Apparel and Footwear Environmental Assessment Tool

Understanding how Rapid Design Module is used and if it can contribute to sustainability-oriented organizational culture

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ABSTRACT

The aim of this thesis is to study the usage of an Apparel and Footwear Environmental Assessment Tool, the Rapid Design Module, in Swedish companies in the textile and fashion industry and the tool’s possible impact on the change process of organizational culture towards a more sustainable one. A qualitative study has been conducted via interviewing and observing employees using the focal tool on-site in three different companies. A theoretical framework within organizational culture was developed along with necessary cultural traits a company should nurture in order to change its culture towards a more sustainable one. The most important findings pointed out that companies should develop common guidelines in order to use the tool in question coherently and in unison. The tool was found to act as a change initiator in the employee level of the companies and additionally management support was found to be essential in order to empower employees in taking initiative in their work. Furthermore, the tool showed signs of increased collaboration within the companies’ external and internal environments, i.e. learning from one another, as well as it was observed to encourage interdependent thinking, which both are the necessary traits mentioned earlier.

Keywords: Environmental Management System, Rapid Design Module, Apparel and Footwear Environmental Assessment Tool, Organizational Culture, Cultural Change, Corporate Sustainability, Sustainability-oriented Organizational Culture
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LIST OF ABBREVIATIONS

AFEAT = Apparel and Footwear Environmental Assessment Tool

CSR = Corporate Social Responsibility

EMS = Environmental Management System

MSI = Materials Sustainability Index

RDM = Rapid Design Module

SAC = The Sustainable Apparel Coalition

SME = Small and Medium sized Enterprise
1 Introduction

The introduction chapter presents the background of the topic and the events that have led to the present situation. Sustainability initiatives within companies are discussed and the Environmental Management System Higg Index is introduced along with the tool that is in the core of this thesis. The background guides to problem discussion, where the research done within the field(s) is discussed and relevant findings and theories are presented. The discussion serves as a base for the purpose of the study and leads the way towards the research questions.

1.1 Background

While environmental problems have become more serious in recent years and consumers have begun to expand their interest towards eco-friendlier products, sustainability initiatives within the fashion and textile industry have increased along (Trudel and Cotte, 2009; Laroche et al., 2001). The rising concerns are touching the sustainability of the production and the supply chain as well, and therefore fashion companies have started to pay closer attention to their suppliers’ environmental performance and focused their interest in search for methods and management approaches that incorporate sustainability initiatives (Boiral and Sala, 1998; Hamner, 2006; Meyer, 2001). Sustainability initiatives are defined by Allen et al. (2012, p. 211) as: “how companies enact their sustainability goals through their operations and practices. Initiatives might include tracking and/or reducing greenhouse gas emissions, designing sustainable products, or seeking to eliminate waste”. Additionally, other ways to apply sustainability strategies is joining ecological initiatives, emphasizing Corporate Social Responsibility (CSR) or implementing an Environmental Management System (EMS) and thereby improving environmental performance of the company (Reuter et al., 2010; Flint and Golicic, 2009; Markley and Davis, 2007).

ISO 14000 is one of the most popular and recognized Environmental Management Systems in the world and since its development and launch in the 1990s, along with the famous Rio Summit in 1992, the phenomenon of EMS has caught on in various organizations and continues to spread (Nawrocka and Parker, 2009). According to the
ISO 14000 standard, the result of implementing an Environmental Management System is environmental performance, and an EMS is broadly defined as “measurable results of an organization’s management of its environmental aspects” (ISO 14001, cited in Nawrocka and Parker, 2009). However, one of the weaknesses of the ISO standard is its adaptability to different industries, which gives space to interpretative actions, which can lead to difficulties in comparing the companies’ environmental performance (Jørgensen et al., 2010). Thus, the difference in features and areas of emphasis in an EMS certainly affects the way company’s environmental performance is defined, not to mention measured.

The production process of fashion and textile products is usually highly energy- water- and chemical-intensive, and requires an EMS that is more tailored for the industry’s needs than the ISO 14000 is, with the emphasis on fabric, water and energy usage, which are of essence for the textile industry (Lo et al., 2011). Consequently, various tools and minor systems have emerged during the last years in order to assist environmental decision making in textile design, purchasing and manufacturing. Many of these tools are based upon life cycle assessment, and some of them address only specific parts of the garment life cycle. Thus the existing tools are quite different in content, approach and especially comprehensiveness (Kviseth, 2011).

An EMS that in the recent years has set foot specifically within the apparel and footwear industry is the Higg Index. It is a holistic self-assessment suite with the essential tools needed to assess the environmental and social performance of apparel and footwear companies. It includes three modules; the brand, product and facility module, which all aim to measure and give guidance on the environmental and social performance of different parts of a company. The Higg Index is currently the most comprehensive EMS within the fashion and textile industry (King, 2012; Friedman, 2013; the SAC, 2014). The Sustainable Apparel Coalition (SAC) launched the first version of the Index in 2012. The SAC comprises almost 40 percent of the total production volumes of the apparel and footwear industry, and its ambition is to reach sustainable supply chain practices for the fashion and textile industry by implementing the Higg Index and by emphasizing their main message; it is an opportunity and as well a necessity for the industry to start acting sustainably (the SAC, 2014).
In December 2013 the SAC released another tool for the public, called the Rapid Design Module - Beta (RDM). The tool is a streamlined version of the Higg Index’s Product Module, and its purpose is to educate and engage designers, buyers and product developers in environmental thinking in their work. The RDM is accessible online\(^1\). According to the Product Manager of the SAC, a future goal for RDM is to possibly replace the Product Module, as it is at present considered to be too time consuming and complicated to use and therefore it was seen as necessary to develop a faster tool that can be easy to use\(^2\). The RDM’s aim is, as the SAC (2014) has stated; to “\emph{test the concept of a simple tool that aims at educating and providing quick directional guidance for apparel and footwear designers during the product creation process about the potential environmental impacts of their design solutions}”.

It is important to clarify that the Higg Index is more of an environmental management toolbox in which one or more individuals manage the ongoing environmental work of a company while RDM is developed to be a quick, easy-to-access tool to help product developers, designers and buyers in making environmental decisions when it comes to product design (the SAC, 2014). In other words, the RDM aims to involve the aforementioned employees in the process which aims to create a more environmentally friendly product selection, while the Higg Index is more comprehensive, full-time tool that commonly is used in managerial level.

The RDM, which will be explained more thoroughly in chapter 3, consists of five sections; materials, manufacturing, packaging, product use and end of use. Each of the sections has different weights in the final score depending if the measured product is apparel or footwear (SAC, 2014). The module ranks and evaluates fibres and textiles for their environmental impact and tries to encourage the user to continuous environmental improvement by resulting in quantitative scores based on qualitative questions. Since the fashion and clothing industry comprises of both fast-fashion consumption and long-term quality, the environmental impact of a garment or footwear is dependent as much on the usage and end of life solutions as it is on the material

\(^1\) rdm.apparelcoalition.org  
\(^2\) According to informal discussion with the Product Manager of the SAC, Cameron Childs on the 11\(^{th}\) of February 2014 about the goals of RDM and the purpose of the research.
selection and manufacturing processes. Therefore, it is important that the environmental impact is analysed by taking the whole life cycle into account, as the RDM is believed to do (Kviseth, 2011; SAC 2014).

As a new tool for measuring a single garment’s or footwear’s environmental impact during its whole life cycle, the RDM has not been defined earlier. Consequently, we define it as: Apparel and Footwear Environmental Assessment Tool (AFEAT). Since this particular AFEAT was launched in December 2013 (the writing of this thesis takes place during spring 2014), there has been no research published to date considering its usability or its outcomes on the daily work within a fashion or textile organization. Therefore this study aims to contribute to the field by examining the use and impact of the focal AFEAT within the context of a fashion and textiles company.

1.2 Problem Discussion
The RDM is being expected to act as a “gateway” to a more holistic sustainable approach for companies, thus can be figured that it can work as a starting point for the employees to engage to more sustainable ways of working and thus developing a snowball effect by creating a buzz within the company and involve more and more people within these practices. As Linnenluecke and Griffiths (2010) discovered, even changes like training the employees towards sustainable practises in the company level can have a positive effect on the attitudes and values of the employees. This suggests that the more the employee knows about sustainability issues, the more motivated the person is regarding the matter.

The recognition of the importance of implementing a bottom-up strategy and thus involving the employees in the change process has set foot already in the 1990s, as Beer et al. (1990) and Lupton (1991) found that organizational change and learning starts from the grass root level, i.e. the employees, and is thus not something solely dictated by the managers or CEOs of the company. The employees are the actual experts on their own work, and that is a resource that should be fully utilised (Lupton,

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3 According to informal discussion with the Product Manager of the SAC, Cameron Childs on the 11th of February 2014 about the goals of RDM and the purpose of the research.
Therefore we assume that using an AFEAT at the employee level can encourage a more environmentally conscious behaviour within the company and thus be beneficial for the organisation as a whole. The industry should create together a more sustainable supply chain in order to reduce the incentives to use unsustainable means (Brammer et al., 2011).

According to Kashmanian et al. (2011) and Kirkpatrick (1996), the companies succeeding most in their sustainability actions have integrated their environmental agenda horizontally, extending it into the decision-making processes in every department, which strengthens the view presented in the previous paragraph. It is important for companies to keep their employees up-to-date with sustainability issues to ensure the development and further growth within environmental strategy. This can be achieved by giving employees incentives and encourage them to share the information with each other (Kashmanian et al. 2011). This implies that in addition to implementing environmental strategies vertically from bottom to top, the strategies should be implemented horizontally as well. Therefore the employees sharing the knowledge with each other across departmental boundaries could lead to success in sustainability initiatives. Just by including environmental aspects in the company’s general vision can encourage sustainability creativity among employees (Åsnes et al. 1997). Accordingly, involving employees to actively participate in sustainable practices at home and at work, can lead to more engagement and interest towards the sustainability goal (Devereaux, 2013). This view has been fortified by Hornung et al. (2010) who found that providing employees a chance to affect their jobs can lead to positive outcomes, such as proactive behaviour.

In addition to applying a realistic sustainability agenda, the companies could benefit from involving their employees to pursue the mission together with the company, as stated in the previous paragraph. This view has been supplemented by Brammer et al. (2011), who found out that the management in addition to the employees need to be strongly committed to a clear company mission and policy infrastructure, in order to successfully implement sustainability policies. This implies that companies and organisations that want to implement sustainability initiatives successfully need to have a clear company agenda, and market it well internally as well, to ensure that everyone is committed to the common goal. Savitz (2014) addresses that in order to
create a sustainably oriented organization, the whole organizational culture needs to change, which was the view Linnenluecke and Griffiths (2010) emphasized as well.

What can be concluded is that problems arising from implementing a sustainability oriented strategy are mainly related to motivating the employees to act and think sustainably in their own work, which can be avoided by empowering the employees and encouraging them to share their knowledge within the work community. Strategies pushed down from the management level can be seen as obstacles in the learning process as the employees might feel that they have no influence on the agenda (Hornung et al., 2010; Brammer et al., 2011; Devereaux, 2013; Beer et al., 1990; Lupton, 1991), which can lead to change resistance.

