like a random, unstructured activity without any clear output, Nils assigns a political dimension to it that turns the informal, agendaless chats into a powerful tool to convince relevant stakeholders of their new ideas. Referring to the image of a marionette, the idea department thus learns how to trigger attention in people by getting to know them better on a personal basis. Moreover, it seems important to identify which stakeholders are crucial to convince in order to allow an idea to move from an exploration to the exploitation phase. Another member of the idea department gives insights into his approach when pre-selecting a suitable audience for the presentation of a new idea:

"So if I have a [specific product idea], I typically think, 'okay, I think [this person] could use it'. So I try to focus on those people and then grab people in the canteen or the coffee queue or wherever." -Anton

The knowledge that Anton has accumulated about people over time seemingly helps him to address the "right" people with a pitch. Moreover, this quote shows that the usual next step after identifying whom to approach is to contact them in an informal setting. How this informality impacts the way people experience the ideas presented to them will be examined further in the following chapters.

4.3.3.3. Unboxing Ideas at Lunches

To deepen the knowledge of why informal communication is used substantially throughout to facilitate innovation processes, we will develop *how* this kind of exchange between stakeholders is experienced to influence the decision-making around new ideas within different settings. A repeatedly mentioned theme during the interviews was the setting of lunches between the idea department and product managers, and the atmosphere it allows for when presenting and discussing ideas. When comparing the excursions that Fabian, one of the product managers, regularly takes with members of the idea department to a nearby pizzeria to the presentation of ideas at the idea department's office, it becomes clear that the interviewee appreciates the open

atmosphere to think out loud that lunch meetings create as well as the possibility to shape the idea by giving own input. Fabian explains:

"If [Anton] sets up at a meeting, we sit here and we have a PowerPoint presentation, then he has something he wants to present. He has already boxed it in. If we take a walk for lunch, there isn't any box. He can say 'We have this crazy idea to do this and this'. And then [...] we can discuss it. [...] If you want to be really open-minded, you cannot sit with a PowerPoint." -Fabian

Based on the above excerpt, the informal exchange taking place amongst product managers and members of the idea department is described as allowing for free thinking and expression as well as, thereby, to improve ideas though giving feedback. Referring to the image of an absent box, Fabian indicates that initially discussing new ideas extremely informally does prevent set agendas. One may, moreover, interpret that in other, more formal settings free thoughts are not as likely to be shared. Also, as the formalized communication previously was described as following a protocol, this statement may suggest that there is a box thinking ascribed to formalized processes not suitable for exploring and developing new ideas. Moreover, another interesting aspect of having the lunch and lunch walks seems to be the fact that the atmosphere is open for negotiating ideas, and giving suggestions, adding to the importance of the feeling of informality to develop new ideas and innovate. Moreover, it can be assumed that by shaping the new product concept through own input, targeted product managers might get more attached to a new idea as they leave their imprint on it.

While the paragraph above has described the lunch setting from the viewpoint of a receiver of new ideas, the following excerpt adds to the importance of the lunch setting from the viewpoint of the sender of ideas:

"So if they are in operation mode, you can't reach them [product managers]. You just get them on another day. Or, as we usually do, we invite them out for lunch because then they're more relaxed and they're more open to weird stuff [new product ideas]." -Magnus

Firstly, one can interpret the atmosphere at lunches to be more easygoing and freer from tensions than in formalized settings which may make product managers more receptive to new ideas. This

is argued to be based on the fact that lunches allow for a break from the busy schedule that these stakeholders usually have. When product managers are "in operation mode", they presumably focus on exploiting their existing product portfolio and the idea department perceives it to be difficult to get their attention for new ideas. Therefore, the point in time for inviting to an informal lunch also seems to be decisive. Connecting this to the previous statement made by Fabian, it does indeed confirm that receivers are open to being introduced to new "stuff" and discussing new ideas back and forth.

4.3.3.4. Conclusions on Informality

Finally, informality is important to create relationships, initially pitch new ideas and to gather input to these ideas. Derived from interviews, the conclusion can be drawn that the informal communication that characterizes the interpersonal interactions at AmasophTech function as a means for the idea department to pre-select the audience for the pitching of new ideas. When these stakeholders have been identified, the lunch setting allows for presenting ideas in still a very informal way, as one interviewee explained, the idea is not "boxed in" but rather perceived to be open for discussion. Moreover, this section has alluded to an incremental formalization of informal communication, meaning the communication becomes increasingly planned but still with the feeling of informality. However, to deepen the understanding of the increasing formality during the exploration phase, the next chapter will present the importance of demos and considerations on the maturity level of the product.

4.3.4. "Seeing is Believing" - The Role of Demos

Once relevant stakeholders for the idea have been identified and first informal meetings with them during lunches or breakfasts have sparked interest in the innovation, the idea department usually invites these people to a demonstration of the technology into their lab. Showing a prototype has been portrayed as a first step into a more in-depth discussion of the idea. This chapter will elaborate on the relevance of demos to facilitate the communication around an innovation and which role they play in convincing stakeholders to take on the idea. It will start by explaining how demos create excitement for a new product concept and how they contribute to building a deeper understanding of the technology. Then, we will examine how the demos convince stakeholders of the feasibility of the idea, strengthening their confidence to adopt the innovation and approve it for exploitation. In this regard, several interviewees uttered in the exact same words that "seeing is

believing", a crucial quote for this thesis that will be analyzed further. However, demos have also been found to bear risks, especially if the maturity level of a product concept is not communicated properly. Finally, demoing a product concept will be shown to provide room for discussing the idea and developing it further in which the prototype serves as a tangible basis for conversation.

4.3.4.1. How Demos add to Previous Informal Encounters

First of all, the interviews have shown that demos can create excitement and spark curiosity among stakeholders while also allowing them to build a deeper understanding of how the new product works. To set the scene, Nils, the idea department's manager, introduces us to the intention that his unit has with demoing a product concept:

"We can do some kind of lab environment demonstration as well. 'Please come up to our lab and see what we can do. We can show something to you.' And we start to pitch and create some kind of curiosity of the product manager, so they need to tune in." -Nils

To begin with, this excerpt alludes to the fact that the demonstration of a new idea usually builds on a previous encounter with the targeted stakeholder. The invitation to the idea department's lab is presented to derive from an informal conversation in which the manager drops the casual call to action of coming to the lab to experience the new idea. Thereby, the demonstration can be seen as a follow-up to an interest that has been sparked in a first verbal encounter, building another layer to informal lunches, breakfasts and/or hallway discussions. That Nils sees demoing as pitching highlights that the intention for these meetings is set and thought through. Convincing a product manager of the idea and getting their support is presented to be the goal of the demos. Moreover, the metaphor of "tuning in" illustrates that demos should enable the different stakeholders to synchronize their perceptions of the idea to achieve harmony through establishing a common goal. However, staying in this metaphorical picture of music, it seems that the idea department aims to provide the key in which the collective will play and the stakeholders entering the innovation process should, therefore, adapt accordingly.

