



SCHOOL OF
ECONOMICS AND
MANAGEMENT

Managing Change in Corporate Climate Action

A Study of Change Management to Support the Science Based Targets
(SBT) Implementation in Sweden

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Abstract

In an uncertain and ambiguous world, organizations need to find new ways to manage change and stay in business. Constantly changing environmental policies and corporate climate action puts even more pressure on organizations in change management. It is apparent that corporate climate action shapes the way companies operate a business. Hence, the purpose of the present study is to shed light on managing change in corporate climate action in Sweden.

One type of corporate climate action is Science Based Targets (SBT) implementation. SBT implementation was selected since research in corporate climate action is limited and sustainable business is principal to creating a long-term value for companies. The present study was based on change management theory: the Bolman and Deal Model (2017), the ADKAR Model (Hiatt, 2006), and previous research (Sarasini & Jacon, 2014). Companies that are part of SBT implementation in Sweden were chosen as a target sample. The mixed-methods approach of using qualitative and quantitative data was used in the present study. Overall, the participants' pool consisted of 23 surveys and 10 interviews with participants who were sustainability managers or SBT's responsible company representatives.

Change management theories have been applied and adapted to a company's type of business, size of the company, and current business needs. The empirical findings showed that the selected change management theories are practical and applicable in SBT implementation. The results showed that each change management component has a different level of importance in SBT implementation. Furthermore, the present study results indicate that organizational and people change management are interconnected and interdependent. It also revealed that the necessity of SBT implementations is more likely to be perceived as important than the SBT's support and guidelines. The present study offers practical implications to the managers, management teams, and relevant stakeholders on managing change in corporate climate action and other areas of managing change.

Keywords: Corporate Climate Action, Science Based Targets, Change Management, Organizational Management, People Management, Change Factor.

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1 Introduction

1.1 Background

Change management is an approach to shifting and transitioning individuals, teams, and organizations from their current state to a desired future (Lumen learning, 2022). It includes various changes that can come from inside or outside the organization. Change encompasses many different phenomena, occurs in various ways, and can have widely divergent causes and driving forces. It also helps develop a constructive theory dealing with planned organizational change (Jacobsen, 2021). Managing change in an organization is a challenge for many companies worldwide. Hence, it is relevant to investigate the current state of organizational and people change management in different circumstances and time frames that may lead the change management theories to unfamiliar knowledge, concepts and results. Additionally, academic research also provides managers with the importance of identifying the key lessons learned for change management planning and decision making (McKenzie, Winkelen & Grewal, 2011; Obioma, 2015; Volk et al. 2009).

The number of companies going through different change management stages increases every day. The complexity of the business world and uncertainty of the environmental and political environment affects all types of organizations (McKinsey & Company, 2021). Managers need to be ready to deal with an unexpected problem and have a change management system to control or mitigate any risk issue in their business (OECD, 2014; Sousa, Martins, & Sousa, 2019). Similarly, companies should adapt to changes in technology, competitors, regulations, and trends in different circumstances (Jacobides & Reeves, 2020; Reeves & Deimler, 2011). Sharma and Starik (2002) suggest that without adaptation, companies may end up with underperformed and unsuccessful change management in their companies, creating a negative impact on the business, environment, and society as a whole. Change management in real business life is an action that companies perform to adjust one or more components of their organization to new ways of working (Jabri, 2015; Stobierski, 2020). Generally, each company has change management that matches its type of business, size, vision, mission, and needs for change (Jabri, 2015). Especially when it comes to change, which is not the main core business of a company, it is not an easy decision for the management team to prioritize their resource utilization. Hence, management teams need to provide enough resources and

investment for change, support individuals adapting to change, and encourage each individual to take action to achieve common goals (Dhingra et al. 2021; Sirkin, 2005).

Concerning change management in the environmental standards area, companies and, in particular, managers are constantly faced with a conceptual change factor of transforming businesses into new environmentally sustainable companies (Dechezleprêtre & Sato, 2014). The pressure on environmental standards and requirements is rising, especially after the Paris Agreement (Ministry of the Environment in Sweden, 2020). To enable companies to comply with the Paris Agreement for corporate climate action, environmental change transformation was implemented in a sustainable initiative - Science Based Targets (SBT). SBT was founded by the United Nations Global Compact, the World Wide Fund for Nature, CDP Worldwide, and the World Resources Institute in 2015 (Science-Based Targets, 2022b). SBT provides a clear route to reduce greenhouse emissions for companies by developing their targets based on their type of business, needs, and resources (Science-Based Targets, 2022b). SBT companies voluntarily commit, set, and implement the SBT framework for corporate climate action (Science-Based Targets, 2022b). Since the SBT concept is new and involves a complex process with high standards, it requires various change management practices from company, individual, and business perspectives.

1.2 Problem Statement

The main objective of the present study is not to provide a solution or solve managerial problems with the empirical results but to deliver valuable insights on change management in real business life practice. The present study on Managing Change in Corporate Climate Action aims to provide data and information on corporate climate action to understand organizational and people change management and the business point of view.

However, the available literature on managing change in SBT implementation is limited, and there is no peer-reviewed literature on this topic. Based on the research gap, the present study is the first to discuss managing change in SBT implementation in Sweden. The present study would help SBT target set companies that are stuck in the commitment stage and new companies who plan to join SBT. Managers could consider using the present study to support the development and adaptation of their change management practices for SBT implementation progress. Managers could also use the present study to find an appropriate, localized, and suitable SBT implementation plan that fits with their circumstances and company culture context.

Further, the change management for SBT implementation may have a similar process to other changes that managers must follow or comply with in the future. Thus, the present study provides valuable insights into change management that could conceivably contribute to managerial practice and might be helpful for many managers, professionals, and educators.

1.3 Purpose and Research Questions

The present study aims to explore and shed light on managing change in corporate climate action in Sweden. The present study contributes to understanding how to manage change in the SBT implementation in organizational and people change management areas and in regards to key change factors on corporate climate action.

In line with the research purpose, the following research questions are formed:

1. How do companies and individuals in the companies perceive managing change in SBT implementation?

To be able to answer the first research question, two supporting sub-questions are formed:

- a. How do companies and individuals perceive organizational change management?
 - b. How do companies and individuals perceive people change management?
2. What are key change factors from a business's perspective that affect the performance and success of STB implementation?

1.4 Significance

The present study on managing change in corporate climate action can be used to adapt the SBT implementation plan by companies that are willing to join or participate in SBT. The key change factors in change management can also be used to expand the information on SBT implementation for further collaboration among SBT companies in similar and different industries and the SBT partner organizations. Lastly, the results of the studies can serve SBT-related companies and all the managers in managing change and provide information to all the stakeholders involved.

1.5 Delimitations

The present study involved only companies in Sweden who already set the SBT and are in the implementation stage. The present study targets 76 companies registered as target set companies up to 16 April 2022 (Science Based Targets, 2022a). For the management aspect,

the present study mainly focuses on organizational and people change management from company, individual, and business perspectives of SBT's responsible representatives from selected companies.

1.6 Outline of the Thesis

The present study is divided into six main sections.

Chapter 1 presents the background and problem overview information about the researched topic, purpose, research questions, significance, and delimitations.

Chapter 2 presents the literature review on managing change, the theory of change management, and in particular, Bolman and Deal organizational frames, the ADKAR model of change management, and corporate climate action research in Sweden. It concluded with the analytical framework for the present study.

Chapter 3 covers the present study's Methodology, concentrating on the research methodology approach, design, data collection, and data analysis, concluding with a data quality assessment and limitations of the present study.

Chapter 4 discusses the data results and analysis of empirical findings from primary and secondary data collection. It also contains summaries of the results of data collection after each subsection.

Chapter 5 presents the discussion of the research questions and a summary of results consolidated with the analytical framework of the present study.

Chapter 6 presents the conclusion, accessing the research practical implications and contributions, research limitations, recommendations for future research.

2 Theoretical Framework

The first step in understanding how to manage change is exploring and analyzing the existing literature on this topic. Hence, in this chapter, the literature review is presented to have a clear analytical framework and to outline the best available knowledge for the present study. It also includes the explanation and description of change management theories valuable for the present study and a short overview of factors and components of change management in Sweden. This chapter ends with a summary of the literature insights and a summarized analytical framework.

2.1 Change Management

Change management is the field of study and research that includes a range of theories and models from different perspectives. Following, change management models work as guidelines that could help and assist with leading change by developing specific steps and components of change, understanding key factors influencing change steps, and determining which factors affect the performance and success of change management (Errida & Lotfi, 2021; Rothwell & Sullivan, 2005). Multiple change management models were developed over the years that focus on different aspects of change management. One strand of change management models concentrates on organizational and people change management (Rothwell & Sullivan, 2005).

Organizational and people change management includes several categories of change management models: descriptive and processual models (Parry et al. 2013). The descriptive models identify what main variables affecting the organizational change management (Parry et al. 2013), for example, Bolman and Deal four frames (Bolman & Deal, 2017), McKinsey 7s model (Cordell & Thompson, 2019), and Burke and Litwin causal model (Burke & Litwin, 1992). On the other hand, the processual model directs which steps or stages to take to manage change. Great examples of the processual change models are Kotter's 8-step model (Kotter, 2007), ADKAR 5 steps model (Hiatt, 2006), and Lewin's three stages model (Lewin, 1947).

To implement organizational and people change management, both descriptive and processual models should be used and combined to guarantee the performance and success of the change (Parry et al. 2013). In the descriptive models, the Bolman and Deal Model (2017) excels since

it provides a helpful understanding of managing change and how its multidimensional approach helps create the most effective change strategies (Lowe, Plummer, & Boyd, 2017; Thompson, 2000). Moreover, in the processual models, the ADKAR 5 steps Model (Hiatt, 2006) stands out since it is a heavily goal-oriented change management model that allows change management teams to concentrate their change processes on specific business results (Adhikari, 2007; Galli, 2018). It is essential for the present study since, in the previous research, one of the main factors influencing change management in Swedish corporate climate action is economic benefit and business focus (Sarasini & Jacob, 2014). Hence, the Bolman and Deal Model (Bolman & Deal, 2017) and the ADKAR 5 steps Model (Hiatt, 2006) are presented and explained in more detail in the following sections.

2.1.1 Bolman and Deal Model

Bolman and Deal (1991) assert that "an increasingly complex and turbulent organizational world demands greater cognitive complexity: effective managers need to understand multiple frames and know how to use them in practice to be fully effective as both managers and leaders" (Bolman & Deal, 1991, pp. 528–529). Bolman and Deal (2017) add that the multi-frame approach and effective leadership are necessary for successful change management practice. They suggest structural, human resources, political, and symbolic frames as crucial in managing change (Bolman & Deal, 2017). The alignment and interconnectedness of all four lenses help provide a clear vision for the companies in change and ensure readiness for change (Bista & Glasman, 1998; Thompson, 2000).

Further, Bolman and Deal (1991, 1997) argue that structural, human resources, political, and symbolic frames represent four main ways leaders and management teams perceive organizational change management and how those changes are defined and managed successfully.

To elaborate more on four frames, managers can see managing change in four ways depending on what change factors they face in their organization (Bolman & Deal, 2017):

1. Structurally, the main change factors are loss of direction, clarity of the communication, and unclear or confusing change management guidelines. In this case, Bolman and Deal (2017) state that the essential strategies in managing change would be better and more effective communication and changing organizational policies and patterns.
2. In the human resources frame, if the main change factors of organizational management are uncertainty or people's perception of being incompetent, the

strategies to manage change are as follows: training people, involvement of leaders, and support (Bolman & Deal, 2017).

3. Politically, it is vital to see the areas where there is a conflict between different actors of the change management and how power relationships are in the company. To ensure efficient change, one should develop new ways and areas of negotiation and partnership and create new alliances to support managing change (Bolman & Deal, 2017).
4. The fourth frame, symbolic, concentrates on the company's loss of vision and mission that could support upcoming changes. In such cases, Bolman and Deal (2017) suggest that an organization is responsible for creating new ways of working, aligning its vision and mission with further change, and ensuring the readiness for change inside the organization.

Fruehauf, Al-Khalifa, and Coniker (2015) conclude that four frames promote a better understanding of the intersectionality and interdependence of the organizations and their managing change, which, if only looked at from one perspective, could go overseen or unnoticed. By analyzing and applying all four frames of Bolman and Deal (2017), organizational change management understands which frames are successfully implemented and managed in the organization and which frames are the most challenging and resistant to change.

2.1.2 ADKAR Model

The ADKAR model was primarily used to determine whether the change management, particularly communication and employee training, was positively impacted (Adhikari, 2007). This model answers how some organizations succeed with one change while others do not (Goyal, 2018). The model also believes that through the change in individual level and training of employees, it is possible to bring desirable results (Hiatt & Crease, 2012).

The ADKAR model of successful change focuses on two sides (Figure 2.1). The first side of the ADKAR model is the people side of things, and the second side is the phases of a change project (Hiatt & Crease, 2012). In the present study, the main focus is to understand the individual perception of the people management in change; therefore, the analytical framework is formed primarily on the people's side of change in the ADKAR model.

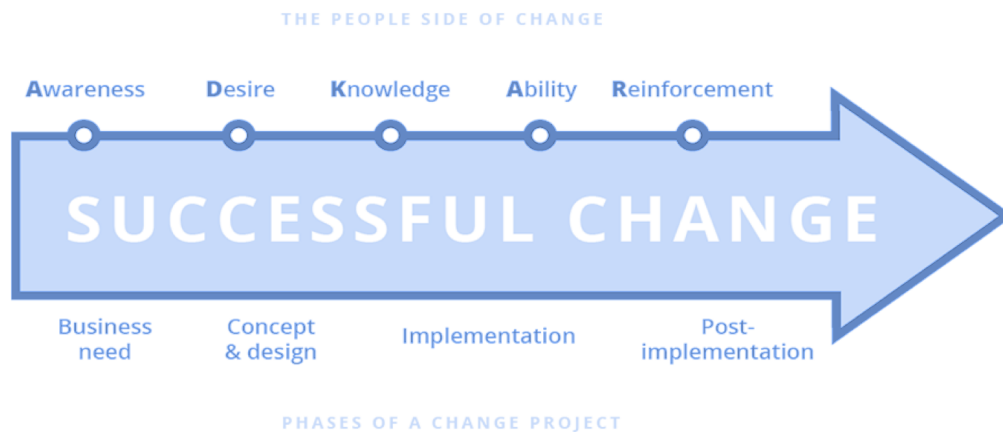


Figure 2.1 The ADKAR Change Model

Source: Hiatt & Crease, 2012

The human side of change ADKAR model explains that organizations as actors themselves do not change. However, individuals who are part of the organization are drivers of change (Hiatt & Crease, 2012). It is divided into five steps of the change management (Hiatt, 2006):

The first step of the model is awareness. Hiatt (2006) describes this step as "an individual or organizational understanding of the nature of the change, why the change is being made, and the risk of not changing." (Hiatt, 2006, p.16). He further explains that the awareness step usually includes the introduction of internal and external factors that can guide the company through required change (Hiatt, 2006).

The second step is the desire, which "represents the willingness to support and engage in a change." (Hiatt, 2006, p.16). This step is characterized by individual choice, which is influenced by the nature of the change, individual characteristics, and individual motivators. Shortly, this step is about what participants of the change would want to get out of the process.

The third step is knowledge. This step is about informing, training, and educating employees to achieve the necessary change. Knowledge includes the information about processes, concepts, tools, skills, job responsibilities, and change management techniques needed for change management (Hiatt, 2006).

The fourth step of the ADKAR model is the ability, which refers to "the realization or execution of the change" (Hiatt, 2006, p.16). It is the step from making knowledge to the practical application when the person and a group of people show the capability to implement the required change. This step also includes understanding and considering potential barriers that might hinder change management.

The fifth and final step is reinforcement, where one determines the internal and external impact that could potentially sustain the change. The external impact could consist of different rewards, ceremonies, and recognition systems connected to implementing change. At the same time, the internal impact might be the individual level of satisfaction with their achievement or other benefits related to the change (Hiatt, 2006).

As described below (Table 2.1), Hiatt (2006) also mentions different factors that could influence the success of the five steps of ADKAR models. Those factors would be considered in the data analysis part to compare participants' responses and listed factors from the model. By analyzing the human side of the ADKAR model and the factors influencing its success, the present study investigates if some elements or components have a more significant impact on managing change. This analysis could be helpful for organizations and managers, in particular, to see which factors and steps of the ADKAR model to concentrate more and which measures to take to ensure more successful management of change.

Table 2.1 ADKAR Elements and Change Success Factors (Hiatt, 2006, p.45)

| | ADKAR elements | Factors Influencing Success |
|---|--|--|
| A | Awareness of the need for change | <ul style="list-style-type: none"> ● A person’s view of the current state ● How a person perceives problems ● Credibility of the sender of awareness messages ● Circulation of misinformation or rumors ● Contestability of the reasons for change |
| D | Desire to support and participate in the change | <ul style="list-style-type: none"> ● The nature of the change (what the change is and how it will impact each person) ● The organizational and environmental context for the change (his or her perception of the organization or environment that is subject to change) ● Each individual situation ● What motivates a person (those intrinsic motivators that are unique to an individual) |
| K | Knowledge of how to change | <ul style="list-style-type: none"> ● The current knowledge base of an individual ● The capacity of this person to gain additional knowledge ● Resources available for education and training ● Access to or existence of the required knowledge |
| A | Ability to implement required skills and behaviors | <ul style="list-style-type: none"> ● Psychological blocks ● Physical abilities ● Intellectual capacity ● The time available to develop the need skills |

| | | |
|---|-------------------------------------|---|
| | | <ul style="list-style-type: none"> • The availability of resources to support the development of new abilities |
| R | Reinforcement to sustain the change | <ul style="list-style-type: none"> • The degree to which the reinforcement is meaningful and specific to the person impacted by the change • The association of the reinforcement with actual demonstrated progress or accomplishment • The absence of negative consequences and accountability system that creates an ongoing mechanism to reinforce the change |

2.2 Change Factors in Corporate Climate Action in Sweden

2.2.1 Support and Guidelines

Sarasini and Jacob (2014), in their study on corporate climate action in the Swedish electricity sector, state that one of the managing change factors is that managers and companies usually show a lack of clear guidance and passively follow laws and regulations with no room for independence and initiative. They also discovered that while some managers mainly focus on future climate policy changes and their development, other managers also discuss, redesign and even disapprove of other corporate climate initiatives, which in the present study is the SBT framework (Sarasini & Jacob, 2014). On the other hand, Berrone, Fosfurri, Gelabert, and Gomez- Mejia (2013) found a positive correlation in managing change between limited autonomous space of management and corporate climate action development. They also added that this correlation is even stronger in the firms that pollute more than their peers or have smaller availability of natural resources (Berrone et al. 2013).