Therefore the authors believe that a cultural change is needed in a company in order for it to become sustainable, and according to the literature reviewed, this can be achieved by applying the sustainability agenda horizontally, to each department in addition to applying it from bottom-up and top-bottom. Additionally the AFEAT researched has potential to become a starting point for employees to start thinking and acting more sustainably in their work, and thus encourage learning and increase motivation on the sustainability issue.

1.3 Research Gap
At the moment one of the goals for the RDM is to familiarize employees with a quick assessment tool, which can help them to see the possible effect of their, for example, material choices\(^4\). For the module being at its beta-stage, it is not encouraged for the companies to use it in strategic business decisions, but to actually test how it can be used and how it would affect their work on a daily basis. It is encouraged nonetheless, to give the companies a chance to explore how a more sustainable work could be done. It is important to find out if the score from the tool would actually guide the production decisions towards more sustainable ways\(^4\), and what other outcomes it might have on the company and the everyday work.

\(^4\) According to informal discussion with the Product Manager of the SAC, Cameron Childs on the 11\(^{th}\) of February 2014 about the goals of RDM and the purpose of the research.
It has become evident that there is not much research done in how the usage of environmental assessment tools or systems actually has effect the organizational culture or if they initiate any change. Also the functionality of this AFEAT has not been studied earlier, and the authors believe it is important to evaluate the usage and its aspects from the employee point-of-view as well. Therefore this thesis aims to contribute to this gap in the field of research. As stated earlier, the goal of the tool is to involve employees more into working sustainably; therefore it is important to study what are the outcomes the use of this particular AFEAT has on the company culture and the work of the employees, as an initiator of possible change.

1.4 Aim of the study and research questions
As stated earlier, little is known about how organisations and their employees deal with the use of a Apparel and Footwear Environmental Assessment Tool, i.e. Rapid Design Module - Beta (RDM), therefore the aim of this thesis is to generate knowledge on the subject of introducing the aforementioned tool and the possible outcomes it may or may not have on other parts of the organisation and thus give the management guidelines in what kinds of changes in attitudes and atmosphere can be expected and what needs to be taken into consideration when planning such a change. Thus the purpose is to research how the tool correlates with the organizational culture and how it is used in practice. As the RDM is a self-assessment tool, every organisation interprets the questions individually and therefore three companies were involved in this study, to reach a more comprehensive view on the usage and possible impacts of the tool. Accordingly, two research questions were developed in order to solve these issues:

1. How the tool in focus is being used in textile retail companies?

2. What outcome does the use of Apparel and Footwear Environmental Assessment Tool have on sustainable thinking in the company within the context of organizational culture?
1.5 Limitations
This study has been performed within a 4-month time period, and therefore the amount of companies and people investigated in the study is limited. As the thesis has been written for the Swedish School of Textiles, in Borås, Sweden, the investigated companies are limited to companies located in Sweden. Also companies who had not used the tool have been excluded. The applicability of the findings is limited due to the industry-specific nature of the tool in question. However, the authors believe that the findings on the cultural change can be applicable to other industries as well, but only in a general level.
2 Theoretical Framework

This chapter will cover the theoretical approaches of organizational culture and what cultural and managerial aspects should be taken into consideration when an organization undergoes a change towards a more sustainable organization. The framework aims to provide a better understanding for the empirical research and a basis for the analysis chapter in order to answer research question 2.

2.1 Organizational Culture

Theories of organizational culture have received increasing attention in recent decades both from academics and practitioners. Organizational culture refers to a culture in any type of organization. Although the term became famous in the 1980s, organizational culture has been already used and addressed in anthropology, cultural studies and organizational theories since the 1940s. However, it was not until the 1980s when the "organizational culture boom" materialized. Organizational culture came to be treated as a subject that focuses on identifying characteristics of successful companies and a belief emerged that corporate culture was the dominant factor behind the success of a business (Peters and Waterman, 1982). This exaggerated view of corporate culture as a universal tool for competitiveness and excellence was partly due to the successful boom of the Japanese companies and the corresponding difficulties of western corporations. Nevertheless, since those times the view has changed and today organizational culture is not only viewed as a tool to gain more market share, but also a way to understand the organization’s life and all its richness and variations (Alvesson, 2005).

The use of the term "organization culture” is an intersection of two theories: the organization, which in this case is meant as a basic principle for achieving objectives and culture, which in turn is defined from an anthropological perspective as an instrument for understanding needs and values (Alvesson, 2005).

Tylor (1871, p. 410), has defined culture as "the complex whole which includes knowledge, beliefs, art, morals, law, custom and any ability or habit acquired by an
individual as a member of society”. Thus, culture is a phenomenon that surrounds us all the time and is constantly created by our interactions with others and formed partly by leadership, structures, rules, routines and norms that govern and limit our behaviour (Schein, 2004).

Smircich (1985, cited in Alvesson, 2005) argues that an organization can be seen as a system of meanings covered by the members of varying degrees, who share specific set of ideas, beliefs and interpretations which are necessary for organizing its activities. It allows collaboration without the constant need to carefully interpret and reinterpret the meanings of different opinions or actions. Thus, for those who work within the organization's framework, it becomes easier to make decisions and to facilitate people to do the "right" things.

By taking culture from management level down to the employee group level within an organization, one can clearly see how culture is created, developed, manipulated and how culture gives structure to an organization. Any social unit that has some kind of shared history will evolve a culture and the strength of that culture depends on the length of its existence, the stability of the group’s membership and the experiences they have shared (Schein, 2004).

Although the terminology organizational culture has been in the corporate sector for a while now, there is not yet a generally accepted definition of organizational culture. However, it is not surprising that there is such a wide variety of definitions for "organizational culture" since even before the term was used both "culture" and "organization" has been defined in many different ways (Brown, 1995).

Deshpande et al. (1993, cited in Ramachandran et al., 2011, p.618) reviewed over 100 studies in organizational culture and defined it as “a pattern of shared values and beliefs that help individuals understand organization functions and provide them the norm for the behavior in organizations”. Lorsch (1986, p. 95) defines organizational culture as “shared beliefs top managers in the company have about how they should manage themselves and other employees, and how they should conduct their business”. Drennan (1992, p. 3) defines it as “how things are done around here. It is what is typical to the organization, the habits, the prevailing attitudes, the grown-up
A definition that particularly highlights how external adaptation and internal integration shapes and develops an organizational culture is Schein's (2004) definition below. The authors agree with Schein's definition which implies that an organization’s culture is not only developed or shaped through top-down management strategies, nor solely controlled by the already grounded habits, values and beliefs, but it is rather a blend of these various elements and that the formation of organizations is continuously flexing and shifting depending on how various internal and external environments affects them. Schein defines organizational culture as:

“a pattern of shared basic assumptions that was learned by a group as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid, and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems.” (Schein, 2004, p.17)

2.1.1 Culture as a variable versus culture as a metaphor
Researchers who have a more rational, objectivist and functionalist approach to organizational culture assumes that organizations are more concrete, consisting of various components that can be shaped to function optimally if one tries to improve an organization. On the other hand researchers approaching organizational culture as it were a culture are influenced by social anthropology in its attempts to view organizational culture from a rather a holistic perspective on everything that happens in the organization (Alvesson 2005). Thus, the culture is more of a universal notion; it takes into account everything that happens within the organization, and instead of perceiving culture as something that an organization "has" it rather emphasizes that the organization "is" the culture. According to this perspective, organizational culture is not only a mystery to be solved, but something more complex, which demands a deep and holistic approach (Pacanowsky and O’Donell-Trujillo 1983, cited in Alvesson 2005). Thus, the world is not seen as objective, tangible or measurable but rather something that is constructed by people and reproduced by the network, symbols and meanings that people share and which enables joint action (Burrell and Morgan, 1979; Putnam, 1983). Hence, objective things, like the number of employees, turnover, physical products, customers, etc. will become interesting and taken into account if they possess a cultural significance (Alvesson 2005).
Furthermore, Karel and van Muijen (1999) discuss that some authors argue that organizational culture can be easily handled while others view it to be more challenging. According to the latter, organizational culture is affected by diverse factors such as the complexity of sub-cultures within the organization, political interest, communication and timing. The aforementioned group on the other hand argues that organizational culture can be, should be, and has been managed. These researchers often provide guidance on how to do this as well. In contrast, other researchers find it unreasonable to talk about managing organizational culture, for them organization culture cannot be managed, it rather evolves. Thus, researchers who argue that an organizational culture is a socially constructed system of shared beliefs and values would find it inconsistent to try systematically managing or attempting to control the organizational culture phenomenon (Karel and van Muijen, 1999).

The authors of this thesis do not follow strictly a specific approach; rather space is left even for "non-cultural" phenomenon or other aspects in the analysis. The point is that the authors do not want to miss out on something that might lie outside the culture. Thus, the authors view organizational culture rather from a more a holistic perspective where different elements create and form an organization culture. Additionally, anything that is seen as meaningful for a group of people is by its own right part of the cultural context.

2.1.2 Levels of organizational culture
Schein (1990) has been pioneering the idea of organizational culture by further defining three levels of organizational culture, which all need to be taken into account in order to gain holistic understanding on the organization’s behaviour and the factors that influence it. A company’s tangible, visible and physical behaviours form the first level, named *artifacts*. It consists of the things you see when entering a company, the first impressions, the behaviours that are encouraged or repressed, the things that are emphasized and the things that are depreciated. The second level consists of the *espoused values* the organization has, for example the strategies and norms a company has, their ideologies and philosophies that guide their everyday work and actions. These can include statements, slogans or other distinct messages (Savitz, 2014). In order to understand the visible, surface behaviour, the *underlying assumptions* must be
realized. They form the deepest level of culture in an organization, and are rather hard to pin down, as these assumptions are “underlying and usually unconscious” (Schein, 1990, p. 112). The underlying assumptions typically start out as values, but during time they become self-evident and transform into normal behaviour, without questioning why. They may become unobservable, as they are deeply embedded in the organizational culture. Each of the levels bear a significant meaning in the shaping and changing of a culture. The levels are illustrated in figure 1 below, with elaborations by Savitz (2014), on the right side and Linnenluecke and Griffiths (2010) on the left side.

