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The Strategic Approaches of Delivering Radical Innovations

- A Case Study at F.H. Bertling AB

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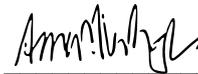
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Gothenburg, June 2022



Matilda Ström



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Abstract

Title: Innovation strategy at F.H. Bertling AB

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It has been seen how digitalization has shifted consumer behaviors and forced industries to follow the path of transformation. Traditional industries, like freight forwarding firms, have experienced challenges in doing so. It has been seen how these firms have a tendency to miss out being entrepreneurial and innovative, which puts them at risk of becoming irrelevant. This research had its aim to investigate what strategic approaches F.H. Bertling AB, being in this position, should implement to increase radical innovations, and mitigate the risk of being irrelevant. Conducting this research the purpose was to outline strategic approaches for how Bertling should work towards the strategic goal of producing radical innovations.

On the basis of a theoretical framework, consisting of previous research, and a mixed-method empirical case study, the authors were able to answer the following research question: *What strategic approaches should Bertling implement in order to achieve their strategic goal of producing radical innovations?*

The research resulted in several strategic approaches F.H. Bertling AB should implement in order to produce radical innovations. It can be concluded that implementing the suggested strategic approaches will help F.H. Bertling AB to deliver radical innovations. The most crucial part of the strategic approach will be to enable more time for employees to work with developing radical innovations.

Key words: Radical innovation, strategic approach, innovation management, freight forwarding

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1. Introduction

This chapter gives a background description of the research, which also involves a theoretical starting point and a description of the case company studied. The background and case description results in a problem statement and serves as a base for the research question. Further, this chapter describes the delimitations and disposition of the research.

1.1 Background

The perpetual digitalization and technological advancement in society, as well as shifting customer and consumer behaviors pushes industries of all kinds to adapt and transform in one way or another. The freight, transport, and logistics (FTL) industry has likewise experienced a new wave of digitalization, technological advancements, and shifts in customers and consumer behaviors (Wang & Sarkis, 2021). Industrial evolutions, changing consumer patterns, and the growing importance of digital technologies are critical for FTL firms' success and sometimes even for the survival of their logistical operations and initiatives. In a highly competitive environment, businesses need to constantly pursue innovative ways to capture revenue and structure enterprise activities (Wang & Sarkis, 2021). Moreover, technological innovation and digital transformation play a crucial role in transforming business models of logistics and supply chains and bringing about new ways of doing business.

Freight forwarding firms act as an intermediary between international buyers and sellers by receiving and shipping goods on behalf of other companies. Kofod-Hansen (2020) describes that transactional thinking, reactive thinking, and denial of critical situations characterize many freight forwarding firms and therefore, they have a tendency to miss out on being entrepreneurial and innovative. They are at risk of being irrelevant and outpaced by competitors and unattractive to talents if they do not innovate beyond traditional freight forwarding thinking (Kofod-Hansen, 2020).

While there are contrasting opinions over who is more likely to innovate, innovations matter to firms of both small and large sizes, start-ups, and incumbents. Regardless, all companies that aim to make a profit in the long run, can not do so without engaging in innovation since customers quickly will substitute one firm for another firm with more up-to-date products or services (Gilbert, 1994). Jack Welch once described the importance of innovation as “If the external change exceeds the internal, the end is near” (Human Factor Inc, 2017, Is Your Organization Changing Fast Enough to Win?). Therefore it is crucial for firms to be capable of engaging in regular and focused change, such as innovation (Bessant & Tidd, 2011).

1.2 Theoretical Starting Point

Innovation requires firms to establish a process that steers how basic work of the organization should be managed, and how they should ensure continuous renewal and growth. The establishment of such processes is often referred to as *strategic management*. It should ultimately provide the context for which the development and implementation of strategic approaches are energized in the organization's operations (Kuratko & Audretch, 2009). Within strategic management, the formulation of strategic plans is the primary step to determining the future direction of the organization's operations. Part of strategic planning is the formulation of the short-term and long-term objectives of the firm.

Coupled with strategic management and planning is the concept of strategy, which is the organization's statement on what the company wants to be and how they plan to get there. The strategy of the firm should create consistency of actions and unite organizational levels to work towards a set of common objectives. Without employees knowing what the objectives are, they cannot be expected to work towards them. In the notion of innovation, employees need a strong understanding that innovation is essential to reach the firm's strategic objectives. If they lack this understanding, their actions on the job will not emphasize innovation efforts (Kuratko & Audretsch, 2009).

Since strategy, at its essence, should capture the firm's objectives for the future and its action plan to get there, the integration of innovation in a firm's strategic approach increases the

possibilities of where the firm can go, and how and how fast it can get there. (Kuratko & Audretsch, 2009).

1.3 Case Company F.H. Bertling AB

The Bertling Group is an organization operating in the freight forwarding industry and was founded in 1865 in Germany. It started by providing transportation links throughout Scandinavia and the Baltic Sea. In the early years, Bertling Group was an organization that specialized in ship owning, chartering, and freight forwarding. As time went Bertling Group established a logistics division which induced the organization to expand its product portfolio to include warehousing, customs clearance, and insurance. (Bertling, N.D.)

Bertling Group continued its expansion and 100 years after the foundation it opened its first office abroad, which now consists of 60 offices worldwide. One of its offices is located in Sweden, F.H. Bertling AB (further called Bertling), and is where this research will have its focus. Today Bertling primarily focuses on providing services within shipping, logistics, and project freight management. The service portfolio consists of several services within areas such as shipping and chartering, logistics and project freight forwarding services, and IT services and solutions. In line with the history of Bertling the organization aims to have a continuing growth (Bertling, N.D, Bertling's Vision and Goal):

It is Bertling's aim to be the long-term partner of choice for freight forwarding and shipping in the oil & gas, energy and mining industries, by providing quality solutions tailored to specific client needs and delivering success. It is Bertling's goal over the next 5 years to continue its global expansion strategy by focusing on the key growth regions of Africa, Asia, and the Americas.

As part of their growth goals, Bertling established an affiliate company in 2014, Bertling Enviro (further mentioned Enviro), which trades materials within the waste and resource sector in Gothenburg and London. In comparison to Bertling's main business, Enviro owns

the products they trade while Bertling only provides the intermediary logistic services between buyers and sellers. Together, the two companies are operating in both the product and service sectors.

1.3.1 Pre-study of Bertling

When this case study was initiated Bertling expressed the desire to become more innovative. However, this was not further specified which resulted in the authors doing a pre-study, to get a better understanding of what needs the organization has. During an informal conversation with the chairman of the board and the change manager at Bertling, a concern was expressed regarding Bertling's innovation activities, idea generation, and lack of innovative outputs.

On this basis, the authors needed to increase the understanding of the innovative climate and the ideas generated. Therefore observations were conducted during a meeting with the firm's business developers which showed that ideas are generated, however mainly of incremental type. To gain further knowledge of the innovative climate, better understand how employees at Bertling perceive their contribution to innovation and establish whether there is a consensus regarding the need for and what type of innovation, a survey was sent out to all employees at Bertling (Appendix 1). The survey included questions connected to the generation of the ideas and the results showed that the respondents on average had a feeling that they actively worked with generating ideas, and that it was something that they continuously did. However, senior executives' responses indicated a slightly opposing view and felt that not enough ideas were generated within the organization. Another question asked in the survey related to whether employees perceived that there is an innovation strategy in place, and the average respondent implied that they do not know if an innovation strategy exists or not. These responses demonstrated that there might be a gap between what senior executives define as innovation and what employees at other organizational levels believe are innovative contributions, as well as that there is a lack of commonly known innovation objectives.

Continuing with the pre-study, the authors decided to do a semistructured interview with one of the business developers, founders, and board members of Bertling's affiliate Bertling Enviro (further mentioned Enviro). The business developer explained how the lack of time affected the work of generating ideas. However, he explained that ideas were generated, but the amount and quality of them could vary across the organization. Even if he expressed that ideas were generated he explained that Enviro is facing a problem where it was of major importance to generate ideas and especially radical ones. The interviewee expressed that Enviro's current operations had an expiration date and to be able to continue to successfully operate in the future the organization needed radical innovations to change its product and service portfolio. The interviewee confirmed the lack of a commonly defined innovation objective and indicated that it could be a contributing factor to the aforementioned gap between senior executives and other employees.

As a last step of the pre-study, the authors had an unstructured interview with the change manager and chairman of the board, where the findings were presented. During the interview, it was decided that Bertling's strategic innovation objective is to increase its output of radical innovations. Based on Goffin and Mitchel's (2017) definition of radical innovations being products and services that are groundbreaking on the market, together with Bertling, the authors defined radical innovations in this research as products and services that are groundbreaking for the organization.

1.3 Problem Statement

Bessant and Tidd (2011) argue that it is a necessity to be able to change in a turbulent and ever-changing world, if not, firms risk being outstripped by those who do. The freight forwarding industry in which Bertling operates is constantly challenged by changing industry dynamics, trends, and technological advancements which not only compromises their turnover but also their long-term success. Thus, with the survival of firms being dependent on their innovation capabilities, establishing a notion of innovation in Bertling's business strategy is at the forefront of gaining sustainable performance and becoming more innovative. Sustained competitive advantages and continuous growth can therefore be seen as strongly

interlinked with firms' ability to create a business from new ideas, i.e. produce viable ideas and implement them.

A business strategy establishes how a company competes in the industry it operates and acts as a guiding tool for the broad plans to achieve the performance objectives of the business (Gilbert, 1994). Incorporating innovation in the business strategy helps determine the degree of innovation an organization aims to develop and in what way those innovation efforts will help execute the business strategy and increase the long-term performance of the firm (Gilbert, 1994). Therefore, the incorporation of innovation is at the heart of the process of innovation and is key to increasing the likelihood of sustained performance and success.

Bertling's long history in such a traditional industry has led them to experience challenges that inhibit the process of innovation. With the right methods and tools, these challenges can be overpowered which can increase the firm's innovation potential, and help them establish an innovative working system (Katila & Ahuja, 2002). As aforementioned, the pre-study performed at Bertling indicated that Bertling needs to establish a strategic approach to produce radical innovations. Without this in place, Bertling is at risk of only producing incremental innovation which could jeopardize their long-term success as the capabilities within the Freight forwarding industry is limited.

1.4 Purpose

The purpose of this research is to outline strategic approaches for how Bertling should work towards the strategic goal of producing radical innovations. In doing this, the authors will determine the inputs necessary to support Bertling in the implementation of their strategic goal.

1.5 Research Question

As part of this research, the authors will examine the necessary inputs that Bertling's need to include in the implementation of the goal to produce more radical innovation. To do this, the authors will examine what strategic approach Bertling should employ in order to increase the likelihood of adoption and alignment within the organization. Thus, the authors will study the following research question:

What strategic approaches should Bertling implement in order to achieve its strategic goal of producing radical innovations?

1.6 Delimitations

The main objective of the research is to investigate what strategic approaches Bertling should implement to produce radical innovations. Thus, the focus is directed toward providing company-specific recommendations of strategic approaches, rather than developing an innovation strategy. Due to time constraints, the study primarily presents strategic approaches necessary for Bertling to implement in order to successfully establish an innovation process for the future production of radical innovations. To do so, attention will be paid to the mapping of Bertling's pre-conditions and current challenges, rather than performing a full-scale analysis of Bertling's organizational structure and culture. Additionally, as Bertling's innovation objective is to produce radical innovation little attention will be directed towards incremental innovation, unless discussed in relation to differences between the two.

1.7 Disposition

The study will proceed into five following chapters. First, the *theoretical framework* will present relevant previous studies of frameworks and concepts related to the research topic. The chapter will include theories related to themes of innovation and risk, innovation ownership and resource allocation, innovation portfolio management, as well as skills and capabilities which are elements considered to be fundamental for producing radical innovations.

Thereafter, the *methodology* chapter will present and reflect upon how the research was conducted and for what reasons the research strategy and design were chosen. Additionally, the chapter will include a description of how the data was collected and later analyzed.

Thirdly, the *empirical data* will be presented tied to the theoretical themes. The main part of the data presented will be related to the interviews held during the research but will also include elements of a workshop held together with individuals at Bertling. At the end of the chapter key, empirical findings will be laid out.

In the subsequent chapter, the *analysis* will be conducted. The theoretical framework will be compared and contrasted to the empirical data, and implications for Bertling will be discussed. The analysis will act as the foundation for the recommendations of strategic approaches presented in the last chapter, the *conclusion*. This chapter will summarize the findings in the analysis and conclude which strategic approaches Bertling should implement to produce radical innovations. Hence, this chapter will provide answers to the research question. Lastly, it will include additional recommendations and a discussion regarding the implications of future research.

2. Theoretical Framework

For organizations to reach developed objectives, there are different methods to use. The methods are based on the strategy the organization develops, that in turn is based on the strategic approach taken by the organization. Based on different aspects such as risk and capabilities within the organization there are different strategic approaches to incorporate. This chapter consists of a theoretical framework of relevant theories applicable to describe these connections. The theoretical framework gives a theoretical perspective of what strategic approach Bertling should take in producing radical innovations. The literature was chosen based on the year of publications, citations, and relevancy. To receive the most relevant literature, all these three criteria were combined and analyzed when searching for literature.

2.1 Innovation & Risk

Innovation typically has been observed to involve three underlying mechanisms: infrastructure, capital, and entrepreneurial capacity. The latter has been observed by multiple authors to have considerable overlap between innovation and entrepreneurship (Kanungo, 1999; Sundbo, 1998; Drucker, 1985; Schumpeter, 1934), by arguing that “innovation is the specific tool of entrepreneurship by which entrepreneurs exploit change as an opportunity for a different business or service” (Zhao, 2005, p. 28). Additionally, Su, Xie, Wang and Li (2011) argue that entrepreneurship fosters innovative thinking, which can increase the output of innovations. Hence, innovation and entrepreneurship can be argued to be closely tied together where innovation requires entrepreneurial capacity and vice versa.

Sonfield and Lussier (1997) further emphasize this, by arguing that innovation and risk are critical factors to consider in strategy making. It is important to know that innovation efforts involve risks and uncertain outcomes. Without uncertainty, there is no innovation, and therefore the organization is required to take risks to face the uncertainty (Wolcott & Lippitz, 2007). Sonfield and Lussier (1997) have developed a matrix to measure the level of innovation and risk that a firm is willing to engage in. The matrix defines innovation as the “creation of something new and different”, and the more unique and newer the product/service is the higher it would score on a measurement scale. Risk is defined as the

“probability of major financial loss” and is thus primarily focused on financial factors. The higher the probability of the entrepreneurial venture failing, or the resulting financial loss is, the higher score on a measurement. In combination, these two independent variables create a four-cell matrix as seen in figure 1 (Sonfield & Lussier, 1997). By denoting I and R as high levels of innovation and risk, i and r denote low levels.