2.2.2 Business Perspective

One of the factors that influence managing change and participating in the corporate climate action is to manage future economic risks and take advantage of innovation opportunities with renewable energy sources (Boiral, 2006). Sarasini and Jacob (2014) also state that organizational readiness to join and commit to the corporate climate action could be connected to future aspirations and strategy of the company and, therefore, influence the company's ability to manage change. Another factor influencing corporate climate action and change management in Sweden is corporate attention and framing climate policies as future business opportunities rather than challenges (Sarasini & Jacob, 2014). It could be connected to the socio-cultural context of Sweden, where the country is the 8th in the world among 180

countries in the 2020 Environmental Performance Index (Sustainable Business in Sweden, 2022).

2.3 Analytical Framework

Based on the literature review of the change management model of Bolman and Deal (2017), the ADKAR model (Hiatt, 2006; Hiatt & Crease, 2012), and change factors in managing change in corporate climate action in Sweden (Sarasini & Jacob, 2014), the analytical framework for the present study was formed as an analytical framework model shows in Figure 2.2.

The analytical framework model for the present study is the combination of different change management models since change management requires both organizational, people, and external support. The analytical framework model illustrates the organizational change that needs the help of four frames, which include structural, human resource, political, and symbolic (Bolman & Deal, 2017) and people change that has five components, namely awareness, knowledge, desire, ability, and reinforcement (Hiatt, 2006; Hiatt & Crease, 2012). The successful change could not be driven by only one component. At organizational levels, managers need to provide guidance, direction, and support (top-down), and employees need to follow, provide input, and support the change (bottom-up) (Heyden et al. 2016). At the individual level, the level of employee awareness, individual decision or desire to participate in the change, knowledge, and capability to implement the change to follow the new tool, process, procedure, and guideline of SBT implementation creates an impact on the change progress (Hiatt, 2006; Hiatt & Crease, 2012; Sarasini & Jacob, 2014). At the same time, managers also need to support their employees in the change by identifying the gap between five components to ensure that one or more of these five components are not missing. Managers also need to be sure that employees can move forward with the change and do not leave someone behind (Hiatt, 2006). To move forward with the change in a practical way, managers need to have feedback from employees and an assessment of change to revise the frame of their organizations. If employees have insufficient knowledge and need more time to learn, managers need to focus on developing the human resource frame (Hiatt, 2006; Bolman & Deal, 2017). Managers need to ensure that they use sufficient resources and the right approach of four frames that best suit their culture and circumstances (Bolman & Deal, 2017). Apart from this, support and guidelines from the SBT partnership are essential for the change to ensure that the organization aligns with the SBT framework standard and stays on track

with the SBT implementation agenda (Sarasini & Jacob, 2014). Lastly, an organization has to have a clear perspective of the long-term impact of SBT implementation on business for internal and external stakeholders (Sarasini & Jacob, 2014).

The analytical framework model provides an overview of the questions of the surveys and interviews, which aim to explore the way managers reflect on a range of different factors influencing managing change.

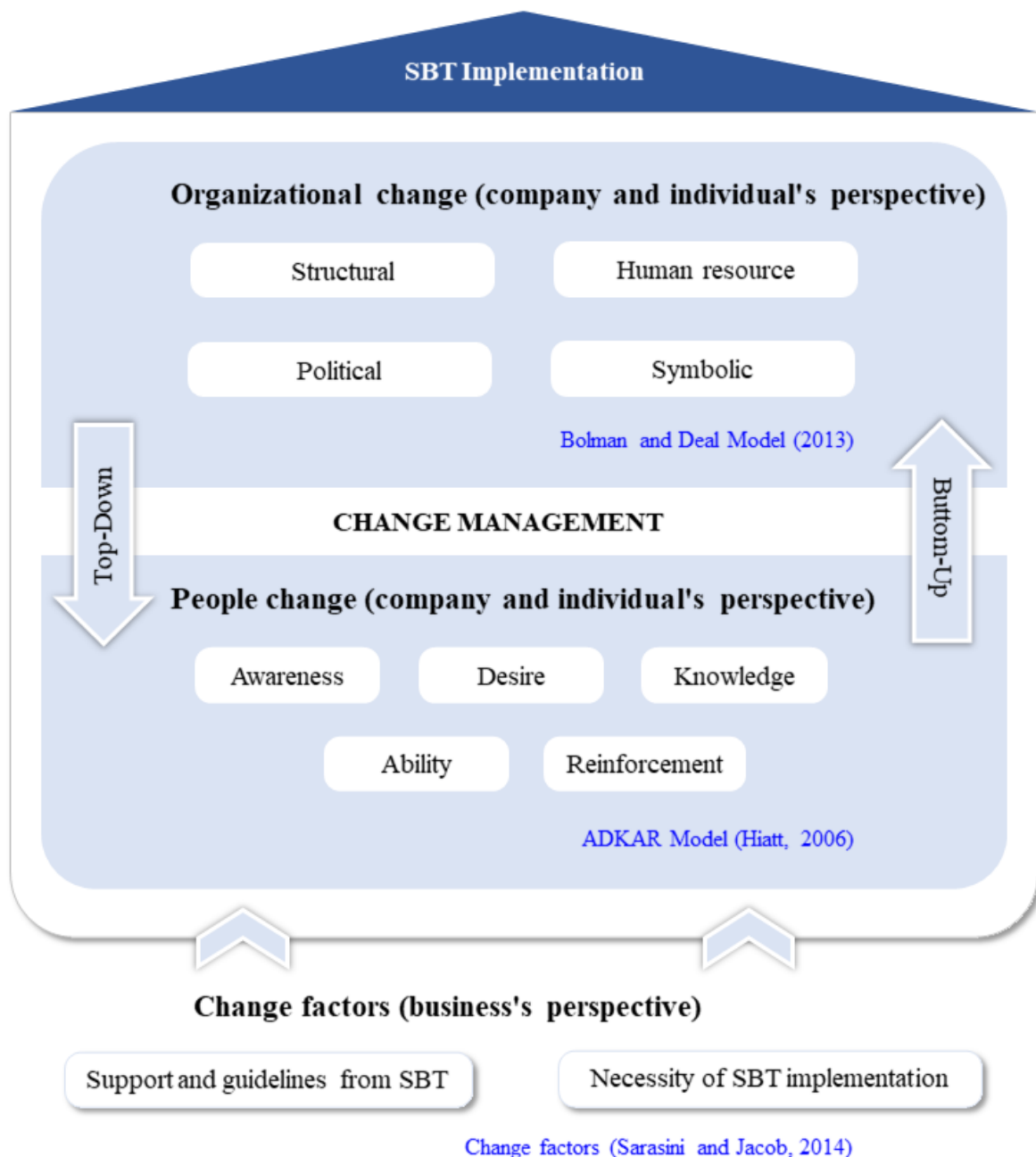


Figure 2.2 Analytical Framework Model

Source: by authors

2.4 Chapter Summary

This chapter explores the best available knowledge on managing change. To align with the present study context, the three theoretical approaches have been presented and analyzed: the change management model of Bolman and Deal (2017), the ADKAR model (Hiatt, 2006; Hiatt & Crease, 2012), and managing change in corporate climate action in Sweden (Sarasini & Jacob, 2014). The chapter concludes with the analytical framework for the present study that combines three theoretical models as a theory base for the methodology of the present study in the next chapter.

3 Methodology

This chapter gives an overview of the methodology approach, data collection, and data analysis sections to answer the research questions. The present study uses a mixed-method approach to understand the company and individual perceptions of managing change concerning SBT implementation. By narrowing the research gap, the present study aims to develop unrivaled knowledge about this topic and provide all stakeholders with new information.

3.1 Methodology Approach

The present study was conducted in the deductive methodology approach since it was based on an already existing theory on change management, corporate climate action in Sweden, and SBT's previous research (Bryman & Bell, 2011). The analytical framework from change management and corporate climate action was applied for mixed data collection methods. This theory and information on SBT were used to design the present study strategy to answer the research questions and see the link and relationship between theories and change management of SBT in real practice. Since there is much theory, but a limited amount of mixed-methods research studies, qualitative interviews, and quantitative surveys data collection are performed. It allows authors to gather more information about the present study context and potentially uncover new findings of already existing theories (Sekaran & Bougie, 2016; Saunders, Thornhill, & Lewis, 2019).

3.2 Methodology Design

Considering a methodological approach, the present study uses mixed research methods to gain better insights and confirm the previous research by adopting an exploratory research design (Bryman & Bell, 2011; Saunders, Thornhill, & Lewis, 2019). In the present study, both quantitative surveys and qualitative interview questionnaires were used for data collection to get a better pioneer understanding of a newly researched topic of SBT implementation (Figure 3.1). Quantitative research was used to obtain primary data insights about managing change in SBT implementation, and all the surveys were conducted electronically. Qualitative interviews were conducted to explore and examine change management theories. Interviews were conducted electronically depending on the availability of the target sample, which gave authors more opportunity for probing. Using more than one method of data collection helped

decrease some of the limitations of the present study and get a better understanding of the behavior of each participant (Saunders, Thornhill, & Lewis, 2019).

The list of accountable persons for each company was recorded. The communication strategy was in place with a clear purpose to ensure that target groups were willing to participate in the data collection within the timeframe. Due to the limited timeframe of the present study, it was impossible to observe managing change over the time frame and different change management steps. However, the insights were primarily used to compare participants with similar occupations between selected participants. Thus, present cross-sectional study was conducted. The target sample for the present study is SBT accountable persons - managers or employees of Swedish SBT target set companies (76 companies) (Science Based Targets, 2022a).

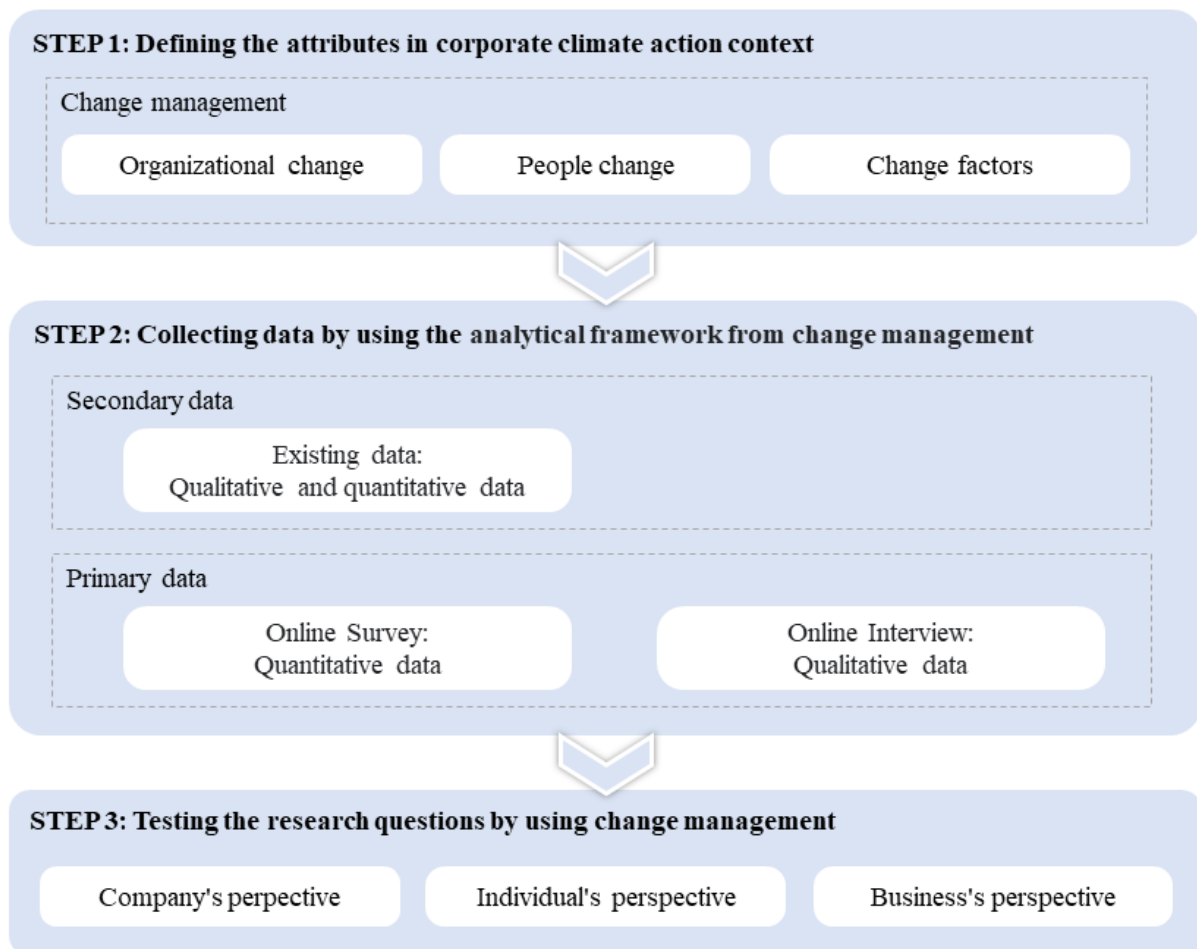


Figure 3.1 Illustration of methodology design

Source: by authors

Further, the Bolman and Deal Model (2017) is a well-known theory and is considered a robust framework and solid foundation to serve organizations and managers in managing change factors. Nevertheless, in real-life practice or specific business working environments, not all managers have a good understanding or are familiar with the model. Hence, in the present study, the terminology of the four frames has been adjusted and identified to have a common language or term in the survey form and interview questions. The identified terms are defined as appropriately as possible to all levels of managers in different businesses and companies. Be sure that the words are not interpreted differently by other managers. The defined terminology for the four frames used in the survey form and interview questions show in Table 3.1.

Table 3.1 The defined terminology of four frames

| The Bolman and Deal Model terminology | Term use in the survey form and interview questions |
|--|--|
| Structural | Structure and Strategy |
| Human resources | People Management |
| Political | Stakeholder Engagement |
| Symbolic | Mission and Vision |

3.3 Data Collection Method

To acquire the generalizability and validity of the data collection, the secondary data collection was conducted before the primary data collection. For the secondary data, the SBT online resource platform with SBT reports and data was collected and analyzed (Science Based Targets, 2022a). Further, all 76 companies on the SBT target set company list in Sweden (Science Based Targets, 2022a) were selected as a target sample for data collection. All the selected participants were contacted online via email, phone, or LinkedIn. To ensure a larger share of the participation from the company list, both surveys and interviews were conducted with the participants to get a better overview of the target sample. Background information about the participants has been requested at the beginning of both the surveys and interviews, followed by the sets of the questions based on the Bolman and Deal (2017), the ADKAR model (Hiatt, 2006), and change factors in managing change in corporate climate action in Sweden (Sarasini and Jacob, 2014).

3.3.1 Quantitative Data Collection Method

3.3.1.1 Survey Sampling

The participants of the survey were the SBT target set company's representatives. The target sample was selected through purposive sampling from only the SBT target set companies. Purposive sampling was used to target the specific target sample for the present study (Bryman & Bell, 2011). The purposive sampling used in the present study is subjective and influenced by the authors' judgment in choosing selected participants, and it could be different for other researchers (Saunders, Thornhill, & Lewis, 2019).

The selection of the participants was based on several aspects. First and foremost, the authors have selected managers' or employees' responsibility for the SBT implementation. The participants' relation to the SBT implementation was the most crucial factor in choosing the participants from the selected companies to get the most informative and relevant information and insights about managing change with SBT implementation. Further, for the small to middle size company in the target sample, due to limited personnel in the SBT implementation, the vice president or public relations representatives have been contacted. Their insights have been valuable since they are responsible for different aspects of the company and could provide some surprising insights.

In addition, volunteer sampling was used in the present study, which means that the participants were the ones who were voluntarily willing to participate in surveys from the selected sample (Bryman & Bell, 2011). The majority of the participants were sustainability managers or SBT responsible employees.

3.3.1.2 Survey Design

The survey was designed using the Google Forms digital survey platform, a self-completion online anonymous survey that allows participants to answer questions without the authors' assistance. The survey was then distributed through email (Appendix A) to the selected sample. The sample had 18 days to complete the study, and a reminder message was after 7 days. The survey was designed based on the change management model of Bolman and Deal (2017), the ADKAR model (Hiatt, 2006), and change factors in managing change in corporate climate action in Sweden (Sarasini & Jacob, 2014).

At the beginning of the survey, the participants were asked to provide the general information about themselves: company, position, department, weekly distribution of SBT, and how many employees are responsible for SBT implementation.

The second part of the survey questions was designed based on the organizational model of change by Bolman and Deal (2017). The questions were formed by asking participants to evaluate to what extent they agree with the statement on the scale from “Strongly disagree” to “Strongly Agree.” The questions had four subparts based on Bolman and Deal (2017): structure and strategy, people management, stakeholder engagement, and mission and vision. The second part was combined with two questions based on the previous research (Sarasini & Jacob, 2014), where participants were asked to evaluate to what extent do they agree or disagree with SBT’s role in business and SBT’s support and guideline for implementation of the scale “Strongly disagree” to “Strongly Agree.”

For the third part of the survey question design, the present study analyzed previous studies measuring the ADKAR model in a survey data collection method. The survey questions have been adapted from Kachian, Elyasi, and Haghani (2019) (Appendix B). The second part of the survey questions has been formed around five categories of the ADKAR model: awareness, desire, knowledge, ability, and reinforcement. The questions were developed by asking participants to evaluate to what extent they agree with the statement on the scale from “Strongly disagree” to “Strongly Agree.”

At the end of the survey, the participants were asked to provide additional comments and if they would like a final copy of the present study. The survey was conducted between 12 April and 29 April 2022 (Appendix C).

3.3.2 Qualitative Data collection Method

3.3.2.1 Interview Sampling

The participants of the interviews were selected from the SBT target set company representatives who completed the survey and afterward agreed to the follow-up interview. Both purposive and volunteer sampling were used for the selection of interviewees. The target sample for the interviews was selected through purposive sampling from only the 22 company representatives who responded to the survey. It was also chosen through volunteer sampling. Only the company representatives who were willing to participate in the interview and had accessibility were contacted from the selected sample. Only 10 participants agreed to proceed with the interview. The participants were mainly invited through email (Appendix D), and the

interviews were conducted electronically through Zoom. All the interview participants were sustainability managers and SBT responsible employees. A detailed table of the interviewees' information is below (Table 3.2). The interviews took between 22 minutes 43 seconds to 41 minutes 56 seconds.

