



**CHALMERS**  
UNIVERSITY OF TECHNOLOGY



# **Sustainability transitions in established companies**

Enabling organisational change through ambidexterity

Master's thesis in:

Industrial Ecology

Management and Economics of Innovation

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DIVISION OF ARCHITECTURAL THEORY AND METHOD

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MASTER'S THESIS ACEX30

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Industrial Ecology*

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## Abstract

Organizations and how they operate today contribute to the environmental problems we are currently facing. Management of organizations tend to focus on economics and at least partly neglect sustainability. Companies face uncertainty when trying to make a sustainability transition, and the concept of ambidexterity aims to address the question of how to manage conflicting demands within the company. That is, the conflicts of the exploitation part and the exploration part, or the day-to-day business and the future business. This thesis aims to explore how established organizations can enable a sustainability transition through an ambidextrous strategy. The research conducted is qualitative and explorative. More specifically the study aims to explore ways for established companies to 1) Enable an uncertain sustainability transition internally 2) Enable more exploration and 3) Integrate the findings into the existing business. To achieve this, the thesis includes a literature review, an interview study with individuals from various industries and a case study. The case is a kitchen appliance manufacturer exploring ways to make a circularity transition. The case study includes interviews and a workshop with the case company. The 30 conducted interviews are the primary source of data collection for this study and analysis of the data was done through a thematic analysis identifying common themes, differences, and similarities in the interview data. The findings of this study are threefold. First, implications for each of the three research questions were presented and visualized. All implications were related to strategy, structure, engagement, systems thinking, and external validation. Additionally, the exploration implications included the importance of learning as a success factor. Second, building on the implications of all three research questions, five general guiding principles for established organizations wanting to enable a sustainability transition were identified. The five principles related to strategy, engagement, systems thinking, learning and early integration. Third, a six-step model was developed on how the case company can approach the circular transition. The hope is that the principles and the six-step-model can offer direction for companies approaching a sustainability transition.

Key words: sustainability transitions, ambidexterity, exploration, circularity, circular economy, organisational change

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We would then want to thank our co-supervisors, Johan Holmén and John Holmberg, for the guidance and help with our research. Their help was very valuable as we had the tendency to go broad in our scope, which led us to sometimes get lost in our ways, but their wise words brought us down to earth, and helped us clear the path so we saw a light at the end of the tunnel. Also, their knowledge and expertise on the topic of sustainability transitions was valuable for us, and helped to make sense of the complex content of our research.

We also want to give thanks to our case company for their support throughout the research process, and especially to our supervisor at the case company. He was always positive and more than willing to provide us with all the help and resources we needed. Furthermore, the overall openness and willingness to work with us at the case company really made the process easy and we feel grateful for all the time they gave us.

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# 1 Introduction

In this chapter, an introduction to the thesis is given in five sections. First the background of the study is given, which introduces the problem formulation where traditional business is based on the assumptions that economics and sustainability are treated as separate entities in organizations today. Next, the aim and research questions are introduced which is about how organizations can enable sustainability transition with ambidextrous strategy. Then, the limitations of the thesis are introduced, and lastly, the outline of the thesis is explained.

## 1.1 Background

There are many environmental issues that stem from the actions and behaviours of today’s society, such as climate change, depletion of earth’s natural resources, loss in biodiversity and ecosystems, to name a few (Bird, 2018). Organizations and how they are operated today influence these problems as they are run by the primary assumption that the ultimate goal of the business is economic growth, and organizations’ responsibilities towards the ecosystem and the societal system are neglected (Borland et al., 2019). Furthermore, management of organizations tends to focus on economics and neglect sustainability, creating a gap between the understanding of the two (Brønn & Brønn, 2018; Borland et al., 2019). With more knowledge and awareness on climate change, the issue has grown in importance over the years as sustainability research has been gaining more legitimacy and urgency in society, and a realisation is that a change is needed towards a more sustainable future. This gap problem according to these underlying assumptions has been visualized in Figure 1 and is based on the work of Stead and Stead (2010), Borland et al. (2018), and more.

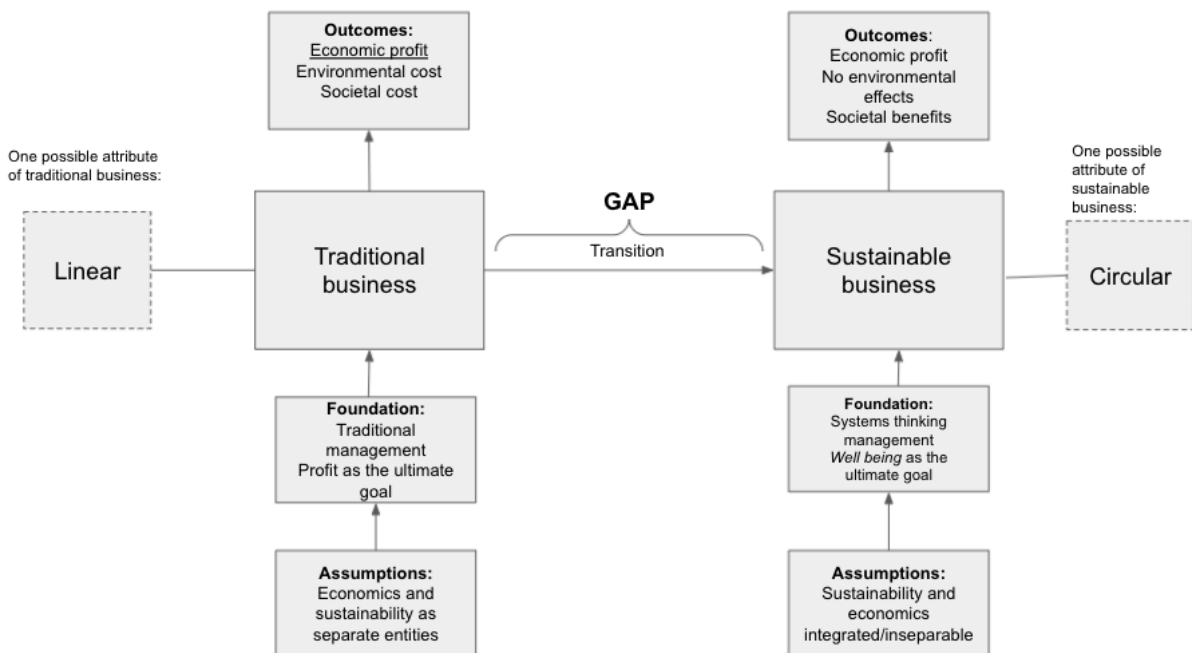


Figure 1 Visualisation of the Gap problem, our own understanding based on Stead and Stead (2010), Borland et al. (2018) and more

Organizations play an important role when it comes to enabling a sustainability transition. They have a platform to introduce new innovations and diffuse new technologies (Elzen & Wiczorek, 2005). Companies can affect the behaviour of society, and at the same time, the demands of society can affect the companies. An example of that is that research has shown that there is increasing pressure from society for

companies to put more focus on environmental and sustainability matters (Zhang, He, Shi, Hong, Bao, & Xue, 2020). Currently, many organizations have started to react to these demands by changing something within the organization. One sustainability change that companies approach is circularity, with organizations aiming to become circular in their business. That is based on the concepts of the circular economy where the ultimate goal is to design out waste and pollution, to keep products and materials in use and to regenerate natural systems (Ellen MacArthur Foundation, n.d). By becoming circular, organizations move away from a linear business model towards a circular business model and in order to do that, steps are taken throughout the product life cycle. These steps are for example recycling, refurbishing, reusing, maintaining, sharing, and even redesigning with the goal of designing out waste and pollution (Ellen MacArthur Foundation, 2013).

When trying to become more sustainable, companies face uncertainties, as this is a relatively new and emerging field (Galpin & Hebard, 2018). Questions such as how can organizations prepare for the uncertainties of the future, while at the same time sustaining the ultimate goal of economic profit have been asked. Research on ambidexterity aims to address the questions on how to manage conflicting demands within the company (Turner, Swart & Maylor, 2013). Ambidexterity is a concept which presents a way for companies to explore options for the future while operating today. An ambidextrous organization is an organization with one part of the company focused on today, further referred to as exploitation, and the other part focused on the future, further referred to as exploration (O'Reilly & Tushman, 2013). Exploitation refers to the ability to learn from and refine existing knowledge, while exploration is the ability to explore unfamiliar areas through planned experimentation and play (Simsek, 2009). Companies often struggle to balance exploration and exploitation, as they tend to focus more on exploitation due to a bias of preferring efficiency and short-term success (O'Reilly & Tushman, 2013). According to O'Reilly and Tushman (2013) companies are on a path with high fail rates when they act reactively to change and neglect exploring. Therefore, this thesis will look into whether enabling more exploration using an ambidextrous strategy can enable companies to change to a more sustainable business and support the sustainability systems transition.

## 1.2 Aim and research questions

### **Aim**

The aim of this study is to explore how established companies can enable a sustainability transition within the company through an ambidextrous strategy.

### **Research questions**

There will be three research questions to fulfil the aim, the first seeks to understand how an established company can enable a sustainability transition. The second question focuses on how exploration can be enabled and the third, how the findings from the exploration can be integrated into the existing business.

1. *How can established companies enable a sustainability transition even though the outcomes of the change are uncertain?*

Established companies are faced with the challenge of making a sustainability transition where both the outcomes of the change and how to implement the change is uncertain, whereas they are operating in a traditional business logic environment that prioritizes economic profit over other parts of sustainability. Therefore, it is important to explore how companies can approach a major sustainability transition with uncertain outcomes in the existing business landscape.

2. *How can established companies enable more exploration?*

In the existing business environment, it is a great challenge for established companies to go through organizational change in general, as the majority of organisations have an organisational logic favouring exploitation over exploration. Following this, the aim of this question is to better understand how established companies can enable more exploration through using an ambidextrous strategy.

3. *How can established companies integrate findings from the exploration into the existing business?*

A well-known risk with an ambidextrous strategy, which combines exploitation and exploration, is that the well-established, exploitation side of the business is prioritized over the novel, uncertain exploration side and that the implementation of findings from the explorative part of the business is not integrated into the existing business. Therefore, the aim of this question is to explore how findings from the exploration can be integrated better into the existing business.

### 1.3 Limitations

This thesis is limited to organisational change through ambidexterity within established companies. Furthermore, this thesis focuses on the organization's perspective and not on the views of other stakeholders or end-users of the business. That is, a focus is on the internal perspective of the organization and the actions taken within the company. Additionally, the focus will be on the private sector and organisational change within a company, and not within a system or a value chain. The study of how to enable more exploration in established companies, and how that supports a company to change in a transition, will be conducted in more general terms. The specific recommendations will be limited to one case that can be used as a starting point for other companies.

### 1.4 Outline of the thesis

This thesis will be divided into 9 main chapters. Overall, the research that was conducted will be structured into two parts, one being theoretical and focusing on the research questions, while the other is about a case company and findings specific for it. In this chapter, an overview will be given of the thesis in order to paint a clearer picture of the two parts of this thesis.

The first chapter gives an introduction to the topic of the thesis, along with background information, aim and limitations. The second chapter will introduce the case company, with an explanation of the specific case of the company. The third chapter gives an overview of the literature used for this research, while the fourth chapter outlines the method chosen for this thesis. The fourth chapter presents the results of the interviews of the theoretical part of the thesis, which is specific for the aim and research questions. Chapter 5 is the analysis and discussion of the theoretical part, where the research questions are discussed, along with the method and the findings. Chapter 6 presents results, analysis and discussion specific for the case company, where an introduction to the. Chapter 7 includes a discussion on the method and the results of the research, as well as recommendation for further research. Next, the conclusions for the thesis are presented in chapter 8, and lastly, further recommendations are presented in chapter 9.

## 2 Introduction to the case

For this thesis, a case company was used to generate practical conclusions on how established organizations can enable a sustainability transition. The conclusions specific for the case were based on results generated from the theoretical part of this research, that is, from the answers to the research questions, literature and through discussions with employees from the case company.

The case company is a kitchen appliance supplier located in the Netherlands and is part of a multinational corporation that has 80 000 employees in total, where 450 of them are employees of the case company. It supplies kitchen appliances and consumer electronics through five brands. The case company does not sell appliances directly to consumers, and instead it sells mainly through the electric market and to kitchen retailers. One of the case company's brands is a premium brand which they want to explore to introduce circular products and how to become circular in their operations (Hoogeveen, 2020).

The appliance industry is a traditional industry with proportionally high environmental impact, low levels of change in the past and the industry is now faced with two challenges that require fundamental changes for the future, the challenges of technology change and sustainability change (Del Rio, Sovacool, Bergman & Mkuch, 2020). The industry has one of the most negative environmental impacts, in the EU only 35 % of products are recycled in the industry (Bressanelli, Saccani, Perona & Baccanelli, 2020). The EU and the government in the Netherlands gradually put more regulatory pressure on different industries reading circularity and the Netherlands aims to be fully circular in 2050 (Buren, Demmers, Van der Heijden & Witlox, 2016).

Therefore, the specific case part of this thesis will look into the upcoming circularity transition for the case company's premium brand, where a focus is on the internal part of the organization, in order to generate a guide on how the case company can approach the transition internally.

### 3 Literature Overview

This chapter presents an overview of the literature that has been used to support the study. First, an introduction to the existing organizational change and strategic change management literature is given. Then the topic of organisational ambidexterity is introduced. Next, the concept of systems thinking is introduced in relation to sustainability management. Then, an introduction is given to sustainable businesses with the concept of circularity used as an attribute of a sustainable business. Lastly, an introduction is given to sustainability transition in companies in terms of enabling them. An overview of the literature framework used in the study can be found in Figure 2 below, which shows the relation between the different areas of literature.

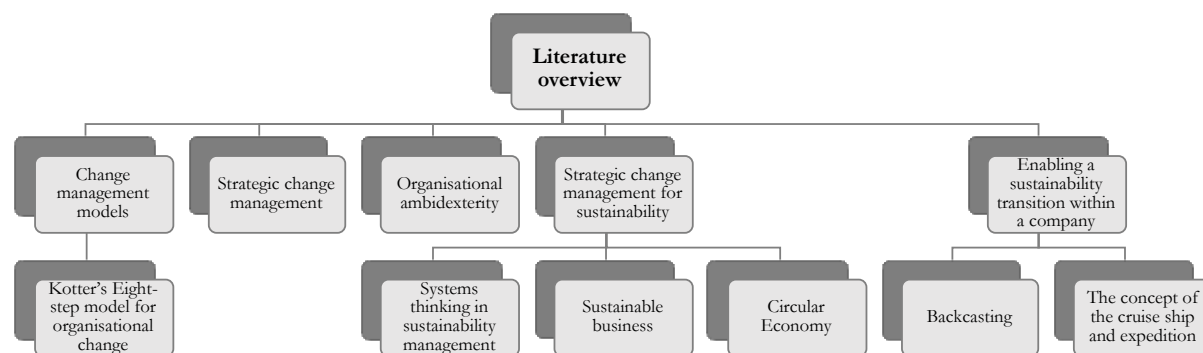


Figure 2 The literature framework used in the study which shows relations between different areas of research

#### 3.1 Change management models

In order to remain competitive over time, companies are required to evolve and adapt to new circumstances. In the organizational change management field there is an extensive body of literature on how to manage change in an organisation. Planned organisational change models were introduced by Lewin in 1946 and have since developed with different approaches, focused on type, context, organizational origin and impact of the change respectively (Rosenbaum, More & Steane, 2018; Armenakis and Bedeian, 1999).

Although the models are sometimes conflicting, they are related to each other to a great extent, using similar or complementing steps that can often be related to the original three step model introduced in 1946 by Lewin (Rosenbaum et al., 2018). According to Rosenbaum et al. (2018) is the three step model connected to most other key change models, for example to the models of Kotter (1995) and Senge (1990). The Eight-step model by Kotter (1995) is one of the most well-known and widely used organisational change models and has a strong connection to Lewin's original model. (Rosenbaum et al., 2018; Appelbaum, 2012)

##### 3.1.1 Kotter's Eight-step model for organisational change

Kotter (1995) suggested eight steps for transformation of an organisation based on research into 100 organisations undergoing change processes. The model is called the eight-step model and has been recognised for its practical format (Appelbaum, 2012). The eight steps of Kotter's model are described below.

1. **Establishing a sense of urgency** - exploring market conditions, potential crises and major opportunities
2. **Forming a powerful guiding coalition** - making sure the change is led by people with enough power and encouraging teamwork between them.

3. **Creating a vision** - ensuring that the change has a direction, end goal and strategies for reaching it
4. **Communicating the vision** - communicating the vision and the strategies in as many ways as possible including new behaviours
5. **Empowering others to act on the vision** - removing obstacles, changing structures and systems that compromises the vision, encouraging risk taking and new ideas
6. **Planning for and creating short-term wins** - planning for and creating visible improvements in performance, recognised employees involved in improvements
7. **Consolidating improvements and producing still more change** - changing things that do not fit the vision, investing in employees who can implement the vision, adding new themes and projects to the process
8. **Institutionalizing new approaches** - connecting the new behaviour with success

## 3.2 Strategic change management

Strategic change management has contributed to change management research by tackling the strategic challenges the management of a company faces in time of change and introducing concepts like organisational ambidexterity, organisational inertia and dynamic capabilities. The definition of a strategy is the means by which an organisation fulfils its goals and objectives. A strategy includes deciding on objectives, allocating resources to reach them as well as making sure that decisions and actions are aligned. Common elements of a successful strategy are clear long term goals, understanding of the external environment and objective appraisal of resources. A strategy is essential to organisations as it focuses on long-term goals and facilitates coordination (Grant, 2018; Porter, 1996).

A classic dilemma in strategic management is the balancing of the two dimensions of strategy; competing for today and competing for tomorrow (Abell, 1993). Competing in the present is called the static part of strategy and is concerned with the positioning of the firm and answers the questions of “where are we competing” and “how are we competing”. Competing for the future is called the dynamic part of the strategy and relates to the purpose and vision of the organisation answering the questions of “ what do we want to become and achieve” and “how do we get there” (Grant, 2018).

Building on the assumption of economic profit as the ultimate goal and focus, strategic management focuses on concepts such as competitive advantage, differentiation, identifying key success factors, understanding the competitive environment and identifying organisational capabilities. (Grant, 2018) An organisational capability or core competence is defined as a company’s ability to allocate resources to reach a desired end result (Helfat & Liberman, 2002). The organizational capabilities are a result of the company's history, in the sense that the company's capabilities often stem from the early years of the development and are therefore subject to path dependency (Wernerfelt, 2003). In established companies these early developed capabilities can become barriers to change and hinder the development of new capabilities. (Leonard-Barton, 1992) One reason for change failure is that a company's strategy must be coherent, in other words the strategy, structure, systems, culture, goals and employee skills have to be complementary (Milgrom & Roberts, 1995). These complementariness that stem from early development of the organisation become a hindrance for change. This means that an extensive set of radical changes are often needed, as incremental

changes in a few dimensions are not sufficient when it comes to changing the strategy (Porter & Siggelkow, 2008).

Scholars argue that the capacity to change is an organisational capability in its own right (Grant, 2018). The capability of handling change is connected to the concept of dynamic capabilities that was introduced by Teece, Pisano & Shuen in 1997. A dynamic capability is defined as a company's "ability to integrate, build and reconfigure internal and external competences to address rapidly changing environments" (Teece, et al, 1997). In order to develop new organisational capabilities, the concepts of knowledge management and organisational learning are considered important (Dalkir, 2017). In times of change, an organisation needs to sense and seize opportunities through relocation of assets and skills; this dynamic capability is called ambidexterity (O'Reilly & Tushman, 2013).

### 3.3 Organisational ambidexterity

As previously discussed in the strategic change management section, the balance between operating today and preparing for the future is a classic dilemma in strategic management (Abell, 1993). Companies often tend to prioritize the exploitative part of the business with the cost of missing to adapt to major market changes that require exploration, famous examples include FACIT and Kodak, that were not able to adapt to the new digital technologies in time (Grönquist, 2017).

In order to tackle this classic balancing dilemma, the concept of organisational ambidexterity was introduced by Duncan in 1976 and later built on by many other scholars (Turner, Swart & Maylor, 2013). Ambidexterity has grown to become an important domain in management research (Junni et al, 2013; Cristofi et al, 2021; Ferraris et al, 2019). The definition of an ambidextrous organisation is an organisation that successfully exploits the present activities and explores future ones simultaneously (Christofi et al., 2021). There is an extensive body of research that supports the notion that ambidexterity is positively related to performance of companies and that the findings are consistent across industries (Bierly & Daly, 2007; Caspin-Wagner, Ellis & Tishler, 2012; Adler, Goldoftas & Levine, 1999; O'Reilly & Tushman, 2013).

An ambidextrous organisation uses exploitation to become more efficient in existing operations and exploration to adapt and apply learnings. (Christofi et al., 2021). Successfully ambidextrous organisations share the characteristics of separation of the explorative and exploitative parts while having a close relation between the two through the senior management (O'Reilly & Tushman, 2013). The importance of the connection on top management level is due to avoiding unsupported teams working outside of the established organization, see Figure 3 for the structural differences between unsupported teams and ambidextrous organisations introduced by O'Reilly and Tushman (2004).

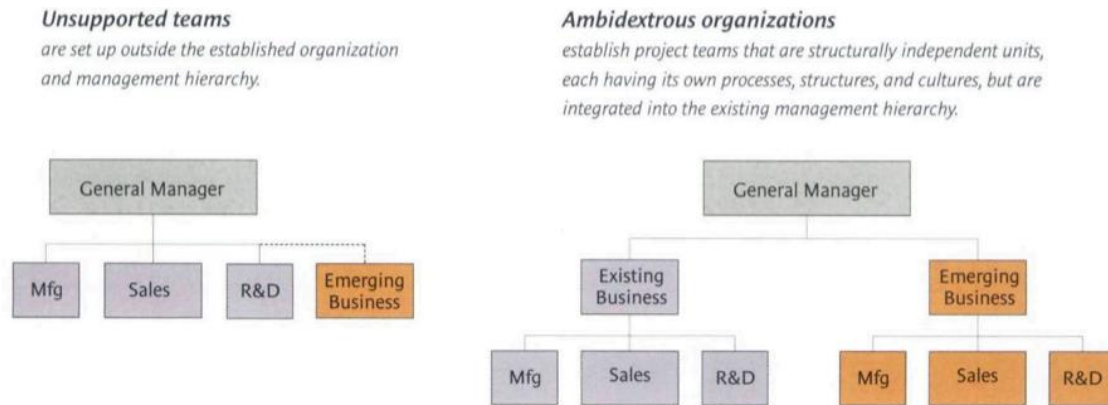


Figure 3 The structural differences of unsupported teams and ambidextrous organizations from O'Reilly & Tushman (2004)

Building on this, Tushman & O'Reilly (2011) presented conditions under which ambidexterity is more likely to be successful, namely: separate organizational units that are well aligned, management's ability to resolve tension between the two units, a senior team having ownership over both parts of the ambidextrous strategy, giving strategic importance to both exploration and exploitation, relentlessly communicating the strategy and creating a common identity of the explorative and exploitative parts of the organization based on a common vision and values. To conclude, O'Reilly & Tushman (2013) note that organizational culture might be an important capability to enable ambidexterity and emphasize that ambidexterity itself is the capability of an organisation to sense and seize opportunities through relocation of assets and skills. Although, it has also been shown that the environment matters; higher uncertainty of the environment and sufficient resources of the organization make ambidexterity more beneficial (Junni et al., 2013).