Figure 1 The Three Levels of Organizational Culture. Adapted from Savitz (2014, p. 259) and Linnenluecke and Griffiths (2010, p.358)

Linnenluecke and Griffiths (2010) give Schein’s three levels another dimension regarding the development of a sustainable organization. In the first level, the surface level, adaptation of corporate sustainability becomes visible through technical solutions, publication of sustainability reports and interrogation of sustainability measures in employee performance evaluation (Dunphy et al 2003, cited in Linnenluecke and Griffiths, 2010). On the second level, the value-level, the adaptation of corporate sustainability becomes visible through changes in employee values and beliefs towards more ethical and more responsible values (Crane, 2000). At the third level, the underlying level, adaptation of the principles of corporate sustainability requires a change in the core assumption of the interdependence of human and ecological systems (Purser 1994, cited in Linnenluecke and Griffiths 2010).
Savitz (2014) discusses further that the underlying assumptions that are in conflict with an organization’s values, goals or visions are often the deciding factors that might hinder progress towards a more sustainable organization. A process of change will not be successful if employees adhere to conflicting underlying beliefs. Therefore by identifying and systematically addressing the underlying beliefs that hinder the progress towards sustainability is often the single most crucial step required in organizations that are trying to become sustainable. Thus, becoming a sustainable business is not just a matter of placing the new visions on top of the daily business thinking. It is rather a transition from an old way of thinking with a new set of beliefs and attitudes that change everything within the organisation (Savitz 2014). Hence, sustainability requires a new perspective, one that is embedded in the culture of an organization. Therefore it is crucial to understand the role of organizational culture and the challenge of changing it in order to be able to support a movement towards sustainability.

Hence, no business can truly be sustainable without changing its culture (Savitz 2014). Additionally, Linnenluecke and Griffiths (2010) discuss that internal organizational factors such as top management support, human resource management, environmental education, employee empowerment, teamwork and reward systems, are essential aspects for achieving corporate sustainability. Thus, comprehensive changes in employee values and underlying assumptions are required for organizations to achieve sustainability. Hence, it is a multifaceted concept that requires organizational change and adaptation in various levels.
2.2 Cultural Change
As noted in the previous paragraph, in order to carry out a successful cultural change, all three levels of culture need to be acknowledged and understood to be able to implement the change fully and profoundly. This view is fortified by previous research stating that a significant change in the culture of a company needs to be done in order to respond to the sustainability challenge (Post and Altman, 1994). Nevertheless, Harris and Crane (2002) came to conclusion that cultural change towards sustainability is possible, but it is very time consuming, and cannot be expected to happen overnight, which is in unison with Savitz’s (2014) view. This implies that even though the change may need a whole generation to go through, it should be systematic and persistent from the beginning.

Top-down pushed change strategy will not create profound change in the culture, instead it may create resistance to future change and thus the managers have a difficult task in creating a change that initiates in the grass-root level, without dictating the behaviour (Beer et al., 1990). Therefore the authors have deduced that a change process is multidimensional and can start from the employee level, as well as from the managerial level, for example an environmental strategy, which does not dictate the details, but instead illustrates the general direction the company should go. This conclusion is fortified with Georg and Füssel’s (2000) outcome, that the greening of an organization is best achieved not by setting a detailed plan, but by adapting and developing during the change process. Thus can be derived that the change process is individual to each company, and therefore only general guidelines for change process can be given.
The figure above illustrates a summary of the theories reviewed, regarding what organizations should take into account when trying to create a more sustainable organization. Hence, cultural change gains momentum in the employee level, with managerial level guidelines, thus it is a multifaceted concept that requires organizational change and adaptation at various levels within the organisation. Guidelines on the management level may range from integration of sustainability measures, sustainability reports, and environmental education. The change in the grass root level, the core assumptions of employees requires a more profound cultural change. This cultural change can occur, for example by truly engaging employees in sustainable practices that enable collaboration between departments and employees (Linnenluecke and Griffiths 2010). Klinkers and Nelissen (1995, cited in Harjeet, 2011) discuss further that hierarchical management structures, top-down commanding and controlled processes does not contribute to successful environmental implementation. Instead, the environmental policies may be implemented successfully when people participate in the overall change processes.
In recent years, the role of empowerment has also gained significant attention (Daily and Huang, 2001). Theoretically, empowerment represents a process in which those with authority share their power with subordinates. Thus, empowering can be defined as a phenomenon where manager shares his power with the employee. This usually leads to that the employee feels more responsible and involved in the overall change process (Conger and Kanungo, 1988).

In addition to this, Daily and Huang (2001) discuss that environmental training has been identified as a critical factor of environmental management. Hence, environmental education creates awareness among employees of environmental requirements, increases flexibility and promotes a proactive approach to sustainability (Rothenberg, 2003). Additionally, training may increase motivation, promote environmental practices and improve collaboration within the organization (Cook and Seith, 1992, cited in Massoud et al., 2010).

Furthermore, the implementation of team work can improve environmental management. Environmental team work is defined as work intended to solve environmental problems and to achieve environmental improvements (Daily and Huang, 2001). Additionally, team work contributes notably to improving the environmental performance and has also been revealed to show improved problem solving and cooperation (Beard and Rees, 2000; Daily and Huang, 2001; Govindarajulu and Daily, 2004). In addition, Remmen and Lorentzen (2000) state that employee involvement and employee participation can have a strong impact on changing work practices, which affect behaviour and environmental awareness.

However, management support is considered important in the process of achieving greater sustainability. Ramus and Steger (2000), and Zutshi and Sohal (2003) emphasized its importance; their research showed especially that employees were more likely to engage in environmental activities when management guided and supported their efforts. Additionally, employees seemed to be more engaged to environmental initiatives if they perceived strong supervisory support. Consequently, employees seemed to be less interested in environmentally friendly objectives if their supervisors did not generate enough support to achieve these goals (Ramus and Steger, 2000).
2.3 Integration and differentiation perspective
Linnenluecke and Griffiths (2010) discuss how integration perspective and differentiation perspective can have an effect on an organizations work towards a more sustainable direction. The integration perspective focuses on the existence of unification within the organizational culture and amongst employees around common assumptions, values and beliefs. Thus, those cultural values and beliefs should be widely shared and held throughout the organisation resulting in a strong culture (Martin, 2002 cited in Linnenluecke and Griffiths, 2010). Thus, it advocates that with a more united culture it is easier to guide an organization towards a sustainable direction.

The integration perspective has become popular in the sustainability literature where it is often viewed as a way to encourage a greener corporate management (Crane, 1995, cited in Linnenluecke and Griffiths, 2010). It has come to be treated as a tool for organizational leaders to develop a strong and highly integrative sustainability oriented organization culture that pervades and unites the company's environmental goals and ambitions (Dodge, 1997, cited in Linnenluecke and Griffiths, 2010). Thus, a strong sustainability-oriented culture requires mutual understanding of environmental values and beliefs between individual employees and their organization (Crane, 1995, cited in Linnenluecke and Griffiths, 2010). These sustainability-oriented values are assumed to be supported by the top management and then spread among the employees, so that they are extensively shared and held by all members of the organisation (Linnenluecke and Griffiths, 2010).

However, the integration perspective does not apply if employees do not share the same attitudes. Furthermore, it does not take into account any contradiction between individual values or dominant organizational values. Consequently, several researchers have emphasized that there is cultural diversity within an organization which has come to be called differentiation perspective. The “differentiation perspective is similar to integration perspective in that organizational culture is defined on the based on what is shared yet at the level of groups within an organization” (Linnenluecke and Griffiths, 2010 p. 363).

Nevertheless, differentiation research argues that there are subcultures within organisations, for instance “they can form within an organisation around hierarchical
levels (Jermier, Slocum, Fry & Gains, 1991, cited in Linnenluecke and Griffiths, 2010; Riley, 1983 cited in Linnenluecke and Griffiths, 2010, p. 363) or around distinction based on organizational roles, such as departments” (Hofstede, 1998, cited in Linnenluecke and Griffiths, 2010, p. 363). Subcultures can also emerge “around personal contacts and networks, as well as individual demographic differences such as ethnicity and gender” (Martin 2002, cited in Linnenluecke and Griffiths, 2010, p. 363). Thus, different subcultures can exist throughout an organisation and different members of a subculture can have different attitudes.

With this being said the integration perspective of organisational culture generally assumes that organisations have only one dominant culture and differentiation perspective on the other hand argues that subcultures exist within an organisation wherein members can hold different attitudes. As Linnenluecke and Griffiths (2010) concluded that barriers and limitations for sustainability related cultural change might exist such as subcultures. Nevertheless, the adaptation of corporate sustainable principals can occur at several different dimensions. Hence, not only changes in the surface level such as managerial guidance or employee involvement should be taken into consideration when striving to achieve a sustainability-oriented culture but also the existence of subcultures that might exist and which can be either a barrier or an advantage for the company.

Figure 3 Subcultures within an organisation.
2.4 Sustainability-oriented culture

In addition to culture, there are a number of specific support functions that may be important for companies that hope to achieve a long term and profound sustainable growth. According to Savitz (2014), the future will bring companies the inevitable fact that profitability and sustainability go hand in hand, and sustainability cannot be reached without a change in the culture. Implementing sustainability in a company needs to be deeply rooted in the culture of the company. Traditional companies founded on the principles of capitalism, profit-making and creating value for shareholders are facing a hard task; in order to become more sustainable they have a culture to change.

Companies which are initially built on sustainability principles, have already embedded the values and traits that are needed to achieve sustainable industries, and therefore the whole cultural change is unnecessary. Change towards the sustainability-oriented culture requires an awareness of the company culture and the effect it may have inside and outside the company. The sustainability initiatives in the organization’s culture are creating an initial change in the way the employees, managers and executives are thinking about their jobs (Savitz, 2014).

Accompanying Savitz’s view of cultural change, Linnenluecke and Griffiths (2010) have discovered in addition that even changes in the surface level of an organization can have an encouraging effect on the values of an employee, if the change has quaked the deepest values and assumptions. This pertains to the conclusion that long-term systematic change starting with small steps leads eventually to a cultural change. A company has to nurture different types of capabilities that need to be embedded in the culture and the daily decision making of the employees, in order to develop the company towards a sustainable one. Savitz (2014) has identified 4 most crucial capabilities for creating a culture rooted in sustainability; collaboration, long-term orientation, interdependent thinking and adaptability.
Collaboration is important especially when sustainability issues are considered, due to the complex nature of the sustainability challenge, which requires different perspectives and participation from many stakeholders. The sustainability challenge cannot be solved by one person, and thus a joint cooperation among people with different skills and knowledge increases the learning from each other within and even outside the organization. In other words, reaching sustainability requires shared and combined efforts, which bring different perspectives from different parts of the organisation.

Long-term orientation is a very crucial capability for an organization to embrace in order to be able to act sustainably. Quarterly thinking should be replaced with plans considering the society and future generations, and inevitably some trade-offs between short-term success and long-term growth must be done. Eventually it will pay off resulting in a thriving organization which has the future prosperity in their sight.

Interdependent thinking is as needed a capability as the previously mentioned. Above all, it emphasizes the importance for an organization to be able to think beyond their actions, and consider the direct and indirect consequences for the stakeholders. The key is to find the balance between different stakeholders’ needs and make it in the most beneficial way for them. This represents the social environment the companies operate in.

Adaptability is a very valuable ability for an organization to be ready when the circumstances in the external environment of the company changes. Failing to adapt to changes can result the company getting into a crisis. Most thriving companies start the change process before they are forced to, and thus are prepared for future challenges.

