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Improving the Innovative Work:

- How can an Organisation Work with Incremental and Radical Innovation Simultaneously?

Master's thesis in Management and Economics of Innovation

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Abstract

The notion of innovation management is well studied within literature and the importance of being innovative is frequently discussed among firms. Being innovative is crucial for a company's survival and to sustain profitable. Furthermore, in order to become innovative, the firm need to innovate for its existing business as well as for future activities. In this project, a company's ability to innovate has been investigated. More accurately, how they can improve their radical innovation. The research has had the purpose of conducting how the studied Company can be organised in order to generate radical innovations while maintaining their ability of incremental innovation.

To answer the research question, a case study has been executed at the firm, defined as Company C. The methodology used is based on empirical research of an explorative approach. This in order to gain an in-depth understanding of the situation in combination with knowledge from literature and comparison with other organisations in similar situation. The procedure was initiated by defining the problem at Company C, followed by an investigation of the problem area. The investigation included a literature review and a comprehensive understanding on the studied organisation. Once a more thorough view of the problem area was concluded, a re-definition of the problem was made. Last, ideation of possible improvements took place, with the most suitable suggestion presented to the supervisors. After each phase, the delivered outcome has been discussed with supervisor from Company C.

It was found that Company C is a growing firm with a great foundation of ambitious employees. The cultural environment within the organisation fosters innovation and the employees are comfortable with changes. Employees perceives the company as innovative and that they manage incremental innovation with excellence. However, they do believe the organisation is lacking capabilities to innovate radically. Their innovative process is theoretically built upon a three-step model which relies on creating a flow of ideas streaming from a design thinking procedure, that later evolves and transitions into the organisation. The understanding of how this innovative model is executed is perceived unclear among employees. It is found that the ideas generated from the design thinking procedure is struggling and that employees experience radical development to be difficult. Ideas should derive from customer insight, which may not always be in favour for radical exploration. Furthermore, in order to develop an idea, the one who got the idea need to promote it themselves internally and find external support.

In conclusion, Company C has potential of improving their ability to innovate by further develop their level of ambidexterity into reaching dynamic ambidexterity. It is recommended that the organisation should include a divided responsibility with ambidextrous leadership for exploitation and exploration in its contradicting environments. For explorative projects where tasks of sensing the environment is executed, a visionary leadership is required. The manager should have strong participation in dialogs with the explorative units, described as "Innovation thinking team" and "Start-up incubation team" in the innovation model. The explorative unit should furthermore create a closer relationship with the sales department to obtain an increased overview of the market. For exploitative projects, where the ability to seize an opportunity is performed, a result-oriented leadership is more suitable. It is suggested that this unit should have a strong connection with the "Agile development team" and the manager need to support the transition into the ongoing business as described in the innovation model.

Keywords: Innovation management, Ambidexterity, Dynamic Ambidexterity, Ambidextrous leadership

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1. Introduction

1.1 Background

Companies within many industries have a constant pressure of continuously improving themselves in order to stay competitive. According to the industry life cycle which describes the general pattern for a technology's evolution, all industries go through four phases in their life-span. The life cycle starts with the industry's introduction, moving forward to its growing phase, which later develops to a maturity and ends with a decline (Porter, 1998). In order to avoid the declining development, companies need to be innovative in order to drive their success forward. According to Schumpeter, any industry that seeks profit must be able to innovate. Innovation is crucial for a firm to retain their competitiveness and the dynamics of sustainable economy (Śledzik, 2013). The innovative course of action is a response to prevent the maturity and stabilisation within the technological S-curve. More accurately, being innovative creates a new S-curve and a new pattern of growth (Christensen C. M., 1992).

The importance of being innovative is known among most companies. However, how firms create an innovative organisation is not as simply understood. An innovative organisation is defined as a company which can handle both today's challenges simultaneously with future problems (Tushman & Nadler, 1986), or as Steiber (2014) defines it in her book *The Google Model*: "A company is innovative when it possesses the ability to change its business or management model, as well as to develop and implement new products that respond to expressed and unexpressed customer needs". This involves an organisation which replies to current customer needs, but at the same time formulates possible market changes and adapts towards an unknown future to find further possibilities. To meet the necessities of today's business although provide attention for the future, firms need to manage the logics of exploration and exploitation. Firms that succeed in balancing them both have a higher probability of being profitable and survive long-term (Sinha, 2016). The logic of exploitation and exploration have similarities with the two forms of innovation, incremental innovation and radical

innovation. Innovating for the distinguishing conditions of today's and the future's problems therefore involves that organisations must achieve the ability of creating both incremental innovations and radical innovations (Tushman & Nadler, 1986; Chandy & Tellis, 1997).

The separation of incremental and radical innovation is a well-researched area within innovation management literature. A definition of the two forms of innovation is simply described as incremental innovation having slight improvements or adjustments of an existing technology. Whereas radical is innovation that evidently separate the technology from existing products. What more differentiate the two are the level of predictability for the development process, having incremental innovations most predictable and furthestmost the main source of income for an organisation (Brattström, Löfsten, & Richtner, 2015). Radical innovations are however a critical cause for the long-term success of a firm. Investing in radical innovations can change the competitive position of a firm by promoting new market leaders (Chandy & Tellis, 1997). Contrasting incremental innovation, radical innovation includes greater flexibility towards being explorative, with a diverse cross-functional development team that exchanges information and ideas (Brattström, Löfsten, & Richtner, 2015).

Furthermore, dealing with incremental improvements and radical innovation simultaneously is a main activity of being an innovative organisation. However, creating an innovative organisation does not have one single recipe that fits all organisations. Whether an organisation's innovative strategy is successful or not depends mainly on how the strategy is compatible with the organisation's culture (Tushman & Nadler, 1986). On the other hand, there is plenty of literature within innovation management studying the requirements of being an innovative organisation. In overall, the literature has shown some patterns in successful innovations. Galbraith (1982) elaborates that in order to become an innovative organisation, one must have two separated organisations. An organisation focusing on the operating business, which includes improving today's business and developing incremental innovations, and one organisation dedicated to creating radical innovations for future problems and opportunities. Tushman and

Nadler (1986) is describing the issue in a similar way by recommending a management that can handle the duality between incremental and radical innovation. The difference between these innovations requires opposing management, since the movement from incremental to radical innovation includes a higher risk with greater uncertainty. He further elaborates that an organisation must function as an effective learning system, benefiting from both failure and success in order to manage innovation (Tushman & Nadler, 1986). An additional standpoint, which goes in line with Tushman and Nadler (1986) and Galbraith (1982), is explained by Drucker (2002). He describes that firms need to consider innovation as any other corporate function in order to succeed. He explains that innovation must be seen as an important activity of actual effort which cannot be foreseen.

As described by Tushman and Nadler (1986), working as an innovative organisation is difficult and complex in practice. Firms that have a successful innovative effort are supported by a strong and well-functioning strategy, applicable to their culture which combines management and organisation. There have been done several approaches of creating continuous innovation among companies, whereas researchers have identified crucial clusters for managing innovation. For example, the usage of dynamic capabilities, both within and outside the organisation, and the concept of open innovation has shown signs of innovativeness. Further, working proactively with future problems and the reliance on employee's ability to innovate improves the organisation's innovativeness. Finally, the approach of creating an ambidextrous organisation where the organisation separates the regular operations and innovative efforts into different functions thrives innovation (Steiber, 2014). An ambidextrous organisation has the ability of working with both hands, meaning balancing exploitation and exploration at the same time (O'Reilly & Tushman, 2011). Ambidexterity is an approach of tackling the innovator's dilemma described as "the dilemma of how to avoid missing out on new opportunities while existing ones need attention" (Chen, 2017).

1.2 Aim

The aim of the study is to develop a strategy on how the investigated enterprise can rationalise ideas towards new innovations. It will further include how ideas can be generated and captured by a larger set of employees within the organisation instead of currently going through top management. There have been several approaches to capture radical innovations within the examined company, but these incentives have been dismissed due to higher workload and prioritisation. Therefore, the aim is to explore what requirements must be fulfilled in order to succeed with such actions. Furthermore, the study will investigate how successful companies organise themselves to find radical innovation and capture future business value.

1.3 The Investigated Company and Problem Area

The company (later defined as Company C), where the following master thesis will be addressed at, are aware of the importance of being innovative and working with constant improvements. Since their introduction in 1998, the company has grown a lot and they have been able to answer both current and new customer needs which has resulted into a broad customer base. However, the organisation is questioning what approach they should adapt in order to stay in a leading market position long term and avoid the risk of maturity phase followed by a path toward a declining state.

Company C was founded in Sweden, but today the company exist in four different geographic areas around the world. The geographic locations are set with the purpose of serving customer support throughout the day, independently of which time zone their customer is in. Company C is a business within IT and has a constant pressure of continuously improving themselves. Today the firm has approximately 300 employees with a global customer network. Company C values a solid relationship with customers and improves their businesses in line with customers' needs and requirements.

The organisation is defined by a creative culture with a positive attitude towards change. Company C values an individual drive and advocates each member to be involved in the innovative work. It is a flat organisation where employees have the same authority level, which gives equal possibilities to make decisions and continuously improve solutions for the customers. The company is not structured as a classical hierarchy. Instead, the company have categorised employees in clusters separated in different focus areas. Further, within one cluster there are various sectors that in turn contain smaller teams of 5-8 people (See figure 1). The only level which can be seen above this structure is the top executives which includes the CEO, the COO, and the sales manager. Each member has an area of responsibility with the CEO managing governance, the COO managing operational deliveries and the sales manager in charge of employees within sales. However, the CEO is rather included in all areas and has a close collaboration with the COO. The executive board is coaching employees and piloting the company forward. Decisions can be made without an approval from the executives. However, most big decisions are generated through the top management.

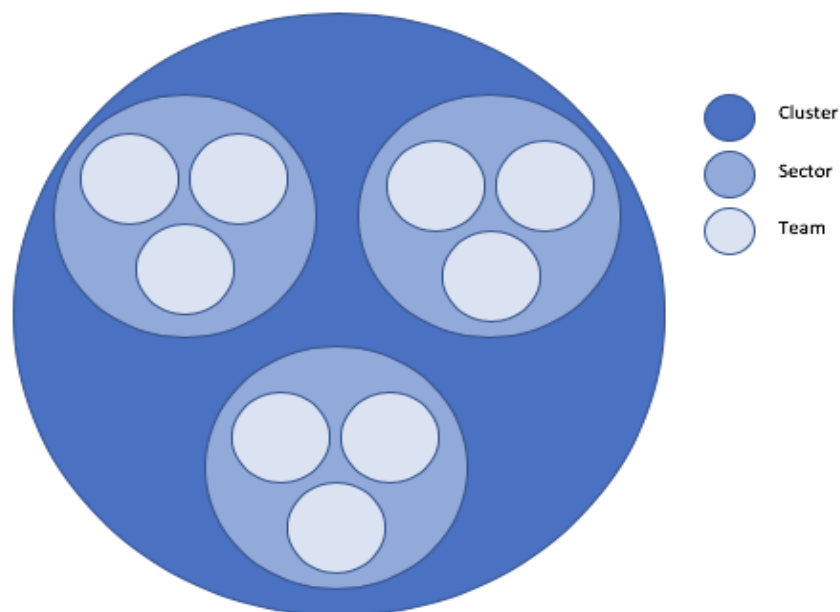


Figure 1: The image visualises how the organisation is structured. The largest circle of dark blue represents a cluster. Within clusters exists sectors, which is visualised as the middle-sized circles in lighter blue. In each sector, people are sorted into teams.

Most employees belong to sectors whose focus area are customer deliveries. Customer teams have the responsibility of delivering products and flexible solutions through daily contact with customers. These teams are responsible for the daily operations and are expected to innovate and improve existing solutions based on customer needs. In most sectors, there is a R&D team. Such team does not have straight customer deliveries but has the purpose of improving existing customer solutions on a higher level. They create innovations within the time frame of one year. Furthermore, there are a few teams that are not connected to any specific customer. These teams belong to a sector defined as Sector V in this report. Sector V has the purpose of innovating within extended time frames, around three years ahead. These teams are focusing on creating radical innovations.

Company C is working to shape an organic organisation where all employees are driven by the same vision of empowering commerce for companies, with successful aspirations that seeks to make a difference. The purpose of having an organic organisation is to enable all employees in driving the company forward. As the executives describe, if the company has 300 employees, they want all 300 individuals to think and create new possibilities for the company instead of having a group of people making all decisions.

In line with the company's culture, Company C perform systematic re-organisations. The re-organisations are a way of avoiding a state where employees become too comfortable within their positions and roles in the company. By changing the team structures, the employees are forced into continuously collaborate with new people, acquire new insights, and further expanding their internal network which is favourable for innovations. When someone gets an idea, that person has the possibility of developing the idea if it has enough internal support and customer interest. It is therefore essential that employees have a wide internal network and knows who to turn to in these matters.

Finding the support needed for an idea to be developed can be seen as resource consuming. The organisation does not have a central department responsible for evolving ideas into commercialised innovations. Neither do they have a specific forum in which ideas and innovations can take place. Some people in the organisation have that aspiration with a higher interest in generating ideas, but the company does not have a clear and prioritised approach in how future innovation should be executed. Therefore, efforts are set on customer-specific improvements or on opportunities mentioned by the company's top management. The firm is very good in innovating for its existing customers, but they lack the ability to involve a larger number of employees into the radical development of future innovations.

Company C is struggling with constructing a suitable approach concerning the innovation strategy. They seek guidelines on how they can be more successful when generating radical ideas and simultaneously ensure that they remain productive. They need to capture new market trends and reply with potential solutions, while serving their existing business of today. The research will therefore elaborate on how an enterprise can organise itself to improve their innovativeness. To expand on that topic, following research questions are set to guide the study and will be refined during the project, focusing on external knowledge on how companies innovate:

- *How can Company C be organised in order to generate radical innovations while maintaining their work of creating incremental innovations?*

1.4 Limitations

Limitations of the study are associated with the wide range of research concerning innovation. The chosen methodology is limited to not include the implementation procedure, this due to the nature of the company and its business environment. Additionally, the research assignment will be delimited to not include a comprehensive business case of proposed solution. It will also be delimited to the availability of information on organisational structure for how other companies innovate. Furthermore, the study will be limited to Company C's local office in Sweden.

2. Literature

The following chapter includes a description of literature and previous studies within Innovation Management. It begins with an introduction of how innovations are defined and in what situations they might occur. Further, creating innovation is elaborated as a way for companies to stay competitive, both in short-term and to sustain in long-term. In this setting, the logics of exploitation and exploration are introduced. The two perspectives must be handled simultaneously in order to be defined as an innovative organisation, which later connects with the two slightly contradicting environments of incremental and radical innovation. The context in which these outcomes of exploitation and exploration occurs within is explained and what difficulties of managing those are elaborated. One approach of dealing with the contradicting environments of incremental and radical innovations is the concept of ambidexterity. The chapter ends with the explanation of an ambidextrous organisation, what managerial difficulties one must be aware of when applying the concept of ambidexterity, and real examples of successful implementations of ambidexterity at well-known companies.

2.1 Innovation

What triggers innovation? Is it people's inspiration or the struggle of hard work? Elaborating on the incitements that generates innovation, it is essential to differentiate innovations from inventions. There is a vast amount of literature expanding on the differences between innovations and inventions. A definition by Galbraith (1982) of the two forms is that an invention is the creation of a new idea, while an innovation is the commercialisation and the process of transforming that idea into a new product or a process.

Drucker (2002) elaborates the different ways of constructing innovation. Whether the management's role is to hire the right people or to establish roles and processes that nurture innovation. He further explains that the process of innovation is an actual organisational effort and should be considered as any other corporate function. According to Schumpeter, any industry that seek profit must be able to innovate. Innovation is crucial for a firm to retain their competitiveness

and the dynamics of sustainable economy (Śledzik, 2013). Likewise, innovation has been recognised to be critical for the long-term survival of a firm and its potential growth (Looy, Martens, & Debackere, 2005). Schumpeter characterises innovation development as four stages of organisational variation including invention, innovation, diffusion and imitation (Śledzik, 2013).

Additionally, generating innovation requires harmonisation between different individuals that each are specialised in a specific area such as marketing, engineers, managers, and salespersons (Brattström, Löfsten, & Richtnér, 2015). Innovation as a task includes risks, are more difficult in nature and is a process that takes longer time periods (Galbraith, 1982). Schumpeter differentiates two types of risk as “the risk of technical failure” and “the risk of commercial failure” (Croitoru, 2012). Most innovations occur from a conscious pursuit of opportunities, which can be divided into different areas within an industry such as unexpected occurrences, industry and market changes, process needs and incongruities. Additionally, there are other sources that exists outside a company for instance changes in perception, new knowledge and demographic changes. However, potential innovation may occur in more than one area as these sources usually overlap and has different nature of risk, complexity and difficulty. The different areas that foster innovation are further described below.

Unexpected Occurrences

Unexpected occurrences of success and failures are a productive source of innovation due to most companies' disregard or resent such opportunities. Often, the attitude of managers has towards the unexpected is that the incidence should have not happened. And corporate reporting tries to dismiss such events. But according to Drucker (2002), such evidence is needed to help the acknowledgment of new possible opportunities. Managers should spend equal time on both problems as for opportunities (Drucker, 2002).

Incongruities

In cases where an industry's assumption differs from realities, or when expectations differs from results, opportunities of innovation from incongruity occurs. Incompatible oddness in processes or results creates potential for improvements. An example that Drucker (2002) mentioned as incongruity is the medical operation of cataract, when Bill Connor realised that a specific procedure was so different and incompatible from the rest of operations that an innovation opportunity was exploited (Drucker, 2002).