### 3.4 Strategic change management for sustainability

*In this section, literature on strategic change management for sustainability is introduced. First, literature on systems thinking in sustainability management is presented to emphasize that sustainability is a complex, system based concept which makes it difficult to act on. Next, literature on sustainable businesses is introduced with where traditional business strategies are compared to more sustainable business strategies. Lastly, the concept of circular economy is introduced as it is believed to be an example of one sustainability transition that organizations are looking into.*

#### 3.4.1 Systems thinking in sustainability management

With growing awareness in societies around issues like climate change, ecological degradation and social inequality, people have looked towards sustainability management to act on these issues. Sustainability is a system based concept that is very difficult to conceptualize, and is about three highly interconnected systems, the ecological system, the societal system and the economic system (Brønn & Brønn, 2018). As society keeps growing and evolving, these systems keep evolving and developing fast, and to understand them and their relations is becoming a very complex matter (Wright and Meadows, 2012). Scholars have identified the skill set of systems thinking that an individual can attain in order to better understand these systems, the roots and their complex behaviours, to be able to foresee them and better regulate their outcomes (Arnold & Wade, 2015).

Organizations today operate and are dependent on all these three systems, and they can directly impact them through different feedback loops (Williams, Kennedy, Philipp & Whiteman, 2017). Therefore, there is a need for organizations to be aware of this interconnectedness, and manage that in the businesses today. Answers of questions surrounding how to incorporate sustainability into businesses and how to manage it

are still uncertain, and there is still little research available today on sustainability management and how to manage it successfully in organizations (Williams et al., 2017; Galpin & Hebard, 2018). However, researchers do believe that systems thinking and holistic understanding is critical in order to progress towards sustainability and to be better in making decisions that avoid trade-offs and unintended consequences (Metson, Aggarwal & Childers, 2012; Metcalf and Benn, 2013). Furthermore, sustainability managers need to understand that the role and responsibilities of organizations are a part of a larger system, so there is a need for balancing that with the self-preserving tendencies of organizations (Van Marrewijk, 2003).

### 3.4.2 Sustainable business

Traditional businesses as we know them are based on the fundamental assumption that economic profit of the business is the ultimate goal (Borland, Lindgreen, Ambrosini & Vanhamme, 2019). Another fundamental assumption for traditional businesses is that the economy is a closed circular flow where resources, products and services can flow forever from businesses to households without affecting the social and ecological systems of the Earth (Stead & Stead, 2010). That is, traditional businesses are not concerned with ecological constraints and sustainability. A visualisation of this can be seen in Figure 4 below. Many businesses today are following a so-called linear process, or a cradle-to-grave process, which has emerged from the fundamental assumptions explained before. A cradle-to-grave process is when a product is produced and sold to a customer with a profit, and the exploitation of raw materials and the disposal processes are excluded (Borland et al, 2019). Or in other words it is often summarized as a take, make and dispose model. Meaning that resources are taken to make goods that will be sold to make profit, and everything that is not used is disposed of, and that includes products that are at the end of their lifecycle (Sariatli, 2017). There are many issues with these types of business models, such as depletion and wasting of valuable finite resources (Sariatli, 2017). That is, organizations and their business environment acts as a closed system that is separate from the natural and societal system, and ignores the connectedness and responsibilities towards them (Borland et al, 2019). An illustration of the traditional business strategy can be seen again in figure 4 below.

The importance of including the natural and societal system into businesses and business strategies has been brought up multiple times, with scholars attempting to build on existing traditional business and management frameworks. Borland et al. (2019) built on the contributions of those scholars (Hart and Dowell, 2011; Stead and Stead, 2010; McDonough & Braungart, 2002), and proposed two strategic alternatives to the traditional business strategy which provides different levels and approaches in incorporating sustainability. These two alternative strategies for sustainability are *transitional* and *transformational strategies*, the transitional ones are built on anthropocentric assumptions while the transformational strategies are based on ecocentric assumptions (Borland et al., 2019).

#### Transitional strategy

The transitional strategy assumes that eco-efficiency should be aimed for businesses that operate in a linear fashion (Borland et al, 2019). Eco-efficiency aims to create value with less impact, or to minimize ecological damage while maximizing efficiency at the same time (Čuček, Klemeš & Kravanja, 2015). Transitional strategies are incremental where organizations aim for eco-efficiency in terms of pollution reduction, product stewardship, and corporate social responsibility (Hart, 1995). The strategy introduces the 5Rs of reducing, reusing, repairing, recycling and regulating with aims to reduce the use of resources during the production phase of a product (Borland et al, 2019). However, since the strategy is still based on the fact that the company operates in its own system and has little connection and responsibilities towards the societal and natural system, it is believed that it does not majorly affect the production and how the end user disposes of the product (Borland et al, 2019). Products are still produced with a linear process. In fact,

this strategy is more of an add-on option which tries to combat the problems of waste and toxic materials during the life-cycle of a product and it might indicate that organizations are trying to be less bad than the others that still operate the traditional way (McDonough & Braungart, 2002). Furthermore, it has been highlighted that these incremental strategies would not be sufficient enough as the results were mainly to reduce negative impacts stemming from operations of firms, but not systematically resolving the large sustainability issues (Hart & Dowel, 2011).

### Transformational strategy

The transformational strategy aims to eliminate creating waste and toxic chemicals or spread it into the environment. The main assumption with this strategy is that organizations understand that resources are not endless, and therefore resources need to be used again and again in order to maintain a balance (Borland et al., 2019). Businesses should therefore aim to achieve eco-effectiveness, safe bio-materials should be handled in a closed loop, and to keep so-called techno-materials out of the ecological system and make sure to circulate them only in the industrial system (Borland et al., 2019). Techno-materials are materials that are not recognized by nature and cannot be broken down by nature. In order to reach eco-effectiveness, a set of 5R activities are essential; rethink, reinvent, redesign, redirect and recover (Borland et al., 2019). But eco-effectiveness is about promoting human activity and production so it is in sync with nature and ecosystems, or in other words, it aims to go beyond only aiming for zero emission and instead focuses on developing products and industrial systems that maintains or enhance the use and quality of materials through circular life cycles (Braungart, McDonough & Bollinger, 2007). Additionally, scholars have stated that organizations need to introduce a sustainability vision, and that managers should acquire a long-term mindset with an understanding that businesses have a responsibility in sustaining and enhancing the ecosystem which consists of nature and humans (Borland et al., 2019; Hart, 1997). An illustration of the transformation business strategy in comparison to the traditional business strategy can be seen in Figure 4 below

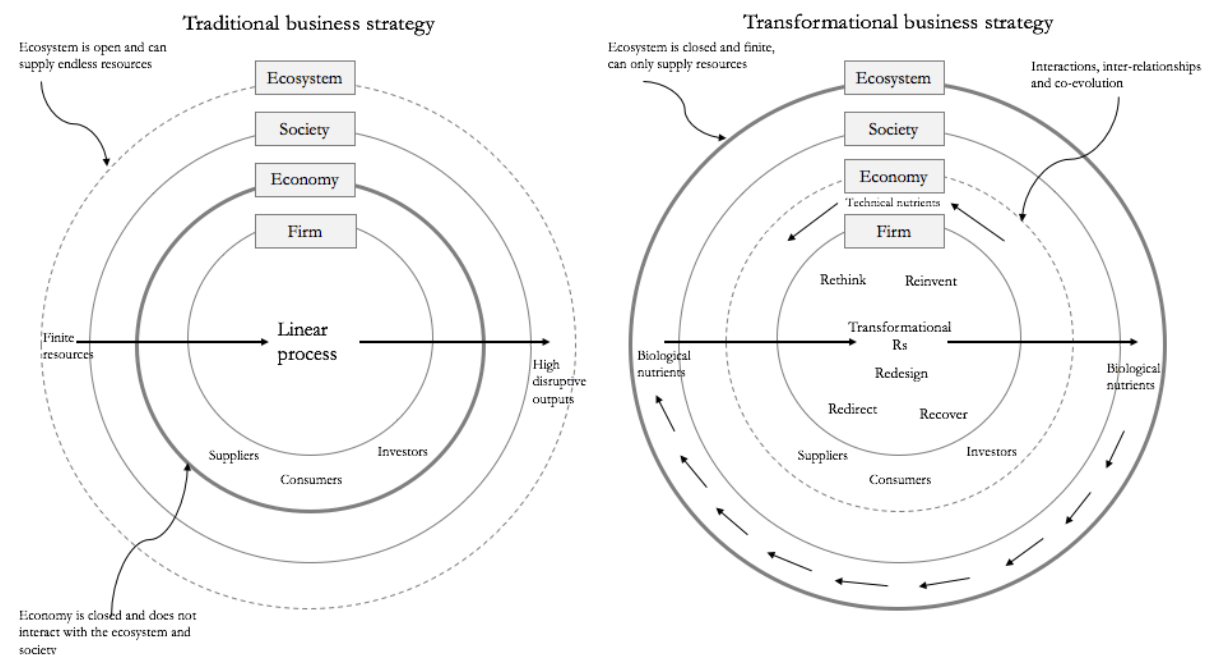


Figure 4 The traditional business strategy and transformational business strategy, redesigned from Stead and Stead (2010)

### 3.4.3 Circular Economy

One concept that is highly related to the transformational business strategy defined by Borland et al. (2019) is the concept of circular economy which has attracted attention in the last decade. The concept has roots

from different fields, but it was first introduced as a concept in 1989 by the environmental economists Pearce and Turner. They introduced a concept of a circular economic system which was built on studies and ideas by an economist called Boulding (Ghisellini, Cialani & Ulgiati, 2016). Pearce and Turner (1989) introduced a theoretical framework of shifting to a circular economic system, from a traditional open-ended economic system. The framework has since then been picked up by various scholars and businesses, with the Ellen MacArthur foundation working most recently with developing and promoting the idea of the circular economy (Ghisellini, 2016).

The circular economy is most commonly defined in literature according to the 3Rs principles; Reduce, Reuse and Recycle (Ghisellini, 2016). But, with further developments, the framework has grown and expanded in the last few years. The Ellen MacArthur foundation describes the circular economy as a “systemic approach to economic development designed to benefit businesses, society, and the environment” (The Ellen MacArthur foundation, n.d.). The aim of the circular economy is to increasingly disassociate growth from the use of finite resources and is based on the principles of 1) designing out waste and pollution, 2) keeping products and materials in use, and 3) regenerating natural systems (Ellen MacArthur Foundation, 2013). The circular economy has been displayed in a diagram, which can be seen in Figure 5 below. The diagram has two halves of it, each representing two distinct flows of material, technical and biological. The technical materials are materials such as plastics and metals, that need to be kept in a continuous cycle in order to be recaptured and used again. These materials can also not re-enter the environment. Biological materials are materials that degrade over time and return to the environment as nutrients after one or more use cycles, and can re-enter the environment. Furthermore, the diagram shows appropriate steps on how to handle those two different sets of materials. For the technical materials, the steps include recycling, refurbishing, reusing and prolonging the lifetime of them, while the steps for the biological materials include regeneration and to keep a flow of renewable materials. The steps shown in the diagram create closed loops, which is what the circular economy is known for.

Furthermore, many organizations have incorporated the circular economy in their businesses with developments of circular business models followed (Bocken, Short, Rana & Evans, 2014).

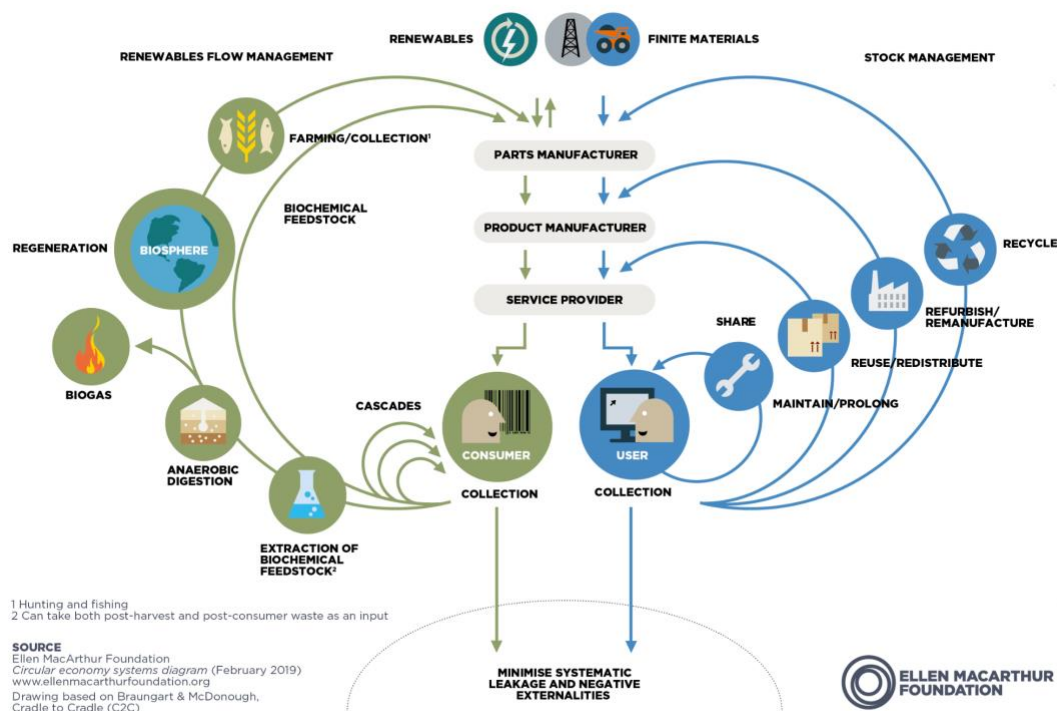


Figure 5 The Butterfly diagram according to The Ellen MacArthur foundation (The Ellen MacArthur Foundation, n.d)

### 3.5 Enabling a sustainability transition within a company

This section introduces literature on enabling sustainability transition within an organization. First, the backcasting planning method is explained which is highly relevant for strategic planning for changes that have uncertain outcomes, such as sustainability transition. Next, the concept of the cruise ship and expedition is introduced but the framework aims to guide socio-technical transitions towards sustainability. Lastly, literature on organizational learning is introduced which goes over the different levels of learning in organizations and the connection to the concept of the cruise ship and expedition.

#### 3.5.1 Backcasting

Backcasting is a planning method that is believed to be helpful when dealing with uncertain circumstances and complex problems, particularly when the problems are due to current trends (Holmberg & Rob ert, 2000). Backcasting is a method for envisioning a desired future, and a step-by-step approach is developed in order to reach that envisioned, desired future (Holmberg, 1998, Holmberg & Rob ert, 2000). The method is the opposite of traditional forecasting, forecasting is when predictions are made on past and present data and through analysis of trends. Instead of taking actions on a present and current situation and continuing with that like is done in forecasting, the focus is shifted to answering the following question “what do we need to do today to get to the desirable future?” (Holmberg & Rob ert, 2000). Figure 6 showcases the difference between backcasting and forecasting. This approach has been further developed, built on and revisited by different scholars over the recent years.

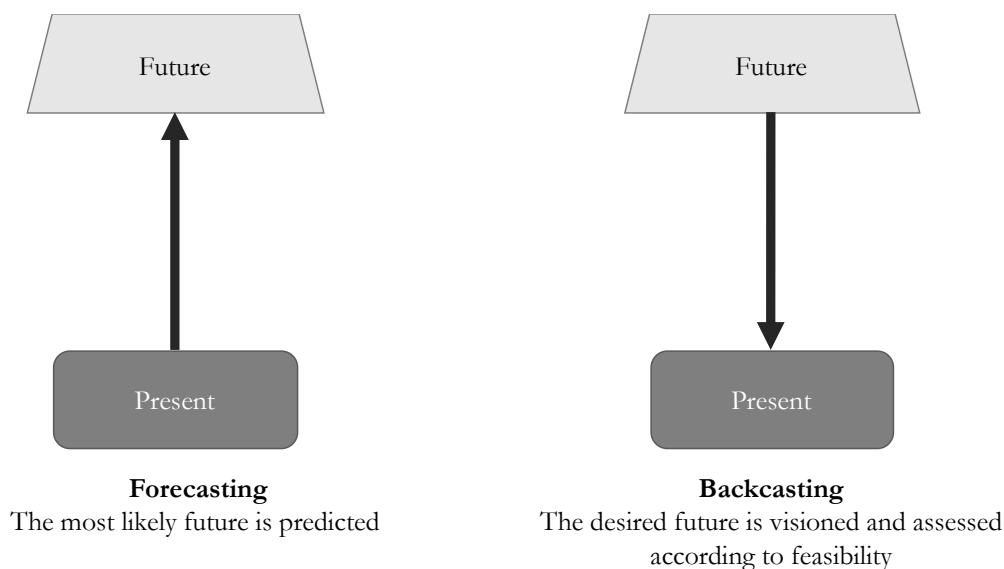


Figure 6 Differences to forecasting and backcasting, adapted from Robinson (1982)

The backcasting method is beneficial when it comes to strategic planning in businesses, as the problems of integrating the ecological and societal values into the economic system is seen as a complex process, and the approach aims to create a path for organizations towards a desirable and sustainable vision (Robinson, Burch, Talwar, O’Shea & Walsh, 2011; Holmberg & Rob ert 2000).

Holmberg (1998) defined four steps in the backcasting approach which can be seen in Figure 7. The steps are:

1. Defining Criteria for Sustainability:
  - a. The desired sustainable future is envisioned and defined, the conditions that need to be met in a sustainable future are identified.
2. Describing the Current Situation in Relation to the Criteria for Sustainability

- a. The present state, the now, as well as current activities and competences of organizations are described according to the criteria that was defined in step one. This is done in order to have a good understanding of the current state and can help identify unsustainable activities which can be used as inventory for the next steps.
3. Envisaging and Discussing the Future
  - a. Based on the envisaged desirable future in step one and the identified current state in step two, various options for the future are envisaged and discussed with an open mind. Out of the options, the most feasible and sustainable one should be identified.
4. Finding Strategies for Sustainability
  - a. The current situation and the future sustainable situation are linked together by identifying a transition pathway which should achieve the future outcome.

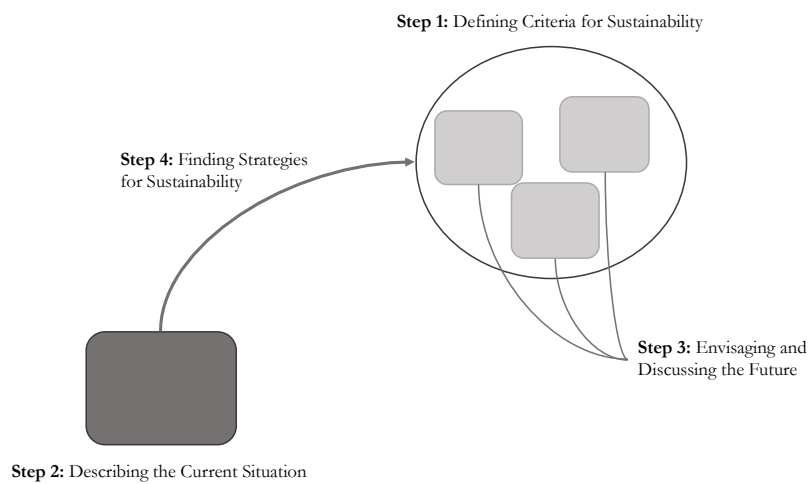


Figure 7 The four steps of backcasting. Adapted from Holmberg (1998)

### 3.5.2 The concept of the cruise ship and expedition

Holmberg and Larsson (2018) developed the conceptual framework of a sustainability lighthouse with aims to support conversations and transition leadership on achieving desirable sustainable futures. The framework aims to guide socio-technical transitions towards sustainability by seeking to inspire and support conversations on sustainability.

Holmberg and Larsson (2018) identified that in transition literature, the process of system optimization is often in conflict with the processes of system innovation. It is mentioned that depending on the activity, the two contrasts demand different kinds of leadership. That is, the process of experimenting and innovating follows different kinds of logic than the process of optimizing and redefining what is already existing. Furthermore, the two processes are given a metaphor of going on a cruise ship, and going on an expedition tour. The cruise ship is identified as the established part of an organization, where the current structures and routines, and more, provide support. But, on an expedition tour, these structures and routines can be seen as hinders. Holmberg and Larsson also identify key differences associated with the two different tours, in relation to leadership, key elements and emphasis which can be seen in Table 1 below

Table 1 Overview of the main differences of the cruise ship and the expedition

	The cruise ship	The expedition
Key elements	Goals, targets, measuring, follow up, controls and steering	Guiding principles, trust, autonomy, flexibility, reflection, learning, and making space for new initiatives
Leadership type	Decision making	Facilitation; actors across organizations are invited to explore and co-create together
An emphasis on:	Problem solving and solution implementation	Creating desirable futures

With the differences in mind, leadership for a sustainability transition proposes that these two types of leadership should co-exist and can complement each other, particularly in relation to mutual learnings (Holmberg & Larsson, 2018). Therefore, the expedition should not replace the cruise ship, rather to be aligned through for example long-term visions (Holmberg & Larsson, 2018) as the cruise ship might benefit from the experimentation done on the expedition.

### 3.5.3 Organizational learning

Organizational learning is connected to the cruise ship and expeditions model as it is important that the cruise ship and expedition parts of the organisation continually learn from each other as well as learn from mistakes (Holmberg & Holmén, 2020). In addition, the development of dynamic capabilities, like ambidexterity, require organisational learning (Dalkir, 2011). The definition of a learning organization is an organization with an expansive pattern of thinking where people learn together, also in regards to how to learn better together (Senge, 1990).