Blome et al. (2014) discuss further how upstream and downstream collaboration of supply chain initiatives does pay off once incorporating sustainable management. Thus, it is crucial to consider the supply-side and demand-side collaboration in sustainability issues, as this can lead to performance improvements. In addition, Lee and Klassen (2008) find that environmental collaboration with suppliers and stakeholders, when it is conducted jointly, with environmental monitoring, can lead to improved environmental capabilities (Lee and Klassen, 2008). Hence, the supply chain
should be viewed holistically to ensure the sustainability along the entire supply chain (Blome et al., 2014). Thus, environmental collaboration, long-term orientation, interdependent thinking and adaptability provide a more holistic framework of understanding of the responsibilities and capabilities in regard to environmental management. As mentioned earlier, a company should nurture these capabilities and be embedded in the culture and the daily decision making of the employees, in order to develop the company towards a sustainable one.

Figure 4 Four capabilities to build a sustainability-oriented culture.
2.5 Summary of the theoretical framework
Organizational culture is a topic that has been discussed broadly in academia and there are plenty of definitions and theoretical approaches. The authors agree with a combined view of organizational culture definitions, that it is not only developed or shaped through top-down management strategies, nor solely controlled by the already grounded habits, values and beliefs, but it is rather a blend of these various elements and that the formation of the culture is continuously flexing and shifting depending on how various internal and external environments affects it (Lorsch, 1986; Deshpande et al., 1993, cited in Ramachandran et al. 2011; Schein 2004). Additionally, the authors do not follow strictly solely a cultural approach; rather a place is left for "non-cultural" phenomenon or other aspects in the analysis as well. Thus, the authors view organizational culture rather from a more a holistic perspective where different elements create and form an organization culture.

Regarding what corporations should consider in their efforts to pursue an organizational cultural change towards a more sustainable organization are hereinafter referred. The three levels of culture (Schein, 1990); artifacts, espoused values and underlying assumptions should be considered in order to carry out a successful cultural transformation. A more profound transformation should take place in employee values and beliefs (Crane, 2000) and in the underlying values as well. However, Ramus and Steger (2000), and Zutshi and Sohal (2003) emphasized the importance of management support in creating a sustainability-oriented culture. Thus, a change process is multidimensional and can start from the employee level, as well as from the managerial level.

Additionally, subcultures may exist within an organization wherein members can hold different attitudes towards sustainability (Linnenluecke and Griffiths 2010). Hence the existence of subcultures should be taken into account, as it can turn out to be an advantage or a threat. In addition to culture, Savitz (2014) has identified 4 most crucial capabilities for creating a culture rooted in sustainability; collaboration, long-term orientation, interdependent thinking and adaptability.
3 Methodology

The methodology chapter aims to provide a detailed view of the research methods used, how the research has been carried out in practice and how the analysis is done. The AFEAT in question is presented more detailed as a frame for analysis. Validity and reliability are discussed here as well.

3.1 Research approach
The research will have features of abductive reasoning since the goal of abductive approach is to produce new insights for a research problem by applying a theory and drawing conclusions which are consistent with the theory. Abductive inference is characterised by investigating a phenomena through a theoretical framework and thus draw new insights and interpretation from observation (Seale and Gobo, 2002). Kovács and Spens (2005) have added that the idea of abductive reasoning involves an alternating direction between the theory and empirical observation which results in a learning loop and a holistic picture of the researched phenomena in light of a suitable theoretical framework. Therefore this research has applied an abductive approach in order to gain as complete understanding of the topic and its implications in the practical every day work. In order to seek answers to research questions developed in chapter 1, the authors have chosen a qualitative approach to study the process in question. Qualitative research has been widely criticised for the lack of validity, as the researcher’s interpretation of the material has such a great role in the outcome. The authors want to increase the validity of this thesis by applying a triangulation technique to confirm and strengthen the result (Patton, 2002). The original term, triangulation, was first described more broadly by Denzin (1970 cited in Bryman, 2012), which he defined to have four categories; Triangulation of data, researchers, methods and theories. It is common to use triangulation as an approach to mixed methods research, where the same phenomenon is investigated in a qualitative and quantitative way, but it is not rare to use it in qualitative research to cross-check and avoid misunderstandings (Bryman, 2012).

Main motivation for using triangulation is to strengthen the results by investigating a phenomenon from multiple perspectives to understand the different aspects of the study (Given, 2008). Also according to Denzin (1978), using multiple methods to
interpret a phenomenon is essential in order to achieve a holistic picture. Additionally using different methods increases the validity of the study by cross-checking and thus fortifying the outcome (Patton, 2002). The mix of methods in this thesis is built on interview combined with observation, with features from contextual inquiry and task analysis. This study is conducted by interviewing employees from three Swedish companies in the textile business, on site, combined with observation of the usage and the process of the AFEAT and the surroundings and the context it is used in. Hence, the data will be collected from similar surroundings, focusing on the same issue as well as there is a combination of four qualitative methods used in collecting the data.

3.2 Research methods
A mix of four qualitative research methods have been used in conducting this research; interview, observation, contextual inquiry, and task analysis of which the two latters combine the two aforementioned methods in a specific way. The aim of these research methods is to reveal patterns and structures in using an Apparel and Footwear Environmental Assessment Tool, particularly the RDM, by triangulating these methods, and thus strengthening the holistic view of the study. To reach this aim the researchers conducted interviews and observations on site, in order to achieve a clear picture of the users’ experiences and reflections on the AFEAT. The reasoning behind these particular methods is that considering the qualitative nature of the study, the combination of the methods is essential, as the authors would not have gained detailed information and insights by conducting solely interviews about the AFEAT or just by observing the use of it (Patton, 2002).

3.2.1 Observation
Employees working in a certain setting, in this case with the AFEAT, create working methods and it is important to observe this, as there may exist subconscious actions which are taken for granted by the participants (Bryman, 2012) and are thus not recognized. For the researchers being present in the session can encourage the participants to talk about sensitive topics (Patton, 2002). Uncovering subconscious activities, unexpected issues and taking part in the setting to reveal the whole context of phenomenon are advantages pointed out by Bryman (2008), which fortifies the choice of observation as one of the methods used, as it will help answering the research
questions in a more coherent way. Thus the authors have observed the use within the on-site context in order to discover what the implications of the AFEAT in practice are and how the users perceive it fitting to their everyday work. This gives the authors an opportunity to perceive a more representative view of how employees work with the tool daily and thus a chance to discover patterns and subconscious actions that probably would not have been discovered by solely conducting interviews.

3.2.2 Interview
Qualitative interviewing is characteristically flexible, and can be easily led by the answers the interviewee gives, and even off the topic discussions are encouraged in order to gain insights on what the person sees as relevant (Bryman, 2012). While the researchers cannot observe everything; thoughts, intentions, earlier happenings, associations or feelings, interviewing can take the session to a deeper level (Patton, 2002). A semi-structured interview technique was employed along with an interview guide, in order to keep the interview and conversation flow open, but to ensure that all important topics were covered. Flick (2009) suggests that in the interview situation an open atmosphere is very important in addition to keeping the questions and conversations in everyday language. When designing the interview guide, it is important to distinguish the interview questions from the research questions, even though the ultimate goal is to answer them (Ibid.). Therefore the authors let the conversation flow in a natural way, more guided by the use of the tool than the interview guide itself. Interview was thus chosen as a complementary method for observation.

3.2.3 Contextual Inquiry and task analysis
A relatively new and perhaps not a very well-known a research method, contextual inquiry is a mix of observation and interview aiming to pin down work practices and routines. It is commonly used in user-centred work practises, for example in product development stage of computer software (Kuniavsky, 2003). As the first research question intends to map out how the AFEAT is used in the companies in question, the method was selected to help answering that question. According to Beyer and Holzblatt (1998), people have the tendency of not remembering how they perform a task once asked about it afterwards. The main attribute in the method is that the
observations are carried out on site, where the persons normally perform their tasks. Thus the context is very important to see how the user experience in reality is, and at the same time it gives the participants confidence in performing the task as usual.

Being closely related to contextual inquiry, task analysis is considered in this research to be a complementary method. While contextual inquiry focuses on the surroundings of the task, task analysis focuses on the task itself (Kuniavsky, 2003). The goal in using task analysis is to compare the purpose and needs of the system (RDM) with the skills and resources of the user (Kirwan and Ainsworth, 1992). One of the main purposes of this thesis is to find possible differences between the purpose of the RDM and the abilities of the user to utilise it, task analysis is thought to complement contextual inquiry as a method, in order to acquire an answer to research question 1.

3.3 Research process
Studying the usage and outcomes of an online-tool requires a certain amount of knowledge of the tool itself and its purpose and goals. Initial inquiries and discussions with the developer of the tool, the SAC, were done concerning the AFEAT and its use, as well as discussions about the expected outcome of the research. These discussions are referred to in chapters 1.1, 1.2 and 1.3. The discussions with Cameron Childs, the Product Manager of the SAC, were informal and conducted via phone and e-mail, and therefore are not referred to as interviews. Also we had tested the tool earlier to get more familiar with its interface. The authors believe that in order to answer the research questions, the researchers cannot conduct the research without underlying subjective opinions. Hence, the understanding, the thoughts, impressions and the knowledge of the researchers is an asset rather than a hindrance to interpret and understand the research object. Additionally, a holistic approach is necessary in order to achieve the fullest possible understanding of the phenomenon studied. As the goal is to find how this AFEAT is used, and what outcomes its use can have on the organizational culture, a study of a qualitative approach for research was selected, as presented earlier.

The authors received information from the thesis supervisor about 5 companies which already had tried the AFEAT, or were in the process of trying it and therefore these companies were contacted. Eventually interviews were organized with 3 companies
which the authors decided to be enough due to the qualitative approach of the study. The companies which agreed to participate on the study are all located in southern Sweden. The participating persons were chosen simply by the fact that they are using the tool in their work, i.e. designers and buyers, and they are willing to participate in the study. The participating people were the only ones who were using the tool at the moment of interviews. Eventually 5 sessions were carried out on site.

Before the session we acquainted ourselves with the work the person is normally doing by having a short conversation about it. The role of the researchers was decided to be “apprentice”, as opposed to the user being the “master”. This means that the user is narrating the process as the work proceeds, and the interviewee acts as learning to do the work (Beyer and Holzblatt, 1998).

At the start of the session the interviewer and participant got acquainted with each other. The interviewer introduced the focus of the study and asked the participant about their work and explained that it is the participant’s task to explain what they are doing during the interview, as in teaching the researcher about the task. After the introduction, the session could begin. During the session the user showed how they use the RDM and explained each step at the same time. The interviewer followed the participant working in order to get as complete a picture of the process, asking questions according to the interview guide (see appendix) to deepen the experience and to guide the process and discussion. The same interview guide was used in each of the interviews in order to ensure the compatibility of the data received in multiple cases (Flick, 2009; Bryman, 2012). Field notes were made during the session, and the sessions were videotaped to ensure a thorough observation of the task in hand. Afterwards the observation and the interview were transcribed by the authors and analysed. Transcripts were sent to participants before the analysis, in order for them to check if there are any misheard or misinterpreted information.