Innovation	High	I-r <ul style="list-style-type: none"> • <i>Move quickly</i> • <i>Protect innovation</i> • <i>Lock in investment and operating costs via control systems, contracts etc.</i> 	I-R <ul style="list-style-type: none"> • <i>Reduce risk by lowering investment and operating costs</i> • <i>Maintain innovation</i> • <i>Outsource high investment operations</i> • <i>Joint venture options</i>
	Low	i-r <ul style="list-style-type: none"> • <i>Defend present position</i> • <i>Accept limited payback</i> • <i>Accept limited growth potential</i> 	i-R <ul style="list-style-type: none"> • <i>Increase innovation; develop a competitive advantage</i> • <i>Reduce risk</i> • <i>Use business plan and objective analysis</i> • <i>Minimize investment</i> • <i>Reduce financing costs</i> • <i>Franchise option</i> • <i>Abandon venture?</i>
		Low	High

Risk

Figure 1: The strategy matrix: Appropriate strategies

By identifying the kind of innovation a firm contemplates, and the risk they are willing to take, this matrix can help identify appropriate avenues for strategies that are more likely to be effective. Certain cells within the matrix are more beneficial and preferable than others, such as the I-r (high innovation, low risk) in comparison to the i-R (low innovation, high risk). Yet, many firms can be found in the i-R cell because the risk is more common than innovativeness. There are two options for a firm that finds itself in an unwanted cell within the matrix. The first option involves moving from one cell to another which often requires large efforts to transform and is therefore not a possibility for all firms. The second option involves efforts to reduce the risk and increase the innovativeness within the cell, i.e. reposition themselves along with the innovation- and risk axis in the matrix while staying within the cell (see figure 1). Once the firm can place its ventures or planned ventures within

a cell, figure 1 displays appropriate strategies for each position within the matrix. (Sonfield & Lussier, 1997)

High innovation, low risk (I-r) signifies ventures involving a unique and novel idea that carries as little risk as possible, i.e. as few investments as possible. However, innovations that require large investments can still be characterized within this cell (Sonfield & Lussier, 1997). Such as when a highly innovative and novel idea can be protected from competition, particularly by a large firm where such financial commitments are not too risky. Such innovations rarely occur in smaller companies. The I-r cell is the most desirable cell to be within for a firm that strives to engage in high innovation efforts and produce radical innovation. If a firm finds themselves to be positioned within this cell, it should quickly ensure they take advantage of the situation. The innovations should be protected by patents and brought to the market quickly to avoid competition and gain first-mover advantages. Risk is kept low by locking in investments, internally by using cost-control systems, and externally by negotiating long-term contracts with suppliers to avoid cost increases. The strategy is to keep the company within the cell to keep producing high innovation at low risk.

High innovation, high risk (I-R) indicates ventures involving truly novel ideas, but the risk is considerably higher than in the prior cell. The higher risk often stems from higher initial investments (relative to the firm's size), or because the competition is greater. Innovative initiatives of this sort are primarily attempted by large corporations which have the financial ability to invest large amounts before knowing whether the innovation will be successfully marketed or not (Sonfield & Lussier, 1997). In the I-R cell, the innovation's success is less certain due to the presence of high risk. If the nature of the novel product or service requires large initial investments, risk must be reduced elsewhere. Risk can be reduced by joint ventures, in which two firms share the investments and operating costs. If a joint venture is not an option, operating costs might be reduced by outsourcing to other companies or redesigned with the objective of lowering costs. The strategy within this cell should be focused on reducing the risk, without compromising the high innovation efforts. Ideally, a firm should strive to move from this cell to I-r, but it is also feasible to reduce risk within the cell itself.

Additionally, low innovation and high risk (i-R), represent the most situations in which small business ventures find themselves. New businesses or start-ups involve conventional entries into incumbent fields of business, which often require high financial investments and great competition, which increases the risk. In the i-R cell, where most companies are positioned, they lack innovativeness but are yet faced with major financial risks. For such firms, the ideal would be to move into i-r (with less risk), I-R (increased innovation), or I-r (Increased innovation and reduced risk). To reduce the risk, efforts can be made to decrease the financial investments or operating costs. Feasible strategies in this position involve activities aimed to reduce risk or increase innovation. The business plan tool can help the firm to follow such a strategy. Such a plan forces the firms to objectively conduct an analysis to identify ways to reduce risk and increase innovation and thus better position themselves within the i-R cell. (Sonfield & Lussier, 1997)

Low innovation and low risk (i-r) indicate low innovation efforts and small risk. Firms find themselves in this cell when only a small amount of investments are needed, or market demand is sturdy or competition is weak. The i-r cell is a safe option but is generally low in the payoff. Minimal new investment implies that the firm's strategic focus is to understand the situation they are in and defend and maintain it. Without innovation, the likelihood of gaining competitive advantages is low, and so is the chance of sustained performance. As Sonfield and Lussier (1997, p. 77) phrase it: "Autonomy and reasonable security are inherent, but there is little likelihood of getting very rich".

The level of risk can also refer to the level of risk inherent in the market. E.g. the more radical the innovation is, the higher the market risk the organization will experience. This can be further described as if the innovation is radical the market has not experienced it before which results in the organization being unaware of what the market reaction will be. This increases the risk the organization is taking (McDermott & O'Connor, 2002). Organizations' goals are to reduce the risk, but this often results in leaving the scope of radical innovations and moving towards incremental ones. McDermott and O'Connor (2002) have described that there are multiple factors to consider in order to decrease the market risk but still deliver

more radical innovations. Depending on the previous knowledge the organization possesses they will have different prerequisites for lowering the risk. A high level of previous knowledge about the market will lower the risk. This is because the organization will have an insight into what the market reaction has been to previous radical innovations. Therefore, including people that possess this kind of expertise will help the organization lower the risk. However, it is important to be aware that this adds the possibility of moving away from the radical innovation focus and results in innovation with more incremental characteristics. Another factor for decreasing the risk is outsourcing some parts of the development of radical innovations. This will result in sharing the risk with another organization and therefore decrease the risk for both organizations involved. McDermott and O'Connor (2002) have described that outsourcing can occur in different ways. It can be hiring external consultants working with specific tasks for the development of the innovation but also doing a strategic partnership together with another organization. The strategic partnership will start a project where the two organizations involved share knowledge and resources in order to develop the innovation together.

2.2 Innovation Ownership & Resource Allocation

One method of increasing highly innovative outputs, radical innovations, in an organization is to create a business model that fosters innovation. This requires a firm to establish who is responsible and in charge of the innovation efforts, and how resources should be allocated. Incorporating a business model of such sort will result in established organizations having the possibility to deliver new business within the current organization and without leaving the existing business (Wolcott & Lippitz, 2007; Tseng & Tseng, 2019). In turn, this will lead to organizations delivering more innovative outcomes in terms of market position, capabilities, products, services, brands, and multiple other factors of the business. Wolcott and Lippitz (2007) present four models for the development of innovation in business models: the opportunist model, the enabler model, the advocate model, and the producer model. However, there are two factors the organization must consider before deciding which model to incorporate. The first factor to consider is organizational ownership, which means deciding who within the organization has the responsibility to create the new business. The second factor influencing the decision is the resource authority, which the authors refer to as how the resources for the new business will be allocated. The resource authority should steer whether

innovation efforts should be funded through a pre-decided budget, such as divisional budgets, or happen through an ad-hoc process by which funding is allocated as needed. After this is decided the organization will automatically know which model to focus on. At some point, all companies start in The opportunist model in which there is a lack of structured organizational ownership and resources are allocated as needed. In the enabler model, the organization has divided specific resources that will be used for the development of new business and innovation, but everyone within the organization is responsible and has the possibility to work with the development of innovation and new business. This model is suitable for organizations that aim to encourage concept development and experimentation and can provide adequate support for monetary and non-monetary resources (Wolcott & Lippitz, 2007). Additionally, the advocate model represents an organization with a focused group or division that is committed to developing new businesses, but the resources and funds are not specifically allocated to new business development, instead the resources are allocated in an ad hoc way. This model is sufficient for firms that want to stimulate the growth of already established divisions, and a prerequisite for such is having extensive slack funds. Lastly, if the organization decides to focus on both allocating specific resources for the business development and committing a specific group to be responsible for the business development the organization is found to be part of the producer model. The producer model is beneficial for organizations that seek to exploit cross-cutting, breakthrough, and radical innovations (Wolcott & Lippitz, 2007).

Within the producer model funds are dedicated to specific purposes to support and influence business units and encourage latent entrepreneurs within the organizations. Furthermore, this model aims to protect emerging innovative projects from turf battles with existing business models, stimulate cross-unit collaboration, and encourage the development of radical innovation outside the organization's business models. As it is claimed that senior executives within incumbent organizations often do not know when they stumble across a new concept or do not know what to do with a new concept that does not fit the traditional business model. Additionally, such managers often find themselves in situations where incentives discourage them to take risks and absorb near-time losses that new concept development and radical innovation might require in the initial phases of bringing them to market. To solve this problem, the producer model promotes establishing a group that acts as a clearinghouse for new concepts, innovations, and value propositions across the organization. Wolcott and

Lippitz (2007) further suggest that this group could maintain a website, or implement a system, for people inside and outside the company to submit ideas. As new concepts, innovations or novel ideas appear promising the group develops a plan, evaluates the opportunity, and if approved by the board of directors, funding is provided and the progress is monitored. This way of working does not only help process the ideas but encourages trust and collaboration among the organization's stakeholders.

The allocated group should consist of both veterans and employees from different business units. The veterans within the organization should be well-connected within the business and possess the knowledge suitable for developing innovations. The group should also be supplemented with employees from different business units to promote diversity and cross-collaboration. If the organization lacks the expertise in building new businesses an external consultant can mitigate this. This will add an outside perspective as well as other knowledge and counteract the organization developing only incremental innovations (Wolcott & Lippitz, 2007; Tseng & Tseng, 2019). The fact of building teams compounded with both more senior and junior employees is also discussed by McDermott and O'Connor (2002), who describes it as a crucial part of lowering the risk while increasing the ability to deliver radical innovations. People who are up-and-coming managers and moving towards being ready to take that role can be counted on as organizational veterans (Wolcott & Lippitz, 2007).

Wolcott and Lippitz (2007) describe that a common way of applying the model is to start with the top management setting small but credible objectives. When the objectives are set, they should be communicated to the group allocated to work with the innovation objectives. Capital, staffing, and a direct line to top management are requirements of the producer model. Consequently, understaffed, part-time employees, and underfunded producer teams will hinder the achievement of the innovation objectives.

2.2.1 Unabsorbed Slack- & Flexible Employed Resources

To meet the requirements of the producer business model, mitigate the risk of having understaffed or underfunded teams, and increase the chances of producing radical innovation, flexible unabsorbed slack resources and employed resources are needed (Su et al., 2011). As high innovation efforts and activities tend to be resource-consuming, related strategy's performance is strongly influenced by a firm's ability to match its resources to the innovation outputs they want to achieve (Covin & Selvin, 1991; Tang, Tang, Marino & Zhang, 2008; Su et al., 2011). To realize a high innovation approach, research shows that a firm needs both flexible employed resources and unabsorbed slack resources (Su et al., 2011). Unabsorbed slack resources can be defined as the pool of resources a firm has in excess of the minimum necessary to produce a given level of output, and can e.g. be unused capital, redundant employees, or unnecessary capital expenditures (Nohria & Gulati, 1996). Flexible employed resources refer to resources used in the operation during a specific period of time, and can e.g. be the capital used, staff, knowledge, information, and other assets a firm possesses.

The flexibility in the definitions refers to whether the unabsorbed slack or the employed resources can be easily and quickly used for other purposes at a low cost. Highly flexible slack resources are referred to as unabsorbed resources and are those resources that can be deployed to adapt to changes in the organizational context of a firm or respond to uneven performance (Su et al., 2011; Nohira & Gulati, 1996). Highly flexible employed resources are the operational resources that are being used on a day-to-day basis but can be used for multiple purposes. This can e.g. be the ability to make changes in the product or service offered or the employee's ability to switch focus to different targets.

Su et al. (2011) argue that the relationship between strategy making and a firm's innovative performance increases when having flexible employed resources. Firms with highly flexible employed resources can satisfy their strategy making better and in a shorter time, and might even increase the likelihood to gain first-mover advantages and higher profits. In contrast, low flexible employed resources diminish a firm's ability to explore and develop new resources needed to support the strategy making. Thus, the authors strongly emphasize the importance of flexible employed resources to internally develop needed resources.

Furthermore, when a firm possesses unabsorbed slack resources it can more easily satisfy the requirements of the resources needed in strategy making since unabsorbed slack resources are available to be deployed where they are needed. As the purpose of strategy making is to push for innovation, such effort might require significant changes or entirely new resources. Having unabsorbed slack resources thus increases a firm's ability to acquire those resources externally. Unabsorbed slack resources also facilitate innovation by permitting a firm to more safely pursue experimentation of introducing new products or services and pursue projects that initially appear to not be justifiable (Nohira & Gulati, 1997). However, too many unabsorbed slack resources do not increase the likelihood of innovation, but too little is inimical to innovation. Thus, a certain amount of unabsorbed slack resources is needed, but they should be carefully distributed to not harm the performance of innovation efforts (Nohira & Gulati, 1997).

Su et al. (2011) conclude that both types of flexible resources are needed to accomplish the enhanced performance of a firm's innovation efforts. Thus, it is important to remark that it is not enough to only have one of the two. The strategy of a firm should therefore include how to accumulate both unabsorbed slack- and flexible employed resources. Doing this will increase the possibility of delivering a higher amount of radical innovations.

2.2.2 Innovation Portfolio Management

Despite recognizing the importance of unabsorbed slack- and flexible employed resources, concerning radical innovations, research shows that one reason radical innovation efforts fail is due to organizational factors undermining the firm's ability to manage their innovation portfolios. Brasil, Salermo, Eggers, and Gomes (2021) argue that the management system of a firm needs to consider the differences between its incremental and radical innovation goals and efforts. To simultaneously engage in both incremental and radical innovation a firm needs to handle the different innovation projects separately. With radical innovation projects being characterized as more uncertain and riskier, even if they have more potential to transform a business and result in greater payoff, a “one system” approach to innovation portfolio management errors the internal support of radical innovations.