That lab demonstrations often contribute to making the idea department achieve this aim is confirmed in manifold quotes from product managers to product developers that get involved at a later stage. When asking them about which communication channels contribute most to making them convinced of a new idea, many interviewees highlighted the demos. Elsa from the product development organization, for example, describes the benefits of a demo compared to illustrations on presentation slides:

"I always like to come and see and feel the product. [...] Because you see a picture, you don't know how big it is. You don't know how it feels. [...]. And also later, we've been testing the product. It was also fun using the product." -Elsa

As described in this quote, the possibility to feel the product enables recipients to grasp the idea in a more holistic way. For instance, they develop an understanding for the potential size of the product, an aspect that can hardly be conveyed equally well by an image only. Furthermore, the interviewee shares that they got the chance to experiment with the prototype themselves which, for Elsa, created excitement for the new technology as she enjoyed testing it.

Having reflected on the psychological dimension of engaging with a demo, Lars elaborates further how it helped him as a product manager to believe in the potential of a product concept:

"The closer to the real stuff you can get, the better it is. It also has to do with psychology and emotions you build up when you see things that look pleasant and helps you in your mind expand and see, visualize, 'what could this be in the future?' and so on. It's so much easier if there is a demo." -Lars

This interviewee is explicitly aware that demos affect his emotions and attitude towards a new product concept. Lars describes that seeing a prototype breaks with cognitive boundaries that he might have developed and enables him to grasp the potential of a new idea. Adding to that, Lars moves on to explain how demos also help him and other product managers to believe in the technical feasibility of a new idea with a reasonable amount of resources that need to be dedicated to realize it:

"Because seeing is believing. And if you can make a demo without spending a huge amount of resources, they can also as a product manager get a feeling that this won't eat up all my engineers for three years. Because if they could do this demo in two months it should be possible to make a mass-producible solution out of this with a reasonable amount of resources. Not always the case though! But it really helps you get the courage to invest in it if you see the demo." -Lars Interestingly, "seeing is believing" is a phrase that three different interviewees have uttered in the exact same wording when talking about demos. Therefore, it can be derived that building trust in a product concept is crucial for the decision to adopt it. Especially product managers as key stakeholders in this initial phase (see chapter 4.1.2.) need to believe that the idea is working in practice and that it can live up to what the idea department promises when introducing the concept verbally. As shown in this excerpt, product managers are concerned with a balance in the use of their engineering resources that are split between refinement of existing products in their portfolio and developing new products for mass production. Thus, demos help to build the necessary confidence that working with the presented innovation is a manageable challenge for his/her organization.

4.3.4.2. Finding the Challenging Balance in the Maturity Level

However, the same excerpt already alludes to another, potentially negative dimension of demos: When the prototype looks more mature than it actually is, it can create wrong expectations. One product developer elaborates on this challenge of managing expectations and vividly describes:

"[The product managers] get easily fooled. They see some nice demo by [the idea department]. 'Oh, that looks great. And it's already done. Excellent. I want it'. And then they come to their product development team. 'Oh, they already have done it at [the idea department]. Can you not just release it? You can have it out in a week'. And that's of course very naive. But that is what happens every day to some extent." -Björn

Another interviewee adds:

"It's just that extra little step can sometimes be very simple and easy - but it's not. It's super complicated to get there, and that might build up a great deal of frustration and it could also lead to investments going the wrong way as well." -Lars

Both excerpts display possible tensions that can arise when handing a product concept over from the exploration to the exploitation phase. Although the demonstration of a prototype can be a powerful tool to convince product managers of the potential of an idea and develop their understanding of the technology, it is not to be equated with the final development of a product concept to prepare it for mass production. In that exploitation phase, considerations need to be made that are different from developing a single prototype. As the interviewees highlight, sometimes seemingly small aspects can require many resources from the product development organization. However, a successful demonstration also bears the risk of distracting from such pain points.

Furthermore, setting the right expectations when demoing appears to be a challenging endeavor as the idea department, on the one hand, wants to sell their product concepts for which it needs to be perceived rather mature by product managers. On the other hand, the following quotes allude to the tensions that arise when the presented maturity level clashes with the actual demands to prepare an innovation for mass production:

"At times, they [idea department] focus quite a lot on the positive side. 'It's going to be cheap, it's going to be quick, it's going to be easy'. But I know from experience that it takes time, unfortunately, to develop a product." -Emil

"And when we think that something is 90 percent ready it doesn't mean that it's only 10 percent left. It's usually much more to do. And sometimes when something has been 90 percent ready from [the idea department], it has been very far from that." -Oskar

What can be read from the receiving parts' statements is that they have previously experienced new product concepts as being communicated as almost done. Yet, when handed over to the product development phase, they turned out to be further away from done than said. This may result in the perception of the idea department's demo presentations as less trustworthy. An interpretation of the statements may as well be that the idea department's desire to sell their ideas to the stakeholders encourages them to present a high maturity level so they can convince others of the project's feasibility. Therefore, setting the right balance in the communication around maturity of an innovation can be identified as a challenge that needs to juggle stakeholders' expectations.

4.3.4.3. Should the Idea become "The Receiver's Baby"?

Yet, the maturity level of a new product concept and how it is communicated has not only been found to potentially lead to wrong estimations for resource allocation on further development projects. Moreover, the interviews have shown that the maturity level impacts the product developers' attitude towards their work of bringing an innovation to the market. This is described as when handing the idea over to the exploitation phase, there needs to be room for adjustments of the products. Astrid, a manager of product development engineers, explains that her unit wishes to make the innovation their own which is why it should not be too mature:

"And then when it's handed over, it is important that the receiving part makes their full, own investigation, because it must be the receiver's baby." -Astrid

When asked to further develop her thoughts on the innovation being the "receiver's baby", Astrid continues:

"You can tell an engineer what to do, but you can't tell an engineer how to do it. So if [the idea department] is doing too much of the final product, they have set their how. So their task is to investigate: 'this is possible to do'. And this is one how, this is one way of doing it. And then when it comes to the product [development] organization, they can look at the prototype, they can listen to what [the idea department] has to say, and then they want to make their own how. And that is important. If engineers get to tell their own how, they get the inner motivation, and they will actually burn for the product. Because that is what I mean, it's their baby, they will care for it, they will think about it, they will do their utmost. And that comes from inner motivation." -Astrid

In contrast to what was previously said about having a somewhat mature product when performing demos and knowing how mature a product is to allocate resources accordingly, the statements show a different request of not developing the product too far. Finding a balance in the maturity level when presenting and handing over innovations appears to be challenging. As Astrid explains, the engineers working with the product concept want to find their own ways of realizing the idea, displaying a tension in the handover phase from exploration to exploitation. Interestingly, investigating different ways of configuring how the idea turns into a final product is emphasized as adding to the engineers' intrinsic motivation and commitment to their work. While these factors can be assumed to impact how fast an innovation can be launched, a "full, own investigation", as requested above, may also lead to a loss of valuable research and development results that have been gathered by the idea department. Therefore, the context of engineering seems to be especially challenging when it comes to coordinating different business units to achieve ambidexterity. Moreover, the question arises if the idea department is even able to precisely estimate how long it

will take to bring a product idea to the market if product development wants to make the product their own.