3.4 Method of Analysis
Analysing qualitative material has been more described as “art” or “dance”, rather than something strict and straightforward with clear rules and guidelines (Patton, 2002; Bryman, 2008). Thus the method of analysing is highly dependable on the amount of qualitative data and the focus of the study, and in many cases it is not easy to pin down
or repeat. The authors have decided on analysing the material by using the theoretical framework presented in the previous chapter as a lens as well as the structure of the tool itself, which is presented in subchapter 3.4.1. as a frame. Thus the categories and levels of organisational culture are used as a guideline to group and categorize the data, as well as the data related to the actual use of the AFEAT, in order to find answers to both research questions.

The analysis process starts already at the observation stage, as Bryman (2008) suggests. This means that the research process changes and grows during the collection stage, and provides insights already along the way. After the material has been collected and transcribed, begins the coding phase, which has been described as a very common starting point for qualitative studies (Bryman, 2012) and it aims at labelling the material under various topics or key words in order to organise the vast amount of qualitative data (Bryman, 2008; Miles and Huberman, 1994). Coding can also be described more precisely as “reducing the original text by paraphrasing, summarizing or categorizing” (Flick, 2009, p. 306). The coding has been done traditionally by hand, as the amount of data is not daunting, and the available time for the authors to learn using analysis software, like CAQDAS is limited (Bryman, 2008). The triangulation of methods (observation vs. interview) described earlier in this chapter manifests itself more tangibly in the analysis-phase, as the observations done in the field and during transcribing are combined in the transcriptions and thus can be seen which conclusions are strengthened and which not, and if inconsistencies and contradictions arise (Miles and Huberman, 1994).

Thus the transcripts including the field notes were read through several times in order to identify recurring themes and phenomenon related to culture and the use of the AFEAT. The emerging themes were organized under topics presented in the theoretical framework, which the authors discuss in chapter 2, in order to connect the collected data firmly with the theoretical framework, as well as the data related to the use of the tool itself was organized according to the questions the tool sets. According to Patton (2002), the categories a researcher brings to the data in order to achieve a direction what to look for are called “sensitizing concepts”. Therefore the theoretical framework of organizational culture will be treated as conceptual framing of the data collected, thus the aim is to match the findings with the theory. The authors try to make use all
the data gathered, but exclude ones that are not seen as relevant for topics of Organizational Culture and the module itself. The coded data serves as the base for conclusions and recommendations. The analysis will be elaborated in chapter 4.

What was done with the data in practice was that we cut the printed transcripts into short statements and organized them under major topics of “RDM” and “Organizational Culture”. Thus emerging themes were found and eventually the data was organized under subtopics presented in chapter 4. What is worth noting is that the same statements could be categorized to multiple categories, which increased the comprehensiveness of the analysis.

3.4.1 Rapid Design Module as a frame for analysis
In order to reach answers to research question 1, the use of the AFEAT in question, the authors will utilise the existing structure of the module as a frame to understand the use of it on the sites and to help categorizing the data from the interviews to aid the analysis. The RDM is presented here in more detailed, also to give the readers a better picture how the actual module, which is in the core of this thesis, looks like and what is included. This part of the thesis will construe and frame the analysis process. The module consists, in addition to product information details, of 5 sections of which each include indicator questions.

3.4.1.1 Product information
The first section in the module has the purpose of identifying the garment in question. It includes among other things information about the design name, which can be addressed as “Proto 1”, for example (SAC, 2014). Image 1 on the next page illustrates the structure of the section. This part of the module is not scored.

![Image 1 Product information – section, RDM. (The SAC, 2014)](image-url)
3.4.1.2 Materials
Materials-section lists which materials have been used, what portion of the whole garment each material represents, and what is the dyeing and coating method, among other things. The material score is based on the SAC’s Materials Sustainability Index (MSI), which can be found online. The score from materials-section consists 30% of the final score in the module, which makes the materials-section the heaviest contributor to the final score. The maximum score for materials is 100 points. See image 2 below for further details.

![Image 2](Image 2 Materials-section, RDM. (The SAC, 2014))

3.4.1.3 Manufacturing
The manufacturing section measures the fabric usage, i.e. Marker Efficiency of each of the materials along the finishing process of the garment. Image 3 on the next page illustrates the section. Manufacturing score contributes 25% of the final score, and a maximum score of 100 can be reached in this section as well.

![Image 3](Image 3 Manufacturing-section, RDM. (The SAC, 2014))

3.4.1.4 Packaging
This section measures the use of packaging for the garment, which according to the

5 [http://msi.apparelcoalition.org/](http://msi.apparelcoalition.org/)
SAC (2014) wastes a lot of energy and resources. Additionally the section measures the strategies in reducing the use of unnecessary packaging and waste. The packaging-section is illustrated in image 4 below. The maximum score is 100 points in this section, and it contributes to 10% of the final score in the module.

Image 4 Packaging-section, RDM. (The SAC, 2014)

3.4.1.5 Product Use
Product use –section scores the level of care, such as laundry, needed after the consumer has purchased the garment and if there is a low impact care label to guide the consumer. Product use –section is illustrated below in image 5. This section is weighted at 20% on the final score and has a maximum score of 100 points.

Image 5 Product Use-section, RDM. (The SAC, 2014)

3.4.1.6 End of Use
The last section measures the end of use of a garment, i.e. are the materials easily identified for recycling purposes, and does the infrastructure for recycling already exist. End of Use –section is illustrated below in image 6. Points for closed loop recycling are also given. The maximum score is 100 forming 15% of the final score.
3.5 Reliability and validity

For qualitative research, there are no straightforward tests to prove its reliability and validity, as there are no manoeuvres to replicate the researchers’ thought processes (Patton, 2002). Thus qualitative research has a weakness which is also its strength, and that is the human factor. Therefore the authors perform their best in order to report the research process and results as truthfully as possible, staying true to the data and the purpose of the study.

3.5.1 Reliability

Flick (2009) discusses reliability in the qualitative context and addresses that the sources of data needs to be presented clearly in order to see whether it is the authors’ interpretations or a statement from the participant. In order to increase the reliability, the authors will state clearly the narrators of each statement in the analysis-chapter, and a copy of the transcript will be available by request. Flick (2009) explains as well that the reliability increases the more detailed the process of the research is described, and this the authors have ensured by having the process mapped out detailed in paragraphs 3.3 and 3.4. Therefore is deduced that this research is reliable due to detailed documenting of the process. Thus, the external reliability (Bryman, 2012) which describes to what extent the research is replicable is considered to be high to a certain extent, as the research can be replicated by using the same methods, same interview guide, same participants, same tool and same kind of researcher role. The social setting, on the other hand, cannot be frozen in time, and as the participants are persons who evolve every day, and the time period for the research was in the initial stage of using the AFEAT, the authors state that the research cannot be perfectly replicated later on.
Internal reliability in qualitative research is applicable when there is more than one researcher, which is the case in this thesis. According to Bryman (2012) it is a synonym to inter-observer consistency, which reflects on the consistency of the field observations and the analysis of the data. The authors have decided to increase this by double-checking their conclusions and making sure that proper guidelines are agreed on before categorizing the data.

3.5.2 Validity
Internal validity shows to which extent the researchers are seeing the reality truthfully and objectively (Bryman, 2012; Miles and Huberman, 1994). The authors believe internal validity to be high due to the use of triangulation in order to cross-check the data and results (Miles and Huberman, 1994), as well as linking the results firmly within the theoretical framework.

External validity describes to which extent the research can be generalized and applied to other settings (Bryman, 2012). This thesis focuses on a specific tool that measures environmental impact of a life cycle of a piece of footwear or apparel, and therefore the results related to the tool specifically cannot be applied to other industries. In addition, the authors do believe that the results considering the change towards a more sustainable organization can be applied to any company that is going through or planning a cultural change. On the other hand the size of the sample is considerably small and thus the results should be applied to other companies in a general level.
4 Analysis

In this chapter the authors present the findings drawn out from the data acquired in the empirical research, and combine it with the theoretical framework about organizational culture presented in the theory chapter, as well as using the RDM as a frame for analysis, which was presented in the previous chapter.

For the research 5 interviews with 7 participants altogether were carried out in 3 Swedish companies which operate in the textile industry. Each of the companies develop their own brands, and thus they employ buyers, designers and product developers who have a direct or indirect impact on the production and sourcing, and have a chance to use the AFEAT. The companies have requested to stay anonymous in this report and thus they are referred to as Company A, Company B and Company C. The participants will stay likewise anonymous and will be referred to as A1, A2, A3, B1, B2, B3 and C1, indicating the companies. Of the participants, A1, A2, A3, B1 and B3 are buyers, B2 is a project leader in production support and C1 is a design assistant.

All 3 companies are well-established enterprises in Scandinavia, where company A and C falls into the category of small and medium-sized enterprise (SME) and where B is a large enterprise. Company A has 28 years, Company B 60 years and Company C 54 years of experience with in the textile and fashion industry. Due to the size of the organizations and the amount of years they have been operating in the industry one can assume that they have somewhat developed organizational culture. All 3 companies have a Corporate Social Responsibility (CSR) agenda and communicate their ongoing work relatively openly through their websites. Company A is a member of the SAC and have already started to use Higg Index in their work within the company, and also with their suppliers. Company B has engaged in sustainable actions by increasing the amount of sustainable fibres in their production and training their employees and suppliers to work more sustainably. Company C has applied reduction of chemicals, water and energy consumption in their production. This implies that each of the participating companies is not unfamiliar with sustainable ways of working, and their culture is rather open to new sustainable ideas and ways of working.
4.1 Rapid Design Module –beta
The interviews were conducted approximately 3 months after the release of the module. Each of the participants had some initial user experience about the module and on average the participants had used it 2-3 times before the interviews. Generally the expectations on the module were found to be quite similar among the participants:

“My expectation was to have a really simple way to finding out the score of the garment, because we should really underline it to be simple, because if you look at all the garments that we have it’s quite many.” (B3),

“I had big expectations like how can we compare this with this, if we use padding or down in the jacket, will it affect the results and stuff like that, and you can see some differences, and the major part I think is, like, how you do the logistics and how you pack and what impact you have on the wash and stuff like that, is very important if you compare it to what you actually put on the garment, which is also important, that not like... You get a better picture of how everything correlates, more or less.” (A2),

“The RDM, for sure, I had expectations that it would be smoother than 0.1 (the Higg Index), the excel sheet, even though it wasn’t complicated, as soon as you have gone through it once, it wasn’t a huge hassle.” (C1)

Hence, the participants presume it to be a way to learn how different choices affect the score and how they could improve their ongoing environmental work. Additionally, they had preconceptions that the module would be complicated to use, as they had familiarized themselves with the Higg Index earlier, but instead they were pleased to find out that it was easy and fast to use (B1; C1).