Brasil et al. (2021) argue that firms should treat radical innovation projects comprehensively: with each having its tailored management in terms of separation, fit, and alignment. In other words, radical innovation projects could go into the portfolio management system as just a report, which is then reviewed with a specialist team and controlled by the board case-by-case. Furthermore, with radical innovations and a close relationship to strategic management, senior executives have a major role as decision-makers within portfolio management. As radical innovations tend to require large financial investments the senior executives engaged in the strategic management should engage in providing budgets for early-stage exploration, even though it is still primarily the board's task to make the final call on approving investments and resource allocation. Resources are asked for on-demand by senior executives and evaluated and decided by the board. Additionally, as radical innovation proceeds to develop more investments will be needed and senior executives need to be more present and supportive. Brasil et al. (2021) argue that it is not necessary to have a strict predefined process, but that radical innovation projects should early on define proceeding steps. Another necessity, in developing radical innovation, is the formation of diverse innovation committees consisting of high-level managers from different business units, vice presidents, and senior executives (Brasil et al., 2021; Tseng & Tseng, 2019). The diversity of the innovation committee and their expertise mitigates the risk to turn down feasible innovation projects. Moreover, a firm engaging in both incremental and radical innovation projects is to adopt a strong separation approach in their portfolio management system. This includes keeping the decision-making, processes, resource allocation, and other criteria separated from each other. Radical innovation management should also include multilevel integration which considers both project evaluation, individual's professional backgrounds, management experience, governance structures, agendas, etc. Once the firms establish separate processes between their incremental innovation projects and radical ones, they can successfully fuel radical innovation over time (Brasil et al., 2021; Tseng & Tseng, 2019).

2.5 Skills & Capabilities

An organization's capability to innovate is closely interlinked to the organization's intellectual capital, i.e. the sum of an organization's knowledge resources utilized for competitive advantages (Subramaniam & Youndt, 2005; Nahapiet & Ghoshal, 1998). While incremental and radical innovation might draw upon different types of knowledge, studies show that

intellectual capital is a critical component to consider in order to successfully engage in either type of innovation. While radical innovation capabilities require the ability to transform prevailing knowledge, incremental innovation requires reinforcement of prevailing knowledge.

Subramaniam and Youndt (2005) identify two critical aspects of intellectual capital in relation to radical innovation: human and social capital. Human capital refers to the knowledge, skills, and qualities utilized by individuals within the organization (Subramaniam & Youndt, 2005; Schultz, 1961), whereas social capital is the knowledge ingrained within, available through, and utilized by the interactions among individuals and within their networks of interdependencies (Subramaniam & Youndt, 2005; Nahapiet & Ghoshal, 1998). In their study, human capital is found to have a negative influence on radical innovation which indicates that human capital, i.e. individuals' knowledge and skills, in isolation is unproductive to producing radical innovation. In other words, if individual experts are hesitant to share their ideas with peers it will have a counterproductive effect on radical innovation (Subramaniam & Youndt, 2005). Additionally, the authors found strong empirical evidence that human and social capital in interaction positively influences an organization's radical innovation capability. This indicates the criticality to tie human and social capital together to stimulate radical innovation efforts.

With the social component of individuals as an intrinsic aspect of their human capital organizations need to make investments to stimulate both. However, the different characteristics of human and social capital call for different investments. While human capital can be improved by investing in hiring, training, and development, as well as the retainment of employees, social capital requires the development of norms that aid interactions, relationship-building, and collaboration among peers within the organizations (Subramaniam & Youndt, 2005). The evident interaction between human and social capital indicates that firms, in order to effectively leverage investments in human capital, need to also invest in social capital to pipeline individuals with expertise to network and share their knowledge with their peers. Neglecting either the human or the social capital part of radical innovation efforts will result in segregation, and harm the likelihood to enhance the organization's innovative capabilities.

3. Methodology

To perform this research, there have been methodological decisions taken. These decisions have affected the outcome of the research. The decisions were based on methodology theories and recommendations suitable for the desired research. In this chapter, there is a description and discussion of the chosen methodology.

3.1 Research Strategy

The purpose of this research was to understand different aspects of the studied phenomenon and include an understanding of the social and behavioral characteristics of the phenomenon in its natural setting. Therefore, a mixed-method approach was applied to increase the research comprehensive results. Bell, Bryman, and Harley (2019; Saunders, Lewis & Thornhill, 2007) argues that the choice of quantitative, qualitative, or mixed-method depends on how the authors want to collect and analyze the data gathered. The qualitative approach involves the collection of data through conversational communication and open-ended conversations, while the quantitative approach emphasizes the collection and analysis of numerical data. Qualitative research is also suitable when the author aims to capture the complexity of the innovation process in a practical setting (Aasen & Amundsen, 2013). In this thesis, the qualitative research was the main focus, but to understand what phenomenon to focus on in the qualitative research, a quantitative pre-study was conducted (Bell et al., 2019; Saunders et al., 2007). The pre-study showed indications of what phenomenon the authors should have their focus on.

A mix of inductive and deductive approaches was then applied to explain the relationship between theory and the research being done. As the authors have chosen to use a grounded theory it entailed moving back and forth between the collected data and the theory. Having this approach, the empirical data and theoretical framework were collected in parallel (Bell et al., 2019). While collecting data from Bertling the authors were consciously reviewing and reflecting on the theory throughout the data collection process. The authors employed this iterative abductive approach to finding the most appropriate explanation for the phenomenon studied based on existing empirical evidence. (Bell et al., 2019).

The qualitative research strategy allowed the authors to focus on contracting a deep contextual understanding of the phenomenon and track patterns in activities, events, and decisions that Bertling has made over time. While a quantitative research strategy would have given the authors the breadth of data, making it more generalizable, the aim was rather to extract rich and deep data which did provide the authors with a holistic perspective of the phenomenon studied. Moreover, this type of research design offered prospects for flexibility, which allowed the authors to adjust the course of the collection of data and the investigation of the phenomenon studied during the interview process (Bell et al., 2019). The qualitative research strategy is often criticized for lacking the possibility of generalizing based on the results. However, since the aim of this study was to make an in-depth and contextual analysis of Bertling specifically, generalization across organizations was not a necessary objective to consider in this research. Another disadvantage to consider regarding this approach was the risk of subjectivity bias in the interpretation of the collected data, which could potentially have influenced the reported results (Bell et al., 2019). But being aware of this risk, and having frequent discussions of the material, minimizes it.

The quantitative research being done in the pre-study helped the authors get a more general understanding of the phenomenon relevant to study at the specific organization. Conducting the quantitative part of the research was done by formulating a survey with pre-set questions and categories. This survey was sent out to all staff at Bertling. It was relevant to involve everyone in the organization in this pre-study to get a general picture of the work environment and phenomenon available to research. This approach was not as flexible as the qualitative one as the authors had to formulate a survey with pre-set categories. However, it provided the authors with comparable data to the social setting at Bertling. The response rate of the survey was 57.1 %, of 63 employees, which can be discussed if it was enough. However, due to the quantitative part only having its aim to give a perspective about relevant phenomena to study, having a higher response rate was not crucial. Instead, it was of higher importance to start the research of the phenomena (Bell et al., 2019; Saunders et al., 2007). It was also noticed that at this point a saturation was reached in the responses, which was another factor why the authors ended the survey and pre-study.

3.2 Research Design

A case study research design entails a detailed and intense analysis of a single case, such as a single organization (Bell et al., 2019; Saunders et al., 2007). This research had its aim to conduct a detailed and intense analysis of Bertling, which is a single organization. The organization organized a case to study and research further. Therefore, a suitable choice for this research paper was to apply a case study research design. During the research process of the case study, the data was collected through observations and interviews that later would result in a deeper understanding of the given case. This method is something that single case studies favor (Bell et al., 2019; Saunders et al., 2007). However, single case studies are not limited to only being applicable when using a qualitative method. It is also a suitable choice when having a mixed-method approach.

3.3 Sample Selection

During this research, there were two sample selections conducted: one for the quantitative part and one for the qualitative part. The research was conducted at Bertling, having the organization as the population, hence the samples were chosen within the organization. For the quantitative part of the study, the whole population was researched, which consisted of 63 individuals. According to Bell et al. (2019) and Saunders et al. (2007) including the whole population can be challenging if the population is too large, but as this was not the case it was advantageous to include everyone. This is in order to get a better understanding and avoid making assumptions and generalizations.

In regards to the qualitative part of the research, data was collected through interviews. The choice of interviewees was goal-oriented which means that the interviewees were chosen based on pre-decided criteria and by which individuals have relevant information for the empirical data (Bell et al., 2019; Saunders et al., 2007). The criteria were decided with a combination of what the theories from the theoretical framework proposed, and what the observations, being conducted in the pre-study, showed was relevant. By combining these aspects, the authors created a list of which employees were relevant to be a part of the sample. The criteria taken into consideration when sampling the interviewees were to involve

senior executives, employees from multiple departments, and those being a part of the leadership team.

3.4 Data Collection

The data was collected through primary and secondary data, as well as previous research for the theoretical framework.

3.4.1 Primary Data & Secondary Data

The data collected for the research consisted of both primary and secondary. The primary data was collected by the authors through interviews, observations, a survey, as well as a workshop. Collecting primary data for the quantitative part of the research consisted of an online survey with self-completing closed questions. The questions were formulated as closed according to the Likert scale to increase the comparability between respondents. (Bell et al., 2019; Saunders et al., 2007). The Likert scale did not allow the respondents to express their own thoughts, but instead, they needed to adapt them to the existing ones. Having open-ended questions in the survey, would have given the respondents a better chance to express their opinions, but would also be more time consuming, and would not have provided a higher value to the pre-study. Another reason why the Likert scale was to be preferred in this research was because of the increased comparability in the answers. All of the respondents had the same options of answers which eased the process of comparing the collected answers. As previously mentioned, it would be more time-consuming to have open-ended questions, and due to time constraints and this only being a pre-study, it was of greater importance to spend time on other parts of the data collection, than the quantitative one. Therefore, it was chosen to only implement the Likert scale in the survey. The Likert scale was labeled 1-5, where 1 was “Do not agree”, and 5 was “Fully agree”. When enough answers from the sample were collected the questionnaire was closed, and the answers were compiled (Bell et al., 2019; Saunders et al., 2007).

The qualitative part consisted of data collection made through observations, interviews, and a workshop with the senior executives. The interviews were both semi-structured and

unstructured depending on the purpose of it. The pre-study required discussions and less bounded interviews, and therefore unstructured interviews were used. The unstructured interviews have been conducted similar to informal conversations and are characterized as open-ended. This type of interview provides the respondent to answer even more freely and allows the authors to ask questions as they come along throughout a conversation. (Bell et al., 2019; Saunders et al., 2007). To defend the reliability of this approach, notes have been taken thoroughly during and in the aftermath of conversations.

The main research was conducted as semi-structured in order to give the authors a clear guide to follow, while still having the room for follow-up questions and a discussion (Bell et al., 2019; Saunders et al., 2007). This type of data collection gave first-hand information on how Bertling works today and through that, the authors were able to analyze what type of improvements could have been done. This research had its aim to understand different aspects of the studied phenomenon and include an understanding of and behavioral characteristics of the phenomenon in its natural setting, which resulted in interviews being a relevant method to use during the data collection. The interviews took place at Bertling's office in Gothenburg. The location was appropriate because the interviewees were located at the office when the interviewees were being held, but also because it was a familiar place for the interviewees, and they felt comfortable and safe there. This is something that Bell et al. (2019; Saunders et al., 2007) suggest taking it into consideration when doing interviews. The interviews followed an interview guide (Appendix 2 and 3), but due to the interviewees having different amounts of information to share the duration varied between 20 minutes and 1,5 hours. The variation of time for the interviews can be discussed, but the main reason for this was that the interviewees had different amounts of data they wanted to share. Therefore, this is not something that affected the research to a greater extent than different amounts of data being collected from different interviewees. Information about the interviews and interviewees is pictured in Table 1. The interview guide was used to provide a list of questions on the specific topic but also aimed to give the subjects leeway in how to answer the questions, was used for the semi-structured interviews. Two different interview guides were used, depending on what role the interviewees possessed. There was no major variation in the interviewee guide, the only difference was that interviewees with the role as; chairman of the board, managing director, and retiring board members, included questions about Bertling's financial power. The interviews were held in Swedish because it was the native

language of all the interviewees, and therefore the language they were most comfortable with. This increased the interviewees' chance to express themselves in the easiest way.

#	Role	Date	Duration
1	Chairman of the board	2022-03-23	1h 17min
2	Managing director	2022-03-17	20 min
3	Member of the leadership-team	2022-03-18	35 min
4	Managing director	2022-03-18	38 min
5	Member of the leadership-team	2022-03-23	28 min
6	Managing director	2022-03-18	1h 12 min
7	Member of the leadership-team	2022-03-18	55 min
8	Member of the leadership-team	2022-04-06	20 min
9	Retiring board member	2022-04-06	1h 30 min
10	Member of the leadership-team	2022-03-25	45 min

Table 1: Description of each interview

The second part of primary data collection was observations at the Bertling office in Gothenburg. When doing qualitative research and only collecting data through interviews there is a risk of the data collection being subjective and dependent on the respondent's thoughts. Adding observations to the interviews, it gave the authors the possibility to increase the objectivity of the primary data and reduce the subjectivity of the interviews (Bell et al., 2019; Saunders et al., 2007). Therefore, this is something that was added to the method in the phase of data collection. As a short period of time has been spent in Bertling's offices on a part-time basis, this approach was also advantageous to achieving a higher degree of cultural understanding of the organization (Bell et al., 2019; Saunders et al., 2007). The authors were based at Bertling's office a couple of days each week, where they took a role as complete

observers and have thus only engaged in objective observations. This has primarily been done through shadowing employees at meetings during the pre-study and observing the discussions between participants during the workshop as part of the main study. The interviews and observations served their purpose for the qualitative part of the research but were done both during the pre-study and the main study. The workshop was conducted together with the chairman of the board, the change manager, and two of the managing directors. Methods used during the workshop were observations of group discussions as well as unstructured interviews in the form of discussions with all the participants. The workshop was recorded and transcribed.

The primary data collected built up the chapter of empirical evidence being used in the research. The secondary data used served as a supplement for the primary data, and consisted of internal documents from Bertling, and was received from employees at Bertling.

3.4.2 Theoretical Framework

The theoretical framework had its focuses on previous research being done and theoretical findings by other researchers and authors. This part of the data collection explained theoretical parts of how Bertling should be able to reach the goal of having a strategic approach to produce more radical innovations. The theoretical framework was collected through Google Scholar which had access to academic reports and journals, as well as from books being written about the phenomena. In other words, it was searched for existing literature about the phenomena in order to develop the chapter with the theoretical framework. Keywords that were chosen for the search for secondary data were: *innovation management*, *innovative strategy*, *innovation risk*, *innovation skills*, and *innovation capabilities*. Some of them were searched for in combination with each other, while some were searched for alone. It started with searching for the keywords separately but later on, they were combined to get more precise results (Bell et al., 2019; Saunders et al., 2007). In order to ensure only trustworthy data was collected specific inclusion and exclusion criteria were employed. This can be pictured in table 2 below.