There are different levels of learning in organizations that have been recognised in literature. Level zero of learning is defined as not taking the correct action in times of change, single loop learning is when an organisation detects errors and adapts partly, but keeps policies and objectives the same, and double loop learning is when an organization changes underlying factors in response to change. Double loop learning is hard to achieve for many organizations but for those who succeed it facilitates organizational adaptiveness. Key to developing double loop learning is ongoing and open dialogues in the organization (Romme & Witteloostuijn, 1999).

Connecting the levels of learning to the cruise ship and expedition model, the importance of learning from mistakes in the cruise ship and expedition model could be understood as facilitating double loop learning in the organisations and changing underlying mental models and strategies when faced with change (Holmberg & Holmén, 2020).

## 4 Method

*In this chapter, an overview of the methodology used in this study is described. The study consisted of three main areas: Literature review, Interview study and Workshop with the case company. The chapter will be divided into subheadings according to these main areas where more explanations and details will be described.*

For this study, an explorative, qualitative research method was chosen as the aim of this study is to explore how established companies can enable a sustainability transition within the company through an ambidextrous strategy. This is an area that has not been thoroughly investigated in the past and more contribution to the research is therefore valuable and relevant. According to Saldana (2011), one possible outcome from qualitative research methods is new insights and understanding about social complexity. Therefore, in order to explore this research area, a decision was made to gather qualitative data through different sources and build on existing theory, so through primary and secondary data. Primary data is defined as new data obtained for a certain study by researchers while secondary data is collected from other sources (Thornhill, Saunders & Lewis, 2009). Data for this study has therefore been gathered through literature review and an interview study with the concepts of the expedition and cruise ship being central in the process. Furthermore, the findings will be used to provide general principles for organizations going through a sustainability transition within, as well as to provide more concrete recommendations for the specific case company.

### 4.1 Literature review

A literature review was performed in the beginning of the study and was revised later on in the analysis. According to Saldana (2011), an initial literature review is recommended in a qualitative study in order to ensure that basic knowledge is attained on the topic. Furthermore, it can widen the scope as other topics might become apparent that had not been thought of before (Saldana, 2011).

For the literature review, key papers were used for each of the main areas. In order to ensure good quality of the papers, a criteria was decided on whether it would qualify as a key paper for this study. This included how many citations the paper had and the year of publication. In the initial literature review, papers were identified through searches with keywords on Google Scholar and by suggestions from examiner and other experts familiar with the research areas with the criteria kept in mind. The papers were screened in relation to the year it was published as more recent papers indicated more relevant findings on the research area. Furthermore, the papers were screened according to the number of citations.

Additional literature review was conducted later in the process during the analysis of the interviews in order to further understand the different subjects that became apparent in the interviews. Furthermore, it gave an opportunity to enhance and broaden the findings from the initial literature review for a better analysis in the project work.

### 4.2 Interviews

Since the thesis is based on an explorative, qualitative research method, a series of semi-structured interviews were conducted throughout a month-long phase in order to gather the primary data for this study. The decision of conducting interviews was chosen in order to gain a better understanding of the researched area. As the research area is transdisciplinary, better understanding is needed that available literature cannot provide on its own on the issue, so an attempt was made to gather insights on the research area by interviewing individuals from different industries that might have experience in the field.

### 4.2.1 Interviewees

The first phase of the interview study was to plan and map out who to interview. Since the aim of the interview study would be to gain a better understanding of the research area by gathering insights from different individuals with experience in the field, the interview candidates were chosen according to different factors:

- The interviewees should have understanding of and experience in working with sustainability. After some consideration, a decision was made to also approach individuals with knowledge and understanding of organizational change in general to expand the knowledge base as these individuals are believed to hold valuable insights and experiences on working with transitions within companies. Furthermore, this decision was made in order to see if these two groups perceive changes in organizations differently.
- The interviewees did not have to come from any specific industry as the aim was to hear insights and success stories with different perspectives. Since the case company is positioned in the kitchen appliance industry, it was decided to also contact individuals from the home appliance industry in order to gain a better understanding of that industry.
- A decision was made to also reach out to different researchers from universities in order to gain a broader view of perspectives, and hear from individuals researching the topic of this thesis. That is, ambidexterity, sustainability, management and entrepreneurship.

For the case company, a similar decision was made, to interview individuals from different departments in order to gather as many different perspectives on the circularity transition happening within the organization. The interview candidates were found with three approaches; utilizing the network of the research group, searching on the internet and using a snowballing method for the interviewees. A snowballing method The interview candidates were then contacted via email and invited to participate in a 45-minute long interview session via Zoom. The individuals contacted were mainly working for Icelandic and Swedish companies, and the researchers came from Swedish, Icelandic and Dutch universities. The individuals from the case company are from the Netherlands. Chapter 4.2.1.1 below gives an overview of the individuals interviewed for this study.

#### 4.2.1.1 Interviewee groups

For this study, 30 individuals were interviewed and they can be divided into three different groups; *sustainability experts, management experts, and the case company.*

- *Sustainability experts:* are individuals that are actively working with sustainability. These individuals have education or experiences in environmental or sustainability matters and are actively working with sustainability in their daily lives. That includes researchers, sustainability consultants, individuals that are head of sustainability departments and more. Furthermore, this group includes companies that have succeeded well in making sustainability changes in their businesses.
- *Management experts:* are individuals that are not actively working with sustainability in their daily lives such as the group sustainability experts, but have knowledge on management and have experiences with working with organisational changes. These individuals do not specifically have education or experiences in the area of environmental or sustainability matters and the group consists of both researchers and practitioners that have worked with organizational change to some extent, either in the form of research or work experience. The majority of this group are individuals that have management expertise, but there are also individuals that do not have specific expertise in management, but those individuals have experience in changes in organisations.
- *The case company:* is the group with individuals from different departments in the case company. The reason why they were chosen was in order to gain a broader view of perspectives in the company

surrounding the circular transition. It's important to note here that the case company group only includes individuals from the case company.

An overview of the interviewees in each group and the industry the interviewees and/or departments are associated with are shown in Table 2, Table 3, and Table 4 below.

*Table 2 The interviewee group of sustainability experts, their industry, location and background information*

Inter-viewer code	Industry	Background	Country
SE1	Consultancy - sustainability	<b>Now:</b> Owner of a sustainability consultancy company that works with strategies and policies in companies and education, works as a sustainability coach. <b>Prior:</b> PhD in environmental engineering.	Iceland
SE2	Consultancy - management and sustainability	<b>Now:</b> 25 years' experience as management and sustainability consultant, owns a consultancy firm and has worked with a number of different companies going through some kind of sustainability transition. <b>Prior:</b> Educational background in environmental science and business.	Iceland
SE3	Consultancy - finance	<b>Now:</b> Head of sustainability at a large financial consultancy firm in Sweden. Main tasks include developing sustainability work in the organization, but part time works as a sustainability advisor for larger companies.	Sweden
SE4	Corporate group (various industries)	<b>Now:</b> working as a sustainability manager for a large corporate group. <b>Prior:</b> 5 year experience as sustainability manager for one of the daughter companies in the group. <b>Prior:</b> Educational background in economics.	Sweden
SE5	Sustainable development	<b>Now:</b> Project manager at a sustainability centre for companies where the goal is to build a more sustainable society and act as a bridge builder between the industry and the government. <b>Prior:</b> More than a decade experience in project management.	Iceland
SE6	Automotive	<b>Now:</b> Head of sustainability centre, and in charge of the sustainability aspect of R&D at the company. <b>Prior:</b> engineer with experience in R&D and managing and leading projects. 16 years' experience at the same company.	Sweden
SE7	Retail - home sector	<b>Now:</b> Head of circular business development for 5 years at a company where the projects are on strategic planning and goal setting for circular business. <b>Prior:</b> 15 year experience as business leader at the same company.	Sweden
SE8	Retail - construction	<b>Now:</b> CEO at a company going through organizational changes, one being sustainability efforts incorporated in the core strategy of the company. <b>Prior:</b> more than 21 year experience at the company in various positions.	Iceland
SE9	Researcher	<b>Now:</b> Assistant professor and a teacher. Focuses on CSR in small and medium sized companies. Relation to strategic implementation, communication, innovation and entrepreneurship of CSR and more.	Netherlands and Iceland
SE10	Signs	<b>Now:</b> CEO and manager for a small company that went through a circular transition. CEO for 13 years. <b>Prior:</b> Overall 20 years' experience at the same company.	Sweden
SE11	IT	<b>Now:</b> Director of CSR for 5 years, working with compliances and sustainability. <b>Prior:</b> more than a decade experience in CSR work	Sweden

Table 3 The interviewee group of management experts, their industry, location and background information

Interviewer code	Industry	Background	Country
ME1	Manufacturing – Food Automation	<b>Now:</b> Team manager of an international team at a company that is going through a relatively large organizational change. <b>Prior:</b> Project manager in the sales department, has 5 years' experience at the company. Holds master's degree in project management.	Iceland
ME2	Manufacturing – Food Automation	<b>Now:</b> Sales operation manager. <b>Prior:</b> Held various positions within the company, has 10 year experience at the company. Background in marketing and international business.	Iceland
ME3	Construction	<b>Now:</b> head of people and organization and responsible for strategic changes, has had that position the last 5,5 years. <b>Prior:</b> Decades experience in consulting in change management and organizational set-up.	Sweden
ME4	Automotive	<b>Now:</b> Talent manager specialist. <b>Prior:</b> Financial manager for the company. Also initiated a project that is still ongoing against social segregation.	Sweden
ME5	Researcher	<b>Now:</b> Professor working with large scale transformations within companies. Has worked with many organizations during his research. <b>Prior:</b> Has years' experience in the field of leadership, in charge of a large association in relation to leadership.	Sweden
ME6	Researcher	<b>Now:</b> Professor since 2000, working with technology, business administration, public administration and entrepreneurship, entrepreneurship and effectuation with focus on cultural difference and how entrepreneurs take decisions	Netherlands
ME7	Researcher	<b>Now:</b> Assistant professor working with entrepreneurship, strategic entrepreneurship and management with focus on IT/ computer science for one year. <b>Prior:</b> student and PhD for 5 years.	Netherlands
ME8	Retail - home appliances	<b>Now:</b> Head of brand marketing for a large corporate group in the home appliance industry, responsible for external communication of the different brands. The company is currently going through a large organizational change.	Sweden

Table 4 The interview group from the case company according to departments

Interviewer code	Department	Interviewer code	Department
CC1	Innovation manager directly under the CEO	CC6	Sales controlling
CC2	Research and development	CC7	Top management
CC3	Legal	CC8	Top management
CC4	Business manager	CC9	Marketing
CC5	Finance	CC10	Human resources

#### 4.2.2 Conducted interviews

The interviews were conducted online via Zoom or on Microsoft Teams due to the current travel and meeting restrictions because of the Covid-19 pandemic. Each interview was around 45-minutes and the interviews were conducted over a month. Notes were taken during the interviews but interviewees were also asked for permission for the meeting to be recorded in order to do a detailed transcription later on.

The semi-structured interview method allowed for flexibility in the questions asked, which was beneficial since the interviewees have different backgrounds and specialties. The questions asked during the interviews consisted of four main parts that varied to some extent between the interviewee groups. The difference in questions asked was also in order to gather specific data for the case company. The four main areas were:

- **Part 1: Introduction questions - varied between the interview groups**
  - All groups were asked questions on this topic which differed between the interviewee groups.
- **Part 2: Questions on enabling change in a new way**
  - All groups were asked questions on this topic
  - The research area, the concept of ambidexterity and the concept of the cruise ship and expedition was introduced to the interviewees. See Figure 8 and Figure 9 for the content that was presented to the interviewees.
- **Part 3: Questions on integrating change**
  - All groups were asked questions on this topic
  - Another scenario on integration was introduced to the interviewees. See Figure 10 for the content that was presented to the interviewees.
- **Part 4: Visualizing the future - two groups**
  - Interviewees from the case company and the sustainability experts were asked questions on this topic as this part was specific for the case.

A more detailed description of the interview questions can be found below in Appendix A - Interview questions.

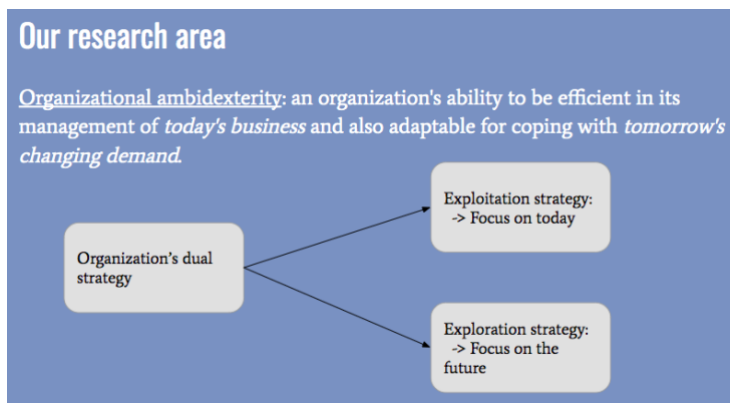


Figure 8 The slide that the interviewees were shown in part 2 of the interview. An introduction to the research area

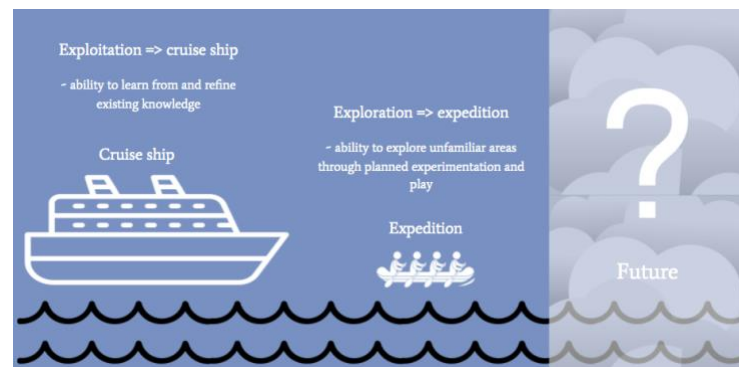


Figure 9 The slide that the interviewees were shown in part 2 of the interview and the cruise ship and expedition model.

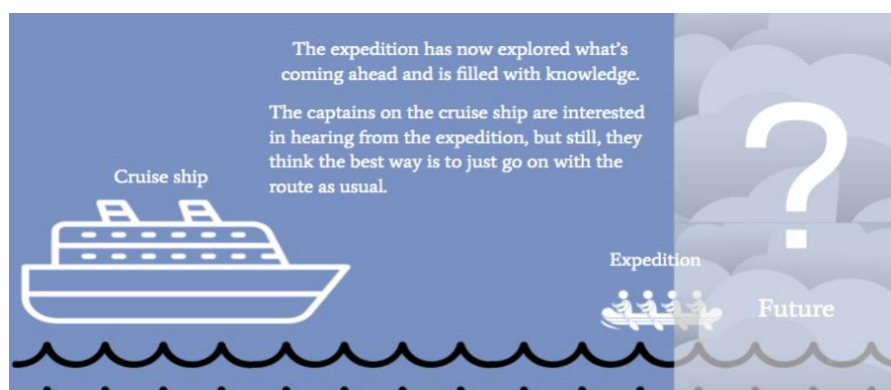


Figure 10 The slide that the interviewees were shown in part 3 of the interview. The scenario of the expedition coming back to the cruise ship with its findings

### 4.2.3 Analysis

The last part of the interview study was to do a thematic data analysis of the data gathered from the interviews. A thematic analysis is described by Braun and Clarke (2006) as “a method for identifying, analysing and reporting patterns (themes) within data.” (p. 79) and is widely used for analysing qualitative data. The steps of doing a thematic analysing include: 1) being familiar with the data, 2) making initial codes, 3) looking for themes, 4) reviewing themes, 5) defining themes, and 6) producing the report (Braun & Clarke, 2006). With these steps in mind, the transcribed interviews were reviewed and coded, and during a brainstorming session, the codes were clustered together and themes were identified. The themes were reviewed again and further defined. The final step was then to relate them to the research questions put forth in this study, and to the literature review. Additionally for the case questions, the themes were structured according to the Backcasting method. The steps of the thematic analysis are described in the sections below.

#### 4.2.3.1 Coding

This refers to step one and two of the thematic analysis. All thirty interviews were transcribed in a separate Word document and were then coded in the software NVivo. NVivo is a qualitative data analysis software with many features that allows for an easier coding process. The coding process consisted of going through the transcribed interviews and parts of the texts that were believed to be a theme, or contribute to a theme, were marked. The marked text was then exported to a so-called node, and the nodes were given a heading of the theme. This process was done individually by both members of the research group in order to create a more diverse understanding of the data and themes, the next steps of the analysis are explained in the section below.

#### 4.2.3.2 Themes

This refers to step three to six of the thematic analysis. The individual coding was clustered together in order to identify patterns and connections, as well as consensus and dissimilarities between them. That was done by a brainstorming session where the software Miro was used, but each node from the coding process was put on a separate sticky note on a virtual whiteboard in Miro. The notes were then reviewed and clustered further together after the themes were defined. This process gave indication on what was new information, and what information was already known before in literature in order to identify and focus on the less known themes. The final step of the analysis was to relate the themes to the literature and appropriate parts of the thesis, first the theoretical part and then the case part which is illustrated in Figure 11.

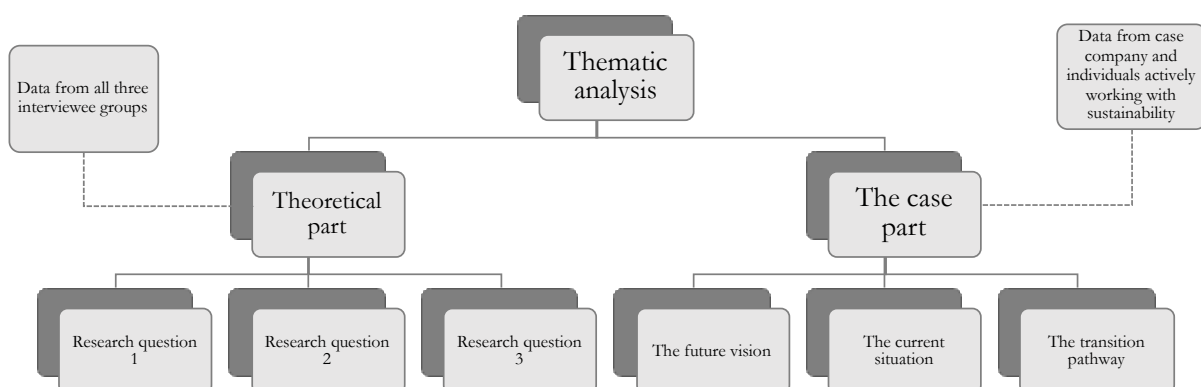


Figure 11 An overview of the thematic analysis for the two parts of the thesis

For the theoretical part, the themes were sorted in relation to appropriate research questions, so another review of the clusters took place and the themes were associated with corresponding research questions and literature. Similar and overlapping themes were clustered together in an overarching theme instead of many related themes. For the case part, the focus was on the implications of the data for the case, where the analysis was based on the structure of the backcasting approach. This was done in order to give an indication on where the case company is positioned in relation to the circular transition which would benefit the final recommendations to the case company. Therefore, the corresponding themes were sorted based on the three steps of the backcasting approach, beginning with a desirable vision in relation to the circularity transition of the case company. Moving on to the current situation of the case company, and lastly in relation to the pathway of reaching the future vision.

### 4.3 Workshop with the case company

The third part of this study was to conduct a workshop with the case company. The main goal of the workshop was to enable a sense of ownership to the recommendations in the circular transition that would be given to the company. Furthermore, the aim was to gain a better understanding of how individuals of the case company perceive the circular transition and where they are positioned in that transition. The workshop was split into two halves, the first half was an introduction to the thesis, the research area and the preliminary findings from the interviews and recommendations, while the second half consisted of a brainstorming session for possible next steps in the circular transition at the case company.

#### 4.3.1 First half

During the introduction, four preliminary recommendations from the conducted interviews with individuals from the case company were shared with the participant and they were asked to answer questions anonymously in Menti on to what degree they agreed with the recommendations and if they could rank them according to how important they felt the recommendations were. Furthermore, participants were asked to answer the question on how long they believed it would take for the case company to become fully circular. With them being fully circular, a definition was given according to the Ellen MacArthur foundation that the case company will have designed out waste and pollution, keep materials and products in use, and work on regenerating natural systems. During the last part of the first half, the participants were divided into 2-person breakout rooms where they were asked to choose the recommendation they agreed with the most, and the least, and discuss why they felt that. The participants were then asked to share their discussion with the rest of the participants in the main room after the short discussion.

#### 4.3.2 Second half

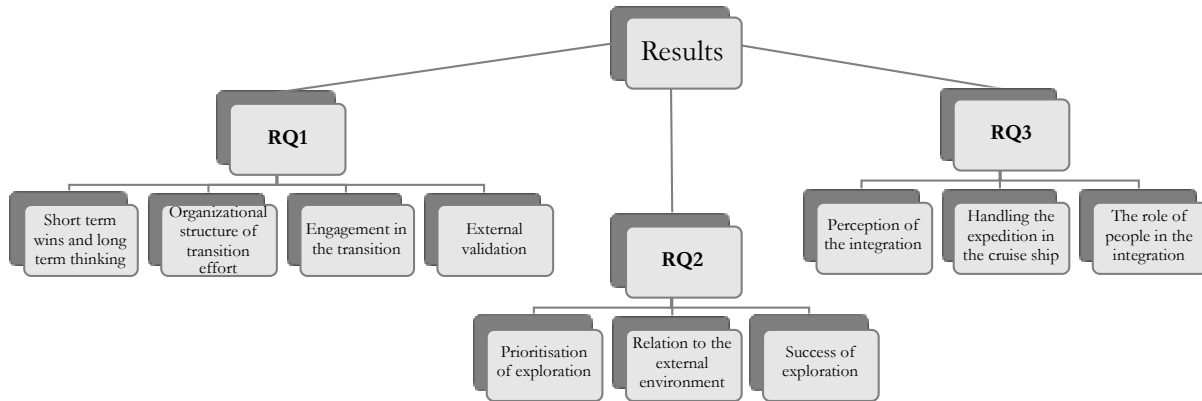
During the second half, the results from the question on for how long the participants believed it would take for the case company to become fully circular was revealed. The participants were then again divided into 2-person breakout rooms and each room was given one recommendation to work with. The task was to brainstorm and co-create what steps needed to be taken in each recommendation in order for the case company to become fully circular. Each group got guiding questions that they could use, or not, during their working session. The groups were given 20 minutes to discuss and prepare a short presentation to their next steps for the recommendations and after the work session, participants were invited back to the main room and were asked to briefly present their ideas.