4.3.4.4. Debating at Demos

Finally, open discussions around product demonstrations have been found to serve as a potential means to reconcile the tensions that different demands on the maturity level of an innovation may create. It seems to be important to be clear about the limitations of a product concept as well when communicating ideas through demoing them. The receiving stakeholders want to know about the pros and cons of the new technology which requires honest communication that does refrain from persuasion to adopt at any cost. However, this potential risk of demos can similarly be addressed if product managers and developers ask critical questions. Building on that, Emil further mentions that the lab demonstrations also provide room for discussion and asking more in-depth questions about the innovation:

"I want to know what's bad as well, not only the positives for new technology. What are the limitations? [...] If you see a demo, you can start to ask those [critical] questions." - Emil

Also Lars confirms that discussing the product concept is an integral part of the demonstrations:

"They show. And then there's a discussion." -Lars

Thereby, demoing a new idea serves as a fruitful basis for a conversation that can build on what has just been seen. The lab demonstrations set a frame in which the invited stakeholders can ask further questions about the innovation and in that way develop their understanding of the idea. The fact that the interviewees describe this type of meeting as a discussion instead of, for example, a presentation or a Q&A session, highlights that the targeted stakeholders perceive the idea to still be open for changes. There is the possibility to express concerns, to suggest adaptations or alternative solutions. Through this conversation, the product managers and developers become convinced that they understand the idea and build the confidence to further work with it. Moreover, it can be assumed that the open debate also gives them a feeling of being part of the development process of the idea. By contributing their opinion, they may leave an imprint on the product concept in this exploration phase that makes it feel more their own and can add to their motivation to lead the idea to success.

Furthermore, one product manager, Oskar, depicts the fact that demos require a personal meeting to make it stand out from written digital communication that is often perceived to be overwhelming. By providing a reason to visit the idea department's lab and setting time aside to engage with a new idea, the demos serve as a crucial platform for exchanging thoughts. Answering the question which of the manifold communication channels that Oskar is exposed to he does experience to affect him most, the product manager elaborates:

"It's the personal meeting and the demos. [...] I don't know how much you're exposed to Teams here but a lot of information is being pushed out and it's not that you read everything. And maybe you don't really get the full context of things by all this written communication. I think the human interaction is very important and to be able to have a communication and talk, maybe build on ideas and ask questions and all of those things. So I think that is the most efficient way actually if you really want things to happen." -Oskar

By distinguishing the in-person demos from written (mass-)communication through digital channels, the interviewee emphasizes the impact that personal meetings have on his decision to take on an idea. Firstly, demos focus attention on the product concept. Secondly, these kinds of meetings are portrayed as providing useful context information that allows people to grasp the idea better. Thirdly, although it could be assumed that visiting the idea department's lab would be perceived as a rather big time effort, the interviewee, contrastingly, describes it as "efficient" and effective for making things happen. Allowing people to interact face-to-face, as simple as this conclusion might seem, stands out among the large amount of written communication and contributes to their engagement in the innovation project.

4.3.4.5. Conclusions on the Role of Demos

In summary, demos of product ideas have been identified to be a crucial platform for discussing innovations at AmashopTech. Showing prototypes can create further excitement about a new idea and convince the product managers to adopt it because "seeing is believing". However, this chapter on product demonstrations has also displayed an interesting threefold tension between exploration and exploitation that complicates the communication of the maturity level in demo meetings. On the one hand, it seems important for receiving stakeholders that the idea department communicates a high level of maturity to show that the product concept is functioning, to create an understanding

of how it works and to believe in its technical feasibility. On the other hand, if the idea is approved and handed over to product development, there seems to be a tension if communicated as too mature and then the estimation does not match the demands of product development, resulting in disappointments and a decrease in trust in the idea department when presenting ideas in the future. Or, if the expectations can be fulfilled, engineers might be less motivated to adopt an innovation when they are not allowed to develop it themselves. What can be interpreted from this is that the communication around maturity might need to be adapted towards different stakeholders, either when selling in the product, or when handing it over to the exploitation phase.

4.3.5. Formalizing Communication for Exploitation

As has been shown, informal communication appears to matter when introducing a new idea, whereas the need for a more formal communication process has been discovered when moving into the exploitation phase, facilitating the development of a final product. This chapter presents the formalization of communication happening in roadmap meetings and after a decision to adopt the idea has been made there.

4.3.5.1. A Roadmap to the Future

One identified theme that was repeatedly mentioned during interviews is the roadmap process, where the ideas produced at the idea department can receive approval to come to life. This is done by the product managers and top management who twice a year meet to discuss which product concepts to turn into actual products, as explained by Emil and Björn below:

"The roadmap is a high level plan where we have all projects planned for the coming 36 months and in that plan you have all the products that we intend to develop. When we start a new project, it's part of the roadmap project plan." -Emil

"[A] more formal setup would be the roadmap work. So if we have seen some shiny new technology at [the idea department] with product managers. And if they really want to have it done, then we just need to get it into our roadmaps. And that is a process that we have every six months. So then we maybe need to have a lower priority on something else and add this new shiny thing into the roadmap." -Björn

Derived from interviews, these roadmap processes are used for handing over the concepts to product development, that is, leaving the exploration phase to exploitation. The roadmap process

is described as "a more formal setup" (Björn) and, as it happens repeatedly every six months, it aligns with how several interviewees have defined formal communication, that is, planned and with an agenda. Also, the roadmap process appears to be of importance for the idea department to get through with an idea, as Björn states, "if they really want to have it done, then we just need to get it into our roadmaps". As "they" refers to the product managers, this quote also supports the previous arguments made about informal communication as convincing product managers of an idea so they fight for the new product in decision-making meetings.

Moreover, Björn indicates that roadmap meetings are relevant for prioritizing projects and allocating resources accordingly. However, from the perspective of product development, Björn does not seem too excited to incorporate new things deriving from the idea department into the roadmap as he describes it as something that needs to be done. Furthermore, labeling the new technology as "shiny" can be interpreted as distancing himself from the innovation, considering we perceived this quote to be conveyed in a slightly sarcastic tone. In contrast to excited product managers, the more facts-driven and rational product developer highlights that he does not get as easily convinced by product demonstrations. It almost appears as if Björn tries to talk down on the innovations developed at the idea department. Again, a tension between exploitation- and exploration-focused units becomes apparent. The roadmap meetings appear to be the arena for negotiation in which these different perspectives come together and decisions on future products are made.

To deepen the understanding of why the communication incrementally moves from informal to formal, Björn explains that, although informal communication has created a foundation for understanding the ideas and concepts, formal communication has the capacity to build a basis for decision-making. Björn extends the thoughts and describes formal communication and meetings as a place where no one will miss the communication, as with informal chats in the corridors not everyone will be present and official decisions should not be made there. Björn explains the necessity of formal meetings in the coming excerpt:

"So the formal meetings I think are good to get a handshake from everyone, all key stakeholders, that we should move forward in one specific direction." -Björn

The excerpt shows the importance of formal communication as it appears to be necessary when deciding on which idea to take on, and that at this stage the presence of all relevant stakeholders matters. It seems important as well that all stakeholders are on board with the idea. Björn's handshake metaphor refers to the need of getting approval from relevant decision-makers, and that it is only after this official agreement has happened that a new idea can move into the development phase of becoming a final product.