Inclusion Criteria	Exclusion Criteria
Peer-reviewed articles	Literature in other languages than English or Swedish
Articles about innovation management and strategic approaches	Literature with few citings
Literature with innovation management being the main subject	Industry-specific literature
Literature written in English or Swedish	Non-peer-reviewed literature
	Literature that was not accessible through Google Scholar

Table 2: Inclusion and exclusion criteria

3.5 Data Analysis

After the data was collected it was analyzed. This has been done by several methods like recordings, transcription, and coding. All semi-structured interviews and the workshop that have been conducted have also been recorded. Because of this, no notes have been taken during the actual interview. This has made it possible for the authors to be fully concentrated on the interview and the answers the interviewees provided. Taking notes can be a distraction for both the interviewer and interviewee, which can result in relevant information being missed out (Bell et al., 2019; Saunders et al., 2007). The recordings were listened to after the interview and analyzed based on the answers given. The authors kept the recordings during the process of the research, but as the research came to an end all recordings were deleted. This has been done in order to protect the integrity and personal information of the interviewees. The unstructured interviews (except the one during the workshop) have not been recorded, instead, they have only been analyzed based on the notes taken during each interview. The unstructured interviews served their main purpose during the pre-study.

After all the semi-interviews were performed, they were transcribed in detail. Doing this gave the authors the possibility to analyze the recordings while also transcribing them. This approach eased the process of the interviews being analyzed even more in detail when they were used in the empirical part of the research. The authors constantly moved between analyzing details of the transcription and the entirety of it. (Bell et al., 2019; Saunders et al., 2007)

The transcription of each interview was done as soon as possible after the interview. Doing this gave the authors the possibility to analyze the collected data faster, and in that way gather a perception of the data faster (Bell et al., 2019; Saunders et al., 2007). This also gave the authors the possibility to have more time to collect more data if it was needed to reach a successful result. The transcriptions were compared to each other in order to see similarities and differences between the answers of the different interviewees. This data was also compared with the observations. Regarding the unstructured interviews, it was even more important to summarize soon after the interviews were completed as they were not recorded, which means that the only information the authors had was what was remembered from the actual interview and the notes taken.

The data was not interpreted by the authors as they transcribed it. In other words, the recordings were only transcribed with the information given during the interviews. This was done to avoid researchers' subjectivity being included in the transcription. Instead, the transcription was purely focused on what the interviewee explained, to make sure that the authors could analyze it in a more objective way (Bell et al., 2019; Saunders et al., 2007). Additionally, the transcribed data was then coded and labeled. As the transcribing was performed regularly as the authors collected data, the same approach was used when coding and labeling. Coding was used to give us the opportunity to label and organize data, which in turn resulted in themes and relationships within the data (Bell et al., 2019; Saunders et al., 2007). This eased the analysis as the authors could more easily contrast and compare the data in a structured way. When doing the coding, relevant words, phrases, sentences, etc. in the transcripts were labeled. When the relevant sections of the transcripts were labeled, it resulted in the transcripts being coded (Bell et al., 2019; Saunders et al., 2007) (Appendix 4).

In order to know what was relevant, the authors carefully analyzed sections that were repeated in several interviews or several times within one interview, parts that were surprising for the authors, and sections that the interviewee said were important. When the coding was done, the most important codes were categorized by compiling them. The important codes were grouped together which created categories. When the themes were made, the connections between them were also described. The connections between the themes served a part as the main result of the research.

The empirical data was based on the coding of the interviews. In conclusion, it can be said that a grounded theory system of the codes was produced during the coding. The process of gathering codes and empirical data was conducted until saturation was reached (Bell et al., 2019; Saunders et al., 2007). This was recognized when the same data was being collected repeatedly. Coding was the key process of enabling the use of a grounded theory approach.

In order to be able to perform data analysis on the observations, field notes were taken. The field notes were based on what the authors had observed during each visit at Bertling's office, which means that they included the events and behaviors that occurred during the observations, as well as reflections of the authors occurred during the observation (Bell et al., 2019; Saunders et al., 2007).

When analyzing the data from the theoretical framework a narrative review of the literature was conducted. This means that the literature was reviewed in order to generate understanding rather than generating knowledge which a systematic review would have its focus on. (Bell et al., 2019; Saunders et al., 2007)

The quantitative data were analyzed by using the calculated mean. When the survey was done and closed, the mean of each question was calculated and served as a base when deciding what phenomenon to focus on. Because the quantitative data only served its purpose in the

pre-study and was used to get a picture of a relevant phenomenon, there was no need to do a more in-depth quantitative analysis. Therefore, the calculated mean was enough to reach the quantitative research purpose (Bell et al., 2019).

3.6 Conduction of Study

The study started with creating a purpose of research questions to follow. When creating the purpose and research question the conducted pre-study was used as a guideline. This created the path for the theoretical framework, that was chosen based on previously conducted research that was relevant based on the pre-study and research question. The theoretical framework served as a base when creating the interview guide. In the interview-guide the different questions were divided in different themes that were: *innovation risk*, *innovation ownership & resource allocation*, and *skills & capabilities*. Beforehand to all interviews, the interview guide was sent to all the respondents. It can be discussed whether or not this is recommended, but the authors' analysis of the interview questions was that it could have been hard to answer the questions without having some time to prepare. The preparation time did give the interviewees the possibility to prepare answers that maybe were not their real perception of the different situations, but what they thought the authors wanted to hear. Even if this was a risk, the authors saw it as a greater risk to not having enough prepared answers because it could lead to not receiving enough data for the empirical part of the research (Bell et al., 2019). In the interview guide the authors defined radical innovations, in order for the respondents to know what definition would be used in the research. This definition was also specified before each interview was conducted. The interviews then served as a base for the empirical chapter. Due to the iterative approach this research had, the theoretical framework was revised after the empirical chapter was written. Based on the theoretical framework and the empirical findings and analysis was made that helped draw conclusions, which in turn answered the research question. A summary of the conduction of the study can be pictured in table 3 below. Even if table 3 creates a good overview of the study it is important to remember that this has been an iterative study, where the steps are not linear as shown in the table.

Research process
1. Research idea
2. Conducting the pre-study
3. Developing the research question
4. Searching for literature
5. Creating the theoretical framework
6. Conducting the workshop
7. Formulating an interview guide and sending it to interviewees
8. Empirical data-collection
9. Coding empirical data
10. Compiling the empirical data
11. Analyzing the empirical data and comparing to previous literature
12. Reaching a conclusion

Table 3: Summary of the conduction of the study

3.7 Quality Criteria

To give the reader the opportunity to examine the quality of the research there are two criteria to follow, which are reliability and validity. It is discussed that these two criteria are more applicable to quantitative studies, and therefore the criteria can be expanded to four criteria in qualitative studies (Bell et al., 2019). The four criteria are credibility, transferability, dependability, and confirmability, but all of them have parallels with the first two criteria of quantitative studies. This research had a mixed-method approach, which means that it was a combination of a quantitative and qualitative one, but with a major part being a qualitative one. Because of this, the quality criteria used in this research were the four criteria for

qualitative research. These four criteria are taking reliability and validity into consideration, which means that even if the quality is based on four criteria, reliability and validity are not missed out. (Bell et al., 2019)

The criterion for credibility has its parallel with internal validity and focuses on how trustworthy the findings of the research are (Bell et al., 2019). To fulfill this criterion all the interviews were recorded to ensure not missing any information. Not missing any information being received, increased the credibility of the research. Knowing that the information gathered was interpreted in the right way, citations and specific parts were sent to interviewees which gave them the possibility to revise and review if the information was used in the way the interviewees wanted to. The criterion of transferability goes in parallel with the external validity and relates to the finding being applicable to other contexts (Bell et al., 2019). Fulfilling the criterion about transferability has been done by using other research to help answer the research question. This shows that other studies are applicable at this study, which shows indications about this research also being applicable to these and other studies. To strengthen this criterion the authors have chosen to give suggestions about further research, where this research is applicable. To show the dependability of the research the whole process has been described in detail. This will help the reader to understand to what extent this research can be used in other situations or environments. Confirmability goes in parallel with objectivity and investigates whether or not the author has allowed his or her value to intrude on the research (Bell et al., 2019). This is something that has been taken into consideration during each step of the research. Each decision that has been taken during the process of the research has been taken action to be as subjective as possible. There have been active actions taken to leave your own opinions and values out of the research. To minimize this risk and increase the confirmability all the data has been discussed and analyzed by both authors.

3.8 Ethical Considerations

For research to be allowed there are ethical considerations that were evaluated. The ethical considerations are created for the interviewees and people being involved in the research to feel safe, and make sure they will not be harmed when participating. The research criterion

has its purpose to ensure the research is being of value and of high quality, while the criterion for the protection of individuals has as purpose to ensuring the people involved in the research are not being physically or psychologically harmed, humiliated, or offended (Vetenskapsrådet, 2017). The criterion for the protection of individuals can further be divided into subcategories which are: the criterion for consent, the criterion for confidentiality, the criterion for right to use, and the criterion for information (Vetenskapsrådet, 2017). These subcategories will make sure the criterion for the protection of individuals is applied.

When asking the interviewees to participate in the research the authors also asked for their consent of participating. The consent was given based on how the authors described the research, its purpose, and the research question. Each respondent did get the opportunity to withdraw from the research at any time. As the interviewees gave their consent the authors knew they were participating in the research of their own will (Vetenskapsrådet, 2017). The criterion for confidentiality serves the purpose of not revealing any personal or harmful information about the interviewees (Vetenskapsrådet, 2017). To ensure this the authors made all the respondents anonymous, and no information about the interviewees and their answers were revealed. This ensured that no personal information about the interviewees was revealed. The information the interviewees shared was not discussed with other interviewees either, in order to avoid the risk of other interviewees receiving information about each other. The criterion for right to use serves the purpose to make sure the data collected for the research only is used for the research and not for any other purposes (Vetenskapsrådet, 2017). The data collected is not allowed to be used for commercial purposes or non-scientific purposes. To strengthen this, the collected data was only used and saved during the process of the research. When the research process reached its end all the data was deleted, and the only remaining part was the report of the research. The criterion for information is in place to make sure the participants of the research are aware of what their participation will contribute (Vetenskapsrådet, 2017). This was done by informing the interviewees, when asked for their participation, about what purpose they serve. To make sure they receive this message, the purpose of their participation was also described in person before each interview started. This also enabled the possibility for the interviewees to ask questions and give their opinions about it.

4. Empirical Data

In order to answer the research question there was a need to collect internal information about Bertling, their work of today, and based on this what actions are feasible to proceed with. This information reflects a picture of reality and resulted in empirical data for this research. The empirical data was collected through a workshop at Bertling, and interviews with employees of Bertling, and will be presented in this chapter.

4.1 Innovation & Risk

All interviewees expressed concern about the financial risk that Bertling would face when pursuing radical innovation efforts. Investing in such innovations will pose them with the financial risk of different degrees depending on whom you ask. While all interviewees shared a common view regarding the presence of financial risk, the degree of risk that Bertling is willing to take differed among respondents. Nine out of ten interviewees expressed that Bertling was willing to take the financial risk, however, interviewee 8 did not agree, stating that Bertling's low margins and the uncertainty in the market acts as barriers. Additionally, interviewee 4 stated that Bertling is willing to take the risk but needs to carefully evaluate each innovation effort before investing capital in producing it, as well as make sure it is aligned with the organizational aims of Bertling. On the other hand, interviewee 3, expressed that Bertling as a company has historically shown that they are risk-takers under the right circumstances by exemplifying with the arising of affiliate company Enviro. Furthermore, interviewee 9, described how Bertling has to take financial risks in order to deliver outputs and make their business relevant for their customers. If they do not, "it could be the end for Bertling" (Interviewee 9), as they would be at risk to underperform their competitors and become an outdated business. Interviewee 10 also stated similar opinions but remarked, similarly as interviewee 4, on the risk of misaligning innovation with Bertling current brand which might affect relationships with current stakeholders. Thus, these two interviewees expressed that Bertling should take the financial risk regardless. These answers show two extremes within the company, but during these interviews, there occurred answers that said that Bertling is willing to take risks as long as it will result in future profits and competitive advantages in the long run. The risk should be evaluated and if the evaluation shows that it will result in profit the organization will take the risk.

Another risk that was expressed among interviewees was the risk of wasting resources, both monetary and non-monetary ones such as time. Multiple interviewees expressed concern regarding wasting employee-related resources. If the employees engage in creating radical innovations, that will not be successful, it will be seen as a waste of several resources. Interviewee 6 did e.g. describe that in order to know the number of resources needed for a specific project it would be good to create a budget of estimated costs. In that way the organization will know if they can afford to invest in the specific radical innovation, and also plan how to effectively distribute existing resources or whether they need to employ more. The budget will both show the financial possibilities, amount of time needed, employees, etc. If Bertling makes budgets they will think about the resources and the risk before taking it. When analyzing the budget that is set up interviewees 6 and 1 argued that the organization will have to think about how much Bertling will have to work for it in relation to what the cost is expected to be, i.e. the costs have to be weighed against the potential benefits and supporting arguments for engaging and investing in radical innovations.

Additional risks mentioned among interviewees were the risk of engaging and implementing radical innovations that are not in line with Bertling's brand and supported by the market. If the market would not accept the innovation and this hurts the brand Bertling has, it can affect the organization's current businesses in a negative way, which can result in a financial loss for the company. It can also put the organization in a position that is hard to recover from.

All interviewees further stated that Bertling is operating in a highly competitive market. Bertling is a relatively small organization within the industry, but they have tried to maintain a strong position by having a niche through its personalized logistics offering and close customer contact. Even though this makes Bertling more expensive than their competitors, it is perceived as their competitive edge which their suppliers cannot challenge them on (Interviewee 10). Moreover, as reported by interviewee 3 and 10, the greatest competition comes from the larger shipping companies which according to interviewee 1 has a better ability to engage in innovation efforts and bring them to market due to their size of capital, resources, and networks. Additionally, these competitors are also more digitized which

further increases their ability to spend more time on innovation efforts (Interviewee 2). Even though these shipping companies are strong competitors, Bertling is forced to use them as suppliers as they do not own their own ships or containers. However, by putting themselves in the position of using the shipping companies as suppliers Bertling is always dependent on the suppliers' offerings, which is believed to have limited Bertling's opportunities for innovative work, and is expected to influence their abilities in the future as well (Interviewee 3). This means that even if Bertling produces a radical innovation, bringing it to market can be complicated and expensive if their suppliers cannot support their new business offering. Due to the highly competitive market, Bertling is forced to focus on cutting costs, slimming the organization, and chasing marginals as well as customers and new leads which also decreases the availability of resources for innovative work. The position of being dependent on their competitors and having restricted resources makes it difficult to know how to allocate resources for innovation efforts (Interviewee 1; Interviewee 6; Interviewee 9).