### 4.3.3 Data from the workshop

The information gathered from the workshop was not coded like the data from the interviewees from the case company, but instead it was used to further strengthen the data gathered on the case company and their circularity transition. Furthermore, the data from the brainstorming session was used in the final recommendation to the case company. The workshop took two hours during a Monday afternoon and was conducted online via Zoom. For the workshop, 8 individuals from various departments of the case company participated, and around half of participants had not been interviewed nor spoken to before.

# 5 Results

*In this chapter, the results on the theoretical part of this thesis are presented. The chapter will be divided into three main sections where the data from the interviews are presented, with each section representing one research question. In the sections, the main themes according to the three interview groups are presented, and an overview of the themes identified by the interviewee groups is presented in the beginning of the sections in a table. Then, the sections will be broken down into sub-sections, each representing the main themes identified by the interviewees. In the subsections, the data according to each interviewee group is presented, with quotes taken directly from the interviews. It is important to note that this chapter only includes a presentation of the data gathered from the interviews. An overview of the themes found for each of the research questions can be seen in Figure 12.*



*Figure 12 An overview of the themes identified by the interviewees for each research question*

## 5.1 Research question 1

This section presents data in relation to research questions 1, which was: *How can established companies enable a sustainability transition even though the outcomes of the change are uncertain?* The section is divided into four parts, each representing a theme from the answers of interviewees. Within each theme are findings from the three interview groups presented. First the findings from the case company, second findings from the sustainability experts, and lastly, findings from the management experts. An overview of the main points made by the three interviewee groups in regard to enabling a sustainability transition and the correlating theme are presented in Table 5.

*Table 5 How to enable an uncertain sustainability transition according to each interview group*

Overview of themes	Case company:	Sustainability experts	Management experts
<b>Short term wins and long term thinking</b>	Short term wins	Long term thinking	Short term wins
<b>Organizational structure of transition effort</b>	Doing the transition outside of the company	Working with sustainability at the core of the business	Starting the transition in a part of the company
<b>Engagement in the transition</b>	Gaining sustainability knowledge	Making the transition meaningful	Engaging people and communicating
<b>External validation</b>		Getting external validation	

### 5.1.1 Short term wins and long term thinking

The first theme that was identified was on short term wins, long term thinking and the relation between them. All groups mentioned both, but the sustainability experts emphasized long term thinking while the other two groups short term wins.

#### Case company

The first way the case company employees would like to approach the circularity transition is by creating short term wins by starting small and going for low hanging fruit. As a reminder, these were individuals from various departments within the case company. While some employees' emphasizes that the short-term wins must be part of a road map towards a long-term vision, others are more focused on starting small and seeing where it leads. One reason behind going for small steps first as stated by interviewees, is that it is hard for many employees to understand what circularity is and why it is needed. For example, some interviewees mentioned that it is hard to see hypothetical things. Some are quite critical and do not think a lot will happen short term, as they think the change would require more commitment and support from the top management, one interviewee said:

“I think there should be a mandate from top down as well, management needs to support it and budget for it.” (CC2)

#### Sustainability experts

As previously stated, the sustainability experts are individuals that have knowledge on sustainability and experience with sustainability transitions, and do not work at the case company. Almost everyone in this interview group mentioned seeing the bigger picture, not only focusing on one's own business, long term thinking, accepting uncertainty and looking forward. One expert shared the main problem for many companies when attempting to change before they are forced to:

“If a company has been successful in the past, it is a reason for that, which is that they have conducted business in a specific way. They're not changing a successful way of business to something that is unsure, the main obstacle is to take the leap forward. They need to change their strategy of business when it is fine right now. There are a lot of examples, Hasselblad that was successful at non-digital cameras, Kodak that was not adjusting because they had a business model that was successful, they were reluctant to change it. The problem is to perceive the urgency of the change that has to be, and managers tend to look backwards to what has been successful in the past.” (SE2)

Many interviewees in this group talked about the importance of looking forward and not to the past. They say that there is a need to always be exploring the future of the business, to not be hitting walls as you can never be sure. The experts agreed that companies need to see beyond their own boundaries, collaborate more and care more for the system they are operating in. One expert urged companies to not be too focused on themselves, and to start working with universities and research as organizations need to work with other institutions for the greater good.

A best-case company in a related industry to the case company puts it in a way that looking forward and being an attractive option in the future is essential for the company to survive as they are aware the they will not be an attractive go-to company if they don't go circular in their operations and their business offers will shrink. So they see their circularity transition as an important business opportunity perspective.

## Management experts

According to the management experts, the importance of short-term wins is very similar to that of the case company's reasoning and is focused on making money both today and in the future, approaching changes that can give short term wins or that are needed due to external pressure. As a reminder, this interviewee group includes individuals that have management expertise and/or experience in working with organizational change. Note that two interviewees in this group talked about seeing the bigger picture and wanting to make a difference, one of them connected it to getting a competitive advantage in the future and the other to make an impact fast. The remaining seven interviewees focused on changing because of external pressure or monetary reasons, where profitability is part of sustainability. Their main argument is that profit makes the business survive and therefore profit needs to be prioritised. One of the researchers explain why many companies focus on the short term when it comes to sustainability:

“If you hear today that the sea levels are rising in 25 years’ time, but people say this is in 25 years, should we already change the complete structure in order to be able to cope with this when others are not doing it? Why on earth should we do it?” (ME6)

### 5.1.2 Organisational structure of the transition effort

The second theme that was identified was on the organisational structure of the transition effort. All the three groups had different opinions on what the best structure for the transition would be.

#### Case company

The majority of interviewees from the case company would approach the transition by going outside of the established organization, in other words by going fully circular outside of the organisation before integrating it into the existing business. This is something that the majority of interviewees from the case company agreed upon, usually with the reasoning that the day-to-day business would take over if a transition would be attempted internally. Some point out that they need to split the interest of the day-to-day business from what is coming in the future and the most optimistic way is to use a start-up outside of the organization. Many also mention that it would not make sense to approach the transition in the established part of the company until it is profitable, as one of the workshop participant brought forth:

“A small part of [the case company] wants to do it because it is in their DNA. Most colleagues are looking for commercial success. “ (*Workshop participant*)

Many interviewees also mention that there is a need for further collaboration with external actors like universities, in the value chain and even with competitors to enable some things required for the circular transition, for example a refurbishment line.

#### Sustainability experts

The majority of sustainability experts emphasized the importance of having a clear direction, focus and prioritization of sustainability changes, that they need to be part of the identity of the company and core of the business to enable a truly sustainable change. One expert shares the experience of working with many different companies and that starting at the core of the business is essential to becoming sustainable:

“The first thing is to look into your core business, what is your purpose, what is your reason for existence and how is that linked to sustainability? How can you become more sustainable, how can you work on your main issues and not something in the periphery? It is almost nonsense when

companies focus on something that is not related to the core business, you have to start from the core of the business.” (SE2)

In order to work with sustainability at the core several of the sustainability experts stated that the day-to-day tasks need to be down-prioritized sometimes and that it is very common that these changes are put on top of people's tasks, while companies instead should give employees the flexibility to skip some day-to-day tasks in order to work on the transition as well. Some interviewees in this group state that you need to work with the full value chain and identify process steps that need to become circular and that you need to start where you have the most negative impact on the environment. One of the interviewees is worried that other companies will try to copy what they are doing without actually doing the work themselves and mentions the importance of avoiding greenwashing. Another interviewees explains what a circular transition means for them and mentions that it is a systemic shift:

“We have set that we need to be a circular company in 2030. What we mean by this is that we want to take this on in our complete value chain and everything we do, supply chain, develop our products are enablers for CE. We want to be as a company, to inspire others so that is also part of that clear goals, we want all our products to be enabling circularity in 2030, it is very much a systemic shift in our range offer to understand how they need to be designed to prolong life and whatever comes in is right from the beginning for recycling, CO<sub>2</sub> etcetera.“ (SE7)

### Management experts

In contrast to interviewees from the case company who agreed that to transition externally is the best way to approach change, the management experts focus on transition internally through starting in a part of the company. This approach is also different from the approach of the sustainability experts that emphasizes starting at the core of the business. Most management experts talk about local initiatives, pilot projects and similar in the organization as an enabler for change. They mention that there are often local success stories that have then moved into the big organization. One of the interviewees explain why the change should be approached in new part of the company:

“If you think about a plant that produces paper, it is 700 meters long and has a gigantic machine. When they work there, they need to ensure the machine spits out the right amount of paper. So, they will improve and deliver what they are measured on and make the process better. They won't pause the plant for three months and throw out the machine and install a new one.” (ME3)

Furthermore, some of the management experts emphasized that starting in one part of the company is good but, in the end, the full company needs to be involved and if the difference is very big, you are going to want to have the transition in the organization. One of the interviewed management researchers explained what needs to happen in an organization in relation to corporate social responsibility, or CSR. He stated that if you have a team investigating it for the organizations so there is a good understanding of the current and emerging practices, you also need to look into and solve the problem of making the whole company follow it. That is, that the company will be run by the CSR findings.

### 5.1.3 Engagement in the transition

The third theme that was identified for the research questions 1 was engagement of employees in the transition. All the interview groups mentioned this, but had different focus areas, the case company focused on knowledge, the sustainability experts on communication and management experts focused on the meaningfulness of the transition.

## Case company

Most interviewees from the case company were not sure of how to define circularity and mentioned that they and most others in the organization need to gain more knowledge when it comes to circularity. When interviewees were asked about circularity, how they would define it and how they would approach circularity in their work, most had a hard time to talk about what it would mean if the case company would try to become circular. Two reasons given for this was that they were not in the product part of the company and that the innovation manager has all contact with researchers and universities. Many of the interviewees thought that the case company's core is commercial success, and that circularity is only meaningful if it fits with that. Some of the interviewed managers mentioned that it is hard for employees to understand what they mean with circularity and then to prioritise it, and emphasize the importance of bringing it closer to the employees and what it means for their future.

Some of these case company's interviewees talked about the importance of having a training program for the middle management, for them to get more knowledge on circularity and freedom in their job to implement what they think is the best solution. One recurrent thing the interviewees from the case company brought up was the need to create a new mindset in the organisation, a long-term goal, and a clear strategy for circularity. As one of the case company's interviewee explained what they think is needed:

“It is important to first create the right mindset, what do we need to solve as an organization, at first making the proposition clear, what does it exactly mean for us, customers, consumers.”  
(CC10)

## Sustainability experts

Many of the sustainability experts mention that the interest to work with sustainability often is connected to a personal passion and initiative of employees. As a reminder, the sustainability experts are individuals that have knowledge on sustainability and experience with sustainability transitions, and do not work at the case company. These experts also mention that the transition needs to make sense to employees and feel meaningful for them, including that they need awareness, knowledge, and a personal connection to the change as well as a clear vision that is broken down into what it means in practice for them in their everyday work. One best case company said:

“The awareness is there, we need to change, we need to do this, but the problem could be that a lot of people don't know how to contribute. Our main task right now is to translate this mystic way of transitioning there, because it is not easy to make the right choice. [...] You also need to create a level of engagement, to have the push of doing something differently. [...] The lesson has been to involve the employees as much as possible, so not doing it only in a small group and then presenting it.” (SE10)

Some interviewees emphasize that knowledge is key to making a change meaningful, that some kind of training and to give some kind of basic understanding on why the company is changing and becoming more circular are needed. They mention different methods and tools, for example to facilitate workshops with all employees. One interviewee mentions that the company's circularity transition started with a child in the family asking about how they worked with sustainability in the company.

Furthermore, many of the sustainability experts mention knowledge and building new competencies in the organizations. Some of the interviewees in this group brought up that sometimes changing competencies in the organisation means that the expertise of an employee is no longer wanted, with one interviewee sharing how their employees learned new competencies:

“For many people it has been a very difficult transition and of course there has been non-acceptance and hesitance, not in full areas but there have been people that have been having a hard time jumping aboard in certain areas. And so, we needed to change our competence base, so we have had a lot of education within the company, creating different paths in how you can get information, knowledge, some training, go beside a person a lot of initiative in how you can use your competence today and transfer it to a new area.” (SE5)

### Management experts

Similar to sustainability experts, the management experts emphasize making the transition meaningful for employees by involving them actively in changes and communicating regularly. In contrast to the case company, they do not focus on knowledge. In comparison to the sustainability experts, they are mostly focused on engagement and communication in the transition. Co-creating a higher purpose is mentioned by some interviewees in this group, but is not the focus of most. One interviewee points out the importance of trust for engagement in change:

“Another thing that tends to happen is that most organizations are horrible when it comes to people trusting their organizations and how they feel trusted by the organization. If you don’t feel trusted by your organization you are probably not going to take initiatives to drive things forward, you are not going to invest anything extra if you don’t think the organization will appreciate it and you don’t trust the organization will do something properly. You are not going to do the best of your work if you don’t think that the organization will succeed anyhow, you feel it’s useless.” (ME5)

#### 5.1.4 External validation

The last theme that was identified on how to enable an uncertain sustainability transition was only mentioned by the sustainability experts. According to them, a main enabler for change is getting external validation for your work through a feedback loop. Interviewees of this group frequently mentioned getting external validation as essential to manage to change in a less explored direction and that the words from external people are more impactful than trying to convince people internally. One of the sustainability experts explained the importance of getting external validation and feedback to enable a sustainability transition:

“I spoke outside [the company] about it and someone outside came back there and talked about it, *this was smart*, which was much more valuable than listening to me presenting the business case.” (SE2)

## 5.2 Research question 2

Data from the interviews in relation to research question 2 will be presented in this section, but the question was: *How can established companies enable more exploration?* The section is divided into three parts, each representing a theme from the answers of the three interviewee groups. Within each theme are findings from the three interview groups presented. First the findings from the case company, second findings according to the sustainability experts, and lastly, findings from the interviews with the management experts. An overview of the main points made by the three interviewee groups in regard to how to enable more exploration are presented in Table 6. Note that exploration was introduced in terms of the expedition and cruise ship model, and that the words exploration and expedition are interchangeable here.

Table 6 Main points from each interview group in regard to enabling exploration

Overview of themes	Case company	Sustainability experts	Management experts
<b>Prioritisation of exploration</b>	Making room for exploration	Making room for exploration	Making room for exploration
<b>Relation to the external environment</b>	External collaboration	Connection to the external environment	Sensing the external environment
<b>Success of exploration</b>	Measuring success for exploration differently	Redefining success to explore for learning	Deciding what success in exploration means for you

### 5.2.1 Prioritisation of exploration

The first theme that was identified was prioritisation of exploration through making room for the exploration effort with all of the three interviewee groups emphasizing the importance of this.

#### Case company

The first thing that interviewees from the case company brought up when asked how they can enable more exploration was to make room for the exploration to take place. As a reminder, these were individuals from various departments within the case company. Resources, time, money, or freedom and support from the board was mentioned by all interviewees in some form. In addition, other things brought up frequently were having a clear goal for exploration, a bigger team working full time on exploration and that people in the day-to-day business are taking the exploration seriously and acting on the findings. The two interviewees from the top management of the case company agreed that the exploration needs their support and emphasized that explorations are strategic projects that everyone in the organization needs to support. When asked about what the expedition needs to explore fully one of them answer:

“They need full support from the board, that means that they are able to go into the organisation and ask people for help and they also get the budget to do so. Everyone has to support the team as it is part of the strategic project, you need to support the team. In a very traditional organization like ours, everyone is sitting in their own column, sales etc., but it is very difficult to think outside of the column. It doesn’t matter where; everybody needs to support the expedition.” (CC7)

All the employees agree that the top management need to support the expedition and many of them add that there is a great need for more people involved exploration efforts, more resources allocated from exploitation to exploration parts of the company and that it is a problem that the innovation manager is alone at the boat as well as that people are expected to work with exploration on top of other tasks. One of the interviewed case company’s employee explained:

“For instance, with the circularity, it’s a very important project and has to become the number one and put above and beyond every other work that has to be done, but then at the same time it’s put on top of the rest of work, so on top of the day-to-day business. So, what the cruise ship needs to allow is a little bit more room!” (CC4)

#### Sustainability experts

Like the interviewees from the case company, one of the first things the sustainability experts brought up when asked how to enable more exploration, was to make room for the exploration to take place through

removing different kinds of hindrances and prioritizing exploration. Resources, time, money, or freedom and support from the top management was mentioned by all interviewees in this group as well. One of the interviewees mentioned that going from a three-year plan to a ten-year plan enabled more exploration. Additionally, many of the interviewees in this group brought up the need to trust people, to really listen to what the exploration team has to say, to use the knowledge and act on what they bring back. Some interviewees point out the importance of listening, being open to change and to take action on what you learn. One of the sustainability experts said that the cruise ship needs to be open to receive and willing to listen to the team coming back. Other two interviewed sustainability experts said:

“I prepared a presentation on what they are doing, this is the future and the manager said *no I don't believe you*. They weren't prepared to receive the message I was bringing back. You need to not only send people out, but you need to listen to them too.” (SE2)

“You talk about facts and the threats and everyone in the room they are talking about oh my god we need to do this and this and this and then 30 minutes later they go back to the day-to-day business and their ordinary roles. They are not doing anything differently.” (SE3)

#### Management experts

The management experts answered the same as the two other interviewee groups. The first thing that came up in order to enable exploration is removing different obstacles and prioritizing exploration by giving it enough time, resources and power as well as listening to the insights that are brought back from the exploration.

### 5.2.2 Relation to the external environment

The second theme that was identified to research questions 2 was the relation to the external environment. All groups mentioned this in some form, but with different focuses. The case company focused on collaboration, management experts focused on sensing the environment and sustainability experts had a more holistic approach to the external environment.

#### Case company

Another way the employees from the case company would enable more exploration is through external collaboration. Some interviewees mentioned that the case company cannot explore exclusively internally as there is a need for new competencies, mindsets, and ideas. It was mentioned that sensing what is happening in the external environment and applying long-term thinking to that is important and enabled by collaboration with for example universities and external partners. Particularly in regards to exploration for circularity, several interviewees mentioned the need to collaborate with consultant companies, start-ups and universities. One interviewee emphasizes the need to sense what is happening in the external environment and not only the immediate external environment, looking to other industries for example. The rest of the case company's interviewees are mainly focused on collaboration with universities and start-ups.

#### Sustainability experts

This interview group views connection to the external environment as important to enable exploration for sustainability transitions. As a reminder, this group includes sustainability experts that have knowledge on sustainability and experience with sustainability transitions. Although, the sustainability experts agree with the individuals from the case company on the importance of external collaboration, they add transparency and communication with customers, the willingness to make an impact in the external world, sensing and trusting that change will happen in the external environment, measuring beyond the company boundaries,

getting external validation, and hearing the same message from different groups of people repeatedly. One interviewee summarizes the concept of looking further and the ongoing connection with the external environment as follows:

“They want to measure their part of the cake instead of the whole cake, measuring only themselves rather than the society outside the boundaries of the company [...] You need a team of people going to all kinds of meetings, getting new ideas, out there exploring. Then you can combine the new ideas with your company’s experience and come up with new ideas. It is very helpful.” (SE2)

A key learning from this group is that companies should work with the external environment in a way that makes it confirm what they are doing internally. For example by talking to customers or the industry about the change they are doing or the previous successes they have had in order to hear it back from them.

#### Management experts

The management experts emphasize the importance of sensing the external environment both as an enabler for more exploration and as a goal with the exploration effort. As a reminder, this interviewee group includes individuals that have management expertise and/or experience in working with organizational change. Unlike the other two groups they do not focus particularly on collaboration. Like the sustainability experts, they focus on being aware of what is happening in the external environment.

### 5.2.3 Success of exploration

The third theme that was identified in relation to research question 2 was on how to measure the success of exploration. All three interview groups had different thoughts on how to measure success on exploration efforts. The interviewees from the case company thought that it should be different than for exploitation but did not have a consensus on how. Most of the interviewed sustainability experts agreed that success in exploration should be learning and that the exploration effort should not be measured, while the management experts had several different views.

#### Case company

One of the main ways to enable exploration that came up in the interviews with the case company is that success in exploration is different from success in day-to-day business. Many interviewees mentioned that it is difficult to measure success in exploration and hard to predict the future meaning that failure and success is not the same for the expedition as for the cruise ship and they therefore should have different criteria and KPIs.

Most of the interviewees from the case company agree that strict economical key performance indexes (KPIs) and measurements that are the same as for the day-to-day business are not suitable to measure the success of the exploration. One interviewee simply thinks that success of exploration is if it brings a remarkable idea to the cruise ship while another thinks it is a success if the idea fits with the existing business. Some of the interviewees from the case company suggest that adjusted entrepreneurial KPIs would be suitable, for example measuring the number of patents, successful prototypes, and new business models. Others suggest that there are no real financial targets for exploration other than to finish the project, gain knowledge or ensure future survival of the company. The two top management that were interviewed from the case company both agree that success need to be different for the exploration and cruise ship, but they have a bit different views on how to measure the success of exploration:

“It is difficult to put KPI on the expedition. [...] Not necessarily a business case, but more than just thoughts; this is what we are causing, analysis, broad perspective, our responsibility, an impact analysis, how can we prevent this and improve this kind of thing.” (CC8)

“If we are looking for a strategic project, it is always a business case, always in the old-fashioned way with numbers. But for us it is not only about financials because we are working at the moment on a lot of projects that we don’t know if we will earn money, but we think it can be necessary to be in the market in 5 or 10 years. This is not financial, not to earn money or save money but also to survive long term, not always the financial KPIs, [the innovation manager] now works on the set-ups of sustainability KPIs.” (CC7)

Many other interviewees also discuss the dilemma of exploring for monetary reasons or not. Several of them emphasize the importance of avoiding “hobby” in the exploration with one of them explaining that the expedition should be quite free to act and explore, but it needs to be able to elaborate on some possible success. So, it is important to have people on the cruise ship on the expedition in order to keep it on route, because that will give them an opportunity to look into the mirror and evaluate if they are on the right route or not, and then answer the question on if the expedition has started hobbying.