However, the formal communication and the formal meeting settings do not only occur when deciding on whether or not an idea will make it into becoming a product, but also after the decision has been made to move forward with it. Other formalized documents with more concrete specifications have been found to emerge out of the high-level discussions in the roadmap process. In the following extractions Per clarifies the meaning of product proposal documents and Henrik demonstrates the importance of formalizing the communication after decisions have been made in the roadmap process when operations produce the final product:

"[*T*]*he product proposal,* [...] *that's* [...] *the order document for the* [*product development*] *teams.*" -Per

"Some things are more formal. Of course, when operations get involved, it's very important that they know what they're doing. So that is when the project has been started, so during the product development, a lot of things have to be quite formal." -Henrik

The above excerpts display another dimension of formalized communication after the roadmap process, at the handover point to exploitation, where there appears to be a need for formalized documents to coordinate the activities of larger business units. As Per explains, the product proposal functions as an order document suggesting which product to develop next, what the project entails and how it should be approached by product development. Further, Henrik extends that formalized documents at a later stage also ensure that operations can follow concrete instructions. Once an idea has moved to the exploitation phase, Henrik argues that things *have* to be formal, portraying it as a requirement rather than a choice to increasingly formalize the communication.

4.3.5.2. No Either/Or - Informality Continues

Formalizing communication at the roadmap meetings as a handover stage may make it seem like the idea department is not involved anymore in the process, but Anton and Magnus explain otherwise. While the communication has been noticeably formalized, the following excerpts expose continuous interpersonal informal communication between the idea department and product development:

"And product development...We try to talk to them so they don't destroy our idea. [...] So we think this is a great idea, the best ever. And then when they want to make a product, maybe they make changes that we don't like. So we try to see what they're doing to make sure that they understand it correctly." -Anton

The excerpt implies there is a tension between the idea department and product development after the handover is done, where the idea department exhibits the assumption that there is only one right way to realize an idea and a fear of the initial idea changing too much. Anton's quote displays a lot of pride around the new product concepts which serves as a basis for not wanting the initial idea to change too drastically when being developed for mass-production. Here, the idea department reveals that, to some extent, they feel an urge to remain in control of an innovation that originated in their lab. Therefore, one means to stay in touch after the official handover is to informally share information on how to solve issues that may arise when developing the product. How this plays out is extended in the following passage:

"If we go in and say 'you are doing it wrong', they are going to do it anyway, sort of. If we go in and say: 'Hej, have you heard about that?'. 'You don't need to do this?'. 'No'. 'Tell me more' 'When we did this over here, we found out that if we did it this way, it was quite easy'. 'Oh really? You don't say'. And then it's their decision to do it. So it's just simple leadership really that we don't want to be the ones that meddle in other's business by being explicitly meddling. We are trying to create win-win situations so that they don't fuck up the product." -Magnus

The statement suggests that Magnus, like Anton, hints on a fear of the product development team changing the idea too much and therefore, in his eyes, destroying it. However, he explains that transferring previously gained knowledge can be a way of implicitly suggesting product development how to work with and develop the product. Once again, this also shows there is a

need to use existing information within this phase, and exploit what has already been done. Further, he also states that they (idea department) do not want to explicitly meddle, meaning he is meddling but doing so in a more hidden way. As the first sentence indicates, if he were to explicitly meddle, the product development engineers would not listen as a matter of principle. What could be assumed here is that the idea department got involved in the development process before and meddled, but realized they need to do it in a smoother way to create "win-win situations", interpreted as giving valuable information that can fuel the work of product development. At the same time they (idea department) get their win by staying close to the idea and increasing their chances of developing the product like the initial idea they created.

Although it may seem that the product development organization does not appreciate this implicit involvement, Elsa as a representative from that unit nuances these statements above. Firstly, she describes that they sometimes have to change the products because there are demands that the idea department might not be aware of. Secondly, Elsa also utters that she sees a need for the idea department to stay in touch with them during the development process as their knowledge of the products can help the development, presented in the excerpt:

"Because we have other demands that maybe [the idea department] are not thinking about. So when we're doing those changes, it can be a good idea to have good communication there [between idea department and product development]. [...] We need them. They can't leave. We need to understand. And also they are doing so much software and they have a lot of knowledge that I want to transfer." -Elsa

To begin with, the statement displays a new perspective of the product development process, wherein it gives us the understanding of why a concept needs to change as there might be factors concerning mass production that the idea department is not aware of. Communication between the two departments is suggested as a means to understanding the divergent requirements of the units and thus potentially reconciling tensions that can emerge. Moreover, Elsa perceives a need for receiving information from the idea department throughout the development process to make use of the knowledge that they gained when initially investigating the product. Although the dependency relationship that Elsa suggests when saying "they can't leave" may be judged as exaggerated by other representatives of product development, it nevertheless highlights that the input from the idea department is seen as valuable. Lastly, this confirms that the informal

communication does not stop at the handover phase, but rather that it can add to the exploitation phase as well.

4.3.5.3. Conclusions on Increasing Formalization

In conclusion, the formal roadmap process seems to function as a bridge between exploration and exploitation in which new ideas get approved by key stakeholders. After this handover from the idea department to product development, a much larger organizational unit draws on more formal documents and meeting formats to coordinate their activities. However, at the other side of the bridge, the communication does not fully change from informal to only formal. Although the communication has been found to get increasingly formalized when moving towards exploitation, still some elements of informal communication persist to allow for a smooth development of the products, transferring knowledge from the idea department to product development while simultaneously allowing them to accompany the project longer than officially stated.

4.4. When the Distance Detector got unveiled outside AmasophTech

The communication moving from informal inspiration to increasingly formalized demos and roadmap meetings has also been applied in the distance detector project which will be examined in this chapter. However, in this special case, the idea department's communication strategy did not reach the usual results. This uncovers illuminating limitations to the communication flow elaborated above. Moreover, it will portray the unanticipated negative consequences of communicating too much in order to make things happen. Thereby, the distance detector story exemplifies that communication can essentially be seen as managing expectations. Where excitement is created, disappointment does not lay far away.

4.4.1. Background of the Distance Detector Revelation

The distance detector is currently at the handover phase to product development, thus at the edge at which most stakeholders need to be convinced of the concept so the decision to invest in its mass production can be made. However, the distance detector is a completely new technology that has never been explored by AmasophTech before. Due to high uncertainty, this idea requires comparatively much effort to win support from the decision makers. Summarizing, the distance detector can be considered a bleeding edge technology, especially in AmasophTech's industry.

After the decision to invest in the distance detector technology had been postponed several times, the idea department reached out to people from AmasophTech's sales organization and potential customers. As the idea department has put a lot of effort into this product concept and strongly believes in its value, they communicated more than usual, also to outside their company. Targeting the product managers as gatekeepers was not enough in this case. On the one hand, the goal was to get feedback on the idea from a market perspective and strengthen their argument. On the other hand, the idea department also hoped to achieve a quicker decision if another stakeholder group would approach the product manager with a request for production as well. However, although this may be a common procedure to gather market insights, the extent to which the idea department has engaged in this activity this time has created tensions among the different stakeholders involved in the innovation process. Moreover, this chapter will discuss different positions that product managers, product developers, sales and the idea department take in regards to the revelation. What has been the purpose of presenting distance detector demos to the outside of the organization? Which consequences does it have for whom if a product concept that has not yet been decided to become a real product is presented to salespeople and customers?