The majority of the interviewees answered that Bertling's position in the market, the competitive landscape, affects their ability to both allocate resources and capital to radical innovation efforts and could provide obstacles when bringing innovations, new concepts, or new businesses to the market. One interviewee did however respond in a more positive manner by expressing that the competitive landscape is not a factor that would influence nor has influenced Bertling's radical innovation abilities. It was argued that Bertling as an organization is responsible for producing innovations and engaging in innovative work regardless of competition from other freight forwarding companies or shipping companies. Bertling's niche position within the market rather provides them opportunities than obstacles in terms of being innovative. They could leverage their expertise within their niche to produce radical innovations to complement their current business (Interviewee 6). Therefore it cannot be said that the organization's competitors are a reason for the organization lacking it.

4.2 Ownership & Resource Allocation

During the workshop, interviewees 1 and 9 emphasized that Bertling lacks a structured strategic approach to working with radical innovation at Bertling. Historically, Bertling has neither had any clear innovation objectives nor had a plan of action to take in order to engage in innovation (Interviewee 1; Interviewee 9). If there are innovations produced, they tend to happen by accident, which results in no people being allocated to work with innovations and no budget allocated specifically for it. This is something that Bertling wants to change in order to reach the objective of having an increased level of innovations, with a focus on radical ones (Interviewee 1; Interviewee 9). The incremental innovations are something that Bertling strives to keep on the level they have today, with the whole organization being involved in its development of it. Regarding radical innovation, the majority of interviewees expressed their belief in allocating a specific team for it, as long as the issue of allocating time for it is solved. The consistency of this group was different among the interviewees, and many of them had a hard time pointing out who should be involved in it. Some aspect that this group should take into consideration is that this group would benefit from having people with different knowledge. All interviewees, who believed that Bertling should engage in radical innovation, promoted that the team should be a combination of both internal employees and external parties like consultants. This would create a combination of internal knowledge and expertise from an outside perspective. The emphasis on external resources was expressed as a critical need for Bertling as they have a deficit of skills and capabilities to engage in radical innovation. An external party could be used to steer and guide the team's innovation efforts, or be employed to support Bertling with the skills and knowledge they lack (Interviewee 1; Interviewee 6). Additionally, another interviewee suggested the hiring new employees possessing the missing skills and expertise, for e.g., through short-term contracts (Interviewee 5). Additionally, for the sake of the group dynamic and gaining benefits from diverse perspectives and knowledge, the team was suggested to involve internal employees from different operational departments and managerial levels. Interviewee 3 suggested that employees from the operational and sales department would be beneficial to include due to their market and customer knowledge, which would help Bertling in evaluating what ideas are feasible and not. By doing so the group working with radical innovations will get the best insight into the market. Today the organization has a "leadership team", that consists of middle-level managers from different departments and senior executives. This team has bi-weekly meetings discussing the objectives within Bertling's

business plan, how they should be reached, worked towards, and how the operational work should be managed accordingly to improve. The majority of the interviewees believe that a team similar to the leadership team working with radical innovations is something that would result in positive outcomes, but does not necessarily have to consist of the same employees according to interviewee 7. Instead, it should be people with different skills and knowledge, combined with external sources. This will enable people within the team to discuss ideas and combine different expertise that should result in radical innovations.

Another example brought up among interviewees, was to incorporate external resources into the organization without hiring consultants, and instead collaborate with suppliers, customers, universities, and start-ups. Either through strategic partnerships, joint ventures, or having coworking areas where partners and Bertling can share ideas. This would bring external knowledge into Bertling and give them the knowledge that does not exist within the organization today without having the need of hiring external consultants or guest lectures. According to interviewee 6, Bertling has the possibilities and opportunities to do something like this, and he believes that this is how Bertling would benefit the most from collaborating with external parties both from a financial and risk perspective. The opportunity of engaging in strategic partnerships was also discussed during the workshop. Due to the reason that Bertling is a small organization, compared to their competitors, it can be difficult to take big risks. Developing strategic partnerships is something that would decrease the risks by sharing it with the partner-company, while also gaining knowledge that is lacking. Building strategic partnerships is also a necessary part of developing Bertling and reaching the strategic goal of “making every delivery a meaningful connection” (The Bertling Group, n.d.).

Some of the interviewees did express a problem with allocating an innovation team because of two reasons. First, Bertling has a deficit of resources to allocate for radical innovation. Currently, employees at Bertling experience that they have full schedules, and difficulties finding time for other activities and projects other than their day-to-day tasks. Thus, assigning internal employees to engage in an innovation team is perceived to be difficult unless time is freed among those employees who should engage in radical innovation efforts. All interviewees perceived this to be a core prerequisite in order to deliver on Bertling’s innovation objective to produce radical innovations. However, working extra hours is no

solution to solve the problem of shortage of time (Interviewee 1; Interviewee 9). Additionally, allocating an innovation team could prove difficult due to interviewees expressing fear of employees lacking interest in engaging in radical innovation efforts and being part of yet another project group. This has been observed in the past when other projects have been initiated. Another factor brought up regarding limited capabilities to produce radical innovation was the lack of interest among the employees. Interviewee 3 said that a lot of their employees have chosen to work at Bertling because they like logistics and not to be part of driving Bertling's development and growth. Thus, many have no or little interest in engaging in innovation projects within the organization. This is something that interviewee 5 also agreed on, elaborating that it limits Bertling's resources to such an extent that it is almost impossible to generate radical innovations, or at least that the quality of those ideas generated would be low.

There are also other resources that the interviewees thought should be allocated during the process of developing the specific innovation. Some resources can be budgeted from the beginning, and if signs show that this innovation will be successful more resources can be allocated (Interviewee 1). Several of the interviewees agreed, stating that it would help understand whether investments in innovation are affordable or not. Interviewee 8 did not agree on budgeting for innovations, instead, the interviewee stated that the organization already has small margins and therefore innovations should not be prioritized. Instead, the innovations should be financed by a surplus of the rest of the organization. However, by allocating a budget, the responsible innovation team will have a guideline in terms of which innovations are feasible and what investments are reasonable to make (Interviewee 6).

“Budgets are good for us, in that way we know if we can afford the innovation or not” (Interviewee 6).

However, Interviewee 9 discussed that the budget itself does not have to be immense, but flexible to accommodate the development of innovation projects. This approach has been applied in the past, during the initial development phases of affiliate company Enviro, Bertling provided the Enviro team with a small budget. As the project grew, and it showed

signs of potentially being profitable, the budget was expanded. According to the interviewees, Bertling could successfully stimulate innovative work by adapting the budget when necessary. Additionally, if no budget were to be present at all, expenses could have gotten out of control. Even if multiple of the interviewees agreed on allocating a financial budget for radical innovation, interviewee 3 was afraid that this will be the least prioritized budget, which can affect the amount of it. The interviewee described that if the organization is financially affected this will be the budget will be reduced. Reducing the budget is however something that interviewees 1 and 9 wanted to avoid by not making a large budget, but instead expanding it when needed.

4.2.1 Unabsorbed Slack- & Flexible Employed Resources

In terms of financial resources, half of the interviewees expressed that Bertling has unabsorbed slack resources to spend on solving the aforementioned issues in the allocation of resources. Others expressed that Bertling has limited unabsorbed slack resources due to the amount of capital available to be spent. The latter mentioned an influencing factor to be the size of Bertling as an organization, as it limits the potential to spend capital on activities that are uncertain in terms of being value-adding. However, Interviewee 1, chairman of the board, ensured that Bertling had slack funds available which could be allocated to retrieve resources and skills needed for radical innovations. This was also confirmed by the managing directors of Bertling, Interviewee 2 explicitly said:

“There are funds and slack funds that can be allocated for education and development internally or to buy resources/hire consultants with the right competencies”.

However, among these interviewees, different amounts of capital available for innovation efforts were expressed. For example, interviewee 1 described the relevant amount invested in radical innovation to be around 100 000 SEK per year, while interviewee 9, a retiring board member, thought Bertling could spend around 1-2 million SEK per year of its slack funds. Additionally, the differing opinions of Bertling’s position in terms of unabsorbed slack funds

are also related to the perception that the German parent company of Bertling influences how capital can be spent. Thus, there are conflicting opinions on Bertling's financial capabilities, and to what extent the unabsorbed slack resources can be spent on radical innovation efforts.

In terms of the unabsorbed slack human resources, the majority of interviewees concluded that there are no redundant employees or slack time. Multiple interviewees conveyed that they work 40 hours per week and have little time to engage in innovation efforts or other projects. However, some expressed that they have noticed that other employees are not working 40 hours per week, and thus would have time to allocate time to either cover-up for those allocating time to radical innovation efforts, or could potentially be part of an innovation team.

Flexibility among employed resources is something that exists and according to the interviewees, Bertling is good at being flexible in terms of their current operational resources. However, even if the employees are flexible, interviewees expressed that it takes some time for the employees to adjust to the new work, but it is very individual depending on the associated department. For example, expectations and requirements on the employee's performance sometimes influence their ability to be flexible when required. Also, some employees have worked within a certain department or a customer portfolio for a long time which makes their expertise closely tied to their role which also is believed to influence their flexibility to a certain extent. This is the reason why it takes some time before they have adjusted to the new expectations and requirements. Interviewee 5 articulated:

“It depends on how fast the shift needs to be made. If it is one day, it can be quite hard. If it is a week there are no problems.”

Overall, the interviewees had a positive outlook on the flexibility of their employed resources but also on the acceptance among employees to be flexible:

“There is a high acceptance regarding flexibility in the operational departments, which makes our resources flexible” (Interviewee 6).

While agreeing with Bertling about having flexible employed resources, interviewees 2 and 9 stated that there is always room for improvement by claiming that increased flexibility would positively influence the organization's chances of generating radical innovations.

4.2.2 Innovation Portfolio Management

The responses from the majority of the interviewees shows that they share a common view on separating the development of radical and incremental innovations. However, the interviewees had different ideas on how this should be managed within Bertling. Interviewee 2 mentioned how this could be done in different ways, either by hiring one consultant to work with radical innovations and letting all other employees work with incremental innovations, or by having two internal teams where one works with incremental innovations and the other one with radical ones. Interviewee 3 agreed on having two teams, one working with radical ones and one with incremental ones, but she expressed how it can be hard to find employees that are willing to work with this. This is something that interviewee 5 also agreed on by describing how Bertling has the capacity to form these two teams, but the organization does not have enough employees that are interested in working with innovations. A minority of the interviewees did not agree on Bertling's capacity of having two separated teams. For example, one rather expressed how the organization lacks the capacity to even form one group for incremental innovations and therefore certainly lacks the capacity of creating another one for radical innovations (Interviewee 6). However, it was believed that the approach of separation was a good idea. Furthermore, interviewee 4 acknowledged the same and expressed how this is something that the interviewee's co-workers are doing. Interviewee 4 focuses on incremental innovation while his co-worker is the one focusing on radical ones.

As aforementioned, employees including the senior executives experience a scarce time to allocate tasks to innovative work (Interviewee 4). Currently, the operational tasks absorb all available time among the senior executives, which leaves limited room for additional tasks.

Therefore, some of the interviewees expressed concern about their being required to participate in and manage such a team. However, interviewee 5 did express the cruciality regarding the involvement of senior executives who need to be supportive and engaged in the radical innovation efforts Bertling chose to enroll. Moreover, interviewees mentioned that the senior executives tend to dedicate themselves to the projects they are being a part of.

4.3 Skills & Capabilities

The interviewees agreed that employees at Bertling possess deep market and customer knowledge about the services and product portfolio Bertling currently offers. However, some of the interviewees expressed that only a handful of employees have the knowledge, skills, capabilities, and interest required to produce radical innovations. Interviewee 1 explained that only a few possess the right skills and knowledge to engage in radical innovation and other development activities. Additionally, few people are also believed to have interest in shaping the future of Bertling as a business, and be part of influencing Bertling's journey to grow. The knowledge about market, trends, products, and the industry differs a lot among the employees, which complicates Bertling's opportunity of allocating a team that will work with radical innovations (Interviewee 1). Therefore, several interviewees described how they wished for increasing such knowledge and skills in order to increase the overall ability to produce radical innovations. One example of how Bertling planned to increase the knowledge was to enable more opportunities to provide workshops and lectures about innovation and innovative work (Interviewee 7). Similarly, interviewee 1 called for increasing the knowledge about tools and methods to perform external analysis which could be used to incentivize employees to strive to increase their analytical skills and innovativeness.

Additionally, interviewee 9 described how Bertling's employees lack networks and communication both within the organization and externally. This was also expressed during the workshop where the participants expressed the need for the company to increase their network. In order for the organization to be able to work towards developing more radical innovations the organization was in need of increasing their knowledge which would be done through increased network-connections(Interviewee 1). Similarly, others expressed that the business culture needs to change in order to better encourage sharing of thoughts and ideas

among departments (Interviewee 1; Interviewee 7). Altogether, this was seen to be of great importance in order to increase the knowledge and idea generation. The lack of networking isolates the employees at Bertling which decreases their possibilities of finding new business opportunities. To encourage communication and cross-collaboration among departments and senior executives, interviewee 9 proposed that employees should be encouraged to share ideas and thoughts they stumble across by writing them down on post-it notes, and putting them on a board visible to everyone in the open-spaced office. Moreover, these ideas and thoughts should be regularly and randomly reviewed and evaluated by senior executives to mitigate the risk of missing out on opportunities, but also to create a culture where employees feel motivated by being recognized for their efforts (Interviewee 9).

A shared opinion among interviewees was that Bertling needed to hire external consultants or lecturers in order to increase its knowledge and gain an outside perspective. Especially, as internal employees need to be trained to develop skills necessary to produce new ideas and engage in radical innovation efforts. Hiring external consultants was also expressed to increase the capabilities of Bertling, which would ease the possibilities of allocating an aforementioned innovation team. Moreover, some of the interviewees saw collaborations with suppliers and customers as a possibility to share and increase knowledge, while other interviewees saw collaborations with start-ups as a possibility to gain access to the skills and capabilities needed. Doing collaborations with external actors as the previously mentioned ones would give external skills and capabilities, while not requiring the same financial resources as hiring a consultant would.