#### Sustainability experts

In contrast to the interviewees from the case company, sustainability experts emphasized that even though a clear goal and strategy is needed for the exploration, the direction should not at all be controlled by the day-to-day business. In addition, they also discussed the problem with setting specific goals on the result of exploration, for example using measurements like KPIs and having an economic or short-term agenda while most exploration efforts require long-term exploring, several failures and openness to a different result than first expected. Some interviewees explain:

“Goals and KPIs and so on are fine measurements but the problem is that the measurements are based on your previous experience and the organization you are in right now. It is often difficult for organizations to rethink what they are really measuring.” (SE2)

This group agrees with the case company that success for exploration needs to be redefined and many of them add that learning is a suitable success factor for exploration. They mean that exploring for learning and following the curiosity of the employees, in terms of answering a question rather than coming back with a business case or specific result, is successful in itself. One of the sustainability experts said that if you learn something from the expedition, you get value from it, and if the decision is to not use the learning, that is also of value for the organization. Another sustainability expert explains that you need to be all over the place learning, by participating in all kinds of networks and meetings, and although you are not learning anything new from these activities, you are attending them for the 1-2% you learn each time. One sustainability expert explains:

“Follow your curiosity. Think of an organization as a person and take the individual into account, follow their curiosity. Their curiosity is leading the way, hopefully they are interested in the company and that will lead the way forward to change and exploration.” (SE1)

#### Management experts

Unlike the other two groups, there is no consensus or more common opinion on how to measure success for exploration according to the management experts. As a reminder, this interviewee group includes individuals that have management expertise and/or experience in working with organizational change. It is

quite even between the interviewees who think exploration should be measured in the same way as day-to-day business and those who think it should be measured differently. The individuals from the case company and sustainability experts agree that to enable exploration the success of exploration needs to be different from the success of the day-to-day business. The management experts agree that it is important to decide what you think is success in exploration before exploring, but the opinions on how to measure the success differ.

“Everyone that was a part of the expedition will say this was great. Nobody will admit that it was a total failure after some time and stop working on it. That is the challenge with these cases. You are so keen on showing the good things so you might forget the bad things with it. So, you need to set up really clear KPIs on it, so what is a success beforehand.” (ME8)

“Evaluate it completely differently from the cruise ship. The cruise ship is more day to day focused; there we are focused on revenue.” (ME2)

### 5.3 Research question 3

This question refers to the third and last research questions: *How can established companies integrate findings from the exploration into the existing business?* Three main themes were identified from the three interviewee groups which differed slightly between the groups. These themes are; perception of the integration, handling the expedition in the cruise ship during integration and the role of people in the integration. This section will be divided into three parts, each representing one theme with the main points from each interviewee group. Table 7 shows an overview of the answers on the three identified themes from each interviewee group. Note that exploration was introduced in terms of the expedition and cruise ship model, and that the words exploration and expedition are interchangeable here.

Table 7 Main points from each interview group in regard to integrating the findings

Overview of themes	Case company:	Sustainability experts	Management experts
<b>Perception of the integration</b>	Integration is not a problem	Integration is a big problem	Integration is a big problem
<b>Handling the expedition in the cruise ship during integration</b>	Communication of the expedition’s success stories	Creating a sense of ownership in the cruise ship	Creating a sense of ownership in the cruise ship
<b>The role of people in the integration</b>	Different knowledge and expertise on the expedition	Identifying the right people for the right positions	Competences and identifying the right people

#### 5.3.1 Perception of the integration

The first theme that was identified was surrounding the different perception of the integration phase, with the interviewees from the case company stating that the integration would not be an issue, while the other two interviewee groups identifying it is a big issue in established organizations.

##### Case company

When the ten interviewees from the case company were asked to reflect on whether integrating new expedition findings into the established part of the business could be seen as a challenge or a problem, almost all interviewees answered that it wasn’t and wouldn’t be an issue.

It differed between interviewees why they perceived that it wouldn't be an issue, three mentioned that the top management of the company is very open for changes and therefore supportive of new ideas. The same interviewees said that this would be a problem for an organization with an old and old-fashioned board, but that was not the case for the case company as their CEO is young and very open. Furthermore, they mentioned that they are very lucky in the sense that their CEO is one of the most advanced in pushing them to come up with new ideas. Some interviewees also mentioned that their current structure was good, that people working on new ideas were invited to communicate with the top management on the findings which will help the integration process later on. It was however mentioned by two interviewees, one a member of the top management, that they were facing some resistance from the middle management during change processes and they admitted they needed to tackle it in a better way. The member from the top management said that they have resulted in a directive leadership in order to implement a change which they do not like as they try to give their employees freedom to explore new ideas, but the resistance with some of the employees has led to a risk of destruction of processes.

Other interviewees mentioned the size of the company, since they are a small company the integration isn't as problematic compared to larger and more established companies. Lastly, around half of the interviewees indicated that a successful expedition would lead to a successful integration. As two of the interviewees said:

“If this expedition is a success it isn't much of a problem to communicate to the cruise ship, because everyone wants to be a part of a success and then it is easy to get people aligned” (CC1)

“If there is a good expedition, then it will be no problem and it will be integrated.” (CC4)

### Sustainability experts

In contrast to the interviewees from the case company identifying that the integration would not be a problem, almost all of 11 sustainability experts said that integrating the findings from the expedition into the established business is a problem and a common challenge in organizations.

One of the sustainability experts stated it was a common problem as it is the basics of humanity; people get inspired, they listen in, but they don't change your ways. Another interviewee said it was a challenge because simply, it is hard. Furthermore, one of the best case companies stated that this is a common problem, often in legacy companies. Additionally, another sustainability expert identified that it was a very big problem in companies today and related it to the lack of innovative and entrepreneurial traits of the top management. Meaning that the management often fails to acknowledge and incorporate the findings into the organizational strategy.

For the two interviewees that believed it was not a problem, one identified that it really depended on the size of the company, and that for a smaller company it shouldn't be an issue. Furthermore, the other stated that people are more interested in adapting to changing times:

“I don't think it is a problem, everyone is interested in adapting to changing times, perhaps an older way of business was to do as we always did, so in the past we did that. If you want to survive you need to adapt, how do we adapt to the changes in the environment, even traditional companies need to.” (SE4)

The same expert did follow up with that, the main issue with the expedition coming back to the cruise ship is surrounding the communication and how the expedition plans to explain the learnings from their exploration.

### Management experts

The 8 interviewed management experts gave similar answers to the sustainability experts, that the integration of the expedition into the established part of the business is a challenge.

One management expert mentioned that it is difficult to change an old dog to sit, and that people are so set in their ways. One researcher mentioned that the real problem is that the companies do not have the ability to use the new things founded from the expedition (the researcher gave the metaphor of the expedition being an innovation lab at an established company), and the expeditions are usually not bad or poor.

Another management researcher stated that this problem is maybe not the big problem since if the exploration is already happening, then ideally, all the preconditions needed are met already. Therefore it would be strange if the management team would discard the findings from the expedition and that there is always someone willing to support it. But, he then stated that if the expedition was successful and still the management team is resistant, that is a big problem and continued with:

“That means that the management team is very conservative, they are lacking the risk taking, the organic flow on how businesses are being run, lack of understanding of the value that is being provided. The company could also simply just lack the competences and knowledge on integrating it.“ (ME7)

### 5.3.2 Handling the expedition in the cruise ship

The second theme that was identified to research questions 3 was on how to handle the expedition in the cruise ship during the integration phase. The three interview groups differed slightly in their answers, with the interviewees from the case company identifying the importance of communicating the success stories of the expedition, while the other two groups identified the importance of creating a sense of ownership of the expedition in the cruise ship.

#### Case company

Even though almost all of the interviewees from the case company didn't believe that the integration process of the expedition would be an issue, the majority of the interviewees did mention how they could avoid it becoming a problem. Through good communication between the expedition and the cruise ship, especially in relation to the expedition's success. As was stated previously, the interviewees in the groups are individuals from various departments within the case company

Almost half of the interviewees from the case company mentioned the importance that the expedition would share success stories with the cruise ship from time to time as it will create a common understanding and will be good for motivation when it comes to the integration. Another interviewee stated that the expedition should be aligned with the cruise ship in order for the cruise ship to know the direction and progress of the expedition, so the new ideas will not be completely new information when it comes to the integration. So, there should be communication back and forth on the status of the expedition while it is out exploring.

## Sustainability experts

Similarly to the answers on the importance of communication from the interviewees from the case company on how to integrate the findings into the existing business, the sustainability experts mentioned that it is crucial that the individuals on the cruise ship sense that they have ownership on the expedition. As stated before, this group includes individuals that have knowledge on sustainability and experience with sustainability transitions. By creating a feeling of ownership, the interviewees meant that the feeling of an idea or a change that was not invented in the company is avoided amongst the individuals on the cruise ship, and involvement of individuals is important. Furthermore, there is a need to involve individuals from the whole company from the beginning of the expedition, both by inviting them to participate in the expedition and to have clear communications back and forth from the cruise ship to the expedition. One of the interviewed sustainability expert said:

“Without anchoring from the beginning, it is impossible to integrate even if the idea is fantastic, because then the idea feels that it is not invented here and people will not understand it. Then it is difficult to implement the change if you have already come far in your exploration.” (SE7)

The majority of the interviewees identified that by having an involvement from the beginning, it creates the understanding of why the expedition is going out to explore and a common understanding is created in the whole organization. The expedition should therefore be active in communicating the purpose and their success stories with the rest of the organization. Furthermore, at the same time, the cruise ship needs to make sure to be open to receive the information coming from the expedition and that there be good communications between those two.

Some of the sustainability experts that were interviewed had experience in working with projects and changes that were established outside of their organizations which further highlighted the importance of communicating and having involvement from the beginning:

“To be honest that is not as simple [...] If you have a start-up coming from the outside, you haven't really been involved in the journey and you haven't built trust [...] You already have something that was developed outside, and we usually say it was not invented here. We can't believe it and we can't trust it so there needs to be a lot of onboarding. [...] It could be the hard way or the soft way. Sometimes you have to go the hard way, because you don't have time for onboarding and more. If you get people that don't function and don't have time to build up trust, there is a risk you won't get success in those kinds of joint ventures. I still think that you need to gain trust either way, also if an idea is coming from outside the company, you need to build trust.” (SE5)

Lastly, the majority of the interviewees mentioned that it is important that a culture of trust and information sharing is created in the cruise ship around the expedition. One of the sustainability experts mentioned that it is important to establish clear and transparent methods and metrics so that all stakeholders of the expedition can take part in it.

## Management experts

Similarly as the sustainability experts identified, the management experts identified that it was important to create a sense of ownership in the cruise ship for the expedition. As a reminder, this interviewee group includes individuals that have management expertise or experience in working with organizational change. They mentioned it was important to engage the individuals on the cruise ship, creating a reason for the

change and to create the bigger picture for the change for the employees. Furthermore, it was identified by the majority of the interview group that it was important to do this as there was a risk of the established part of the business to kill off the findings from the expedition. One management researcher said:

“A lot of the time, the established get the resources, they get the income, they pay the salaries. They are the established, they deliver to the customers, and what research shows is that most of the time the established kills off the new thing. The new thing does not survive in the established organization.” (ME5)

Furthermore, the management experts mentioned that it was important to establish trust between the new and the established as it is like you are trying to merge two very different organizations, each having their own culture and their own way of working. Furthermore, it also came down to how the organization was in managing internal conflicts and that companies that are known to be good at handling those, often have an easier time integrating something new into the established.

### 5.3.3 The role of people in the integration

The last theme that was identified for research questions 3 was in relation to the people in the organization of the integration phase, namely in relation to competences on the expedition and identifying the right people. Again, the three interview groups differed slightly in their answers. The interviewees from the case company identified the importance of having the right knowledge and competences on the expedition boat, and the sustainability experts identified the importance of identifying the right people for the change. The management experts agreed with both the previous groups, and mentioned both those key points.

#### Case company

According to the individuals from the case company, it is important to have a diverse group of individuals on the expedition exploring in order to integrate the findings of the expedition into the cruise ship. The interviewees stated that there needed to be a team of people working on the expedition, and not just one person. This team should consist of various individuals from different departments in order to create a better and a common understanding of what the expedition is doing, which would in turn make the integration process easier. An interviewee from the case company mentioned that it is important to have knowledge and expertise on the expedition teams in order to create a common understanding in the cruise ship:

“Invite business people or at least product managers to be on the expedition as they should be involved. This will build a common understanding, and having them onboard is important, you need multiple people on the expedition.” (CC2)

Another interviewee mentioned that in order to have a successful integration, the full organization needs to support the expedition, especially in relation to the different parts of the organization. Similarly, another interviewee mentioned that people should be given the opportunity to be a part of the expedition to some extent in order to exchange as much information between the two. That will create awareness from both sides of the organization but it also gives new perspectives going back and forth if different people are invited to participate.

#### Sustainability experts

For the 11 interviewed sustainability experts, almost all of them mentioned that changes rely on people and a majority of the expert interviewees mentioned that it is very important to identify the right people for the change, the so-called change makers and appoint them to a right position for the change. One sustainability

expert stated that these change makers have the effect of convincing others that a change is important and can increase the performance of the change. The same expert also said that the management should be clever enough to be able to identify these change makers in the organization. In addition, one interviewee mentioned that these individuals are important and will strengthen the voice for the change, it will influence the change and allow for more repetition on the reason for the change. That will in turn help the large cruise ship to make changes and do things differently.

Another expert mentioned to form a team with these change makers:

“You have to have more than one person, a team that is empowering, learning, empowering each other in daring to speak out and bring forth ideas on how to proceed, [...] I think the key word is to empower the people who are the informal leaders and give them the opportunity to participate in all kinds of networks. You don’t know where they will benefit from it, but you know that they will benefit from it.” (SE2)

Furthermore, the majority of the sustainability experts said that at the same time you have the change makers, you also have so-called saboteurs of change. These are the individuals that the experts identified to be resistant to change and the ones who have the power to stop a change from happening.

#### Management experts

The management experts' answers in relation to how to integrate the expedition findings into the established business is similar to answers from both the previous interviewee groups. That is, identifying the change makers and the saboteurs of change, and giving them the correct roles in the organization, as well as to have a combination of knowledge and competences on the expedition.

The management experts identified that it was important to evaluate which individuals should get on board of the expedition, and that depended on the exploration tour that they would be going on. Maybe it would not benefit the expedition to have a lot of individuals from a finance department, when the main goal was to explore high tech innovation. Then the focus should rather be on including the R&D department.

The management experts also mentioned the change makers and the saboteurs of change and the importance of identifying these individuals in the organization. The change makers should be identified, given the opportunity to make a change, and should feel the motivation to do so. One expert mentioned that there are many individuals ready for a change in organizations and have the motivation to drive a change forward, but they might not have the courage to take the step forward. So, therefore, it is important to identify those individuals and bring them forward. Furthermore, the experts identified that you cannot have the saboteurs of change in a leading position, and instead they should be kept occupied, and preferably occupied with focusing on the business today:

“The kings and queens, saboteurs, could be anywhere, but higher up could mean a big high risk or failure. Change agents are 5-10 % of the organisation, regardless of level in the organisation. The problem is that if you have influential saboteurs in high level places, they could actually block the change and that could be a big disaster for the company. [...] The change agents reward them for what they do for tomorrow, the influential saboteurs you should reward for what they do today and make sure that they are not blocking the future.” (ME3)

## 6 Discussion and analysis

*In this chapter, an analysis and discussion on the results of the theoretical part of this research is presented. The chapter will be divided into three main sections. The first section presents an analysis and discussion on the three research questions where the findings are analysed and discussed in relation to literature and the interviews. The next section will present what the implications of the data and literature is, and will be presented as the five guiding principles for organizations that want to make a sustainability transition. The last section will include a discussion on the method and results of this research.*

### 6.1 The research questions

This section is divided into four parts, the three first parts refer to one research question each where the previously identified themes from the interviews are discussed and analyzed in relation to literature to understand the implications of the data. All literature referred to in this chapter can be found in the literature chapter of the thesis, frequently referenced to is Kotter's eight step model (Kotter, 1995), double loop learning (Romme & Witteloostuijn, 1999), sustainability literature (Borland et al, 2019), the backcasting approach (Holmberg, 1998) and strategic management literature (Grant, 2018) . Sometimes a subchapter or an area of research introduced in the literature chapter is referred to, see chapter 3 for an overview of the literature areas and more information on the models and research areas referred to in this section.

#### 6.1.1 Research question 1

In this section, data from all three interview groups will be compared with each other and connected to literature to understand the implications of the data. Out of the four main themes answering the question of *how companies can enable a highly uncertain sustainability transition*, is one theme found in only one of the interview groups while the other three themes are related but the take on them is different in the groups.

##### Short term wins and long term thinking

The case company and the management experts both bring up short term wins as important for enabling a sustainability transition. In contrast, the sustainability experts emphasize the need of seeing the bigger picture and using long-term thinking when enabling a sustainability transition. Even though long-term thinking is mentioned as important by all groups, short term wins, short term profit and focusing on the now is emphasized more by the case, the management experts and mentioned more frequently than by the sustainability experts. All groups agree that long-term thinking and short-term wins are both important aspects of enabling a sustainability transition; the main difference is how the groups view the relation between the short-term wins and the long-term thinking. For the sustainability experts, the long-term thinking comes first, and the short term wins are a part of enabling the long-term vision. This group emphasizes the importance of seeing the bigger picture and starts with long-term thinking to look for possible short-term wins within the long-term vision. For the other two groups, the connection is sometimes not there and when it is the logic is often turned around, meaning that they look for short term wins that can make them come closer to the long-term vision but without starting with defining the long-term vision and action plan.

This implies that many companies try to reach for low hanging fruit without knowing what their end goal with the transition is, while best case companies that have succeeded with a sustainability transition have started with the long-term vision. Starting with the long-term vision is strongly supported by sustainability literature, for example the backcasting approach is often used to enable uncertain sustainability transitions. There the vision is the first step, understanding where you are today the second step and starting to bridge the gap between the two, the last step. This implies that companies often use forecasting methods and try

to enable sustainability transitions without having a clear vision for it. Instead, they try to see where different small changes lead them. Relating this to change management literature, many companies seem to use incremental change strategies for major changes. This is a questionable strategy for sustainability transitions like circularity, where the core operations of the business are affected. The difference in how the groups view the relation between the short-term wins and the long-term thinking could be explained with the help of Kotter's eight step model. The sustainability experts emphasize the importance of establishing a sense of urgency and creating a vision for the change, relating to step one to three in Kotter's eight step model for organizational change. In contrast, the other two groups focus on step six, planning for and creating short term wins, before they pay proper attention to the first five steps.

### Organisational structure of transition effort

The three groups had different views on how to enable a transition structurally. The case viewed an external transition as the best option, whereas the management experts viewed a transition in a part of the company as the natural choice while the sustainability experts urged companies to transition at the core of the business. Related to sustainability literature, working with sustainability at the core should be the case if the sustainability work is taken seriously, which strengthens the argument of the sustainability experts. Although connected to the ambidexterity literature and the cruise ship and expedition model, there is a way of keeping the day-to-day business as it is and approach changes in another part of the company. For a company to be truly ambidextrous, the new part needs to be independent but within the established management hierarchy, relating to the view of the management experts and non-best-case companies. If the external transition is done within the established management hierarchy and is given enough resources and freedom while still sharing the long-term vision with the day-to-day business, the view of the case interviewees could relate to ambidexterity. However, building on the case interviewees' collective concern of lack of long-term strategy and resources for the transition, it implies that the transition will be attempted with an unsupported team rather than an exploration part of an ambidextrous organization. Furthermore, this could be connected to step two of Kotter's model, forming a powerful guiding coalition or in other words making sure that the change is led by people with enough power, which is not the case for unsupported teams.

### Engagement in the transition

All interview groups agree that people are important for the transition, but again, they take three slightly different approaches. The case focuses on the importance of gaining knowledge, the management experts focus on the importance of engagement and communication in the organization and the sustainability experts focus on making the transition meaningful for the employees, including but not only focusing on knowledge and communication. All three factors are strongly supported as important for change-by-change management and sustainability literature, including circularity literature. The differences in focus could be explained by the fact that many interviewees in the case company do not think communication is an issue but think that employees know too little about circularity. Some of the interviewees from the case company and interviewees from many other companies, of both other groups, agree that communication is a big challenge, especially in a transition. Furthermore, the sustainability experts emphasize making the transition meaningful for the employees using knowledge, learning, communication, engagement, trust, listening to employees and co-creating a clear vision for the transition as tools for making it meaningful. The management experts agree but focus less on learning and knowledge, while the case agrees with many things but focuses more on competence building than communication and engagement. The views of both sustainability experts and management experts are supported by and relate to step four to six in Kotter's model. For the case, the connection to these steps is weaker, implying that the case company needs to define a clear vision for the change, step three in Kotter's model, before they approach step four to six on communicating and acting on the vision.

## External validation

One way to enable a sustainability transition that was only mentioned by the sustainability experts was getting external validation. Many interviewees in this group mentioned that getting external validation is essential to enable an uncertain sustainability transition within a company. The reason for this being that the nature of sustainability changes often creates internal resistance and that the words from people outside of the organization are more impactful when trying to convince people in the organization to support the transition. Although it is common knowledge that external approval is important for companies, the sustainability experts seemed to actively use external approval in a kind of feedback loop to enable change within the company. No literature on this specific phenomenon was found but it relates to sustainability management and systems thinking, in terms of how companies see themselves in relation to the external environment and how actively they engage with it. Note that this concept needs to be separated from marketing and should not include any greenwashing, instead it is about presenting innovative ideas that the company has implemented in the right forums to gain momentum for further change. Important to avoid greenwashing is full transparency of what exactly has been done and the impact of it. Furthermore, a company can never expect the external environment to validate what they are doing, but if the changes done are interesting, relevant, true, transparent, and presented in the right forums, one example given was at a conference, chances are the company will hear back sooner or later.

### 6.1.2 Research question 2

In this section, data from all three interview groups will be compared with each other and connected to literature to understand the implications of the data. Out of the three main themes answering the question of *how established companies can practice more exploration*, one theme is agreed upon in all three interview groups and the other two themes differ slightly between groups.

#### Prioritisation of exploration

All three interview groups clearly state the need for making room for exploration in the organization, in terms of prioritizing, giving it resources, power and time as well as having a vision and clear strategy. This is supported by change management and strategic management literature. It relates to the first three steps in Kotter's change management model, namely: establishing a sense of urgency, forming a powerful guiding coalition, and creating a vision. In addition, it relates to step five in Kotter's model, empowering others to act on the vision. As this is already well known and agreed upon by all interview groups no in-depth analysis will be conducted. That it was emphasized by many interviewees indicates that even though all these things are well known, many companies often do not make enough room for exploration.

