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Corporate Sustainability Implementation

Mapping of sustainability approaches and implementation-strategy evaluation of selected front-running companies

Keywords: Corporate Sustainability, CSR, Sustainability Approaches, Mapping Methodology (MoCSAs), Strategy, Implementation, Success factors, Barriers

Master Thesis

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Preface

The choice for my Master Programme (Joint M.Sc. Sustainable Development) as well as for this Master Thesis emerged out of my personal conviction that a significant change within our society as well as within the underlying paradigms of production and consumption is more than necessary and that I can make a contribution to this transition process – especially on the awareness-creation and consultancy side.

Responsible actors for several problems within the society can be identified easily but in my opinion it is not beneficial to point only at the apparent 'evil-doers' but instead, help to create real value by supportive actions and planting 'seeds for solutions'. And those things have to be identified and found together with the actors' in-need. Due to my personal interests in the business world, I recognised the field of Corporate Sustainability (from now on also described as 'CS') within the larger context of Sustainable Development as the best suitable one for me.

I am highly enthusiastic about contributing with this thesis as well as with all following steps of my academic education to foster the transition towards a more responsible and sustainable behaviour of companies. It will be very likely inevitable for companies to embrace sustainability within their core business strategy anyhow in order to master the transition phase the current economy has to undergo. The age of ruthless exploitation of natural as well as human resources cannot have a future, if we will not provide a basis for equal socio-economic development for our upcoming generations, too.

Lastly, I want to state clearly that my vision of 'holistic' Corporate Sustainability goes far beyond (minor) climate change mitigation initiatives (a common understanding of a large part of society what sustainability is mainly dealing with) or being 'only' less harming to the natural environment. In my opinion, it has to go as far as understanding the true value contribution potential for society as well as for the ecosystems and to carry this out without having a lasting negative impact on the former two. We have to learn to conduct business activities within the given carrying capacity of this planet and implement truly symbiotic relationships between all involved actors. Without intending to suggest yet another definition at this stage, it should only be clarified, that companies in my opinion have to dare to go beyond picking the low hanging fruits to please society on a superficial level but rather have to start radically rethinking their current business paradigms in order to do their utter best (also in their own interest) to create significant value on the social, the environmental and the economical pillar of the system.

At this point I would like to greatly acknowledge the constructive feedback and support by my two supervisors Dr. Walter Vermeulen and Sjors Witjes (M.Sc.). I highly appreciated the time invested into the meetings and great advice of how my thesis could be improved and structured better. Furthermore, I would like to express my deepest acknowledgements to Aleen Bayard, Juhi Shareef, Nathan Havey, Sjors Witjes, Geanne van Arkel, Jos Manders, Bas Gehlen, Hero Boonstra and Henk Bakker for having found the time for the interviews. All interviews were highly interesting and provided me with a new and more practical view on the subject. Lastly, I would like to thank also Sonja Koehler for her collaboration to write a joint chapter within this thesis. I experienced her as a very ambitious, structured and great co-writer with who I would work again at any moment.

Abbreviations

B2B	Business to Business
BSC	Balanced Score Card
C2C	Cradle 2 Cradle
CERES	Coalition for Environmentally Responsible Economies
CFP	Corporate Financial Performance
CM	Change Management
CP	Cleaner Production
CS	Corporate Sustainability
CSR	Corporate Social Responsibility
CSS	Corporate Sustainability Strategy
EE	Eco-Efficiency
EU	European Union
EMAS	Eco-Management and Audit Scheme
EMS	Environmental Management System
FSC	Forest Stewardship Council
GRI	Global Reporting Initiative
IMS	Integrated Management Systems
ISO	International Standard Organization
KPI	Key Performance Indicator
LCA	Life-Cycle Assessment

LEED	Leadership in Energy and Environmental Design
MBDC	McDonough Braungart Design Chemistry
MNE	Multinational Enterprises
MoCSAs	Mapping of Corporate Sustainability Approaches
REACH	European Community Regulation on chemicals and their safe use: Registration, Evaluation, Authorisation and Restriction of Chemical substances
SASB	Sustainability Accounting Standards Board
SBSC	Sustainability Balanced Score Card
SD	Sustainable Development
SEDEX	Supplier Ethical Data Exchange
SKPI	Sustainability Key Performance Indicators
SME	Small or medium-sized enterprise
TBL	Triple bottom line
TNS	The Natural Step
TQM(S)	Total Quality Management (System)
UNEP	United Nations Environmental Programme
UNIDO	United Nations Industrial Development Organisation

Executive Summary

The field of Corporate Sustainability (CS) has been gaining significant momentum for several years but it is still lacking clarity within the categorization and mapping of its approaches as well as practical translations into business actions. A large number of approaches such as *Cradle 2 Cradle*, *The Natural Step* or *Cleaner Production* have been developed but no clear categorization and mapping methodology has been established yet with which these approaches could be assessed on their underlying characteristics. So far it seems more as if concepts are somehow existent but not clearly integrated into the 'house of Corporate Sustainability' and thus not fully aligned with each other.
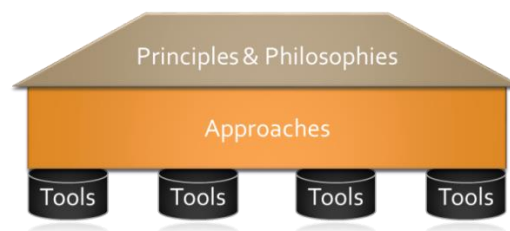
Figure 1 - The 'house of Corporate Sustainability'

This thesis justifies in chapter 1 that there is an urgent need for a sustainable behaviour of companies and introduces to the chosen structure and methodology. Companies play a major role within the debate but often see themselves overwhelmed by the challenges of integrating CS into their 'DNA'. In the two following chapters an overview about the current understanding of CS as a concept as well as its strategic implications for the implementation (Chapter 2 and 3) are explained in further detail. CS is nowadays seen as significantly more than 'only' predominantly socially focused CSR and a sound implementation can offer serious benefits for each adopter. The business case is proven by the majority of researchers, if the concept of CS is applied correctly. The common part of the thesis (chapter 4) provides a sound methodology for the assessment and mapping of specific sustainability approaches as well as for the mapping of business strategies. An application suggestion will be provided at the end and later on applied within the case studies.

In this research thesis four case studies of front-running companies (chapter 5 and 6) will be presented which focus mainly on the analysis of their current (a) status of CS development as well as on (b) lessons-learned from the CS implementation process. The mapping which was carried out with those companies, by the help of the developed mapping methodology (MoCSAs) provides a clear overview about the characteristics of the chosen sustainability strategy/approach of the respective companies. Identified success factors as well as barriers/challenges will be highlighted and added by empirical findings from interviews with four sustainability consultants. The overarching goal of this thesis is to understand and learn from the CS implementation process of front-runners and to provide a methodology with which companies can easily assess their current position and thus derive implications for CS development fields. The applied methodology for assessing CS approaches as well as chosen strategies in a more conscious way as well as the insights about success factors and barriers/challenges is meant to help researchers, consultants and other practitioners to structure and understand the respective situation that they try to research/find solutions to, in a better way. Further research fields and implications are suggested as well as limitations of the methodology described.

1. Introduction

1.1   The system crisis and the need for sustainability

Since the beginning of the Industrial Revolution, the impact of humanity on our planet, its eco-systems, but also on humanity itself, has increased drastically. Despite beneficial innovations, inspiring personalities and societal progress, many negative – and human induced – impacts like climate change, ruthless urbanization, loss of biodiversity, destructive resource extraction, waste, and so forth have happened as well (WCED, 1987; Blomgren, 2011). Considering the extent out usage of non-renewable resources, the current lifestyle cannot be maintained for-ever and solutions have to be found that also enable future generations to prosper in a sustainable manner (Azapagic, 2003; Ageron et al., 2012). Well-known authors like *Rachel Carson's* and her book *Silent Spring (1962)* have created awareness for the urgent need for a significant shift towards a more environmentally friendly behaviour towards our planet (Cowan et al. 2010). During the attempts to reduce the previously mentioned negative 'impact' of humanity and to take the wellbeing for current and future generations into consideration, the concept of sustainability/sustainable development[1] moved to the agenda of international policy makers. Even though the term was defined by the German nobleman *Hans Carl von Carlowitz* already in 1713, it received its current definition just relatively recently. Sustainability and the field of sustainable development are some of the most formative words for the beginning of the 21st century and increasingly used within societal as well as corporate debates (Grober, 2007). Despite the potential of the concept to create significant value for humanity and nature, it still remains a rather unclear concept which is defined throughout cultures, actors and application fields in a different way or at least with different notions (Bagheri & Hjordh, 2007). The Brundtland Commission (1987) defines sustainable development as the: "*development that meets the needs of the present without compromising the ability of future generations to meet their own needs*" and it has crystallized to become the most quoted definition and seemingly no academic paper about sustainability is published that does not contain these words. But as this popular definition is also very prone to various interpretations, since the vagueness of 'needs' as well as the pure anthropocentric focus are inherent elements, the term 'sustainability' is often used for green-washing, delusion of customers as well as for being hypocritical in itself (Robinson, 2004). However, the task and challenge of academics is to **transfer this 'visionary and partly too vague concept' into concrete principles and approaches** which can be applied by practitioners. Beside the business actors, also policy makers have moved the ambitions to foster sustainable development to the political agenda. The European Union for example announced in the year 2000 that it wants to transform itself into "the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion, and respect for the environment by 2010" (European Council, 2000 papa 5). It can be concluded that that a significant behavioural change in our society is absolutely necessary if the needs of

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[1] The words "sustainability" and "sustainable development" will be understood and used exchangeable in this thesis. They can be seen as the overarching ambition and thus Corporate Sustainability which will be explained in a later stage can be seen as one – but not the only – way to achieve the development that enables future generations to fulfil their needs while current generations fulfil their ones.

current as well as future generations shall be fulfilled. The concept of sustainability/sustainable development thus appears to be a vital and recognised one to work towards.

1.2 The role and importance of companies within the necessary transition

The responsibility of carrying out initiatives to foster 'sustainability' lies within the hands of different actor groups and can be mainly attributed to specific actions for *governments*, *consumers* and *producers* (Deutz, 2009; Hoppe & Coenen, 2011). Especially corporations bare a large part of the responsibility and thus have to reduce their negative impacts in form of emissions, resource exploitation, bad workforce treatment, etc.. Ideally, negative actions should not only be reduced but rather turned into positive impacts and actions (Elkington, 1994; Hardjono & de Klein, 2004). Seemingly the tendencies at least in the European Union (EU) go further in the direction of fostering producer responsibility and thus regulations like the "Packaging Waste, End of Life Vehicle, Waste Electronic and Electrical Equipment Directives" (Deutz, 2009, p. 274) were implemented. However, it has to be stated, that the concept of 'the polluter pays[2]' is also shifting further towards creating intrinsic arguments – instead of top-down regulation – for new SD approaches such as Industrial Ecology where companies enjoy the advantages of acting in a symbiotic manner instead of paying for harmful practices (Deutz, 2009). However, the drivers for CS are certainly not only found in the governmental level. Market pressures as for example Exxon, Nestlé, Nike or Pfizer have encountered had a fundamental impact on their reputation and thus the need for a sustainable behaviour was clearly present (Maon et al., 2009).

A clear trend starting in the early 1990s within the corporate world can be seen in which the dominant focus on short term benefits and -thinking shifts towards long-term orientation paired with the ambition to incorporate environmental aspects in the core strategy as well (Jamali, 2006). Especially, the need to eliminate *negative externalities[3]* and the creation of *wellbeing of all involved stakeholders* (the environment can here also be seen as a stakeholder) are thus central elements and fields of responsibility for organizations within the debate about sustainability (Diesendorf, 1999).

1.3 Necessity for implementation frameworks and support

Even though the number of companies that have written Corporate Sustainability on their agenda is continuously rising, the concept still remains unclear and hard to grasp for especially small- and medium sized enterprises (SME) (Del Baldo, 2012). The need for CS implementation – as well as its benefits – are often believed but the knowledge of which concrete initiatives and steps to take is lacking. Having an environmental management system[4] (EMS) implemented is often already understood as sufficient to be considered a sustainable company (Hohen, 2007). Without intending to lower the value of such systems[5] they often cover

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[2] The responsible actor for pollution is obligated to compensate the negative effects by payments or other compensation initiatives

[3] negative effects on external stakeholders/environment that are not compensated by the responsible actor and neither reflected in the market price

[4] "An Environmental Management System (EMS) is a set of processes and practices that enable an organization to reduce its environmental impacts and increase its operating efficiency. This Web site provides information and resources related to EMS for businesses, associations, the public, and state and federal agencies" (EPA, 2013)

[5] If implemented correctly, they can foster the environmental performance of a company significantly

only selected aspects of CS and do not help a company to incorporate 'holistic sustainability'[6] (ibid.). In that respect, especially the need for SMEs but also well established companies to get support for the definition but also improvement of their current corporate sustainability strategy (CSS[7]) is vast (Bivona & Daza, 2009). As stated by Ameer & Othman (2011) the proper management of sustainability requires a "sound management framework" (p. 61) that is able to bring the ambitions about CS and thus also the triple bottom line[8] into order. However, the question about how this kind of a management system can be defined poses a large challenge for companies (Azapagic & Perdan, 2003). To start with, it is often unclear which possible approaches are available to choose from and furthermore which of those approaches are most suiting to a specific company. If the choice however was possible to make, the next question about specific tools to use poses another challenge (Atkinson, 2000). Even though the scientific community does dominantly agree that CS can never be a recipe-like concept, companies could significantly benefit from a supporting guideline/framework that leaves all necessary freedom and flexibility for specific adjustments and content but still helps to conduct the process in a more structured and supportive way (Azapagic, 2003). CS implementation seems to develop into an essential pathway, that companies which still want to exist in the future, have to walk but due to the (often fundamental) changes within corporate structures that are necessary, the task is anything but trivial (Holton, 2010).

To emphasise especially the societal relevance of such implementation support for SMEs as well, the fact that SMEs make up roughly 95% of all enterprises in the European Union and that especially they often do not have the capacities to investigate potential implementation strategies themselves, shows that a need for such guidelines exists (Purcarea, 2008). Even though companies are always embedded in a very specific context and situation, many challenges they are facing are quite similar and thus the need exists to learn about similar success factors, barriers/challenges and the strategies to overcome the latter. Thus, learning from those experiences and making them available for newcomers in the field is seen by the researcher as a beneficial step towards speeding up the implementation process.

1.4 Research questions and -objectives

1.4.1 Research questions

The research focus of this thesis, dealing with Corporate Sustainability implementation is to learn from the experiences companies as well as consultancies made during the implementation process and to investigate possibilities to assess and understand in a 'quick-check-manner' the respective and customized sustainability approach of a company better. Thus, the overarching research question is: *How is the implementation process of CS understood and carried out by academics and practitioners and which insights can be gained by analysing*

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[6] Holistic sustainability in this context will from now on describe the concept of implementing CS in a company-wide and deep way. In detail this would mean that sustainability strategies have to go beyond minor adjustments in the day-to-day business activities and rather focus on rethinking the entire company processes and thus embedding sustainability within the core pillars of an enterprise. However, there cannot not be any specific way of measurement to say, when a strategy is 'holistic'.

[7] CSS will be explained in more detail in a later stage

[8] This will be explained in a further stage of this thesis

the chosen initiatives with respect to optimizing the academic approaches and frameworks for CS implementation?