To begin with, according to one member of the idea department, the management team in charge of making a decision about the production of the distance detector had asked for feedback on which kind of customer would want to use this technology. Especially because it is to date such an expensive technology, the decision-makers wanted to be sure that there is a market for the product. In that way, the idea department got permission to pitch their concept to outside the company:

"So we started talking to different salespeople [from our company]: 'Who do you think this would be good for?'." -Magnus

Even though one may assume that a potential loss of competitive advantage would be the largest concern that different stakeholders hold against communicating new ideas to outside the company, leaking knowledge to competitors did not seem to be perceived as the largest issue. Only three out of fourteen interviewees even brought it up in the conversation. Interestingly, another unanticipated drawback of this communication strategy became apparent: The creation of wrong

expectations among salespeople and customers. Firstly, we will explain why the assumption has been developed that AmasophTech is already producing a distance detector. After that, it will become clear that this may result in disappointment and in hesitation among product developers and product managers.

4.4.2. Communicating creates (wrong) Expectations

Even if the idea department reported to have stated clearly that it is only a concept, rumors created high expectations on the distance detector. Also the sheer number of people the idea department talked to contributed to the perception that AmasophTech would already be producing a distance detector, although actually still being at the exploration stage. To begin with, salespeople and customers are not used to seeing demos (compared to 4.3.4.). Therefore, they may not understand that, although the prototype is working well, it is no final product and can take much more time until it can get to the market. As Lars further explains:

"When [idea department] people are out in the regions to meet customers and so on, people may think that it's actually things that are quite close to come. And that's a bit dangerous. Especially with demos, because they are not used to see prototypes. They don't necessarily understand that this is just a concept, this is not a ready product." -Lars

Moreover, once the idea is presented to outside the organization, AmasophTech has less control over the flow of communication. Thus, rumors began to spread that AmasophTech would launch a distance detector in the nearer future and that this product would solve many of the issues that customers are facing today, as described by Lars and Per:

"The [idea department] people have been talking to salespeople to get feedback. And then they talk to their friends, and then they talk to their friends. And all of a sudden people think that it's coming much further than it actually has." -Lars

"And in the [distance detector] context, they talked to so many people that the impression emerged that we are going to make a [distance detector], which was never decided. But they've asked so many people that the salespeople thought 'We are making a [distance detector]', and that's where things then go sideways. Because that's when customers eventually are under the impression that we're launching something and those are going to be successful. And that's not what should happen." -Per

4.4.3. Results of this Communication Process

The result of this communication strategy has been perceived to be twofold. On the one hand, the idea department was able to strengthen their argument that a distance detector is not only a cool technology but that there is also a demand from a market perspective. One outcome of their presentations to various customers was that the customers approached the product management to express their request of the technology. This can be evaluated as positive from the idea department's point of view wanting to bring their product concept to life. However, product management as well as product development did not appreciate this tactic as the expectations felt too high to be fulfilled properly. Therefore, on the other hand, demoing the distance detector to outside of AmasophTech led to negative evaluations of this approach as well and lowered motivation to engage in the project.

To start with, the idea department's intention with this amount of communication to the outside world was to increase their chances of getting the distance detector to be approved for exploitation, as becomes clear in the following excerpts:

"If we provide information upwards and if we plant the idea as a sales guy that comes from the other direction and also approaches the same manager, they will have some kind of two input. 'OK, this seems actually to be something.' Because in some cases it's only our voice, what we think. And the manager could actually disagree. But if you also hear that there is actually a need or urge from the customers from another point, we can really strengthen our ability to really to make this come through." -Nils

"It's a lot of creating fire so that someone reacts. [The idea department] wants someone to take on this and bring the value of it. And by engaging more and more people that say it's valuable, that's the way it can be attached to an organization." -Sven

While the idea department gathered feedback from the customers and continued pitching to the responsible management team, the technical founder of the company, a friend of the idea department, went to other countries and met with potential customers as well. One member of the idea department even vividly describes this communication flow as a *"three front attack on the product management team" (Magnus)*. The metaphors of "creating fire so that someone reacts" and the attack from several fronts convey the feeling of a dramatic situation, a fight, an urgent

situation in which a decision has to be made rather quickly if people want to survive. While this imagery may be exaggerated, it brings across the sense of urgency that the idea department tried to create, as well as the tensions inherent in this process. From these quotes, we can derive that gathering feedback from potential customers to this extent was not only meant to contribute to facilitating rational decision making, i.e. checking if there is a market for this product. What is more, motivating customers and salespeople to approach product management was also meant to target decision-makers' emotions, so that they would feel the need to approve the idea for production.

Magnus continues to summarize the results of this strategy, also aware of the potentially negative reactions that it had created in other parts of the organization:

"So you get a tremendous amount of hype. And then there is the matter of how capable is [our company] of actually producing what we're saying. And we know that it's quite easy to do it. But then it's not me who's going to do it in the end. It's going to be the engineers and the R&D managers in the product development organizations and the product managers that are going to stand there and front this towards customers. They got worried that they were not able to meet the expectations because they didn't know enough about the technology and how it would address the different issues." -Magnus

From a product manager's point of view, Sven adds:

"It's actually the more it's communicated the less these people [product development and product management] want to be involved in it. [...] So we already sold the gold, and we cannot really deliver it in time. But they need to do it, and it's a very hard situation to get engagement from product development." -Sven

Moreover, he also raises awareness that not only may disengagement be created in product development but also disappointment in the sales organization:

"If we just continue to increase the expectations that we are making the one and only product ever, they will get disappointed. Disappointment is not good in the sales organization. Or it will take five years until we have the product. That will also be a disappointment. So the effects of that need to be taken into account all the time. Why do we communicate and for what purpose?" -Sven

Adding to that, Per from the perspective of the sales organization supports this conclusion:

"So you also have to be responsible in the communication with whom do you talk. And not that they shouldn't talk to as many people as possible, that's not the point. But you always need to manage the expectations. So you always have to put up the massive disclaimer in the beginning. 'We haven't decided yet if we're going to make this or not.' But let us talk about the possibilities and then let's have a discussion." -Per

4.4.4. Conclusions from Unveiling the Distance Detector

Summarizing what can be derived from the different perspectives that the idea department, the product managers, product developers and the sales organization shared in the interviews, the communication that took place between the idea department and the outside of AmasophTech can be a valuable source of input from a market point of view, but that is only one side of the coin. Firstly, it is important to acknowledge that the market perspective can improve the idea department's argument for a business case of their innovation and help them explore the best customer segments, thus also delivering input to the development of the idea. Yet, the potential creation of wrong expectations is considered to become problematic for the development of a new product. Customers wanted the new distance detector technology that can solve problems for them as soon as possible and made strong requests to product management. These, however, realized that they will not be able to deliver a final product within the time span that customers and salespeople would wish for. In fact, when not having reached a decision if the explored idea will pass the gate of approval for exploitation, the idea department may have wanted to make this happen too desperately and targeted decision-makers from several sides. Concluding, being clear when demoing to outside AmasophTech that this is only a product concept and not yet decided if it will get integrated in the company's product portfolio seems to be of crucial importance. Moreover, the idea department is asked to communicate thoughtfully and reflect upon the unanticipated negative consequences the increased pressure to make a decision may have for the people who will then have to make the product. If they feel that they cannot live up to the created expectations, motivations to support the project have been argued to go down.