Process Needs

Innovation also develops in response to a process need. There are examples where adaptations of processes create new innovations, such as how modern advertising made it possible for newspaper publishers to distribute news for free. Or the adjustment of mirror reflectors that are used in traffic, let drivers see other approaching vehicle and reduces traffic accidents (Drucker, 2002).

Industry and Market Changes

Changes in industry structure or market creates great openings for innovations. For example, changes in medical industry has created huge opportunities for American health care providers. And established companies who desperately tries to defend themselves tend to become overrun by newcomers. New opportunities seldomly fits the traditional way of industry and new markets may require structural changes (Drucker, 2002).

Demographic Changes

By recognising demographic events and the changes within, a company can anticipate what future needs are. For instance, with the educational explosion including that young people stayed in school in developed countries, everyone knew that the number of blue-collar works would decrease in manufacturing. But only Japanese acted on it and therefore had a clear advantage of robotic development for many years. Managers have always known that demographic changes are of importance but are believed to change slowly. However, that is not

the case as the number of people grow and innovations based on demographic change are one of the least risky and most rewarding (Drucker, 2002).

Changes in Perception

Changing a manager's perception means to open for great innovation. A change of perception does not alter facts but their meaning. It took very little time for people to change their assumptions that computers were for big businesses. That means, perceptions are often determined by people's attitude rather than concrete facts and can be altered rapidly to change meaning. Consequently, creating new opportunities (Drucker, 2002).

New Knowledge

Usually, what people consider is innovation are those that comes from new knowledge, that draws attention, publicity and money. Innovations based on new knowledge differs in time and predictability. Knowledge-based innovations often pose new challenges and has the longest lead time to implement. Most often, this type of innovation requires new knowledge of many kinds in a convergence which results in a lot of speculative activity. It is however possible to manage knowledge-based innovation. It requires careful investigation of the needs and capabilities of intended user, as it is highly market dependent and risky (Drucker, 2002).

2.2 Innovative Organisation

Creating an innovative organisation does not have one single recipe that fits all firms. Instead the firms' strategy needs to fit each cultural environment where the organisational structure is interlinked with their systems, and where changes must be compatible to that structure (Tushman & Nadler, 1986). Tushman and Nadler (1986) further describes that an innovative organisation needs to handle today's challenges simultaneously with future problems. In other words, firms have to develop and create efficient business in short-term periods, while creating opportunities for future growth through innovation and experimentation that will sustain over a longer time-frame (Tushman & Nadler, 1986; Sinha, 2016).

To meet the necessities of current business although provide attention for the future, firms need to manage the logics of exploration and exploitation (March, 1991; Gupta, Smith, & Shalley, 2006; Rosenkopf & Nerkar, 2001; Sidhu, Commandeur, & Volberda, 2007; Tushman & O'Reilly, 1996). Firms that succeed in balancing them both have a higher probability of being profitable and survive long-term (Sinha, 2016). The logics of exploitation and exploration are different and somewhat contradictory. Exploitation refers to activities such as refinement, efficiency and selection. It relies on the understanding that an organisation has information and knowledge concerning their capabilities and external opportunities, to meet the problems and solutions that clearly can be defined. Exploitation involves activities that relies on existing business and achieves short-term goals. Those activities have a low level of uncertainty with high rate of success. On the other hand, exploration is defined by actions such as search, experimentation and discovery. It is about finding new ways of doing business and see new possibilities that can create value. It advocates that the organisation does not have the insights and knowledge about possible outcomes. Therefore, exploration contains a high level of uncertainty with low level of success (Looy, Martens & Debackere, 2005; Chen 2017).

The logic of exploitation and exploration can be connected with the two forms of innovation, incremental innovation and radical innovation. As exploitation refers to activities corresponding refinements and improving existing business, so does incremental innovation. Incremental innovation is the outcome that adds features to an existing product or respond to existing customer's needs. Further, incremental innovation involves the development or adjustments of an existing technology (Tushman & Nadler, 1986; Chandy & Tellis, 1997; Brattström, Löfsten & Richtnér, 2015). Exploration involves seeking new opportunities, new technologies and new markets, which correlates to radical innovation which is defined as new technology that fulfil higher customer need. Radical innovation separates the technology from existing products and are a critical source for long-term success of a firm. Radical innovation is characterised by the firm's willingness to cannibalise their preceding investments which is critical in the sense that firms of dominant market often are reluctant to embrace new radical

innovations (O'Reilly & Tushman, 2011; Chandy & Tellis, 1997). Further, radical innovation includes greater flexibility towards being explorative, with a diverse development team that exchanges information and ideas (Brattström, Löfsten, & Richtnér, 2015).

An organisation that deals with exploitation and exploration simultaneously provides opportunities to develop incremental and radical innovations. If an organisation can handle the contradicting demands for the two logics, they have a rigorous foundation of staying competitive and sustain profitable. However, managing the opposing drivers of structure, culture and processes within exploitation and exploration is problematic. Organisations that attempt to handle both logics are regularly encountering tensions within the organisation (Sinha, 2016; Van Looy et al., 2005). Large companies are largely exposed to these complications. Usually, established firms tend to handle incremental innovations extremely well, but applying radical innovation is poorly understood. On the contrary, several researchers believe that large firms have advantages in their capacity of producing radical innovations comparing to small firms due to greater financial resources (Chandy & Tellis, 1997). In practice, it has been observed that large firms avoid uncertainties that comes with exploring new possibilities and therefore lack the ability to create radical innovations. Furthermore, explorative projects need to be managed differently from exploitative, which creates challenges for managers who are experts in leading incremental innovations. Additionally, since radical innovations tend to require a higher amount of resources that may disturb the mainstream organisation, managers tend to allocate resources on the most lucrative part of technology (Leifer, O'Connor, & Rice, 2001; Van Looy et al., 2005).

Managing the different logics of exploitation and exploration alike incremental and radical innovation is challenging since the purposes, demands and outcomes are dissimilar. The functions of exploitation and exploration consists of same components, but the activities of each are unlike. Galbraith (1982) elaborates on the dilemma of handling both logics and concludes that the functions need individual designs. He establishes a framework, which is called the Star Model,

consisting of five cornerstones. However, the outcome of each cornerstones within the separated functions are different. Regardless if you are managing an exploitative or explorative unit, you should consider strategy, structure, process, reward systems and people. Every and each of these components are essential and must fit the specific function. Strategy determines the direction; it specifies the goals to be achieved as well as the values and missions to be pursued. Structure determines the location of decision-making authority; it shapes the organisation with departments and decide where specialisation should be positioned. Process involves the flow of information; it is the mean of response to information technologies. Reward system has its purpose of motivating employees; it influences people to perform and address organisational goals. And last, the cornerstone of people which relates to the employee's mindset and skills; a flexible organisation needs flexible people (Galbraith, 1982).

The elaborated areas within the star model has strong connections to later research within innovation management. Sinha (2016) have studied how firms can manage both exploitation and exploration efficiently and brought a set of mechanisms to deal with the contradicting demands. As Galbraith (1982) discusses the importance of designing separated strategies for the exploitative and the explorative units, Sinha (2016) explains in a similar way how meaningful it is for top management to provide different direction and guidelines for each logic and provides trust and meaningfulness for both works. The cornerstone concerning the reward system is mentioned within one of Sinha's (2016) mechanisms as well. The context of exploitation and exploration needs different types of incitements that will contribute to motivation. Were exploitation needs reward systems aligned with strategy, exploration requires passion for innovation and motivation in form of freedom. Lastly, both articles discuss the importance of having the right people for each task. The mindset when dealing with the two logics need to be slightly different. People dealing with exploration need to be more risk oriented and be able to do things beyond the obvious than people dealing with exploitation (Sinha, 2016).

The notion of handling exploitation and exploration are well discussed within innovation management literature and the model made by Galbraith (1982) with parallels to Sinha's mechanisms are only a few approaches to it. However, the idea of managing the two logics simultaneously is referred to the concept of ambidexterity. An ambidextrous organisation has the ability of working with both hands, meaning balancing exploitation and exploration at the same time.

2.3 Ambidextrous Organisation

Researchers have found that on average, even a large well-established company is expected to live between 6 to 15 years (O'Reilly & Tushman, 2011). Even though a company has all the resources to be successful, most organisations do not survive for a longer period. A central role for a company to survive is the ability to exploit existing assets at the same time as they explore new technologies and markets. To meet this disruptive change, and for an organisation's long-term survival and success, they must excel in both their ability of exploitation and exploration. That means, a firm should organise and re-organise its resources to both capture existing opportunities as well as new ones.

Still, many firms struggle to put up such organisational design because of the contradicting logic of exploitation and exploration. Exploitation in terms of using existing information and capabilities, to ensure short-term profitability. While exploring new possibilities with new information ensuring the success of long-term investments. As Chen (2017) describes the innovator's dilemma, "*the dilemma of how to avoid missing out on new opportunities while existing ones need attention*". A common issue for firms is that the exploitation most often outshines exploration, resulting in mishandling the ability of exploration (Chen, 2017).

This dilemma can be tackled by creating an ambidextrous organisation as described by O'Reilly and Tushman (2011). Ambidexterity as organisational design features the ability to reallocate resources and competences to address new opportunities and threats. This requires ambidextrous leaders being able to take difficult decisions that reconfigures resources to endorse explorative ventures (O'Reilly & Tushman, 2004). As stated by O'Reilly and Tushman (2011),

for an organisation to survive and face the fast-changing environment, a business must be able to exploit current businesses as well as explore new opportunities successfully by reconfiguring existing assets and develop new capabilities.

2.3.1 Different Forms of Ambidexterity and their Practices

Prior literature suggests many forms of organisational ambidexterity. Within this, researchers have contributed in different ways of a firm to extend their focus of exploitation and exploration, underlying that there are different strategic decisions that reflect this expanded resource allocation. Following is a brief explanation of the different types of ambidexterity, and their circumstantial benefits.

Contextual Ambidexterity

An organisational design in which both exploitation and exploration are pursued by creating a context where employees can freely decide to exploit or explore opportunities within their work. This enables that employees can work with both logics, indicating a possibility to explore the unknown without a confined time limit or being restricted to a certain business unit whom are more responsible for such explorative search. Contextual ambidexterity allow exploration to appear in unintended ways (Chen, 2017). However, contextual ambidexterity assumes that one single organisational context can enable both exploitation and exploration (Birkinshaw & Gibson, 2004), while literature within Innovation Management describe the two logics as contradicting (Pregmark, 2019) and may need two different organisational settings in order to flourish. When new initiatives are close to a firm's core business, an organisational context in line with contextual ambidexterity may be successful. On the other hand, when new initiatives are more radical and that differs from the core business, contextual ambidexterity may be insufficient. Although, contextual ambidexterity may prosper exploitation and exploration to some extent, it does not provide a complete solution to pursue ambidexterity (Chen, 2017). Considering Alphabet who adopted contextual ambidexterity allowing 20% to be dedicated for explorative work. The company realised that they had to create a separate unit, X,

who incubates and pursues these long-shot projects initiated by employees (Chen, 2017).

Sequential Ambidexterity

Sequential ambidexterity uses an organisational context that temporarily separates the explorative and exploitative initiatives during periods of time. This separation allows firms to focus on the different forms at specific periods and can be effective at project levels. An example of sequential ambidexterity is when a project evolves from being explorative, searching for a viable business model, towards having validated their business model and adopts an exploitative approach during execution. This allows managers to practice different approaches at different project stages (Chen, 2017). To achieve sequential ambidexterity, the organisation must switch between exploitation and exploration with reconfigured strategies, processes and structures. This approach may be effective at project level but challenging at organisational level. Sequential ambidexterity may cause interruption in the organisation and may also disrupt the firm's capabilities, and by switching between these modes at organisational level, the firm may not be able to survive in short-range (Chen, 2017).

Structural Ambidexterity

With a structural ambidexterity, the organisation structurally separates the business units, pursuing exploitation and exploration simultaneously (Tushman & O'Reilly, 1996). This in turn are achieved through a coordination from top management which uses different strategies, processes and structures for the purpose. According to Chen (2017), this is the most promising and practical way of achieving organisational ambidexterity. In similar terms, Tushman & O'Reilly (1996) argues that when rapid changes are needed, a simultaneous approach of exploration and exploitation is more effective.

Even though structural ambidexterity is the most promising way of achieving ambidexterity, it requires massive efforts from top executives to achieve this organisational design. It creates an ambiguity for the top executives to coordinate different units with different structures, different processes and strategies,

including creating new ones when needed and intervening in these units separately. In other words, the limitation of achieving structural ambidexterity lays on the executives which may become the bottleneck (Chen, 2017).

Dynamic Ambidexterity

Dynamic ambidexterity can be described in short as an organisational combination of ambidexterity (Luger, Raisch, & Schimmer, 2018) which utilises the three forms of ambidexterity at different organisational levels. At corporate level, dynamic ambidexterity applies structural ambidexterity. In other words, the organisation should have separated business units that exploits existing markets and likewise exploring units chasing radical opportunities. These two units should be allowed to have different strategies, structures and processes which are guided and supported by top management (Chen, 2017).

In order to unravel the difficulties for top executives when applying structural ambidexterity, dynamic ambidexterity recognises the importance of contextual ambidexterity at business unit levels where employees are encouraged to adapt both logics. This way, employees can explore new opportunities independent of what business unit they belong to and new initiatives can emerge unintentionally. By applying contextual ambidexterity at the business level, a larger number of employees are involved in the explorative search which reduces the dilemma for top managers at the corporate level (Chen, 2017).

Also, the dynamic ambidexterity uses the third form of ambidexterity, the sequential ambidexterity. Sequential ambidexterity is effective at project level since projects tend to gradually evolve from a searching mode into a more developing state. Radical initiatives emerge in devoted exploration units where they search for a viable business model. When a feasible business model is identified, the project tends to become more exploitative and it evolves from the explorative unit and change position either into an existing exploitative business unit or a new business unit (Chen, 2017).

2.4 Managing Ambidexterity

To explore means to discover what is yet to be known. An explorative organisation focuses on new businesses or new ways of doing business. This logic advocates that the organisation does not have comprehensive information on all imaginable opportunities and must detect and grasp new businesses. Exploration contains a high level of uncertainty with low level of success, and often produces early failures which results in temporary performance declination. Organisations that are well-managed at exploitation emphasizes on the things that creates value which gives less attention on what creates new future possibilities. Furthermore, organisation most often expects revolutionary innovation but are not willing to tolerate early failures. And they lack the sense of distinguishing creative failures from unproductive ones (Chen, 2017).

Organising for ambidexterity entails that senior managers are willing to commit resources to explorative projects while establishing a separate structural unit for exploration and exploitation. As a result, O'Reilly and Tushman (2011) describes following five conditions that are crucial for an ambidextrous organisation to adapt to new opportunities:

- "A compelling strategic intent that intellectually justifies the importance of both exploration and exploitation".
- "An articulation of a common vision and values that provide for a common identity across the exploitative and exploratory units".
- "A senior team that explicitly owns the unit's strategy of exploration and exploitation; there is a common-fate reward system; and the strategy is communicated relentlessly".
- "Separate but aligned organisational architectures (business models, structure, incentives, metrics, and cultures) for the exploratory and exploitative units and targeted integration at both senior and tactical levels to properly leverage organisational assets".
- "The ability of the senior leadership to tolerate and resolve the tensions arising from separate alignments".

Considering these elements, without a strategic intent that rationalises ambidexterity as stated in the first condition, the organisation would lack reasons

that justifies why a profitable exploitative unit under pressure would hand over resources to fund uncertain efforts. Previous research shows that managers reject future threats and focus on the immediate returns instead of the less confident long-term returns. Likewise, the absence of a common vision with values as described in the second condition will lead to lack of common identity and trust, cooperation and long-standing perspective. Third, a lack of consensus with commitment from the senior team for ambidexterity will lead to resistance, competition for resources, fading cooperation and breaking the implementation. Furthermore, without the fourth condition of separated but aligned architectures would lead to poor coordination and ineffective use of common assets and resources. Last, if there is an absence from senior leadership in the ability of resolving tensions and managing trade-offs from the separated structures, it will generate confusion in the organisation with increased conflicts (O'Reilly & Tushman, 2011).

Based on these elements, O'Reilly and Tushman (2011) discovered in their study of organisational ambidexterity that the five conditions mentioned above must be fulfilled in order to establish a successful ambidextrous organisation. By studying 15 firms as illustrated in appendix A, eight companies were successful in managing ambidexterity. Three companies failed entirely while managing ambidexterity and four firms were able to transform their failure into success.

Briefly describing the eight successful companies that managed ambidexterity, in 1998, IBM had a dilemma whether to develop their existing software service or the new radical products for World Wide Web. To solve this, the senior management decided to exploit existing programming languages for incumbent customers while exploring new languages and markets. This by establishing different units that were integrated at senior levels. In 2000, IBM manager Carol Kovac was enquired to create a new separated cross-IBM Life Science business on the increased demand for processing generated by genomic revolution. This initiative resulted in a growth of \$5B in revenue by 2006. The CEO of Cisco, John Chambers initiated his program to identify 30 new potential \$1B ventures that would generate 25% of the total firm's revenue within 5-10 years. One of the

ventures, TelePresence has grown in 2006 from two internal entrepreneurs to a 100 people with \$200M in revenue.