#### Relation to the external environment

While the case company focuses on actively collaborating with others and the management experts on sensing what is happening in the external environment, the sustainability experts focus on both aspects and the connection between them. One reason for the case focusing on external collaboration could be that circularity requires an extensive collaboration effort in comparison to many other changes. That the management experts focus on sensing the external environment implies that they have a traditional management mindset where changes are done to gain competitive advantage or due to external pressure. The importance of sensing the external environment is a cornerstone in strategic management. Noteworthy is that the sustainability experts take a more active stance when they are talking about the importance of the connection to the external environment for enabling exploration. Instead of focusing on collaboration with certain players or being aware of changes in the external environment to cope with external pressure, this group has a more holistic approach to the external environment. This difference could be explained with sustainability management literature. In relation to sustainability management literature, it is implied

that this group views the organization as part of the natural and societal system whereas the other two groups, at least partly, ignore the interconnectedness of the business and the external environment. Furthermore, this group uses a deeper level of learning when exploring than the other two. This means that when the sustainability experts learn from the exploration, they use double loop learning and change underlying factors to adapt to the environment, whereas the other groups do not change goals, mental maps or policies when they learn something about the external environment using single loop learning.

### Success of exploration

The three interview groups all think that how you measure success in exploration matters when you want to practice more exploration. However, the three groups do not agree if and how success in exploration should be measured. While the management experts do not have a consensus within the group, the case company and the sustainability experts do agree that success in exploration needs to be measured differently than in day-to-day business. The case company is focused on long-term measuring and using different KPIs than for day-to-day business, while the sustainability experts are questioning if it is suitable to measure success in exploration at all. The last group points out that exploration is valuable in itself and that learning from the exploration should be considered a success, meaning that success in exploration needs to be redefined and aim for learning rather than reaching specific objectives.

That the measurement for the exploration needs to be different is supported by the ambidexterity literature, including the cruise ship and expedition model where learning and reflection are key elements of the expedition whereas goals and measuring are key elements of the cruise ship. The differences in opinions on how to measure success in exploration could be further explained by literature on sustainability management. Borland et al. (2019) brings attention to the problem of companies viewing business as a separate entity from the societal and ecological system. This means that in order to explore fully, particularly to explore for innovation and sustainability, systems thinking and double loop learning in the organization are required. The risk of not having this in the organization and trying to explore for innovation and sustainability, is that the expedition will either not be able to explore fully, leading to missing out on innovation and sensing things in the external environment, or not help the cruise ship to learn from the expedition, leading to the two being separate entities rather than one organization, which in turn leads to the cruise ship not getting further in the transition when they explore.

In combination with the data from the three interview groups, this implies that the view of learning as the success factor of exploration stems from double loop learning and a systems thinking mindset in the organization. The sustainability experts are the only group that shows these factors, as discussed above, hence this group has the mindset that literature supports as necessary for being able to explore fully. The other two groups do not have the same mindset and are therefore likely to risk not exploring fully and not learning sufficiently from the exploration efforts. Although, the individuals from the case as well as some of the management experts do agree with the sustainability experts, the success of the exploration needs to be different, there are chances that they have or will be able to adopt the same mindset and unlock the ability to explore fully. Furthermore, this implies that there is no consensus among companies and not enough knowledge on how to measure exploration, which causes confusion on what exploration really means and what is needed to enable it. In particular exploration for sustainability and innovation is in need of systems thinking and double loop learning in organizations.

### 6.1.3 Research question 3

In this section, data from all three interview groups will be compared with each other and connected to literature to understand the implications of the data. Out of the three main themes answering the question of *how established companies can integrate findings from an expedition into the existing business*, one theme is highly related to all three interviewee groups, while the other two differ to some extent between the groups.

#### Perception of the integration

The interviewees from the case company had another opinion than the two other interview groups on whether the integration of expeditions findings into the existing business would be considered a challenge or not. The case interviewees believed that it would not be an issue for them as they believed that their top management was fully supportive and encouraged the employees to go ahead with new initiatives, and due to the size of their company. The other two interviewee groups disagreed and stated that changing or integrating something new into something established will mostly always lead to disagreements and friction. Literature on strategic change management supports the two interviewee groups on the integration being perceived as a problem as it is highlighted that it is a common dilemma on how to balance the established part of the organization while also preparing for the future. Furthermore, the literature mentions that established routines in organizations are difficult to change. Organizational ambidexterity literature continues on and mentions that increasing the likelihood of having a successful ambidextrous organization is the ability of the management to resolve tension between the exploitative and explorative part of the organization. The interviewees from the case company did admit that business today was prioritized and that they were facing resistance from the middle management. This might be due to the exploitative and explorative part of the organization being unbalanced, and not enough room being made for exploring, learning, and working on new initiatives. In addition, relating to previous mentions that a clear strategy for the circularity transition is lacking, it could indicate that a holistic understanding of the complexity of what the circularity transition means for the company is not shared with all of the employees. This might make the integration process more challenging, and the learnings from the expedition might be missed.

#### Handling the expedition in the cruise ship during integration

Similarly, as occurred for the first theme, the answers from the interviewees from the case company differed slightly compared to the other two groups in relation to answering how to integrate the expedition's findings into the existing business. Individuals from the case company were more focused on the idea that the expedition should share success stories with the established party in order to create a common understanding of the expedition in the cruise ship. The other two groups did also mention that it is important to share success stories along the way, but the emphasis was on creating a feeling of ownership for the cruise ship in the expedition, such as inviting all employees to take part in the expedition to some extent, which would make the integration process easier.

Literature on sustainable business models, namely the concept of the cruise ship and expedition, is supportive of the finding of the sustainability experts and management experts. It is mentioned in the literature that for the expedition, a facilitation type of leadership is needed and different actors across the organization should be invited to explore and co-create together. Furthermore, literature on organizational ambidexterity introduces the structure of ambidextrous organizations, where the emerging business is integrated into the existing management hierarchy, which supports the findings from sustainability experts and the management experts. That further indicates that the case company is following the unsupported teams structure, and the circularity transition is handled outside of the management hierarchy.

## The role of people in the integration

All three interview groups identified the people of the organization in relation to the integration but with some difference. The interviewees from the case company identified the importance of having diverse competences and knowledge on the expedition as it would create a common understanding with more individuals in the company, and in turn, would make the integration process more easy. The sustainability experts mentioned the importance of identifying the change makers and positioning them in the right roles within the organization in order to have more voices for a change. Lastly, the management experts identified both what the other two groups mentioned. Literature on change management, and organizational ambidexterity supports the findings of the two latter groups. Step two in Kotter's eight step model includes forming a powerful guiding coalition in order to ensure that change is driven by people with enough power and to encourage teamwork between them, as change cannot be driven by a single person. Furthermore, although the right competencies, knowledge and expertise are put on the expedition, it is also important to have individuals ready to receive and act on the findings from the expedition on the cruise ship. By not having the change makers engaged and motivated, it might lead to the risk of the learning from the expedition and possible benefits to be missed.

## 6.2 Implications

In this section, the implications of the data are presented according to the discussion and analysis on the research questions done in the section before. The implications for each of the research questions have been summarized in three figures, and together, they constitute five general guiding principles for organizations that want to make a sustainability transition within. The five general guiding principles will be presented at the end of this section. An in depth explanation of the implications and the guiding principles will not be provided as they are based on the detailed discussion above.

### 6.2.1 The research questions

For the first research question on *how companies can enable a highly uncertain sustainability transition*, the four implications were identified that have been visualised in a pyramid and can be seen in Figure 13. That was done as the implications in the lower parts of the pyramid are believed to be essential to have in place in the organizations in order to enable a highly uncertain sustainability transition. The four implications are 1) to understand that sustainability is a strategic choice in the business, 2) to decide on a long-term vision first and then focus on the short-term wins, 3) make the transition meaningful and ensure that everyone in the company knows that, and 4) to seek external validation for implemented changes.

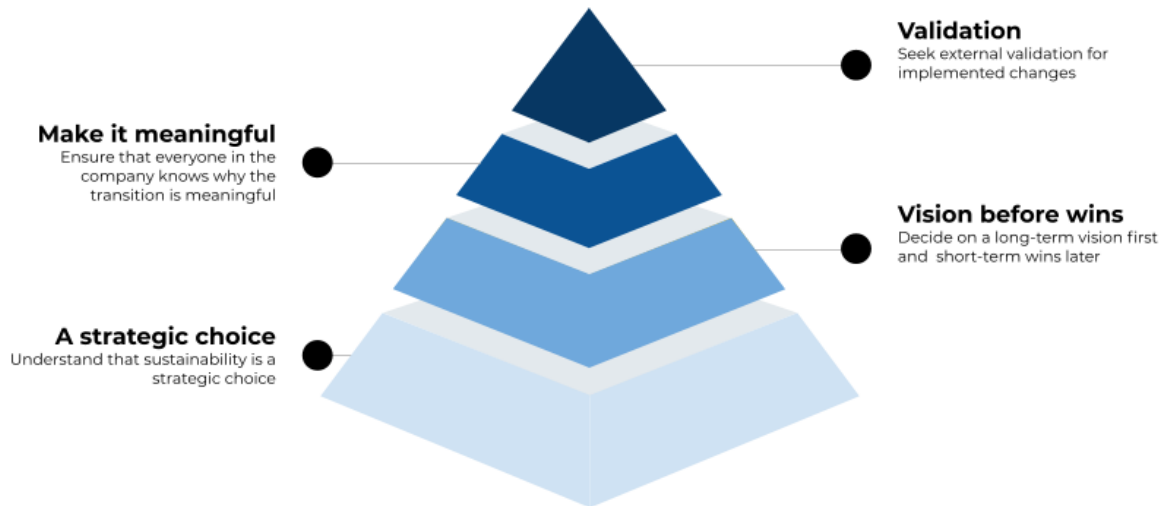


Figure 13 The four implications for research question one

The next research question is on *how established companies can practice more exploration*. Four implications were identified for this question which has been visualised in a circle in Figure 14. The reason for it being presented in a circle is that one factor is believed to influence the other and vice versa when established organizations practice more exploration. The four identified implications for this question are 1) to make enough room for the exploration in the organization, 2) to actively take part in the larger system of actors, 3) enable double loop learning in the organizations and 4) use learnings from the expedition as a success factor for exploration efforts.

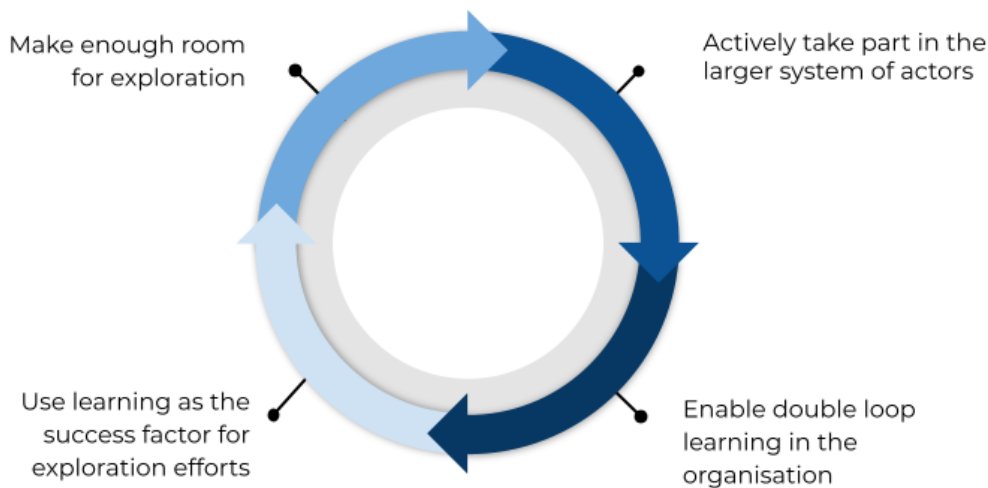
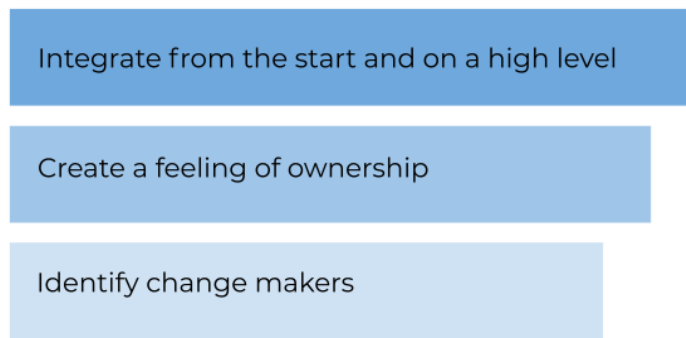


Figure 14 The four implications for research question two

Three main implications were identified for research question three on *how established companies can integrate findings from an expedition into the existing business*, which can be seen in Figure 15 below. The three main implications were to 1) integrate from the start of the expedition and do it on a high level in the organizations, 2) create a feeling of ownership of the expedition within the cruise ship, and 3) identify the change makers in the organizations that are likely to drive the change forward, as well as to identify the saboteurs of change.



*Figure 15 The three implications for research question three*

### 6.2.2 The guiding principles

Building on the implications from the research questions, five general guiding principles were identified as a way to enable a sustainability transition in an established organization through an ambidextrous strategy, which can be seen in Figure 16. These principles are for established companies that want to enable a sustainability transition internally. Therefore, these guiding principles are applicable for the case company and other established companies. As explained before, the guiding principles are based on the implications from each of the research questions, which are based on an analysis and discussion on the findings from the conducted interviews and literature. Therefore, an in depth explanation of each of the principles will not be given, but sections 6.1.1, 6.1.2 and 0 provide the in-depth analysis of each research question. Furthermore, the guiding principles will be applied to the specific case company so a further elaboration on how these principles can be applied can be found in section chapter 7.2.2.

## The general guiding principles

- 1 | Understand that sustainability and exploration are strategic choices
- 2 | Make the transition and exploration efforts meaningful
- 3 | Be active in being a part of the larger system of actors
- 4 | Use learning as the definition of success
- 5 | Integrate from the start on a high level in the organisation

*Figure 16 The five general guiding principles from the three research questions*

## 6.3 Method and results

Validity and reliability in qualitative research has been debated as many scholars believe it is mainly applicable for quantitative research (Bengtsson, 2016). However, different scholars have tried to formulate their own criteria as what would constitute valid and reliable quantitative research since data is gathered

from interviews, questionnaires and observations of the researcher (Leung, 2015). In this study, an aim was on neutrality and consistency in order to ensure higher chances of validity and reliability on this research, but there are many other factors that could influence the validity and reliability of this study which will be discussed below.

The interviewees for this study consisted of individuals with various backgrounds from a broad range of different industries. In total, 30 individuals were interviewed, and their answers constituted a large part of this study. As the questions asked in the interviews were open-ended, and the interviewees had different personal interpretations and different knowledge bases, the interviewees gave different answers to the questions. However, a level of saturation was reached during the answers from the interviewees. That is, during the last interviews, there were no new answers or information being brought forth by the interviewees. This indicates a level of validity of the chosen method as the answers from the interviewees seemed to be of similar nature, even though the interviewees came from different backgrounds and industries. In addition, in order to further validate the findings, literature and workshops were used.

Furthermore, it could be discussed if having interviewees from a broad range of different industries participating would not give valid implications for all the organizations within those industries, and especially in relation to the case company. Therefore, it could be debated if a more narrow focus on only one industry might have given more applicable findings. However, there was a clear consensus surrounding how the participants perceived the cruise ship and expedition model, with 29 out of 30 participants agreeing with it and able to relate to it in their own organizations or work. Additionally, the interviewees that had a sustainability background or higher knowledge on sustainability had similar answers to the same questions, although these individuals came from different industries. Meaning that there seems to be a similar mindset amongst those experts, despite their different backgrounds.

Regarding the choice of the research area, namely in relation to exploration, was because it was believed to be highly relevant in organizational changes where the outcome is perceived to be uncertain. Therefore, we believe that the concept of ambidexterity and the cruise ship and expedition model, is a very good method to handle those uncertain outcomes in an organizational change. Regarding other changes, we do believe that there are other good ways to execute them, and that exploration is not always the best way forward. Those instances are for example when companies are certain of their changes and they know what the outcome of the change will be, we believe the company should act on the changes instead of spending much time exploring. Furthermore, it is debatable if the concept of ambidexterity is beneficial for smaller companies with fewer employees, where it might be better to change the whole organization instead of sending out an expedition team exploring. Furthermore, there are other aspects related to difficulties of organizational change that we did not focus on in this thesis.

In addition, the question can be asked to what extent ambidexterity and sustainability transitions like circularity are compatible. The research area is underexplored and more research combining the two is needed. Important to keep in mind is that both exploring and exploiting might not be a good idea if the change is urgent or if the path dependency makes organisational change extremely hard even in the exploration part of the company. Factors like strategy, organisational structure, leadership, allocation of resources, organisational culture and communication cannot be ignored whether an ambidextrous strategy is chosen or not. Sometimes all resources in the organisation need to be focused on the change in order to transition in time and trying to use ambidexterity then can make the organisation too slow. Hence being aware of the external environment and adopting a systems thinking mindset and a holistic view is important also when choosing whether to be ambidextrous or not.

When preparing for a sustainability transition through an ambidextrous strategy, the strength is the ability to gradually transition from the old business model to the new, in a dynamic process in line with the market today but prepared for changes. Without the duality of ambidexterity the change is more drastic and fast, which might be needed at times, but might not be what most established companies would prefer, which favours the use of an ambidextrous strategy. Following this, having a dynamic relationship between the exploration and exploitation, the old and the new, the traditional and the sustainable, the linear and the circular, is of importance in an ambidextrous organisation. When an organization is not using an ambidextrous strategy and instead transition fully at once, they are moving from one static model to another static model, never balancing two different parts of the organisation. While this approach might be faster when the change is urgent, it is probably more challenging as everything has to be rebuilt at once and there are competencies missing that are urgently needed in the new organization.

In regard to the results of the study, it brings us back to the gap problem introduced in the beginning of the thesis. The gap problem is apparent in the findings and even though many companies are aware of it, they are too caught up in the business of today to prioritise sustainability and exploration. On one hand, measuring sustainability with financial measurements is often not suitable due to the high complexity of sustainability. Oversimplification of sustainability is dangerous as financial measurements on sustainability could easily lead companies to mislead themselves in their sustainability work. On the other hand, setting numbers to sustainability is often what convinces companies to implement changes, creating a catch 22. Our findings point out that sustainability experts have a more holistic mindset compared to the other groups, which strengthens the belief of sustainability researchers that systems thinking is critical in order to enable more sustainability work. This implies that there is a need for more awareness and discussion on the topic, both in companies and in society as a whole, as the sustainability experts are educated in, interested in and communicating about sustainability on a daily basis.

Furthermore, this is connected to the lack of consensus in society on what sustainability really is and how prioritised it should be. There is a need to support further conversations on achieving a desirable sustainable future. We believe that the definitions of economy and sustainability were meant to be the same, but that humanity made a mistake setting up the economic system by not including the whole system. In other words, when humanity created the economic system with the meaning of *careful management of available resources*, some resources were not taken into account and these resources now need to be included in a sustainable system where we are *meeting our own needs without compromising the ability of future generations to meet their own needs*.

## 7 The case company

*In this chapter, the findings specific for the case company will be presented and analysed in relation to literature to understand the implications of the data. This chapter will be divided into three sections. The first section introduces data from the interviews with the individuals from the case company and the sustainability experts, and the data will be structured according to the backcasting approach (Holmberg, 1998). The next section will present the analysis and discussion of the data, where the different perspectives of the two interview groups are discussed and also related to literature on sustainable business strategies (Borland et al, 2019) and organizational learning (Romme & Witteloostuijn, 1999). In the last section, recommendations on how the case company can approach their circularity transition is presented in the form of a 6-step model that is based on the results from the discussions with the case interviewees and the general guiding principles presented in the previous chapter.*

### 7.1 Results from interviews

In this section, the data specific for the case company from the interviews are presented. This data is from the two interviewee groups from the case company and the sustainability experts, as well as from the participants from the workshop with the case company. As was established previously, the individuals from the case company are individuals from various different departments within the case company and the sustainability experts are individuals that have knowledge on sustainability and experience with sustainability transitions. The data will be presented according to the backcasting structure where the first step is to identify the vision of a desirable future of the organization. The next step is then to identify the current situation of the organization, and the last two steps are to identify the transition pathway from the situation today, to the desirable future. The full backcasting method was not conducted with the interviewees, but the reason for the structuring of the data according to this method is to better understand where the case company is situated in relation to the circularity transition of the company, and to gain a better understanding of what the challenges and hinders for the transition will be.

The two groups were asked to reflect on a hypothetical scenario of new regulations stating that all organizations must be fully circular in order to be allowed to operate. These interviewees were then to ask to reflect on that scenario, what that would mean for the organization, how the organization would look like, and what the main challenges and hinders would be. The interviewees were not asked to envision a desirable sustainable future for the case company or to answer one question related to how the current situation of the organization is, instead the future vision and the current situation were derived from the interviewees' answers.

Figure 17 and Figure 18 showcase the findings from the interviews, Figure 17 is the findings according to the interviewees from the case company, while Figure 18 presents the findings according to the sustainability experts. In Appendix B - Results for the case company, a more detailed overview of the data from the two groups is presented.