Table 3.2 List of the participants for the interviews

| No. | Participants | Date | Duration |
|-----|----------------|---------------|---------------|
| 01 | Participant 1 | 22 Apr 2022 | 36 min 06 sec |
| 02 | Participant 2 | 25 Apr 2022 | 29 min 30 sec |
| 03 | Participant 3 | 26 Apr 2022 | 41 min 56 sec |
| 04 | Participant 4 | 28 Apr 2022 | 41 min 16 sec |
| 05 | Participant 5 | 28 Apr 2022 | 26 min 28 sec |
| 06 | Participant 6 | 29 Apr 2022 | 35 min 2 sec |
| 07 | Participant 7 | 29 April 2022 | 28 min 4 sec |
| 08 | Participant 8 | 29 April 2022 | 29 min 27 sec |
| 09 | Participant 9 | 05 May 2022 | 38 min 21 sec |
| 10 | Participant 10 | 06 May 2022 | 22 min 43 sec |

3.3.2.2 Interview Design

The interview questions were designed based on the change management model of Bolman and Deal (2017), the ADKAR model (Hiatt, 2006), and change factors in managing change in corporate climate action in Sweden (Sarasini & Jacob, 2014) (Appendix E), and also adapted from the survey results for follow-up questions in each part of the interview questionnaire. The interviews were semi-structured to give a chance to get more surprising insights and diverse opinions from the participants. Thus, each interviewee was highly valuable for the data collection.

The interview questionnaire consists of 4 parts with 19 questions in total. In the first part of the interview questionnaire, to have an ice-breaker, the 2 questions were asked to get some insights into the career of the selected participants. Following the block of 8 open-ended questions about Bolman and Deal (2017) measuring each organizational change management frame and then 5 open-ended questions about the ADKAR model (Hiatt, 2006).

To get more information and surprising insights, the interviews were concluded with 2 open-ended questions about the business impact of SBT implementation and SBT support. Participants were also asked to give their key message about managing SBT implementation from the management perspective. Lastly, the participants had a chance to provide any additional comments, which gave them room to add insights outside of the present study scope. The interviews were conducted from April 22 2022 to May 6 2022.

3.4 Data Analysis

To guarantee that all qualitative interviews and quantitative survey results in the present study are valid, reliable, and generalizable, they need to be backed up by relevant, reliable theories, previous research, data, and statistics. Data analysis and interpretation would be based on the people and change management theories, terminology, and identified models. Due to a mixed-method of data collection, the present study's analysis is divided into separate sections and then combined in the results and discussion section to increase credibility.

3.4.1 Secondary Data and Information Analysis

To better understand the research topic and scopes, an analysis of the secondary data has been performed and carried out. The present study's secondary data and information are existing data from SBT's official website (Science Based Targets, 2022b) and previous research articles. These data and information are reliable sources. According to the present study timeframe and the cost for data collection, secondary data is highly effective and suitable for the present study.

The secondary information from SBTi Progress Report 2020 (Science Based Targets, 2022a) and the secondary data set of SBT companies and other data are in electronic formats that are publicly available and accessible on the SBT official website. Analyzing these secondary data and information supports us in understanding the corporate climate action foundation and SBT implementation status on a large scale and in Sweden. In addition, secondary data sets of SBT companies also enable the authors to define the target sample for the survey and interview questionnaires development and create a plan for data collection. A finding from a previous research article about corporate climate action and change management also has been used for both survey and interview questionnaires design.

This secondary data will be used for data interpretation and comparison with the data results from the surveys and interviews, which are the primary data of the present study. Using

secondary and primary data ensures that the present study results respond to the purpose and research questions.

3.4.2 Primary Data and Information Analysis

3.4.2.1 Quantitative Data Analysis

Bryman and Bell (2011) proposed diverse quantitative survey data analysis methods and techniques that could be used for data analysis and interpretation. Since all the selected participants first completed a survey before the interview, the analytical tool used to analyze the data in the present study was Excel to ensure the inclusivity and generalizability of all results. Following, it was easier to interpret the data using the Excel method of data analysis since most of the questions were on the Likert scale from “Strongly disagree” to “Strongly Agree.” To analyze the data, the results were coded as follows: “Strongly disagree” as 1, “Disagree” as 2, “Neutral” as 3, “Agree” as 4, and “Strongly Agree” as 5. Further, in the summary of each section of data analysis, the average rating from 1 to 5 was calculated from the total of all participants. The average rating compares and contrasts the data results from different sections. The differences between average ratings were also calculated by subtracting the higher average rating from the lower average rating. The authors categorized, interpreted, and analyzed the open-ended questions of the general information such as company name and position. The authors examined the section about additional comments to gain more surprising insights into the present study. In the end, the empirical findings of the present study were presented and designed in the Microsoft Excel charts and diagrams to have a better visual understanding for the reader. It was the most appropriate data analysis method considering the relevantly small sample size of the present study (Sekaran & Bougie, 2016).

3.4.2.2 Qualitative Data Analysis

According to Sekaran and Bougie (2016), three main steps in the qualitative data analysis process are data reduction, data display, and concluding. The first step in the qualitative interview data analysis used in the present study was data reduction through coding and categorization. Due to the open-ended questions, the amount of qualitative interview data analysis was significant to analyze. Overall, 10 transcribed interviews were collected for data analysis. Thus, all interviews were recorded, transcribed, and categorized in an Excel file to make it more convenient for authors to analyze the data. Excel was also used to analyze the qualitative interview data. The data were categorized into specific groups by their relations to the change management model of Bolman and Deal (2017), the ADKAR model (Hiatt, 2006),

and change factors in managing change in corporate climate action in Sweden (Sarasini & Jacob, 2014), and surprising insights outside of the present study scope. After coding and categorization, the data display has been performed (Sekaran & Bougie, 2016). The data display step consisted of taking the coded and categorized data and displaying it in an organized and structured manner. Data was visualized through lines, charts, or diagrams of frequently mentioned words and phrases. The final step of the qualitative interview data analysis was concluding. In this stage, the identified patterns and relationships were connected to the research questions, and explanations for those phenomena were completed by creating contrasts and comparisons of data results.

3.5 Data Quality Assessment

3.5.1 Validity and Reliability of Quantitative Data

Bryman and Bell (2011) emphasize the importance of validity and reliability in measuring the quality of quantitative research. First, to ensure the validity of the present study, it is vital to do it in three forms of validity confirmation: context, criterion-related, and construct (Sekaran & Bougie, 2016). In the present study, to secure construct validity, the data collection method should be able to measure the analytical framework it is supposed to measure. Since the concepts the present study is trying to measure are managing change theories, it was vital to ensure the appropriate scope of the survey questions provided to the participants. The survey questions were also based on the previous research studies and then adapted to the present study, which guarantees the higher validity of the survey questionnaire.

Further, at the end of the survey, the participants are asked for additional comments, which decreases the limitations of the present study by giving the participants a chance to speak their opinions outside of the survey questions. The survey also has a balanced structure of the questions where the amount of questions is proportional to the distribution of the analytical framework. Hence, it helps to cover a flat and wide range of the questions to all the factors addressed in the literature review.

Further, the present study achieves this for context and criterion-related validity by surveying 22 companies from the selected sample, representing 29 % of the sample chosen for the present study. Such a high share of the selected respondents secures the validity of the present study to the specific target group. Later, the analysis and discussion are built around comparing the data collected with previous research and literature review and even searching

more for other articles confirming the data collection. It helps to improve the understanding and findings of the empirical data and make the present study more valid and reliable.

It is also essential to secure the reliability of the research by making sure the quality assessment of the questions is done, and the questions and measurements are consistent and duplicated from other studies (Bryman & Bell, 2011). To ensure the reliability of the survey questions, the testing and self-completion of the questions were conducted with a group of participants. The participants included 6 people, both females, and males, in different age categories with diverse educational and professional backgrounds in biomedical engineering, gender studies, wireless communications, global studies, management, and public policy. The probing and self-completion of the survey and interview questions led to a few changes adapted by the authors to be accessible to the general public outside of the SBT area. Since only the participants directly connected to SBT implementation were contacted, the validity and reliability of the data collection were established. Participants in the survey had to answer all the questions except the questions about additional comments, and this way, the complete set of the data collection was ensured.

3.5.2 Validity and Reliability of Qualitative Data

Further, the same guidelines for quality assessment of the quantitative survey data were also applied to the qualitative interview data quality assurance. An extra step to develop the interview questions and improve the understanding of the interview question was the probing of the questions, and self-completion of the interview guide was conducted with a number of the participants. The participants were outside of the selected sample of the present study to ensure the generalizability of the questions. The participants consisted of 6 people, both female and male, in different age categories. After probing, the interview questions were adapted to the interview guide for the selected sample.

3.6 Limitations of Research Approach

The most crucial present study limitations in living up to the purpose and research questions are uncertainty, nature of the research, online way of conducting and timeframe data collection, and lack of data and information.

One of the present study limitations that could complicate living the purpose is the highly uncertain world situation. The uncertainty could make it hard to identify the influencing factors in the data collection. It would be difficult to decide whether participants were

influenced by the Russian invasion of Ukraine or disrupted the international supply chain. This uncertainty could also lead to low response rates among target samples, creating potential challenges for the present study.

In addition, the important present study limitations are also caused by the nature of the research. Another limitation would be the language barrier. Since the target sample is managers and employees working in Swedish companies and the research language is English, it could limit the interpretation of non-verbal languages and the range of expressions that participants could use.

One more limitation could be due to cultural differences. The participants come from Laos and Ukraine, with different workplace cultures than Swedish workplace cultures. Even though the respondent could trust the neutrality and validity of the present study, they could potentially present information more positively to better represent their country and companies. Hence, the questions are designed to be non-biased and not lead to any perspective for participants to answer them honestly.

Following that, one of the limitations is the nature of the questions. Since the interviews were semi-structured, some questions could lead in a specific direction and were influenced by interaction with the interviewer.

Another limitation of the present study is the COVID-19 pandemic and the digital way of data collection. Since some interviews were conducted through online video networks, it limited the chance to observe the participants' non-verbal behavior and gave less opportunity for probing because of technical barriers and internet issues. Participants could likely be distracted by other activities during digital interviews. Hence, their focus and concentration during the interview process were limited and, as a result, possibly affected data collection results. One more limitation of the present study is that data collection was conducted during one of the biggest national holidays in Sweden - Easter. It could impact the participants' answers, and since the interviews are time-constrained, it limits the ability for potential probing.

The limitation is the lack of primary data on SBT implementation research. Volunteer sampling is used for the present study, and the number of available primary and secondary data from data collection may not be enough. It can be affected by the data interpretation and the final result of the present study. The present study uses a mixed-method to combine face-to-face and online interviews with selected participants to minimize the impact.

However, the different results in data collection due to using mixed data collection methods could likely lead to complications in interpreting and analyzing data from surveys and interviews.

3.7 Confidentiality and Thesis Disclosure

The central concept for a Master's thesis in management at Lund University School of Economics Management is that all master thesis results should be published and accessible to everyone for academic and business purposes. However, since the present study was conducted with several companies in different business sectors, it is essential to respect the company rules and agreements. Company confidential information shall not be included in this master thesis. Essentially, data analysis results contain much information from companies that may collect confidential information. Some sensitive information shall be transformed in the statement by anonymizing the participant's name. The authors must share the draft result with companies to be valid, ensure that the information is reliable, and avoid any misinterpretation from authors.

The confidentiality information is mainly from the data collection for qualitative interviews and quantitative surveys. The raw data and information from companies during interviews that are considered confidential by authors and the supervisor should not be included in the final thesis that needs to be submitted to examiners and the Lund University portal.

3.8 Chapter Summary

This chapter provides an overview of the methodology concept used in the present study. Using a deductive research approach and exploratory research design, the company and individual perspectives on managing change were analyzed using mixed research methods. Empirical findings from quantitative surveys and qualitative interviews are gathered through purposive and volunteering sampling. To ensure the data quality and overcome the limitations, the data analysis and testing of survey and interview questionnaires were conducted. The empirical findings and their analysis are presented in the following section.

4 Data Results and Analysis

4.1 Secondary Data Analysis Result

4.1.1 Corporate Climate Action

The transition of companies to a zero-carbon economy is critical to any business in different areas (Krishnan et al. 2022; McKinsey Sustainability, 2022). Up to 16 April 2022, 2,844 businesses and financial institutions (1,535 companies set SBT and 1,309 have commitments to 1.5°C) have been working together to reduce their carbon emissions in their company and factories around the world since 2015 (Science Based Targets, 2022b). Climate action is defined as: “means stepped-up efforts to reduce greenhouse gas emissions and strengthen resilience and adaptive capacity to climate-induced impacts, including climate-related hazards in all countries; integrating climate change measures into national policies, strategies and planning; and improving education, awareness-raising and human and institutional capacity for climate change mitigation, adaptation, impact reduction, and early warning.” (Sustainable Development Goals Help Desk, 2020). Corporate climate action is usually implemented through public policies or international climate agreements, which influence business strategy and market transformation (NewClimate Institute, 2022). However, it is common to see that such agreements usually lack guidance or a framework for corporation climate action implementation (Esty & Bell, 2018). It could be a real challenge for companies and managers responsible for its implementation (IKEA Foundation, 2020).

4.1.2 Science Based Targets (SBT)

According to the SBT initiative (Science Based Targets, 2022b), the Science Based Targets are the targets “in line with what the latest climate science deems necessary to meet the goals of the Paris Agreement - limiting global warming to well-below 2°C above pre-industrial levels and pursuing efforts to limit warming to 1.5°C.” It further explains that SBT assists with clear guidelines for companies and organizations to reduce greenhouse gas emissions to prevent the negative impact of climate change and stimulate future-proof business growth. The SBT guidelines consist of five consistent steps: commitment, the stage where companies apply intent on setting SBT. Secondly, development, where companies and the SBT initiative work together on emission reduction targets that align with current SBT criteria. Third, submission is when companies present their targets to the SBT for official approval. Then,

communication is the stage to announce the targets publicly and communicate them to the company stakeholders. Lastly, disclosure is the final step where companies report the company-wide emissions annually and track their target progress. The present study primarily focuses on the companies currently in the final stage of the five steps SBT framework. It means that those companies are already working towards target achievement and implementation. It is important to note that all the companies of all company sizes and sectors can join the SBT initiative and proceed through the five steps (Science Based Targets, 2022b). Regarding this, the SBT initiative developed sector-specific guidelines to ensure all the companies have an opportunity to join SBT.

4.1.3 Corporate Climate Action Worldwide

At a global level, there are promising signs of leadership (Sullivan & Gouldson, 2020). China's target to hit net-zero emissions by 2060, the US administration's plan to reach net-zero by 2050, and Japan's institutionalization of SBT are all examples of bold, national climate action (Aden, 2019; Kerry, 2021; Yep, 2020). Meanwhile, the European Union has committed to becoming the first climate-neutral continent by 2050 and reducing its emissions to at least 55% below 1990 levels by 2030 (European Commission, 2022; SBT Progress Report 2020). According to SBT Progress Report (Science Based Targets, 2022a), now, at a regional level, Europe has reached a critical mass and moved into the mainstreaming stage, with 34% of high-impact companies in Europe having set or committed to SBT.

4.1.4 Corporate Climate Action in Sweden

Based on data from the SBT website accessed on 16 April 2022, in Sweden, up to date, 149 companies have participated in SBT, with 76 companies on the committed list (companies had committed to prepare and develop SBT) and 73 companies in the targets set list (companies already had approved SBT) (Science Based Targets, 2022a). Participation in SBT in Sweden quickly increased from 2016 to 2022 for both new SBT commitment and SBT approval companies, as presented in Figure 4.1. Figure 4.1 highlights a significant number of new companies joining SBT in 2021, with 57 committed companies, while 43 new companies joined in that year (Science Based Targets, 2022c). Sweden has companies in 33 sectors: Real Estate, Food and Beverage Processing, Banks, Diverse Financials, Insurance, Retailer, Electrical Equipment and Machinery, Professional Services, Consumer Durables, and Household and Personal Products (Science Based Targets, 2022a) (Appendix F).

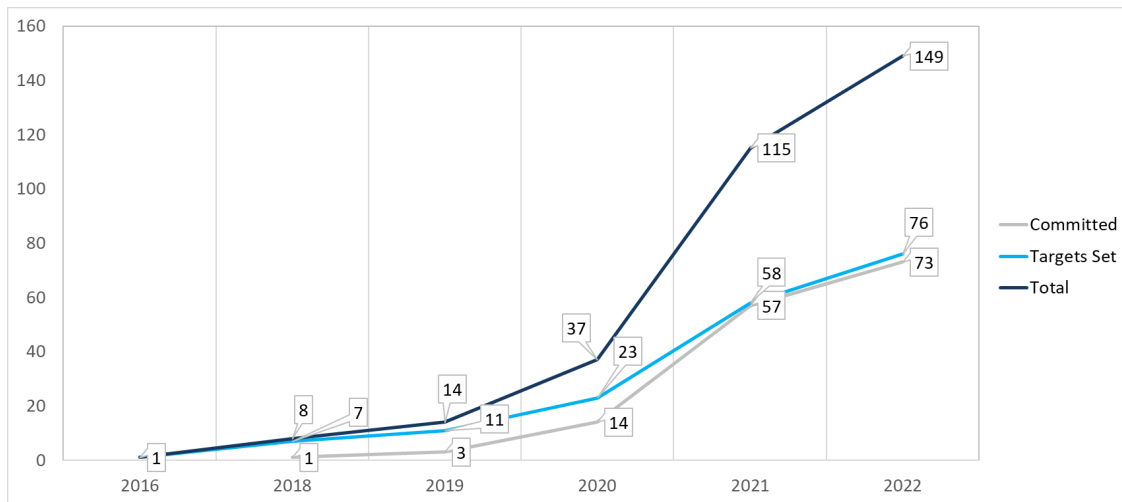


Figure 4.1 Number of companies committed and had targets set in Sweden from 2016 to 2022

Source: by authors, created from data from (Science Based Targets, 2022a)

4.1.5 Science Based Targets (SBT) Implementation in Sweden

SBT implementation Progress Report (Science Based Targets, 2022a) states that limiting global temperature rise to well below 2°C above pre-industrial levels, with efforts to limit warming to no more than 1.5°C. The private sector has an essential role in achieving this aim (OECD, 2011). In Sweden, SBT companies set targets to align with the Paris Agreement. In April 2020, 84% of companies (64 companies) approved targets covering greenhouse gas emissions from company operations (scopes 1 and 2) are consistent with reductions required to keep warming to 1.5°C (Science Based Targets, 2022c). 15% of companies (11 companies) approved targets covering greenhouse gas emissions from company operations (scopes 1 and 2) are consistent with reductions required to keep warming to Well-below 2°C, and 1% of companies (1 company) approved targets covering greenhouse gas emissions from company operations (scopes 1 and 2) are consistent with reductions required to keep warming to 2°C (Figure 4.2).