Resulting from this question, the three specific main research questions (first level) and sub-research questions (second level) will be:

(1) *How could current as well as future sustainability approaches be mapped in order to gain more detailed insights about them and to be able to compare them with each other?*

(2) *What can newcomers learn from the experiences and procedures of CS implementation by the analysed front-runners?*

    a. *What were/are the main success factors, barriers and challenges during the implementation process of the selected front-running companies?*

    b. *During which phases of the implementation did the former mentioned factors occur?*

(3) *How could the developed mapping methodology be used for the assessment of corporate sustainability strategies and if, which limitations and further research fields can be identified?*

1.4.2 Research objectives

Within this thesis, dealing with the broader subject of Corporate Sustainability Implementation, the three main research objectives that derived from the previously stated research questions are to:

(1) <u>Develop a visualized methodology</u> with which current as well as future sustainability approaches but also the characteristics of company specific Corporate Sustainability strategies can be mapped and assessed. The goal of this mapping 'tool' will be to gain more detailed insights into the characteristics of the approaches and thus be able to compare them better with each other. Ultimately, it is intended to be able to propose various options of how this methodology can be used as well for CS practitioners to assess the current status of the corporate sustainability strategy[9] of an organization.

(2) To <u>identify the underlying processes and 'steps' of Corporate Sustainability implementation</u>, carried out by the selected case companies and to evaluate the drivers for CS implementation. It is ultimately intended to identify which steps advanced companies in the field of CS have taken to reach the level they are at right now. The focus will be set on <u>success factors, encountered barriers/challenges</u> as well as strategies to overcome those.

(3) <u>Test the developed mapping methodology (MoCSAs)</u> in one of the five suggested ways with the four case studies. The specific CS strategies of the companies are meant to be analysed and mapped In order to provide a quick-check tool for the assessment of customized CS approaches.

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[9] In this context a sustainability strategy and a customized sustainability approach of a company are understood to be the same.

1.5   Research approach and -methodology

1.5.1   Research framework

The following research framework will explain the chosen research approach as well as the phases of the thesis. The **orange boxes** indicate which parts were carried out by the researcher alone and the **green boxes** indicate the parts which were carried out together with Sonja Koehler, a fellow Joint Degree student from Utrecht University. Generally, the process was divided into four distinct phases which were partly overlapping.
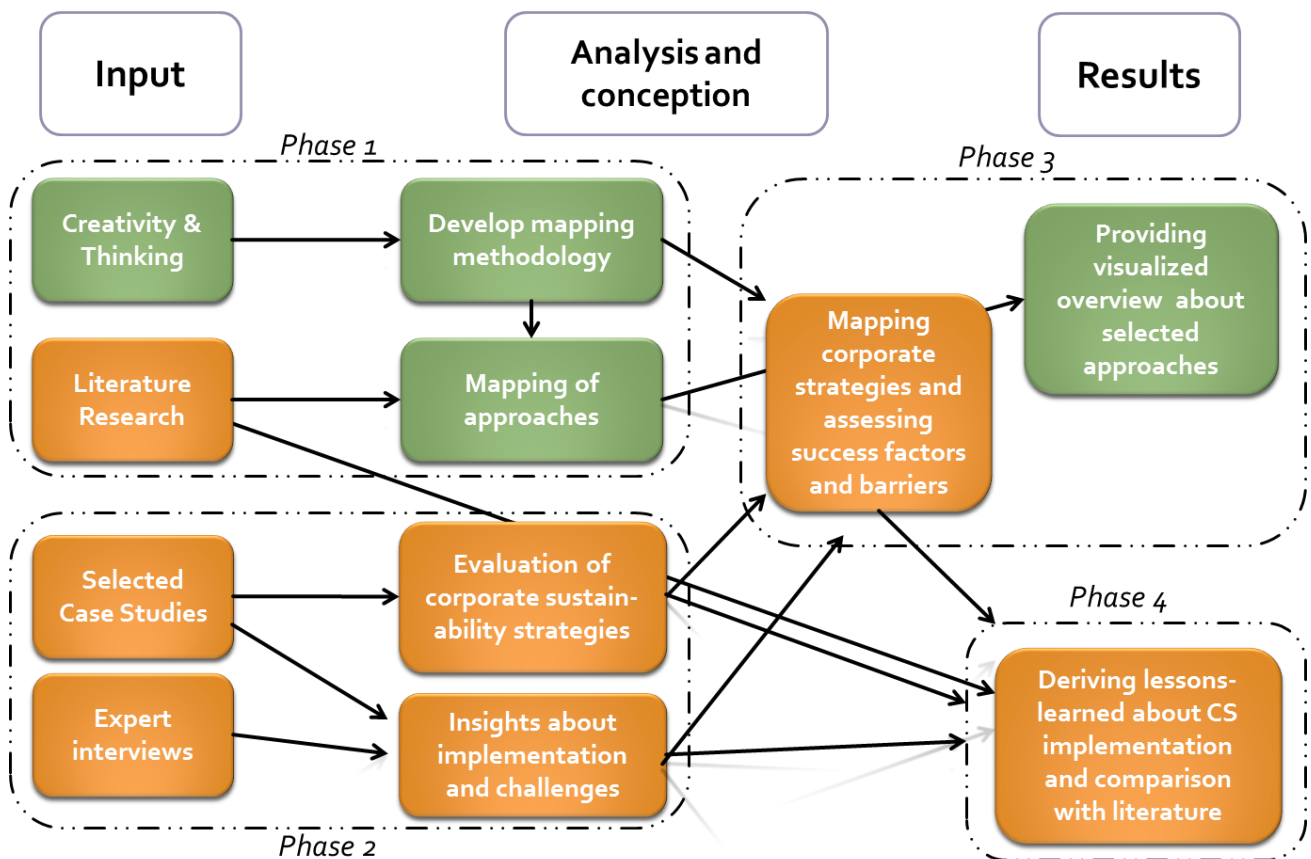
Figure 2 - Research Framework

1.5.2   Research methodology and limitations

The methodological basis of this master thesis is built upon in-depth literature studies about CS. The most important search terms in different possible combinations were: *Corporate Sustainability, implementation, tools, approaches, guidelines, change management, procedures, CSR, triple bottom line, benefits, management, strategy, barriers and challenges*. This information is provided to the reader to clarify which subject sources were used. However, in order to validate the literature based findings, four case studies with selected companies were carried out. These case studies consisted of intensive analysis of the published documents by each company (for example Sustainability Reports) and interviews with available personnel from the middle- and upper management. Due to availability limitations, it was not always possible to

interview staff from the top management or each preferred department. Additionally to this, four sustainability consultancies were interviewed about their experiences and insights about the subject of corporate sustainability implementation and strategies. The appendix I and II presents the concrete interview questions for the companies as well as the consultancies.

The chosen methodology of semi-structured, qualitative interviews with mainly staff from the sustainability/quality or environmental department (or similar departments with a different name) has certain limitations/a bias and because there is no possibility to check whether the situation as it is presented by the sustainability managers is precisely like it is explained by them. Since other personnel and neither stakeholders were interviewed, a cross-check of information was not possible. However, this research rather intends to provide a methodology that can help future researchers to quickly assess the current status of a corporate sustainability strategy and identify the dominant barriers and success factors during the implementation process. Thus, this approach could be useful as a pre-evaluation procedure for in-depth and longitudinal case studies. Furthermore, the intention was to learn from the responsible staff (sustainability managers) about their experiences and thus, the focus was set on rather subjective experiences. At the end of this thesis (chapter 6.3), the concrete encountered limitations during the research process will be stated.

1.6   Structure of the thesis

After the introduction to the concept of Corporate Sustainability (chapter 2) and the subject of CS implementation (chapter 3) this thesis is structured in two main and sub-sequential parts. The **first** one deals with the development of a mapping methodology for CS approaches, as well as the example mapping of seven selected approaches[10] (chapter 4). A short suggestion for how the methodology could be also used for mapping corporate strategies will be given. The **second** major part will predominantly focus on CS implementation strategies and procedures of case studies carried out with four front-running companies that have already implemented thorough CS strategies (chapter 5). Insights about CS implementation of four sustainability consultants will be presented at the beginning and later on compared with the case studies. The case studies will start with a description of how CS was implemented and how the respective strategy was developed. A special focus will be set on encountered barriers/ challenges and success factors which will finally be visualized in a framework provided by Maon et al. (2009). The second aim of the case studies is to apply the mapping methodology and map the current state of the sustainability strategy. The outcome and findings will be discussed, limitations and further research fields described (chapter 6) and a conclusion will be drawn (chapter 7). Figure 3 provides a visualized overview about the structure of the thesis. The concrete methodological approach of the case studies will be explained in further detail at the beginning of chapter 5.

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[10] This will be the common part of the Master Thesis, written together with Sonja Koehler
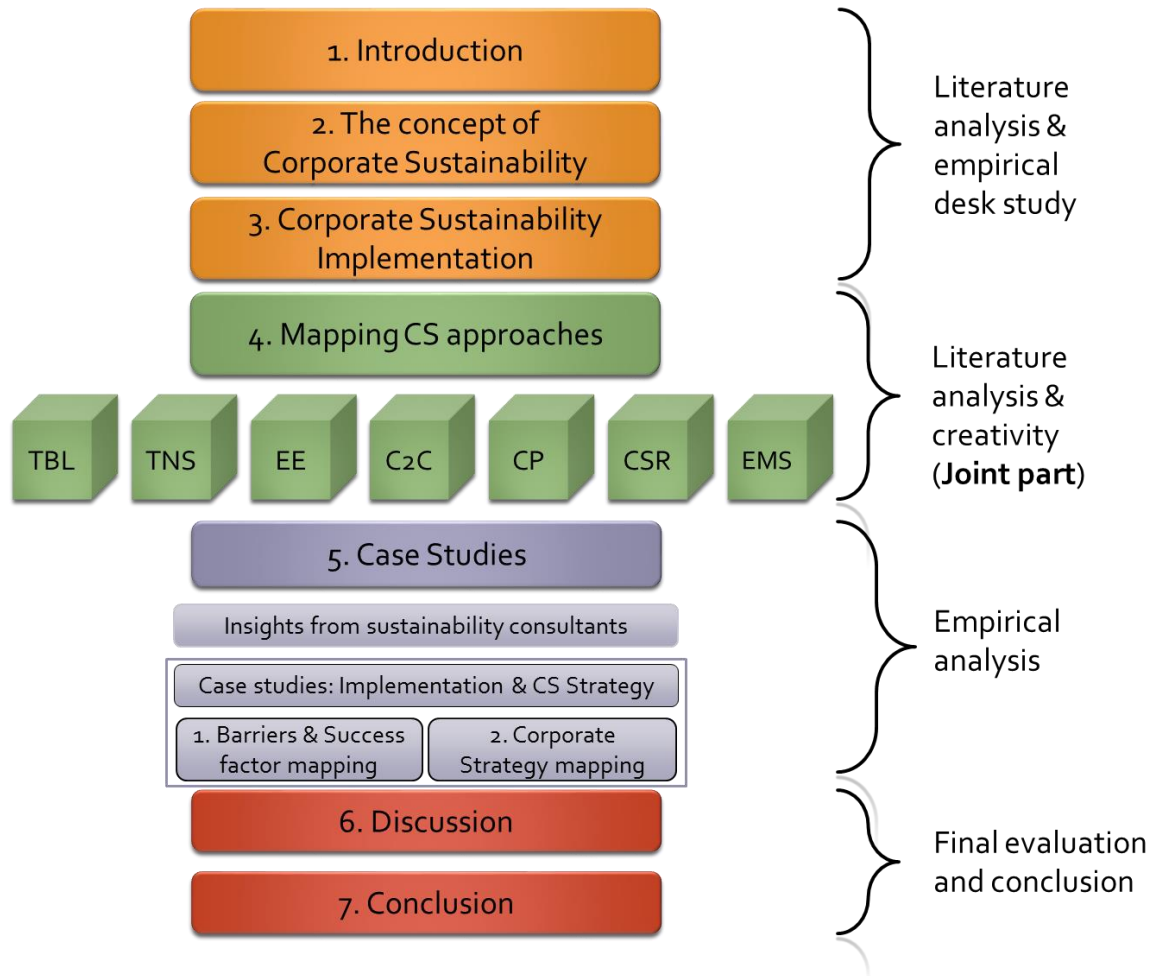
Figure 3 - Structure of thesis

2. The concept of Corporate Sustainability

The following chapter will explain the concept of CS and its definition in further detail (2.1) and provide an overview about the six dimensions of CS (2.2). Furthermore, the motives and benefits of CS for companies will be described (2.3) and Corporate Sustainability Strategies will be explained (2.4). The goal of this chapter is to clarify how the subject of CS is understood by academics and used in the context of this thesis in order to create a common understanding and basis for the case studies.
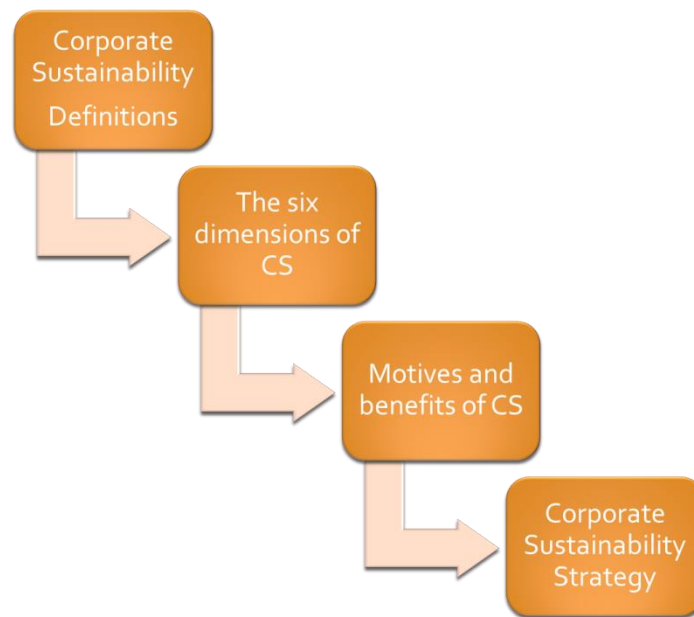
Figure 4 - Structure of chapter 2

2.1   Definitions and theoretical basis

Corporate Sustainability is understood in this context as a 'sub-branch' of the overarching concept of Sustainable Development. CS specifically addresses the role of (commercial) organizations and their possibilities of carrying out the core business processes in a sustainable manner. In the following chapter, the concept of CS will be clarified and differentiated from related (sub-) concepts. Furthermore, common definitions of CS will be presented and (3) changes of CS over time described.