4.5. Summary of Empirical Findings

With this chapter our intention was to present the findings to investigate how the idea department at AmasophTech uses communication to master the challenges of ambidexterity when diffusing new concepts and ideas. The findings display that the different ways of communicating are contextual, and that communication incrementally moves from very informal to more formalized, although not excluding informal in the end stage. The chapter firstly presented the main characters and what ambidexterity looks like at AmasophTech to set an understanding for further analysis. Moreover, the incremental process of adapting communication was presented through the chapters as being very informal in the beginning stages when identifying relevant stakeholders of ideas, to becoming more planned when scheduling lunch meetings to present and discuss ideas, although still very informal at this stage. The demos, however, seem to inhere a feeling of informality, although adding formality to the scale because of the set agenda of selling in concepts. When presenting ideas and concepts at demos, it was shown that both the concept itself had matured as it needs to be tangible for the receivers. This setting to inspire and convince the product managers to take on the product was presented as impactful by the interviewees because of the chance to see the actual product, increasing the understanding of it and the excitement to exploit its potential.

However, making the concepts tangible was also identified as creating tensions of finding a balance between presenting a good level of maturity, as the risks of communicating too high of a maturity level could lead to faulty expectations of the product and an unwillingness by the product development department to take on the product. Contrastingly, the concept needed to be mature to convince the stakeholders of its functionality for them to take on the product. Additionally, our findings show that after a concept has been taken on by the product managers the process becomes more formalized, where in the exploitation phase of the new product more formalized documents are needed for the larger organizational units to coordinate their activities. However, informal communication does not get fully excluded as it has been shown to add to a smoother handover where product development can continuously receive information regarding the concept from the idea department.

Lastly, the distance detector story exemplified that the communication patterns identified above do not guarantee successful adoption of new ideas by relevant stakeholders as other external factors such as uncertain development of price levels may also hinder decisions for exploitation. However, when strengthening the argument for the business case of a new idea by sharing it with people outside of the company, extensive communication has also been found to be potentially hurtful instead of reconciling the tensions due to ambidexterity. Creating excitement for new ideas among many stakeholders also creates high expectations that can decrease engagement in the exploitationforce if the organization feels it cannot live up to its promises. Therefore, the distance detector revelation has added nuances to the analysis and raises awareness for reflexive communication.

5. Discussion

This chapter aims at applying a communications perspective on organizational ambidexterity to discuss the findings of our research with previous literature. Firstly, different solutions to managing the tensions caused by ambidexterity will be discussed to set the scene for a more indepth analysis of the role that communication plays to reconcile exploratory and exploitative units. Then, Weick's (2001) systems-view of organizations will add to the understanding of different means of communication necessary for different stakeholder groups. Furthermore, we will present new perspectives on Rogers' diffusion of innovation theory, applying it from an intraorganizational perspective. Moreover, having understood the needs of different adopter groups at AmasophTech, a discussion of formal and informal ways of communicating and their role in the innovation process will be demonstrated. Finally, the importance of demo meetings to connect considerations of exploration and exploitation will be presented as a new insight before this chapter gets summarized briefly.

5.1. How to Reconcile Ambidexterity?

Because organizational ambidexterity goes beyond the simple co-existence of exploration and exploitation within a firm, Raisch & Birkinshaw (2008) conducted a literature review to gain an overview of how organizations balance and synchronize their simultaneous exploitative and exploratory activities. Synthesizing the findings from previous studies, they found the three analytical categories of structural, contextual, and leadership-based solutions that can respond to the tensions that arise between the two activities, as has been elaborated in the literature review of this thesis. On a surface level, it is rather obvious that AmasophTech applies structural solutions to handle ambidexterity. The case organization has established one department (the idea department) that has the task to explore new business opportunities and develop new product concepts which they hand over to rather exploitation-focussed departments once the idea has

matured (e.g., product development). Moreover, Benner and Tushman's (2003) observation that business units concerned with exploration are usually small and working with loose processes while exploitation-focused units tend to have tighter processes that allow for coordinating the activities of their typically larger organization has been confirmed by our research.

Yet, even though theoretically adopting structural ambidexterity, each of the different departments in focus of this study is similarly challenged to manage ambidexterity within their unit. Organizational members across business units have to decide how much of their time should be spent on exploiting existing ideas and products or work with the exploration of new ones, which alludes to contextual ambidexterity (Gibson & Birkinshaw, 2004). The product managers, for example, have been found to seriously consider for themselves how much of their engineering resources they dedicate to the realization of new products or the refinement of their existing product portfolio. Thus, structural and contextual solutions to ambidexterity do not seem to be mutually exclusive.

Moreover, the importance of leadership from top management for addressing the tensions due to ambidexterity which Raisch and Birkinshaw (2008) conceptualize as a third organizational antecedent to ambidexterity seems to also be relevant for understanding the processes at AmasophTech. In this context, Mom et al. (2007) found that knowledge flowing horizontally or bottom-up through the organizational structure is rather connected to exploratory activities, whereas knowledge that flows top-down from higher management usually relates more to exploitation. Similarly, our case study showed that the development of new ideas resides at the idea department which then approaches product managers on the same level. Interestingly, these product managers have been found to be important gatekeepers for the realization of new ideas, even though they are not superior to the idea department from a perspective of organizational structure. Thereby, our findings challenge Tushman and O'Reilly's (2002) argument ascribing key roles in developing ambidexterity only to members high up in the hierarchy. In fact, we have found that more informal discussions between the idea department and product management function as a phase of pre-selecting new ideas that will later be taken into more formal roadmap meetings, in which top management gets involved in the decision-making about the adoption of an innovation. Our research indicates that there might be more reconciliation between the tensions of ambidexterity happening horizontally than the leadership-based view suggests.

Having developed an advanced understanding for the different levels at which AmasophTech engages with ambidexterity, we will now depart for a discussion of how communication contributes to moving an idea from exploration to exploitation within an organization. As became clear in the literature review, we thereby attempt to address the research gap identifiable on the question of which role communication plays in handling ambidexterity successfully so it becomes a powerful dynamic capability that can create a competitive advantage. Synthesizing findings from different communication scholars will allow for a deeper analysis of what our empirical findings may contribute to the academic debate.

5.2. Communicating through the Organizational Systems

As set forth by Eisenberg and Riley (1988), communication is the pillar for organizing to happen, further enhanced by Wiio (1988) that organizations cannot exist without communication. First and foremost, these statements serve as a basis for understanding why communication is important to master ambidexterity as it emphasizes the importance of communication when organizing in general. Secondly, the literature review has, building on Weick (2001), introduced organizations as social systems that are made up of people, where interactions between them link the systems together. Moreover, communication within and amid these systems and subsystems has been established to actively facilitate organizing.