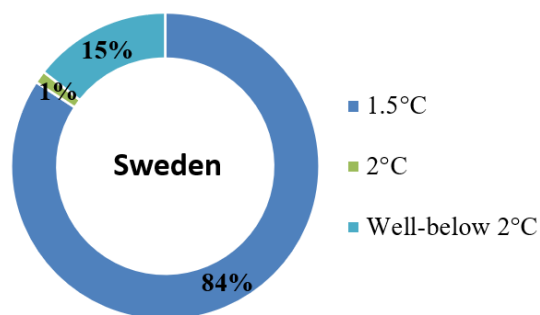


Figure 4.2 Target classification of companies with approved targets in Sweden

Source: by authors, created from data from (Science Based Targets, 2022a)

4.2 Primary Data Analysis

4.2.1 Survey Data Analysis Result

This section presents the findings from the quantitative survey analysis. Due to the small sample size, the data is delivered only for descriptive purposes. The data from the surveys served as pioneer research for managing change related to SBT implementation and was used to try out and design questionnaires for qualitative interview data collection.

The final data collection contains 23 participants from 22 companies representing the Target Set Companies in Sweden. One company had 2 survey participants because it was a larger company and the participants shared duties regarding SBT implementation. All the participants are in Sweden and are company representatives of only Swedish companies part of SBT implementation. The participant poll had respondents from 9 different industries, where the plurality of 26% belongs to the real estate industry. The survey reached 22 (29%) of 76 companies in the target sample (Figure 4.3).

The participants had various positions in their companies regarding SBT implementation: 19 Sustainability, 3 Managers, and 1 Other. The majority of the participants are from the Sustainability Department - 15 (65.2%). Following, 3 participants (13%) from both Top Management and Other Departments, 1 participant from Supply Chain, and 1 participant from Production. The participants' weekly time distribution varied from less than 10 hours per week (59.1%), 10-20 hours per week (22,7%), and 20-30 hours per week (18.2%). The number of staff responsible for SBT implementation in the participants' companies is more than 10 persons (36.4%) and from 2-5 persons (31.8%), 1 person (22.7%), and 10-5 persons (9.1%).

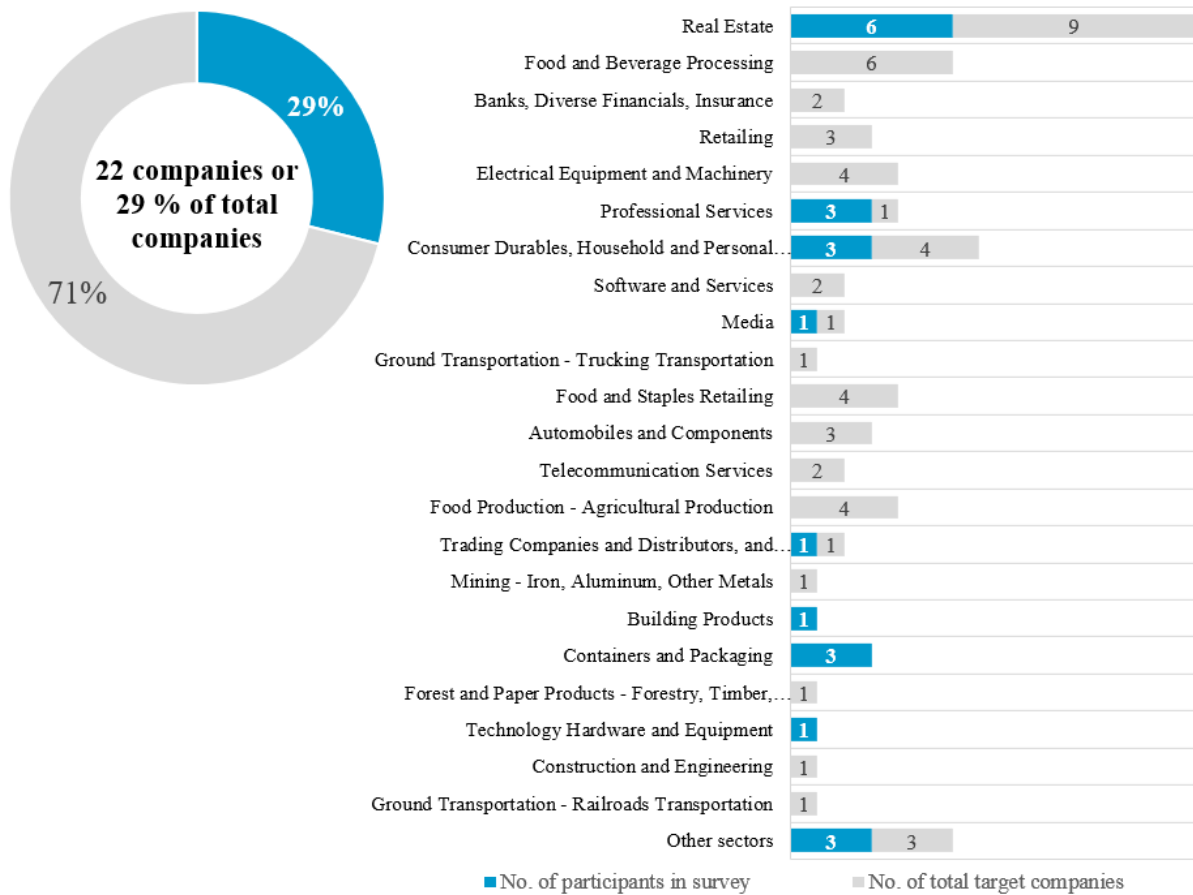


Figure 4.3 Proportion of companies participated in the survey

4.2.1.1 Organizational Management - Bolman and Deal Model

In this section, the participants were asked to rate sentences on a 5-point Likert scale from strongly agree to strongly disagree. The following sentences deal with the company’s perspective on the different aspects of the SBT implementation.

Company perspective in SBT implementation

In the part of the Bolman and Deal questionnaire, the participants were asked to evaluate to what extent they agree or disagree from their company perspective that Structure and Strategy, People Management, Stakeholder Engagement, and Mission and Vision are important in SBT implementation. The results showed that most participants agreed or strongly agreed with structure and strategy being an important component (70%). More than half of the participants (57%) strongly agree with the mission and vision. 39% strongly agree with people management and stakeholder engagement being important components. However, the largest share of neutral responses across four components was stakeholder engagement with 17% (Figure 4.4).

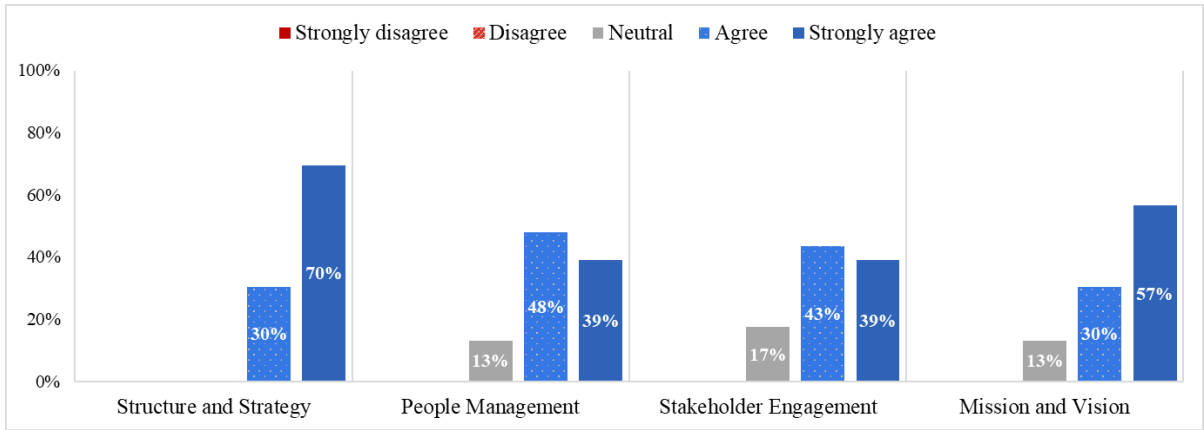
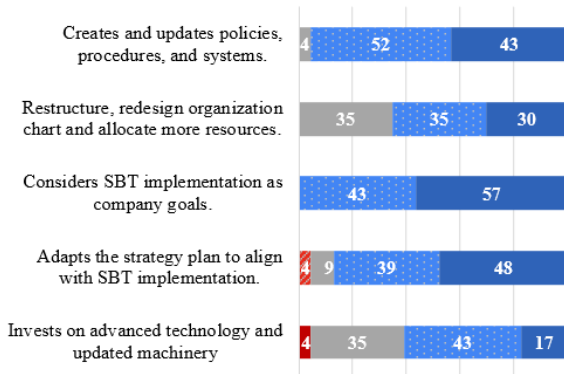


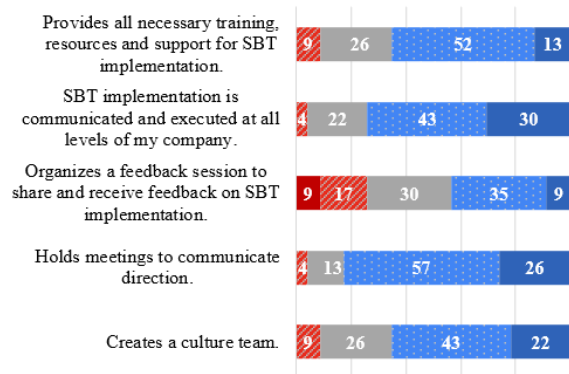
Figure 4.4 The importance of components in organizational management to SBT implementation from the company perspective

Individual perspective in SBT implementation

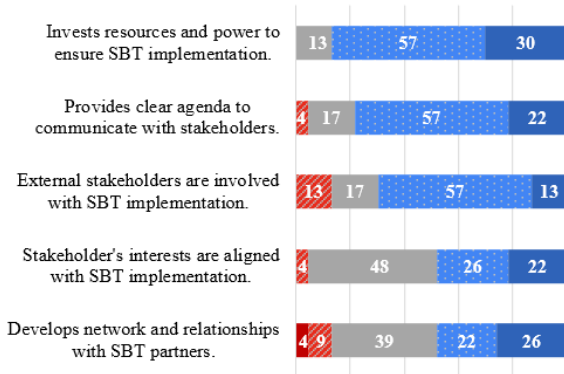
Structure and Strategy (%)



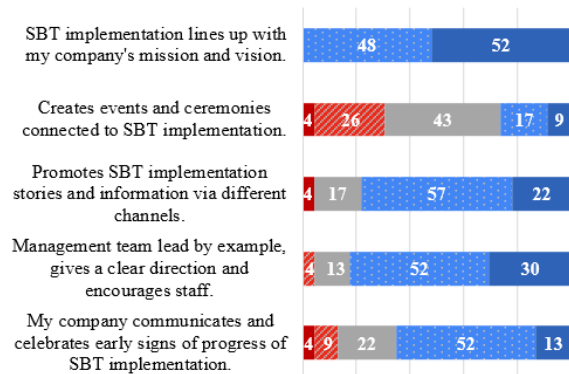
People Management (%)



Stakeholder Engagement (%)



Mission and Vision (%)



■ Strongly disagree ■ Disagree ■ Neutral ■ Agree ■ Strongly agree

Figure 4.5 The importance of components in organizational management to SBT implementation from individual perspective

Structure and Strategy - Structural Frame

Regarding the Structure and Strategy, all the participants strongly agree or agree with their company considering SBT implementation as part of their company goals. Regarding their company restructuring, redesigning organizational charts, and allocating more resources, 35% remained neutral, and 35% agreed. Similarly, with their company investing in advanced technology and updated machinery, 35% neutral. While only 4% of the participants strongly disagreed with adapting their strategic plan and investing in advanced technology (Figure 4.5).

People Management - Human Resource Frame

Regarding People Management, the largest share of being strongly disagreeing (9%) and disagreeing (17%) was with their company organizing a feedback session for SBT implementation. 9% of participants also disagreed with their company creating a culture team and providing all necessary training, resources, and support. The majority of the participants agreed (26%) or strongly agreed (57%) with their company holding meetings to communicate direction, with only 4 % disagreement (Figure 4.5).

Stakeholder Engagement - Political Frame

In the Stakeholder Engagement section, all the participants strongly agreed, agreed, and were neutral with their company investing resources and power to ensure SBT implementation. Following, only 4 % of the participants disagreed with their company providing a clear agenda to communicate with stakeholders and stakeholders' interests being aligned with SBT implementation. 13 % of the participants disagreed with external stakeholders involved with SBT implementation, 4% strongly disagreed, and 9% disagree with their company developing networks and relationships with SBT partners (Figure 4.5).

Mission and Vision - Symbolic Frame

In the Mission and Vision section, all the participants strongly agreed or agreed with SBT implementation lining up with their company mission and vision. Further, only 4% of the participants disagreed with their management team leading by example, giving a clear direction, and encouraging staff, and 4% strongly disagreed with their company communicating and celebrating the early signs of progress of SBT implementation. Almost a third of the participants (30%) disagreed or strongly disagreed with their company creating events and ceremonies connected to SBT implementation (Figure 4.5).

Conclusion of company and individual perspective on Bolman and Deal Model (four frames)

The four frames approach shows that companies manage organizational change in different ways. Some companies believe in the importance of some frames, while some believe that all frames are important or of equal weight.

Overall, the participants were more likely to agree on the importance of the Structural and Symbolic frame by agreeing on the structure strategy, mission, and vision to support SBT implementation. It was also found that participants are less likely to emphasize the importance of People management and Stakeholder engagement frames as important components in the SBT implementation.

As mentioned above, the participants were asked to rate their perspectives on each item for each question on a Likert scale ranging from 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly agree. Each component (from four frames) was calculated by an average rating of the total of all participants. The average rating of each component is used to compare with the average rating of another question (company and individual perspectives on organizational change). The purpose is to present how each component from a company perspective differs from the individual perspective. The structural frame has an average rating from a company perspective of 4.70 and an individual perspective of 4.18. The variance is 0.52, as shown in Figure 4.6. For four frames to support SBT implementation, demonstrate that they have a high variance in Symbolic (0.61), Human resource (0.52), and Structural (0.51), and less on Political (0.41).

In summary, most companies emphasize Structural and Symbolic frames, even though what they believe and implement in these frames are a little bit inconsistent. In contrast, companies believe it is unimportant for the political frame and do not implement it much, but the gap is relatively low compared to other frames, as shown in Figure 4.6.

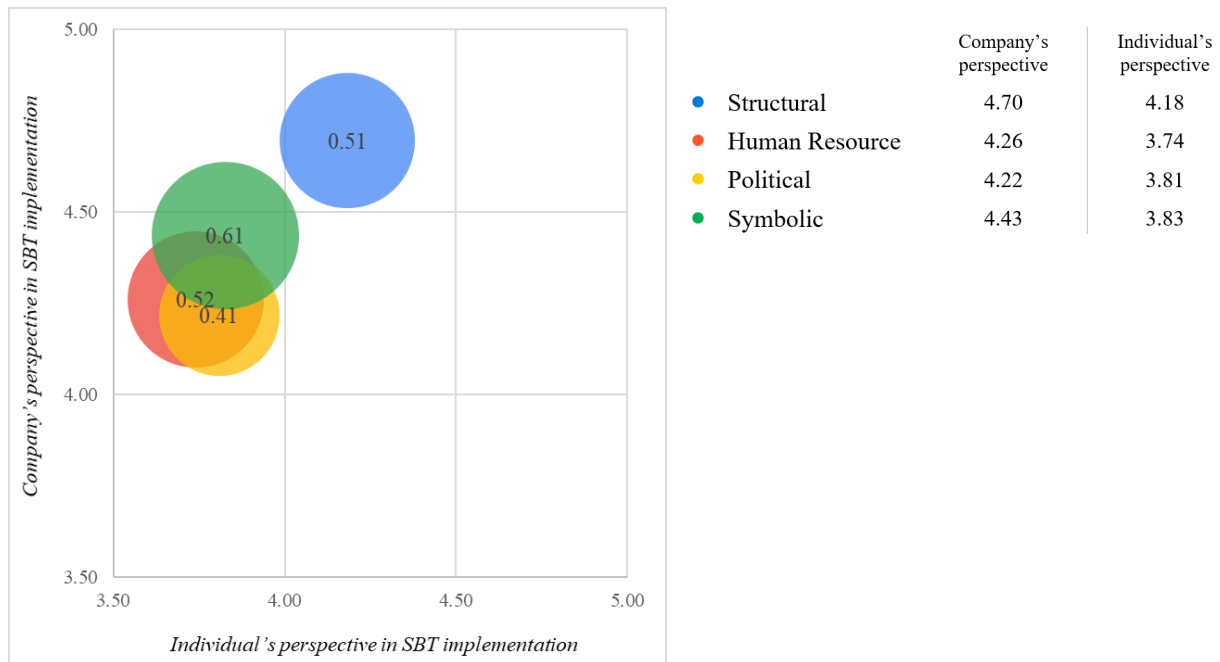


Figure 4.6 Comparison of companies and individual perspectives in SBT implementation with four frames

4.2.1.2 People Management - ADKAR Model

Company perspective in SBT implementation

In the section of the ADKAR Model questionnaire, the participants were asked to assess on 5 point scale from Strongly disagree to Strongly agree from their perspective Awareness of the need for change, Desire to change, Sufficient knowledge of how to change, Ability to implement change, and Reinforcement is important in SBT implementation. The final data set shows that with awareness of the need for change and the Desire to change, all participants strongly agreed or agreed. Only 4% of the participants remained neutral with sufficient knowledge of how to change, and 9% were neutral on the Ability to implement the change. Lastly, the lowest extent of the importance was in the reinforcement section, where 26% of the participants remained neutral (Figure 4.7).