Within the scientific community of sustainability researchers no general consensus about the terminology within the field exists (Van Marrewijk, 2003). The most commonly cited and used concepts found in the literature research are Corporate Sustainability (CS), Corporate Social Responsibility (CSR), Corporate Citizenship (CC), Triple Bottom Line (TBL) and Business Ethics. A 'Trends in Sustainability' (TIS) graph can visualize the frequency of occurrence of the mentioned terms in the print media over time. However, this visualization does not provide any insights about the relations of the concepts to each other.
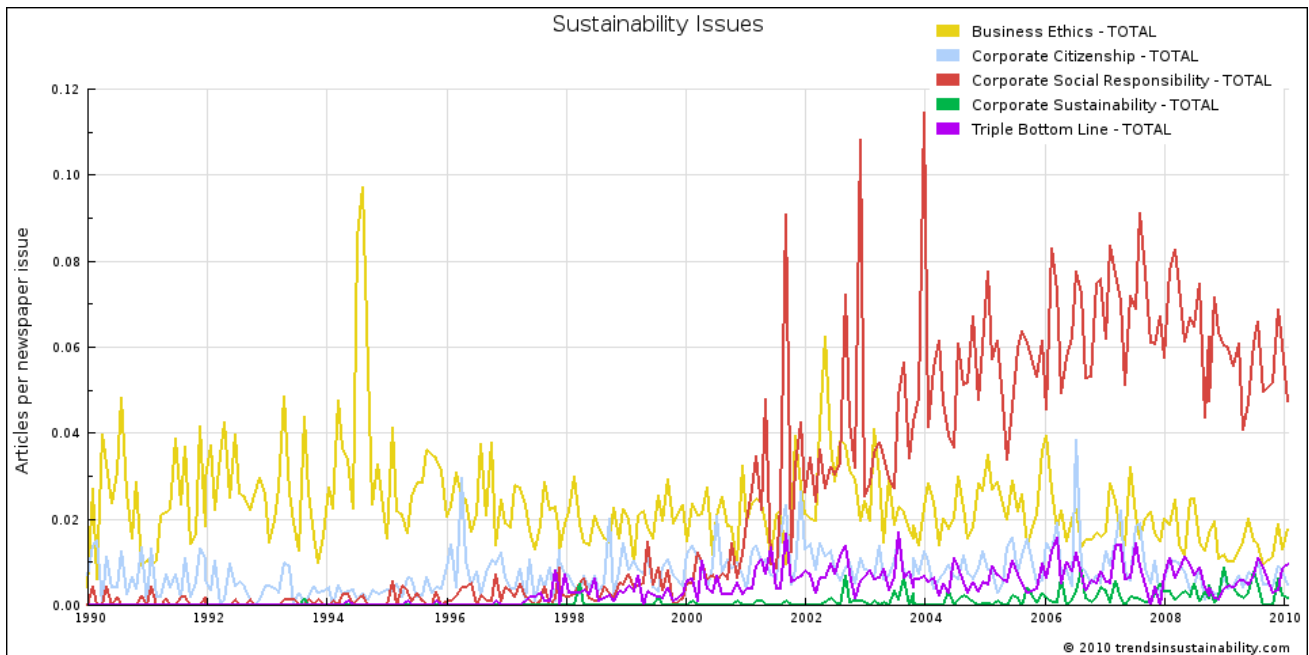
Figure 5 - Frequency of occurrence of five corporate sustainability issues in the print media over time

Source: Trends in Sustainability (2013)

It is clearly visible, that CSR became the most prominent and commonly used term within the field. According to Wempe & Kaptein (2002) Corporate Sustainability (CS) is however the umbrella term of the mentioned terms above and CSR is thus one specific sub-element of it. The 3 P's (people, planet, profit) which describe the three pillars that are supposed to be considered in every sustainability initiative, are the foundation of the 'house construction' (see figure 6). Those pillars are also described as the Triple Bottom Line (TBL).

However, since the definitions and thus understanding of especially CSR varies in the scientific community, Van Marrewijk (2003) tried to clarify the terms CS and CSR. He concluded that CS/CSR can be seen inter-exchangeable but should be divided into five major categories. Those are: *Compliance-driven CS, Profit-driven CS, Caring CS, Synergistic CS and Holistic CS* (see Figure 7). Those five different categories can be seen as development stages

Figure 6 - The hierachical relation between CS, CSR and the TBL

Source: Wempe & Kaptein (2002)

of CS development and are thus related to different challenges a company is facing in each development stage. In this thesis however, CS will be seen as the 'umbrella' term (as it is understood by Wempe & Kaptein, 2002) whereas CSR as one specific approach with the focus on social wellbeing (Dahlsrud, 2008). This will however be explained in a later stage of this thesis (see chapter 4.2.2) in further detail.

Level of sustainability	Description
Pre-corporate sustainability	No ambition for corporate sustainability (CS); however, some activities toward CS might be initiated when forced from the outside (e.g. through legislation or a buyers strike)
Compliance-driven	Providing welfare to society, within the limits of regulations from the rightful authorities; organizations may respond to charity and stewardship concerns
Profit-driven	Integration of social, ethical, and ecological aspects into business operations and decision making, provided that it contributes to the bottom line
Caring	Consists of balancing economic, social, and ecological concerns, going beyond legal compliance and beyond profit considerations, motivation is that human potential, social responsibility and care for the planet are important
Synergistic	Consists of a search for well-balanced, functional solutions creating value in the economic, social and ecological realms of corporate performance with a synergistic, win-together approach with all relevant stakeholders
Holistic	Fully integrated and embedded in every aspect of the organization, aimed at contributing to the quality and continuation of life of every being and entity, now and in the future

Figure 7 - Levels of CS according to van Marrewijk & Werre (2003), cited in Quinn & Dalton (2009, p. 23)

In order to visualize how CS is understood in this thesis, Figure 8 visualises how CS and the other four concepts can be brought into relation to each other. Sustainable Development is the overarching concept, and CS one distinct translation of the sustainability ideas into the corporate world. The other approaches like CSR, Business Ethics, etc. are rather specific way of operationalizing CS. However, as already stated before, this understanding of the terminology is not shared by every researcher and Fifka (2009) hence stated that the terms are often understood in a very similar way and thus only other descriptions of the same idea.
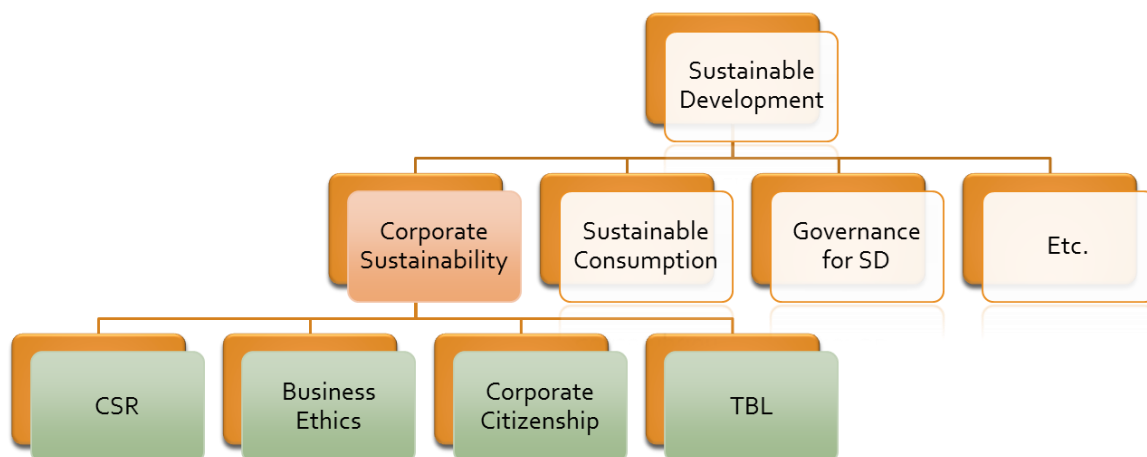
Figure 8 - Structuring of the concept of CS as understood in this thesis

When talking about CS, the general idea of Sustainability applied to the corporate world is meant and CSR or the TBL for example are rather more specific approaches that can be applied in a practical way to an organization. This research has not focused in further detail on Business Ethics and Corporate Citizenship and thus the two terms were not required to be analysed and described in detail. Furthermore, it was not a research objective to find distinctions between the terminologies.

However, to describe and define the concept of CS, which will be in the focus of this research as a broad umbrella term, several definitions for Corporate Sustainability can be found in the literature. In order to provide some examples, the following ones shall be named:

Table 1 - Selected definitions for Corporate Sustainability

Author	Definition
Dow Jones Sustainability Index (2013)	*"Corporate Sustainability is a business approach that creates long-term shareholder value by embracing opportunities and managing risks deriving from economic, environmental and social developments."*
Willard (2002)	*"For a business, it means sustaining nature's resources as well as sustaining the company."*
Savitz & Weber (2006)	*"A sustainable company manages its risks and maximizes its opportunities by identifying key nonfinancial stakeholders and engaging them in matters of mutual interest."*
Makower (2008)	*"The ability to continue one's business operations indefinitely in a way that doesn't create limits for future generations."*
Van Marrewijk (2003)	*"Corporate Sustainability refers to demonstrating the inclusion of social and environmental concerns in business operations and in interactions with stakeholders"*

The distinct ideas that can be found in those definitions are: *long-term value creation, opportunities, risk/resilience management, future generations and alignment of social, environmental and economic goals*. Hence, parts of the previous definitions will be used for this research and merged together. Corporate Sustainability will be from now on defined as: "*The commitment of enterprises to create shared value for current as well as future generations while sustaining nature's resources, fostering resilience and generating a positive impact for a maximum amount of internal as well as external stakeholders*."

After a common understanding of CS was created in the previous paragraphs, it has to be mentioned that the concept has been undergoing significant changes and will likely continue to do so. Currently, it seems to be the recent 'wave' within the business world. In the late 60s the dominant driver of change and improvement was quality management, followed shortly after by environmental management and nowadays 'sustainability' (Bansal, 2005). Generally speaking, the social dimension has gained significant momentum from the beginning of the new millennium onwards and issues like working conditions and sweatshop labour moved to the corporate agenda (Kleine & Hauff, 2009). Besides this trend, other changes within the concept have occurred as well. The following figure illustrates these trends. According to Ming-Dong Lee's (2008) research, the concept of CS(R) moved from a rather macro-social and purely ethical one further in the direction of an financially beneficial, managerial concepts which is meant to be applied to the organizational level of a company.

	50s&60s		90s
Level of Analysis	Macro-social	→	Organizational
Theoretical Orientation	Ethical/ Obligation	→	Managerial
Ethical Orientation	Explicit	→	Implicit
Relationship between CSR&CFP	Exclusive/No discussion	→	Tight coupling

Figure 9 - Trends in CS(R) research

Source: Min-Dong Lee (2008), cited in: Zu (2009:19)

Overall, it can be concluded that the academic world has not yet managed to create a clear and common understanding of Sustainability in the business context and that still a large variety of definitions exists which do however often describe the same ideas with different words (Carroll, 1999). The concept and understanding of CS itself has changed over time and will likely continue to do so. Despite all the variations, it is only important for this thesis to understand the broader concept and ideas of CS and thus it is not necessary to elaborate on the fine nuances that are inherent to the different definitions.

2.2   The dimensions of Corporate Sustainability

In order to describe CS in more detailed level, the description of the concept by the help of the different dimensions can foster the understanding of it. The three most commonly mentioned ones are the (1) social, (2) environmental and (3) economic dimension which are all together also described as the Triple Bottom Line or the famous 'three P's' (People, Planet, Profit) (Archel, et al., 2008; Fauzi, et al., 2010). However, beside those three, especially the consideration of all relevant stakeholders within each field of influence is of vital importance. The questions about which (4) stakeholders can and should be included in the planning and strategy application process is however a very controversially discussed and one that is difficult to be answered (Albareda et al., 2007).

Social dimension

Environmental dimension

Economic dimension

Stakeholder dimension

Voluntariness dimension
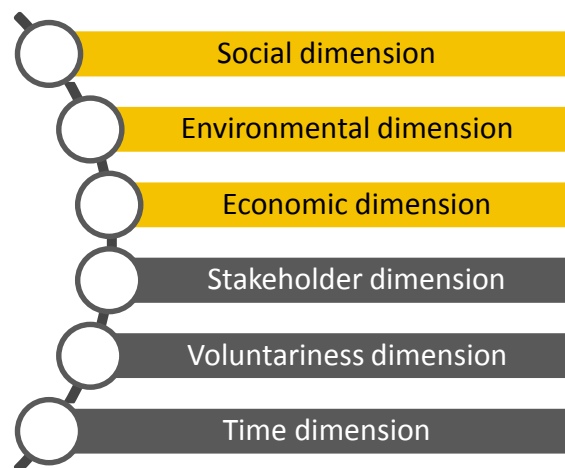
Time dimension

Figure 10 - Different dimensions of Corporate Sustainability

Often it is possible for a company to identify the most obvious and direct stakeholders, but the assessment of effects on indirect or distant stakeholders is anything but trivial. Furthermore, there is still an on-going debate about the (5) voluntariness of the concept. For advocates and believers in the necessity of sustainability, the

concept has to be obligatory and opponent say that the voluntariness can only assure a proper application (Albareda et al., 2007, Archel et al., 2008). Lastly, the (6) time dimension plays an important role as well, since CS is meant to point out the importance of the consideration of future results of current actions to the currently rather short-term oriented business world, this dimension is of central importance (Lozano, 2012b). The following figure intends to provide an overview about concrete examples of how the first three dimensions can be described and also which examples can be found to explain the implications of the TBL.

Dimension	Description	Example
Economic	Moving beyond conventional financial accounting by according attention to new measures of wealth such as the human/intellectual capital that firms develop	Reducing the cost of doing business through rigorous business integrity policies Increasing productivity through a motivated workforce
Environmental	Studying the implications of resource consumption, energy use and the effects of the firm on ecological integrity	Environmental policy; environmental audits and management systems and environmental liabilities
Social	Maximizing the positive impacts of a firm's operations on broader society	Issues of public health, social justice and inter and intra organizational equity

Figure 11 - The three dimensions of CS

Source: Jamali (2006:811)

However, how to balance, weigh and measure the equal addressing still remains unclear (Chatterji et al., 2009). Hahn & Figge (2011) have pointed out in their research that especially the economic profitability has to be seen as inclusive profitability and not only resulting positively out of the other two pillars. According to them the inclusive notion of profitability would reflect positive returns on all three pillars.

2.3 Drivers for- and benefits of Corporate Sustainability

After having clarified the concept as such, an important question is 'why' companies do and should opt for the implementation of CS? Starting with the **external drivers and conditions of CS**, the following paragraph will elaborate on the question which set of institutional conditions has to be in place to increase the likeliness of CS actions to be taken by companies. Campbell (2007) analysed during his institutional analysis research in sociology as well as in political science seven factors that have an influence on the likelihood of a more responsible and sustainable behaviour of companies. The seven drivers were: (1) Financial conditions of the respective company as well as the situation of the global economy, (2) rather too much or too little competition, (3) regulations enforced by governments, (4) the existence of effective self-regulation by governments, (5) (indirect) pressure by the civil society in form of NGOs, movements or the press, (6) influential publications or spread thought-concepts that reach corporate managers and lastly, (7) participation of companies in associations that encourage a more responsible behaviour. However, most of those factors can only be influential on the corporate agenda, when the business leaders are also **intrinsically convinced of the benefits of CS**. Thus, the subject for financial performance fostering is of central relevance in this context.