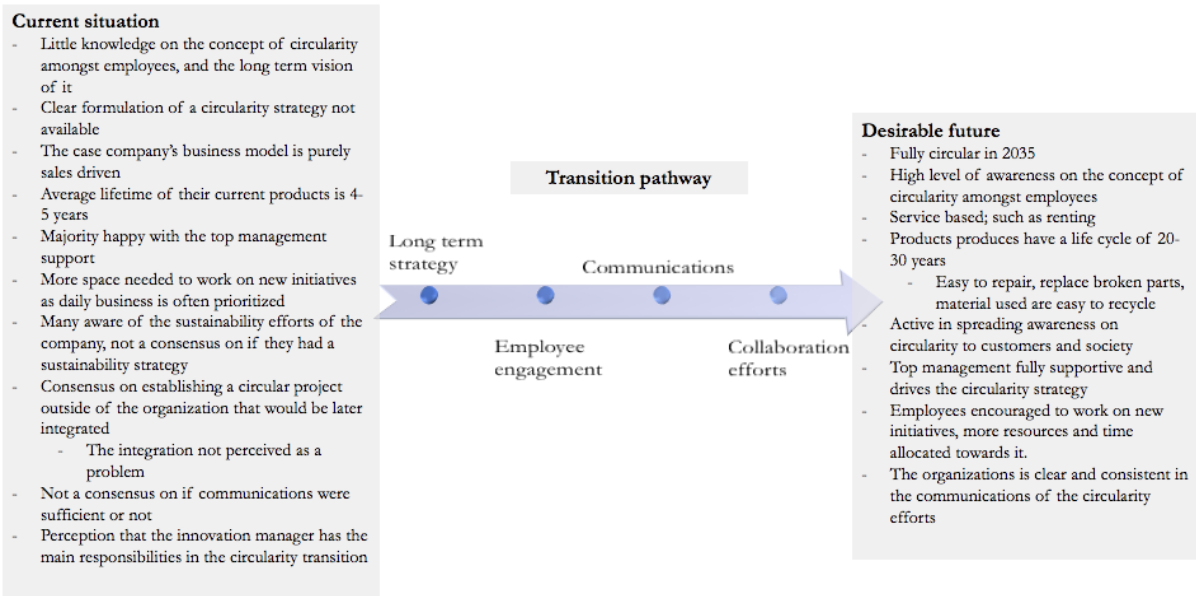


Figure 17 The data from the interviews with the case company and the participants of the workshop is structured according to the backcasting method

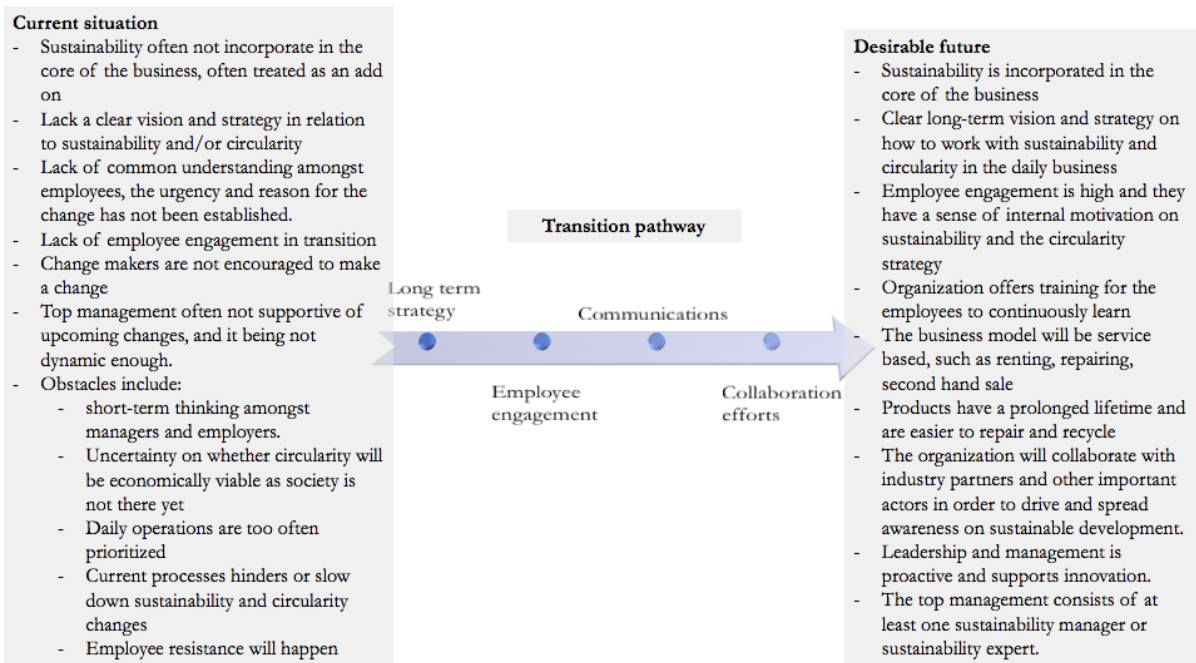


Figure 18 The data from the interviews with the sustainability experts is structured according to the backcasting method

Regarding the transition pathway on how the case can approach the circularity transition, both groups mentioned four main areas in relation to: long term strategy, employee engagement, communications and collaboration efforts.

For the long term strategy, the groups mentioned that the organization needs to create a long-term vision and strategy for the circularity transition, and also to create an urgency for the change. Both of the groups mentioned the importance of allocating people and resources to the exploration and making space for it in the organization. One suggestion from the workshop was to have a circularity ratio for each brand segment that would be broken down towards local targets or plans. Furthermore, the sustainability experts talked about recruiting and appointing a sustainability responsible to the top management team, in order to have it more integrated in the core of the organization. Furthermore, the sustainability experts brought up the

importance of co-creating a clear vision with employees and break it down to action points together, adapting it, communicating it and breaking down the vision together with employees continuously

The next main area the group mentioned was in relation to employee engagement, that employees should gain knowledge on the circularity transition and the concept of circularity, with the sustainability experts mentioned to establish an urgency in the organization through education on sustainability and circularity for everyone. The interviewees from the case company mentioned the need to create a program for transferring competencies and recruit people with competencies missing. Furthermore, suggestions from the participants for the workshop was to use scorecards to value circular choices and a live feed of what has been done on the homepage in order to identify what needs to be done and how employees can help. This should make it transparent and easy for the employees to follow the progress towards the vision. Other suggestions were to use a gamification platform for learning and to have a yearly sustainability day and award the most sustainable employee of the year.

Both groups mention to facilitate employees finding their personal purpose with the circular transition, and to make it meaningful and personal to them. Lastly, sustainability experts mention the need to identify who should be involved to what degree as there are the change makers and the saboteurs of a change, and to allocate people to actively work with sensing and understanding the external environment, to integrate the efforts and learnings in the organization continuously.

The third main area was in relation to collaboration efforts with the case company mentioning to share awareness of the circularity transition with customers, other actors in their organization's value chain, and the society as a whole. The sustainability experts mentioned the same, but also included collaboration with partners inside the industry to drive the circularity transition on a higher level. Furthermore, the sustainability experts mentioned the need to participate in external settings for learning as much as possible from different actors and to connect further to the external environment through collaboration and participation.

The last key area the two interview groups and the participants in the case company's workshop mentioned was in relation to communications. Both groups talked about the importance of the case company being clear and consistent in the communications, through both words and actions. Suggestions from the workshop included establishing a system of continuous communication and learning in the organization. The content will be frequently shared and in various forms, such as text, videos, animations and photos. Another suggestion was to have a live feed on the company's homepage that showcases their current status and future projects, and to have an established intranet in order to follow the route for success. Lastly, an emphasis was on celebrating successes and sharing them with the employees and society.

## 7.2 Analysis and discussion

In this section, an analysis and discussion will be presented on the findings from the interviews in relation to existing literature to understand the implications of the data for the case company. As the data from the interviews has been discussed and analysed in the previous chapter, and in-depth analysis of the data will not be done in this chapter, and a focus will be on suggested recommendations for the case company.

Furthermore, in this section, recommendations on how the case company can approach the circularity transition will be presented, both in terms of general steps and also with more practical recommendations. The first subsection will present a brief discussion on the data, while the second subsection goes over general recommendations for the case company on how they can approach the circularity transition internally, a six-step model. In the third subsection, a more practical suggestion on how to approach

circularity transition will be presented, which includes practical recommendations and different phases that the case company can go through to enable the circularity transition.

### 7.2.1 The findings

Beginning with the desirable futures envisioned by the interviewees from the case company and the sustainability experts. Many similarities were noticed of the two future visions derived from the groups. Both the individuals from the case company and the sustainability experts mentioned the importance of having sufficient knowledge and high level of awareness on the concept of circularity and about the circularity transition in the organizations, with both groups mentioning to offer training for employees. Furthermore, both groups mentioned creating an internal motivation amongst the employees for the changes. This is supported in the literature about organizational learning, in relation to the different levels of learning (Romme & Witteloostuijn, 1999).

The findings from both interview groups are also supported by sustainable business literature, with the sustainable business strategies defined by Borland et al. (2019) and the circular economy. The main difference in the answers from the two interviewee groups was the frequent mentions of employee engagement from the sustainability experts and their emphasis that everyone in the organization is actively working on the strategy. The sustainability experts also mentioned sustainability would be incorporated in the core of the business. Furthermore, the sustainability experts were focused on collaboration with various actors in different and the same industries in order to help drive the circularity transition. The interviewees from the case company did mention that they would actively work on spreading awareness of the circular transition towards their customers and society, but industry collaboration was not mentioned. This might indicate that the sustainability experts recognize that due to the high complexity of a circularity transition and its requirements, more developments and collaboration by actors both inside and outside of the sector will be needed. Lastly, the main differences between the two future visions was that the sustainability experts mentioned the importance of having a sustainability responsible part of the top management, such as a chief sustainability officer that would actively participate in higher level decisions.

According to the literature on sustainable business, namely the transformational strategy defined by Borland et al. (2019) and the circular economy, the future vision of the case company does follow the transformational business strategy to some extent. The main difference from the literature about transformational business strategies and the answers from the two interviewee groups, and that was the concept of businesses operating in terms of an ecocentric view. According to Borland et al. (2019) organizations need to be aware that business operates within the ecological and societal system, so the main goal of business should be on preserving and bettering these two systems. It was acknowledged by some of the interviewees from the case company that businesses should actively work on being more sustainable because it is something that we as society need to do, but then the focus was shifted to the economic side of the business, that the circularity efforts the company was going to focus on needed to produce profit. Furthermore, the individuals from the case company and the sustainability experts both mentioned the importance of having a circularity and a sustainability strategy in the core of the business, and the business strategy should revolve around the circular economy. However, the answers were still mainly answered from the point of trying to fit the sustainability aspect into the business while still generating economic profit. This does indicate that the current mindset of the case company, and other organizations is still very traditional, where economic profit is the ultimate aim.

Moving on to the current situation identified by the interviewees from the case company and the sustainability experts. The findings from the two interviewee groups were aligned, meaning that the sustainability experts identified a similar current situation as the interviewees from the case company. When

relating those findings to the literature on sustainable businesses, the current situation identified by the interviewees indicated that the case company is operating in a traditional way with economic success being the goal of the business. Additionally, the case company is following a transitional business strategy as identified by Borland et al. (2019). Transitional strategy includes that organizations have a linear process and operate still separately to the ecological and societal systems, but their efforts towards the environment are in relation to eco-efficiency. Such as better recycling and energy efficiency. This is aligned with what the interviewees identified as some mentioned that the case company did partake in reducing negative environmental effects stemming from their operations and their office building. Furthermore, when looking into literature on ambidextrous organizations, namely the characteristics of exploitation and exploration, the findings from the interviewees align with the organization focusing on the exploitative part of the business, and that the circularity transition is handled with the structure of unsupportive teams.

## 7.2.2 Recommendations

In this section, the recommendations for the case company are presented on how it can approach the circularity transition, and this part constitutes the last two steps of the backcasting approach, or the transition pathway. First, a six-step model consisting of six key enablers for the circularity transition is presented, which are based on the general guiding principles presented in chapter 6 above. Then next, more practical recommendations are provided to the case company which is based on the findings from this research and literature. The difference between these two recommendations is that the 6-step model includes steps that are necessary to have in place within the organization when doing the circularity transition, while the practical recommendations give more detailed suggestions on steps that can be taken for the circularity transition.

### The 6-step model

The first recommendations for the case company are put in a 6-step model and are built on the guiding principles presented in chapter 6 and taking the case's specific situation into account. The six steps include how the case company can approach the circularity transition and are presented in Figure 19, with an explanation to each step below. These steps are thought to be necessary to have in place when doing the circularity transition, and are believed to be good to have in place within the organization.

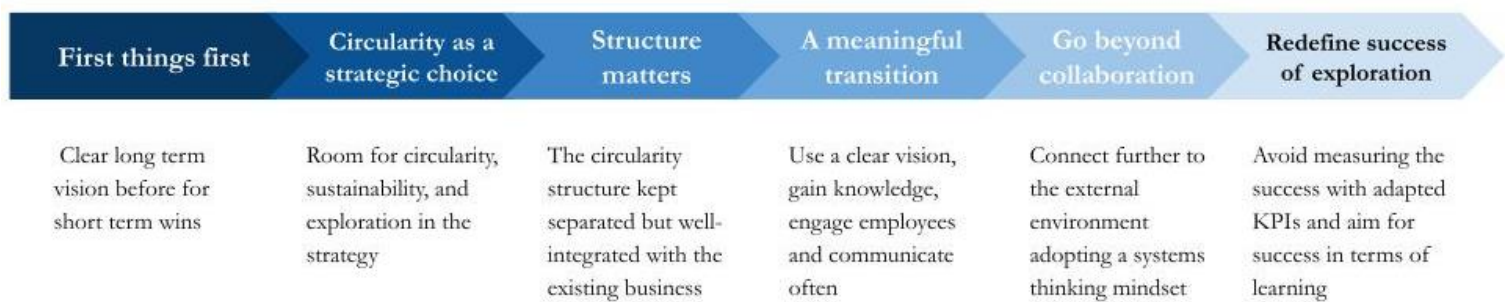


Figure 19 The six-step model on how the case company can approach the circularity transition internally

## First things first

The number one thing asked for by case interviewees and participants of the workshop was a clear vision for the transition. If there is a vision for circularity, this implies that it is not shared among employees, and it is not clear enough. Literature, best cases, and sustainability experts all emphasize the importance of having a clear vision and to start there, therefore the case will benefit from creating or recreating the vision and making sure it is aligned with the strategy and shared among employees, particularly but not exclusively involving those actively engaged in the circular transition. Important to note is to have the vision clearly in place before moving on to looking for ways to reach it, particularly regarding short term wins. Short term wins are important in a later stage of the transition, moving there without making sure other things are in place first risks concentrating change efforts on things that are not effective. Building on Kotter's model and advice from sustainability experts, it is important to create a sense of urgency in the organization and explore risks and opportunities with the change before the vision is created. As is the step of making sure the change is led by a team of people with enough power to change the company. When that is in place, the vision as well as strategies for reaching it should be created followed by communicating the vision widely and removing obstacles before planning for short term wins. This means that step one to five of Kotter's model should be in place before planning for the short-term wins. Additionally, in the backcasting framework, the steps of envisioning the future and understanding the current situation comes before creating the transition pathway. The main point from both models is to ensure the company moves in one chosen direction before the move is initiated.

## Circularity as a strategic choice

In addition to the vision, almost all case interviewees agreed that there is a need to prioritize exploration and the circularity transition to a greater degree. Literature and the interviewees clearly state the need for making room for exploration in organizations, in terms of prioritizing, giving it resources, power and time as well including it in the strategy and long-term vision of the company. This implies that the circularity transition needs to be seen as a strategic choice and allocated more resources than it has today. The transition should be understood as going into any new market for a long-term gain, a strategic choice for the future and being treated as such within the vision, communication, strategy, and structures, which includes allocating more resources and freeing up employees' time to work with the transition. The same could be said about exploration and innovation in general. Not doing this is a strategic choice to not go into the circular market and not explore fully. To enable circularity as a strategic choice, the time horizon probably needs to be longer than it currently is, the time horizon is brought up as important by both case employees, experts, and sustainability literature. For example, one of the best-case companies enabled the transition with a ten-year time horizon.

## Structure matters

The question of how to handle a transition in a company without changing the day-to-day business directly relates to the ambidexterity literature, to have a new part of the company explore and implement the changes. Case interviewees state that there is a lack of knowledge on circularity in the organization and are concerned that many people are not open to the change, they all agree that doing the transition externally is the best option for the case company to manage the transition. The risk with this approach is missing the importance of integration of change, not becoming more circular and avoiding making a strategic choice to go into the circular market. For this reason, sustainability literature and experts clearly emphasize the need to work with sustainability at the core of the business if the circular transition is taken seriously. Building on the case interviewees' collective concern of lack of long-term strategy and resources for the transition, it implies that the circular transition will be attempted with an unsupported team rather than an exploration part of an ambidextrous organization. All factors combined point towards the need for the development

of ambidexterity at the case company, starting with the circularity at the core of the business as a part of an overarching vision for the full organisations through leading decisions at the top management level. This means to keep the circularity structure separate but well-integrated into the existing structure, tightly connected on top management level and sharing a clear long-term vision and higher purpose throughout both parts of the organisation. As advised by a sustainability expert, this should be signalled through the organisational structure, for example it is hard to communicate the importance of sustainability change without appointing a sustainability responsible as part of top management. This person should have sustainability as the only focus, have experience and education in sustainability and should be involved in all strategic choices of the company.

### **Make the transition meaningful**

The case company's employees that were asked to think about how to make the transition meaningful during the workshop presented that it must be economically viable to be meaningful. This was also mentioned by the majority of case interviewees. Building on previous analysis, only looking at the economic profit is a risk to miss long term economic profit and a hindrance for exploration and sustainability. Being able to look beyond short-term profit to long term gains, risks, and meaningfulness to contribute to a more sustainable world are mentioned by experts and best-case companies as essential to be able to enable a sustainability transition. This implies that many case employees do not have this mindset or vision and they do not feel that the transition is meaningful. This is the number one problem to overcome according to sustainability experts and management of best cases and it implies that there are several things needed to make the transition feel meaningful.

Case employees themselves mention the need for more circularity knowledge in the company, some mention that they do not know where to look for it. There are many aspects to making the transition meaningful to employees, but it is essential if a transition should be enabled within the company, even if the transition starts outside or in a new part of the organisation. A vision and clear communication from the top management, also through structure and resource allocation, is important to this, as is knowledge, creating an urgency to change, actively engaging employees in the change, creating a higher purpose for the change and making the transition personal to every employee, including making sure that they can see their place in the future vision of the case company. The first priority should be to gain knowledge to make sure people understand circularity and feel an urgency to become more sustainable as a company. Then the strategic choice, top management support and resource allocation need to be in place before engaging people in creating a vision for the change. Actively engaging people and making the vision personal to them is important to be able to get more support for the change. This means to facilitate employees finding their personal purpose with the transition and encourage people to work with things they are passionate about within sustainability. Many best cases state that their transition started with curiosity and a personal passion stemming from hearing about a concept or due to for example a child of the CEO asking about how sustainable they were in the company.

When the vision is in place, communication in all ways possible is essential, especially communication coming directly from top management clearly and continuously. A big worry for employees could be that they do not see where they fit in this new vision and therefore are resistant to change. Here engagement, breaking the vision down with employees, rather than for them, making employees feel hopeful through a positive future vision and offering competence building could be ways to address the fear of change. One best case company called this to address the scared experts, building on their existing competencies and transforming their competencies to match the competencies of the future business. Complementary ways of making the transition meaningful is the skill of systems thinking, transformational leadership, creating trust between the company and employees, facilitating organisational learning, making sure to work for a

higher purpose that is aligned in the organisation, repeating the message many times for a long period of time and having the right people in the right place. While all employees should be involved, the degree should differ.

### **Go beyond collaboration**

The case company's interviewees emphasize actively collaborating with other organizations to reach circularity and as circularity requires an extensive collaboration effort, this is the right direction to go. However, collaboration in the industry today is seen as far away or having to be enabled by regulations or other external pressure according to interviewees. While collaboration with universities, start-ups and consultancies are there, even more collaboration and connection to the external environment is needed to create urgency for change and ways forward in the transition. Sustainability experts and best cases have an even more active stance when they are talking about the external environment. Instead of focusing on collaboration with certain players or being aware of changes in the external environment to cope with external pressure, this group has a more holistic approach due to systems thinking and another approach learning. Therefore, should the case company seek to go beyond collaboration, adopting a system thinking mindset and enable deeper levels of learning in the organization, meaning that further collaboration, sensing the environment and seeing the company's role in the environment are important skills. This will make chances higher that the case company will sense changes in the environment earlier, finding ways to adapt to the changes and learn from them on a deeper level. The need for learning is on-going and enabled by open dialogue in the organization. Systems thinking is an important part of sustainability knowledge.

### **Redefine success**

One big difference between the companies that have enabled a sustainability transition and ones that have not are the way they measure the success of exploration. The case should learn from the best cases and understand that measuring exploration is not suitable even if the KPIs are different. Having learning as the success factor on the exploration effort is essential to unlock the ability to explore fully. The view of having learning as a success factor of exploration stems from having a systems thinking mindset in the organization, further strengthening the need for sustainability knowledge and open dialogue in the company is essential to facilitate this.

### **7.2.3 Suggestions on how to do the work**

As said before, this section will present more practical suggestions on how to approach the circularity transition in the case company. These recommendations include five phases for the case company, that are based on the guiding principles presented in chapter 6.2.2, and the six-step model with the key enablers presented in chapter 7.2.2.

First, a five transition phase plan for an established organization doing a sustainability transition is introduced with each phase being explained. These phases are therefore applicable for established organizations doing a sustainability transition. Next, the five phases have been adapted to the specific case company and their circularity transition, in order to provide the case company with practical suggestions and to showcase how the five phases can be used in practice. The phases specific for the case company are a breakdown structure on how the case company could do that work needed for the circularity transition, and is based on the analysis of the research questions and the implications for the case, as well as including the suggestions from the workshop with the eight employees at the case company, literature and the suggestions from the sustainability experts.

The five transition phases are based on the data gathered and analysis in combination with Kotter's model, the backcasting model and the cruise ship and expedition model introduced in the literature chapter. Furthermore, they are based on the guiding principles and key enablers for the case company, discussing their practical implications for the case company, and are explained in the list below. Note that phase 5 is the longest and describes more detail as it builds on the expedition and cruise ship model and adds four steps to the model.