Furthermore, the new CEO of Misys Corporation initiated in 2007 a cost-cutting program for the mature business and introduced a new open source approach to replace existing platform. For this, he created a dedicated exploratory unit and replaced members in the senior management team who resisted this approach. This open source platform opened for new markets which attracted considerably new customers. In 2004, DaVita CEO created a team that would identify new business opportunities. This allowed an internal start-up DaVita Rx to form a different business model with different metrics and margins to generate \$220M in revenue with 400 employees in 2010. Moreover in 2005, the CEO of Defence Corp approved an initiative to broaden their customer base. Although the given funding and cooperation from main lines of business was slow. It was not until a clear separation was made with appropriate metrics and an aligned senior team that this new unit resulted in a new contract worth \$13M.

In Ciba's attempt to recapture their lost market, the president of Ciba Vision decided to stop all incremental innovation and invested in six revolutionary new products. Each unit was encouraged to create their own configuration with people, structure and culture to pursue breakthrough innovation. This resulted in having several successful products that tripled revenues. Furthermore, the new CEO of Zensar Technologies shifted the firm in 2002 and created a product-focused firm while the new technology ventures was separated as business unit reporting directly to his office. As in 2008, the venture unit had a validated business model and the new innovations was integrated into the product units. This allowed Zensar to build on its core business as well as it brought new technology to market.

While describing the four companies that managed to transform their disappointment into success, starting in 1991, when HP Scanner failed to commercialise any of their inventions and not until 1996, a new division GM was physically separated into an ambidextrous unit with its own people, system, incentives and culture that the business became successful enough to space out as

its own division. The advanced IC division of Turner Technologies had issues of growing new products as well as the quality in their existing products. It was not until they split up the innovative strategy from their existing product line, with two new managers reporting to divisional GM that they managed to both explore and exploit effectively. The GM of IBM Network Technologies expressed the strategic intent to exploit the existing chip line as she promised to explore into fundamentally new ones. Her passion for exploration led however to building a business unit only focusing on exploration which suffered the existing product line. The pressure from corporate and clients made her however rebuild the senior team and business units to focus on current products at the same time on new product lines. Furthermore in 1990, newspapers had a decline in both circulation and advertising because of the emerging web-based news. As a response, Tom Curley, USA Today's publisher adopted a network strategy in which they started to deliver news on three platforms. This transition of simultaneously deliver content across the three platform became successful between 1999 and 2002 which increased revenues by 50%.

However, three companies failed entirely to manage ambidexterity. When the CEO of SAP declared in 2006 that future revenue for the company was in small and medium business market and software on demand. However, no separation in units was made which resulted in having market failures for their offerings. This resulted in having CEO Leo Apotheker fired. Moreover, in 2007, a printing company tried to tackle increased competition and declining customer satisfaction by reinventing their business as web-based publisher. Even though senior managers had a clear vision for the future with heavy investments on new technologies, the new product failed due to facing continual resistance from the mature part of the business. The GM of a software company expressed a strategy to both build on its struggling product line and initiate a notable set of new software solutions. He created a separate unit that reported directly to him, focusing on innovation. Although a three-year period, the GM did not staff or fund this new unit which resulted in underperforming in both existing as well as the innovative line.

From this, it could be concluded that the succeeding firms had fulfilled all conditions, while the ones that were able to turn their failure into success changed their unsatisfied conditions into accomplished instead. However, the failing firms were unable to complete all conditions. This in detail is described in figure 2.

	Proposition 1 Strategic intent that intellectually justifies ambidextrous form	Proposition 2 Vision and values that promote a common identity but separate cultures	Proposition 3 Senior team that explicitly owns the ambidextrous strategy (common-date rewards, communication)	Proposition 4 Separate units with aligned architectures and targeted integration (senior level and tactical)	Proposition 5 Ambidextrous Leadership (conflict resolution, resource allocation)	Overall Performance		Proposition 1 Strategic intent that intellectually justifies ambidextrous form	Proposition 2 Vision and values that promote a common identity but separate cultures	Proposition 3 Senior team that explicitly owns the ambidextrous strategy (common-date rewards, communication)	Proposition 4 Separate units with aligned architectures and targeted integration (senior level and tactical)	Proposition 5 Ambidextrous Leadership (conflict resolution, resource allocation)	Overall Performance
Success:							Defense Corp	Yes	No But did set new explore culture	Yes After initial resistance	Yes Unit reports to President	Yes Used consultant to mediate conflict	Success— Won \$13M in new contracts
IBM Life Sciences	Yes	Yes	Yes 100% of bonus for senior executives	Yes EBO structure	Yes	Success— \$5B in revenue in 6 years	Failure:						
Cisco TelePresence	Yes	Yes	Yes 70% of bonus	Yes Council/Board structure	Yes	Success— \$200M in revenue in 4 years	SAP Business-by-Design	Yes	No	No Disputes over revenue recognition	No No clear ambidextrous unit or leader	No Continued conflicts over who owns the customer	Failure— lack of penetration in targeted markets
DaVita Rx	Yes	Yes	Yes But some initial disputes over autonomy	Yes Geographically separate	Yes But some conflict over metrics and rewards	Success— \$220M in revenue in 6 years	Printing Company	Yes But the strategy does not fit well with current one	Yes "Save the company"	No Short-term revenue still dominates	No Explore unit not protected	No Ambidextrous unit not represented	Failure—no new growth
Ciba Vision	Yes	Yes "Healthy eyes for life"	Yes	Yes Geographically separate	Yes Senior leader integrates	Success— tripled sales in 10 years	Software Co	Yes	No	No	Yes	No	Poor Innovation Performance
IBM Middleware	Yes	Yes "Beat BEA"	Yes Senior leaders agree on a new structure	Yes Geographically separate units	Yes Senior leaders integration	Success—old and new products combined	Transition to Success:						
Zensar Technologies	Yes	Yes "Among the top Indian IT Services Firms"	Yes	Yes Distinct unit for new platform	Yes Tension held at top	Both profit and growth doubled from 2005-2010	USA Today	Yes	Yes "Network, not a newspaper"	No to Yes	Yes Separate units with targeted integration	No to Yes Resource allocation to web-based business	Stalled to Success— increased earnings 50% in 3 years
Misys	Yes	Yes Drive productivity and innovate	Yes Replaced old team with new one	Yes Open source reports to CEO	Yes CEO drove the new effort	Success— developed new platform with new customers	H-P Scanner	Yes	No	No then Yes Senior team bonus based on overall performance	No then Yes Physically separate units	No to Yes Senior leader integrates	Stalled to Success— then innovation unit spun out

Figure 2: Company performance for the five conditions (O'Reilly & Tushman, 2011, pp. 9-10)

Another firm that succeeded in adapting ambidexterity within their organisation is Nestlé. Nestlé is a large food and beverage company who had a well-established coffee brand, Nescafé. During the 90's, they worked in parallel with separated business units, which later became Nespresso. Nespresso is a leading firm within espresso machines and luxury coffee. In order to get there, the explorative business unit had to rethink their system and develop innovation beyond coffee to combine coffee with machine. This required Nespresso to create partnership thru machine factories. Further, Nespresso established new sales channels through own shops instead of retailers which Nestlé earlier used. New marketing

strategies were created, customers could join the Nespresso Club to get individual preferences, which improved the customer experience. This created new markets for Nestlé to compete in and further increase their profit. Nestlé succeeded because they ventured by exploring new opportunities and allocate resources on that project although managing a new organisational architecture (Maier, 2015).

2.4.1 Managing Dynamic Ambidexterity

Dynamic ambidexterity introduces an alternative way of managing exploration and exploitation. It combines the three forms of ambidexterity, and balances exploration and exploitation at different organisational levels as a comprehensive solution to an ambidextrous organisational design (Luger, Raisch, & Schimmer, 2018). This combination solves the limitation that may occur in each form individually. To develop a successful dynamic ambidextrous organisation, Chen (2017) provide a set of managerial principles. First, exploitation and exploration must be managed with different perspectives (Tushman & O'Reilly, 1996) with different strategies for each logic. Exploitation should be guided through deliberate strategies, that helps the unit to priorities and allocate resources to key strategic initiatives which generates innovation in line with strategic direction. Exploration shall however be managed through emergent strategies allowing new possibilities to be created. The strategy should emerge in line with the employee's exploration (Chen, 2017).

Furthermore, Chen (2017) elaborates on the different structures for exploitation and exploration. Exploitation is best performed under mechanistic structures involving high levels of formalisation and standardisation, as well as established patterns of specialisation and coordination. By having clear routines, exploitative units can achieve efficiency, reliability and effectiveness. Due to that these strategies only facilitates some certain patterns of specialisation and coordination; these structures do not apply for explorative units. Explorative units require the development of new patterns, therefore organic structures are better suited. Organic structures allow low levels of formalisation and standardisation which favours initiatives to gradually be discovered. Moreover, Galbraith (1982) elaborates on incentives and reward systems which in turn motivates exploitation

or exploration. Exploitation can be motivated by payed performance where compensation is measured through outcomes. It could for example be a piece rate, commission or profit sharing. On contrary, payment does not motivate people who are exploring new opportunities (Chen, 2017). Since exploration is not linked to a specific goal, payments may discourage new possibilities. To motivate exploration, the organisation must tolerate early failures and reward long-term success.

When it comes to processes, these are distinguished between execution and search. Exploitative projects execute from existing information and capabilities to solve well-defined problems. Execution-oriented processes are referred to processes like stage-gate process and waterfall process. These processes can be planned up front and go through a linear structure. Exploratory projects need search-oriented processes, like effectuation method, sprint or agile approach. Explorative projects are difficult to plan and therefore requirements should not be defined in the beginning of the project. Instead requirements should be defined iteratively as additional understanding is developed. The evaluation of these processes is also different. Exploitative processes can use traditional financial metrics like ROI, but explorative processes cannot be evaluated according to traditional measurements since it would underestimate its value of exploration projects (Christensen & van Bever, 2014; Christensen, Kaufman, & Shih, 2008). Instead, exploration should be evaluated through internal learning, validation and external interest (Chen, 2017).

Innovative attempts sometimes involve customers, but these customers have different characteristics which should be considered depending on what logic you are developing (Moore, 2014). Exploitative projects should involve mainstream customers to collect market intelligence which further allows the firm to exploit existing market demands. When exploring new projects, customer involvement is questioned. Existing customers are not always aware of what they need in the future, except the early adopters. Problem is weather the firm is able to identify these lead users. Last, Chen (2017) elaborates on exploitative and explorative acquisition. Sometimes firms have to acquire other firms to gain control and

develop new capabilities. Exploitative acquisition complements the core business and controls the critical resources and processes. While explorative acquisition brings new businesses to the company.

2.4.2 Integrating an Innovation into the Ongoing Business

In order to establish a successful ambidextrous organisation, the firm must not only accomplish the conditions and managerial principles of an ambidextrous organisation as mentioned in previous chapter. The organisation must also consider how new explorative innovations can be integrated into the activities of the ongoing business and make part of the existing business. Processes and structures must exist to ensure that the entire organisation understands the new innovation and enables employees to adapt the innovation on a larger scale. Reintegration mechanisms for the transition of new innovations into the daily activities is required for the exploratory investments to be beneficial and creating an advantage over its competitors (Dixon, Brohman, & Chan, 2017).

Implementing radical innovations needs different types of capabilities in terms of facing challenges while capturing acceptance between innovation units and operational business. However, literature study brings five transition modes which eases the implementation of radical innovations into the ongoing business. Each mode defines a mechanism of innovation transfer, but generally more than one transition mode can be applicable (Gassmann, Widenmayer, & Zeschky, 2012). The five transition modes which each underlines a mechanism of action is presented as following:

- **External validating:** The first mode transfers radical innovation through external partners or customers. In this mode, the radical unit applies proof to the operational business to reduce market or technical uncertainties. This is done by integrating customers or consultancies in the radical innovation process and letting them inform the operational business about solution- and need-based information. The purpose is to let external parties validate the radical innovation, measure customer demand and guide radical innovation through the voice from customers.

- **Liaison channelling:** Another mode uses personal ties internally to spread radical innovation through the company. By applying job rotation, employees from radical units are able to spread information into the operational business. The goal is to involve the operational business at an early stage. By positioning managers from the operational business, mostly from R&D and marketing, into the radical unit for a couple of years, the managers can afterwards return to their original positions and provide a linking mechanism between new and existing business. Individuals are given the responsibility to transfer radical innovation. When radical innovation is about to be implemented within the ongoing business, these are the first people to be contacted. They promote and spread information about the innovation and as soon the operational business is interested, ad-hoc meetings take place. Owing to the open mindset of the former members of the radical unit, they carry an ambidextrous attitude into operational business and create acceptance for radical innovation.
- **Showcasing innovation:** The third mode transfers radical innovation by making innovation tangible. The intention of this mode is to make radical innovation easy to communicate and evoke interest among remaining organisation. In order to accomplish this, pictures and prototypes are used to spread information about the radical innovation to achieve acceptance from the operating business. The study showed that physical presentations of radical innovation proofed feasibility and generated trust by operational business.
- **Network building:** This mode relies on network building to achieve successful transfer of radical innovation. Personal contacts are used to identify and interact with innovation champions within the organisation. Besides, this mode establishes communication of current research and identification of potential adopters, the network building creates social ties between members of radical units and operational business. The informal linkages are drivers for implementing radical innovation.

- **Integrative innovation planning:** The last mode integrates the operational business collaboratively in the radical innovation research. The operational business is involved at an early stage of radical projects in order to create an included atmosphere and reduce organisational uncertainties. The operational business is involved in discussions of new ideas and possible projects, which in turn has made a positive effect on the acceptance of radical ideas among employees of the ongoing business.

2.4.3 Cannibalising a Firm's own Investments

Chendy & Tellis (1997) describe radical innovation as “the propensity of a firm to introduce new products that: 1) incorporate substantially different technology from existing products, and 2) can fulfil key customer needs much better than existing products.” Managers perception of substitutional technology has an important role in their decisions of pursuing radical innovation. According to the authors, the key factor that separates radical innovators from the rest is the willingness of a firm to cannibalise their preceding investments. The willingness of cannibalising own investments is critical because firms of dominant market are often unwilling to embrace new radical innovations in their market. Cannibalisation of a specialised investments is the actions that reduce the value of an older products, such as tangible or intangible assets and organisational routines. The willingness to cannibalise is referred to the degree a firm is willing to reduce the value of an existing investment. Such specialised investments may have created a strong relationship to managers with strong professional and personal commitment. This in turn may lead to irrational decision-making or sub-optimal development, such behaviour is a main issue of managing new product development (Chandy & Tellis, 1997).

To outline this term, a central point is to understand managerial behaviour in terms of S-curves. While a new technology emerges, an incumbent must decide whether to advance with current technology or switch to the new one. By using current technology, the firm can utilise and capitalise the many investments previously made by the firm in which they have a stronger value connected to it.

Switching to a new technology would therefore require new investments and potentially lead to making the current investments outdated (Chandy & Tellis, 1997). A company that are willing to cannibalise will also inspire employees to work on new technologies. By allocating resources to radical innovation, it would be more likely to develop breakthrough technologies. However, radical innovation does not always need a cannibalisation of related product and does not per automatic make current technology obsolete. Furthermore, previous literature indicates that innovation is often introduced by some other party and not the managers of existing technology, in some cases it can be an outsider. This due to that managers often consider cannibalisation as a problem, while in fact it should be treated as something desirable that promote radical innovation and the long-term achievement of a company (Chandy & Tellis, 1997).

Additionally, sociologists and economics have studied why firms are unable to respond to changed market environment. And the literature can briefly be summarised that there are four biases that affect such behaviour: Cognitive dissonance, Self-justification, External justification and Sunk cost fallacy. A firm can be affected by such biases even though the top management do not struggle with it. In many cases, information from operating managers are biased to validate current investments and create commitments. Moreover, if a manager is involved in the success of a current technology, they will be even less open to new future innovation. Or as Chandy & Tellis (1997) describes it, “the more specialised investments a firm has in a current technology, the lower its willingness to cannibalise those investments”.

2.5 Literature Summary

Literature within innovation management has defined innovation in several ways, in which the definition brought by Galbraith (1982) has been chosen for this work. Innovation is the commercialisation and the process of transforming an idea into a new product or a process. However, as Drucker (2002) describes, the most important factor within innovation management is the leadership’s role of establishing a cultural environment in which innovation is nurtured. Innovation is crucial for a firm to retain its competitiveness and sustainability (Śledzik, 2013).

There are different types of innovations that further applies at different time aspects. In order to become an innovative organisation, the firm need to manage both innovation for today and for the future. According to Tushman and Nadler (1986), firms must develop and create efficient businesses in short-term periods while creating opportunities for future growth in order to survive. An organisation that deals with exploitation of today's business and exploration of future possibilities simultaneously provides opportunities to develop incremental and radical innovations. However, the logics of exploitation and exploration are somewhat contradicting. If an organisation can handle the contradicting demands for the two logics, they have a rigorous foundation of staying competitive and sustain profitable (Sinha, 2016).

Managing exploitation and exploration can be referred to the innovator's dilemma. This dilemma can be tackled by creating an ambidextrous organisation which refers to an organisation's ability to generate incremental and radical innovation at the same time (O'Reilly & Tushman, 2011). Moreover, dynamic ambidexterity is the type of organisational design in which this project focuses upon. Dynamic ambidexterity can be described in short as a combination of the three forms of ambidexterity that are utilised at different organisational levels (Luger, Raisch, & Schimmer, 2018). By applying a combination of the three forms, the difficulties of each form are considered and managed. In order to generate a successful dynamic ambidexterity, the five conditions defined by O'Reilly and Tushman (2011) must be fulfilled. These five conditions are crucial for an organisation to adapt to the new opportunities. The conditions can be executed by applying a set of managerial principles brought by Chen (2017). Each managerial principle should have two aspects dependent on what focus it is responding to, one for exploitative projects and one for explorative projects. Last, a successful dynamic ambidextrous organisation must not only accomplish the structure, conditions and managerial principles mentioned. The organisation must also consider how new innovations can be integrated into the activities of the ongoing business and make it part of the existing business. Implementing radical innovation need capabilities that capture acceptance between innovation units and the operational business (Dixon, Brohman, & Chan, 2017).