The debate about the (economic) value of CS is one of the most vibrantly discussed debates within this field. According to Ameere & Othman (2011) the opinion about the interaction and thus (positive) influence of the three pillars on each other differs partly within the scientific community. Not only academics do not have a coherent opinion about the financial profitability of CS, but also practitioners are not similarly convinced by it. However, the following figure illustrates a) that the positive relationship is dominantly recognized by practitioners as well as academics and that b) even more practitioners (78 %) than academics (60 %) acknowledge the positive relationship.
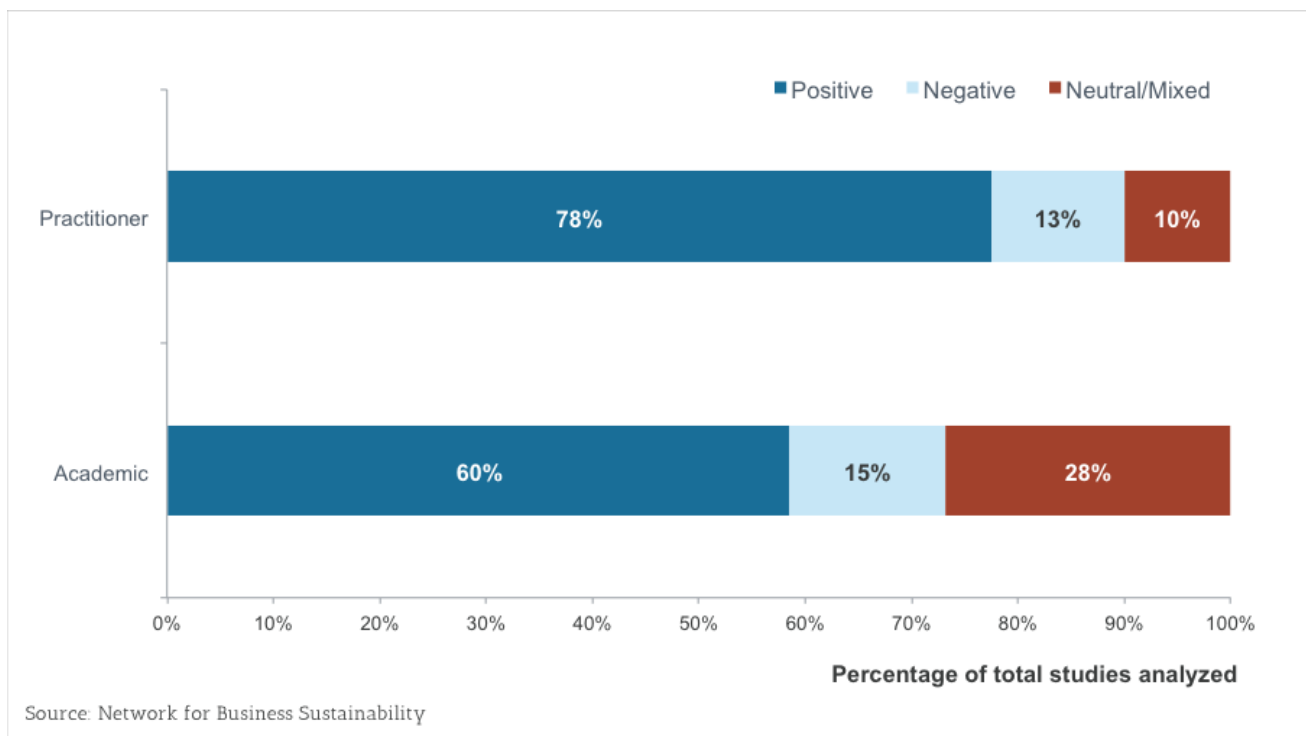
Figure 12 - Perception about the financial benefits of CS of practitioners and academics

Source: Gaspar (2013)

However, financial benefits are not the only (internal) drivers and motives for CS implementation. Several other benefits were identified in the literature as well. In order to provide an overview about the business benefits of CS activities, the following table will mention the most commonly mentioned benefits in the analysed literature of this research. Some of these benefits are clearly connected to financial performance improvements, whereas others have a rather indirect influence or no influence at all on the financial performance of a company.

Table 2 - Benefits of Corporate Sustainability implementation

Author(s)	Benefit
Eccles, et al. 2011	Long-term orientation of company strategy
Azapagic, 2003 / Jenking 2006	Cost savings due to increased efficiency and cleaner production

Jenking, 2006	Positive effects for employee satisfaction and motivation
Jenking, 2006	Better market position
Jenking, 2006	Risk minimization and fostering of resilience
Ameer & Othman, 2011	Higher transparency, internally as well as externally
Jenking, 2006	Improved trust and understanding, internally, as well as externally
Bonini & Görner, 2011	Competitive advantages through (eco-) innovations
Bansal, 2005	Improved management systems due to the alignment of different goals
Azapagic, 2003	Being ahead of regulations and directives
Daub & Ergenzinger, 2005	Creation of shareholder and stakeholder value
Azapagic, 2003	Lower health and safety costs due to fewer accidents and better employee treatment
Bansal, 2005	Continuous improvement gets part of corporate culture
Azapagic, 2003	Additional ethical investors and supporters of the company
Azapagic, 2003/ Jenking, 2006	Lower labour costs due to improved motivation and efficiency
Jenking, 2006	Benefits company culture
Azapagic, 2003/ Jenking, 2006	Reputational gains and thus improved legitimacy and broader customer base
Azapagic, 2003	"Licence to operate"
Jenking, 2006	Increased attractiveness to potential recruits
Lozano, 2012	Symbiotic relations to other companies
Azapagic, 2003	Better access to external financial resources and loans

All these benefits appear convincing on the first sight but the question still remains, whether CS does actually 'pay-off' also in the financial perspective. A wide-ranging study, carried out by Ameere & Othman (2011) has underlined that the causality within the assessment of benefits for the financial performance is of vital importance. Within their statistical analysis they came to the conclusion, that companies that have carried out sustainability practices, have a better financial performance, measured by return on assets compared to companies that do not have CS of their agenda. Furthermore, they pointed out that the positive relation between CS and financial performance has increased from 2006 onwards.

The previous findings represented rather the academic side and opinion about motives and rivers for CS. In the following part, the focus will be set on the **understanding of CS by practitioners**.

For some time sustainability used to be the buzzword for 'greenwashing' and continuing to carry out the same harmful activities while having simply a few 'show-off projects' running on the side to improve the reputation of the company (Barnett & Salomon, 2012). However, CS was not understood and used for those purposes by all companies and many have tried their best from the beginning on to improve the overall environmental performance of the company. The reputational gains have maybe been one of the main drivers, but other improvements were achieved as well (Azapagic, 2003). A study carried out with 2956 companies that intended to investigate the main drivers and reasons for CS implementation of those companies came to the conclusion that especially the cost reduction potential of CS were among the most often named actions taken by the

companies. Improving the corporate reputational gains was mentioned on the third place. The following figure provides an overview about the most commonly named drivers.

Moving beyond reputation

% of respondents,[1] n = 2,956

	Company is currently taking action	Company is more effective than competitors
Reducing energy use in operations	63	47
Reducing waste from operations	61	44
Managing corporate reputation for sustainability	51	57
Responding to regulatory constraints or opportunities	46	50
Reducing emissions from operations	43	48
Managing portfolio to capture trends in sustainability	38	56
Reducing water use in operations	38	46
Committing R&D resources to sustainable products	31	59
Leveraging sustainability of existing products to reach new customers or markets	28	61
Managing impact of products throughout the value chain	28	50
Improving employee retention and/or motivation related to sustainability activities	26	48
Mitigating operational risk related to climate change	22	41
Achieving higher prices or greater market share from sustainable products	18	52

[1]Respondents who answered "don't know" or "none of the above" are not shown.

Figure 13 - Drivers for Corporate Sustainability implementation

Source: Bonini & Görner (2011:3)

Finally, it can be concluded that the motives for- and benefits of CS are still a field that needs to be investigated in further detail. Especially, the discrepancy between theory and practice seems to be existent. However, it seems to be clear and generally accepted that a vast amount of (financial) benefits exist and that CS – if applied correctly – can help a company significantly to prepare the path for a prosperous future. It is however acknowledged that not all CS activities have a positive outcome on the overall performance of a company and thus it is important to identify the company specific initiatives that also 'pay-off' (Lankoski, 2008). Furthermore, tendencies can be observed with respect to the development of intrinsic reasons that are often going in line with expectations about financial performance gains through those activities. This does however not mean that external drivers will lose their importance entirely.

2.4 Corporate Sustainability Strategy

In order to operationalize CS and thus translate it to the specific business context, a sound strategy is required (Eccles et al., 2011). According to the Business Dictionary[11] (2013), a strategy is defined as: "*A method or plan chosen to bring about a desired future, such as achievement of a goal or solution to a problem*". However, since CS is dominantly seen as a process and not a specific goal that can be achieved, a CSS can be rather understood as the method or plan that supports the process of developing towards a desired future with the incorporation of lessons-learned on the way and necessary adjustments due to changing circumstances (Bagheri & Hjorth, 2007). When talking about business strategies, the concept of the strategy pyramid is a very prominent one in the literature. Strategy pyramids however, are set-up in different ways and the basic strategy pyramid has the general <u>strategy</u> at the top, followed by the <u>tactical</u> level and at the bottom the <u>programs</u> (operational level). However, especially for the implementation of CS, which is rooted on a value based system, the following strategy pyramid is seen to be more adequate. Thus, a CSS would consist of (1) underlying values, (2) the vision, (3) the mission statement, (4) strategic objectives, (5) and conclude with concrete actions and key performance indicators (KPI's).

Figure 14 - Strategy Pyramid

Source: Visions of Ireland (2013)

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[11] http://www.businessdictionary.com/definition/strategy.html

According to Azapagic (2003) and Bivona & Daza (2009) a CSS has to be integrated into and aligned with the overall business strategy and not just taken as an 'add-on'. Sustainability activities can only be successfully carried out, if they are part of the core business.

For the process of the strategy definition Burke & Gaughran (2007) suggest the usage of the SMART objectives tool. This 'tool' can be seen as a reminder for setting the strategic goals according to the criteria of goals being: Specific, Measurable, Attainable, Relevant and Time-bound. Furthermore, the strategy approach of 'back-casting' which is also specifically suggested within the Natural Step Framework which will be explained in a later stage of this thesis, is seen to be very valuable for a CSS. Back-casting in short can be described as the definition of a desired future scenario and the connected path to get there (Bagheri & Hjorth, 2007). In the academic community of sustainability researchers, the involvement or at least consideration of stakeholders during the strategy definition phase is seen as an important step towards a successful strategy. A well-defined sustainability strategy does also embrace resilience in its core and thus incorporates risk mitigation aspects (Galloway, et al., 2010).

Baumgartner (2009) has defined different development levels of sustainability strategies that are measured by the extent of activities companies have carried out. The general subject of ranking the level of a strategy development stage however will not be an element of this thesis and thus not elaborated on. Finally, it has to be clarified that the terms Corporate Sustainability Strategy (CSS) and (customized) Corporate Sustainability Approach (CSA) are used interchangeably in this thesis. A CSA can thus mean that a company has picked specific elements of different sustainability approaches (those will be explained in chapter 4) and created its own customized approach/strategy towards sustainability. The next chapter will specifically focus on the subject of CS implementation and thus provide an overview about how the concept of CS can be implemented in a practical way into organizations.

3. Corporate Sustainability Implementation

The ambition of implementing Corporate Sustainability in a more structured and deeply embedded way is constantly rising within the corporate world. The understanding of its vast benefits has reached a high level at least within many leading industries and ambitions rather accelerate than slow down (Ameer & Othman, 2011; Barnett & Salomon, 2012). The times when companies were predominantly looking for the 'low-hanging-fruits' and achieving quick wins is at least over for the more advanced companies within the field and the need for more 'holistic' sustainability strategies is getting larger (Braungard et al., 2007). However, to deeply embed sustainability within the corporate culture, serious efforts have to be made and management systems have to be implemented in order to assure also a long-term orientation and functionality (Azapagic, 2003).

3.1 Implementation guidelines/frameworks

Since deeply embedded CS requires a vast understanding of what it means for businesses as well as persuasion of its benefits for all involved actors, the challenges to bring this subject to the corporate agenda are immense. As often stated in the literature, there is no 'one-fit-all' solution for CS and it is very often recommended that companies have to find their customized approaches towards sustainability (Van Marrewijk, 2003). However, if companies are only told to find their 'own way' it will not help them much to get started on the journey of successful implementation. According to Azapagic (2003, p.303) a holistic CSS "requires a vision, commitment and leadership" and thus an appropriate management framework that supports the implementation process.

Several suggestions for implementation guidelines[12] have been published and many of them differ significantly within their depth and scope. In the following part, some examples will be given that explain how CS according to academic experts should be implemented. However, not all guidelines are very detailed and precise about which steps to take. To give one example about how narrow and abstract suggestions by academics can also be, Harts' (1997) suggests implementing CS in form of a three stage process, where pollution prevention as the first step is followed up by product stewardship and finalized by clean technology. It becomes already clear that this approach is very basic, vague, over-simplified and that it has a distinct bias towards technological solutions. Newcomers in the field of CS do not benefit too much from these 'guidelines' but rather need more detailed and guiding steps added with supportive questions that help to find a suiting and customized strategy.

A more detailed implementation guide which was build up upon the Plan-Do-Check-Act (PDCA) cycle from the ISO management systems is the Corporate Sustainability Management System (CSMS) proposed by Azapagic (2003). According to her it is an instrument to implement CS in a more complete way to achieving long-term sustainable development. Figure 15 visualises the five step approach. Within each step detailed suggestions are made about which concrete actions have to be carried out in order to implement sustainability successfully in the organization.

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[12] Some guidelines are described by the respective authors also as frameworks. However, in this thesis guidelines and frameworks will be used interchangeably.
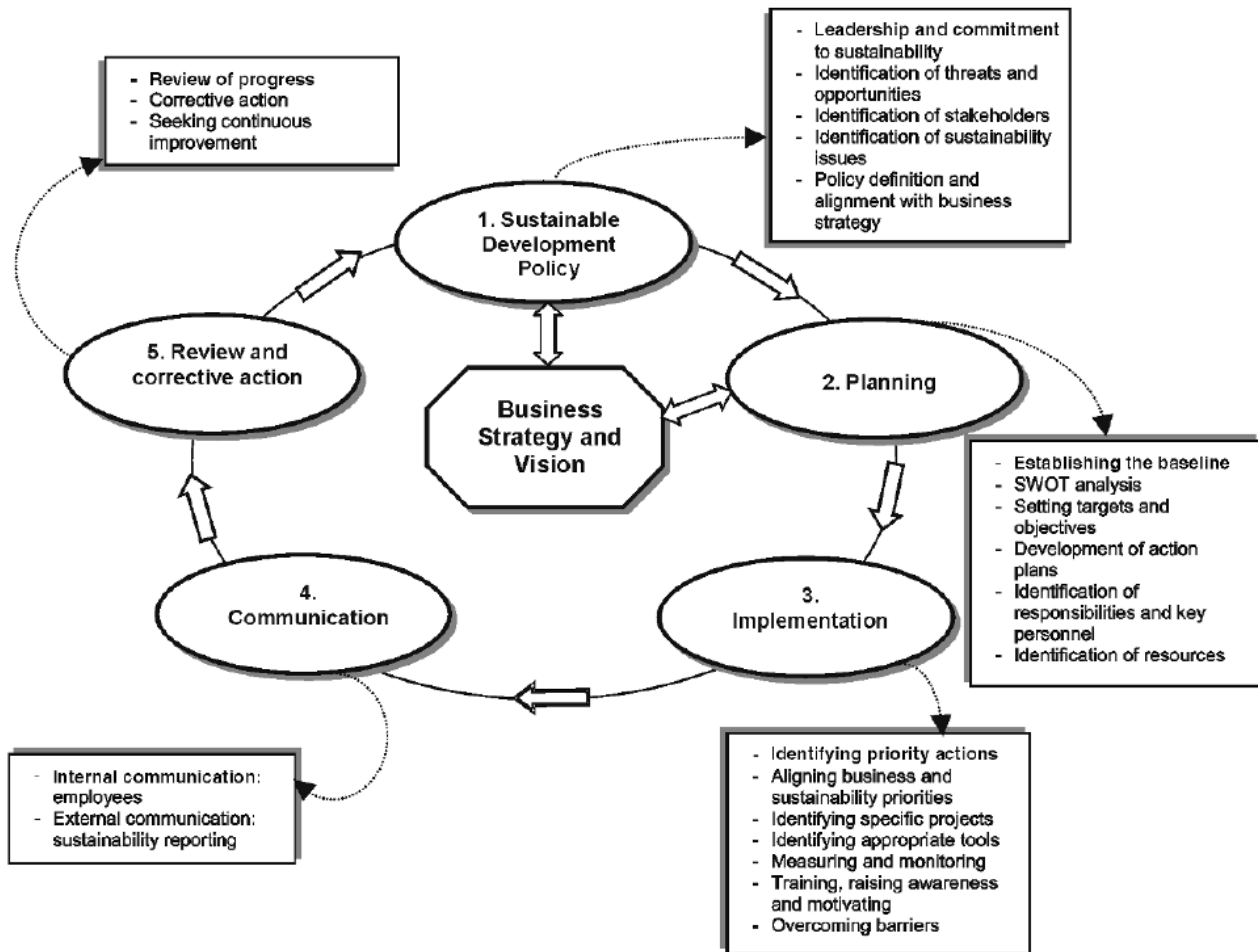
Figure 15 - Corporate Sustainability Management System (CSMS)

Source: Azapagic (2003:305)

Despite the seemingly prefixed structure, Azapagic (2003) sees the framework as designed in a way that companies can find their tailored and specific solutions within it. However, she states that the framework without full commitment will not guarantee success. Reviews have to be made continuously in order to adjust the implemented strategy (Azapagic, 2003).