However, Weick (2001) has also argued for a high probability of rising tensions between the different subsystems when competing for resources, an observation that aligns well with the literature on organizational ambidexterity (Raisch & Birkinshaw, 2004). As mentioned in our literature review, a solution for this is possessing memberships in several groups, which may reduce the tensions by interlinking the systems (Weick, 2001). Nuancing this well-established argument further, our empirical findings suggest that no formal membership in several systems is necessary to reconcile these tensions. Regular close and informal interactions between members of different organizational units have been found to create strong relationships, which can similarly serve as a means to interlink systems and align their activities. Applying these findings to the

perspective of ambidexterity, communication that is perceived to be informal has been detected to have a big impact to unite the diverging interests of different stakeholders.

Furthermore, it has also been established that several communication subsystems exist within organizations, that all have different purposes and aims (Downs et al., 1988). Aligning this with our findings, it has become clear that diverse forms of communication are used and adapted towards different stakeholders in different situations, where for example lunches fulfill one function, demo meetings another and formalized roadmap meetings yet another function. Simplified, product managers want to get excited and convinced of the potential of a new idea, whereas product development is rather concerned with the technical details and practical questions around the product concept's implementation. It can be concluded that these communication subsystems are used within the case organization to fulfill the needs of stakeholders targeted for the communication.

5.3. Applying Rogers' Diffusion of Innovations Theory

Moreover, Rogers' (1995) diffusion of innovations theory (DOIT) can add another theoretical layer to this observation of different communication systems to address the different stakeholders. The DOIT classifies adopters into the categories of innovators, early adopters, early majority, late majority and laggards. When connecting this to our empirical findings, the product managers who were previously identified as the gatekeepers, may in this sense be the early adopters of an innovation. As it seems that the product managers have to accept an innovation for it to even make it into the exploitation phase, these are the first ones to adopt the new idea and could also be confirmed as opinion-leading in this regard. Moreover, looking at the product managers from the lens of Roger's theory is relevant because if they decline a new idea, it may not be diffused and will not reach the later adopters of innovation. Therefore, it seems targeting the product managers by informal communication so they feel free to discuss and contribute to the exploration phase is of greatest importance to start a chain reaction to reach the rest of the innovation adopters. That means declining the innovation at this stage results in no innovation at all for the rest of the chain.

However, getting early adopters on board does not seem to guarantee adoption of an innovation on the whole scale. Thus, it appears to be of importance to adapt the communication style towards the receivers of the innovation. If the idea department is understood as innovators and product managers as early adopters, product development as a larger organization and an important one to start off exploitation can be classified as the early majority in Rogers' (1995) theory. In the context of ambidexterity, the innovators also need to take into account the facts- and process-driven demands of product development as the early majority when communicating with them compared to the inspiration-seeking early adopters. The late majority and laggards, yet, have not been covered by this study but could include the departments of operations and marketing as well as certain salespeople, for example.

Furthermore, Rogers (1995) emphasizes the social nature of the diffusion process by elaborating on advantages and disadvantages of interpersonal and mass media communication channels. While mass media allows a few individuals to reach a potentially large audience efficiently, thereby creating an awareness of the innovation, the face-to-face exchanges between individuals are highlighted to be more effective in persuading people to accept a new idea. However, when elaborating on which communication channels to use for addressing each adopter type, Rogers generalizes that "mass media channels are relatively more important than interpersonal channels for earlier adopters that for later adopters" (p. 197) because there are only very few people that could share their experience with the innovation interpersonally. In contrast, later adopters are argued to rely more on the experience reports from people close to them when deciding to adopt an innovation. Yet, applying the DOIT to the process of developing an innovative product within a company, this assumption might be challenged. Contrastingly, our study suggests that the exploration phase is characterized by addressing potential early adopters interpersonally. Then, later adopters rely on more formal documents that can be spread easily through mass media channels addressing the increasingly complex system of people working with the innovation in the exploitation phase. Therefore, the journey of an innovation from being a new idea developed by innovators to diffuse throughout the whole ambidextrous organization can shed a different light on the well-established chain-reaction of innovation adoption that is usually observed when innovations are introduced to the market.

5.4. Informal and/or Formal Communication?

Building on the different types of communication adapted towards different stakeholders and needs, going into more detail on what the different communication types aim at doing, it has been presented in the literature review that both informal and formal communication are needed in the organization. Informal has been identified as valuable for creating, testing, and evaluating ideas (Falkheimer & Heide, 2018), as well as impacting the attitudes of employees towards new ideas (Weenig, 1999). Furthermore, Weenig (1999) found that formal communication within the context of innovation is seen as planned and having a stronger impact on spreading information regarding new ideas than informal does. This argument is also strengthened by Pfeffermann (2011) who highlights planned communication strategies for the spreading of innovation. Applying this theoretical knowledge to the concept of organizational ambidexterity and combining it with our empirical findings, it becomes clear that the spreading of an innovative idea in the exploration phase may be limited to a smaller number of organizational members but that it, contradicting previous literature, can be based solely on informal encounters in the beginning. While our findings confirm that informal communication influences employees' attitudes towards an innovation and can be powerful in its development phase, they also suggest that the role of informality might still be underestimated by previous studies.

At AmasophTech, formal communication only comes in after an idea has been spread and adopted by product managers as key stakeholders. Then, more structured meetings are set up, documents are formalized, and procedures are more standardized compared to diffusing new ideas initially. Therefore, formal communication is not mainly used to spread innovation like Weenig (1999) suggests, but rather to align the activities of the larger exploitation-focused units. If the innovation does not spread far enough into the decision-making meetings based on informal communication, it may never reach a stage of planned and formal communication to a larger number of stakeholders. For instance, building on the comment of Oskar regarding the information overload of digital, thus arguably formalized communication, personal encounters which are more informal can guarantee that the message of innovation reaches the targeted audience. Therefore, the exploration phase has been found to be characterized by informal communication in regard to people's attitudes as well as the spreading of an innovation, yet getting increasingly formal as activities approach the exploitation phase. However, this study refrains from the simplified conclusion that informal communication is useful in the exploration phase of an idea, while exploitative activities rely solely on formal communication to coordinate the activities of different units. Although the increasing formalization has been noticeable as the innovation process matures, to some extent informal communication persists at AmashopTech. Thereby, informal encounters serve as a continuous information channel when an innovation has been handed over to exploitation-focused units. Thus, it ensures knowledge transfer and can contribute to aligned sensemaking of the formal documents that should guide the exploitation of an idea when preparing it for market introduction.

5.5. Demos as a Hybrid Platform for Discussion

Moreover, a crucial finding of this study that has not been highlighted by previous literature on communication and/or ambidexterity is the potential that demonstrations of prototypes have for facilitating discussion around innovations. At AmasophTech, demos have been presented as central for creating excitement for a new idea but also for understanding how a new technology works. Moreover, by making ideas tangible, demos contribute to convincing targeted adopters of the potential of the innovation as well as to making them believe in its technical feasibility with the available resources. Thereby, demos have been found to act as a semi-(in)formal platform for discussion which enables estimations about the amount of resources needed for the realization of an idea. Thus, although a final decision about adoption will not be made in a demo meeting, they can be seen as a context in which stakeholders begin to weigh exploration and exploitation considerations against each other.