3. Methodology

In this chapter the chosen methodology for the following case study is described. The chapter begins with a description of a case study, following by a presentation of how the project is executed. The execution is divided into three chapters, Research strategy, Procedure of research, and the Quality of research.

3.1 Case Study

A case study analyses in depth at a single or a small number of organisations over time. How to design case studies has been studied by a wide range of researchers. One of the best-known researchers who advocates for case methodology is Robert Yin (Easterby-Smith, Thorpe, & Jackson, 2015). Robert Yin suggests that before collecting any data, all case studies should have a clear design with procedures covering the main question, the unit of analysis, links between propositions and data, and the measures for understanding the data. Moreover, Yin further argues that case studies can be with the same degree of validity as other positivist study (Easterby-Smith, Thorpe, & Jackson, 2015). In this paper, the case study will focus on in depth research concerning how Company C can organise to become more radical in their innovation as described in the aim of the research.

3.2 Research Strategy

The following project will contain an empirical research of an explorative approach in order to gain knowledge regarding the situation at the company in combination with a literature review and further a comparison with other organisations of similar situation. This to be able to create a deductive analysis and develop a suitable recommendation for the studied company. The research will follow a systematic and collaborative approach in order to identify and answer the research question mentioned above. The exploration and the solution of a problem is elaborated by taking each step by step and involve elements of adaptation from external feedback towards the final solution. Continuous involvement of the investigated company is made in order to generate a better understanding about their situation as well providing them regular information about the executed project. The choice of methodology is similar to a design

thinking approach which is appropriate for situations where the problem or opportunities are not well defined. Further, methodologies similar to these tends to find improved solutions that addresses most significant customer needs, which is in line with the project's purpose (Luchs, Swan, & Griffin, 2016).

In order to gain an in-depth insight of the specific case study, the research approach consists of a qualitative data gathering. However, the chosen research methodology is in accordance with a post-positivism view within social science since the research question is rooted in the opportunity to investigate a socially constructed situation and to understand the phenomena rather than objectively determine one outcome. A qualitative research methodology is being used in order to gain knowledge of the firm's innovative work and to create involvement into company's culture. This approach has been used in situations consisting of semi-structured interviews, observations and discussions to investigate the firm's attitude and beliefs. It provides a wider understanding of the company's situation compared to quantitative methods. Therefore, a qualitative methodology will be applied since this approach has generally a more explorative course of action (Easterby-Smith, Thorpe, & Jackson, 2015).

3.3 Procedure of Research

The procedure of research will follow a systematic approach with elements of adaptation to the current situation. Each step includes a purpose and associated actions to take in order to fulfil the purpose. After each step, the delivered outcome has been discussed with supervisor from the investigated company, of which some modification has been made. Empirical knowledge concerning the studied organisation will be gathered throughout the entire procedure.

The research has its introduction once the first problem description is made. For example, a dilemma may occur to an organisation due to that the market is not responding or growing according to their expectations, or that the commercialisation of a product or service is not fruitful. In this case, the problem for Company C originates from a concern that in potential future, the company reaches an ending of their growth and enter a maturity level that evolves into a

declining condition. The initial problem description is mainly formulated by the organisation themselves with the purpose to describe their concern and provide a foundation to the research area. The first problem description will be used as guidance for what research area to investigate. When formulating the issue, the organisation needs to describe the background of their concern and what expectations they have on the project. During this step, a description of the problem must be delivered and agreed upon which is coherent for the researchers.

Next step in the research procedure is to investigate the problem and obtain a rigorous understanding of the research area. This is done through a literature review, an investigation of the organisation, and lastly a benchmark on enterprises of similar outcome. However, empirical data is gathered throughout the entire thesis. The approach of gathering data and how that will generate a final solution follows an deductive approach since the research is of qualitative form, the study is based on a research question and the study explores previous research to compare with different perspectives (Gabriel, 2013).

Literature Review

The purpose of conducting a literature review is to generate a deeper understanding of the studied area and to notice possible courses of action. By studying previous work regarding the area, the researchers can distinguish what variables that are relevant to the topic. What relationships there are between ideas and practices, what theories that are applicable for the subject and in general, to obtain a body of knowledge which can be related with own research findings. Moreover, the literature review will give the researchers required knowledge about the topic, and the ability to further elaborate the research area for the topic (Hart, 2018). In this case, literature within Innovation Management has been studied. The review started broadly on the topic by reading definitions about innovation and aspects on an innovative organisation. It was found that an innovative organisation involves aspects of leadership, organisational design and the management of both today's and the future business which led to the concept of ambidexterity. Further reading about ambidexterity resulted in knowledge of

different forms of the concept and suitable form of ambidexterity to Company C was found.

Understand the Organisation

In order to help the organisation to solve their problem, the students must understand the organisation and see what obstacles there are between their current state and their goal. The purpose is to understand the organisation on a deeper level and being able to empathise with the employees. At the end of this step, the research should be able to define the organisation's needs, thoughts, emotions and motivations (Mortensen, 2020). The procedure of understanding the organisation will contain observations, interviews and casual conversations. According to Doorley, Holcomb, Klebahn, Segovia, & Utley (2018), engaging with people within the organisation directly reveals the actual thinking and what values they hold on to. These thoughts may not be obvious; therefore, a deep engagement may discover new insights (Doorley et. al, 2018). The first steps in order to understand the organisation within Company C, a conversation was made with the supervisor from the firm. An overall description about the organisational structure was outlined and a brief explanation about their vision and culture was made. This description evolved through time by participating in daily meetings with teams, conversating with multiple employees during breaks, and executing semi-structured interviews with several employees. The collection of findings lasted for roughly three months, of which the two first months consisted of observations and unstructured conversations, while the last month consisted of the semi-structured interviews. Fifteen interviews were made with personnel from different parts of the organisation (see Table 1), each interview taking approximately an hour. The interviews followed a prepared questionnaire, see appendix B, which the interviewees had not seen in advance. This to enable some elaboration on the perceived questions. Each interview was recorded and transcribed afterwards.

Table 1: The table below describe the number of employees who were interviewed and in which area they worked with

<i>Position within the Organisation</i>	<i>Number of Interviewed People</i>
<i>Top executives</i>	2
<i>Sector V</i>	7
<i>Customer team</i>	4
<i>Sales department</i>	2

Studying other organisations

In order to provide more knowledge about the investigated area, the research conducted a study with comparison in other organisations. This method is used to investigate how organisations best can compete within their market. It involves an understanding for competitor's performance and in what areas they perform better (Reddy, 2016). Furthermore, studying other organisations tends to drive a change in an organisation's attitude and behaviour when knowledge about other industries are spread within the company (Anderson & Pettersen, 1996). The study in this project intended to investigate companies which are known of being innovative and where an outspoken strategy exists of how to handle innovations. The investigation is grounded on existing studies within such firms and explore published information concerning their innovative strategy. However, investigations at these companies have not been executed by the students.

When a rigid understanding on the identified problem area is concluded, the initial problem description could be re-defined. By investigating the problem on a deeper level, new insights were brought and the real pains and needs within the area was found. The problem did not only occur in the procedure of how to capture great innovations and the involvement of a larger number of employees in the innovative creation, it also existed within the management and how to execute incremental and radical innovation simultaneously. Additionally, an increased understanding of the organisation may enable new possibilities but also add new obstacles. Moving on, based on the solid understanding of the problem area and the perceived knowledge about the organisation's deep requirements, ideas on

potential solutions were formulated. The ideation process has its goals in generating many ideas that may inspire to create even further and better solutions, which later can be sorted out in order to find the most suitable idea. The ideation aims to develop creative and innovative solutions that will fit in to the defined problem (Dam & Teo, 2019). This phase included activities that helped the researchers to create ideas. Activities through this process contained of brainstorming sessions and mind maps. The activities were mainly conducted by the researchers, but the ideation was interconnected with supervisor from the organisation.

When the most suitable idea was found, a first rapid sample of how the idea will turn out is developed. This step has its purpose to show an early version of the end solution in order to reveal any initial problems or concerns with the design. It is a way to present the idea to the organisation, see how the organisation react to the suggestion and get their feedback on it. The result generated from the first explanation about the solution was used to build an even more robust understanding of the problems the organisation face (Dam & Teo, 2019). In interaction with the supervisor during the last steps of the research was executed. The solution was modified in accordance to the feedback, but at the same time a more thorough understanding and acceptance for the suggested solutions was developed by the supervisor. The recommendation from the following project had its final presentation during a gathered meeting with employees and executives, as well presented in a handed copy of the written work. However, whether the solution is further tested and implemented by the organisation has not been within the scope of this study. Nevertheless, the last part of testing the solution is an important step in order to allowing the organisation to interact and operate based on the recommendation. The trial should be desirable, meaning that it must appeal the needs, emotions and behaviours of the organisation. Further, the trial has to be feasible, it has to be technically possible. And finally, the trial should be viable. The organisation needs to have the right capabilities to perform the test, or necessary instructions of what is needed to develop it (Dam & Teo, 2019).

3.4 Quality of Research

Credibility

To gain credibility, the study must establish well suited research methods that illustrates the context in a reliable manner. As described by Krefting (1991), "*A qualitative study is considered credible when it presents an accurate description or interpretation of human experience that people who also share the same experience would immediately recognise*". This can be achieved by triangulation, using multiple sources of data and methods. It can also be achieved by choosing randomly between informants and information sources to provide variables in the researched data. Additionally, by frequently debriefing supervisors and informants, researchers will ensure that interpretations made are accurate and may uncover new insights to evaluate the project (Thomas & Magilvy, 2011).

Transferability

Transferability of a research is the rich description of the research problem that is studied and the circumstantial information. It is the capability to transfer the resulted findings into other contexts or subject and participants. This can be achieved by describing the number of organisations that has been studied and their contextual background, numbers of involved participants and what collection methods that was used. Furthermore, the quantity and the times of data collected. (Thomas & Magilvy, 2011) In other words, transferability simply describes if the results of the study can be applicable in other similar situations.

Dependability

Dependability, equivalent to reliability in quantitative methods is described as the step-by-step process of a repeatable study. It is achieved by describing a clear purpose, elaborating on the decisions made during the study and the selection of information sources. Giving a detailed description of the methods, research process and techniques that was used which gives another potential researcher a decision trail to follow (Thomas & Magilvy, 2011).

Conformability

Creating conformability, comparable to being objective in a research is established when above criteria of credibility, dependability and transferability has been attained. Ensuring that the findings reflect the results from the original source and not from the researchers own interpretation of information. It is by preserving a critical attitude towards own presumptions and personal goals (Thomas & Magilvy, 2011).

4. Empirical Findings

The following chapter present the empirical findings gathered from Company C. The presented data are generated through interviews with employees in different positions within the company. However, the composite view of the company's situation is a combination of the findings brought from interviews and the observations made during the executed project. The aim of the data collection has been to understand the company's ability to innovate, how innovation is proceeded within the organisation and what employees think about the company's innovative work. The achieved comprehension is stated below by first presenting the employees' perception of the company's ability to innovate. Thereafter, a description of how the company is working with innovation is outlined. At last, the perceived responsibilities among different areas within the organisation is summed up.

4.1 The Perception of Company C's Innovativeness

Innovation is a topic that has been widely discussed during the interviews with individuals within the organisation. What defines innovation is sometimes perceived differently, by individuals and by specific roles in the organisation. Below, the perception of Company C's innovativeness among the different parts of the organisation is described.

4.1.1 The Executives

Starting off with the company's executives, they define innovation as something that can be applicable in many areas such as a business model, a process, a product or a solution. A common view from the executives is that Company C is innovative in some fields while operative in others. The idea of Company C is innovative, but the top executives describe themselves as not being radical in the daily operation. There are also parts of the organisation that is standardised such as finance operations. However, the executives' overall view of the company is that Company C is an innovative firm due to the way they are organised and structured.

As a result of a flat organisation, the executives indicate that innovation occurs at different locations of the company. In some cases, innovation has been created in

line with a defined process. And in other cases, innovation has been developed due to an emerged need or changed situation. When innovation occur given to a structured process, this usually takes place in Sector V. It is formally stated that Sector V should develop products that Company C have not yet made. The teams in Sector V researches in areas where they believe have fractions of customer needs with potential problems that may be resolved. At the same time, when innovation occur due to unpredicted situations, it may happen in any part of the organisation.

The executives believe that innovation will take place when employees are motivated and determined while the organisation captures such energy. It is essential that employees sense trust and tolerance from both themselves and managers, to test their ideas and feel appreciation with positive feedback. The executives describe that Company C has a central feedback-loop which they believe is highly important in order to establish the willingness among employees to think creatively and bring more ideas to the table. Moreover, the executives believe that employees understand the importance of innovation and that the executives do not directly communicate how important it is for the organisation. However, it is self-spoken through the company's culture which are the prerequisites for innovation to occur.

In any type of innovation, the executives describe the importance of having early customer involvement. For an idea to be implemented within the company, it has to be supported by either an expressed desire or insights from customers. If an idea achieves such approval from the business, the idea has better chances of survival and can be developed. If not, they describe that the idea did not have what it takes to be an innovation. Therefore, the decision of whether to proceed with an idea is not within the executives' authority. It relies on business demand. For example, one innovation that has been developed within Company C emerged due to an increased capacity for one of their customers. The customer team who were responsible for the specific customer succeeded to develop a new product which system went more efficient the more capacity it needed to proceed.

However, in some occasions innovation may arise because of the current circumstances. The executives describe the company to be adaptable to the situation they are within and enables the tough situations as well. At the same time as the interviews occurred, the crisis regarding Covid-19 was happening around the world. The extreme situation made the executives challenging the employees to think creatively and outside the box by engineering worst case scenarios and regularly given information about the company's status. This way, the organisation can be prepared for possible outcomes. Another example mentioned when Company C have been innovative because of the situation within the society, occurred a couple of years ago. Technology of artificial intelligence is becoming more and more developed and the executives saw the opportunity of investing in such knowledge. They recruited a new team with such capability in order to investigate possible opportunities in their business.

When elaborating on different types of innovation based on various time aspects, the executives are aware of the importance to innovate for both today's business and future business. However, there are some disagreement between the perception of Company C's ability to handle the two aspects simultaneously. There is no doubt that the executives perceive that the organisation succeeds in today's business and that they are one of the leading companies to create incremental innovation throughout the organisation. On the other hand, the radical creation is more problematic. There is a desire among the executives to develop a functioning system of exploration, but despite several initiatives, they have not generated a stated function. As the executives explain, they perceive time aspects as a period of three. The first period involves improvements of current business. Second aspect involves growth and the delivery of innovation to existing customers. The third time aspect involves exploration and the ability to create something entirely new. These time aspects infer different success rates and different level of uncertainty. However, the executives believe that an organisation must look for all these states in order to become sustainable and successful. Furthermore, the executive's impression is that the company is in a constant mode of second time aspect and must push themselves into the third time aspect.

Nevertheless, the executives' mindset of reaching the third time aspect and generate radical innovations differ to some extent. In one way, one executive believes that the company has the ability to innovate for the future. However, the gap between today's business and the future business is reduced according to him. He believes that the employees' interpretation of the time aspects should not differ that much. Instead they should be comfortable of integrating both aspects in their regular work. The executive compares the innovative development for future opportunities as a bonsai tree. Instead of readjusting the business entirely when creating a new S-curve, he wishes to make small adjustments constantly, as to cutting a bonsai tree.

The second executive's view of radical innovations is slightly doubtful in comparison to the first one. The second one agrees that the time aspects of today and the future should be considered when seeking new opportunities. However, he believes that the future is hard to manage and implementing radical ideas is almost impossible. Seeking radical innovations easily becomes philosophical and uncertain, which financially becomes difficult to prioritise. He explains that successful companies have a hard time investing in radical innovations if it does not by certainty produce returns. Searching and testing new ideas requires a lot of resources, which you do not want to waste. He further shares his view of big companies who claims to innovate radically. He feels that these companies are only acquiring other firms into their organisation to become innovative, not developing the idea themselves. In comparison to Company C, acquisition is not within their business model. The executive elaborates on the difficulties and cultural barriers acquisition involves and explains such strategy to not being part of Company C. In summary, the second executive believes that Company C is struggling with exploiting existing business simultaneously as they explore new initiatives. The exploitation of today's business alone is very well executed, the dilemma is within the exploration of radical ideas.

4.1.2 Sector V

Sector V is the part of the organisation where radical innovations are within focus. According to the executives, these teams develop innovations in line with a structured innovation process where they seek new opportunities for the company. Employees within Sector V define innovation as a creation of new value. It can be the creation of something huge and revolutionary, but also the creation of an altered and more efficient approach of something that is already existing.

The employees in Sector V share a common perception of the company's ability to innovate. They believe that the company is an innovative firm and that the importance of innovation is within the organisation's strategy and culture. It is described that the company faces new challenges every day which employees view positively. During one interview, an employee described it is basically a requirement for personnel to enjoy changes. Innovation takes place throughout the entire organisation and it occurs continuously. Working with innovation is not a defined requirement, yet it is within their culture. The employees in Sector V are confident in the company's ability to generate incremental innovation and act rapidly on customer insight. However, the company lacks the ability to innovate for the future according to employees in Sector V.