An even more detailed guideline that makes use of the PDCA cycle as well but contains further important elements of other prominent guidelines is the framework proposed by Maon et al. (2009). Several different implementation guidelines were assessed and served as a baseline for the following framework. In specific, the proposed CS(R) implementation framework by: Cramer (2005), Khoo and Tan (2002), Maignan et al. (2005), Panapanaan et al. (2003) and Werre (2003) were assessed on their a) CSR conception, b) Steps of CSR implementation process and c) the role of the stakeholders during the process. Furthermore, the final framework was tested and refined by the help of several case studies with IKEA, Philips and Unilever.

The following figure shows the final outcome of their study.
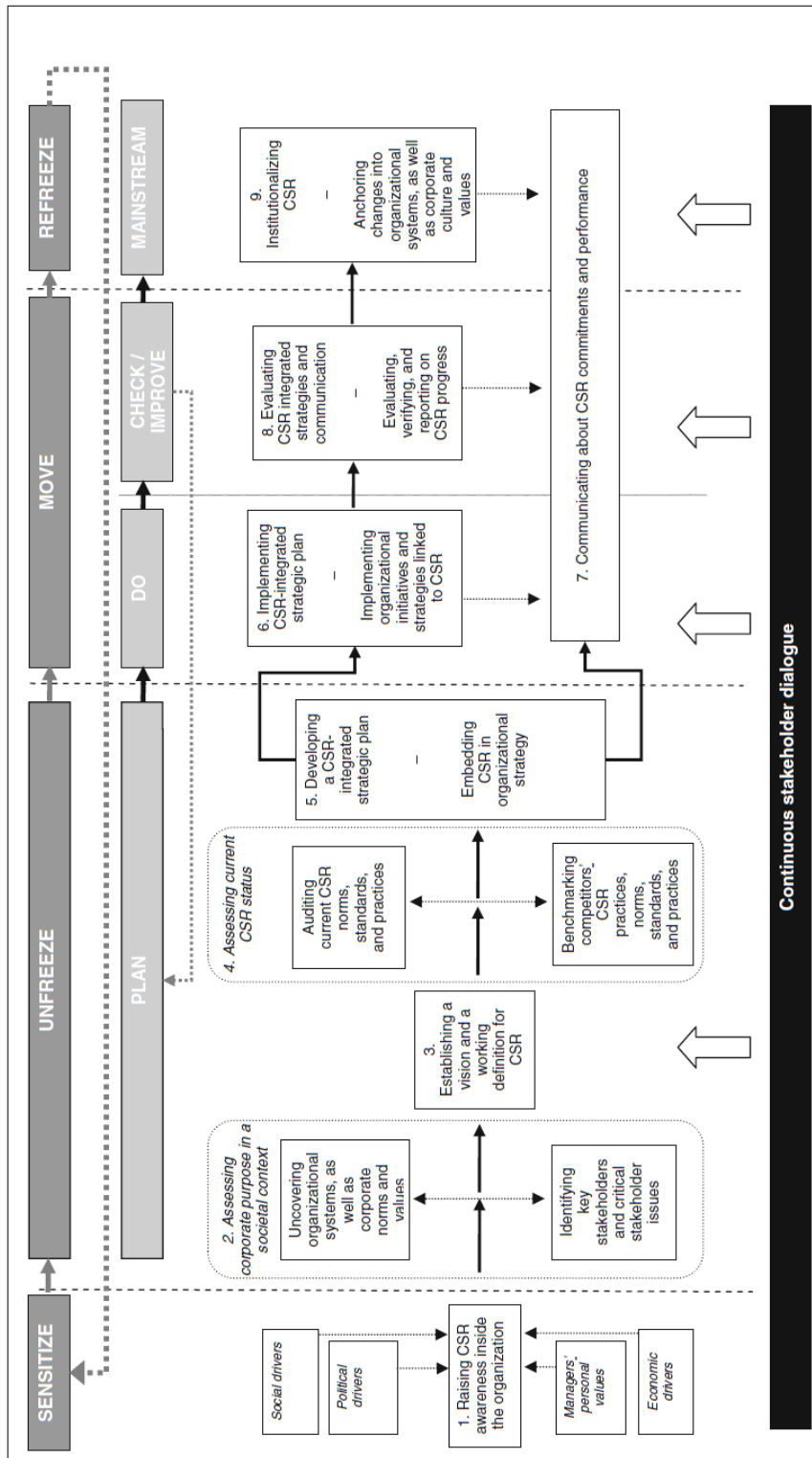
Figure 16 - CS implementation framework

Source: Maon et al. (2009:77)

The main findings by Maon et al. (2009) of each step will be summarized shortly in the following points:

1. *Raising CSR awareness inside the organization*: Four main drivers (economic, social, political, and individual) for the first step were identified that help putting CSR on the corporate agenda. With regard to the role of the 'individual' the importance of a visionary CEO was pointed out (Agle et al., 1999). However, beside this top-down initiation, also bottom-up implementation starting from the employee side was stated as a realistic option.

2. *Assessing Corporate purpose in its societal context:* It was emphasised that a successful strategy has to be aligned with the corporate values, norms and mission and thus reinforce positive behaviour (Van Lee et al., 2004). It has to be the ultimate goal to transform a target-driven behaviour into a value-driven one. Furthermore, in step 2, all relevant stakeholders are supposed to be identified and especially this step often leads to confusion and difficulties.

3. *Establishing a vision and working definition of CSR*: The main goal of the next step is to develop a vision that is constructive, socially/environmentally responsible and compatible with the long-term strategic goals.

4. *Assessing the current CSR status:* This step can be carried out by the help of intensive data and documentation analysis within the company. For this assessment the SA8000 or the GRI can serve as a valuable support. Moreover, benchmarking with CSR strategies and initiatives of competitors should be carried out.

5. *Developing a CSR-integrated strategic plan:* Often CSR is only defined on paper but not fully integrated into the operational level of a company. This gap is meant to be filled during step 5 and a plan developed that has concrete elements to be carried out for the business operations (Walker, 2005).

6. *Implementing the CSR-integrated strategic plan:* The implementation is mainly carried out by the employees of a company and thus especially well-functioning internal communication is a vital factor that has to be ensured from the beginning on. In detail the strategy and its implications have to be explained to the middle management and the employees. Awareness- and understanding of CSR can be fostered by internal trainings.

7. *Communication about CSR commitments and performance:* Internal- as well as external communication can be carried out by the help of an annual report about the achieved goals and carried out initiatives. Also brochures and sections on the corporate homepage turned out to be successful initiatives for the communication process.

8. *Evaluating CSR-integrated strategies and communication:* The evaluation of the carried out initiatives by means of measuring, verifying and reporting is the follow-up step that ensures continuous improvement. It is suggested to assess barriers and success factors as well in order to learn from them. External audits are seen as a fruitful way of rather un-bias evaluation.

9. *Institutionalizing CSR:* Regarding the institutionalization of the previously defined initiatives, it has to be ensured that CSR becomes part of the corporate culture and that thus further resources are invested into maintaining the programs. This could also mean that rewards or penalties are introduced.

Continuous stakeholder dialogue:
Since the entire stakeholder dimension is one of the central elements of CS, it is stated by Maon et al. (2009) explicitly that this dialogue can help companies significantly to identify the main issues that need to be addressed to create a long-term win-win situation. Examples of a close dialogue with NGOs were made that helped IKEA for instance to improve its strategy drastically. Especially, the maintenance of relationship is important.

Based on the literature analysis it can be concluded that helpful frameworks/guidelines were developed in the academic community that were also verified with real world companies. Since the underlying empirical data (three case studies) for the framework by Maon et al. (2009) for example was relatively small, it remains questionable whether the same steps were also encountered by a majority of companies. However, it is

important to mention that the frameworks were not developed to visualize how companies have implemented sustainability retrospectively but rather support newcomers during their implementation process. In order to test this however, longitudinal studies have to be carried out in which a company uses those specific guidelines actively and then provides feedback about the suitability and encountered challenges that have to be taken into account to optimize the framework.

3.2 Typical sustainability initiatives and success factors of companies

Since CS is understood, operationalized and implemented very differently within different organizations, the following chapter aims at providing examples about what concrete sustainability initiatives can be found within organizations and which factors/conditions have led to success during the implementation process. Despite the fact that CS is often used and applied in a customized way, many companies tend to use very similar initiatives to operationalize their strategy (UNEP, 2002). According to an empirical study carried out by Holton et al. (2010) most interviewed companies started their sustainability endeavour with the compliance approach in which ISO 14001 is most often used as a basis for an EMS[13]. This management system ensured them a continuous (environmental) performance improvement and the first steps towards a more environmentally aware culture. However, as stated by Holton et al. (2010), this phase lead to a significant bias towards eco-efficiency but the missing consideration of socio-efficiency. This gap was filled in each case company by a later stage of broadening the sustainability focus on human resources and needs. The senior management commitment towards CS was an essential success factor and especially the introduction of change agents with the various levels of an organization ensured the gradual but constant change. However, Holton et al. (2010) stated as well that in the analysed companies, the change process till this point was manageable in an incremental way but any improvement from this point onwards would very likely require "transformational change and strategic repositioning". The following table summarises typical CS initiatives that can also be understood as success factors which were encountered by empirical studies carried out by Holton et al. (2010) [a] and Russo & Tencti (2008) [b]. The initiatives were divided into environmental, employee oriented, supply chain/B2B and community/society related activities.

Table 3 - Typical CS activities in SMEs

Environmental	Employees	Supply chain/B2B	Community/society
Implementation of ISO14001[a]	Investments in people and training programs [a]	Open house policy for customers, suppliers and competitors to look around [b]	Work with local schools on projects e.g., working with children with learning difficulties [a]
Waste minimisation, re-use and recycling schemes [a]	Flat management structures [b]	Directors of business associations [a]	Donate percentage of profits to charity [a]
Reduction in use of harmful chemicals [a]	Creation of good work-life balance and family friendly employment [a]	Seeking to develop long-term partnerships with customers and suppliers [b]	Supporting local homeless people [b]

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[13] Explanaition of EMS

Reduction in atmospheric emissions [a]	Employee newsletters [a]	Supplier learning schemes [a]	Sponsorship of local sports teams [a]
Use energy from renewable sources [a]	Social events for staff [b]	Measurement of key performance indicators and feedback to staff, customers and suppliers [a]	Involvement in awards schemes for young people [b]
Membership of environmental organisations [a]	Employees sent to developing countries to undertake community projects [a]	Winners of industry awards e.g., world class manufacturing or service industry excellence [a]	Time banks for employees to work in the community [b]
Investment in new technology [a]	Award winning training and development programmes for employees [a]	Support and encouragement for suppliers to become more socially responsible [b]	Social auditing [b]
Environmental reporting [a]	Employment of older and disabled people [a]	Take part in industry best practice programmes [a]	Employ people from the local community [a]
Award winning environmental schemes [a]	One to one mentoring of employees [a]	Inside U.K. enterprise scheme [b]	Working on community projects in developing countries [b]
Reduction of material and resource consumption [b]	360° appraisal schemes [a]	Implementation of the ISO 9001 Quality standard [a]	Work experience placements [b]
Pollution reduction [b]	Integrative medical care [b]		Award winning community engagement programmes [a]
Noise reduction [b]	Flexible working time [b]		Cause-related marketing [b]
Packaging recovery [b]	Employee training [b]		Volunteering [b]

Source: Holton et al. (2010) [a]; Russo & Tencti (2008) [b]

These activities should serve as an example for concrete actions carried out but the table cannot claim to be complete. Based on the data it becomes however clear that companies are already trying to improve their sustainability strategy in many different areas and that the activities range from rather easy-to-implement ones like volunteering, being part of environmental organizations or employee newsletters to relatively (technically and managerially) demanding activities like reduction of material/resource consumption or changes of management structures.

With regard to **success factors**, Martinuzzi et al. (2010) have investigated in their empirical analysis and literature research, three main categories of factors. First, the *market based factors,* then the *resource based* ones and finally the *relational factors.* The following table provides a short overview about concrete identified characteristics about the chosen strategies that have helped the companies to succeed with their CSS. All mentioned aspects can be understood as being success factors if the characteristics are present. A company with environmentally friendly products benefits for example from market entry barriers that are related to market requirements that demand 'sustainable products' and thus keep out 'unsustainable' competitors. Bio-products in the grocery stores are one concrete example.

Table 4 - Identified success factors categorized in three categories

Market Based View	Resource Based View	Relational View
• Market entry barriers • High product quality • Cost leadership strategies • Low production costs and low labour costs • Brand value and reputation • Good value for money • Differentiation strategy • Niche market strategies • Flexibility and fast response to market changes	• Financial resources • Human resources and organizational culture • Efficient processes • Technologies and machines • Research & Development • Access to raw materials • Location • Information, control systems, and effective risk management	• Strategic alliances and networks • Efficient supply chain management • Free-trade areas • Good relations to policy makers and • stakeholder groups • Customer relations • Excellent customer service

Source: Martinuzzi et al. (2010:15)

In this chapter it was pointed out that the respective initiatives carried out by companies are often very specific ones that would only be applicable to particular companies (for example specific pollution prevention activities). However, other initiatives like employee trainings and newsletters can be applied by every company thus this summary can serve as a basis for inspiration. Also the mentioned success factors give indications about how companies should set their own priorities in order to develop those factors actively. Especially, factors like using differentiation strategies or choosing a beneficial location can actively be guided. However, other mentioned success factors like the availability of financial resources or brand value can not only actively be created and are rather dependent as well on external factors/conditions.

3.3   Difficulties, barriers and challenges during the implementation

When talking about CS implementation, a variety of partly general and partly company specific challenges/barriers during the implementation process occur. The following part intends to provide an overview about those.

One of the largest challenge is to make companies understand that the benefits of implementing CS are not purely economic ones and thus cannot always be measured in financial terms (Lankoski, 2008). Generally, the scientific community seems to agree, that CS implementation is a long-term oriented and strategically challenging approach that requires practitioners to think holistically and in an interconnected way (Azapagic, 2003). In this connection, another major challenge is that the CEOs and the senior management have to understand the true value and importance of CS and thus enable change agents to carry out the required processes (Griffiths, 2003). According to Griffiths (2003) the typical sub-sequential phases of CS implementation with regard to common barriers that occur during them are:

Table 5 - Common barriers and challenges encountered in different phases of CS implementation

Phase	Description
Rejection	Sustainability is rejected due to short term gains in other fields, often resulting from externalization of costs
Non-responsiveness	Often a result of a lack of awareness or ignorance. Importance of sustainability is ignored

Compliance	Most changes are reactive due to external expectations or requirements
Efficiency	Realization phase of further advantages and direct representation in the financial performance
Strategic proactivity	Ambitions to benefit from further gains and moving beyond the business as usual scenarios
The sustaining corporation	The 'ultimate' goal. Just a few companies have made it that far. All three pillars of sustainability are fully embedded in the corporate culture and basis of the value system

Source: Griffiths (2003)

For many companies the (a) **organizational challenges** are vast and especially, within a constantly changing environment, where the role of governments gets redefined and responsibilities less clear, a continuous adjustment of strategy and actions is necessary (D'Amato et al., 2009). The times when companies were able to act only upon their own agenda and regulations as well as stakeholder demands were hardly available are over. In the current business world and the field of sustainability the 'needs and demands' of stakeholders like "consumers, employees, national as well as international regulators, watchdogs, NGOs, and activist groups have to be satisfied" (Hatcher, 2002). According to McGaw (2005), it requires new forms of leadership for this sustainable global society in order to provide the positive change that is necessary.