4.4 Key Findings of Empirical Data

Table 4 shows a summary of the key findings of the empirical data for each theme investigated during the research. Within the table, it can be seen what the main findings for each of the themes are.

Innovation & Risk	Ownership & Resource Allocation	Unabsorbed Slack- and Flexible Employed Resources	Innovation Portfolio Management	Skills & Capabilities
Will face a high financial and market risk	Allocate a specific innovation group	Possess unabsorbed slack resource	Separation between radical and incremental innovations	Increase employees knowledge, skills and expertise
Highly competitive market	Innovation group should be diversified	Flexible employed resources exist	Senior executives lack time for innovation work	Increase employees abilities to network, share and communicate their knowledge, skills and expertise
Activities to minimize risk	Collaboration with external parties	However, should increase both unabsorbed slack- and flexible employed resources		
	Flexible financial budget for innovations			

Table 4: Summary of the empirical data for each theme

5. Analysis

In the process of answering the research question it was important to get a picture of Bertling's reality, but also an understanding of how existing literature describes the problem. With the help of these components, the problem will be analyzed and in turn, the research question answered. In this chapter the analysis is presented, with parts of interpretations from the authors.

5.1 Innovation & Risk

Bertling's innovation objective to engage in radical innovation, or high innovation as described by Sonfield and Lussier (1997), requires the organization to establish the degree of risk they are willing to engage in order to work towards their innovation goal. According to Sonfield and Lussier (1997), high innovation objectives of such sort can either involve low or high risk, where they describe the degree of risk as being dependent on the probability of financial loss and the willingness of a firm to risk such losses. Additionally, the competitive landscape is seen as an influencing factor on the financial risk. While all interviewees expressed concern about the financial risks involved in radical innovation efforts, their views on the degree of financial risk deviated some. Nine out of ten agreed that Bertling is willing to take the financial risks but expressed that multiple criteria should be used to evaluate each innovation effort. For e.g. some expressed that the degree of risk should be based on the innovation efforts believed to bring benefits to the business in the future, i.e. future profits and competitive advantage. Two expressed that the financial risk should be taken regardless as they view radical innovation efforts as crucial to sustaining success in the future. Additionally, costs were articulated as an important criterion. One interviewee was more hesitant, expressing concern about Bertling's current state of business and low margins being a constant pressure and thus argued that Bertling cannot take the financial risks inherent in radical innovation efforts.

In terms of competition, Sonfield and Lussier (1997) state that a less competitive landscape can make radical innovation efforts less risky financially, especially if the firm can make larger financial commitments. As expressed during the workshop, Bertling is relatively small

in comparison to its competitors which is partially a reason why they feel limited to taking big risks, both financially and market-related. All interviewees at Bertling stated that the firm operates and is challenged by a highly competitive market, which most perceive as a barrier to pursuing innovation efforts and successfully bringing them to market. In terms of innovation, large competitors such as shipping companies, not only forces Bertling to “chase” customers more than their competitors but also affect their ability to spend time on high innovation efforts. These competitors have, according to several interviewees, larger financial muscles to invest in innovation whether it will be successfully marketed or not (Interviewee 1; Interviewee 2; Interviewee 3; Interviewee 5). Additionally, competitors operate by offering to book logistic services digitally, whereas Bertling does not, which results in Bertling employees and the firm performance being dependent on the constant human interaction between Bertling employees and their customers. Thus, the highly competitive market and human-centric way Bertling does business pose them additional risk if they were to engage in radical innovation efforts. Moreover, Bertling is operating in what interviewee 3 refers to as a conservative industry and works closely with suppliers and buyers in less developed countries, which can impose risks related to not knowing whether the market is ready to acclimatize to radical innovations Bertling choose to pursue (McDermott & O’Connor, 2002). Interviewee 3 also expressed that Bertling “will never be able to perform better than their suppliers”, i.e. they might experience a challenge if they offer the market something that the shipping companies cannot match. Thus, Bertling must consider the market risk both from their buyers' and suppliers' perspectives in order to successfully capitalize on future radical innovations.

As Bertling strives to contemplate radical innovations but is confronted by high risk in multiple areas, they are found to be part of the I-R cell in Sonfield and Lussiers (1997) matrix (figure 1). The financial risk relative to Bertling size and the great competition in the FTL industry indicates that Bertling should employ a strategic approach to reduce the risk they are currently facing in order to increase the innovation efforts' success. Because of the limited possibility to make large investments within Bertling and the need to mitigate market risk, both Sonfield and Lussier (1997), as well as McDermott and O’Connor (2002), suggest joint ventures, and strategic partnerships, or outsourcing part of the development of radical innovations. A joint venture or a strategic partnership would result in shared investments, operating costs, and risks between Bertling and another organization. In regard to this,

McDermott and O'Connor (2002) denote that market risk can be mitigated by increasing the knowledge about the market, which could be achieved by entering partnerships or joint ventures with organizations that increase Bertling's market knowledge. Additionally, as concern has been expressed about radical innovations potentially harming the Bertling brand, future joint ventures or strategic partnerships with other organizations should be carefully considered to avoid hurting the brand. Outsourcing part of the development of radical innovations at Bertling could reduce operating costs, and thus financial risks without compromising high innovation efforts such as radical innovations. For e.g., by hiring external consultants instead of allocating a large number of resources and financial capital to developing radical innovations internally at Bertling. Eventually, as Bertling further reduced financial and market risk, they could achieve another position within the matrix, the I-r cell.

5.2 Ownership & Resource allocation

The data collected from the pre-study and the workshop shows that Bertling currently has not devoted any individuals to engage in innovation efforts. Thus, they have not allocated any workforce, time or financial resources to engage in innovation. Instead, historic data shows that innovation, independent of being radical or not, has rather happened by coincidence. This current approach is much similar to the opportunist model as described by Wolcott and Lippitz (2007). Bertling's tendency to produce innovations randomly rather than strategically in a structured way, makes them allocate resources in an ad-hoc way. As stated during the workshop and interviewees this approach is not sustainable and thus needs to change to support a more innovative climate and increase radical innovative outputs at Bertling. Revising the current approach is critical for a firm that has high innovation objectives, which radical innovation is, according to Wolcott and Lippitz (2007). Especially if a firm aims to deliver new business within the current organization. Producing new businesses within the current organization will result in producing innovations (Wolcott and Lippitz, 2007). If Bertling can successfully move away from the opportunist model by planning for innovations to a greater extent, they will do what Wolcott and Lippitz (2007) say is needed to be done in order to increase their ability to produce more radical innovations.

During the interviews a number of interviewees described how it would be good for Bertling to allocate a specific innovation team focusing on radical innovations. By doing so it would be in line with Wolcotts and Lippitz's (2007) description of either the advocate model or the producer model, where a group of full-time workers should allocate all or part of their work time to innovative work. This would mean that Bertling needs to compose this desired team with relevant individuals for the desired innovation objective of producing radical innovations. The data from the interviews does however indicate that Bertling will experience resistance among employees if they choose to initiate radical innovation efforts before making sure employees have enough time to effectively and successfully engage in such a project team. The interviews showed results of Bertling's employees already having full schedules and difficulties in allocating time to other projects besides the work tasks. Since there are currently no employees available Bertling needs to figure out how to relieve desired innovation team members from their current tasks. This is something that Bertling's senior executives have already thought of by expressing that there is no option to force employees to work extra hours in order to manage both their current tasks and the innovation project. Senior executives at Bertling are aware and willing to solve this in order to give their employees good prerequisites to successfully perform good work in the allocated innovation group. Wolcott and Lippitz (2007) also argue for what the composition of this group should look like, and recommend a mix of both senior and junior employees, including senior executives. This is also something that Bertling already has taken into consideration. The majority of the interviewees explained how an innovation team would be a good idea, but it should be carefully evaluated who should be a part of the team in order to gain a diverse set of knowledge, skills, and expertise. The interviewees had different takes on the composition of the team, but the common ground was to diversify the knowledge by including employees from different operational departments. As Wolcott and Lippitz (2007) argue this would foster cross-collaboration among business units. Due to the lack of time among Bertling employees, promoted supplementing consultants to support the radical innovation team. Others wanted to focus on creating as diverse teams as possible with the internal employees, and only supplement with consultants for the knowledge that is lacking within the organization. It was also suggested to involve in strategic partnerships or joint ventures, for e.g. with firms or universities. A third solution to build a diverse innovation team was to use the internal knowledge and add external knowledge by hiring new employees (perhaps on short-term contracts) that are experts within the field of building new businesses or possess creativeness. Connecting Bertling's view on the innovation team with Wolcott and Lippitz's

(2007) suggestions, Bertling could use their “internal knowledge” as the veterans in the group and the “external knowledge” as more junior employees. It was hard for the interviewees to point out who is relevant to be a part of this group because the majority believed that there are only a handful of employees within the organization that possesses the required knowledge. Due to the reason that Bertling perceived that such a small number of the employees possesses the necessary knowledge nor has the time to set aside for innovation efforts, it is indicated that the organizational ownership needs to be revised for Bertling to be able to engage in producing radical innovation and new business opportunities. Based on the empirical research it can be said that Bertling possesses needed senior knowledge but lacks the junior one which can be added by consultants or hiring junior employees within the area.

Another aspect that Wolcott and Lippitz (2007) emphasize is how the organization wants to allocate its resources. In the past Bertling has not allocated any specific resources or created budgets for the work with innovation. As aforementioned it has historically rather happened in an ad-hoc way. The other method to use as presented by Wolcott and Lippitz (2007), is to allocate specific resources and budgets to use for the development of radical innovations. The opinion about this is something that differs within the organization. Some interviewees have expressed how there are no possibilities of making budgets for innovations, instead, the financing should continue in an ad-hoc way. The interviewees that expressed this opinion, meant that this is the most viable approach as Bertling has small margins and should not prioritize allocating capital to efforts that are uncertain to be value-adding. Consequently, innovations were suggested to be financed by the surplus of the rest of the organization. Other interviewees, especially senior executives with decision-making power, described budgets as a more beneficial and secure approach to allocating resources. Additionally, the budgets should have flexibility in order to accommodate the development of innovations. Thus, additional capital can be allocated when needed but pointed out that it is crucial to evaluate the investments beforehand. Such an approach would be beneficial when capital is not unlimited, as indicated by the interviewees' responses in relation to the pressure of Bertling's marginals.

The senior executives are expected to have greater knowledge and insight into the available resources, and also possess decision-making power in the matter. Thus, their responses are

believed to carry more weight. With them sharing a common view on incorporating a flexible budget for radical innovation efforts, this indicates that Bertling should strive to employ an approach similar to the producer model presented by Wolcott and Lippitz (2007). This would mean that Bertling would have to depart from their traditional approach of not allocating specific resources in advance. Instead, they would plan and budget specific resources for new business development and commit a specific team responsible for radical innovation efforts. For the sake of flexibility, allocating a smaller budget can help Bertling ensure they can afford to engage in radical innovation efforts as well as produce the innovation. Furthermore, the budget can provide guidelines for the innovation team, help manage the expenses and mitigate the financial risks. Additionally, specific resource allocation and organizational ownership are promoted as a suitable approach by Wolcott and Lippitz (2007) for organizations that have the innovation objective to produce a breakthrough and radical innovations, which is in line with Bertling's goal.

5.2.1 Unabsorbed Slack- & Flexible Employed Resources

The perception of unabsorbed slack resources available at Bertling differs among the different interviewees. One thing half of the interviewees agreed on was that there are available unabsorbed slack resources in terms of financial resources, however, the amount of them is something that varies among the interviewees. Hence, it is difficult to properly determine the degree of slack funds that Bertling is willing to spare for radical innovation efforts. While all senior executives were in consensus that there are unabsorbed slack funds available, they presented different examples of amounts they were willing to spend on resources for radical innovation. Since employing a strategy in the notion of high innovation efforts, i.e. radical innovation, tends to be highly resource-consuming, slack funds are key to producing such innovations (Su et al., 2011). Thus, the amount of slack funds available at Bertling is key to being able to retrieve resources they currently have a deficit on or lack entirely, such as time and knowledge of creating new business and radical innovation. For example, the number of slack funds available for distribution varied between 100 000 SEK per year to 1-2 million a year, which is a substantial difference. While the latter amount was given by a retiring board member and the first by the chairman of the board, the authors believe the 100 000 SEK has more substance to influence the future approach Bertling chooses to take. Given Bertling's limited ability to produce radical innovations under the

current business model, and the aforementioned interest in acquiring new talent, consultants and lecturers 100 000 SEK can be considered relatively low. Even if this group agrees on unabsorbed slack resources being available, questions arise about whether 100 000 SEK is a realistic amount to facilitate innovation. Nohira and Gulati (1997) argue that unabsorbed resources facilitate innovation by permitting a firm to more safely pursue experimentation of introducing new products or services, but argue that too many unabsorbed slack resources do not necessarily increase the likelihood of innovation. Therefore, even if the amount of unabsorbed slack resources is difficult to categorize as enough or not, the fact of its existence increases Bertling's opportunities to evaluate and develop ideas generated through innovation efforts, with less risk of making a large financial loss. However, the possession of unabsorbed slack resources will not result in innovations per se. Bertling needs to make sure they use these slack funds on the right type of resources, in order to overcome the challenges they currently face within resource allocation.

Regarding the unabsorbed slack human resources, the majority of the interviewees described that there are little or no redundant employees or slack time. This further reinforces the aforementioned notion of the lack of resources. The few respondents that expressed that there might be a few underworked employees, recalled that it is only a matter of a few hours. The minimal unabsorbed slack human resources could however partly be used to cover for those employees engaging in the innovation team or be spent on innovation efforts by those having unabsorbed slack time. This is something that should be analyzed and evaluated when creating the strategic approach for radical innovations, especially as the data collected indicate relatively low flexibility for unabsorbed slack resources both in terms of slack funds and human resources. The latter, as a result of barely existing. The low flexibility thus indicates that Bertling has few unabsorbed slack resources that could be deployed to adapt to changes in the organizational context to respond to potentially uneven performance (Su et al., 2011; Nohira & Gulati, 1996).