Even though it is stated that Sector V are responsible for the radical and future innovations, employees within the sector have the impression that it is not the case. They do believe initiatives for radical innovation have been made at the company, however these initiatives have been in progress for shorter periods before being shut down for different reasons. The actions taken have led to some new insights, but there has not been enough momentum to maintain these initiatives. The radical initiatives have not emerged through the employees themselves, instead the explorative ideas are described to originate from the top executives. The employees within Sector V do not feel they are in charge of searching for new radical ideas, however they do believe it is positive if they find new possibilities. New ideas and potential opportunities are encouraged to be brought up during

regular business. Employees in Sector V shares the same view that everyone within the organisation can generate ideas. On the other hand, they all agree that the development of an idea is far more difficult. It is everyone's individual responsibility to seek internal and external interests in order to drive the idea forward. Some employees in Sector V describe the struggle of finding resources. According to these interviewees, all employees are caught up in their daily work with deliveries toward customers which is set to higher priority.

There is no central department where ideas from the organisation are evaluated in the company. And Sector V is not responsible for such evaluation. The areas in which Sector V researches within are decided by the executives according to interviewees within Sector V. Ideas may originate from other employees in the organisation, but the decision of what to focus on lies on the executives. The employees in Sector V senses some encouragement of thinking on new opportunities, but they do not see it as a requirement and there is no guidance provided for such work.

The tasks that are done by Sector V is commissioned by the executives. Employees within the sector indicated that the top managers are the ones that have been assigning these tasks. Even for the initiatives to be more radical, employees within Sector V describes that ideas and directions are chosen by the top managers. The given projects during the beginning of Sector V felt more radical and visionary. But today, the projects are associated to current business and are commonly linked to existing customers. In line with this evolvement, the employees in Sector V perceives that their position towards the organisation has changed. In previous projects, employees in Sector V felt separated from the remaining organisation. They were told to keep their work unrevealed and should not talk about it with the rest of the organisation. However, Sector V are now more transparent towards the organisation and the employees within Sector V describes themselves as part of the remaining organisation. This evolvement has been encouraging according to the interviewees. They describe several benefits of transitioning new products and solutions when being closer to the remaining organisation. While some employees within Sector V describes a reduced effort towards visionary ideas

which is perceived as negative. Nevertheless, the employees in Sector V believes that Company C is innovative. They are able to exploit existing business and explore new opportunities. However, the explorative part is still delicate, and Sector V believes that the organisation would benefit by resuming the visionary tasks toward radical innovations.

4.1.3 Customer Teams

Customer teams are directly linked to customers and are responsible for the operational deliveries. The interviewed people within customer teams perceives innovation as the ability of fulfilling customer needs and requirements. According to the interviewees, customer needs could appear in a near future as well as far ahead. It is further described as something that creates new value. As an example, it could be an improvement of an existing function which would decrease potential risks for customer usage.

People working within customer teams perceives the company as innovative. However, their perception of how innovation is executed at the company is described to be different. As one employee explained, Company C is innovative due to their organisational structure and flexibility. Since the authority of taking decision is everywhere in the organisation, ideas can be generated and developed in a couple of days. The company's strength is within their flexibility and speed to react. According to the interviewee, innovation is made by anyone at the company. The company lets everyone be self-sufficient, which results in employees wanting to innovate and drives the company forward. Therefore, everyone within the organisation aims for the future.

On the other hand, another interviewee within a customer team explained that different types of innovations occur at different locations in the organisation. The customer teams focus on their specific client and they are responsive on customer's insights. They target current businesses. However, radical innovations for a future perspective exist in the organisation, but the interviewee was not sure who is responsible for such innovations. The interviewee suggested it could be Sector V who develops such radical ideas. Nevertheless, the innovative work for

radical ideas is not communicated enough according to the employee, neither does it exist forums where ideas and opportunities are discussed.

The understanding of Sector V's responsibility is also different among employees within customer teams. For some, Sector V's work is hidden, and their purpose is not well communicated to the organisation. For others, Sector V's purpose is acknowledged to be within new innovations based on market trends. According to an interviewee, they are the ones that take more risks and think visionary. However, there are some uncertainties whether Sector V leads the innovative work or acts as a supportive function for innovation.

Despite the differences, the interviewed people from customer teams share the same view of what to do when ideas emerge. It is your own responsibility to promote your idea and network with the appropriate people in the organisation in order to flourish your proposition. It is mentioned that no forums exist for ideas to be discussed in. They once had a forum to inform colleagues about new solutions, but the interviewed employee did not know who attended these forums or if it even existed nowadays. However, developers have one forum to brief on new information, but that forum is not available for everyone. Further, they claim the same importance of innovating in line with customer needs or insights. The company's level of innovativeness lies with its customers trust towards Company C. If the customer is willing to grow with Company C, the company has the ability to innovate and improve its business for its customer. Contrasting to if the customer is only willing to buy the company's standard product.

In summary, innovation made by Company C is always in line with existing customers. Regardless of it is an improvement of existing business or if it is an idea for future perspective. For some employees in customer teams, innovation occurs autonomously among anyone in the organisation. And for others, the innovative work is somewhat non-transparent and ambiguous.

4.1.4 Sales Department

Within Company C, there is a sector that is responsible for the sales operations. The interviewed people from sales have previously worked in other sectors within the company, mostly in customer teams. Their thoughts of innovation and their perception of the company's ability to innovate is therefore a joint result based on previous experiences.

Innovation is perceived to be product development or more generally how to design a solution based on customer insights. It may also be described as performing something with a new approach. An interviewee described that there are different types and scales of innovations. The people within sales believe that the company is innovative since they put the customer first, and by being flexible where they disallow themselves to get stuck in old routines. The company is moving forward by momentum from its customers and the requirements from the industry, rather than investing in new products and promoting new solutions to customers. According to the interviewees, innovations on smaller scales are created continuously at the company. Further, larger and more radical innovations occur within Sector V. However, it is hard to find time to innovate for the future since the time spent on uncertainties would otherwise have benefited to direct customer value. Yet, in comparison to other companies, Company C is perceived as innovative. As it is described, there is nothing the company cannot do, but rather where the company should focus.

Even though the perception of the company's ability to innovate is high, some people within sales are unsure how innovations emerge and how they are developed within the company. From previous experience in customer teams, one person from sales knew about a forum where representatives from a customer team met and discussed ideas based on customer insights. The purpose of these meetings was to inform colleagues about improvements and new solutions for them to avoid repeating the same process. It is unnecessary to invent the wheel more than once. However, there is no representative from sales within these meetings. The interviewed person believe it is to the company's disadvantage to not include sales in meetings like this, since people within sales have great

knowledge about the customers and what needs they have. People from sales could guide other colleagues from customer teams in line with the business.

Another employee within sales describes innovation to occur continuously within customer teams. Which is described to be the opposite of what is ongoing within sales. For people within sales to develop an idea, you must find resources and competences within other parts of the organisation. A common problem for Company C is that these resources are generally prioritised on other projects and deliveries toward customers. The company manages incremental innovations very well, but innovation on larger scales is perceived difficult. According to the interviewee, people within customer teams can innovate daily, but these people are never challenged to think outside the box. They improve the customer's solution continuously, but they are never removed from today's business.

In comparison to customer teams, the people within sales are more aware on customers' long-term ideas. According to the interviewee, employees within customer teams are focused on the daily business and the implementation of solutions that is required by the customer. Further described, from earlier experience, being in a customer team is described to be more oriented on current projects and somewhat shielded from the remaining businesses. Working within sales have provided a wider perspective of the company and its businesses. It is further described that the people within sales have knowledge about both new and existing customers. The responsibility within sales is to seek new potential buyers simultaneously as managing the relationships with existing clients.

However, people within sales are not included in any innovation process. Even though the company does not have stated innovation processes, the employees from sales does not feel included when new innovations occur. It is stated that everyone at the company should think creatively and they are encouraged to innovate. Still, some of the innovative work is supposed to be generated by Sector V. However, the people from sales perceives that a lot of innovations are done by customer teams since they work closest to customers. On the other hand, interviewees from sales are not well informed about the work made by Sector V.

They describe themselves being disconnected from Sector V and there is no existing collaboration between the two sectors.

From the interviews, it appears that sales have a desire to engage in the innovation process. Especially from a perspective of how new innovations are sold to customers. They request to be involved already from the beginning of an idea's development. Sales believe that they should have a greater impact on the company's product development. The people within sales prefer that product development should be done as a combination of customer insights, sales perspective and a holistic view of the business.

Lastly, the people within sales describe the level of innovation within Company C as high, but it could be increased with a broader spectrum of innovation types. According to employees within sales, the company manages innovations for current business very well, and they are visionary about the future within their strategy. However, the interviewees perceive the company to be highly focused on its existing customers. The products are somewhat forgotten after development which results in no long-term plan for a specific solution. The perspective of innovating for the future has potentials for improvements. The struggle is to find time, resources and energy to push visionary ideas forward. The interviewed people believe the idea for Sector V was to develop visionary ideas. But currently, they are described as being occupied with customer requirements.

4.2 Working with Innovation

The executives describe that innovation can occur when existing ideas are mixed, resulting in a new applicable solution or in a new context. It defines the ability of becoming aware of an existing problem, perceiving an insight and creating value that solves an issue. It is when you combine different perspectives that you create the conditions for innovation. Innovation is complex and should not be set in a process.

4.2.1 Innovation Model

One model that was described during the interviews with executive is a 3-step model containing innovation thinking iterations, start-up incubation and agile development (See figure 3). Briefly described, the idea of this model is that during innovation thinking, a team iterates different ideas in a design thinking approach to identify potential businesses grounded on close customer relations. As soon as an idea seems comprehensible with potentials of solving customer needs, the idea transforms into an incubation setup with a start-up atmosphere where the team originates from a clean sheet. The start-up team has the task of converting the idea into a tangible business case, and later hand over to an agile team for the development of a product that later transitions into the organisation.

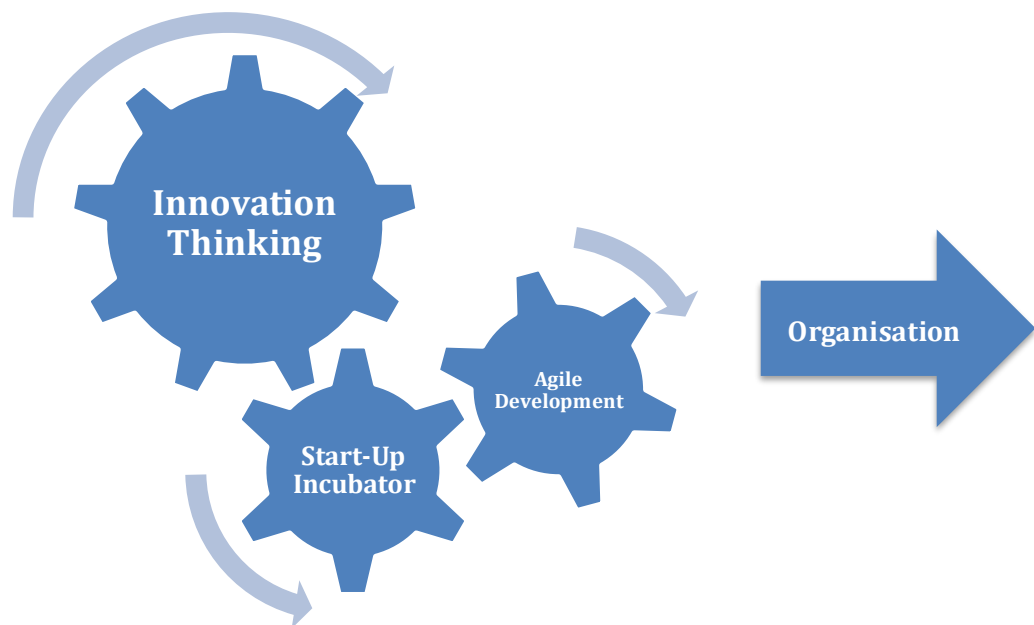


Figure 3: The innovation model as described during the interviews

This model relies on creating a flow of ideas streaming in from the design thinking procedures that later evolves and transitions into the organisation. Furthermore, having the right resources and individuals in each stage of the model is crucial. Even though it is highlighted that innovation is not nurtured by rigid processes, Company C have succeeded in creating an incubation atmosphere and applied agile development. What seems to be missing is the proper constellation of a design thinking team, working conformably with uncertainties and are comfortable seeking new information. Company C have had several attempts of designing such team, once by having a regular team constellation but the team seemed uncertain of what to pursue. The second attempt was to re-arrange members reducing the number of software developers and ensuring that the team was apart from the operative responsibilities. Neither of these attempts were as expected with a common issue of not being able of self-identify a way forward. As described during one of the interviews, the importance of achieving this model is to have a team that is comfortable working in the darkness, a team consisting of variable personal traits considering an idea from different perspectives, and the willingness to seek information without having someone pointing out the directions. Aside the constellation of the team, another important aspect that was described by the executives is the basic need of security, trust and confidence from management for failure and speaking out of heart.

Despite this, innovation is theoretically to happen in every part of the organisation. As it was described, the organisation has a highly distributed mandate. Innovation may occur locally in cooperation with customers without having an approval from the executives. At some cases, the management acknowledge an innovation when it is already implemented. Innovation is described to happen without any central process. Company C did examine several innovation tools but agreed that these tools were for hierarchical organisations, with structures and approvals needed.

To manage that, Company C have created a mix of having structural innovation and innovation that is need-based, which is without pre-assumed processes. In the past attempts of creating structural innovation, the organisation was able to

generate many ideas, but it was just concepts and nothing feasible and lacked proper research. The ideas were not linked with an insight and was short of real-world observations. From that, the next coming attempts was to have iterations linked with an industry and potential customer. Current innovation methodology is to find the delicate pieces connected to a problem area, and that as many perspectives as possible are associated to that area without having the need of consent from the executives.

4.2.2 Working with Innovation in Reality

Relating to how employees within the organisation recognises Company C's way of working with innovation, there seems to be a mix of understanding on how innovation occur. Some interviewee's distinguishes that innovation is supposed to happen within every team but that there is not much energy or time within teams to foster innovation. Innovation occurs reactively and there is an anxiety of creating something that is non-current customer related. That employees are demanded to justify customer needs which obstructs innovation thinking and the procedure of thinking outside the box. One interviewee described that innovation methodology within Company C is based on design thinking, that every employee has been educated in design thinking but that it is uncertain if employees use this methodology during their operations. Terms such as Rip and Replace, Continuous Improvements and Google Fridays are mentioned as innovation catalysts, but they highlight that it is individually correlated whether employees and parts of organisation works with innovation or not.

Another interviewee describes that Company C is not enough innovative on product level but are innovative in how they structure themselves and how decisions are distributed in the organisation. The interviewee indicates that they have not done any continuous innovation "as they go" because of employees are often fixed in operative deliveries. And the times innovation is needed, the executives are often the ones initiating it with immense efforts. According to the interviewee, there are employees that has continuous improvements in their mindset, but there is no known procedure nor communicated from executives how innovations emerge.

One approach that was discussed during an interview was the individual ability of the interviewee to take the lead whenever an idea pops up. As the interviewee describes it, it is most common that things happen when employees co-develop and establishes a social cooperation. You just take hold of the situation and talk to colleagues that may be interested in the idea. According to the interviewee, people are aware of to whom they should talk to for different subjects and ideas. And in cases it is unknown where to proceed, people tend to ask their way through. There is always someone who knows where to turn with questions.

In general, Company C are highly customer centric which allows the company to navigate through market trends and new innovations. According to an interviewee, in some cases Company C chooses to co-develop with a customer by sharing the investments of developing a new product for the customer.

4.2.3 Resistance for Change in the Organisation

Company C is apparent to have low level of standardisation with products that are developed on customer needs. Hence, there is a wide variation of solutions that are adapted and applied by customer teams. This has created an accepting atmosphere for the employees towards change. The executives describe that they sometimes visualised what the company would do if their core business would change drastically. This is an exercise to continuously challenge themselves by questioning their way of developing products and their mission. The executives further describe that within three years, the goal is to build out the old technology by replacing it with new solutions.

To avoid creating an isolated organisation, people within the company are encouraged to reposition themselves with new role and tasks. The executives describe that they would like to have the organisation to re-organise themselves naturally, but sometimes it is hard for people to consider alterations as it is by nature that humans seek security and stability in their environment. To break this trend, Company C re-organise themselves periodically where most employees are relocated into new constellations. The aim for this is to create a company-wide

community rather than separated teams. Another reason to relocate employees is to increase the knowledge sharing within the organisation. To foster creativity and build stronger and broader network. It is also important to avoid team ownership by leaders within an organisation, as leaders in other organisations often tend to protect their own territories and have a higher resistance towards change, which is essential to thrive innovation.

There were discussions during an interview that there are some perceived cultural differences within the organisation, most often between the offices in Sweden and India. This gap has improved according to employees but still there are some disparity when it comes to the way of distinguishing leadership in India and Sweden. However, this does not seem to hinder changes within the organisation as organisational changes commonly are initiated from the Swedish office.

Resistance for change seems to be immaterial within the organisation during the discussions. As employees are familiar taking on new roles with new challenges and new teams, the feeling of territory-pride and product ownership is almost non-existing. This creates an atmosphere where changes are expected and welcomed.