However, it is not necessarily the case that companies are not willing to implement meaningful strategies and initiatives but rather that they are struggling with the definition and development of those sustainability strategies. According to Searcy (2011) the most relevant reasons are the sustainability goals are often pluralistic and ambiguous. Thus it is often not clear what exactly is meant and therefore the content of the initiatives is uncertain and no clear understanding exists. Next to these challenges, (b) **concrete barriers** can be found in the literature. According to Azapagic (2003), Bivona & Daza (2009) and Paramanathan et al. (2004) common barriers are:

➢ Not convinced senior management
➢ No available staff, time and resources
➢ Financial priorities, rendering everything else (hence for example sustainability) less important
➢ Difficulties in expressing/measuring the benefits of sustainability in monetary terms
➢ Pay-back times longer than usual with 'sustainability projects'
➢ Lack of awareness and understanding of the principles of sustainable development and what can be done on the practical level
➢ Changing the attitude of employees and customers
➢ Disconnectedness from company goals [if not well integrated into the core business strategy]

Vasilenko & Arbačiauskas (2012) have analysed further barriers during the implementation process of sustainable innovations in particular. However, it is likely that several of those barriers also apply for the general CS strategy. Since innovations do not necessarily need to be of technical nature, but rather describe novel ways of doing something, the following figure is applicable also for the strategy level of a corporation. It becomes clear that especially 'human factors' like personnel, information, examples, etc. seem to play a major role and not that much the technical barriers.
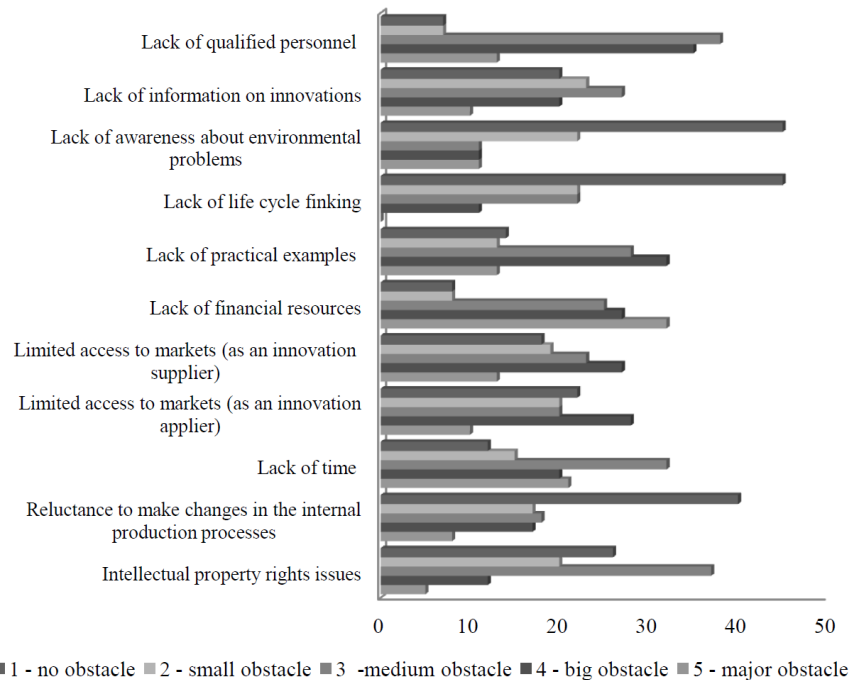
Figure 17 - Obstacles for development and implementation of sustainable innovations

Source: Vasilenko & Arbačiauskas (2012:60)

3.4   The role and functions of consultancies

As elaborated on in the previous chapters, CS implementation in not necessarily a trivial process and especially for companies that do not have the human resources, the challenges of 'sense making' and successful implementation of their CSS are vast (Van der Heijden et al., 2010). Frameworks do not necessarily provide the companies with all the necessary information and furthermore, customized solutions for industry specific challenges are required additionally as well. Thus, the support of specialized consultancies for sustainability challenges is increasing and the following chapter intends to provide better insights into the potential role and functions of consultancies (Martinuzzi et al., 2002). Based on the underlying literature review of this research it can be concluded that the subject of consultancies in the field of CS is a rather weakly researched one and thus not too many papers are published about it.

As stated by Martinuzzi et al. (2002) the consulting sector provides significant added value for the challenges companies are facing but is so far not yet connected sufficiently to the European strategy about sustainable development. In general, the need is seen to align the goals of the EU with regard to SD better with how consultancies are advising companies and also with the target settings of companies themselves (European Commission, 2011). However, in order to understand in the first place, which functions consultancies can have in the field, the following table, which is based on Martinuzzi et al. (2002) provides a short overview of functions consultancies fulfil:

Table 6 - The main fuctions of Consultancies

Information and sensitisation functions	Consultancies can play a major role in emphasising market needs and developments and thus sensitize the market for new development.
Networking function	Especially due to the fact that consultancies operate within many different enterprises and get to know their specific functions and needs, they have a major role for network building and identifying complementary needs and offers of companies. This could for example be the support for initiation regional networks with Eco-Industrial Park ambitions.
Dissemination function	Due to the great market overview of consultancies, especially with respect to new technologies, they can play a major role in awareness creation and know-how transfer of those technologies into SME which often do not have the overview and capabilities.
Optimisation function	Consultancies often have the advantage of being experienced with optimization processes due to their specific knowledge base and can thus realize relatively quickly cost-cutting processes that foster the efficiency of a company.
Knowledge function	The special role of consultancies to be not locked-in into the mind-set and typical constraints of companies enables them to establish new positions and lines of thinking that could help companies to overcome their barriers. Due to their external role and 'helicopter view' new tools, measures and strategies can be found easier since a better objectivity is given.
Moderation function	Since consultancies remain independent within every business relation, their role can thus also become more the one of an intermediate in conflict situations within a company or between a company and public entities. Thus, their moderation function can help to improve stakeholder relations.

Source: Martinuzzi et al. (2002)

Due to their specific functions mentioned above consultancies can be seen as important supporters for the implementation process of CS. It is not argued that they play an indispensable role for every company, but rather that their expert knowledge and objectivity could help understanding the challenges and necessary follow-up steps in a better way. However, despite the potentially important role of consultancies for the fostering of sustainable development, they also create problems and new barriers. The following table by Martinuzzi et al. (2002) will provide a short overview about those:

Table 7 - Problems and barriers caused by consultancies

Know-how as a central factor of production	Since the main 'product' of consultancies is the knowledge transfer, which cannot be patented and thus not protected, it is unlikely that this knowledge will be freely distributed. Due to the fact that consultancies want to maintain their competitive advantage, they also slow down the knowledge transfer to external parties.
Highly dynamic and in-transparent market	The entry barriers for the consultancy market are relatively low and thus this market is continuously changing and highly fragmented. So far only in a few European countries organized lists that provide an overview about specialized Sustainability Consultancies exist and thus companies have to rely on recommendation and the word of mouth. The risk of employing an inexperienced consultancy is thus relatively high.

Ambiguity of client expectations	Clients usually want to have a customized solution for their specific needs and problems that ensures them a competitive advantage over their competitors. This often leads to high competition in the consultancy market and often promises are given by the consultants in the proposal phase that cannot be met in practice.
Reduction of scientific knowledge	Since consultancies often consider only the benefit of their client and not necessarily the societal needs their consideration of academic papers about the overall ambitions of sustainable development are often overseen. Many scientific findings are thus used only in a limited way. Furthermore, the general exchange between consultancies and academics is surprisingly low. However, due to academic publication, conferences and the employment of university graduates some counter developments can be seen.
No transparent quality measures	Quality measurement is a highly difficult task within the consultancy business and thus through self-legitimisation many unsatisfying advice are given that discredit the concept of SD as a whole.

Source: Martinuzzi et al. (2002)

To conclude, the role of consultancies is seen by the researcher as a very central one in the field of CS implementation due to the fact that specialized and experienced consultancies are often able to understand the broader context and thus the challenges a company is facing in a better way and therefore have a rather objective perspective on what is needed. Experiences made with previous clients can significantly help to speed up the implementation process of CS and especially their network functions are seen as important benefits with regards to the potential connection of two or more companies in a symbiotic way. For this research, consultancies are especially regarded as important elements due to the fact that interviews that will be described in a later stage provide the researcher with an external perspective on the implementation process and thus reduce the bias that is created by purely interviewing companies. However, consultancies should not be seen as the essential success factor for CS implementation as such since various problems are inherent in their role as well (see Table 7). Finally, the choice whether consultancies shall be employed to support the implementation process is a subjective and case specific one which highly depends on the available resources of an organisation as well as on the challenges encountered as such. A major disadvantage, seen by the researcher is as well that the consultancy advice might be understood as an external input and thus not entirely embraced by the company. As stated also by Hardjone & De Klein (2004) CSS will be more effective if it is based on intrinsic motivation instead of external input.

The following joint part of this thesis aims at describing, analysing and assessing specific sustainability approaches by the help of the developed methodology which will be explained as well. **All those following approaches can be understood as concrete ways of implementing sustainability into an organization**. However, most of the approaches do differ in many respects and especially the underlying philosophy and goals are dissimilar. Thus this thesis continues to narrow down the subject of CS implementation to a more concrete level.

Joint part of Master Thesis

Written jointly by Thomas Jankov & Sonja Koehler

4. Mapping Corporate Sustainability Approaches

Within the subject area of CS, various approaches have been developed throughout the last decades and all of them aim at being (at least partly) the corporate response to the severe sustainability challenges companies are facing. The great amount of sustainability approaches that managers can access has resulted in more confusion and uncertainty on how to implement a feasible CSS (Van den Brink & van der Woerd, 2004, p.187; Waage et al., 2005). There is thus a clear need to provide a structure, in which to assess and compare sustainability approaches to facilitate an improved overview. Such an overview will be most beneficial if it decodes the different drivers and characteristics behind the approaches (Lozano, 2012b). Therefore, in this chapter a mapping methodology will be developed that can serve these aims. Moreover, identifying an academically sound way of matching specific tools with specific approaches could offer great value for companies, as there is still a lack of understanding of how sustainability approaches such as CSR can be successfully implemented by the support of selected tools in practice (Waage et al., 2005; Van den Brink & van der Woerd, 2004, p.187). In this research, tools are only considered as concrete elements of approaches which support the operational execution of them but will not be considered in further detail. The 'house of corporate sustainability' can serve as visualization. Principles and philosophies stand for the underlying values and ideologies that the approaches are built upon.
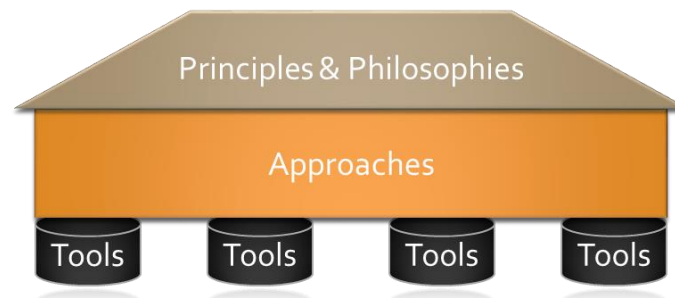
Figure 18 - House of Corporate Sustainability

The main goal of this joint research part will consequently be to develop a mapping methodology, to assess seven sample approaches within this methodology and compare the findings with each other. Furthermore, the potential practical application of the methodology in research and practice will be elaborated on. Lastly, this methodology will be used in a later stage of the individual empirical research to connect theory and practice.

4.1   Terminology

Within the discipline of sustainability, a vast number of different terms have been developed for ideas, which are in reality often very similar. This scientific 'jungle' is not always beneficial for carrying out conceptual research (Dahlsrud, 2008). What is described by one author as an initiative might for example be described by another author as a concept. The following figure is not intending to provide a novel way of classifying this scientific terminology and neither it is argued that all frameworks, strategies, theories, etc. are always 'approaches' in the conventional understanding, instead its intention is to provide clarity to the reader on how these terms are understood for this research. In particular, a clear differentiation of what is seen here as an approach and what as a tool is essential to the reader's understanding of the developed methodology. Figure 19 shows the differentiation that was made.
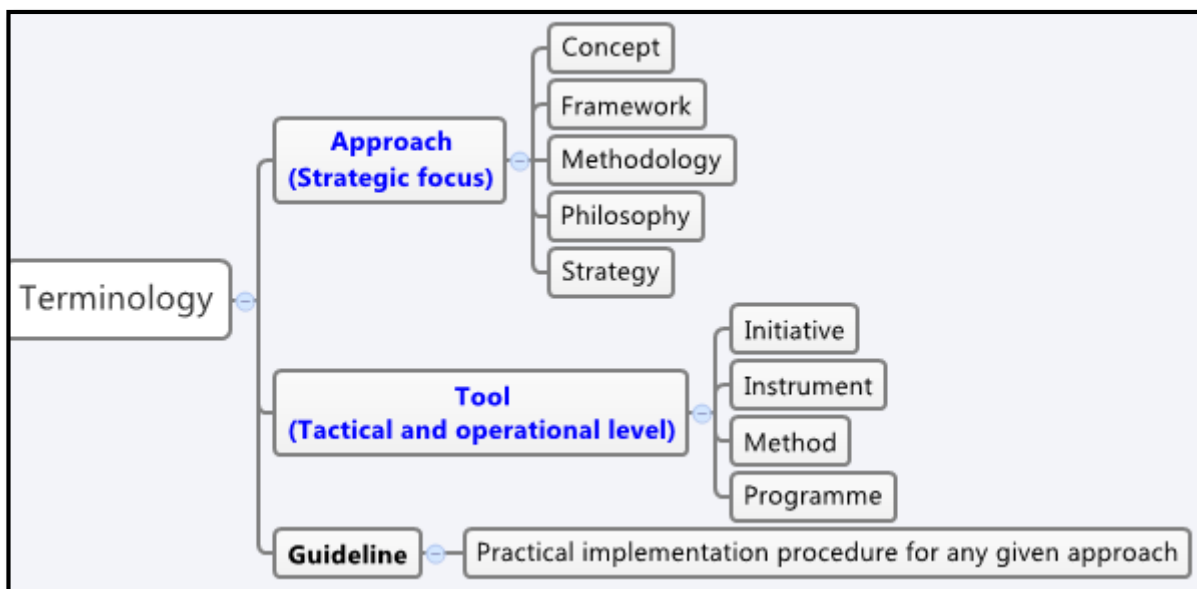
Figure 19 - Categorization of used terminology

The uncertainty about terminology meaning is not only a barrier for academics but often even more so for practitioners. As stated by Waage et al. (2005), many corporate decision-makers struggle to develop a clear understanding of sustainability and its surrounding concepts (principles, strategies, guidelines to name just a few), which has severe consequences for the implementation of sustainability strategies in the corporate world.

Generally, management theory makes a distinction between the strategic, tactical and operational level on which management actions are taken (Schmidt & Wilhelm, 1999). However, in this research, it was chosen to use only a two-fold structure, in which the division between *approaches* (strategic, long-term and rather 'broad' focus) and *tools* (specific, practical ways of carrying out the intended plan) was made (see Figure 19). The mapping methodology aims at assessing only the approaches (strategic focus) and is not meant to be applicable for the assessment of tools (tactical and operational level). However, in this research the academic distinction between the tactical and operational level is not relevant and thus not elaborated on in further

detail. In future research, it could however be useful to further split the 'tools' section up into tactical and operational tools in order to serve the needs of practitioners during the implementation process better.

The mapping methodology will be developed with the intention to assess sustainability approaches. Guidelines however, are not meant to be assessed since they often do not entail a concrete philosophy and are rather seen as supporting instrument to implement certain approaches. Thus, they are not seen as belonging to either one of the previous two categories (approaches and tools), because they ideally describe the process of corporate sustainability implementation and therefore are the transformation and consolidation of approaches and tools into an inclusive and practical application.