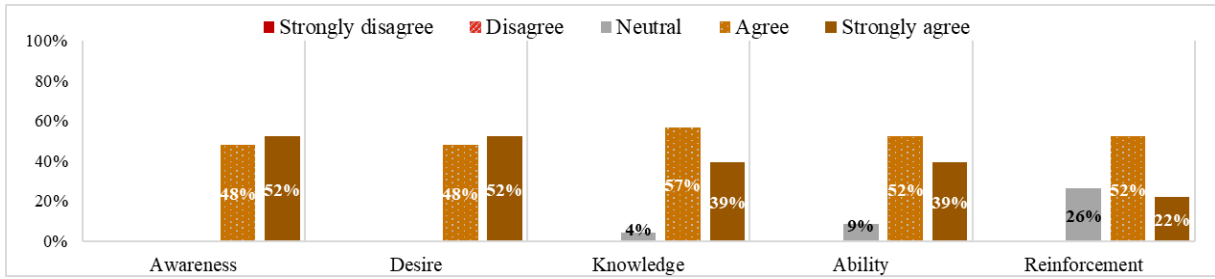
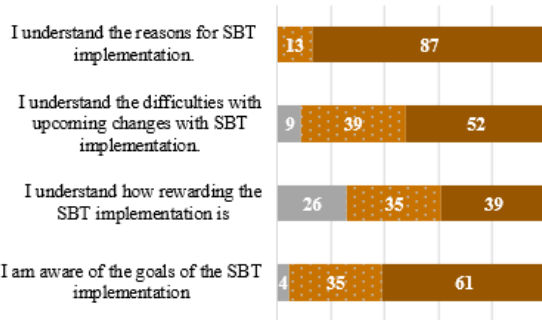


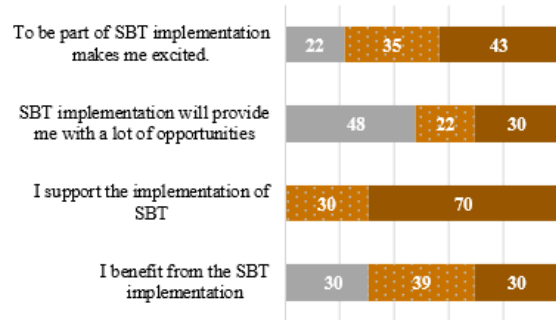
Figure 4.7 The importance of components in people management to SBT implementation from company perspective

Individual perspective in SBT implementation

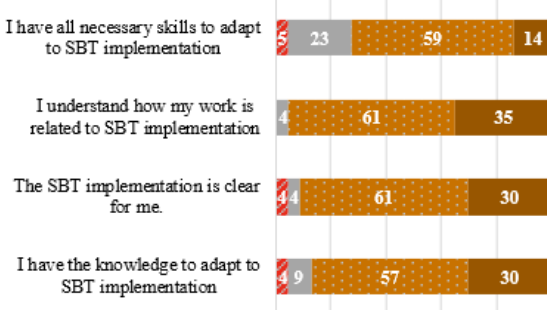
Awareness (%)



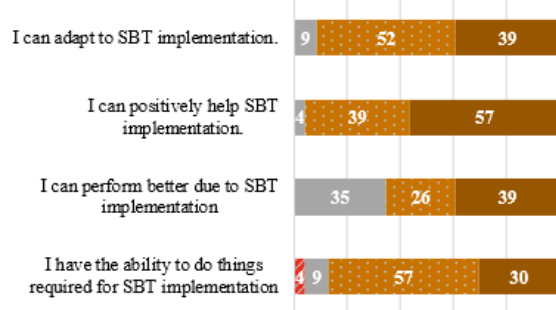
Desire (%)



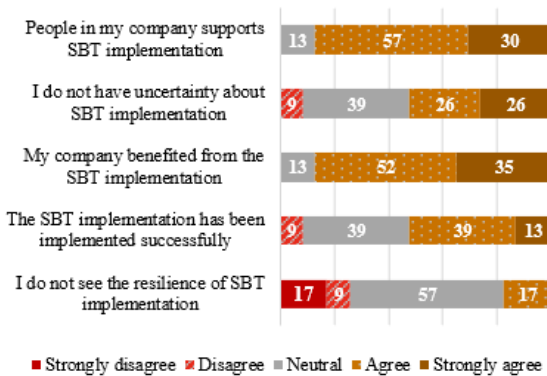
Knowledge (%)



Ability (%)



Reinforcement (%)



■ Strongly disagree ■ Disagree ■ Neutral ■ Agree ■ Strongly agree

Figure 4.8 The importance of components in people management to SBT implementation from individual perspective

Awareness

In the Awareness section, all the participants strongly agreed or agreed with understanding the reasons for SBT implementation. Only 4 % of participants remained neutral in being aware of the goals of the SBT implementation and 9% in understanding the difficulties with the upcoming changes with SBT implementation. Further, the largest share of being neutral in this section (26%) was in understanding how rewarding the SBT implementation is (Figure 4.8).

Desire

In the Desire to change section, all the participants strongly agreed or agreed with their support for the SBT implementation. While only 22% and 30% remained neutral about being part of the SBT implementation, making them excited and benefiting from the SBT implementation. Almost half of the participants (48%) remain neutral on SBT implementation, providing them with many opportunities (Figure 4.8).

Knowledge

In the Knowledge in how to change section, all the participants agreed or agreed with understanding how their work relates to SBT implementation. Only 4% of the participants disagreed with having the Knowledge to adapt to SBT implementation and regarding the SBT implementation being clear for them. Lastly, almost a quarter of the participants (23%) remained neutral about having all the necessary skills to adapt to SBT implementation (Figure 4.8).

Ability

In the section on the ability to implement change, all participants strongly agreed, agreed, or remained neutral about being able to positively help SBT implementation and perform better due to SBT implementation. Only 9% of participants remained neutral about adapting to SBT implementation and having the ability to do things required for SBT implementation. Only 1 participant disagreed with having the ability to do things required for SBT implementation (Figure 4.8).

Reinforcement

In the reinforcement of the change step, all the participants strongly agreed, agreed, or remained neutral with their company supporting SBT implementation and benefiting from the SBT implementation. Only 9% of participants disagree with SBT implementation being implemented successfully and do not have uncertainty about SBT implementation. Without

seeing the resilience of SBT implementation, more than a quarter (26%) of the participants strongly disagreed or disagreed (Figure 4.8).

Conclusion of company and individual perspective on ADKAR model (five steps)

The five steps approach shows that SBT accountable staff manage people's change differently. Some SBT accountable staff believe in the importance of some steps, while some believe that all steps are important or of equal weight.

Overall, the participants were more likely to agree on the importance of Awareness in supporting SBT implementation. It was also found that participants slightly to less agreed on Reinforcement.

Comparing company and individual perspectives in SBT implementation for five steps to support SBT implementation demonstrates that they have a high variance in Desire (0.34), Reinforcement (0.28), Knowledge (0.24), and less in Ability (0.05) and Awareness (0.02).

In summary, most companies put more emphasis on Awareness. The result also shows that what they believe for Awareness is aligned with what they implement. In contrast, Desire is not as important. However, they are less likely to emphasize the importance of implementation, or they do not implement it much to support SBT implementation. It has the highest gap compared to other steps (Figure 4.9).

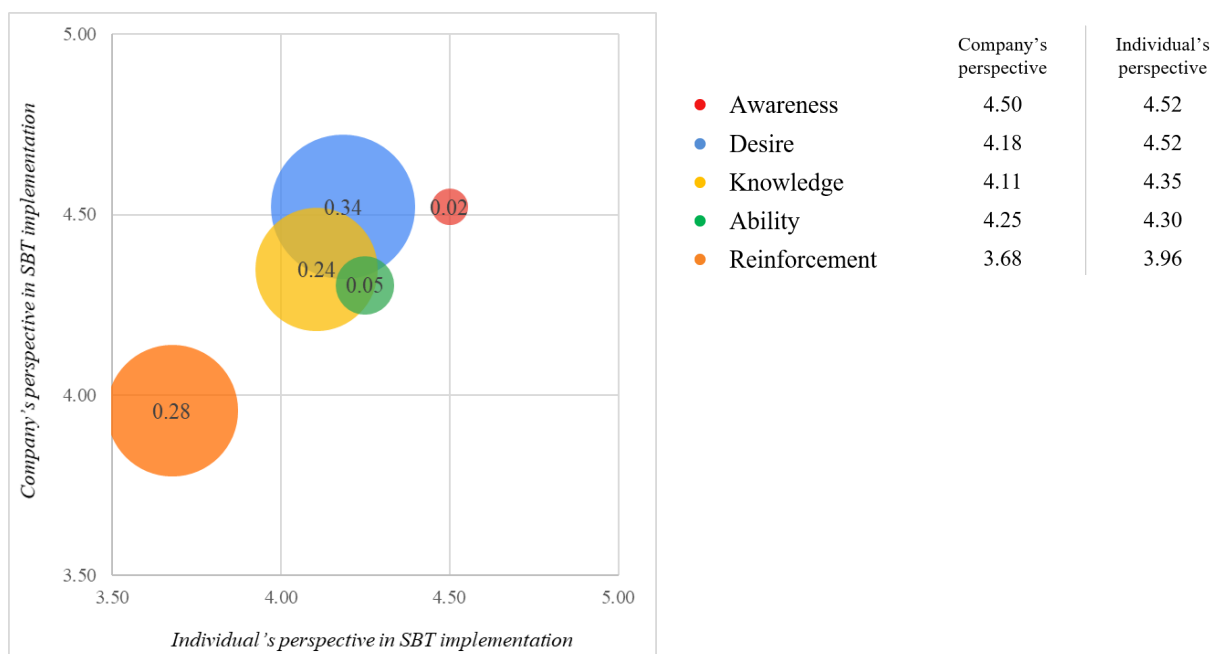


Figure 4.9 Comparison of companies and individual perspectives in SBT implementation with five steps

Conclusion of change management to support SBT implementation

The overall average score indicates that Organizational change management is more important than People change management to support SBT implementation from the company perspective. Specifically, the average score of the four frames from the Bolman and Deal Model illustrates that the score is higher than the average score of the five steps from the ADKAR Model. In contrast, from an individual perspective, the average score of the Bolman and Deal and ADKAR model also demonstrates that individuals believe that organizational change management is less important than People management for SBT implementation.

In conclusion, companies tend to strongly agree (4.50 and 4.70) that organizational and people change management are important for SBT implementation. In contrast, from an individual perspective, participants agree (4.18 and 4.52) that organizational and people change management is also important in SBT implementation. Nonetheless, the gap between the company and individual perspectives of the change management to support SBT is quite significant in organizational change (0.51) if compared to people change (0.19) (Figure 4.10).

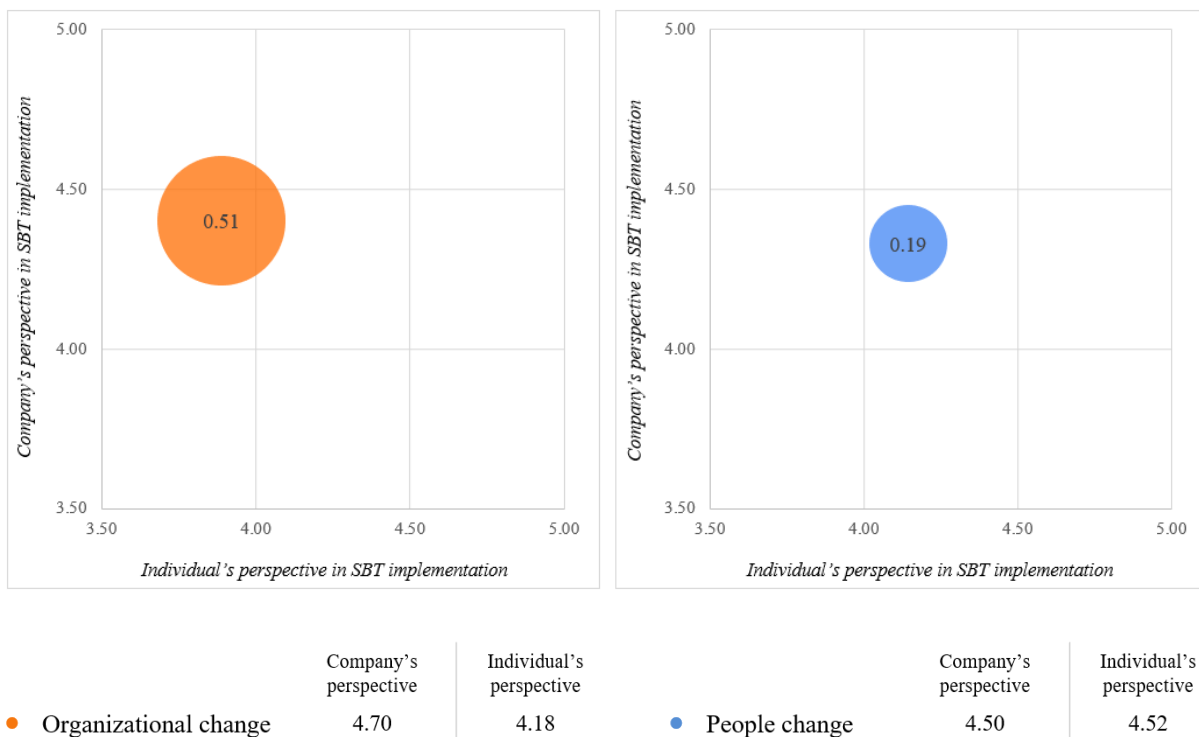


Figure 4.10 Comparison of companies and individual perspectives in SBT implementation for organizational change (left) and people change (right)

4.2.1.3 Change Factors in Managing Change in Corporate Climate Action

Business perspective in SBT implementation

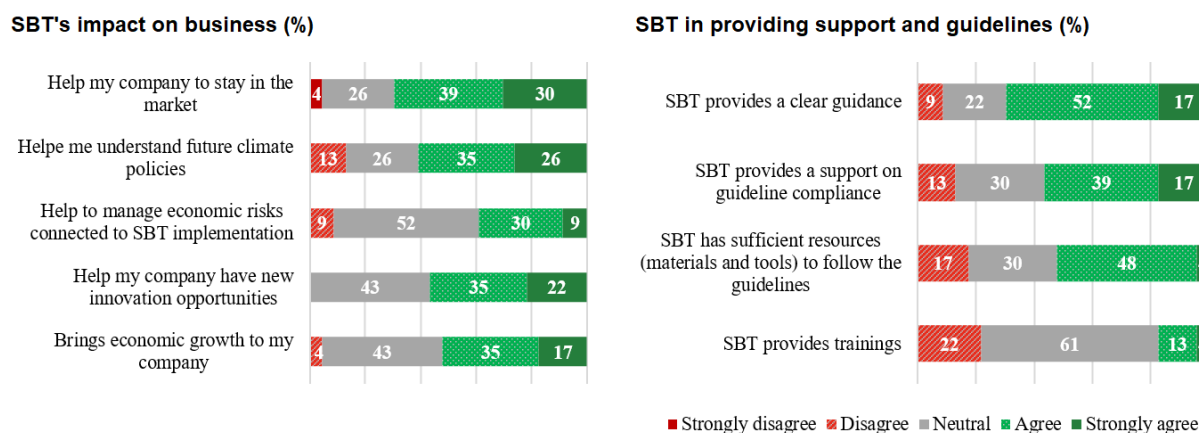


Figure 4.11 The importance of components in change factors to SBT implementation from business perspective

In this section, the participants are asked to evaluate the 5 points scale from Strongly disagree to Strongly agree with SBT’s impact on their business from their company perspective. All the participants strongly agreed, agreed, or were neutral with the statement that SBT implementation is helping their company have innovation opportunities. Only 1 participant disagreed with SBT implementation helping their company stay in the market and with SBT implementation bringing economic growth to their company. Lastly, 13 % of the participants disagree that joining SBT implementation helped them understand future climate policies (Figure 4.11).

Further, the participants were asked from their company perspective to assess from strongly disagree to strongly agree with the role of SBT in providing support and guidelines. Regarding SBT providing clear guidance, only 9% of the participants disagreed. 16 of the participants disagreed that SBT supports guideline compliance, 17 % stated SBT has sufficient resources to follow the guidelines, and almost a quarter (22%) disagreed with SBT providing training (Figure 4.11).

Conclusion of business perspective on change factors

Companies believe that the change factors are important for SBT implementation from a business perspective. Most companies believe that the change factors, including "Support and guidelines from SBT" and "Necessity of SBT implementation," are important for their organization to manage change in corporate climate action.

Overall, the participants were more likely to agree on the importance of "Support and guidelines from SBT" (3.70), meaning that they have sufficient support in terms of guidelines, training, tools, and other resources to support the SBT implementation compliance tasks for the organization (Figure 4.12). Another change factor is the "Necessity of SBT implementation" (3.45). The participants also agree that it is important to implement SBT and believe that participating in SBT is a business opportunity for companies (Figure 4.12).

From a business perspective, according to an overall average score. Companies believe that the "Support and guidance from SBT" is more important than the "Necessity of SBT implementation."

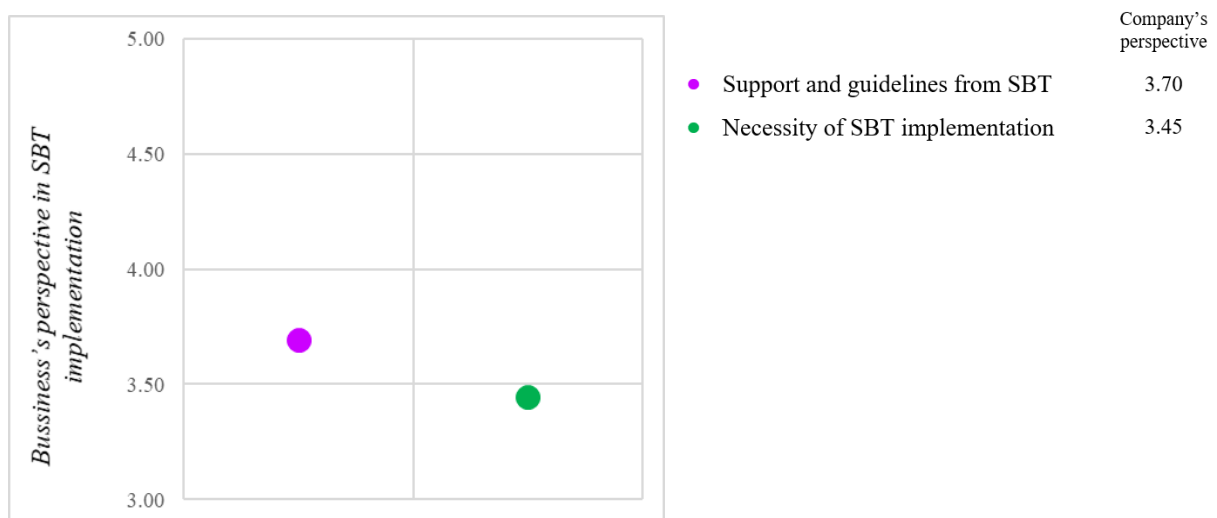


Figure 4.12 Comparison of business perspectives in SBT implementation on the change factors

4.2.1.4 Additional comments on SBT implementation

At the end of the survey, participants had a chance to leave additional comments. More than a third (35%) out of 17 survey participants left the comments. One of the participants in this section emphasized the importance of the external consultants and creating a partnership with different companies that are part of SBT implementation. Another participant mentioned that SBT implementation is very complex and involves different processes inside the company. The additional comments section is used later in the analysis to interpret the results better.