4.1.1 Product Info
The experiences on the product info –section were similar to each of the participants. They mainly used intra-company terminology to be able to distinguish the garment from others or other versions of it. Most of them used some form of written aid, like the Bill of Material or other intra-company document to fill in the correct information. The SKU-number was not seen as valid to fill in this section, as it is something the
buyers and designers do not use at this stage of product planning (B1; A3). As this section is not scored, the participants filled it in a fast and confident manner. Thoughts about using the design name as a base for grouping the products came up, as when the amount of garments saved in the system grows, the more difficult it is to find previous designs and build a taxonomy based on different variables. The information that already existed in the intra-company documents was seen as easy for the participants to fill in. At this point the participants thought it would be wise to save the information, because sometimes the module might log them out suddenly.

4.1.2 Materials
Material-section seemed to be the hardest to fill in, in comparison to all the other sections, due to it having many specific questions that the participants did not necessarily have answers to. They mainly started by looking at a previous design they had filled, to see how it was done. The naming of each material differed in each company and they used terms such as “main fabric”, “shell fabric”, “lining”, “filling”, “trims”, “trim fabric”, “trim metal”, “button”, “zipper”. The less different materials the garment had, the easier this part was to fill in. There is a difference between a t-shirt and a jacket, when it comes to the amount of different materials used (B3; C1). The weight of the material was marked as either the actual weight or the percentual proportion it had on the garment. For this part Company A had developed guidelines, in order to reach comparable results for each of the garments they put in the module. B1 felt that at this point the score is only for internal purposes, as it is not comparable to others.

In order to get the actual weight of different parts of the garment, they would have to contact the supplier for it, or dissemble the garment and weight it themselves. Finding the exact material on the MSI-list was somewhat difficult, as the list is not inclusive. A3 was surprised that the list was lacking so many materials but on the other hand A1 thought it was easy to find materials from the list, as she usually uses the same ones for her garments. C1 experienced that she did not have enough information on the zippers for example, and that she would have to cross check with the buyers and product developers, which was also a problem with other participants who had metal parts in their garments. They thought it would be better to have the accurate materials on the list, instead of using something that is just close. As A2 said about down:
“Yeah, but especially if it’s white or grey, or if it’s like the blend, 90/10, 80/20, it makes a difference. Maybe not like it will score 5 points difference, but like everything matters, so...”

Dyeing-method was considered to be easy to fill, if the person used similar kind of methods in most of the garments. Reduce chemical impact –question was considered to be difficult to interpret, and therefore it can reduce the consistency of the results. A1 was not sure if the question had been there before. A3 stated that they will have to choose “unknown” for the chemical impact:

“Because as we interpret, this is also if the fabric supplier is doing something exceptional, and that we haven’t really asked”.

C1 told that she would say the material has reduced chemical impact:

“I would say reduced chemical impact here, because I know that it has extra certification.”

As stated earlier, this question is ambiguous and interpretations can differ from person to person.

4.1.3 Manufacturing
Manufacturing-part of the module raised a lot of questions, since marker efficiency and finishing methods are something usually only the supplier or manufacturer knows. Company A had developed guidelines for this part as well, and they had decided to stick strictly to the guidelines, even when the employees would have better information, in order to keep it consistent. For example, when filling in the marker efficiency for down filling, the guidelines stated 85% for filling and that is what they eventually marked down, but A2 stated:

“I know for sure that filling is at least 95% when it comes to down, because you don’t cut it”.

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Due to the guidelines the participants in Company A were quite confident in filling in the information. However they were planning to acquire specific information for each garment, and update it in the module afterwards. Company B had asked the information from their production office, which in turn got the information from the supplier. B3 and C1 brought up a matter of scheduling, when filling the marker efficiency,

“Because of you need to contact the supplier before they even made the garment, because you want to do this (fill RDM) before you place the order. Then I think we need to have like a default or schedule where you can get the information by yourself so you don’t need to involve the supplier each time, so then it’s easier. But I don’t know if the supplier can help us to build this schedule where you have different efficiency for different garments and after that, we can just use it.” (B3)

and

“I want to fill this out today, but I need information from other people, and it will then constantly have to be updated” (C1).

This implies that initial collaboration between the user and the supplier would be beneficial in order to have an effect on the amount of spill material.

4.1.4 Packaging
Each company stated that they use packaging in their products, such as a polybag. Company A was disappointed that their package material was not completely recycled, but instead recyclable. Company B is reducing hang tags in their products and using recycled paper on them, and therefore interpreted that they are pursuing efforts to adopt more sustainable packaging. C1 stated:

“Every garment comes with a polybag and hangtags. But I think that’s quite a standard in the industry. And we are absolutely pushing for better alternatives”.
From which can be derived that the companies are each making different efforts in making the packaging more sustainable, but stating objectively what is considered as an effort, is very hard.

4.1.5 Product Use
Product use –section did not raise a lot of questions, and it seemed that each participant knew what it was about, and therefore could answer without hesitation. Company A are in the process of increasing the care information in the care labels on their products and thinking of how to communicate it better, and they were displeased that the garment had high impact care due to the down-filling. Company B has a care label, which encourages the consumer to think before washing, and thus they deduced they have a low impact care label on their garments.

4.1.6 End of Use
The end of use –section had four questions and required to answer yes in each, in order to get to the next one. Company A answered no to the first question, which was about if any parts of the garment could be recycled. A1:

“So this is the part when they ask if any part of the garment can be recycled and we have to answer no”.

In question 2, which asked if the garment is made of one material, or can it be easily separated into individual material types, Company B thought the materials were easily identifiable, as they had only one material used in both their garments. Question 3 asked about if the garment can be recycled via existing infrastructure, and for this Company B felt that there are a lot of recycling stations in Sweden, although not within their company, and therefore answered yes. Question 4 asked if the materials can be used in closed-loop recycling processes and this question was interpreted differently by the participant and Company B had contradictory answers between B1 and B3, as B1 said:

“And it can also be closed loop”,

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and B3 stated that:

“At the closed-loop recycling, we are not there yet so here we press no”.

This implies that different interpretations are made, and could be avoided by deciding within the company what the question means for them and how it should be understood. C1 felt that the questions were hard to interpret, and since their garments have a lot of different material on them, the “yes”-answers do not apply to every material in the garment. As C1 stated:

“And again, can these materials be used in closed-loop recycling process, the main fabric can, and the others can’t”.

Therefore the last question was seen as hard to answer. Thus, there seems to be some lack of knowledge of what closed-loop recycling processes actually stand for since there seems to be some uncertainty regarding the question and even some disagreement between colleagues.

4.2 Cultural Change towards sustainability

In chapter 2 organizational culture and its history along with the levels of culture was discussed. The authors also presented factors influencing a cultural change towards a more sustainability-oriented culture. The aim of the thesis is to generate knowledge on the subject of introducing the Apparel and Footwear Environmental Assessment Tool and the possible outcomes it may or may not have on other parts of the organisation.

As highlighted in the theoretical framework, it is relatively difficult to change an organizational culture and it is usually a long process. However, it is important to study the field of organizational culture in order to gain an understanding of its content and what should be taken in consideration when an organization is facing a change. The theoretical framework also provided an understanding of what an organisation should take into consideration when planning to create a more sustainability-oriented organisational culture. For example, it is not enough to push environmental policies from the management level but it is also important to involve the employees in the change process.
What can be concluded is that problems arising from implementing a sustainability oriented strategy are mainly related to motivating the employees to act and think sustainably in their own work, which can be avoided by empowering the employees and encouraging them to share their knowledge within the work community. Strategies pushed down from the management level can be seen as obstacles in the learning process as the employees might feel that they have no influence on the agenda (Hornung et al., 2010; Brammer et al., 2011; Devereaux, 2013; Beer et al., 1990; Lupton, 1991). Hence, an AFEAT could be considered as one way of involving and motivating employees in sustainable thinking and thereby facilitate the organisational change towards achieving a sustainability oriented organisational culture. The analytical implications related to mentioned factors are discussed below.

4.2.1 Employee Level
Schein’s (1990) levels of culture conceptualize the employee behaviour in the culture of the organization. Cultural change can start as communicating sustainability values for the employees, until they eventually turn self-evident and deeply embedded in the organizational culture, thus becoming underlying assumptions, which is the deepest level of culture. In Company B the talks about the module are considered to be positive. Although it is a very new tool, it can be seen as an example of a cultural trait in the artifact-level turning into espoused value. Artifact-level was also visible in a smaller scale, as A1 told:

“Yeah absolutely, I even might use the same (coffee) cup twice instead of one time”.

This shows that small steps in every day work can offer a starting point, but also on another level, while C1 stated that the tool makes the employees remember the consequences of their decisions, C1 also mentions that

“I can feel even just the short time I have been here, and the short time that I have been working on this, I was working with the product module before, and hearing the buyers and developers going “oh, that’s gonna score so many more points”, it’s like we’ll do this. And everyone in here is very excited about it, and it’s not just this fluffy untouchable sustainability thing, you’re actually
seeing what your choices get you. You’re seeing automatic, like confirmation that, oh, it is better to choose, whatever”.

This indicates that employees in company C discuss and create a conversation by comparing their work with each other in order to see how to reach higher score, which can, in time, lead to the level of underlying assumptions, where the environmentally friendlier decision-making becomes subconscious.

Linnenluecke and Griffiths (2010) argued that internal organizational factors, such as environmental education, employee empowerment and teamwork are essential in order to achieve corporate sustainability. B1 also stated that it has already created some movement within the company, and people are getting to be interested about sustainability. A2 and A3 fortified the view by stating that the tool guides the employees to discover things, and revoke assumptions about their company’s policies. For example, they were sure their packaging material was recycled, but due to the tool they found out that it was not, just recyclable, actually. C1 explained that sustainability is something all employees think about and try to act accordingly, even in their private lives, which implies that they have implemented values to the second, even to the third level of the company culture. B1 stated that:

“I mean, there are already a lot of persons that I think are interested, in the company, but it could be like a framework to work from, to learn more also, I think and to start discussions”.

A2 and A3 thought that by starting to use the RDM they have seen the following effect

“I think it’s a lot of frustration, compared to inspiration, because everyone wants to improve and we really want to learn, and we are... I mean the discussions just the last two months when we have started using this, it’s getting more and more, which is really good, because that means that the motivation is really high” (A3).
“It’s really a topic and we have it in the back of our heads with everything we do from now on. The more we talk of it, the more everyone learns about it, so we like improve ourselves together, which is really good. So it helps out in that way and... Also it’s a good way to start something, to have something concrete since the whole topic is not easy just to grab up.” (A2)

Above statements indicate that the RDM creates a common ground at employee level which gives them mutual understanding and platform to work from. As well as motivates them jointly to create and improve the ongoing environmental work.

A1 stated that when she started to use the tool she also started having more thoughts about the environment and how easy it is to improve the environmental friendliness. This implies that the tool has already created some potential to be a change initiator in Companies A and B. This was verified by A2 and A3 as they pointed out that

“So it’s like a tool of awareness, more than something else”,

which A2 clarified stating that it does not necessarily lead to environmental improvement, but it makes the employees aware of their choices. B1 stated that the tool

“It’s more about learning more”.

By this she meant that in the initial stage when using the tool the employees learn which choices can affect the score and after a while they already have an idea, i.e. a good estimate of what are good choices and what are not.