4.1.1 Approaches

According to the Oxford dictionary, an approach is defined as "a way of dealing with a situation or problem".[14] This simple definition confirms the suitability of the term 'approach' since the most prominent sustainability approaches were developed in order to deal with sustainability challenges. Thus, an approach will be seen as an umbrella term for concepts, frameworks, methodologies, philosophies, strategies and theories. Even though the precise definitions for the previous terms are not necessary for understanding the mapping-methodology which will be presented later on, they might be important for further research and evaluation of new approaches and will be provided in the following. A **concept** is defined in the business dictionary[15] as "the reasoning behind an idea, strategy, or proposal with particular emphasis placed on the benefits brought on by that idea". Thus, a concept describes and explains the why and how question behind ideas, strategies or proposals in order to point out the benefits of it. Especially, the 'benefit' notion is of central importance within sustainability approaches since there exists still some doubt in the business community about the (financial) benefits of CS (Lankoski, 2008). **Frameworks** can have significantly different characteristics throughout the scientific debate but are generally seen as abstract guidelines that can help directing through a research field. According to the USC Library[16], frameworks are defined as: "the structure and support that may be used as both the launching point and the on-going guidelines for investigating a research problem". Another term of importance is **methodology**, according to Charvat "a methodology is a set of guidelines or principles that can be tailored and applied to a specific situation" (2003, p.3). Specialized in the field of project management, he further elaborates that this might be captured in the form of "a specific approach, templates, forms, and even checklists used over the product life cycle" (2003, p.3). According to the Business Dictionary[17], a **strategy** is defined as: "a method or plan chosen to bring about a desired future, such as achievement of a goal or solution to a problem". Thus, certain strategies could aim specifically at fostering corporate sustainability through a chosen plan and can therefore be seen as approaches as well.

As became clear from all given definitions, the terms are all focused on strategic elements and thus match the understanding of the umbrella term of 'approach'.

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[14] http://oxforddictionaries.com/definition/english/approach
[15] http://www.businessdictionary.com/definition/concept.html
[16] http://libguides.usc.edu/content.php?pid=83009&sid=2772758
[17] http://www.businessdictionary.com/definition/strategy.html

4.1.2 Tools

It has been established in the last section that a sustainability approach constitutes a strategic thought model, which provides underlying values and serves as an orientation for the way in which sustainability (which is then also defined according to the approaches' values and principles) can be approximated. Change, however, will only take place if the strategic thought model is supported and carried out with the assistance of tools on the tactical and operational level (Hardjono & de Klein, 2004). In order to select relevant tools for the implementation of sustainability approaches, it has to be clarified at the beginning what can be understood as a tool.

A tool is defined by business dictionary[18] as "an item or implement used for a specific purpose". This purpose can be seen in this research as for example the support of the practical implementation of a specific sustainability approach. In other words, the authors define a tool for this purpose as an instrument or method used to achieve a certain goal. The array of tools for corporate sustainability is very broad and may for instance refer to tools that manage environmental risks or concerns, e.g. a Life Cycle Assessment (LCA), the strategy development, e.g. a Sustainability Balanced Scorecard (SBSC), or social concerns, e.g. motivational workshops. Since this research will not elaborate on specific tools, an overview about common tool categories with relation to sustainability approaches will be provided:

- **Accounting** tools (e.g. Life cycle costing)
- **Assessment** tools (e.g. Driving Forces-Pressures-State-Impacts-Responses Framework)
- **Human Resources** tools (e.g. Internal Success Stories, confidential person)
- **Communication** tools (e.g. Social Media, Sustainable Marketing)
- **Controlling** tools (e.g. (Sustainability) Balanced Scorecard
- **Creativity** tools (e.g. Brainstorming, Six thinking hats)
- **Decision making** tools (e.g. Grid analysis, Pareto analysis)
- **Problem solving** tools (e.g. Cause & Effect diagrams, flow charts)
- **Project management** tools (e.g. Gantt charts)
- **Real estate assessment** tools (e.g. Building Research Establishment Environmental Assessment Method)
- **Strategy finding** tools (e.g. Decision trees, Porter's five forces, SWOT)

Obviously, more tool categories exist and further research about those as well as the connections between tools and sustainability approaches is highly recommended. Many business tools were not specifically developed to serve the needs of implementing sustainability approaches but rather for a general purpose within the business context. Connecting those with specific sustainability approaches is seen by the authors as a next step towards operationalizing CS in a more successful way.

It has now been clarified what can fall under the term sustainability approach as well as a tool. After the approaches have been collected, selected according to relevance and analysed, they will be mapped with the help of an axes-scheme. This will illustrate the different aims and key characteristics of the approaches, which

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[18] http://www.businessdictionary.com/definition/tool.html

can then be used for the following purposes, the (1) creation of an overview and increased understanding, (2) a gap analysis of ambitions and achievements by companies, (3) a comparison of how companies see and apply approaches and how it is seen by academia, (4) as a quick assessment tool to create a baseline for decision-making and lastly (5) for a discrepancy analysis between theory and practice.

4.2 Introducing seven selected Sustainability Approaches

The following table (sorted by hits in Scopus) provides an overview about the most prominent approaches within the field of sustainability and their search hits on prominent academic search engines. This selection is not claimed to be complete but rather to symbolize the range of concepts that exists. The pre-selection of the list is based on the appearance of approaches in the sustainability literature (see for example Robért, 2000; Lozano, 2012b). In order to increase the precision of the findings, each term was searched with quotation marks.[19]

Table 8 - Sustainability approaches and the number of hits in Scopus, Jstor, google scholar and the 'web of knowledge'

Approach	Scopus (search in title, abstract, keywords)	JSTOR	Google scholar Netherlands	Web of Knowledge
Corporate Social Responsibility	4203	4629	140000	3504
Life-cycle (Management)	2360	233	27300	711
Environmental Management Systems	2119	483	26000	578
Zero Emissions	1775	187	23300	306
Cleaner Production	1667	288	42500	764
Industrial Ecology	1425	733	30200	1057
Eco-Efficiency	1042	296	22700	768
Footprint Analysis	989	356	13100	690
Triple Bottom Line	568	403	24500	322
Biomimicry	347	130	6680	303
Design for the Environment	187	80	4180	115
Cradle to Cradle	143	80	6240	62
The Natural Step (Framework)	88	1549	24400	48
Natural Capitalism	27	182	4240	27
Radical Industrialist	1	7	87	1

(Retrieved on 29.01.2013).

Table 8 shows how many search hits each pre-selected approach received in Scopus, Jstor, Google scholar and Web of knowledge. The intention was to choose the first seven highest-ranked approaches (as a higher number would go beyond the scope of this research) as sample approaches to be mapped. The colours in the table illustrate the amount of hits, red colours meaning a very low amount of hits, up to green colours that

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[19] When putting a term in quotation marks when using a search engine, it is assured that the term or sentence as a whole will be searched for exactly as it is written, instead of for example also showing results which relate to only one of the words that belong to the term.

indicate a large number of hits[20]. As any type of search engine exhibits biases, e.g. due to their target readers it was decided to use a number of different search engines in order to be able to detect biases and to purify the ranking results of such and in order to show that the seven chosen approaches are indeed the most prominent ones. However, after the search was carried out and the number of search hits collected it became clear that there were large differences in the number of hits for various approaches (see e.g. the natural step). Moreover, judging from accumulated knowledge and experience in sustainability science the search result for some approaches actually seemed not to be representing their relevance entirely. This may be due to a number of reasons, such as terminology (various terms used for one approach) or a differing attention to an approach in management as opposed to scientific literature. In fact, this very exercise provided a good reflection of the state of diffuse and overwhelming information on sustainability approaches as discussed in the introduction. In the end it was decided to select seven approaches from the list based to some extent on the number of hits, but also on the personal opinion of the researchers. After all the mapping methodology that will be developed in section 4.3 aims to be applicable to all approaches that are available and even such that will still be developed. To give an example, Life-cycle management was left out as it is a very relevant approach mostly in its practical terms, but less with regards to the underlying ideology which the mapping aims to identify. The Natural Step, however, will be analysed as it has played a crucial role in particular in the early beginnings of the sustainable development movement. The seven approaches indicated in bold writing in the table that were chosen and will be discussed in the following are: Cleaner Production (CP), Corporate Social Responsibility (CSR), Cradle to Cradle (C2C), Eco-Efficiency (EE), Environmental Management Systems (EMS), The Natural Step (TNS) and the Triple Bottom Line (TBL).

4.2.1 Cleaner Production (CP)

Authors and year

The emergence of cleaner production (CP) can be seen to have taken place in the 1970s (Baas, 2005,). At that time industry pollution control became a major concern and technological engineering solutions were developed (ibid.). In the 1980s, various international organisations as well as governments, and in particular the American Environmental Protection Agency (EPA), the Dutch government and Dutch universities, supported efforts of the development of environmental technology. Thereby these institutions took the technology of pollution control to a next level, which was termed clean technology (ibid.; Dieleman, 2007). In the 1980s and 1990s, many different authorities, industry and independent experts contributed to the development of the cleaner production concept (Baas, 2005). Eventually, the dissemination of the concept and thus its rising importance took place under the auspices of the United Nations Environmental Programme (UNEP) (Dieleman, 2007). In the academic world, the Journal of Cleaner Production that was founded in 1993 by Donald Huisingh has contributed to the evolution of the CP concept (Elsevier, 2013).

Core philosophy

UNEP is commonly credited with having provided the first definition of cleaner production (Hilson, 2003).

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[20] The colours were always calculated by the automatic function in Excel in relative comparison within each search engine

"CP is the continuous application of an integrated preventative environmental strategy to processes, products and services to increase efficiency and reduce risks to humans and the environment." (Unido website, n.d.)

The CP approach rests on the concept of the four Rs: Reduce, Recycle, Reuse and Reformulate (Shah, n.d).

Short description

In the early stages of the CP concept development, it was often described as an environmental strategy that could substitute for traditional pollution control (Hilson, 2003). The programme puts a focus on developing countries by way of exhibiting great efforts to make technologies available „in order to assist developing nations in leapfrogging from pollution to less pollution." (Pauli, 2011). Today cleaner production is mostly seen as a sustainability approach that aims to reduce the environmental impact in processes and product development (Lozano 2012b, p.17: Glavič and Lukman, 2007; Pauli, 1997). This is being achieved through creating awareness (Fresner, 1998) for preventive strategies that focus on minimising harmful impacts to society and environment and on efficient resource use (Lozano 2012b) by detecting the sources of waste and emissions and through the definition of programmes that reduce and monitor these (Fresner, 1998). Cleaner Production is based on 4 guiding principles: the (1) precaution principle, (2) integration principle, (3) democratic principle and (4) the continuity principle[21] (Lei et al., n.d.). The main tools for CP are internal recycling, the substitution of harmful materials, a better education of and communication between employees and in particular material and energy flow management (Fresner, 1998) to facilitate modifications of products themselves as well as the production processes to reduce waste and emissions as far as possible (ibid.). Some authors extended the concept to include changes in the soft level such as company culture and organisational changes (Lozano 2012b: see Baumgartner and Zielowski, 2007; DeSimone and Popoff, 2000). Nevertheless, CP has a clear focus on the environmental sustainability dimension, while aiming to improve the financial situation as well (Lozano 2012b). The people dimension finds less regard within the CP concept (ibid.). The sustainability approach of 'zero emissions' is closely related to CP and Gunther Pauli, who introduced the concept of 'zero emissions', describes the goal of CP to be one of zero waste (ibid.).

Reflection/Criticism

The environmental focus of the cleaner production approach can lead to a lack of consideration of the role of the people within the CSS development. Moreover, the time dimension in CP is only implicitly mentioned, in form of a call for continuous CP strategies (ibid.).

4.2.2 Corporate <u>Social</u> Responsibility (CSR)

Authors and year

The first formal definition of CSR is attributed to Howard Bowen provided in his book "Social Responsibilities of the Businessman" in 1953 (Dahlsrud, 2008, p.2). However, an uncounted number of CSR definitions have been coined since then. Overviews are provided by e.g. Dahlsrud (2008) or Carroll (1999). It is thus difficult to

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[21] (1) the precautionary principle stands for prevention; (2) the integration principle calls for adopting a "holistic view of the production cycle"; (3) the democratic principle requires the involvement of employees in the development; (4) the continuity principle, stands for a process without an end-point, which thus requires continuous improvements

attribute the CSR approach to sustainable development in companies to a specific selection of authors. According to a frequency count search in google performed by Dahlsrud (2008, p.7), the CSR definition of the European Commission is currently the one most frequently used, followed by the definition provided by the World Business Council for Sustainable Development (WBCSD).

Core philosophy

CSR is a way for businesses to contribute to sustainable economic development, while taking into account stakeholder concerns (WBCSD, 1999).

Short description

The CSR definition of the European Commission reads

> *"A concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis" (2001).*

The definition is one of the CSR definitions that do mention the economic, social and environmental dimension. However, in a majority of cases the latter is not seen as part of CSR (Dahlsrud, 2008). This is the case in the second most frequently used definition of CSR by the WBCSD, which states that CSR is

> *"the commitment of business to contribute to sustainable economic development, working with employees, their families, the local community and society at large to improve their quality of life" (1999).*

For this research purpose, the second definition will be considered the core philosophy of CSR and thus CSR with a focus on the social pillar will be representing this sustainability approach. This is meant to facilitate the categorization of this approach and is justified as it represents the majority of CSR understandings.

Reflection/criticism

CSR can be attested a bias towards economic and social concerns, with a certain disregard of the third sustainability dimension, the environment. CSR is a social construct, which is thus context-specific (Dahlsrud, 2008). There is, therefore, no global definition of CSR and it is a concept, which undergoes a continuous process of change and adaption. It is thus of importance to keep the restrictive focus of the mapped CSR approach in mind, in particular when a link to companies is constructed.

4.2.3   Cradle to Cradle (C2C)

Authors and year

The concept of Cradle to Cradle (C2C) emerged out of a cooperation between the American architect William McDonough and the German chemist Michael Braungart in the early 1990s (Chick, 1997, p.97). Based on design principles developed by McDonough and Braungart's idea of an environmentally sound product life cycle, the three C2C principles 'waste equals food', 'use current solar income' and 'respect diversity', which later became 'celebrate diversity' (see e.g. McDonough et al., 2003), were developed (Chick, 1997, p.97).

Core philosophy

Out of this emerged an elaborate approach, which was published in the book 'Cradle to Cradle – Remaking the Way We Make Things'. It calls for the transformation of human industry through ecologically intelligent design (Braungart & McDonough, 2009). This process is seen to take place in 5 steps:

(1) **Free of … [specific substance]**

(2) **Personal preferences**

(3) **The passive positive list**

(4) **The active positive list**

(5) **Reinvention**

(McDonough & Braungart, 2001a, 2001b, 2001c; Braungart et al., 2007)

Beginning with the elimination of undesired substances (step 1), eventually a list of desirable substances is to be created (step 4) in order to reinvent products to "optimally fulfil the need or needs for which they are actually intended while simultaneously being supportive of ecological and social systems" (Braungart et al., 2007, p.1337)

Short description

The development of the Cradle to Cradle (C2C) concept takes the cradle-to-grave thinking on which LCAs are based one step further. It can be seen as a response to the dominance of the concept of eco-efficiency as a driving product and service development (Reay et al., 2011). Eco-efficiency in the eyes of cradle to cradle supporters aims only at making products 'less bad'. The C2C philosophy, however, is based on the production of goods that are not just 'not bad' for the environment, but have in fact positive externalities (Braungart & McDonough, 2009). While LCAs commonly assume an end of the product life cycle, C2C, aims at reintroducing all used materials back into the technological or biological nutrients cycle (ibid.). Therefore, in the C2C perspective 'waste equals food' (MBDC, n.d.). Hereby, C2C puts a great emphasis on the abolishment of the usage of any hazardous substances (Eppinger 2011, p.400).