4.2.2 Interview Data Analysis Result

This section shows the findings from the qualitative interview data collection.

Profile of the participants

The final number of interview participants is 10, which is 45 % of all the survey participants (Figure 4.13). All the interviews were conducted electronically using the platform Zoom. The participant poll consisted of 6 different industries, with the largest share of 4 (40%) respondents in the real estate industry. The work experience of the participants working in their companies is from 1 year to 23 years. The majority (90%) of the participants worked in the same role from the beginning in their companies.

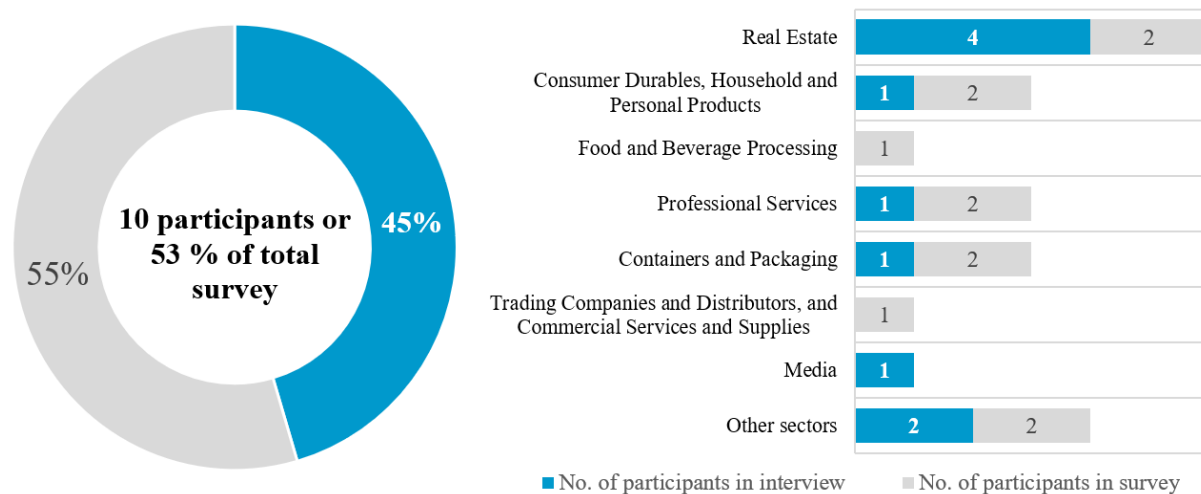


Figure 4.13 Proportion of company participated in the interview

4.2.2.1 Organizational Management - Bolman and Deal Model

Structure and Strategy - Structural Frame

When asked about the company structure and strategy, some of the participants mentioned that their companies are not restructuring but more optimizing the same processes to reach SBT. The participants mentioned the creation of new projects, centers, and teams to be able to implement SBT. However, few participants highlighted that the restructuring processes often do not target SBT in particular but rather climate targets or sustainability company goals. Participant 8 stated, “restructure is not only related to the science based target initiatives.”

When looking at the strategy goals, most companies emphasize collaboration with external stakeholders to share a similar mission and vision, and contributions to communities are essential. In addition, companies also believe that the alignment and involvement of internal

teams significantly contribute to the company's strategic goals: the *“key is to set objectives in each project and educate our project staff about the possibilities”* (Participant 6). Moreover, Participant 9 added that their *“employees and functions are quite competitive about reaching targets and surpassing targets at the company in general.”*

People Management - Human Resource Frame

Participants highlighted that the success of SBT implementation is the responsibility of the manager to create the right conditions, such as coaching to build capacity to team members in both formal and informal ways, as well as providing a good working environment to teams: *“the responsibility of the manager is to be a manager that could coach and lead your employees”* (Participant 4).

Additionally, to manage people, some participants believed that employees' involvement and commitment build motivation and dynamic of individuals and teams. Sharing knowledge between employees and managers in different meetings, workshops, events, councils, and other events is also a way to strengthen the understanding of teams and promote the learning environment for continuous improvement and organizational success: *“to be motivated by other aspects of stimuli. Well, we have to sort of bring that up in an early stage to create some sort of shared level of understanding of different processes”* (Participant 3).

Stakeholder Engagement - Political Frame

Participants demonstrated that the success of SBT implementation is completing power and sharing the same interests and resources. Next, providing the different needs and support among individuals and teams to enable the SBT implementation. *“you might need to interpret the standards, work it into your own internal documentation”*(Participant 7).

Overall, many participants foresaw that collaboration and transparency of internal and external stakeholders are important for networking and partnership. Transparency information ensures the effectiveness of knowledge sharing and progress review: *“our work is built on collaboration and transparency more than anything else. So with transparency also comes knowledge sharing, working with shared and clearly aligned missions and visions”*. (Participant 1). Similarly, the participants also emphasized networking and partnerships between different internal and external stakeholders: *“it is more of a time networking with the different sites internally, externally, and also share the learnings”* (Participant 5).

Mission and Vision - Symbolic Frame

The majority of participants are confident that communication of the company vision and mission is necessary for SBT implementation. Communicating SBT implementation by top management to create an order, clarity, encouragement, and inspiration is a part of the implementation to help employees see the image of the future and understand the company's long-term perspectives. *"Our CEO is very engaged in this topic, he always talks about this during conferences and his keynote speeches"* (Participant 2).

Furthermore, many participants confirmed that updating the implementation of SBT in both verbal and non-verbal communication through different channels and different occasions that companies or other organizations organize is a good practice. *"we are kind of or a little reluctant to over-communicate. We think it is more important to first do and then communicate. In different seminars or webinars, either broadcasted by ourselves or as invited speakers"*. (Participant 8). Besides communication of vision and mission. Participants considered a learning culture or non-financial initiative factors for SBT implementation. In addition, management's encouragement, motivating, and inspiring employees at all levels is a way to ensure SBT implementation.

Conclusion of company and individual perspective on Bolman and Deal Model (four frames)

When asked questions about the four frames, the participants were less likely to emphasize their companies' structural frame or strategy and structure. While some participants did not see any significant restructuring for the SBT initiative, others mentioned other components such as mission and vision and stakeholder engagement being more important in the structural part of the questions.

The participants also talked about political frame or stakeholder engagement in networking and creating partnerships for SBT implementation. Nonetheless, the partnerships and networking of the participants were entirely limited to the specific industry and sector, heavily focused on the investors, and time-constrained.

The vital connection participants made was between human resources and symbolic frames. The majority of the participants emphasized the importance of management teams aligned on their mission and vision and communicating it to their employees. Further, learning and education benefits and other employee initiatives were also considered a part of communicating the vision and mission to the employees and ensuring SBT implementation.

Overall, the most significant influence on managing change in SBT implementation was in the human resources frames. Most of the participants were quite optimistic about their management teams, the commitment and engagement of their employees, and the culture team.

4.2.2.2 People Management - ADKAR Model

Awareness

Majority of the participants agreed or absolutely agreed when they were asked if it is necessary to implement SBT. However, some participants highlighted that it is not just necessary for SBT in general but what SBT brings as an end goal. As Participant 2 mentioned *“the important thing is the impact, that's what we focus on”*. Further, participants also emphasized the importance of thinking about SBT as a long-term plan, a benefit for the society and the planet as a whole, or as something all companies should implement.

Some participants stated that SBT is one of the many frameworks in the corporate climate world. They added that standardization and consolidation of this framework by all the companies would help to create the same process for everyone participating in corporate climate action, and eventually it would create a common language between SBT participants. The participants also mentioned that by being part of SBT implementation and implementing the necessary changes, one creates a dialogue between SBT and their company. Participant 8 highlighted that this dialogue helps to *“get other people's perspective on the industries actual climate impact, which is really, really important and sometimes an eye opener”*.

Desire

All the participants have shown a very strong desire and motivation to do SBT implementation, since SBT is considered as a competition between different companies, but more like a partnership and network where all companies grow and develop together. As Participant 3 said *“in that sense, where we are not competitors, I think that's in the sustainability issues, we really are just collaborators”* Several participants connected their motivation to be part of the SBT implementation to the engagement and support of the SBT system that comes with the implementation process. They added that this network and knowledge exchange between different SBT companies helps them to stay motivated and keep going forward. Furthermore, the participants also expressed their concern about the time limits of SBT implementation and the extent of what they can actually do: *“it is clear that I'm struggling to do as much as I want to do as fast as I want to do”* (Participant 9).

Knowledge

When the participants were asked about having sufficient knowledge to be able to implement SBT effectively, few participants were confident in their knowledge. However, the majority of the participants had some doubts about the knowledge. Further, Participant 5 *explained that “I think that sometimes we probably could do it in a better way”*. Other participants mentioned lack of resources and experience to do the SBT implementation successfully.

On the other hand, the participants also added that even if they are not able to know how to do it effectively themselves, they *“had very good collaboration with some sectors”*. (Participant 7). Some of the participants stated that the collaboration of knowledge sharing could be done externally as well as internally though creating a goal, center of excellence, and learning opportunities.

Lastly, in the knowledge part, the participants were worried about external factors influencing SBT implementation. For example:

it is still interesting as there are a lot of different things going on, for example, the COVID disease has been a big part of our supply chains. Obviously, also the current war in Ukraine is influencing specifically the energy market (Participant 10).

Ability

In the ability part of the questionnaire, the participants have been asked if they faced any problems with putting SBT into practice. 70% of the participants agreed that they faced one or another difficulty with SBT implementation putting in practice. The common problem that participants faced was employee’s motivation on a daily basis, everyone’s involvement in the SBT implementation, and management participation in encouraging SBT. One of the participants mentioned the war in Ukraine and potential energy crisis as one of the future change factors of putting SBT implementation into practice. They added that there are certain factors that help their companies to overcome the difficulties with SBT implementation. One example could be:

“Ukraine and everything that has to do, and then the energy situation in the Nordics and in the world, and then consumer behavior. When it comes to e-commerce, I would say those three things” (Participant 4).

Another example is SBT support and guidelines: *“as long as there is a plan and you know where you need to go, which the SBT is a big contributor to, then at least you know you're on the right track”* (Participant 7).

Reinforcement

All the participants were rather confident with reinforcement and consistency of the SBT implementation and having some measures in place to not come back to the old ways of work before the SBT implementation. Additionally, some of the participants commented that the SBT implementation was just a way of putting things on the document and making it official for other companies and organizations. As Participant 1 said *“it was rather a matter of fact and of formalizing things that we are already implementing and doing. It's a lot of soft communication as we're a small business”*.

Some participants reassured that we would never come back to the old ways of work before SBT implementation since they are trying to change their company strategy and structure to be able to implement SBT successfully:

in order not to get back is to have a message from the management team and make it crystal clear that this is the way we work and that all our policies and guiding documents explain and are in line with our mission and vision and targets (Participant 6).

Overall, all the participants were positive about reinforcement of SBT implementation and saying that if they committed and set a target already, they are not planning to stop or quit. A few ideas of reinforcement of SBT implementation by the participants were to continuously develop, train, and start building SBT strategy from the top to bottom approach.

Conclusion of company and individual perspective on ADKAR model (five steps)

From the individual perspective, all the participants were confident in the reinforcement step of managing change. They emphasized that there is no way of going back to the old ways of working before SBT implementation and even mentioned that there is no way back and only forward by being a part of SBT implementation and committing to it. Another component of the people's changing managing side that the participants positively described was the motivation and desire to change. Most participants expressed a high level of motivation and desire to be part of the SBT implementation and take this as their job responsibility.

On the other hand, most of the participants mentioned that they faced one or few difficulties with implementing SBT into practice or in the ability part of the ADKAR model. Participants

also stated that in knowing how to change, they faced some challenges. They were primarily external factors outside of the control of the participants, such as COVID-19 and the Russian invasion of Ukraine.

4.2.2.3 Change Factors in Managing Change in Corporate Climate Action

Support and guidelines of SBT

Since previous research stated that some companies might not be willing to join SBT or other corporate climate action initiatives, the participants were asked whether they are satisfied with the current structure and support from the SBT as an organization. Generally, the participants were satisfied with the application process and support available from the SBT, and only few participants complained about the long waiting time of the application process and specific industry oriented approach to the target setting. A great example is Participant 8 that said *“they have the kind of guidance in place that they want us to apply but then sometimes, maybe it doesn't make sense. There is not enough guidance for real estate companies when it comes to climate neutrality goals”*.

On the other hand, a couple of the participants stated that they did not take full advantage of all the support and guidelines SBT provides them. They also added that SBT support is something that *“we should really put into work to help us accelerate”* (Participant 3) and *“on my to do list for this year”* (Participant 5). Participants also mentioned that they consider contacting SBT resources and support as part of their long-term plan and strategy.

Business impact of SBT implementation

Another assumption from previous research in corporate climate action in Sweden is that companies are more likely to join SBT or other climate initiatives if it positively impacts their business. Hence, the participants were asked if it is a necessity from the business point of view to implement SBT.

All the participants were sure that joining SBT would help their company to stay in the market and be able to compete in the future market forecast. Participant 1 added that SBT implementation could be helpful in *being a leader in the field and champion SBT's in our collaborations*. In addition, some companies also adapted their targets to their business type and sizes as Participant 10 added that *“it really depends on the business model”*.

Participant 7 mentioned that SBT implementation is crucial to start now to be able to compete in the market in the future: *“if you do not start working with that, now, you have a risk of*

having a product that is not good, that is not going to be aligned with what society needs and what the planet needs". Participant 4 stated that implementing SBT and developing the company strategy to *"really connect it to the business needs, and then really finding what it looks like today and where you want to go"*. Overall, the majority of the participants believe that even if SBT is not a necessity from a business point of view now, it would definitely be essential in the future for the business, society, and the plant.

Conclusion of business perspective

In the SBT support and guidelines, most participants showed low engagement in the contact of SBT organization and its partners in the current moment, and only a few participants ensured that this is on their plan for the following years. They also demonstrated that they only communicated with SBT for documentation and formalization of their targets rather than using the SBT network for support and guidelines in the implementation stage of SBT.

Regarding the SBT as a necessity from the business point of view, all the participants were sure that without SBT or other corporate climate initiatives, it would not be possible to compete in the future market development. Moreover, they predicted that if companies would not start working with SBT implementation now, most likely, they would go out of business in the future. Hence, the findings from the interviews confirm that SBT implementation is a necessity from the business perspective.

4.2.2.4 Additional Insights from Management Perspective

To get more insights on the managing change with regards to the SBT implementation, the participants have been asked if they have any key message from the management perspective on SBT.

To be successful in SBT implementation is not only to support teams in the implementation stage, involvement of different teams in the early stage is also to help teams to understand the process and make them feel that they are a part of the target selection and development : *"one of the most important things is to develop the science based targets with input and with collaboration from different key roles and functions within the company"* (Participant 9).

Participants brought up prioritization, engagement, and monitoring as key success factors of managing change of SBT implementation. As Participant 3 stated: *"the question is understanding your company and finding ways to move forward into getting everyone one way"*.

Alignment and communication of the top management and everyone in the company was also an important factor in managing change. *“it is so important that the management team and the board communicate that this is a priority”* (Participant 6).

Last but not least, the urgency to act now and provide time and resources with a clear action plan for the SBT implementation to teams and *“do not wait for or waste valuable time and put resources in today to get this done”* (Participant 7) is also important to manage SBT implementation successfully. Importantly, to support SBT implementation it is also essential to be transparent and be able to track implementation progress as Participant 10 mentioned that *“it will be as transparent as possible. Focus on internal and external communication and build up the right tools to track your progress”*.

4.3 Chapter Summary

This chapter presents the data collection and analysis results from secondary data collection and survey and interview data collection. In the next chapter, the research questions are answered using the data analysis from this chapter.

5 Discussion

5.1 Research question 1: How do companies and individuals in the companies perceive managing change in SBT implementation?

5.1.1 How do companies and individuals perceive organizational change management?

The results of the present study verify that the four frames of the Bolman and Deal Model (Bolman & Deal, 2017) in the analytical framework model for the present study are meaningful and practical for organizations in the SBT implementation phase. The four frames for change management have been adjusted and applied to meet the company size, complexity, business needs, and situation at the organizational change management level. Generally, organizational change management needs three main components to support four frames for the SBT implementation: leadership, action, and multi-frame thinking.

Organizational change management in SBT implementation needs a leadership

According to the present study result, many organizations believe in the importance of all management levels, particularly top management and middle management, in the change since the SBT implementation is a long-term vision for the organization. Leadership is a need for this chance to shape the culture of the organization and empower its employees; as Bolman and Deal (2017, p.418) state that “reframing, like management and leadership, is more art than science. Every artist brings a distinctive vision and produces unique works”.

SBT implementation is not a common practice for organizations. The organizational changes have occurred at different times; some organizations recently joined less than a year, and others have more than three years of experience in SBT implementation. However, making sure that the frames correspond to the level of understanding of change and the circumstances is the main task for leaders, as “Organizations need leaders who can provide a durable sense of purpose and direction, rooted deeply in values and the human spirit” (Bolman & Deal, 2017, p. 421). In SBT implementation, leaders need to consider integrating multiple lenses and align the SBT guidelines, internal policies, and employees’s perspectives into specific situations, reflect on different lessons from teams and adapt the plan from time to time. “The

effective leader changes lenses when things do not make sense or are not working” (Bolman & Deal, 2017, p. 323).

The implementation of four frames in SBT also needs effectiveness. One frame is not always sufficient for achieving the SBT. Leaders need to have the ability to apply the frames consistently and effectively, and when and which frame is a requirement for the organization at a specific time in SBT implementation.

Additionally, the SBT implementation requires resource allocation for facilities and technology investment, human resources development, and other supports. Effective management and utilization of the resources need coaching and inspiration from leaders and inspired followers. “Without wise leaders and artistic managers to help close the gap, we will continue to see misdirected resources, massive ineffectiveness, and unnecessary human pain and suffering” (Bolman & Deal, 2017, p. 422).

Organizational change management in SBT implementation needs an action

"The overriding purpose of managing is to ensure that the unit serves its basic purpose" (Mintzberg, 2013, p. 49). However, in SBT implementation, units in organizations are no longer servers only for their unit purposes, but they also need to serve the SBT implementation.

The SBT implementation may rely on the relationship between the organization and people or, in other terms, to meet employees' needs and organizational requirements. Mintzberg (2013) states the need for a human resource frame that:

the manager takes one or two steps back from the action. One step back, they encourage other people to take action—the manager gets things done through other people by coaching, motivating, building teams, and strengthening culture. The manager gets things done using the information to drive other people to take action (Mintzberg, 2013, p. 49).