B1 stated that the tool raises questions, and awakens curiosity about the details and

“You get interested in how can I get a better score, and what is affecting really (on the score)”. 

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Increasing the knowledge level of the employees by environment-related training and education can lead to enhanced awareness of environmental requirements, a proactive attitude towards sustainability and increased motivation (Rothenberg, 2003; Cook and Seith, 1992, cited in Massoud et al., 2010). B3 explained that her colleagues are very positive about the tool, as long as it is simple to use. They want to work with sustainable fabrics in Company B, and thus the tool helps them in knowing what is more sustainable and what not, and they are having more internal workshops about the topic. They also believe that everyone wants to be involved in the effort, and are very engaged in what they are doing. Company A is also having more seminars and guest lectures about it, and A3 felt that the level of learning the tool provides depends on how much initial knowledge the user has on the garments, and therefore it can be seen as a way to bring the employees knowledge into the same level. The tool has shown for the employees in Company C that sustainability is not something untouchable and vague, but they can actually see that their choices can matter. A1 was very enthusiastic to learn more about the tool, but

“Unfortunately, I have no time”,

This implies that time schedule for learning about sustainability issues should be a matter for the whole organization and designated time for training should be set for all employees.

A change in strategy, which is initially pushed top-down from the managerial level will not create a thorough change in the organization’s culture, on the contrary, it may even create change resistance within the employee level (Beer et al., 1990). C1 presented an example about possible opposition by stating that there might be change resistance within people who have been longer in the industry;

“We’re relying a lot on honesty here, and I’m a hopeless idealist, and I totally wanna make that work. And then you talk to both, other people within the company, who have been longer in the business, and had to deal with dishonesty a lot more. And they have a hard time believing”. 

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This implies that change resistance should be taken into account and addressed accordingly, in order to diminish negative attitudes towards the inevitability of the change.

It is also important for management to empower the employees, by sharing the responsibility of sustainable work, as that may encourage the employees to take initiative in their own work as well. A successful empowerment process can lead to outcomes, such as the employee feeling a part of the team and being also involved in environmental change process (Conger and Kanungo, 1988). This was visible in Company A, as A3 and A2 explained

“It’s actually more about the daily work and also about us buyers and actually doers, so we are doing the work with all the garments.” (A3)

“If you compare how much in the daily work we talk about this now compared to before we started it’s a very very big influence. It’s in our daily work and we refer to the Higg index at least a few times day”. (A2)

And the tool makes the whole topic easier to understand, as it is something more tangible and concrete (A2). A2 also pointed that they have the know-how, which they transfer to the management team. Thus employee empowerment is tangible in this case and shows how it can lead to a more proactive behaviour within employees.

Teamwork has been shown to contribute to environmental performance and problem solving, and additionally it enhances cooperation (Daily and Bishop, 2003; Beard and Rees, 2000; Daily and Huang, 2001; Govindarajulu and Daily, 2004) in the daily work. In addition, changing work practices have an effect on behaviour and environmental awareness (Remmen and Lorentzen, 2000). Company A’s buyers often sit down with their agents, who are in contact with the suppliers, to discuss about the new collections and about the scores. This kind of teamwork and collaboration can lead to more awareness even in the external environment of the company. B1 states that she has been working in the company for a long time, so she knows where to get information,
which implies that especially for new employees the importance of teamwork is great.

Subcultures should not be ignored in cultural change, as they may have formed hierarchically, department-wise or even within personal networks and demographics (Jermier, Slocum, Fry and Gains, 1991, cited in Linnenluecke and Griffiths, 2010; Riley, 1983 cited in Linnenluecke and Griffiths, 2010; Hofstede, 1998, cited in Linnenluecke and Griffiths, 2010; Martin, 2002, cited in Linnenluecke and Griffiths, 2010) and thus possess different attitudes. Subcultures emerged during the research, such as the buyers getting into realizing how the tool can help them to make better decisions in their work.

C1: “And everyone in here is very excited about it, and it’s not just this fluffy untouchable sustainability thing, you’re actually seeing what your choices get you. You’re seeing automatic, like confirmation that, oh, it is better to choose”, when talking about the tool and how the buyers think of making a better score in it. This view was fortified by A1. Change agents in companies can be initiators of sustainability subcultures. A3 and C1 emerged as potential change agents, as C1 was the only one at that moment using the tool, and she was very enthusiastic to implement it in Company C and get involved in sustainability efforts, and she also stated that she wants the sustainability effort to work. A3 was referred to as a person to ask more details about the tool (A1), and according to her own words, she has been working on the Higg Index project for some time already. C1 also stated that it is easier to “pitch” the idea of the tool to the management, of everyone gets involved in an early stage and works together towards the goal.
4.2.2 Management Level
The authors have concluded earlier in chapter 2 that the organizational culture is not only formed by one aspect or direction of the company, but instead it is a mix of various elements and efforts by all levels of employees, and thus the managerial support is essential in order to create a coherent change in the culture towards a sustainable one. A1 pointed that she will contact their Quality Manager, if any problems or questions arise, which implies that managerial support is very important in using the tool, and she also added that

“I think it’s hard to understand but since we have gone through them (the questions) together it is easier”.

Additionally, the example set by the management by engaging to sustainability initiatives and environmental goals encourages the employee to do so as well (Ramus and Steger, 2000; Zutshi and Sohal, 2003). In company A, the managers had, in cooperation with the employees, set up company guidelines in using the tool, as well as the managers were the initiators in starting to use the tool, and they are also planning to implement it to the whole company.

What became evident was that the employees had a hard time filling in the information on the tool, because they were not sure what the questions meant, and therefore the management guidelines were found to be essential in order for the scores to become comparative in the whole organization. As C1 pointed:

“You need some education to be able to use this... Otherwise you’ll do the greenwash approach”.

This confirms that the approach Company A had with their guidelines, was something that can create a common understanding within the employees how to use the tool, in order to avoid greenwashing⁶. C1 stated also that in order to have consistency in the scoring, some guidelines are needed. Not only intra-company but also universal guidelines for the tool would become essential in the future, if at some point in time

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⁶ “An Eco-label that promises advertisers a green image while telling them they don’t need to do anything to earn that image” (Hsu, 2011, pp. C1)
the results would be compared with other companies. C1 stated about comparability:

“It’s not audited by a third party, can we trust other brands that they are honest”,

which implies that in addition to guidelines, external auditing could be needed in the future.

The managerial aspect is very important when imposing espoused values to the organizations’ culture, for the reason that the values have the chance to transform into underlying assumption in the employees’ behaviour, which can lead to a more sustainability-oriented culture (Savitz, 2014). C1 stated that Company C is quite far in environmental management:

“I would say we are pretty far. And we are absolutely making efforts every day... Looking for better practices. And we have a very ambitious plan, on what we’re doing”.

This implies that the management has already set up company values for reaching environmental goals. Company B also perceived that they have become quite far in their environmental strategies, compared to few years ago. This suggests that efforts have been done from the managerial point of view, and RDM is one of the steps along the way. Company A had also a strong Corporate Social Responsibility strategy for 5 years, with different goals, of which one was starting to use the Higg Index, which also implies that RDM is one step towards their environmental goal. Higg Index was understood to be more of a managerial tool, as RDM plays a role more in the everyday work of the employees.

In order for the environmental values to constitute a strong culture, they must be shared and supported by all members of the organization. These values must be promoted by the management as well and expanded among the employees in order to create a mutual understanding of the values (Crane, 1995, cited in Linnenluecke and Griffiths, 2010). If the employees do not share the same values the change is not applicable. Therefore can be concluded that managerial guidance in using the tool and setting
common goals can create shared values within the whole organization. Some shared values were visible in each of the companies, with different levels of awareness.

4.2.3 Attributes to achieve sustainability-oriented culture

Savitz (2014) states that in addition to a change-oriented culture, a company should possess four attributes, which takes into consideration the external and internal environment as well as the future generations. These attributes are; collaboration, long-term orientation, interdependent thinking and adaptability. The attributes are discussed below respectively.

The sustainability challenge cannot be solved by one person, instead it demands for collaboration between people with different knowledge, experience and skills, in addition to people from different departments, and even outside the organization. Savitz (2014) also emphasizes that the capability to learn from anyone who can help in facing the challenge, is essential. Therefore a joint effort from within the organization and even outside it is beneficial. C1, A2, B3 and B1 explain:

“The more we talk of it, the more everyone learns about it, so we like improve ourselves together”. (A2)

“I would involve the developer and they would involve the suppliers and ask”. (C1)

“Because of you need to contact the supplier before they even made the garment, because you want to do this (fill RDM) before you place the order”. (B3)

“And the designer, of course some of the questions, it’s for the designer... Because I mean they can make a very big impact on this marker efficiency for example and also which quality they use, but I mean it’s a collaboration still, I think. And I think the whole team has to be maybe aware of it”, (B1)

when talking about colleagues and suppliers once using the RDM. This implies that the
tool increases collaboration between co-workers and suppliers and helps them to learn from each other by setting common grounds on sustainability conversation. Thus, by filling in the RDM employees have to contact other departments and even suppliers in order to get it correctly done. Therefore, the tool automatically involves employees and suppliers in their work that perhaps in the long run can involve and create a common ground for achieving sustainability.

For instance, A3 feels that they might need more information about the marker efficiency, and the materials from the suppliers in the future, which implies that it can be a beginning of a deeper collaboration within the external environment of the company. Company A has asked a supplier and the SAC how a zipper should be specified in the system, and if they know how the others are doing it. This suggests that another level of collaboration could exist, among the competitors. C1 on the other hand is not yet convinced that the tool will deepen the collaboration with suppliers;

“*That’s something time will tell*”.

However she explains that she would need to ask the product developers some information, and they in turn will acquire that from the suppliers. B1 feels that using the tool is increasing collaboration within the designers, but also the whole team needs to be aware of it. Company B also involved the production office in order to get information, as well as they discuss with different departments and involve more people, like product developers and merchandisers, who are closer to the manufacturer. B3 stated that for the marker efficiency at least they always would need to contact the supplier before placing the order. Therefore can be deduced that the tool will increase the discussions at least between the supplier and the buyers and designers and to some extent between colleagues as well.

The future generations’ and the society’s needs are something for the organization to consider, when coming up with long-term strategies, not forgetting about its operational functionality. How the company fits to its environment? Does it diminish or create something? A change in focus between quarterly thinking and long-term vision is needed to position the company as a part of the surrounding world (Savitz, 2014). Company B is already increasing the amount of sustainable fabrics, reducing
the amount of chemicals and B3 thinks that the tool helps to know the difference between the fabrics, and thus helps them to reach their goal. Company A has recyclable packaging material and they are thinking about ways to recycle garments due to the use of the tool, which made them think of it more. Additionally they have had discussions about the Higg Index for 2 years, and according to A3 they want to

“Take our sustainable development to the next level within our company and company group”.