Our classification of demo meetings as semi-(in)formal and therefore hybrid relies on the observation that many encounters which AmasophTech's employees would classify as informal do not align with the classical understanding of informal communication as unplanned (Weenig, 1999). Not only are they scheduled but may also be seen as part of a strategy to spread innovation and can therefore be understood as planned. It can be concluded then that, although following the classical definition of formality, there is an importance of the meetings to still feel informal. Furthermore, the demos are representative for the increasing formalization that is noticeable as the idea matures and moves from exploration towards exploitation.

However, as identified in the story of the distance detector where demoing the prototype led to too high expectations, customers requested the not yet fully mature product which put pressure on the product managers to include it in their portfolio and request mass-production. Derived from this, demos might be *too* good in selling concepts or ideas where there is a risk of setting the wrong expectations on functionality or how fast a product can be produced. This seems to be especially essential when demoing to sales or customers, as demonstrated in the findings that they are not used to seeing these demos and may not understand the maturity of the prototype. Therefore, the story of the distance detector can add another dimension to how expectations need to be managed when demoing products, and communication adapted towards the roles of the stakeholders. Concluding, the power of demos to facilitate innovation communication and to improve the chances of an idea being adopted for mass production in the context of a technology firm should not be underestimated, although there is a need to find a balance on how to communicate around the concept depending on the stakeholders.

5.6. Summary of the Discussion

This chapter has analyzed ambidexterity at AmasophTech from a structural, contextual as well as leadership-based perspective. Interestingly, the key role that is usually ascribed to top management for reconciling the tensions arising due to ambidexterity could be advanced with our finding that a phase of horizontally pre-selecting new ideas between idea department and product management precedes the formal decision-making about allocation of resources which requires support from higher management. At this earlier stage, informal communication has been found to play a crucial role in gaining support of key stakeholders for an innovation. However, different organizational units seem to have different needs in regard to communication. In summary, the communication moves from very informal in the beginning to create excitement and refine the new product concept to increasingly formal as the idea moves towards exploitation. Thereby, demonstrations of prototypes can be seen as a semi-(in)formal hybrid that serves as a platform to discuss innovations and to start balancing exploration and exploitation. As an increasing number of people gets involved as soon as it has been decided that the product development organization should invest in the exploitation of an idea, the communication needs to get increasingly formalized which is reflected in different written documents that contain specifications on technical details, for

example. However, it would be too simplified to conclude that informal communication characterizes the exploration phase of an idea, while exploitation builds solely on formal communication. In addition to that, informal interpersonal encounters between employees of different units continuously add to a smooth transfer of knowledge from exploration to exploitation. Finally, communication has been found to act as a mediator that can coordinate exploration and exploitation and therefore make ambidexterity a dynamic capability that has the potential to create a competitive advantage.

6. Conclusion

6.1. Empirical Findings

In conclusion, the aim of our study was to examine the role that communication plays in mastering the challenges of ambidexterity at AmasophTech. Analyzing how the communication processes evolve from initial exploration to decisions about the adoption and, consequently, exploitation of a new idea by turning it into a mass producible product, we have found the degree of perceived (in)formality to be decisive. Needed communication styles for innovation seem to vary over time. More precisely, casual networking in the hallway or canteen has been detected as beneficial for identifying target recipients for the idea department's pitching of ideas. Then, continuously very informal settings for conversations that are more consciously directed at certain people, such as invitations for lunches, have been found to create curiosity for new ideas, and moreover, allow the recipients of a pitch to contribute to exploring the idea. Once interest is established, semi-(in)formal demonstrations of prototypes allow for a more in-depth discussion of the innovation's features. Thereby, demos enable recipients to grasp the potential of a new product concept and believe in its technical feasibility considering the resources available for exploitation. At the latest in roadmap meetings when the product is in transition between exploration and exploitation, a higher degree of formalization is necessary as more people are getting involved in the project. However, informal, interpersonal exchange has been found to remain relevant to ensure a smooth coordination between exploration and exploitation. While these findings may depict a typical communication flow at AmasophTech that other companies can potentially identify with, the story of the distance detector illuminates that organizational reality seldomly follows simple stepmodels. Contrastingly, the distance detector revelation adds an emphasis on the conclusion that communication in the context of ambidexterity is essentially expectation management.

6.2. Theoretical Contribution

Addressing the research gap that Raisch and Birkinshaw (2008) have identified regarding the question of how an ambidextrous organization coordinates exploratory and exploitative activities, we chose to adopt the perspective of organizational communication. Thereby, we put forward a continuum ranging from very informal to formal communication to understand how an idea can move from inspiring and convincing through decision-making to finally exploitation. Although an increasing formalization of communication has been detected as the idea moves towards exploitation, informal communication appears to remain a relevant factor throughout the whole innovation process. Thereby, our theoretical lens reminds us that innovative ideas come to life through the interactions between people within an organization, a continuous process in which communication has proven to be crucial for coordinating exploration and exploitation, although bearing a risk of creating wrong expectations and, as a result, increasing tensions as well. Finally, a balanced and reflexive use of communication can contribute to diffusing innovations through the hurdles of ambidexterity, which needs to be considered when using communication to master the challenges of ambidexterity when diffusing innovation.

6.3. Practical Implications

Not only does this study address a relevant research gap and therefore contributes valuable insights to the academic debate on organizational ambidexterity. It, moreover, has provided useful perspectives that practitioners can draw on to understand the important role that communication plays in coordinating the activities of different business units to master innovation processes. For instance, interpersonal exchange in settings that enable a feeling of informality has been found to be valuable for the creation and maintenance of inter-departmental relationships that can reconcile the tensions that an ambidextrous organization undoubtedly will face. Organizations aiming to leverage their innovative potential may consider allowing for more of such spaces for informal exchange without clear objectives. Furthermore, this study reminds us to acknowledge that creating excitement for an innovation precedes the discussion about technical details and practical concerns of resource allocation. Working with innovation is allowed to be fun. Finally, it is the
combination of excitement and more critical perspectives, of exploratory and exploitative views, that can lead innovation to success. Here, communication provides the means to bring both perspectives together.

6.4. Opportunities for Future Research

Our thesis has focused on the communication processes impacting if and how an innovative idea moves from exploration to exploitation and, thereby, provides a new perspective for understanding how an organization may master the challenges of ambidexterity. Yet, our in-depth analysis of the innovation process within one company could be extended by more studies addressing this research gap. For example, as our study was conducted in an organization located in Sweden and found that informal communication was heavily valued throughout the innovation process, it would be interesting to take potential national differences into consideration. Thus, comparative studies between different national contexts could be done to extend the understanding of formal and informal communication in ambidextrous organizations. Building on this, the differences may not only exist between different nations but also between different organizational cultures, opening up for several opportunities of studying ambidexterity through the lens of organizational communication.

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