Although, in SBT implementation circumstances, a human resource frame that provides spiritual and intangible support from the organization to employees is not enough. Top management and managers are the prominent people who lead the SBT implementation that is a part of their organizational strategy. "authorities—executives, managers, and supervisors—are charged with keeping action aligned with strategy and objectives" (Bolman & Deal, 2017, p. 55). The SBT implementation has a risk and challenges that can be affected by the implementation outcome. To reduce the risk and support the implementation, the system, tools, and documents must be in place as Bolman and Deal (2017) believe that the

structural frame risks ignoring everything outside the rational scope of tasks, procedures, policies, and organization charts (Bolman & Deal, 2017, p. 323).

Furthermore, organizations need to enable an excellent working environment and learning workplace and be flexible and adaptable policies since "a fixation on politics easily becomes a cynical self-fulfilling prophecy, reinforcing conflict and mistrust while sacrificing opportunities for rational discourse, collaboration, and hope" (Bolman & Deal, 2017, p. 323). Lastly, it is also essential to localize SBT standards into company standards to fit the level of understanding of their employees, suppliers, and other related stakeholders and the size and type of business. "The different scenarios offer a glimmer of what they might run into, depending on how they size up a situation" (Bolman & Deal, 2017, p. 324).

Organizational change management in SBT implementation needs a multiframe thinking

The number of activities, events, conflicts, dramas, and other internal and external factors is uncertain. Change management needs to adapt to this uncertainty and ambiguity and be framed differently to achieve various purposes. Over and above that, somehow, it needs an adaptation in unit level or field offices. "To see the same organization as a machine, family, jungle, and theater requires the capacity to think in different ways at the same time about the same thing" (Bolman & Deal, 2017, p. 422).

According to Bolman and Deal (2017), success requires artistry, skill, and the ability to see organizations as organic forms. Needs, roles, power, and symbols must be integrated to provide direction and shape behavior (Bolman & Deal, 2017, p. 422). The decision and direction of managers support organizations and employees in understanding the appropriate actions to take in a process to support the change in SBT implementation. To make the best decision and direction, managers need to have a different lens in four frames to express feelings, maintain a working relationship, motivate employees, increase energy, commitment, loyalty, and solve problems and other matters. Leaders fail when they take too narrow a view. "Unless they can think flexibly and see organizations from multiple angles, they will be unable to deal with the full range of issues they inevitably encounter" (Bolman & Deal, 2017, p. 421). Especially when it comes to restructuring to support SBT implementation, to reduce group and individual interest conflict, a bottom-up approach with collaboration and transparency is a key to the success of human resource change management.

Nevertheless, implementing four frames to support SBT implementation is still a challenge for organizations. Managers have different numbers of experiences in their current

organization. For example, managers need to understand the situation, department, and team working culture, which takes time and attention to apply human resource and political frames. “Managers feel powerless and trapped when they rely on only one or two frames. This is particularly true for newcomers” (Bolman & Deal, 2017, p. 324). Another challenge in change management is diversity management. For diversity promotion, Bolman and Deal (2017) believe that sometimes companies support diversity because they think it is correct. Others do it grudgingly because of bad publicity, a lawsuit, or government pressure (Bolman & Deal, 2017, p.152). For whatever reason, SBT implementation consists of internal diversity teams with different backgrounds, knowledge, genders, ages, and perspectives. To have a multi-frame, managers need “to gain a new perspective, invite listeners and questionnaires who do not know the background, content, or the politics of the strategic issue” (Sloan, 2019, p. 281) and “there is power in knowing the other perspective, not just to use it against a person in some way but also to learn from it” (Berger & Johnston, 2015, p. 21).

5.1.2 How do companies and individuals perceive people change management?

The present study results validate that the ADKAR model in the analytics framework is crucial and practical for the companies in the SBT implementation. The present study results also show that people change management in SBT implementations needs the capability to learn, availability of resources, and accountability systems.

People change management needs the capability to learn

Hiatt (2006), in the book "ADKAR: A Model for Change in Business, Government, and Our Community," points out that the person's capability to learn is one of the components of people's change management. The interview participants revealed that their capability to remember could be demonstrated by knowledge sharing and co-creation of knowledge initiatives in their companies about SBT implementation. The participants stated that creating the space to advance their skills and knowledge and continuously develop and learn helps them perform better in different positions in their companies and, hence, have better people change management. Sartori, Costantini, Ceschi, and Tommasi (2018) present that training, development, and learning capability are necessary key factors for people change management. Further, the interview and survey participants mentioned that they are capable of learning, developing, and collaborating with others to carry out SBT implementation better. In contrast, some survey participants disagreed that they have all the necessary skills,

knowledge, and clearness to adapt to SBT implementation, potentially influencing people change management in their companies.

People change management needs to have an availability of the resources

Even though the size and industry of the companies participating in the present study varied greatly, all participants commented about creating specific centers of excellence, training, workshops, seminars, and resources in their companies for people change management regarding SBT implementation. Hiatt (2006) also calls attention to the availability of the resources having a significant impact on the perception and performance of the people change management in the organizations. Errida and Lotfi (2021) advocated that people change management is more likely to be effective if there is an availability of the resources designated for change projects, which in the present study is SBT implementation. One of the participants also confirmed that it could successfully implement SBT before the deadline due to the company having a wide range of available resources.

People change management needs to have accountability systems

Both the literature (Errida & Lotfi, 2021; Hiatt, 2006) and participants from the interview and surveys expressed that to sustain people change management, their companies should have the accountability systems to track down the daily operations and be able to implement changes in the multiple levels and projects. One of the performance systems that are crucial in people changes management is to create the management teams, or selected individuals who have excellent expertise, credibility, and leadership, to be able to lead their employees through change and motivate their performance in regards to SBT implementation (Kotter, 2007). In the case of small companies, some of the interview participants suggested that CEOs or sustainability managers become those trackers of the accountability systems. They ensure that change is implemented in every project and team and on different levels in the company. Hiatt (2006) affirms that having accountability systems allows the change leaders to understand the share of employees successfully implementing change, how many employees struggle to perform with a new way of working, and then design possible solutions. The interview participants confirm that employees' motivation, engagement, and accountability are key to successfully implementing SBT and managing people change.

5.2 Research question 2: What are key change factors from a business perspective that affect the performance and success of STB implementation?

The present study also aimed to answer the key change factors that affect the performance and success of SBT implementations. Since the interview and survey questions were based on two topics from a business perspective, particularly SBT's support and guidelines and the necessity of SBT implementation, the research question 2 would be discussed firstly from SBT's support and guidelines and further from the necessity of SBT implementation.

SBT's support and guidelines

The SBT's support and guidelines are considered one of the possible factors influencing the performance and success of SBT implementation (U.N.-Convened Net-Zero Asset Owner Alliance, 2020). Both literature (Science Based Targets, 2022a) and interview respondents confirmed that SBT's guidelines on implementation were clear and straightforward, and they did not have any problems with the process. Only a few interview respondents complained about the long waiting time for the approval of SBT. On the contrary, most survey respondents disagreed or remained neutral that the SBT provides training for SBT implementation. The interview participants added that they did not take full advantage of all the support and guidelines from the SBT supplied to them. However, regardless of the SBT's support and guidelines, their performance and success of SBT implementation were still positive. Therefore, it does not support the previous research by Sarasini and Jacob (2014) that believes a lack of corporate climate initiative's support and guidelines could hinder the management of corporate climate action.

Necessity of SBT implementation

Companies align SBT with their long-term business

As mentioned in Chapter 2.2.2, research by Sarasini and Jacob (2014) states that a change factor affecting the performance of SBT implementation is interconnected with the company's future business strategy and ambition. Both participants from the interviews and survey also validate that their successful implementation of SBT was part of their future long-term business in the market. Moreover, several participants emphasized that they believe that companies would not be able to survive the market competition without SBT implementation

or other corporate climate action in the future markets. Global Compact Network Germany (2017) adds that the development and alignment of the company's long-term business is a core of introducing and further implementing the corporate climate action or SBT. It also helps to make the company's strategy more measurable and comparable, which possibly influences the performance and success of SBT implementation (CDP, 2020).

Stakeholders value the brand reputation of SBT

The SBT implementation becomes more and more recognized, credible, and valuable by society and the business world, especially when the biggest companies in the world, such as Colgate Palmolive Company, AstraZeneca, and PepsiCo, joined the SBT initiative (Colgate Palmolive, 2020; AstraZeneca, 2021; PepsiCo, 2017). The literature (United Nations Global Compact & Accenture, 2015) and the interviews and surveys conducted with the participants confirmed that a considerable part of their reasoning for joining SBT and its success was due to SBT's value and credibility with the different stakeholders. It was the case for the small companies where joining SBT implementation was primarily influenced by becoming more appealing and valuable for investor opportunities since the SBT became a credible source of corporate climate action (Galvin, 2018).

Increased innovation

Sarasini and Jacob (2014) and Boral (2006) suggest that the influencing change factors on performance and success of SBT implementation are taking advantage of innovation opportunities. All the participants from the survey affirmed that SBT implementation opened the doors for their companies to have innovation opportunities. Moreover, the previous research by CDP Worldwide supports that SBT implementation is driving innovation and creating new opportunities for their businesses (Galvin, 2018). The participants from the interviews were also eager to mention that their companies implement new circular business models and create new innovative ways of doing business. Hence, it validates that increased innovation is one of the change factors in SBT implementation.

5.3 Summary of Results

To summarize the analysis results and reflect on the theoretical framework. The main research results are consolidated and presented through the analytical framework in Figure 5.1. The analytical framework shows the visualization to guide understanding and sense-making of a

systematic approach and analytical analysis of this research's qualitative and quantitative results. Consolidating of results in an analytical framework find 3 main finding conclusions:

The different levels of importance

The empirical findings revealed that the participants viewed the four frames of the Bolman and Deal Model (2017) and the 5 steps of the ADKAR model (Hiatt, 2006) as different levels of importance (Figure 15). The results indicate that the Structural frame of Bolman and Deal (2017) was perceived as the most influential in organizational change management while the Human Resources was the least significant frame from the company perspective. The present study results also showed that the Awareness step of the ADKAR model (Hiatt, 2006) was perceived as the most impactful step in the people's change management in the participating companies, while the Reinforcement step was perceived as the least impactful step according to the individual perception of the participants.

Organizational and people change management are interdependent

The findings revealed that organizational change management and people change management are interdependent and rely on each other regarding internal support. All four frames from Bolman and Deal (2017) and five steps from ADKAR Model (Hiatt, 2006) are crucial in SBT implementation, and each frame and step is required for the successful implementation of SBT. The practical knowledge in real business life to support change management is leadership, action, and multi-frame thinking in the organizational change management and capability to learn, availability of resources, and accountability system in the people change management (Figure 5.1).

Necessity of SBT implementation outweighs SBT's support and guidelines

In the external support, the conclusion is that the necessity of SBT implementation is more likely to be a change factor that affects the performance and success of SBT implementation rather than SBT's support and guidelines. Predominantly, both interview and survey participants were more likely to agree with the necessity of SBT implementation and particularly highlighted the long-term business, stakeholder value, and increased innovation as the primary change factors in SBT implementation from the business perspective. The previous research was also supported by Sarasini and Jacob (2014), Boral (2006), and (Galvin, 2018). While in the case of SBT's support and guidelines, the results of interview and survey respondents did not support the literature and were not the critical change factors in the SBT implementation in the participants' companies (Figure 5.1).

The outcome of the present study is that the successful change management of SBT implementation requires internal support from the organizational and people change management. Further, it also needs external support from business perspectives and an adaption to the practical knowledge in real business life.

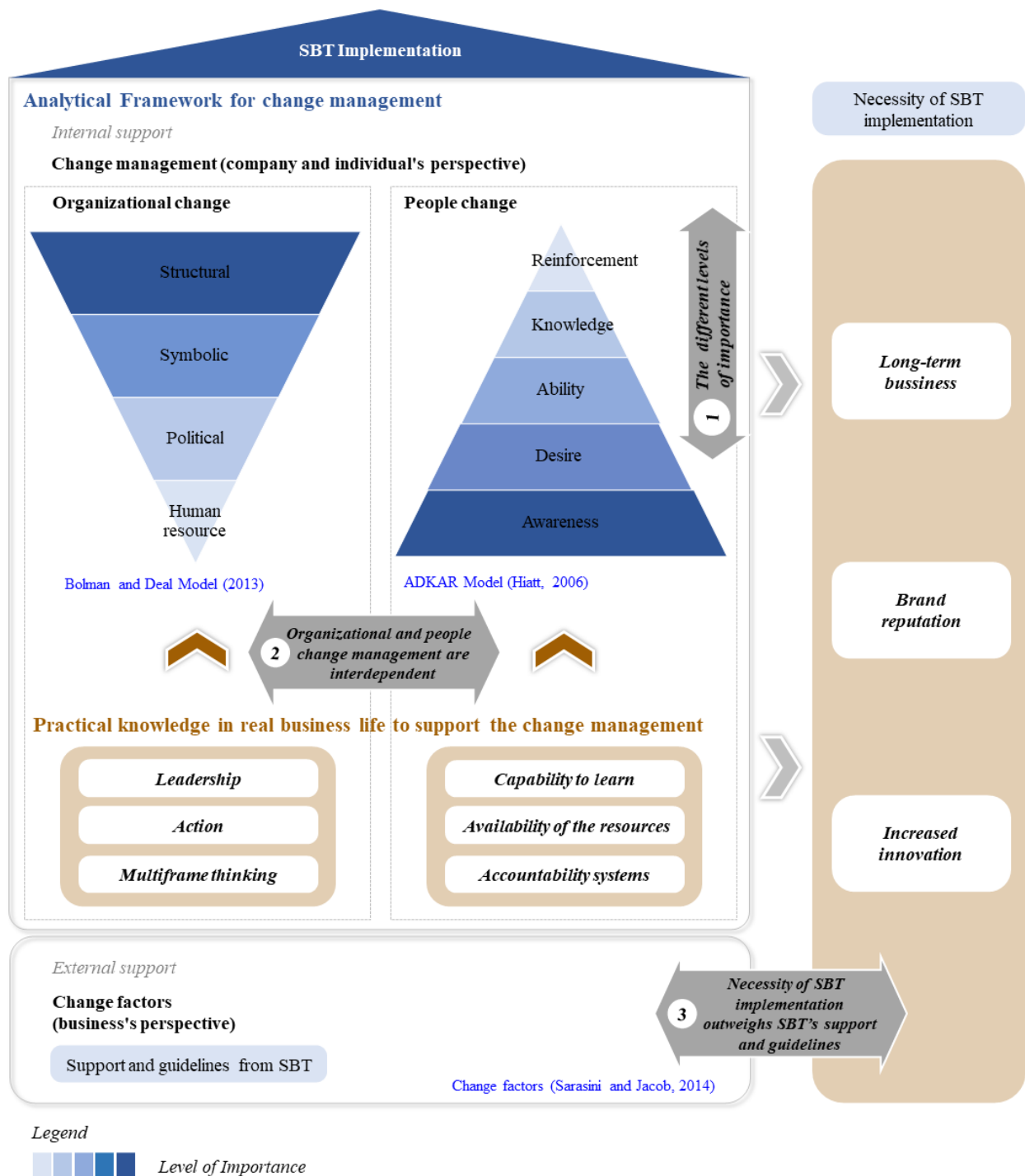


Figure 5.1 Consolidated Results through Analytical Framework

Source: by authors

5.4 Surprising Findings

The type of the business and company size

During the interviews, all the participants heavily emphasized the importance of considering the type of the business and the sector where the participating companies are in SBT implementation. For example, the largest share of the participants from the Real Estate industry (40%) mentioned that the SBT implementation looks different for their type of business than SBT support and guidelines focus on.

In both surveys and interviews, the participants also mentioned the company size as one of the crucial change factors influencing the SBT implementation. A great example could be a few participants from the smaller businesses or family-owned companies that found the survey questionnaire more challenging to answer since SBT implementation is one person's job responsibility but rather company-wide responsibility due to the limited number of employees.

The job experience of participants

Another surprising outcome of the data collection was the participants' SBT implementation experience and job experience in sustainability. Since the participants in interviews had a wide range of job experience from 1 year to 23 years in sustainability, it could potentially influence the results. The participants who worked more years in sustainability and had earlier experience with different sustainability initiatives were more likely to see SBT initiatives as one of the many initiatives existing in the market and SBT implementation as another step of managing sustainability change rather than seeing SBT as coherent change management. Both surveys and interviews also emphasized that SBT implementation is part of corporate climate action rather than a separate process itself. On the other hand, the participants who worked a few years in managing SBT implementation were more likely to see SBT implementation as a crucial step in managing change in their companies.

Technical aspect of the SBT implementation

The participants also were more likely to highlight their knowledge about SBT implementation from the technical perspective rather than the managing change perspective. During the survey's additional comments section and the interview's open-ended questions, almost all the participants mentioned once or several times the technical details of the SBT implementation, such as Scope 1, 2, 3 of the emissions targets, and multiple ways of tracking

the SBT progress in their companies. The participants were focusing more on the technical aspects of the SBT implementation, which could potentially limit their time distribution and importance in the area of organizational and people change management.

5.5 Chapter Summary

In this chapter, the discussion of the research questions and their relation to the analytical framework of the present study is presented. Further, the discussion and summary of the analytical framework of the present study are demonstrated. The chapter concludes with surprising findings. The following chapter winds up the conclusion of the present study.

6 Conclusion

6.1 Overview

The present study aimed to explore and develop the understanding of managing change in the corporate climate action in Sweden. Secondary data analysis and surveys and interviews of the sustainability managers and SBT responsible company representatives were conducted on company and individual perspectives and business perspectives regarding SBT implementation. Data analysis helped shed light on how the companies and individuals in those companies perceive managing change in SBT implementation and the key change factors that affect the performance and success of SBT implementation.

To explore the research questions, the empirical findings revealed that in organizational change management, the companies perceive important components as leadership, action, and multi-frame thinking. Furthermore, in the people change management, the individuals in the companies perceive the capability to learn, availability of resources, and accountability system as key components. The empirical findings concluded that organizational and people change management are interconnected and interdependent. At the same time, the most important components were the Structural frame from Bolman and Deal (2017) and the Awareness step from ADKAR Model (Hiatt, 2006).

Findings also exhibit that, from the business perspective, the necessity of SBT implementation is perceived stronger as a key change factor affecting the performance and success of SBT implementation than SBT's support and guidelines. The empirical data showed that long-term business, brand reputation, and increased innovation were the main reasons behind the participants' performance and success of SBT implementation in their companies.

The findings also revealed that the type of the business and company size, the job experience of the participants, and the technical aspect of SBT implementation influenced the organizational and people to change management and performance and success of SBT implementation in the participating companies and could be considered vital variables in the present study.

Overall, the change management for performance and success of SBT implementation requires organizational and people change management and the necessity of SBT implementation from the business perspective.