In regards to the flexibility of employed resources, the interviewees shared a more common view and described that Bertling operational resources, primarily in reference to human resources, can be used for multiple purposes if a situation requires it. While the shift might take more than a day, and the flexibility might vary between individual employees and

departments, the shared perception that Bertling possesses highly flexible employed resources poses benefits such as increased innovative performance and likelihood of satisfying their strategic approach in terms of innovation (Su et al., 2011). Moreover, Su et al. (2009) state that high flexibility within employed resources means that the process of shifting operations to new concepts and production of innovation becomes more effortless which increases the possibility of gaining competitive advantages, e.g. first-mover advantage. Interviewee 2 and 9 stated that flexibility among employees can improve but as employed resources are already high, improvement focus should be on improving the flexibility of unabsorbed slack resources as Bertling need higher flexibility there in order to increase the likelihood of innovation by making sure they can deploy resources when innovation efforts need a push (Su et al., 2011). It will also improve Bertling's ability to facilitate experimentation, and continue to invest in innovative projects that initially are not justifiable. However, it is important to note that too many unabsorbed slack resources could hurt the performance of innovation efforts, while too little is inimical to innovation, therefore it is important to find the right balance. As Bertling seems to be positioned in the latter situation, they should strive to increase their unabsorbed slack resources but distribute them carefully. Even though the majority of data collected indicates the opposite need than expressed by interviewees 2 and 9 in terms of improving flexibility, too much flexibility of employed resources is not mentioned as an obstacle within the literature. Thus, if Bertling has the ability to improve unabsorbed slack- and flexible employed resources simultaneously, they should. However, if that is not the case, they should focus on improving the flexibility of unabsorbed resources.

5.2.2 Innovation Portfolio Management

When working with innovations Brasil et al. (2021) express the importance of separating the development of incremental and radical innovations. This can be done in different ways, but one method the authors suggest is to create two isolated teams that are not connected to each other. One team works with radical innovations and one with incremental ones. This is something that some of the interviewees expressed can be a problem due to the lack of unabsorbed slack human resources. Interviewee 6 said Bertling lacks the capacity to even form one team for incremental innovations, which results in no capacity to allocate more employees and resources for radical ones. As Brasil et al. (2021) emphasize, this can threaten

the quality of the produced innovations. In the worst case, the innovations will fail if these two teams are mixed with each other. Even though it might be difficult for Bertling in its current state to have two isolated teams, the majority of the interviewees were positive about the idea and did express they believed it would lead to a positive outcome. The interviewees did also have different suggestions on how this could be managed, with one suggestion being including consultants to work with radical innovations and employees at Bertling working with incremental ones. Another suggestion was to try to create two teams within Bertling, one focusing on incremental innovations and one on the radical. This indicates that even if Bertling struggles to find the capacity to implement the separated structure that Brasil et al. (2021) suggest, they have ideas for how it could be implemented and achieved. Interviewee 4 exemplified a scenario, between him and his co-worker, where this structure is implemented. In this case, it has resulted in positive outcomes. This is also a sign of Bertling being willing to work towards having such a structure within the organization, even if it can be a struggle to reach it.

Brasil et al. (2021) also suggest that the composition of this team should include senior executives, as they have a crucial role in the success of the innovation team. The senior executives need to be visible and supportive during the process of developing the innovations, while also making final decisions. Additionally, they are needed for the sake of diversity. Hence, senior executive involvement in radical innovation teams is crucial to composing a diverse innovation committee that is responsible for mitigating the risk of throwing away feasible innovation projects (Brasil et al., 2021). This is something that the senior executives expressed as a problem due to their lack of time. In order to be able to be a part of such a project, they need to allocate time, which is something they already have in shortage. Even if this can create a problem for building a structure that Brasil et al. (2021) suggest, there are signs that senior executives successfully have accomplished allocating time for projects they are being a part of. This indicates that, if Bertling would create an innovative structure of having two innovation teams and given that the problem of time shortage among senior executives is solved, they will be able and are willing to be part of such teams.

5.3 Skills & Capabilities

As Subramaniam and Youndt (2005) describe, radical innovation requires an organization to utilize its knowledge resources effectively. More specifically, the authors emphasize the need for human and social capital, in order to successfully transform prevailing knowledge for the production of radical innovations. Subramaniam and Youndt (2005; Schultz, 1961) have also discussed how isolated human capital has a negative impact on radical innovations while sharing knowledge, which will increase the social capital, will have a positive impact on the production of radical innovations. In terms of Bertling's human capital the data collected indicates that few employees are believed to possess the knowledge, skills, and capabilities necessary to produce radical innovation. For example, interviewee 5 argued how some of the employees had a lot of knowledge and insight about markets and trends, while some employees lacked almost all knowledge about them. This shows how Bertling does hold possession of some human capital but further investigation indicates that it may not be enough. Thus, Bertling has a deficit of human capital. Additionally, Subramaniam and Youndt (2005) argue that it is critical that those who possess the human capital to be innovative, are supported by the social capital of the employees. If not, the human capital will be isolated to the employee, which means that the knowledge will not be shared and spread across the organization. Only the individuals possessing the knowledge will be able to use the knowledge. Thus, social capital on the other hand will create an environment where the knowledge possessed by individuals will be shared, discussed, and brought to attention. By having employees share and discuss the knowledge they possess, the social capital will be increased which Subramaniam and Youndt (2005; Nahapiet & Ghoshal, 1998) also explained had a positive impact on the organization's overall ability to be innovative. In terms of social capital possessed by Bertling's employees, the data indicates that interviewees are concerned about their networking and communication abilities internally and externally. The prior is strongly linked to social capital and thus its ability to capture the human capital of its employees. With the data indicating a need for improvement in terms of social capital, Bertling should also strive to improve communication, cross-collaboration, and incentives for employees to share their ideas and knowledge. The different capitals are increased in different ways. Subramaniam and Youndt (2005), report that human capital can be increased by training and development, while social capital can be increased by developing the norms of interaction, relationship-building, and collaboration within the organization.

To improve the human capital, one solution can be to internally focus on increasing the human capital, which interviewee 7 explained should be done through training and lectures. Another action Bertling is willing to take in order to increase human capital is to hire external consultants that will increase the knowledge the organization will have. Connecting this to Subramaniam and Youndt's (2005) theory it is the right way to proceed if Bertling wants to increase the human capital. As aforementioned, Bertling also needs to consider the amount of employees' social capital, because as said, isolated human capital will have a negative impact on the production of radical innovations. Interviewees 1 and 9 have during several moments in their interviews stated how employees at Bertling lack networks and are in great need of expanding it. The empirical data have shown signs of Bertling being aware of employees lacking social capital and having thoughts on how to increase this. Interviewee 9 presented the idea of having a board at the office where everyone at the office can leave ideas they generate that later will be discussed. The interviewee explained how this will encourage a discussion about ideas and in turn lead to a culture where it is open to sharing ideas. Such actions would create a norm and culture of openly sharing ideas and knowledge within the organization, which is a sign of increasing the social capital. Executing actions like this will also minimize the risk of isolating the human capital which the organization should avoid if wanting to reach its innovation objective.

Bertling shows signs of possessing human capital to some extent but having a desire to increase it. There are several actions Bertling is willing to implement when increasing human capital. The actions involve both developing the existing human capital by lectures and development, as well as hiring external consultants that will provide new human capital to the organization. Senior executives within the organization are also aware of the need of increasing the social capital within Bertling which is advantageous to more easily implement actions that are necessary in order to decrease the possibility of only focusing on human capital. Even if the organization is aware of what knowledge is in place, what is lacking, and how to solve related resource issues, several interviewees have argued for another problem that Bertling possesses which is the lack of interest in radical innovations. Thus, regardless of actions taken to increase human and social capital, Bertling is at risk of wasting resources on improvement. This is a fact that is hard to change and requires more work than just increasing

the amount of human and social capital. It limits Bertling's resources and capabilities for developing radical innovations because all employees cannot be involved. Thus hiring consultants, outsourcing part of their radical innovation efforts, or collaborating with external parties might be something that Bertling should strongly consider. Another option could be to employ new talent that initially has strong interest and aspirations to work with innovation and new business development. By doing so Bertling would add the human capital lacking, skill keeps today's employees and let them continue with tasks they are passionate about.

6. Conclusion

This thesis had the purpose to outline strategic approaches for how Bertling should work toward producing radical innovations. The authors' goal was to outline what inputs that are crucial in order to build a strategy that will work towards this. The purpose of the thesis will in turn answer the following research question:

What strategic approaches should Bertling implement in order to achieve its strategic goal of producing radical innovations?

The research question has been answered by conducting empirical research at Bertling, where data has been collected and analyzed on the basis of previous literature. The following paragraphs will present the strategic approaches Bertling should consider implementing in order to improve its ability to produce radical innovations.

First and foremost, the innovation objective to produce radical innovations requires Bertling to establish a systematic and structured procedure for innovative activities. To do so, they need to consider several strategic approaches. To begin with, Bertling's employees, both operational and senior executives, have very limited time to engage in any radical innovation effort. This serves as a critical component and is a prerequisite that Bertling has to solve in order to implement the following discussed strategic approaches. Since Bertling is currently in a position where they would face high market and financial risk, and are operating in a highly competitive market, they should strive to engage in activities and take actions to minimize their risk. With the objective to produce radical innovations, while keeping the financial and market risk as low as possible, Bertling has to consider engaging in activities that minimize the risk but still allow them to maximize the outputs of radical innovations. To do so the organization should consider a strategic approach of engaging in partnerships with other organizations. This can be done by different activities where one suggestion that would suit Bertling is strategic partnerships or joint ventures, for e.g. with firms or universities with similar innovation objectives, shared interest, and complementing knowledge. Engaging in activities like this would put Bertling in a position where the cost of developing innovations can be decreased, which lowers the financial risk of creating the innovation. Developing a strategic partnership also lowers the market risk, which is in line with the general strategic

goal the organization takes. Another consideration to make is to outsource high investment operations to external parties, such as consultancy companies. In order to work towards producing radical innovations with a low market and financial risks it should be focused on making high value, but yet cheap investments that consist of low operating costs, this will enable more resources for the radical innovations.

The collection of the empirical data has shown different opinions and perceptions of what the best method for Bertling is, and also what actions that are feasible for the organization to make. Even if there is a difference in opinions among the interviewees, one common ground is to allocate a specific group where the focus will be to produce radical innovations. Allocating a specific group responsible for these types of innovations is the second strategic approach Bertling should consider. The members of this group should however be further evaluated, but one thing to remember during this evaluation is to strive toward combining internal and external knowledge. This can be done in different ways, which requires Bertling to evaluate which method is of most relevance to the organization. As aforementioned, collaborating with external parties, whether it is through strategic partnerships or hiring of consultancy companies, is not only a way to mitigate risk but also a way for Bertling to acquire the knowledge they need. Additionally, this innovation team should consist of employees from different levels and operational departments. The latter should produce ideas, develop plans and evaluate the opportunities. Senior executives are needed to steer and support the team throughout the process of producing radical innovations, setting a budget, and communicating with the board. The board should also be involved in the radical innovation efforts by, as new concepts and innovations appear, approving whether innovation activities should continue, providing funding, and monitoring the progress as it proceeds. Implementing a team of such dynamics will not only help Bertling achieve a more structured working procedure but also help them process ideas as they occur, encouraging trust and collaboration among the organization stakeholders. More importantly, it will act as a building block to change the organizational culture to become more innovative, and future-oriented, and foster open communication, as well as collaboration.

Furthermore, in terms of resource allocation, and given the financial constraints, Bertling currently has it is recommended that Bertling leave their ad-hoc funding process behind. As

they start engaging in radical innovation efforts, and implement related activities, they should budget in advance. This will help them better track their expenses and mitigate part of the financial risk. However, as radical innovation efforts performance and required investments are difficult to forecast, the funding needs to remain relatively flexible. This will help them balance their risks and costs against innovation's potential benefits. A flexible budget will thus be helpful as it might help Bertling avoid throwing away opportunities that do not fall within the budget. As the budgeting should be the senior executives' responsibility, it is also their responsibility to, together with the rest of the innovation team, evaluate whether more funding is needed. Then communicate it to the board, which is expected to further analyze the upside and downsides of making additional investments.

As Bertling has a deficit of human capital and needs to improve its social capital, they have to take one of two actions. In terms of increasing human capital, they have to either invest in human capital internally or increase it by hiring external consultants. Moreover, it has been evident that there is a lack of interest internally. Hence, the lack of both human capital and interest in radical innovations indicates that the most suitable action might be to outsource as much of the radical innovation efforts as possible. Through such a strategic approach Bertling could tap into knowledge, skills, and expertise possessed by others and escape having to employ new talent or train current employees. Outsourcing radical innovation efforts might however be expensive in terms of funding but could be a viable option in the short term. Meanwhile, Bertling could engage in activities to internally train and develop their employees, as well as increase the interest in radical innovations. Eventually, Bertling could switch to internal development. Moreover, it is also important for Bertling to increase social capital. Thus, a strategic approach is needed for enhancing social capital. Hence, Bertling should engage in activities that help them foster a climate of networking and knowledge sharing. This could for e.g. be achieved through workshops, co-working spaces at the office, and implementing a system to collect and evaluate ideas.

Lastly, Bertling has unabsorbed slack resources, both in terms of financial and human resources, but too little which could harm Bertling's potential to engage in radical innovation efforts and increase the production of such innovations. There also exists flexibility among the employed resources, which can be classified as high due to the interviewees sharing the

perception of employees being able to shift tasks relatively fast. As both are needed to increase the likelihood of a successful outcome in terms of radical innovation production, Bertling should primarily focus on increasing their unabsorbed slack resources as well as their flexibility of them. To do this, Bertling has to align how much flexibility the slack funds have, in order to know how much can be spent on acquiring the resources they lack, and how much they can allocate to support the radical innovation activities.

6.1 Additional Considerations

There are some additional aspects that Bertling should consider, which have been demonstrated during the empirical research. These considerations can be crucial considering the long-term strategic approach and are therefore of importance to evaluate.

The data collected presents an indistinct image of Bertling's financial possibilities, as several interviewees have expressed different explanations about the financial possibilities for the organization, as well as the financial position the organization possesses today. For the organization to be able to invest in the strategic approaches suggested in this study, as well as start investing in radical innovation efforts, Bertling needs to investigate the financial position they are in today. This will enable the organization to analyze the financial opportunities for the investments in innovations. Additionally, Bertling should aim to create a common ground regarding the criteria for making financial investments and considering them feasible. This will create alignment and unity within the organization, while also eliminating uncertainties about which possibilities the organization has. When conducting the empirical analysis within the organization, some employees have expressed that 100 000 SEK is a realistic amount to invest, while others have expressed 1-2 million SEK being possible to allocate for the work of radical innovations. This is a major gap in what the financial possibilities are, which can create problems when developing the future innovation budget. If Bertling can successfully create better alignment on the financial position of the firm and the financial capabilities in relation to radical innovation, deciding on a reasonable budget will be easier and gain better acceptance among employees.