- **Phase 1. Prepare for transition**

- Prepare everything that needs to be in place before attempting the transition
- Includes an urgency and willingness to change, a strategy that allows change and gaining knowledge on the subject of the transition
- Connect sustainability to the core of the company and the value proposition

- **Phase 2. Envision the future**

- Make sure to have a clear vision of the future that is shared in the organisation to ensure the organisation moves in a specific direction
- Visualise how the organisation look like in a perfect sustainable world

- **Phase 3. Understand current situation**

- Allocate time and resources to understand the external environment and the organisation's role in it
- Be everywhere learning: seminars, meetings, research, collaborations, reports, listen to employees
- Connect to the external environment using systems thinking
- Understand the gap between the vision and the current situation

- **Phase 4. Choose a strategy and align it with systems and structures at the cruise ship**

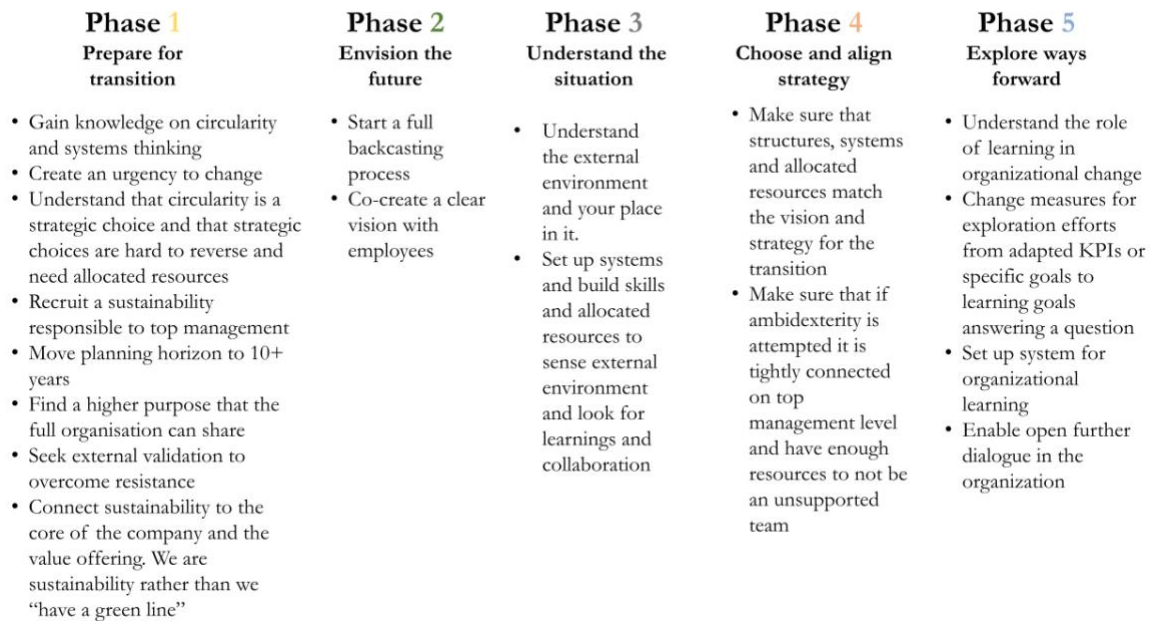
- Choose how the transition will be approached, for example with the full organisation, through ambidexterity, in a department or an external start-up
- Allocate resources to the chosen strategy and make sure it matches the structure, systems, communication and action from top management

- **Phase 5. Explore possible ways to bridge the gap between vision and reality**

- Step 1. Prepare for the expedition
  - Aligning the exploration effort with transition phase 1-4. Decide on a question to answer and decide that success is answering that question.
- Step 2. Explore the fog
  - Explore different ways to answer the questions
  - Make sure to connect with the external environment using systems from phase 3
- Step 3. Integrate learnings from the expedition into the cruise ship
- Step 4. Repeat steps 2 and 3 to gradually become more circular.
  - Repeat to explore different questions and to gradually become more circular by implementing the learnings

Below in Figure 20, the more practical recommendations for the case company in each of the five phases are summarized and presented. The recommendations are a combination of recommendations from the interviewees from the case company and the sustainability experts, literature and suggestions from the

workshop with eight case employees. A more detailed description of each of the phases for the case company can be found in Appendix C - In depth explanation to the different phases for the case company.



*Figure 20 The five phases summarized specifically for the case company on the circularity transition*

## 8 Conclusion

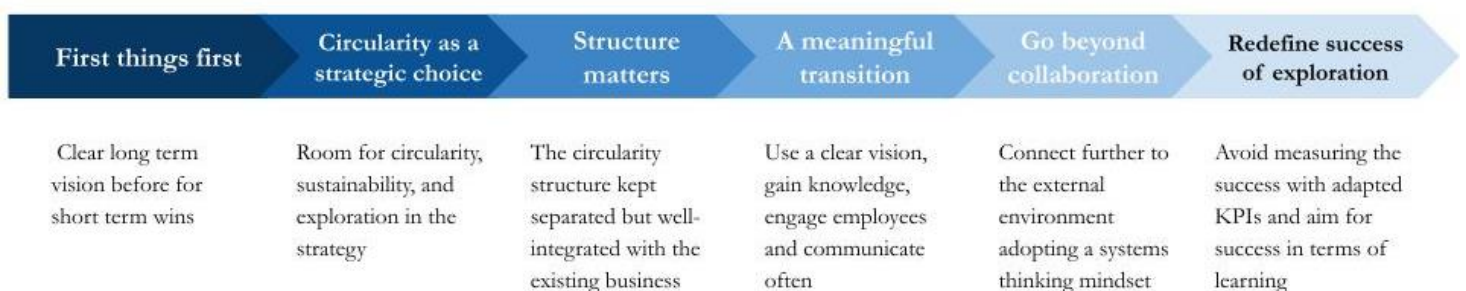
The aim of this thesis was to explore how established companies can enable a sustainability transition within the company through an ambidextrous strategy. In order to do so, an exploratory, qualitative method was chosen where interviewees from various industries were asked questions on enabling sustainability transition. Furthermore, a case company that is going to make a circularity transition in their business was used to generate more practical recommendations of the findings from the research.

The results of this thesis were many, as the dataset of the research was very rich. The three research questions presented in this thesis were discussed in relation to the findings from the 30 interviews, and existing literature, and that led to a formulation of the five general guiding principles for organizations wanting to enable a sustainability transition, and can be seen in Figure 21 The guiding principles for the three research questions. These guiding principles are believed to be relevant for all organizations wanting to make a sustainability transition within, and are built on the concept of ambidexterity and the concept of the cruise ship and expedition.

- 1 | Understand that sustainability and exploration are strategic choices
- 2 | Make the transition and exploration efforts meaningful
- 3 | Be active in being a part of the larger system of actors
- 4 | Use learning as the definition of success
- 5 | Integrate from the start on a high level in the organisation

*Figure 21 The guiding principles for the three research questions*

Furthermore, a six-step model was developed for the case company on how it could approach their circularity transition. Each of the steps represents a key enabler which is based on the guiding principles presented. Each of the key enablers have been explained in detail in chapter 7. This model aims to act as a practical representation of the general guiding principles that were developed during this research on how organizations can enable more sustainability



*Figure 22 The six-step model with the key enablers on how the case company can approach the circularity transition*

## 9 Further research

The first suggestion of further research is to validate findings from this exploratory study through researching other cases and contexts, to see how well the findings hold for companies not studied in this thesis. In addition, as different sizes, types and industries of companies were part of this study, it could be further investigated if there is a difference in the approach to the sustainability transition through exploration depending on any of these factors. As this thesis focused on the internal work of the company further studies could include the focus of other actors in the system, studying for example policies, industry collaboration and customers that enable sustainability transitions through exploration.

Another suggestion for further research is to further connect this area of research to organisational learning theory and measuring success as learning. The questions of how to set up organisational learning and knowledge management to support the sustainability transitions in a company and what underlying factors that enable the mindset of a company to allow exploration for learning in a sustainability transition. Also, the connection between the research areas of ambidexterity and systems thinking as well as ambidexterity and sustainability transitions, including circularity, are underexplored and would benefit from further studies connecting the different areas of research. Adding to this, on a more general level the research areas of sustainability management and strategic management would benefit from further studies combining the two, working towards a consensus of how to manage businesses in the future and how to approach sustainability work. Lastly, the recommendations for companies on how to approach a sustainability transition could be developed further and more practical tools and cases could be beneficial.

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# 11 Appendices

## 11.1 Appendix A - Interview questions

- **Part 1: Introduction questions - varied between the interview groups**
  - *Sustainability experts:* Questions on enabling change today, especially in relation to experience working with sustainability transitions.
  - *Management experts:* Questions on enabling change today, mainly in relation to experiences in enabling organizational change in general.
  - *Individuals from the case company:* Questions surrounding the circularity transition at the company, the current status of it and the vision of the future.
- **Part 2: Questions on enabling change in a new way**
  - All groups were introduced to the research area, the concept of ambidexterity and the model of the expedition and the cruise ship through a short presentation.
  - Interviewees were then asked to reflect on if they felt the model made sense, if they could relate it to their companies or prior experiences, if they felt it was a good method to enable more exploration at an established organization or not, and how they would measure if the expedition was a success or not.
- **Part 3: Questions on integrating change**
  - Similarly to part 2, the interviewees were presented with another scenario in the expedition and cruise ship model where the expedition is coming back and integrating to the cruise ship, i.e. a new initiative being introduced to an established organization, see figures in chapter 4.2.2 for what was presented to the interviewees.
  - The interviewees were asked again to reflect on that scenario, if they believe that the integration of new and the old can be seen as a problem and how to handle those situations and allow for a successful integration.
- **Part 4: Visualizing the future - two groups**
  - Two groups were asked to envision certain scenarios surrounding a circular transition within an organization.
  - *Sustainability experts:* were asked to envision an established kitchen appliance manufacturer that wants to make a change towards becoming fully circular. The interviewees were asked to exclude the external influences such as governmental initiatives and customers, and just focus on the internal organization. A hypothetical scenario of new regulations saying that all businesses need to become fully circular within 5 years in order to be allowed to operate. The interviewees were then asked to reflect on that situation in relation to the established kitchen appliance manufacturer, such as what would their starting point be, what major challenges during this transition could be and if they believed that the concept of expedition and cruise ship could be beneficial in the circular transition journey.
    - This was done in order to be able to provide more strengths to the final recommendation given to the case company.
  - *Individuals from the case company:* were asked to envision the hypothetical scenario of new regulations that say that all businesses need to become fully circular within 5 years in order to be allowed to operate, so to imagine the case company today trying to go fully circular in five years. The individuals were asked to only focus on the company internally, excluding external influences. They were then asked to reflect on what the starting point would be, what major challenges they could face, how to create an urgency for transition in the organization and then to reflect on the value proposition of the company in this new circular future.

- This was done in order to gain a better understanding of the vision and position of the company's employees towards the circular transition .

## 11.2 Appendix B - Results for the case company

In this appendix, more detailed results specific for the case from the interviews with the case company and the sustainability experts are presented. First, how the interviewees perceive the desirable future of the case company is presented, then the current situation of the case company according to the two interviewee groups is presented. Lastly, how the two groups talked about the transition pathway of getting from now to the future vision is presented.

### 11.2.1 Desirable future

This section refers to how the case company can envision itself in the future in terms of the circularity transition and is the view of the individuals from the case company presented first. The second part of the section is how the sustainability experts envision a future for a kitchen appliance manufacturer pursuing a circularity transition. Since the full backcasting approach was not conducted for this study, the interviewees were not asked to specifically envision the desired sustainable future for the case company or a kitchen appliance manufacturer. The future vision was therefore derived from the interviewees' answers.

#### Case company

According to the majority of the 9 interviewees from the case company and the four participants from the workshop with the case company that had not been interviewed before, a desirable sustainable future for the case company would look as following:

- The case company will be fully circular in the year 2035\* (\*on average).
- All employees within the case company will have sufficient knowledge on the concept of circularity, and there will be a high level of awareness towards it in the daily work life amongst the employees.
- All employees will have an understanding and sense of internal motivation on working towards circularity.
- The case company will be service based, so instead of selling products, they will sell services, such as renting and giving their customers a great kitchen experience. They will hold full responsibility for their produced products, and the customer of the case company will be the number one priority.
- The case company will actively work on spreading awareness on the concept of circularity towards their employees, customers and the society as a whole.
- The case company will have developed and will sell products with a life-cycle of around 20-30 years. The products are designed in such a way that it is easy to repair, in terms of it being easy to replace broken parts, and the materials used in the products are easy to recycle. Furthermore, the material used will be sourced from suppliers within Europe.
- The top management fully supports and is driving the case company's circularity strategy and allows the employees to make time to work on new innovations. Employees are therefore encouraged to work on new initiatives, and space is given to work both on the new initiatives and the daily business.

#### Sustainability experts

The vision for a desirable sustainable future for a circular kitchen appliance manufacturer according to the sustainability experts is as follows:

- Sustainability is incorporated in the core of the business, in a way that the core business has been linked to sustainability. The organization has a clear long-term vision and strategy with small aligned goals on how to work continuously on sustainability and circularity in the daily business,

- Employee engagement is high and the employees have a sense of internal motivation on the sustainability and circularity strategy of the business. Everyone is involved in actively working on the strategy.
- The organization offers training for employees to continuously learn about the long-term vision and matters related to it.
- The business model is service based, such as selling a product as a service, renting service, repair service, or offering second hand sales service.
- The products of the organization have been redesigned for a prolonged lifetime, easier repairs and easier recycling.
- The organization will actively participate in collaboration with important actors in order to help drive and spread awareness on sustainable development in society and to find solutions to common challenging sustainability issues. These actors include waste handling companies, recycling companies, the municipalities, the whole value chain of the organization, and more. Furthermore, the organization will have ongoing cooperation with other industry partners in order to have collaborative corporate initiatives working towards sustainable development in the industry.
- The organization has leadership and management that is proactive, willing to go beyond the current state of the art and supports innovation. The top management consists of at least one sustainability manager or sustainability expert.
- Part of the organization is organic where innovation is prioritized and exploration is encouraged.

### 11.2.2 Current situation

This section refers to the current situation of the case company and kitchen appliance manufacturers. The section is divided into two parts, the first part refers to the current situation of the circular transition in the case company according to individuals from the case company. The second part is how the sustainability experts view the current situation for a Dutch kitchen appliance manufacturer embarking on a circularity transition.

#### Case company

According to the majority of the 9 interviewees from the case company and the four participants from the workshop with the case company that had not been interviewed before, the current situation for the case company is as following:

- There is little knowledge on the concept of circularity amongst employees, both in relation to the long term vision of the case company in relation to circularity and general knowledge on the concept of the circular economy.
- A clear formulated strategy surrounding the circular transition of the case company is not available.
- Majority of the interviewees knew of the environmental initiatives that the case company is or has been working on, but it differed between the interviewees if they believed that the case company had a clear sustainability strategy or not. Some interviewees felt that the case company was not doing enough in relation to sustainability, while others believed that they were doing well.
- Many of the interviewees believed that the case company, as a premium brand, had a high responsibility in spreading awareness on sustainability and circularity. Furthermore, they believed that if they don't do it, then no-one else will do it.
- Some of the interviewees admitted that there is awareness amongst the employees that circularity or sustainability is something they should actively work on and that it is in their DNA, but they also mentioned that unfortunately they believed that the majority of the employees were looking for commercial success.

- Majority of the interviewees believed that the organization had a high level of innovation within the company and that the top management was fully supportive of the innovation done at the case company. Majority was also happy with the top management support.
- Almost all of the interviewees mentioned that the daily business was prioritized so there was little flexibility to work on anything else apart from that, and many believed that the top management needed to free up space for individuals to work on new initiatives and innovation.
- Almost all interviewees recognized the concept of having a smaller expedition “boat” exploring new initiatives, and could relate it to the case company. Some even mentioned that they use this metaphor of having a smaller boat exploring, but instead they use the concept of a speed boat that should work fast and gain momentum.
- The case company’s business model is purely sales driven and their products have an average lifetime of 4-5 years. However, some interviewees mentioned that the case company was also selling services, not only the product.
- The participants from the workshop believed that the case company would be able to become fully circular in 2035, on average, with the time spanning from 5 years up to 20 years. However, some believed that the case company would never be able to succeed in becoming fully circular. Some believed that the case company would not succeed in becoming fully circular as they were not large enough, and they should wait for the larger players in the market to pave the way.
- All of the interviewees believed the case company should establish a circular project outside of the organization that would be later integrated into the company.
- All interviewees from the case company believed that the integration of the new circular idea into the established business would not be an issue
- There was not a consensus on whether communications in the case company were perceived to be lacking or were sufficient enough. Around half of the interviewees said that they were good, while the other half admitted that they could be better in communications.
- The interviewees frequently mentioned the role of the innovation manager, and his responsibilities. Examples of the innovation manager’s responsibilities according to the interviewees include figuring out better communication channels, inspiring the middle management for upcoming changes, being the company’s conscience in relation to sustainability, and foreseeing the future changes in relation to sustainability.

### Sustainability experts

According to the sustainability experts, the current situation for a kitchen appliance manufacturer operating today is as following:

- Sustainability is often not incorporated in the core of the business, and it is rather treated as an external project. Organizations often lack a clear vision and strategy in relation to sustainability and/or circularity.
- There is a lack of common understanding amongst employees to understand the reason for working towards sustainability and circularity when they have not done it before. Employees do not feel engaged and there is a lack of communication surrounding sustainability work. Furthermore, many of the experts identified that employees often have answers and solutions to all sorts of problems, so an effort should be made to look for those change makers and really engage them. It is also important to have knowledge and competences available in the company, and actively work on offering that to the employees in the form of for example training.
- Almost all the expert interviewees stated that it was crucial that the top management was supportive of the upcoming changes, and that leadership today is not dynamic enough. The structures of organizations are often too mechanistic, where it is difficult to foster innovation as

you need to go through predefined processes and get approval from various different individuals within the organization.

Along with the previous mentions, the experts identified many obstacles that needed to be overcome in established businesses that want to embark on a sustainability transition:

- Short-term thinking among managers and employers is a problem, as sustainability and circularity changes might not indicate commercial success for the organization in the short term. Additionally, there are large uncertainties on whether circularity will be economically viable since the customer, societies and other industries aren't there yet.
- The daily operations are too often prioritized, and the current processes of the organizations can hinder or slow down the sustainability or circularity changes.
- Employee resistance will happen, and some individuals will be saboteurs of a change.

### 11.2.3 Transition pathway

This section is based on the findings from the individuals from the case, both interviewees and workshop participants, and the sustainability experts, on how the case can approach the circularity transition with the future vision and current situation in mind. Four main areas were suggested in relation to: long term strategy, employee engagement, communications and collaboration efforts.

#### Long term strategy

- Create a long-term vision and strategy for the circularity transition
- Create an urgency for the change towards circularity
- Recruit a sustainability responsible to the top management team
- Co-create a clear vision with employees and break it down to action points together, adapt it, communicate it and break down the vision together with employees continuously
- Allocate people and resources to exploration and make space for it in the organization
- A suggestion from the workshop is to have a circularity ratio for each brand segment that would be broken down towards local targets or plans.

#### Employee engagement

- Employees should gain knowledge on circularity
- Establish urgency in the organization through education on sustainability and circularity for everyone
- A suggestion from the workshop is using scorecards to value circular choices and a live feed of what has been done on the home page in order to identify what needs to be done and how employees can help. Make it transparent and easy to follow the progress towards the vision. Another suggestion was to use a gamification platform for learning,
- Facilitate employees finding their personal purpose with the circular transition
- Identify who should be involved to what degree
- Have a yearly sustainability day and award the most sustainable employee of the year,
- Allocate people to actively work with sensing and understanding the external environment, integrate the efforts and learnings in the organization continuously
- Create a program for transferring competencies and recruit people with competencies missing.

#### Collaboration efforts

- Look for potential collaborations, both inside and outside of the industry
- Participate in external settings for learning as much as possible from different actors

- Connect further to the external environment through collaboration and participation

#### Communication

- Be clear and consistent in the communications, through both words and actions.
- Suggestions from the workshop included to establish a system of continuous communication and learning in the organization. The content will be frequently shared and in various forms, such as text, videos, animations and photos. Another suggestion was to have a live feed on the company's homepage that showcases their current status and future projects, and to have an established intranet in order to follow the route for success. Lastly, an emphasis on celebrating successes and sharing them.

## 11.3 Appendix C - In depth explanation to the different phases for the case company

Below, a more explanation to the different phases on how the case company can approach their circularity transition is presented, but these recommendations are part of the practical recommendations for the case.

- **Phase 1. Prepare for transition**
  - Gain knowledge on circularity and systems thinking
    - For top management and employees
    - Use workshops, reports, seminars, lectures, discussions
    - Ellen MacArthur Foundation is a good starting point for learning about circularity in the organisation.
    - Discuss and explain in order to understand the concepts better
  - Create an urgency to change through education of employees
  - Invest in competence building for all employees, address the scared employees offering them to build new competences through training programmes
  - Recruit a sustainability responsible to top management
  - Recruit the sustainability competence that is missing and is hard to build through training of employees, for example life cycle assessment competence.
  - Have top management communicate the importance regularly and consistently, sustainability needs always be top of mind and advocated for by powerful people in the organisation.
  - Hold a sustainability day at the company
  - Reward the most sustainable employee of the year and find other ways to bring attention to the topic, for example through work cards.
  - Find a higher purpose that the full organisation can share
  - Seek external validation to overcome resistance
    - Be transparent, talk about what is done and where the company is going
    - Actively seek feedback in the right places, for example at universities, conferences and from other industries
  - Understand that circularity is a strategic choice and that strategic choices are hard to reverse and need allocated resources
  - Move planning horizon from current 3 years to 10+ years
  - Connect sustainability to the core of the company and the value offering. We are sustainable rather than we “have a green line”.
    - Add more services in the value proposition
    - Move from value proposition of selling appliances to selling “cooking”
- **Phase 2. Envision the future**
  - Start a full backcasting process
    - This will help all coming phases
    - Recommended to work with sustainability consultants on this
  - Co-create a clear vision with employees
    - Avoid creating it for the employees rather than with them to build trust and enable support for the transition. Make sure saboteurs are not directing the vision.

- **Phase 3.** Understand current situation
  - Continue backcasting process
  - Understand the external environment and your place in it through adopting a systems thinking mindset and facilitating further collaboration and learning in the organisation.
  - Set up systems, build skills and allocate resources to sense the external environment, look for learnings and collaboration. Be everywhere learning.
  
- **Phase 4.** Choose a strategy and align it with systems and structures at the cruise ship
  - Continue backcasting process
  - Make sure that structures, systems and allocated resources match the vision and strategy for the transition
  - Identify which employees should be involved and to what degree
  - Make sure that if ambidexterity is attempted it is tightly connected on top management level and have enough resources to not be an unsupported team
  
- **Phase 5.** Explore possible way to bridge the gap between vision and reality
  - Continue backcasting process
  - Change measures for exploration efforts from adapted “sustainable KPIs” and specific goals to learning goals, in other words let the goal be to answer a question
  - Understand that exploration is not a one time thing, but one exploration effort is needed per question you want to answer.
  - Identify which employees should be involved and to what degree
  - Understand the role of learning in organizational change and set up systems for organizational learning and integration of learnings in the established business.
    - Have a learning plan, foster trust, transparency and dialogue on all levels on the company
    - Enable learning in different ways, for example through a gamification platform



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