6.1.1 Practical Implications and Contributions

The present study explored and shed light on managing change in the corporate climate action in Sweden. It offers practical implications for the top management and management teams in change management. It provides valuable insights into managing change from organizational, people change, and business perspectives on corporate climate action. Hence, it could potentially be used as a facilitation guide by managers in all the areas regarding managing change and its implementation. Further, since the present study has been conducted on SBT implementation, it could be a guideline for the companies in the target set step of SBT implementation of companies planning to join SBT in the future. Lastly, it should be noted that the Bolman and Deal Model (2017) and ADKAR Model (Hiatt, 2006) are change management models and hence, while applied to real-life situations, should be adjusted to the scope of the present study.

6.1.2 Research Limitations

During the present study conduction, some of limitations were experienced. Even though the topic of the present study was introduced at the beginning of all surveys and interviews as "Managing Change," it was not clear if all the participants were able to focus on the management aspect of SBT implementation, but rather the technical details of SBT implementation. Furthermore, the participants were from a wide range of the industry, sectors, types of business, and company sizes that could likely influence their insights and data collection results. The job experience, the participants' knowledge, skills, and proximity to the SBT implementation also varied quite a lot. Hence, the authors thoroughly accessed and categorized the data collection results, and the results not related to the research questions were summarized in the surprising insights section in Chapter 5.3. Overall, since the present study is a pioneer in SBT implementation, it was difficult to generalize the findings; however, the conclusions were substantial to answer the research questions and fulfill the purpose.

6.2 Recommendations for Future Research

The present study is just the pioneer research in the hardly researched area of SBT implementation and hence opens an opportunity for further future research in this area. To begin with, to solve the above limitation of the target sample of the present study, it is recommended to conduct a more extensive study including more companies in Sweden and other countries. It could be helpful to gain a wider research area in the SBT implementation and cover the research gap. It also would help compare and evaluate the findings from the

present study. Secondly, the participants were from different industries, which could potentially influence the data collection results. Thus, it is recommended for further research to consider the type of business and sector of the participating companies as one of the variables to gain more insights into the differences or similarities between the different sectors and industries of the participants.

Further, it is recommended that both surveys and interviews be more adjusted to the size of the companies in future research. For the research of change management, the sampling of the present study may impact the empirical results. Hence, selecting a similar timeframe when companies implemented the change may influence the outcome of the present study. It might help to understand better the change management in particular stages and timespan of SBT implementation. Lastly, it is recommended for further research to get more assistance from the SBT organization and its resources since it could be beneficial for the data outcomes, coverage, and better understanding of the research topic.

6.3 Chapter Summary

This chapter concludes the present study with the overview, its aims and objectives, practical implications and contributions, present study limitations, and recommendations for future research.

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Appendix

Appendix A - Email for survey

Title: Science Based Targets Study from Lund University



Dear Sir/Madam,

We are student researchers from Lund University. We decided to contact you since your company is a part of Science Based Targets implementation in Sweden.

The infographic is titled 'BE A PART OF OUR STUDY' and is subtitled 'A Study of Sustainability Science-Based Target Implementation in Sweden'. It is divided into five sections: 1. 'WHAT IS IT ABOUT?' with an icon of a magnifying glass over a document, explaining the survey's purpose to find out how companies manage change to support SBT implementation. 2. 'WHAT DOES PARTICIPATION MEAN TO YOU?' with an icon of hands typing on a laptop, stating that participation is voluntary and takes less than 10 minutes. 3. 'WHAT DO WE DO WITH THE INFORMATION?' with an icon of a clipboard, stating that information will be analyzed for academic purposes. 4. 'DATA MANAGEMENT AND CONFIDENTIALITY' with an icon of a folder labeled 'CONFIDENTIAL', stating that responses are recorded anonymously. 5. 'WHAT IS THE NEXT STEP?' with an icon of a person at a computer, stating a follow-up session will be held from 11-29 Apr 2022. At the bottom, there is a photo of a building and a 'CONTRACT' section listing the researchers: Yelyzaveta Kopaievska, Toukham Sihalath, and Bo Göransson.

To participate in this study, please access: [HERE](#)

Thank you for your consideration and we are looking forward to hearing from you.

Sincerely,

Yelyzaveta and Toukham

You are welcome to contact us if you have any questions and support about this study:
Yelyzaveta Kopaievska, Student Researcher, ye5588ko-s@student.lu.se, +46 724444725
Toukham Sihalath, Student Researcher, to2374si-s@student.lu.se, +46 723873484
Bo Göransson, Associate Professor and Supervisor, bo.goransson@fek.lu.se

Appendix B - Sample of ADKAR Model survey questionnaire

| Five steps | Question samples |
|---------------|---|
| Awareness | <p>I understand the reasons for changing in the Nursing Process Kardex.</p> <p>I understand the difficulties in changing in the Nursing Process Kardex.</p> <p>I know how effective changing in the Nursing Process Kardex is.</p> <p>I am aware of the goals of the changes in the Nursing Process Kardex.</p> |
| Desire | <p>To be part of these changes makes me feel excited.</p> <p>This change will provide me with a lot of opportunities.</p> <p>I support the implementation of the change (using the Nursing Process Kardex).</p> <p>I benefit from the change (using the Nursing Process Kardex).</p> |
| Knowledge | <p>I have the required skills to adapt to the changes.</p> <p>I understand how my work is related to change.</p> <p>Change is clear to me.</p> <p>I have the knowledge to adapt to the changes.</p> |
| Ability | <p>I can adapt to change.</p> <p>I can positively help change.</p> <p>I can do better due to changes.</p> <p>I have the ability to do things at a level that is needed for the changes.</p> |
| Reinforcement | <p>Our members of the group support this change.</p> <p>My manager supports this change.</p> <p>My uncertainty has been resolved.</p> <p>I personally develop with this change.</p> |

Appendix C - Survey Questionnaire

Science-Based Target (SBT) Implementation

Greetings from Lund University!

Thank you very much for participating in this research. All responses are recorded anonymously so feel free to provide honest feedback. Your answers are used only for research purposes. The survey should take less than 10 minutes to complete.

* Required



I. GENERAL INFORMATION

Please fill out in this section a general information about yourself.

1. 1.1 Company name: *

2. 1.2 Position: *

3. 1.3 Department: *

Mark only one oval.

- Sustainability
- Production
- Top Management
- Human Resources
- Business Development and Innovation
- Finance and Accounting
- Supply Chain
- Others

4. 1.4 Weekly time distribution on SBT implementation:

Mark only one oval.

- 40-30 hours per week
- 30-20 hours per week
- 20-10 hours per week
- Less than 10 hours per week
- 0 hours per week

PART II: SBT Implementation for Organizational Change

In this section, you will find a series of statements about SBT implementation that you will access according to your perception of your company. Please rate from your company and individual's perspective to what extent do you agree with the following statements from "Strongly disagree" to "Strongly agree".

5. 2.1 From your company's perspective, to what extent do you agree that the following components are important in SBT implementation? *

Mark only one oval per row.

| | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|---------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| A. Structure and Strategy | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| B. People Management | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| C. Stakeholder Engagement | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| D. Mission and Vision | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

2.2 From your individual's perspective, to what extent do you agree that the following components are important in SBT implementation?

6. A. Structure and Strategy *

Mark only one oval per row.

| | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| My company creates and updates policies, procedures, and systems. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My company restructure, redesign organization chart and allocate more resources. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My company considers SBT implementation as company goals. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My company adapts the strategy plan to align with SBT implementation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My company invests on advanced technology and updated machinery. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

7. B. People Management *

Mark only one oval per row.

| | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| My company provides all necessary training, resources and support for SBT implementation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| SBT implementation is communicated and executed at all levels of my company. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My company organizes a feedback session to share and receive feedback on SBT implementation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My company holds meetings to communicate direction. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My company creates a culture team. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

8. C. Stakeholder Engagement *

Mark only one oval per row.

| | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| My company invests resources and power to ensure SBT implementation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My company provides clear agenda to communicate with stakeholders. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| External stakeholders are involved with SBT implementation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Stakeholder's interests are aligned with SBT implementation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My company develops network and relationships with SBT partners. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

9. D. Mission and Vision *

Mark only one oval per row.

| | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| SBT implementation lines up with my company's mission and vision. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My company creates events and ceremonies connected to SBT implementation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My company promotes SBT implementation stories and information via different channels. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Management team lead by example, gives a clear direction and encourages staff. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My company communicates and celebrates early signs of progress of SBT implementation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

PART III: SBT Implementation for People Change

In this section, you will find a series of statements about SBT implementation that you will access according to your perception of your company. Please rate from your company and individual's perspective to what extent do you agree with the following statements from "Strongly disagree" to "Strongly agree".

10. 3.1 From your company's perspective, to what extent do you agree that the following components are important in SBT implementation? *

Mark only one oval per row.

| | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Awareness of the need for change | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Desire to change | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Sufficient knowledge how to change | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Ability to implement the change | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Reinforcement | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

3.2 From your individual's perspective, to what extent do you agree that the following components are important in SBT implementation?

11. A. Awareness of the need for change *

Mark only one oval per row.

| | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| I understand the reasons for SBT implementation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I understand the difficulties with upcoming changes with SBT implementation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I understand how rewarding the SBT implementation is. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am aware of the goals of the SBT implementation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

12. B. Desire to change *

Mark only one oval per row.

| | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| To be part of SBT implementation makes me excited. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| SBT implementation will provide me with a lot of opportunities. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I support the implementation of SBT. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I benefit from the SBT implementation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

13. C. Sufficient knowledge of how to change *

Mark only one oval per row.

| | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| I have all necessary skills to adapt to SBT implementation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I understand how my work is related to SBT implementation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The SBT implementation is clear for me. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I have the knowledge to adapt to SBT implementation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

14. D. Ability to implement the change *

Mark only one oval per row.

| | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| I can adapt to SBT implementation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I can positively help SBT implementation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I can perform better due to SBT implementation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I have the ability to do things required for SBT implementation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

15. E. Reinforcement *

Mark only one oval per row.

| | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| People in my company supports SBT implementation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I do not have uncertainty about SBT implementation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My company benefited from the SBT implementation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The SBT implementation has been implemented successfully. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I do not see the resilience of SBT implementation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

PART IV: SBT Implementation for the changes factors

In this section, you will find a series of statements about SBT implementation that you will access according to your perception of your company. Please rate from your business' s perspective to what extent do you agree with the following statements from "Strongly disagree" to "Strongly agree".

16. 4.1. From your business's perspective, to what extent do you agree with the SBT's impact on your business? *

Mark only one oval per row.

| | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| SBT implementation helps my company to stay in the market. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Joining SBT implementation helped me understand future climate policies. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| SBT implementation helps to manage economic risks connected to SBT implementation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| SBT implementation helps my company have new innovation opportunities. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| SBT implementation brings economic growth to my company. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

17. 4.2 From your business's perspective, how do you assess the role of SBT in providing support and guidelines? *

Mark only one oval per row.

| | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| SBT provides a clear guidance. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| SBT provides a support on guideline compliance. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| SBT has sufficient resources (materials and tools) to follow the guidelines. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| SBT provides trainings. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

PART V: Additional Information

18. Additional comments

19. Would you like to receive a copy of the final research report?

Mark only one oval.

- Yes
 No

Thank you very much for participating in this study!

We are very appreciative of the valuable time, information that you have contributed in this survey.

If you have any questions and any support, please contact:

Yelyzaveta Kopalevska, Student Researcher, ye5588ko-s@student.lu.se, +46 724444725

Toukkham Sihaiath, Student Researcher, to2374sl-s@student.lu.se, +46 723873484

Bo Göransson, Associate Professor and Supervisor, bo.goransson@fek.lu.se

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Google Forms

Appendix D - Email for interview

Title: Invitation for the Interview



MANAGING CHANGE PROCESSES IN CORPORATE CLIMATE ACTION

LUND UNIVERSITY SCHOOL OF ECONOMICS AND MANAGEMENT

Dear Sir/Madam,

Thank you so much for filling out our survey questionnaire about Science Based Target implementation. We really appreciate and value your opinion and input in our research. Hence, we would like to invite you for the next step of the interview.

Please select your availabilities in these times slot: [HERE](#)

An infographic with a light blue background and a dark grey header. The header contains the text 'THANK YOU FOR BEING A PART OF OUR STUDY' and 'A Study of Sustainability Science-Based Target Implementation in Sweden'. Below the header are four sections, each with an illustration and text: 1. 'WHAT IS IT ABOUT?' with an illustration of two people talking and a laptop, text: 'The purpose of this survey is to find out how companies manage the change to support the science-based Targets (SBT) implementation.' 2. 'WHAT IS THE NEXT STEP?' with an illustration of a person at a computer, text: 'Interview from 25 - 29 Apr 2022'. 3. 'HOW LONG WILL IT TAKE TIME?' with an illustration of a person at a desk and a clock, text: 'About 30 minutes'. 4. 'WHERE IT WILL TAKE PLACE?' with a Zoom logo and an illustration of a building, text: 'A Zoom call or in person at your office in Skåne area'. At the bottom right, there is a 'CONTRACT:' section listing the names and roles of the researchers: Yelyzaveta Kopaievska, Student Researcher; Toukkham Sihalath, Student Researcher; and Bo Göransson, Associate Professor and Supervisor.

Thank you for your consideration and we are looking forward to discussing and meeting you next week.

Sincerely,

Yelyzaveta and Toukkham

You are welcome to contact us if you have any questions and support about this study:

Yelyzaveta Kopaievska, Student Researcher, ye5588ko-s@student.lu.se, +46 724444725

Toukkham Sihalath, Student Researcher, to2374si-s@student.lu.se, +46 723873484

Bo Göransson, Associate Professor and Supervisor, bo.goransson@fek.lu.se

Appendix E - Interview Questionnaire



MANAGING CHANGE PROCESSES IN CORPORATE CLIMATE ACTION

LUND UNIVERSITY SCHOOL OF ECONOMICS AND MANAGEMENT

Questionnaires for Semi-Structured Interview

Interview no: _____ Company Name: _____

Date: _____ Time: _____ At: _____

I GENERAL

1. How long have you been working in your company?
2. Did you hold many positions in this company?

YES

NO

If so, how long have you been working in your current role?

II CHANGE MANAGEMENT

2.1 Organizational change management

Structure and Strategy

3. What are the strategy goals in your company that link or contribute to the SBT implementation?
4. How do you restructure your company to support SBT implementation?

People Management

5. What kind of training, resources, and support does your company provide for SBT implementation?
6. Do you organize any meeting, event, feedback session or any channels to support SBT implementation?

Stakeholder Engagement

7. Who are your main internal and external stakeholders in SBT implementation?
8. How do you build external networks to build a network and partnership to support SBT implementation?

Mission and Vision

9. How does your company communicate its vision and mission connected to SBT implementation and SBT implementation progress to all stakeholders?
10. How does the management team encourage, motivate, and inspire employees to ensure SBT implementation?

2.2 People change management

11. Do you feel it is necessary to do SBT implementation? (Awareness)
12. Do you have the motivation for a SBT implementation? (Desire)
13. Do you know how to implement SBT effectively? (Knowledge)
14. Do you face any problems in putting SBT into practice? (Ability)
15. Do you put some measures in place for preventing yourself from reverting to the old ways of work before SBT implementation? (Reinforcement)

III. Business's perspective

16. To what extent are you satisfied with the current SBT support and guidelines? (SBT)
17. How is SBT implementation necessary from a business point of view? (Business need)

IV. OTHER ADDITIONAL COMMENTS

18. From the management point of view on SBT implementation, what is the key message that you want to leave for us?
19. Do you have any additional comments?

Appendix F - Target set companies under each sector

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|--|
| Air Freight Transportation and Logistics |
| PostNord AB |
| Automobiles and Components |
| Autoliv Inc, Bulten AB, Volvo Car Group |
| Banks, Diverse Financials, Insurance |
| Carnegie Fonder AB, EQT AB |
| Building Products |
| Diab International AB |
| Chemicals |
| Perstorp Holding AB |
| Construction and Engineering |
| Skanska AB |
| Consumer Durables, Household and Personal Products |
| Electrolux, Essity AB, Husqvarna AB, Lintex AB, Nobia AB, Scapa Inter AB, Thule Group |
| Containers and Packaging |
| BillerudKorsnäs, Ecolean, TETRA PAK |
| Electric Utilities and Independent Power Producers and Energy Traders (including fossil, alternative and nuclear energy) |
| Vattenfall AB |
| Electrical Equipment and Machinery |
| AB Volvo, Atlas Copco AB, Epiroc AB, SCANIA CV |
| Food and Beverage Processing |
| Bama Fresh Cuts AB, Bertegruppen AB, Di Luca & Di Luca AB, Foodmark AB, L.E. Vegetables Company Aktiebolag, Midsona AB |
| Food and Staples Retailing |
| Apotea, Coop Sverige AB, Grönsaksmästarna Nordic AB, ICA Gruppen |
| Food Production - Agricultural Production |
| Almhaga AB, Nyskördade Morötter i Fjälkinge AB, Sörby Handelsträdgård Aktiebolag, SydGrönt Ekonomisk Förening |
| Forest and Paper Products - Forestry, Timber, Pulp and Paper, Rubber |
| Holmen AB |

| |
|---|
| Ground Transportation - Railroads Transportation |
| Essinge Rail AB |
| Ground Transportation - Trucking Transportation |
| Voi Technology AB |
| Homebuilding |
| Bonava AB |
| Hotels, Restaurants and Leisure, and Tourism Services |
| Arjeplog Hotel Silverhatten AB |
| Media |
| Bonnier Books, Norstedts Förlagsgrupp AB |
| Mining - Iron, Aluminum, Other Metals |
| SSAB |
| Professional Services |
| MiljöMatematik Malmö AB, Tricorona Climate Partner AB, Trossa AB, U&We AB |
| Real Estate |
| AMF FASTIGHETER AB, Castellum AB, Catena AB, Diös Fastigheter, Fabège AB, K2A Knaust & Andersson, Kungsleden AB, Platzer Fastigheter Holding AB (publ), Rikshem AB, Samhällsbyggnadsbolaget i Norden AB, Specialfastigheter Sverige AB, Vacse AB (publ), Vasakronan AB, Wihlborgs Fastigheter, Willhem AB |
| Retailing |
| H&M Hennes & Mauritz AB, Reitan Convenience Sweden AB, RugVista AB |
| Software and Services |
| Betsson AB, Knowit Group |
| Technology Hardware and Equipment |
| Ericsson Group |
| Telecommunication Services |
| Tele2 AB, Telia Company AB |
| Tobacco |
| Swedish Match |
| Trading Companies and Distributors, and Commercial Services and Supplies |
| Oleter Group AB, OSS Nordic AB |