4.2.4 Transition of Products and Innovations

According to the executive management, they described the organisation to be constantly on the move. Parallels to corkscrew movement was mentioned to illustrate the flow of new products and innovations. It was described by the management that the organisation avoids drastic changes, mentioned as axe-cutting. Instead, the evolvement of the organisation was described as bonsai pruning where the organisation is carefully transforming for the future. The Company also prefer having customers that transform themselves into future customers, that are willing to question themselves and transform themselves by using Company C as a catalyst. This enables, according to the management, the organisation to be agile in their development with customers as speaking partner.

They further describe that one of the focal prerequisites of enabling a comfortable transition of new innovations into the ongoing business is by creating an organisation that is built on same culture and core values, and that the organisation communicates with a common ground. It is described that any organisations that forgets the importance of having a common ground will face the challenges of having deviating rules and norms within the organisation. Over time, this deviation will expand in the organisation while the information exchanged will dilute and perish. According to the interviewee, the divergent organisation in that case will only identify itself through what is accordance to their norms. And the sense of not invented here will oversee their transition. To tackle this, the organisation must consider an interconnection from the beginning, and leaders must eliminate barriers such as territory formations and create common ground and coherent culture.

Connecting to the innovation model that was discussed earlier, the transition will take place through the theoretical overlapping between stages, having influential senior employees as members in each stage that has an extensive level of networking within the organisation. The managers also describe that these key employees are strategically located in the organisation to enhance innovation to be transitioned into the organisation. Employees that has authority in which others can turn to when needed. Furthermore, it is essential to connect a customer in the transition. As it was described in an interview with the executives, the goal is to squeeze the technology curve as much as possible, meaning to integrate the often-separated future and present.

Transition as seen by the organisation

Given to how the organisation and the employees within it sees the transition of new innovations into the daily activities, there are different views of how the transition occur. Some interviewees evaluate the transition to be unspecified. Others describe it as not fully transitioned even though the product is finalised and in production. Employees from Sector V are still dragged into detailed product development long after it is transitioned into customer teams. Members in the sales organisation are poorly involved and it is described that most often, the first-

time sales representatives are tangled into a product is when the product is ready to be sold. Sales representatives describe that considering that they have a holistic perspective with close customer insight, they should be involved much earlier in the development process of new innovations. Likewise, interviewees from customer teams describe that the transition of a new product is not transparent, that customer teams obtain poor information and education in the overlapping and it is considered that they should take over the product in an instant. Employees describe that a trivial product or innovation could be transitioned effortlessly without hassle but with larger product releases, it should be done more properly. Many interviewees describe that they are not even aware of what is coming, the communication of new major releases and the transition of an innovation is described to be poorly rooted in the organisation. In reality, the transition of an innovation seems somehow blurry for the interviewees.

4.3 Perception of Responsibility

Noteworthy for Company C is the perception of responsibility within each part of the organisation. During the interviews, there were signs of mismatching awareness of where the responsibility lies within each individual and the scope of accountability within their roles.

4.3.1 The Executive's Perspective

As described by the executives, many things are considered to be self-organised and self-managed within the organisation. Earlier discussed in this chapter, the executive expected that the re-organisation and relocation of employees would happen naturally. Their procedure of moving employees around the organisation as discussed was first completed by the executives, later delegated to Sector Managers but the executives request that employees consider relocation by themselves. There were also discussions concerning people who often wait for instructions during the early phases of uncertainty, as innovation often tends to be. According to the interviewee, people felt insecure and lost when there were no instructions. They seek therefore for employees who are comfortable of researching within the unknown. Even though ideas sometimes were flooding, the idea generator did not strive for making this idea relevant. That the idea generator

did not try to see it from several perspective and researched if the idea solved a tangible issue. As described by the executives, getting everyone in the organisation to think long-term is tough. Even though when the responsibility was delegated to someone, it got stuck with just being an idea.

Another aspect of this is the initiative of educating employees in Design Thinking procedure. During the first period, the design thinking methodology was dedicated to an expert who took lead. During this period, ideas were generated even though not fully innovated. But according to the discussions, the design methodology faded away when the expert took on another job elsewhere. The executives define this as there is a need of expert where ideas are generated from design thinking and scaling it up by taking it to something customers are willing to pay.

Executives describe that innovation lies on passionate individuals that takes responsibility of researching and aspiring others to make the idea realistic. Parallels are taken with start-up entrepreneurs who are not afraid and have considerable amount of energy. They further describe the quest of finding such individuals, and the frustration of people not taking the chance when they are offered.

4.3.2 Sector V

During the discussions with members in Sector V, it was mentioned that people does not consider themselves to be innovative. That their self-esteem seemed low and that they consider innovation to be something revolutionary. Employees within this sector describes that revolutionary ideas can come both from customer teams and other teams. That customer teams and sales department has a tighter relation with customers and can generate valid ideas faster. It was also mentioned that when greater ideas are discussed without any customer requesting it, it is furthestmost the executives that is highly involved as it is a larger investment.

According to another interviewee, it was unclear what the expectations were when the innovation team was initiated. And that there is no autonomy on how

ideas are evolving, rather than the executives decide what to focus on. There are no introductions on how to work with uncertainties even though the interviewee had earlier experience of working on research projects. The interviewee did not see the purpose of that initiative and felt that it was more to gather information for the executives. Information that the executives already had a vision of. Moreover, there was no flexibility of what to research. Almost every interviewee described that grand ideas come from the executives, and somehow the responsibility of pointing out where to steer lies within.

Furthermore, it is clear for the interviewees that Sector V is supposed to be somewhat radical but at the same time they expect decisiveness from the organisation. Ideas grow when in close relation with customer and the market. And there seems to be a dilemma to lead and inspire other employees within the organisation to work with an idea even though they have things to work on in their daily operations.

4.3.3 Customer Team

During an interview with a customer team member, the interviewee described that the work around large innovations are initially communicated when it is almost done. The majority in the company seldomly knows anything about an innovation until a conference meeting where it is presented. While minor innovations are communicated through mails with a final product.

Furthermore, the degree of innovation that occurs in customer teams are strongly dependent on the customers working with that team, rather than the people within. If the customer invests in new innovations, Company C will probably produce new innovations. But if the customer sees it as a standardised solution, then there is not much to work with in that team. Most often when customers are requesting a new solution, the R&D teams will get involved. In some cases where there is no clear R&D, then it is up to the team to develop a solution.

The interviewee further describes that when it comes to innovations that are supposed to be for the future, it is foremost Sector V who are involved, and it is

quite diffuse who belongs to that team. As the interviewee sees it, they are responsible for the daily operations and briefing others with information. As an example, there is a product in trial that customers have been using for several months. Currently, it is described that there is no follow-up on that product, and it is unclear which team that should develop it as there is no product owner. According to the interviewee, the customer teams have too much in the pipeline, and Sector V is not really complementing that product.

Another interviewee describes himself to be less innovative, rather motivated to find people that are innovative. Company C does not have any product owners and therefore it is important to find individuals that are networking to drive the innovation further. During the discussions, it was described that the initiative of finding the new big thing lies on people with the right personality. Likewise, it was discussed that there are R&D teams that are more involved in developing products and it is uncertain if Sector V or the R&D teams that takes lead for innovation. But was certain that the executives were the ones that are the visionary and drives innovation.

4.3.4 Sales Department

It was described that people who are willing to innovate can do so, but it requires someone who is passionate about it. Innovation is, according to the interviewee, not only connected to product development, but also something that the sales department should consider. Nevertheless, people from sales believe they should be more involved within the innovative development. Today, employees from sales are involved in the last part of the innovative development. Furthermore, they believe it is difficult to begin an explorative project themselves because they need to allocate time and resources for it. Finding available resources is troublesome and this is considered as an issue throughout the organisation. The general idea is that everyone within the organisation should reflect on working with future products, but the perceived reality is that the executives are the ones initiating it. There are also sectors that are supposed to be radical, such as Sector V. But they are moreover busy with operational development as the interviewee describes it.

Additionally, the other interviewee reflected about a potential market where Company C could aim for growing businesses and industries. However, the interviewee did not consider it as something he should explore further. The interviewee believed that Company C did not have the strategy to pursue these potential customers and that they probably have reasons why that has not taken off in the organisation. Though, what reasons it could be was unclear for the interviewee.

5. Discussion

Based on the empirical findings gathered from interviews with employees at Company C, an in-depth understanding of the organisation's ability to innovate is brought. In combination with the gained knowledge and studied literature within innovation management, the earlier mentioned research question "How can Company C be organised in order to generate radical innovations while maintaining their work of creating incremental innovations?" can be answered. In the following chapter, the brought topics from literature will be discussed based on the perspective of Company C to elaborate on confirmations, strengths and potential areas of improvements. In the end of this chapter, a recommendation for Company C is presented to improve their innovativeness and establish a possibility for them to handle radical and incremental innovation simultaneously.

5.1 Innovative Organisation

What factors that defines an innovative organisation has been discussed and evaluated within research of Innovation Management, but despite a successful revealing of the requirements for the outcome, the implementation and management of becoming innovative is found to be the most difficult. Creating an innovative organisation does not follow one standard, it includes a broader perspective of involving the firm's strategy and structure. For innovation to occur, changes must be compatible to the organisation's system and fit the cultural environment (Tushman & Nadler, 1986). Company C has a flat structure that enables everyone within the organisation to make changes and permits employees to take decisions. Because of the joint level of authority, ideas of improvements can efficiently be implemented. The people of Company C accept changes and the cultural environment radiates a drive to constantly develop the business. According to the interviewed, the organisation is able to innovate easily according to their organic culture and flat structure.

It is further proved that the firm's ability to capture and make use of opportunities for new innovations are high. Drucker (2002) elaborates on different areas where innovation may be established, in which unexpected occurrences, process needs,

and new knowledge are well handled by Company C. For example, though the crisis regarding covid-19 that has emerged during the same time as the executed study, no signs of weakness or loss have been seen at the company. The unexpected occurrence has been handled by excellence. The executives have challenged the employees to think creatively and outside the box by engineering worst case scenarios and regularly given information about the company's status. Another example where Company C has made use of a divergent situation occurred when they needed to manage an enormously increased capacity. In this situation, the employees within a customer team managed to create a system that worked more efficiently with an increased capacity rather than with a low capacity. The employees captured the process need by their own responsibility. Lastly, an example of capturing new knowledge to their advantage occurred when the executives decided to invest and educate employees within data science to answer future requests about artificial intelligence. On the back side, one example where Company C might have not taken notice of a potential improvement area is within market changes. During one interview, one employee mentioned a potential market in which he believed Company C could favour but which they were not active within. The interviewee did not understand why the company did not operate within it, but believed the company probably had a reason for it.

After all, being innovative entails a broad meaning. There are several types of innovation that prosper different time aspects, both of today's business and future possibilities. According to Sinha (2016), a firm has a higher probability of succeeding and become profitable long-term if the organisation manages to exploit existing business as well as exploring new opportunities. The manoeuvre of exploitation and exploration exists to some extent at Company C as they create incremental innovations regularly and have experienced new ways of doing business since their creation in 1998. On the other hand, there is a joint understanding that the explorative work of radical innovation is not as thoroughly developed as the incremental improvements. The interviewed employees describe radical innovation to be difficult to manage and priorities, mostly depending on a shortage of resources and time. Even Sector V, whose purpose is to innovate for a time period of three years ahead, believe they are lacking capacity

to establish explorative ideas. The employees within Sector V do not feel the responsibility of searching new ideas or opportunities, neither do they see themselves as charge of making research of new trends. However, it is encouraged if they want to do so. They describe their work to be mainly based on assignment from the executives. If they were about to start a project based on their own idea, it requires a lot of support in order for it to be of higher priority. It seems like the employees have to present a lot of information that can back their idea, but at the same time it seems like they lack support in thinking creatively and explorative.

The executives elaborate on the perception of creating radical innovations to be positive and possible for everyone within the organisation. The only requirement for the employees to develop an idea is to have a customer demand or insight supporting the idea. The question is, how explorative is it possible to be when it is required to have support from existing customer? Exploration involves the search for new opportunities within technologies and markets, meaning providing a new value for new customers. Exploitation on the other hand entails the improvement of existing technologies and respond to existing customer needs (O'Reilly & Tushman, 2011; Chandy & Tellis, 1997). Based on these definitions, one can discuss whether a support from existing customer would enable radical development or rather slow it down and lead it toward incremental improvement. Customers have different characteristics and in order to favour radical innovation by involving customers, the customers have to be one of the early adopters or an entirely new customer.

Furthermore, Sinha (2016) describes how meaningful it is for top management to provide different guidelines depending on what task is about to be executed. The directions needed for exploitation is not the same as needed for exploration to occur and succeed. As Sinha (2016) describes, so does Company C's executives believe trust and the feeling of meaningfulness is highly important among employees in order for them to think creatively and innovate. However, during the interviews there were no clear evidence signifying on different management dependent on whether the focus was upon exploitation or exploration. The employees are guided and supported by the two top executives. The two

executives are coaching the organisation jointly, however, the two executives have somewhat split opinions about radical innovation. One of them shows several signs of being a visionary and trust the company's ability to be radical. His ideas are broad, open and they derive from all possible sources. The second executive on the other hand express radical innovation to basically be impossible to achieve if you as a company have an existing and well-functioning business. It is not worth investing in a radical investigation if it does not pay off. In comparison to the first executive, the second executive is perceived to be motivated by result and conclusions rather than visionary research of future opportunities. A joint management from the two executives create a good balance for the company as a whole. However, regarding explorative projects, a collective management may encounter difficulties because of these diverse views. A radical project needs longer timeframes and more resources to work during uncertainties. A manager who are used to support incremental innovation is therefore challenged when managing radical innovation (Van Looy et al., 2005).

Another view of what is specifying radical innovation is pronounced by Chandy and Tellis (1997). They argue that a firm's willingness to cannibalise their preceding investment separates the radical innovations from the rest. They further describe managers perception of new technology as an important factor for radical innovation. When interviewing the executives, no resistance is felt about entering an entirely new market if such action is needed. The executives explain their attempt to continuously renew themselves in order to avoid such reversal. Company C's culture is to develop the business regularly in several areas in order to blossom and stay ahead of competitors. One of the executives compare the organisation to a Bonsai tree, where they regularly cut the tree in turns, rather than shopping it off entirely at once.

Furthermore, there is no perceived resistance among the other employees if they had to switch from existing market and technology. They are confident in their ability to adapt to changes and fulfil a vast amount of different needs. The cultural environment has thought the employees to dare take on challenges and the employees are feeling secure with the executives' direction. The idea of

cannibalising the firm's investment is of no worry within Company C and is not hindering radical innovation to occur.

5.2 Company C as an Ambidextrous Organisation

Ambidexterity in an organisation describes the ability to reallocate competences and resources to seek new opportunities and challenge threats. As described in the literature by O'Reilly and Tushman (2011), Tushman and Nadler (1986), and Sinha (2016), for an organisation to survive in a dynamic environment, firms must exploit current businesses simultaneously as exploring new opportunities. This requires leaders that can take difficult decisions in which they reconfigure resources to explorative ventures. During the interviews, the executives described the company as ambidextrous, and employees recognised the term of ambidexterity as within their culture. However, at deeper discussions it was acknowledged that their explorative focus needed further adjustments.

In the past, the organisation has had attempts of gaining radical innovations with different constellations. As it is described, everyone in the organisation is expected to work with exploration while they are running their daily business. This approach is in line with a contextual ambidexterity as described in the literature by Chen (2017). Likewise, there has been attempts of creating separated teams working exclusively with explorative tasks. This in line with a structural ambidexterity. Also, the company has initiated explorative projects in the past to find new opportunities which describes a sequential approach of ambidexterity. The organisation perceives these attempts differently, parts of the organisation sees the explorative focus as insufficient. Employees describe that the company has greater focus on exploitative operations, and some does not see the need of exploration, which is essential for a firm's sustainable growth and survival according to O'Reilly and Tushman (2011).

According to Chen (2017), the principles of exploration and exploitation must be managed differently. The two logics should be guided through careful leadership with priorities that allocate resources to strategic initiatives. Without a strategic commitment that explains ambidexterity, the organisation will lack reasons to

justify why a profitable exploitative unit under pressure would devote resources that funds uncertain innovations (O'Reilly & Tushman, 2011). Furthermore, Sinha (2016) clarifies how vital it is for top management to provide different direction that guides the organisation for each logic. Based on interviews, it seems that managers intensely focus on incremental development that has a strong connection to current business and customers. As described by Galbraith (1982), the roles of exploration and exploitation involves similar mechanisms but with contrasting activities. The reason why firms struggle to achieve an ambidextrous organisational design is because of the inconsistent logic of exploration and exploitation.

Relating to the conditions of an ambidextrous organisation as described by O'Reilly and Tushman (2011) and illustrated in table 2, the organisation has a generic intent of reaching both exploration and exploitation. But with a fragile strategy that employees do not comprehend how specifically they can reach the two logics. It seems that Company C has a convincing vision and values that provides a common identity across the organisation, which is assessed as a fulfilled condition. However, concerning the third condition that the executive team owns the unit's strategy for both logics, persistently communicated and with a common-fate reward system, it is apparent during interviews that there is a strong focus on incremental innovation while the senior team need to expand their coaching on radical development. Furthermore, the fourth condition of separated but aligned architectures of exploratory and exploitative efforts are theoretically determined for Company C, but practically not fulfilled. And last, the condition of tolerating and resolving tensions within the organisation seems committed with a strong mindset throughout the organisation to be innovative. Fulfilled through continuous re-organisations which results in strong relationships and networks thru Company C.