B1 explains that Company B possesses a culture where people are open-minded about environmental issues and everyone wants to be involved. This view is strengthened by B2, who tells that they have had goals for sustainable fibres and transport for years, and now they are trying to develop even more long-term goals, and they are going to have more workshops in the future, as they are now in the process of going through their overall goals and long-term strategy. From which can be deduced that each of the companies have already initial long-term plans, but they are working on it more, and the tool has given them new ideas on where to improve.

The understanding of the direct and indirect consequences of the actions of the organization to its stakeholders can be viewed as essential in order to create and also not destroy well-being in the communities they engage in. Interdependent thinking is a habit that organizations can learn, in order to balance the needs of different stakeholders. As these stakeholders represent the reality the organizations operate in, its significance for the vitality of the organization is plain to realize (Savitz, 2014). For company C the tool has made them realize that

“The decisions that we make every day, how they fit on a bigger scale”,

which implies that sometimes it can be easy to lose the connectedness their work has on the outside world. C1 states that the tool reminds that there is more to the product than just being a piece of garment, it reminds that there is packaging and spill material along the supply chain as well, for example. Company B also found that it is easier to make better choices for their external environment with the tool. Achieving higher scores should mean, according to C1 that the product would not exploit more
resources, and not lead to kind of greenwashing to make the score look nice. According to B1 the scoring system kind of act as a trigger, encourages to score more, and makes them want to learn more about each of the steps in the module.

An organization that wants to embrace sustainable strategies has to adapt quickly to changes in its environment. Failing to recognize situations that demand adaptability can lead the organization to a crisis (Savitz, 2014). Many companies are only developing sustainability strategies when a dramatic event forces them, but at the same time failing at genuinely driving the cause. “Change before you are forced to change” (Savitz, 2014, p. 269). Company B is adapting itself to its environment by setting lists for suppliers on chemicals that are forbidden to use and thus reducing the impact harmful chemical can have on the environment, and also by providing low-impact care labels in their products. Company A is aiming to increase the information on the care label of a garment, in order to encourage consumers care their garments in a less harmful way, they also already have recyclable packaging material.

4.3 Summary of the analysis
Initially the participants had perceptions that the tool would be complicated, because they had familiarized themselves earlier with the more elaborate Higg Index, but they had quickly found out that the tool is easy and fast to use. The Material-section in the tool was found to be the most difficult to fill in, and most of the participants checked an earlier design they had filled in together with the team or the managers. This underlines the observation that management support and learning together increases the usability of the tool. Internal guidelines were developed in Company A, and it had a significant relevance for the participants while working with the tool. Question about reduced chemical impact was seen as hard to interpret, which could be diminished by properly going through the tool internally in the initial stage. A great difference between product groups was found, i.e. t-shirts and jackets, as the amount of different materials in a product contributes greatly to the time and effort used in filling the information. Once the users have developed a routine and gotten familiar with the recurring materials, the tool can become easier to use. For several questions the participants pointed out that they need to contact the suppliers or manufacturers in order to acquire specific answers, which can increase collaboration within the external environment.
Answering objectively to questions about, for example packaging and end of use was observed to be difficult, which suggests that the users need more knowledge and information about these issues, in order to increase the reliability of the score.

The tool was observed to act as a change initiator to encourage more environmental thinking in the companies and it had the ability to remind the participants that their actions have consequences. It has commenced interests within the employees to act more sustainably and also made them discover the true state of their current environmental policies. Furthermore the employees have become more curious and learning more about better choices. The tool was observed to act as an important medium for the participants to achieve same levels of knowledge regarding environmental issues as well as creating shared values. The employees’ practical know-how was observed to be an important asset, and the tool could aid them to communicate new ideas for the management.

Management support and employee empowerment was observed to be crucial during the whole implementation stage of the tool and also afterwards. The tool was seen as an everyday assistance along the way for the companies to reach their goals in environmental strategy. Furthermore, the tool was found to increase collaboration and learning from one another within the external and the internal environment of the organization. Long-term environmental thinking was not found to be caused by the tool itself, but something the companies already had embedded in their values. Instead the tool was observed to encourage interdependent thinking; how the companies’ actions fit on a larger, global scale. Participating companies were showing signs of adaptability, and the tool could improve that in the long-run even more.
5 Conclusion

This chapter concludes the thesis from the research questions set in the beginning, via methodology and theoretical framework to the analysis of the data collected and extracts the results of the study and presents the practical implications and suggestions for future research.

5.1 Discussion

As presented in the theoretical framework there are different elements which create, form and shape an organization culture. It is not only developed or shaped through top-down management strategies, or solely controlled by the already grounded habits, values and beliefs, but it is rather a blend of these various elements and that the formation of the culture is continuously flexing and shifting depending on how various internal and external environments affects it.

What can be drawn from the analysis is that implementation of an AFEAT is an external change, meaning that it is not created by internal movements. Hence, management can decide to implement the RDM with the aim to facilitate employees in their daily work in achieving more sustainable working practices. For instance by increasing the understanding and awareness of environmentally friendlier materials, minimize the chemical impact and creating a common framework for employees to work from.

Implementing an AFEAT in an organization will presumably not have a direct impact on organizational culture. Since it takes time to create, evolve, and establish an organisational culture, it also requires a more comprehensive strategy and approach to change it. Additionally, given that all 3 companies have been operating in the industry for quite long time and due to the size of the organisations it becomes evident that thoroughly changing their culture towards a more sustainable direction is a fairly extensive process.
However, implementing an AFEAT can demonstrate that even relatively small changes can have a major influence in an organization. As discussed in the analysis, the RDM has not only shown to have an impact on the employees’ view on sustainability but it has also increased their knowledge and motivation, not to mention the increased collaboration between colleagues and external organization among other things.

Additionally, all 3 companies have also come quite far with their CSR strategies even though there are differences between the companies. However, giving this, it seemed that the interviewees did not feel directly involved in the process of creating a more sustainable organisation or finding a concrete way to be able to influence or participate in this process before starting to use the RDM.

Thus, from the analysis we can draw the conclusions that an AFEAT will possibly not have a major impact on the overall organization's corporate culture. It should rather be considered as a part of a strategy for the management to use which in the long run can lead to a change in employees’ attitudes and their working practices towards a more sustainable approach. This can in time lead to a cultural change within the organisation to a more sustainable one.

In order to find answers to research questions the authors have conducted a qualitative research using interviews combined with observations as the method. For analysing the qualitative data obtained from these sessions, the authors used a theoretical framework developed in chapter 2. This framework was based on extensive literature review on organizational culture and cultural change that can lead to a more sustainability-oriented culture.

Introduction chapter examined the phenomenon of Environmental Management Systems, and via review of existing literature in the field the authors derived 2 research questions. As the AFEAT is the subject to be examined, a research question was proposed:

1. *How the tool in focus is being used in textile retail companies?*
The analysis for this part of the research lead to multiple findings, of which the most important ones are presented as follows. The participants found that the tool is easy to use and it facilitates the ongoing environmental work. Additionally, it is viewed as a common data bank where they can measure, compare and develop the garments to become more environmentally friendly. The tool also initiates better teamwork both with external partners and internal departments and colleagues. However, companies should create common guidelines and organize an introductory session before starting to use the tool in order to avoid misinterpretation and misunderstanding. Thus the authors believe that the conclusions attained in this research have answered research question 1.

Important propositions that emerged from the problem discussion were that in order for the companies to become sustainable, they need to carry out a thorough change in the organizational culture. In such a comprehensive organizational change, it is important to involve the employees in the change process, not only provide management guidelines. Additionally, problems arising from implementing a sustainability oriented strategy were mainly related to motivating the employees to act and think sustainably in their own work, which can be avoided by empowering the employees and encouraging them to share their knowledge within the work community. Since the RDM could be expected to act as a “gateway” to a more holistic sustainable approach for companies, can be figured that it can work as a starting point for the employees to engage to more sustainable ways of working and get more people involved within these practices. So it became interesting to research the possible outcomes of implementing an AFEAT tool in organization. Thus research question 2 was derived:

2. What outcome does the use of Apparel and Footwear Environmental Assessment Tool have on sustainable thinking in the company within the context of organizational culture?
The analysis was carried out from the perspective of organizational culture and frameworks developed on the topic. The authors made important findings for this question as well, and the most important outcomes are presented in figure 5 below, with a model that tries to encapsulate the cultural change in organizations related to the AFEAT in focus.

![Diagram](image)

Figure 5 The cultural change phenomenon in relation to the RDM-tool.

The tool was found to act as a change initiator in the employee level, however management support was seen essential in order to guide and support the employees and empower them. The tool augmented collaboration within the external and the internal environment and increased interdependent thinking. Long-term orientation and adaptability was not found to be affected by the tool directly, but something the companies were already engaged in. Nonetheless, the authors believe that an effect on these traits will be visible in the long run. Additionally, emerging subcultures can have an impact on the work community and thus should not be neglected. Furthermore the tool was existent in the surface and the value level of the culture and it indicated potential to shift environmental thinking towards the underlying level of the organizational culture. Conclusively, the authors believe that an answer to research question 2 has been acquired.
5.2 Contribution

As a new AFEAT in the fashion and textile industry, there are no previous research done on particularly the RDM, and thus this thesis contributes to the initial usage of the tool and the ongoing change process in the industry to become more sustainable. Furthermore, the research shows that the tool can initiate change in the context of the organizational culture in order to push them into a more sustainable direction which is necessary in order to achieve a thorough cultural change. Thus the contribution of this research for the industry and the academic world has been established. The research gap indicated in chapter 1 was successfully filled, as the findings have answered the questions proposed earlier.

5.3 Future Research

As the tool has been recently released, and is still at its beta-stage, a research on the later stage of the tool would be useful, once it is fully in use in the industry. Additionally, in order to address the long-term effects on the company culture and its operational environment a longitudinal study of the effects of the tool could be very interesting to carry out. As well as a quantitative study, measuring the environmental performance of companies using the tool would create important knowledge for the industry. Furthermore, what would make the tool possibly more acceptable for companies planning to become more sustainable is to study its potential impact on the brand equity as well.
6 References


Appendix – Interview Guide

**Before session:**
Get acquainted with the interviewee’s work  
Review the master-apprentice –model and the focus of the study

**During the session:**
Initial questions, before starting the task:  
What is your job description? Does it involve design/material decisions?  
What were you expectations of the tool before you started using it?  
How long have you been using it?

During the observation/interview, if these issues don’t come up by themselves:  
Why did you start using the tool? Who/what was the motivator? Where did you hear about it the first time? Have you been needing this kind of tool?

How far the environmental management is in your company?  
What are your first impressions about it? Do you think it is missing something? Or does it have something that is not relevant?

Is it clear to fill in? Do you need to contact a lot of other people in order to get the information needed? Where do you get the information needed?

Do you believe this tool will have an impact on you environmental decision-making in your work?  
What kind of impact? Positive, negative, major, minor?  
Do you talk to your colleagues about the tool? In what way? Positive, negative?

Does it bring you new information? Or did you already know the impacts of the design decisions?

Do you believe it will be useful (for the company and your own work) to take this tool to usage fully?