The authors have developed multiple strategic approaches for Bertling to consider as they aim to increase the production of radical innovations. However, the developed strategic approaches can be classified as short-term strategic approaches which are recommended to be implemented in order to proceed with developing an innovation strategy and eventually an innovation process. The components of the strategic approach can be further developed and incorporated in a long-term strategic approach, but this is something that needs to be further elaborated. With this said, Bertling should consider evaluating a strategic approach that can be used for long-term planning, as well as incorporated in the longer run. Examples of components that should be evaluated and incorporated in the long-term strategic approaches are how the human and social capital should be increased in the long run, or how Bertling should invest in order to develop norms and a corporate culture that will encourage innovation work. These are components that can be crucial if aiming towards creating a sustainable long-term innovation strategy, as well as encouraging long-term innovative work.

These considerations are something that Bertling can evaluate internally within the organization, or outsource for others to consider and investigate. One way of outsourcing it is to let other parties do future research about it.

6.2 Suggestions for Future Research

This research has resulted in recommended strategic approaches for Bertling to consider if they want to increase the output of radical innovations. As previously mentioned it has also resulted in additional considerations the organization should take, and furthermore future research should be touched upon.

To further increase Bertling's abilities to produce radical innovation, Bertling needs to transform their corporate culture to support and empower innovation, increase employees' social capital and encourage cross-collaboration. Thus, an interesting topic for future research would be to investigate how Bertling should transform their corporate culture. This is because, even if Bertling incorporates the strategic approaches the authors have suggested,

the long-term innovative work has a risk of becoming unsuccessful if the corporate culture does not support it.

Additionally, future research could be conducted to investigate how Bertling should implement a developed innovation strategy based on the findings of this research. Even if the organization uses the suggested strategic approaches to develop an innovation strategy, it is useless if it is not successfully implemented. Therefore, research about the implementation of the strategy, and the change process required for successful implementation, is necessary to investigate.

One subject employees at Bertling have expressed an interest in during this research is scenario planning. However, it has also been expressed that individuals within the organization lack the knowledge about how to perform scenario planning as well as how it should be implemented in the work and strategic planning process. As this research has made a limitation of not investigating the subject of scenario planning, there is a possibility for future research to do so.

The aforementioned suggestions are still strongly connected to Bertling and how that specific organization can continue the journey of increasing radical innovations, but there is also research to conduct that will have a broader purpose. To investigate whether the strategic approaches found in this research are applicable in similar organizations, the freight forwarding industry as a whole, or organizations in similar situations as Bertling, future research should be performed to investigate whether this is the case. Hence, future research should investigate whether the findings of this study can be generalized. If the findings of this study are generalizable, this study has contributed to the knowledge-increase in the industry as a whole and would show this strategic approach has the capabilities of being used in a general manner.

7. Bibliography

Aasen, T., & Amundsen, O. (2013). *Innovation som kollektiv prestasjon* (1. oppl. ed.).

Bell, E., Bryman, A., & Harley, B. (2019). *Business research methods* (Fifth edition).

Bertling.com. n.d. *The Bertling Group*. [online] Available at:

<<https://www.bertling.com/about-us/the-bertling-group/>> [Accessed 4 January 2022].

Bessant, J., & Tidd, J. (2011). *Innovation and entrepreneurship* (2. nd ed.). Hoboken, N.J.: John Wiley & Sons.

Brasil, V., Salerno, M., Eggers, J., & Gomes, L. (2021). Boosting Radical Innovation Using Ambidextrous Portfolio Management. *Research Technology Management*, 64(5), 39-49.

Covin, J. G., & Slevin, D. P. (1991). A conceptual model of entrepreneurship as firm behavior. *Entrepreneurship theory and practice*, 16(1), 7-26.

Drucker, P. (1985). *Innovation and entrepreneurship : Practice and principles*.

Gilbert, J. (1994). Choosing an innovation strategy: Theory and practice. *Business Horizons*, 37(6), 16-22.

Goffin, K., & Mitchell, R. (2017). *Innovation Management : Effective strategy and implementation*(Third ed.).

Katila, R., & Ahuja, G. (2002). Something old, something new: A longitudinal study of search behavior and new product introduction. *Academy of management journal*, 45(6), 1183-1194.

Kanungo, R.N. (Ed.) (1999). *Entrepreneurship and Innovation: Models for Development*. Sage Publications, London.

Kofod-Hansen, H., 2020. *4 areas where freight forwarders must become future-ready*. [online] Trans.INFO. Available at: <<https://trans.info/en/4-areas-where-freight-forwarders-must-become-future-ready-202635>> [Accessed 24 February 2022].

Kuratko, D., & Audretsch, D. (2009). Strategic Entrepreneurship: Exploring Different Perspectives of an Emerging Concept. *Entrepreneurship Theory and Practice*, 33(1), 1-17.

McDermott, C., & O'Connor, G. (2002). Managing radical innovation: An overview of emergent strategy issues. *The Journal of Product Innovation Management*, 19(6), 424-438.

Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *Academy of management review*, 23(2), 242-266.

Nohria, N., & Gulati, R. (1996). Is slack good or bad for innovation?. *Academy of management Journal*, 39(5), 1245-1264.

Saunders, M., Lewis, P., & Thornhill, A. (2007). *Research methods for business students*(4.th ed.). Harlow: Financial Times/Prentice Hall.

Schumpeter, J. (1934). *The theory of economic development : An inquiry into profits, capital, credit, interest, and the business cycle* (Harvard economic studies, 46). Cambridge, Mass.

Schultz, T. W. (1961). Investment in human capital. *The American economic review*, 51(1), 1-17.

Sonfield, M., & Lussier, R. (1997). The entrepreneurial strategy matrix: A model for new and ongoing ventures. *Business Horizons*, 40(3), 73-77.

Su, Z., Xie, E., Wang, D., & Li, Y. (2011). Entrepreneurial strategy making, resources, and firm performance: evidence from China. *Small Business Economics*, 36(2), 235-247.

Subramaniam, M., & Youndt, M. (2005). The Influence of Intellectual Capital on the Types of Innovative Capabilities. *Academy of Management Journal*, 48(3), 450-463.

Sundbo, J. (1998). *The theory of innovation: entrepreneurs, technology and strategy*. Edward Elgar Publishing.

Tang, J., Tang, Z., Marino, L. D., Zhang, Y., & Li, Q. (2008). Exploring an inverted U-shape relationship between entrepreneurial orientation and performance in Chinese ventures. *Entrepreneurship theory and practice*, 32(1), 219-239.

The Bertling Group. (n.d). *The Bertling Group*. Unpublished internal company document.

The Human Factory. 2017. *Is Your Organization Changing Fast Enough to Win?*. [online] Available at: <<https://thehumanfactor.biz/7993-2/>> [Accessed 4 January 2022].

Tseng, C., & Tseng, C. (2019). Corporate entrepreneurship as a strategic approach for internal innovation performance. *Asia Pacific Journal of Innovation and Entrepreneurship (Online)*, 13(1), 108-120.

Vetenskapsrådet (2017). *Good Research Practice*. Swedish Research Council 2017.

Wang, Y., & Sarkis, J. (2021). Emerging digitalisation technologies in freight transport and logistics: Current trends and future directions. *Transportation Research. Part E, Logistics and Transportation Review*, 148, 102291.

Wolcott, R., & Lippitz, M. (2007). The four models of corporate entrepreneurship. *MIT Sloan Management Review*, 49(1), 75-93.

Zhao, F. (2005). Exploring the synergy between entrepreneurship and innovation. *International Journal of Entrepreneurial Behavior & Research*, 11(1), 25-41.

8. Appendices

Appendix 1 - Pre-study survey-questionnaire

Question	Mean
Department at Bertling you are working at?	N/A
Current title or position of yours:	N/A
How old are you?	N/A
Amount of years you have been working at your current position	N/A
Total time in years you have been working at Bertlin	N/A
I am aware that Bertling strives to develop innovative business ideas	4.4
Bertling has a clear innovation strategy in place	2.9
Top management are committed and support innovative ideas	4.1
Bertling has an organizational structure that supports innovation	3.8
Bertling's corporate culture encourages employees to share ideas & make suggestions for improvement	4.1
I am comfortable with sharing ideas with colleagues	4.6
Sharing ideas are appreciated by colleagues	4.4
The department I work within engage in activities to improve operations, share ideas, and stimulate creativity	4.2
I have ideas that I have not yet mediated to anyone	2.6
If I have an idea I know how to proceed with it	4.3
I know how to identify opportunities for improvement, develop operations, and expand the business portfolio	3.9
I want to be part of developing the future of Bertling	4.5

Appendix 2 - Interview-guide senior executives

Definitions

Radical innovation: groundbreaking innovation, a completely new service or product that is not offered on the market today. Products and services that Bertling does not engage in today.

Incremental innovation: Improvements of existing products or services. Innovation that is already on the market, even though it does not exist in Bertling today.

Risk

- What are the major risks you see with Bertling engaging in radical innovation?
- Do you think Bertling is willing to take the financial risk that comes with investing in radical innovation?
 - Is Bertling willing to take costs to develop innovation, even if not knowing in advance it will be revenue-generating in the short term?
- What percentage of Bertling's financial capital do you think you can invest in innovation and why?
- Do you think that Bertling as a company is ready and willing to take the other risks that you have listed here, in order to develop more radical innovations?
- Based on Bertling's industry, what does the competition look like?
 - Based on your perception, how do you think the competitive image affects your ability to be at the forefront of innovation?
 - Do you see any risk that your competitors will challenge your current business by offering new services and products that you can not challenge them within?

Ownership and resource allocation

We have previously discussed whether to possibly deploy a team that will work with radical innovations. Which, like the leadership-team, should set aside specific time to work on developing innovations of this type.

- What do you think about that approach?

- Do you believe that people within Bertling have the knowledge to be able to deploy a team that works with innovations? (by knowledge we mean the ability to generate new radical business opportunities, market knowledge, trends, etc.)
 - What do you base it on?
- Do you have any other suggestions on how Bertling could work with radical innovation, i.e. if not in a strictly dedicated team?
- What do you think the capacity is to set aside people internally to work with innovation? (time, financial resources / other resources, employees, etc.)
- Do you think that Bertling needs to work with external parties to generate radical innovation? (consultants, collaboration with competitors, customers, suppliers, customers, and start-ups)
 - Exemplify
- Do you think there are superfluous resources today within Bertling that can be spent or set aside to promote or work with innovation?
 - For example, Does Bertling have sufficient net cash flows, financial assets not currently spent, or employees that can be set aside for other work?
- Do you think that the resources you use today in the operational activities can be used for other purposes, is there flexibility?
 - Ie. Is it easy for Bertling to make changes in your product range, to shift focus from one market to another, to quickly use your operational resources for other uses than where they are used today?

Innovation portfolio management

It is often talked of as separating incremental and radical innovation, in such a way that the same people who work with incremental innovations do not work with radical innovations. And that incremental and radical innovation is not evaluated according to the same criteria.

- What are the possibilities of separating the incremental and radical innovation work at Bertling?

- Do you see any problems with this?
- Do you see any possibilities with this?

Other / Concluding questions

- Do you, as a leader within Bertling, believe that you, Malin, Anders and Oscar, have enough time and opportunity to be visible, support, and engage in radical innovation?
- If you had no limits, how would you have wanted Bertling to work with radical innovations?

Appendix 3 - Interview-guide general

Definitions

Radical innovation: groundbreaking innovation, a completely new service or product that is not offered on the market today. Products and services that Bertling does not engage in today.

Incremental innovation: Improvements of existing products or services. Innovation that is already on the market, even though it does not exist in Bertling today.

Risk

- What are the major risks you see with Bertling engaging in radical innovation?
- Do you think Bertling is willing to take the financial risk that comes with investing in radical innovation?
 - Is Bertling willing to take costs to develop innovation, even if not knowing in advance it will be revenue-generating in the short term?
- Do you think that Bertling as a company is ready and willing to take the other risks that you have listed here, in order to develop more radical innovations?
- Based on Bertling's industry, what does the competition look like?
 - Based on your perception, how do you think the competitive image affects your ability to be at the forefront of innovation?

- Do you see any risk that your competitors will challenge your current business by offering new services and products that you can not challenge them within?

Ownership and resource allocation

We have previously discussed whether to possibly deploy a team that will work with radical innovations. Which, like the leadership team, should set aside specific time to work on developing innovations of this type.

- What do you think about that approach?
- Do you believe that people within Bertling have the knowledge to be able to deploy a team that works with innovations? (by the knowledge we mean the ability to generate new radical business opportunities, market knowledge, trends, etc.)
 - What do you base it on?
- Do you have any other suggestions on how Bertling could work with radical innovation, i.e. if not in a strictly dedicated team?
- What do you think the capacity is to set aside people internally to work with innovation? (time, financial resources / other resources, employees, etc.)
- Do you think that Bertling needs to work with external parties to generate radical innovation? (consultants, collaboration with competitors, customers, suppliers, customers, and start-ups)
 - Exemplify
- Do you think there are superfluous resources today within Bertling that can be spent or set aside to promote or work with innovation?
 - For example, Does Bertling have sufficient net cash flows, financial assets not currently spent, or employees that can be set aside for other work?
- Do you think that the resources you use today in the operational activities can be used for other purposes, is there flexibility?

- I.e. Is it easy for Bertling to make changes in your product range, to shift focus from one market to another, to quickly use your operational resources for other uses than where they are used today?

Innovation portfolio management

It is often talked of as separating incremental and radical innovation, in such a way that the same people who work with incremental innovations do not work with radical innovations. And that incremental and radical innovation is not evaluated according to the same criteria.

- What are the possibilities of separating the incremental and radical innovation work at Bertling?
 - Do you see any problems with this?
 - Do you see any possibilities with this?

Other / Concluding questions

- Do you believe that senior executives within Bertling, Malin, Anders and Oscar, have enough time and opportunity to be visible, support, and engage in radical innovation?
- If you had no limits, how would you have wanted Bertling to work with radical innovations?

Appendix 4 - Example of coding

Interview answer	Theme
<p>But we are not that big, so we cannot make any gigantic financial investments in this without winning something. We must take a risk, e.g. risk of investing time and that we invest money, but then there must be something that balances it. That is, if we succeed, then what are the benefits and how great is the probability. Resources and money as risk require that we truly believe we will succeed with innovation.</p>	<p>Financial risk Resource risk</p>
<p>The biggest risk is actually that we would make a monetary loss. I would probably say that it is one of the biggest risks, that we will invest a lot in something and then it turns out it does not work at all. Then we have spent a lot of time, money and resources on something that does not succeed.</p>	<p>Financial risk Resource risk</p>