Table 2: Status from interviews for the conditions formulated by O'Reilly & Tushman (2011)

	<i>C1: "A compelling strategic intent that intellectually justifies the importance of both exploration and exploitation".</i>	<i>C2: "An articulation of a common vision and values that provide for a common identity across the exploitative and exploratory units"</i>	<i>C3: "A senior team that explicitly owns the unit's strategy of exploration and exploitation; there is a common-fate reward system; and the strategy is communicated relentlessly".</i>	<i>C4: "Separate but aligned organisational architectures for the exploratory and exploitative units and targeted integration at both senior and tactical levels to properly leverage organisational assets".</i>	<i>C5: "The ability of the senior leadership to tolerate and resolve the tensions arising from separate alignments".</i>
<i>Company C</i>	Generic strategy but fragile for employees on how to reach both logics.	Fulfilled.	Strong focus on incremental innovation but lacking in radical coaching and rewards.	Theoretically aligned but practically not fulfilled.	Fulfilled.

In summary, the second and fifth condition is pleasingly fulfilled by Company C. While the first and the fourth condition is in one way fulfilled but requires attention. However, it seems that the third condition is where Company C should improve, as currently the focus within the organisation is on incremental innovation. It is somehow expected that the organisation is self-motivated to explore radically. What managers should consider is the inconsistent logic of exploration and exploitation, where the two logics requires dissimilar way of leadership and coaching where an appropriate reward system and strategy is communicated to the organisation. Furthermore, it seems that the organisation per se is practicing different forms of ambidexterity, which leads us to dynamic ambidexterity defined by Chen, (2017) as the appropriate organisational design for Company C. This would result in allocating equivalent focus on the two logics where all employees contribute with innovations and executives focusing on explorative and exploitative sections with suitable coaching.

5.3 Managing Dynamic Ambidexterity

The concept of being ambidextrous involves the ability to innovate for today's business simultaneously as for the future. In general, Company C believe they are ambidextrous since they consider both time aspects of today and up to three years ahead. But in reality, the company have difficulties in executing the explorative business. Dynamic ambidexterity is a form of ambidexterity which is dealing with the issues concerning an ambidextrous organisation and is found to suit Company C. In order to create a successful dynamic ambidexterity, O'Reilly and Tushman (2011) have defined five conditions in which a firm should fulfil. Company C's fulfilment of these conditions is described in chapter 5.3, showing improvement areas within three conditions. Chen (2017) has defined a set of managerial principles which can be disposed to meet the conditions. In general, the managerial principles involve two different approaches depending on what task is in focus. The principles include strategy, structure, incentives for motivation, processes, involvement of customer and acquisition, which all differ whether it focuses on exploitation or exploration. The reason why Company C does not fully succeed in being an ambidextrous organisation, not fulfil the five conditions, may result in no clear differences between the managerial principles of exploitative projects and explorative projects. According to the interviewees, all employees are guided and supported in similar ways resulting in no specific difference between radical and incremental projects.

The strategy for Company C is described as a support for the entire organisation that in turn is developed by each team individually to create a more meaningful sense for them. The strategy correlates to the goals set by the teams. The strategy goes in line with Chen's (2017) description of a deliberate strategy which suits exploitative projects. Deliberate strategies help the organisation to priorities and allocate resources to key strategic initiatives that generates innovation. A clearly defined strategy is favourable for projects of incremental innovation. Explorative projects are on the other hand best executed when the strategy is emergent, meaning the strategy allows new possibilities to be created and the strategy emerge as the employees explore. For radical projects, its strategy is not supposed to be set in advance due to the unknowing of its development. During the

interviews, no clear difference between strategies for exploitative and explorative projects was describes. However, while the team develops the overall strategy individually, they discuss what the strategy means for them today and for the future.

The structure of Company C's organisation follows an organic structure which fit an explorative unit. Explorative projects are favoured when initiatives can gradually be discovered, and new patterns are allowed to be developed. Even though the exploitative projects are executed within the same structure of Company C, such projects seem to work in an organic structure as well. According to Chen (2017), exploitative projects are best performed with mechanistic structures, like standardisation and defined coordination. In case of Company C, exploitative projects should not change its structure. The organic structure suits both logics in their case.

Regarding the incentives for motivation, this is set for each individual at Company C. What each employee is motivated by is used as reference when reorganisations occur. General motivational incentives are not spoken in reference to specific projects. Chen (2017) discuss motivational incentives to be different dependent on exploitative projects or explorative. The most important part, however, is for explorative projects to tolerate early failures and reward long-term success. Employees working with radical innovation need to be motivated to take major risk. According to interviews, employees believe they can take risks, however it is not done on regular basis. Furthermore, they explain risk-taking ideas to be viewed positively by executives, but they lack continuous coaching in how to do it.

The managerial principles of processes elaborated by Chen (2017) is distinguished by execution and search. Even though Company C prefer to not refer their working methods as processes, similarities with Chen's principle of processes can be done. Execution-oriented processes execute from existing information and capabilities to solve a defined problem. Such processes are great for exploitative projects. As explained by the executives, the organisation within Company C perform innovation in term of improvements extremely well. When

information about a customer desire exist, employees tackle the opportunity immediately. On the other hand, Company C lack's the capability of searching for new desires outside their existing customer base. The executives are aware of search-oriented processes and they have a methodology in mind of how to execute explorative projects, see the 3-step model in figure 3. Unfortunately attempts of radical search have not sustained. One recommendation provided by Chen (2017) when executing processes for radical and incremental projects is to consider the evaluation of the projects. Radical and incremental projects are not supposed to be evaluated with the same metrics. Explorative projects cannot be evaluated by traditional measurements like ROI or other financial metrics. Exploration should be evaluated through internal learning, validation and external interest. From the interviews, their attempts of radical projects were perceived to have been somewhat stressed since the initiatives were closed down after a half or one year. It seemed like the executives wanted results quickly which may be difficult to see for radical projects.

Another managerial principle lies within the involvement of customers. When an idea is developed within company C, it has to be supported by a customer demand or insight. The customer support that is required tend to lie with existing customer base, which is favourable for incremental innovation but not necessarily for radical innovation. As mentioned by sales, they are not involved in innovative projects which is an unfortune since they have a wider understanding about the market. Customers have different characteristics which should be considered depending on what project is executed. Existing customers are not always aware of what they need in the future, except the early adopters (Chen, 2017).

The last managerial principle brought to succeed with a dynamic ambidexterity are exploitative and explorative acquisition. According to Chen (2017), firms sometimes need to acquire other firms to gain control and develop new capabilities. Acquisition is not within Company C's strategy. According to the executives, they do not want to risk their existing culture by acquiring another firm into their existing organisation. They claim such action tend to affect the existing cultural environment which they do not want to change. In order to

complement the core business or bring new capabilities to the company, Company C seek to educate current employees or recruiting new personnel with new knowledge into the organisation.

5.4 Integrating Innovations into the Ongoing Business

Employees within Company C has a mixed view of how well the organisation handles the transition of new products into the operating organisation. There are some that perceives the integration of products to be confusing and not fully specified. Where members in departments where the product has not been developed receives the finalised product without proper overlapping resulting in poor commitment and the feeling of inadequate knowledge about the product. According to Dixon, Brohman, and Chan (2017), processes and structures are essential to ensure that the organisation adapts an innovation and the reintegration mechanisms are indispensable for the exploratory investments to be beneficial. During the interviews, it was perceived that the executives are well aware of how important the transition phase is to capture new products and integrate it into the operating organisation. This has led to acknowledging several mechanisms for the development of new products as described by Gassmann, Widenmayer, and Zeschky (2012), such as using external validating, creating liaison channelling, and making use of network building. Meaning that Company C uses personal ties internally to spread radical innovations through job rotations and network building where personal contacts are used to interact with innovation champions. The company are establishing informal social interactions between members of the radical units and operational businesses.

Further, acceptance of new innovations is created among employees through validating the need from external partners such as customer involvement. On the other hand, the transition mode of liaison channelling has some potential of improvement. The goal of this mechanism is to involve the operational business in an early stage to establish a deeper understanding about the innovation among employees of the ongoing business. During the interviews, signs of confusion was seen regarding new radical innovations and employees from the ongoing business

expressed the feeling of being excluded from the development. They are informed about the new idea once the innovation is done, not in the early stages.

What also could be noticed during the interviews is the attention towards the integrating mechanism described as showcasing innovations by Gassmann, Widenmayer, and Zeschky (2012). The mechanism transacts innovations to be tangible for the organisation, by making it easy to communicate through pictures, prototypes and other forms of physical presentations. To evoke interest among the company and spread information. This mechanism was discussed to be fundamental for the organisation when integrating a product and have gained attention thanks to past learnings. However, what seems to be missing for Company C is the integrative innovation planning. The authors describe this mechanism as integrating the operational business collaboratively in research of radical innovations. Operational departments are early involved in order to create an including atmosphere which in turn reduces individual uncertainties. Furthermore, the operational business including customer teams and sales department should be involved in the discussions of a new idea to both create acceptance and elaborate on the development.

5.5 Recommendations for Company C

Based on the empirical findings and previously elaborated discussions, the research assignment suggests that Company C should further develop their level of ambidexterity into reaching dynamic ambidexterity. Creating a dynamic ambidextrous organisation is in line with the innovation model as described in chapter four (see figure 3) and will help the company to recover the three conditions that currently need consideration, which will be further explained in the following chapter. The recommendation will also include the role of divided responsibility with ambidextrous leadership for explorative and exploitative operations in contradicting environments as described by O'Reilly and Tushman (2004). And last, a brief recommendation on how to further expand the integrating procedures within the organisation.

Dynamic ambidexterity can be defined as a combination of the three forms of ambidexterity at different organisational levels. At executive level, dynamic ambidexterity applies structural ambidexterity. The organisation should have separated environments that exploits existing markets and explores radical opportunities. These two units should be guided and supported differently by the executives. As mentioned by Sinha (2016) top management should provide different guidelines depending on whether exploitative or explorative tasks that is about to be executed. According to O'Reilly and Tushman (2011), senior managers must first be able to sense the changes within their environment, technology, customers, regulation and competition. Which leads to being able to act on these opportunities recognised and seize them through reconfigurations in their assets.

For Company C, this requires different types of separated leadership, an ambidextrous leadership as described in figure 4, but with a consensus on the contradicting approach of exploration and exploitation. In which for the first task of sensing the environment, it requires a visionary leadership that has strong participation with dialogs in the explorative units that is described as "Innovation thinking team" and "Start-up incubation team" in the innovation model. Second, the ability to seize an opportunity should be configured with a result-oriented leadership in strong connection with the "Agile development team" and the transition into the organisation as described in the innovation model. This leads us to the third condition, described by O'Reilly and Tushman (2011). That the executives own the unit's strategy of exploration and exploitation where currently Company C has a strong focus on incremental innovation from the management and missing on a close coaching procedure for the exploratory teams by a visionary leadership. Furthermore, developing a convenient reward system for the two structures where ideas can foster without being interrupted or mistreated to soon is crucial.



Figure 4: Ambidextrous Leadership (O'Reilly & Tushman, 2004, pp. 80)

Likewise would this improve the forth condition with seperated but aligned organisational constructions at executive levels as described for the dynamic ambidexterity. With delicate integrations and tactically leveraging organisational assets. Currently, Company C is theoritically considering this approach with Sector V and the proposed team structures in the innovation model. But to practically achieve this, the executives needs to have a splited responsibility. Leading us to the first condition, where Company C has a generic strategy on how to explore and exploit, with strong efforts on the teams creating their own strategies. O'Reilly and Tushman (2011) describes that without a convincing strategic commitment from the organisation, that validates why a profitable exploiting unit under pressure should give up resources to fund uncertain exploring efforts. Would lead to an emergent focus on short-term expansions from the organisation.

Chen (2017) describes that explorative management should be guided by emergent strategies while the management of exploitation should be guided by deliberated strategies. Emergent strategies in the sense of Company C exploring

different possibilities and allowing strategic directions to appear. This seem in line with Company C on a generic level where teams define their own strategy, but during the interviews, it was perceived that there was an absence of responsibility to justify the strategic statements. However, as concluded by O'Reilly and Tushman (2011), the first two conditions of articulating a strategy with a vision of ambidexterity are in line with attaining the execution of the three other conditions. Which requires hard choices concerning leadership behaviour, allocating resources and balancing the tension of contradicting efforts.

By fulfilling the five conditions mentioned by O'Reilly and Tushman (2011), Company C has a great foundation towards a successful structure of ambidexterity. Moreover, the managerial principles elaborated by Chen (2017) should be applied. These managerial principles require the two perspective of exploitative and explorative unit. Company C are recommended to evaluate and expand towards their strategy of radical innovation, develop incentives for employees to dare taking risks when exploring, apply different evaluation methods when classifying radical and incremental projects, and consider the procedures of customer, the early adopters.

Concerning the mechanism of integrative innovation planning, Gassmann, Widenmayer, and Zeschky (2012) describes this mechanism as creating a collaborative environment in the research of radical innovations. That means, Company C should consider operational units, and substantially sales department as an asset that has great insights in market trends. The collaboration should primarily include the "innovation thinking team" as described in the innovation model, in which their vigorous capability is to have a comprehensive internal network but also vital to get out of the building.

5.6 Future Studies

The proposed recommendation for Company C is based on findings gathered at the Swedish office. For an even more accurate proposal, future studies at Company C should involve the remaining offices located around the world. The Swedish personnel have a close collaboration with employees working in India, which affects a potential change in the organisational design.

Second, further studies within the concept of dynamic ambidexterity is to be suggested. It seems that the topic is relatively novel. Making the existing literature on dynamic ambidexterity relatively insubstantial. The concept has not been extensively studied despite the huge pressure on firm's capability to innovate.

Third, the research on how to find the right candidates for radical innovation should be extended. Questions like "what typifies a visionary?" and "what incentives motivates them to explore radical opportunities?" should be investigated. Further, the understanding on what conditions a company must apply for visionary people to stay efficient should be examined.

And last, the investigation would favour if measurement tools in radical innovation were explored. Is it possible to find tools that could identify whether a radical idea is valuable or not? The usage of big data may be applied in this case, and how should the data be used in order to efficiently decide whether an idea is valid or not?

This study has been limited to a single case study, and the recommendations included are specified for Company C. The conclusions drawn from Company C may not be transferable to other settings. This entails that this research would need further studies to provide basis for generalisation of result to wider population. Also, the study was limited in time. With more resources and broader time perspective, the analysis could be expanded with more data from additional interviews.

6. Conclusions

This project has elaborated on potential opportunities that may help the studied company towards a more innovative position. More precisely, the research has investigated how Company C can be organised in order to generate radical innovation while maintaining their work of creating incremental innovation. The researched topic has been within innovation management and further the implementation of ambidexterity. Ambidexterity is a practical model to what is defined as an innovative organisation. An innovative organisation is a firm who can improve and develop its current business, while exploring the business of tomorrow at the same time. Likewise, the concept of ambidexterity involves the management of exploiting existing business while exploring new opportunities simultaneously. The most suitable form of ambidexterity for Company C is concluded to be dynamic ambidexterity, as a balanced strategy of exploration and exploitation, which combines the three forms of ambidexterity and manages the difficulties for each form. It further contributes and reinforces the existing innovation model currently within the organisation. The company has a favourable position in which the culture and employees accept changes and values constant improvements. There is no perceived resistance among employees regarding incremental nor radical innovation, they rather feel that radical innovation is lacking. It is conducted during the interviews that the company suffer in managing explorative projects. They tend to explore for future business for shorter periods but lacks the ability to maintain such initiatives. There is a joint agreement within the organisation that everyone should ideate and think creatively. Despite this, many employees perceive that the top executives are the ones with the radical ideas. It is further found that employees are encouraged to think innovatively, yet they are not guided or coached in how to think radically in their daily work.

The implementation of dynamic ambidexterity includes the fulfilment of the five conditions brought by O'Reilly and Tushman (2011), which can be supported by the managerial principles discussed by Chen (2017). It is concluded that the company fulfils two out of five conditions in which condition three, "A senior team

that explicitly owns the unit's strategy of exploration and exploitation" should have the highest focus to reach an ambidextrous leadership. Furthermore, to accomplish all conditions, the managerial principles should be considered. Company C should consider that each principle has separated aspects of whether the management supports exploitative projects or explorative projects. Particularly, the firm would increase their ability to innovate for both logics of exploitation and exploration if the leadership was separated and specified for each of the two logics. Further, the radical development would benefit by involving new customers and insight from external market, not only from existing customer base. This by including the sales department in the explorative process and inspiring employees to get out of the building. It would increase the opportunities for radical units to gain new insights on the market.

The study shows that Company C has a rigorous foundation for establishing an innovative organisation. Their flat structure and cultural environment enable innovation to occur among many employees. However, it recognises the importance of applying a separated but aligned structure and leadership for incremental and radical innovation. Moreover, it points out the importance of integrating radical innovation into the ongoing business. By using different transition modes, the explorative unit captures the acceptance among employees and facilitates that radical ideas flourishes into ongoing business.

References

- Anderson, B., & Pettersen, P.-G. (1996). *The Benchmarking Handbook: Step-By-Step Instruction*. London: Chapman & Hall.
- Birkinshaw, J., & Gibson, C. (2004). Building ambidexterity into an organization. *MIT Sloan Management Review*, 45(4), 47-55.
- Brattström, A., Löfsten, H., & Richtnér, A. (2015). Similar, yet different: A comparative analysis of the role of trust in radical and incremental product innovation. *International Journal of Innovation Management*, 19(4), 1-33. doi:10.1142/S1363919615500437
- Chandy, R. K., & Tellis, G. J. (1997). Organizing for Radical Product Innovation. *Institute for the Study of Business Markets*, 1-48.
- Chen, Y. (2017). Dynamic ambidexterity: How innovators manage exploration and exploitation. *Kelley School of Business*, 60(3), 385-394. Retrieved from <http://dx.doi.org/10.1016/j.bushor.2017.01.001>
- Christensen, C. M. (1992). Exploring the limits of the technology S-Curve. Part I: Component Technologies. *Production and Operations Management*, 1(4), 334-357. Retrieved from <https://doi.org/10.1111/j.1937-5956.1992.tb00001.x>
- Christensen, C. M., & van Bever, D. (2014). The capitalist's dilemma. *Harvard Business Review*, 92(6), 60-68.
- Christensen, C. M., Kaufman, S. P., & Shih, W. C. (2008). Innovation killers: How financial tools destroy your capacity to do new things. *Harvard Business Review*, 86(1), 98-105.
- Croitoru, A. (2012). Schumpeter, J.A., 1934 (2008), The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest and the Business Cycle. A review to a book that is 100 years old. *Journal of Comparative Research in Anthropology and Sociology*, 3(2), 137-148. Retrieved from <http://compaso.eu/>
- Dam, R. F., & Teo, Y. S. (2019, 12). *Stage 3 in the Design Thinking Process: Ideate*. Retrieved Mars 23, 2020, from Interaction Design Foundation: <https://www.interaction-design.org/literature/article/stage-3-in-the-design-thinking-process-ideate>
- Dam, R. F., & Teo, Y. S. (2019, 02). *Stage 4 in the Design Thinking Process: Prototype*. Retrieved Mars 23, 2020, from Interaction Design Foundation: <https://www.interaction-design.org/literature/article/stage-4-in-the-design-thinking-process-prototype>
- Dixon, J. A., Brohman, K., & Chan, Y. E. (2017). Dynamic Ambidexterity: Exploiting Exploration for Business Success in the Digital Age. *Association for Information Systems*, 17(4), 1-14. doi:10.17705/1jais.00427
- Doorley, S., Holcomb, S., Klebahn, P., Segovia, K., & Utey, a. J. (2018). Design Thinking Bootcamp Bootleg. *D.school Institute of Design at Stanford University*, 1-37.
- Drucker, P. F. (2002). The Discipline of Innovation. *Harvard Business Review*, 1-11.
- Easterby-Smith, M., Thorpe, R., & Jackson, P. (2015). *Management & Business Research, 5th edition*. London: SAGE publication Ltd.

- Gabriel, D. (2013, March 17). *Inductive and deductive approaches to research*. Retrieved from Dr Deborah Gabriel - Academic & Consultant in Race, Media & Educational Equity: <https://deborahgabriel.com/2013/03/17/inductive-and-deductive-approaches-to-research/>
- Galbraith, J. R. (1982). Designing the Innovating Organization. *Organizational Dynamics*, 10(3), 5-25. Retrieved from [https://doi.org/10.1016/0090-2616\(82\)90033-X](https://doi.org/10.1016/0090-2616(82)90033-X)
- Gassmann, O., Widenmayer, B., & Zeschky, M. (2012). Implementing radical innovation in the business: the role of transition modes in large firms. *R&D Management*, 42(2), 120-132. Retrieved from <https://doi.org/10.1111/j.1467-9310.2011.00670.x>
- Gupta, A. K., Smith, K. G., & Shalley, C. E. (2006). The interplay between exploration and exploitation. *Academy of Management Journal*, 49(4), 693-706.
- Hart, C. (2018). *Doing a Literature Review: Releasing the Research Imagination*. SAGE Publications Ltd.
- Krefting, L. (1991). Rigor in qualitative research: The assessment of trustworthiness. *American Journal of Occupational Therapy*, 45, 214-222. Retrieved from <https://doi.org/10.5014/ajot.45.3.214>
- Leifer, R., O'Connor, G. C., & Rice, M. (2001). Implementing Radical Innovation in Mature Firms: The Role of Hubs. *The Academy of Management Executive*, 15(3), 102-113. Retrieved from <https://doi.org/10.5465/ame.2001.5229646>
- Looy, B. V., Martens, T., & Debackere, K. (2005). Organizing for Continuous Innovation: On the Sustainability of Ambidextrous Organizations. *Creativity and Innovation Management*, 14(3), 208-221. Retrieved from <https://doi.org/10.1111/j.1467-8691.2005.00341.x>
- Luchs, M. G., Swan, K. S., & Griffin, A. (2016). *Design thinking: New product development essentials from the PDMA*. New Jersey: John Wiley & Sons Inc.
- Luger, J., Raisch, S., & Schimmer, M. (2018). Dynamic Balancing of Exploration and Exploitation: The Contingent Benefits of Ambidexterity. *Organization Science*, 29(3), 449-470. doi:<https://doi.org/10.1287/orsc.2017.1189>
- Maier, J. (2015). *The Ambidextrous Organization*. London: Palgrave Macmillan.
- March, J. G. (1991). Exploration and exploitation in organizational learning. *Organization Science*, 2(1), 72-87.
- Moore, G. A. (2014). *Crossing the Chasm, 3rd Edition: Marketing and Selling Disruptive Products to Mainstream Customers*. New York: Harper Business.
- Mortensen, D. (2020, 02 03). *Stage 1 in the Design Thinking Process: Empathise with Your Users*. Retrieved Mars 23, 2020, from Interaction Design Foundation: <https://www.interaction-design.org/literature/article/stage-1-in-the-design-thinking-process-empathise-with-your-users>
- O'Reilly, C. A., & Tushman, M. L. (2004). The Ambidextrous Organization. *Harvard Business Review*, 74-81.
- O'Reilly, C. A., & Tushman, M. L. (2011). Organizational Ambidexterity in Action: How Managers Explore and Exploit. *California Management Review*, 53(4),

- 5-22. Retrieved from
<https://journals.sagepub.com/doi/pdf/10.1525/cmr.2011.53.4.5>
- Porter, M. E. (1998). *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. New York, United States: SIMON & SCHUSTER, The Free Press.
- Pregmark, J. E. (2019). *Mastering Change Through Innovative Initiatives: Contextual Ambidexterity as a Process*. Gothenburg: Department of Technology Management and Economics, Chalmers University of Technology. Retrieved from
https://research.chalmers.se/publication/513387/file/513387_Fulltext.pdf
- Reddy, C. (2016). *Benchmarking: Types, Features, Purpose & Limitations*. Retrieved Mars 23, 2020, from Wisestep:
<https://content.wisestep.com/benchmarking-types-features-purpose-limitations/>
- Rosenkopf, L., & Nerkar, A. (2001). Beyond local search: Boundary-spanning, exploration, and impact in the optical disk industry. *Strategic Management Journal*, 22(4), 287-306. doi:doi:10.1002/smj.160
- Sidhu, J. S., Commandeur, H. R., & Volberda, H. W. (2007). The multifaceted nature of exploration and exploitation: Value of supply, demand, and spatial search for innovation. *Organization Science*, 18(1), 20-38. doi:doi:10.1287/orsc.1060.0212
- Sinha, S. (2016). Managing an ambidextrous organization: balancing innovation and efficiency. *Strategic Direction*, 32(10), 35-37. Retrieved from <http://dx.doi.org/10.1108/SD-05-2016-0061>
- Śledzik, K. (2013). Schumpeter's View on Innovation and Entrepreneurship. *Management Trends in Theory and Practice*, 89-95. Retrieved from <https://dx.doi.org/10.2139/ssrn.2257783>
- Steiber, A. (2014). *The Google Model: Managing Continuous Innovation in a Rapidly Changing World*. Switzerland: Springer International Publishing.
- Thomas, E., & Magilvy, J. K. (2011). Qualitative Rigor or Research Validity in Qualitative Research. *Journal for Specialists in Pediatric Nursing*, 151-155. Retrieved from <https://doi.org/10.1111/j.1744-6155.2011.00283.x>
- Tushman, M. L., & O'Reilly, C. A. (1996). Ambidextrous organizations: Managing evolutionary and revolutionary change. *California Management Review*, 38(4), 8-30.
- Tushman, M., & Nadler, D. (1986). Organizing for Innovation. *California Management Review*, 28(3), 74-92. Retrieved from <https://doi.org/10.2307%2F41165203>

Appendix A

(O'Reilly & Tushman, 2011, pp. 7-8)

IBM Life Sciences (Success)

In 2000, IBM began a programmatic effort, (termed the Emerging Business Organization or EBO), to identify and develop cross-IBM business that could provide \$1B in revenue within a 5-year time frame. In April of that year, Carol Kovac, an IBM R&D manager, was asked to establish a new Life Science business that would capitalize on the increased demand for computing being generated by the genomic revolution. Between its founding and 2006, Carol grew the business to \$5B in revenue.

Cisco TelePresence (Success)

Cisco Systems is a \$22B company that sells plumbing for the internet. It has grown from 12-17% annually but currently has a dominant market share in its main businesses. As a part of his effort to continue Cisco Systems growth, John Chambers, the CEO, has launched an ambitious initiative to identify 30 new potential \$1B businesses. His aim is to generate 25% of the firm's revenues from these new ventures within 5-10 years. In October 2006, one of these efforts (TelePresence) was launched as an internal venture to develop high-end video conferencing. Since then the business has grown from two internal entrepreneurs and a sheet of paper to more than 100 people and \$200M in revenue.

DaVita Rx (Success)

DaVita is a \$6B business that derives the bulk of its revenues from operating kidney dialysis centers. In 2004, Kent Thiry, the CEO, formed a team to identify new business opportunities that would match DaVita's clinical skills with economic opportunities. One opportunity identified was to provide prescription drugs to chronic kidney patients. Begun in 2004, DaVita Rx was an internal start-up with a different business model, metrics, and margins than the larger DaVita. By 2010, this new business was generating \$220M in revenue with 400 employees.

Ciba Vision (Success)

In the early 1990s, Ciba Vision, a maker of soft contact lenses and lens solutions, was losing ground to their larger competitors, J&J and Bausch and Lomb. In a bold move, Glenn Bradley, the President, halted all incremental innovation and placed six bets on revolutionary new products such as extended wear lenses and daily disposables. These new units were encouraged to establish their own alignments (people, structure, culture) as they pursued their breakthrough innovation. With the success of several of these, revenues tripled over the next decade.

IBM Middleware (Success)

In 1998, IBM's software division was in turmoil. There were conflicting pressures to continue to develop and service software for their existing installed base that relied heavily on mainframe computers and to develop radically new products based on the emerging World Wide Web. Resolving this required that their senior managers exploit existing programming languages and customers and to explore new languages and markets. They accomplished this by systematically establishing different units and carefully integrating them at senior levels.

Misys Corporation (Success)

Misys is a \$1B software firm selling service and systems to health care and banking clients. As a part of a turnaround effort commenced in 2007, the new CEO initiated a cost-cutting effort in the mature business and proposed a new open source approach to replace the existing proprietary platform. To ensure the success of this disruptive approach, he set up a new exploratory unit and replaced several members of his senior team who were resisting the new approach. By 2010, the new open source platform had opened up new markets and attracted a significant number of new customers.

Defense Corp (Success)

Defense Corp is a \$6B provider of hardware and systems to the U.S. military establishment. In 2005, in an attempt to broaden their customer base the company initiated an effort to sell technology to the newly established Homeland Security Agency. Although the initiative was approved by the CEO, development funding and cooperation from main lines of business were slow in coming until a separate unit was established with a clear charter, appropriate metrics, and an aligned senior team. The new unit recently won a \$13M contract.

Zensar Technologies (Success)

In 2002, Zensar Technologies, a mid-sized Indian IT services firm was losing market share and key talent. There was substantial tension between a potentially promising new technology platform and the existing geographical business units. A new CEO shifted Zensar to a product-focused firm but kept the new technology venture as a business unit reporting to his office. In 2008, after the entrepreneurial unit's technology and business model was validated this unit and its innovative business model was integrated into the product units. Over the five-year period, Zensar was able to build its core business even as it brought to the market a fundamentally new technology.

SAP Business-by-Design (Failure)

In 2006, the CEO of SAP declared that future revenue growth for the company was in the Small and Medium Business market and selling software on demand. This software-as-a-service product (Business-by-Design or ByD) was developed but no separate unit was established. Although this market has grown substantially, SAP has failed to successfully market their offering. In 2010, the CEO, Leo Apotheker, was fired for failing to implement Business-by-Design.

Printing Company (Failure)

In 2007, faced with increased competition and declining customer satisfaction and usage of their core legal research products, the senior managers of the business decided to reinvent their business as a web-based publisher based on a new open source architecture. In spite of a clear vision of the future, heavy investment in the new technology, and a promise to “rescue the company”, the new product has failed to reignite growth. The new unit has faced continual resistance from the more mature part of the business.

Software Company (Failure)

Under pressure from corporate executives, the general manager of Software Company articulated a strategic intent to both build on its struggling extant product line and initiate a remarkable set of new software solutions. This general manager built a separate unit, reporting directly to him, to focus on innovation. Over a three-year period, he did not, however, staff or fund this innovative unit. The unit underperformed in its existing as well as its innovative product line.

USA Today (Declining to Success)

In the late 1990s, USA Today, like most U.S. newspapers, began to see a decline in both circulation and advertising revenues as web-based news began to supplant print. In response to this trend, Tom Curley, the paper’s publisher, adopted a “network strategy” which emphasized the delivery of news content across three platforms, print, the web, and TV. Between 1999 and 2002, he was successful at managing this transition and simultaneously delivering news content across the three platforms-with the result that earnings increased by 50 percent.

HP Scanner (Declining to Success)

Beginning in 1991, HP’s scanner division had begun to develop a portable scanner to complement their flatbed product. For five years they had failed to commercialize any of their inventions. In 1996, a new division GM separated out the handheld business into an ambidextrous unit that was physically separated from the flatbed business and had its own people, systems, incentives, and culture. Two years later, this business was successful enough to be spun-out as its own division.

Turner Technologies (Declining to Success)

The Advanced IC Division of Turner had issues of growth in new products as well as quality in its existing product line. While the division’s strategic intent was clear, it could not get traction on either performance issue until it split out the innovative strategic agenda from its existing product line. Energized by two new managers reporting the divisional GM and a rearticulated identity for the division, Turner was able to both effectively explore and exploit.

IBM Network Technologies (Declining to Success)

A highly entrepreneurial general manager articulated a strategic intent to exploit her existing chip line even as she promised to explore into fundamentally new chips. Yet her zeal for exploration led her to build a business unit only focused on exploration. Her extant product line suffered. Under pressure from corporate staff and client dissatisfaction, the general manager rebuilt her senior team and her business unit to focus attention on both her current product as well as her new product lines.

Appendix B

The purpose of interviewing the employees is to understand the level of innovativeness at the firm and in what extent innovation occurs. What context have they applied for innovation to happen and who are responsible for innovations at the firm?

Remember: *Ask follow-up questions and ask for real life examples before proceeding to the next topic. Questions must not be in descending order.*

Innovation at Company C:

What is innovation for you?

1. Do you think Company C is an innovative firm?
2. In what way is Company C innovative? Give examples.
3. When innovation occur, how does it evolve at Company C? Who is responsible for the idea?
4. What attempts have Company C made in order to create innovations? What organisational structures have you tried?
5. Are there specific people at Company C who are more responsible to innovate or come up with ideas?
6. Who captures market trends?
7. How is the work towards innovations communicated to employees at Company C?
8. When talking about an innovative firm, literature explains that the organisation needs to innovate for both the problems of today and the problems of the future. How do you believe Company C innovate for both situations, exploit existing ideas and explore new ideas?
9. How do you work with that? Is there specific periods/people etc who are responsible for the two logics/situations?
10. Do you have different strategies, processes, people and structures handling future problems and today's problems?
11. How are these formulated?
12. Is it different between sectors?
13. Do you have any personnel who are managing innovation?
14. Is there a specific forum for ideas/innovations to take place/evolve?
15. Where do you think has the most resistance and what could that be?
16. According to our introduction, it was explained that Company C should be more innovative in order to sustain in the future. Are there any examples from today where you believe you are not innovative enough?

Questions regarding Sector V

17. What is the purpose of Sector V?
18. How do you think that Sector V has evolved?
19. How is Sector V structured in the organisation?
20. How have you recruited employees in Sector V? (Is there any specific personality trait/type?)
21. Do Sector V have an own budget? Strategy? Culture? Process? Management?

22. In the beginning, we got the explanation that Sector V were your radical sector, how do you explain radical innovation?
23. How do Sector V work with radical innovation?
24. Are they only focusing on radical or do they innovate for the existing problems as well (incremental)?
25. How do you transition innovation from Sector V to the organisation?
26. How does the management coach employees through these two logics?

Questions on Ambidexterity:

1. There is a concept called ambidexterity which is an approach of how to deal with exploration and exploitation. Dealing with both sets a firm's ability to innovate for today and tomorrow. How familiar are you with the concept of ambidexterity? Can you give any example?
2. From previous conversation we had explained that the organisation tried working according to 80/20 or 70/20/10 method, how did that evolve?
3. Why are you not working like that today?
4. How do you handle it in the organisation's culture? How did the culture become like that?
5. What differences are there in culture between sectors?
6. How would you think of separating the organisation into two different independent organisations?
7. Would you describe any part outside the organisation? For example, a team, a sector, a person?
8. How willing would Company C be to change their core business?
9. How willing are Company C to abandon their current investments?
10. How close to your current customers do you think you need to be?

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