Reflection/criticism

A publication by the Dutch Ministry of Infrastructure and the Environment (2011) assessed the value of C2C in connection with LCAs and found that due to different value-based assumptions and the incorporation of a nutrient cycle in the C2C approach the two cannot be used in an integrated manner, but instead have to be applied separately. This is an important criticism as in practice many companies still see the two as very closely related. A study by Reay et al. (2011) studied the feasibility of C2C on a broad scale and found that the concept of 'waste equals food' can be contested based on the question where humanity would put all the created organic waste. Moreover, questions are raised regarding its radical propagation of 'nature' as ideal model on how human production should work.

4.2.4 Eco-Efficiency (EE)

Authors and year

According to Ehrenfeld (2005) the concept of eco-efficiency was first described by Schaltegger and Sturm (1989) and brought to broader public awareness in the subsequently published Schmidheiny's *Changing Course* (1992). Von Weizsäcker (1995) built upon the concept of eco-efficiency in his book: 'Factor Four:

Doubling Wealth, Halving Resource Use'. The World Business Council for Sustainable Development contributed to the optimization and a clarified the definition of the concept (WBCSD, 2002).

Core philosophy

The core philosophy of eco-efficiency is to generate business profits by becoming more efficient in areas of environmental concern and thus increase the economic performance simultaneously (Etkins, 2005).

Short description

Eco-efficiency is one of the most commonly used approaches companies choose to become sustainable. However, this choice is often made unconsciously which can be explained with the deep integration of efficiency thinking in conventional business management. Most 'quick-wins' can be achieved by optimizing production processes, which - in most cases - also brings financial benefits. Being more energy efficient or using fewer materials for the production process while simultaneously delivering a constant product quality provides at the same time a positive impact on the balance sheet (Aall & Husabø, 2010; Huppes & Ishikawa, 2005). Holliday et al. (2002) work out four main principles of eco-efficiency which are described as: (1) Dematerialization, (2) Circular economy thinking; (3) Servitization of products and (4) Product upgrades in order to add new functionalities.

Reflection/criticism

As simple and clear as the approach is, from a strong sustainability perspective, it does contain several drawbacks. Lozano (2012b) summarized the main points of criticism to the following four points. (1) Eco-efficiency is based on the standard economic theory model which also means that a certain abundance of resources is assumed and growth does not pose any problem. Therefore, if even all companies would become 'eco-efficient', the economic growth would lead to the exceeding of the planet's carrying capacity (Ehrenfeld, 2005). (2) Furthermore, the concept is criticized for its relativity[22] or rebound effects which will eventually result in a worsened situation. If companies save energy in one process it can result in adding more energy consuming processes at other places (Korhonen, 2003). (3) Another major drawback of the approach is the lack of the social dimension, which however is compensated by the later developed concept of socio-efficiency. However, in order to account for the lack, an actor would need to take both concepts into consideration in order to embrace the environmental as well as the social dimension. Eco-efficiency as such does not do this (Ehrenfeld, 2005). However, a combined approach does not exist. (4) As several other approaches, also eco-efficiency is lacking the explicit consideration of the time dimension and is not always easy to be proven beneficial for the direct fostering of the financial performance. Benefits are more often to be found in the eco-innovation area which might result in a later stage in an improved economic performance (Korhonen, 2003). Especially, for the first and third point of criticism, the idea of eco-/socio-efficiency were developed further and turned into 'effectiveness' concepts in order to incorporate the notion of the 'limits to

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[22] Relativity in this context can be seen as the problem of saving relatively more resources by the introduction of certain new technologies that however require other (maybe non-materialistic) resources that were not necessary before. A combination with LCC could thus be a solution.

growth' into new approaches and thus shall not be seen as part of the general Eco-efficiency approach anymore.

4.2.5 Environmental Management Systems (EMS)

Authors and year

The origin of environmental management systems (EMS) can be seen as one of industry's self-regulation responses[23] to the command-and-control instruments that were developed around the globe in industrialized countries in the 1970s to legislate environmental impact (Dieleman, 2007). A major international actor in the EMS field is the International Organisation for Standardization (ISO), founded in 1947. ISO created first working committees for the environmental field in 1971 and in 1987 the first quality management standard, which eventually became the ISO 9000 family (ISO Website, 2013). In the 1980s, notably also the inclusion of environmental risk in the due diligence[24] approach in the US contributed to the emergence of EMS, as well as environmental protection developments in European countries, for example in the Netherlands, where the Dutch business organisation VNO-NCW[25] developed an 'intern gericht milieuzorgsysteem', thus an internal EMS (Bremmers, 2006, p.97). In 1995, the European Union developed EMAS, which stands for Eco-Management and Audit Scheme (EMAS, 2012). In accordance with EMAS, the British Standards Institution (BSI) developed the Environmental Standard BS 7750 (Spedding, 2009, p.551), which was then superseded by the ISO standard 14001 with the intention of broadening the scope of the standard to an international level (Spedding, 2009, p.546, p.552).

Core philosophy

Environmental management systems represent standardized approaches or certifications that facilitate a comprehensive management of a company's influence on the environment. In many cases the systems encompass internal and external audits, which are meant to verify a company's compliance with and commitment to the environmental management.

Short description

As the name says, EMS aim to facilitate the management of environmental factors and impact. This often means making use of a formal system or database which organises the information on products and process within a company and their influence on environmental performance. The information is then used to report to stakeholders and the public (Melnyk et al., 2003, p.332).

The probably most prominent way of certification for companies in the field of environmental and quality management has emerged to become the ISO certifications (Dieleman, 2007; Sroufe & Curkovic, 2008). ISO has already published more than 19000 international standards (ISO website, 2012a). The motivation for its establishment has been "to facilitate the international coordination and unification of industrial standards"

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[23] Life-Cycle Assessments, Cleaner Production, Eco-design and several other concepts can also be seen to be a response to this legislative developments (Dieleman, 2007, p.80).

[24] Due diligence refers to investigations and procedures that take place before a business transactions (Environmental Insurance and Risk Management Tools Glossary of Terms, 2013)

[25] VNO-NCW is a fusion of the Verbond van Nederlandse Ondernemingen and Nederlands Christelijk Werkgeversverbond

(ibid.). The most important standards for corporate sustainability are the ISO 9000 family and the ISO 14000 family concerned with environmental management. The standards "provide a model to follow when setting up and operating a management system" (ISO website, 2012b). They are thus useful for providing structure to a company that aims to integrate more environmental, social or quality concerns.

Reflection/criticism

The problem that arises with EMS is the freedom that they leave to the implementing company with regards to specifics, for example how to weigh environmental data (Ahlroth et al., 2011). While EMS provide a complete framework on guidelines on how to deal with environmental issues, in reality, their effectiveness has diminished, because many companies only use EMS to write down, organise information and to possess the certification (Takakusa, 2005, p.34). The effectiveness of an EMS is related to the motivation behind its implementation (for the case of ISO9001: Sroufe & Curcovix, 2008). Collecting sustainability information is certainly a first important step, but not sufficient for a corporate sustainability strategy if it is not followed up with action (Zobel, 2013) and more importantly exhibits no influence on the company's mind-set. Thus, using an EMS can provide a significant step towards CS if it is applied correctly and thoroughly.

4.2.6 The Natural Step (TNS)

Authors and year

The Natural Step framework was developed by the Swedish oncologist Karl-Henrik Robèrt in the late 1989 and the approach was developed from then on together with scientific institutions in Sweden into the Natural Step not-for-profit organization (Burns, 1999).

Core philosophy

The core idea of the TNS (framework) is to redirect the attention of practitioners to the necessity of changing organizational structures as well as decision-making towards socio-economic sustainability with the support of a funnel metaphor and back-casting techniques which help to evolve towards an envisioned future scenario (Burns, 1999; Robèrt; 2000, Upham, 2000).

Short description

Besides its role as an international education organization, the Natural Step (TNS) is presented as a framework that guides public as well as corporate representatives towards socio-ecological sustainability. The main goal is to create awareness for thinking within cause-effect chains instead of tackling only the symptoms of sustainability problems. Central to the TNS is the concept of 'back-casting' which describes the idea that a desirable future should be envisioned and based on this, the following steps be made. Every action within the TNS should incorporate the four following sustainability principles (Robèrt, 2000; Skov, 2004):

1. End of extraction of substances from the earth's crust in a faster pace than they can be reproduced
2. End of production of substances by society in a faster rate than they can be broken down and integrated into the earth crust again
3. Degradation by physical means has to stop in order to stop the systematic diminishing of ecosystems
4. Conditions that systematically undermine people's capacity to meet their needs with the most efficient methods possible

This initial version was later optimized by Ny et al. (2006) in order to emphasize the importance of embracing the long-term challenges as well as economic considerations. This suggests that a combination of TNS with Life Cycle Management would be promising (ibid.). The most prominent corporations that claim to use the TNS are Interface, Collins Pine Company, Scandic Hotels and IKEA (Upham, 2000). With back-casting the time-dimension is included in the framework (Robèrt, 2000).

Reflection/criticism

Even though TNS can be seen as a promising framework for awareness creation as well as practical implications for organizations, its focus has a bias towards the environmental dimension and could have stronger linkages to societal needs. At least in the original version, the economic dimension is rather passively addressed. Furthermore, Upham (2000) has extensively analysed the framework's advantages and disadvantages. He showed that especially implicit reasoning, value judgements and the assumption of zero growth on a physical scale are rather undesirable characteristics.

4.2.7 Triple Bottom Line (TBL)

Authors and year

The triple bottom line (TBL) was developed by the Institute of Social and Ethical Accountability but also coined by John Elkington[26] in his 1998 book "Cannibals with Forks: the Triple Bottom Line of 21st Century Business" (Jamali, 2006).

Core philosophy

At the centre of the TBL approach stands the idea of incorporating socially and environmentally responsible behaviour into business practices with the aim to align those in order to achieve also financial gains and an overall improved performance as well as value creation on all three pillars (Gimenez et al., 2012). The TBL framework should furthermore help to measure and report about sustainability against these three parameters (Jamali, 2006).

Short description

Several researchers have shown in the past that businesses are often surprised when their environmental management activities turn out to deliver financial rewards (Bansal, 2005) – an attitude that can still be encountered today. However, this is changing with the integration and acceptance of concepts such as the TBL into organisations. The underlying idea is to question the way companies carry out their actions with regard to sustainability principles and thus provide support for an optimized performance in all three pillars (people, planet, and profit). The TBL can be seen as a strategic tool that should help to bear in mind the necessity of value creation in all three levels during every decision making process and thus to instrumentalize and deeply embed this line of thinking into a company (Mowat, 2002, Jamali, 2006). According to Archel et al. (2008), the GRI is the best and most adequate reporting method that has fully incorporated the TBL principles. Companies are required to report on all three pillars in a thorough way.

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[26] http://www.iisd.org/business/tools/principles_triple.asp

Reflection/criticism

The main criticism of the concept, however, is that it is rather value-based and remains quite abstract and is thus difficult to implement into corporate routines. In addition to that there is not clear recommendation set with respect to how the three pillars of the TBL should be valued and balanced with each other (Lozano, 2012b). Archel et al. (2008) investigated in their study the practicability of the TBL for reporting purposes with a special regard to boundary setting and concluded that companies are still struggling significantly with setting proper reporting boundaries. Furthermore, they pointed out that reporting on the TBL 'in accordance with the GRI' might pose a danger in reputational loss if the GRI itself undergoes criticism which would thus be also reflected on the company itself. Lastly, the TBL does not explicitly address the time factor which makes it a contestable approach (Lozano, 2012b).

4.3   Axes development and mapping methodology (MoCSAs)

In order to assess/map the approaches as described in Chapter 4.2 a methodology (**M**apping **o**f **C**orporate **S**ustainability **A**pproache**s**) was developed. This methodology is intended to be able to map current as well as upcoming sustainability approaches that contain strategic characteristics. The selected characteristics can also serve to map the current situation and future intention of a company. For sustainability tools the mapping methodology can probably not provide a complete picture. It can, however, still be used to improve understanding of the linkage of certain tools to certain approaches. In order to identify the core characteristics of those approaches, the following key questions were identified:

Scope/Vision?	• Which scope does a sustainability approach have and how visionary does it get? • Meant to assess the depth and level of development of the vision
Why?	• Assessing the reasons why this approach opts for sustainability (motivation)
What?	• Insights into which actions are carried out to implement the approach • What is done excactly?
How?	• How is the approach implemented on an organizational level?
Where?	•This question referes to where the CS policy may apply to in a stakeholder distance-circle map (Corporation internal, Shareholder, Stakeholders)
When?	•The time dimension considered during the implementation process. Which role do future considerations play?

Figure 20 - Core aspects of characterizing approaches

By asking these questions, specific details about each approach can be identified. However, sometimes, the answer has to be found in-between the lines of the official description or even be left open. Specific sub-questions for each of the main questions will be provided in order to gain more detailed information about the characteristics of the approaches. The general goal is to carry out a qualitative mapping where the

visualized answers provide even further insights into the approaches. Thus, an axes-based mapping model which is extended by an x- and y- axis serves this need the best. The following figure shows how this will look like:
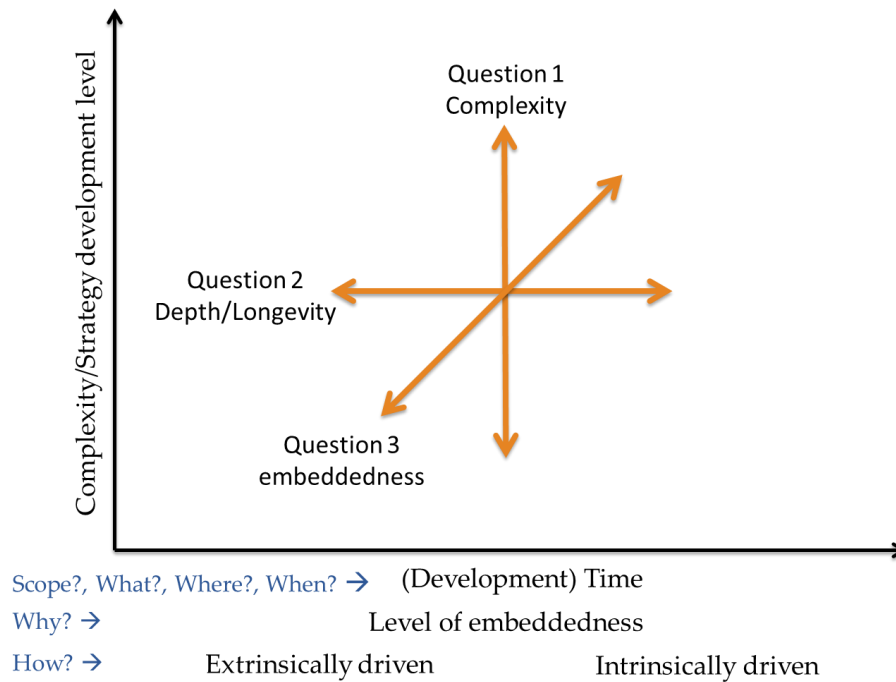
Figure 21 - Mapping methodology

On the x-axis adjustments for the "Why" and "How" questions had to be made in order to provide a logical structure. It should be stated clearly, that this mapping methodology is not of quantitative nature and it is also not supposed to be able to map an approach on specific places on the coordinate system. A decision has to be made between the answer pairs (1+2; 3+4; 5+6). Not in all cases it will be possible to decide clearly in favour of one of the answers and these axes will then be left empty in the map. The following figure will show all six question-systems.

Figure 22 - Overview about the six aspects and constructing sub-aspects as separate poles
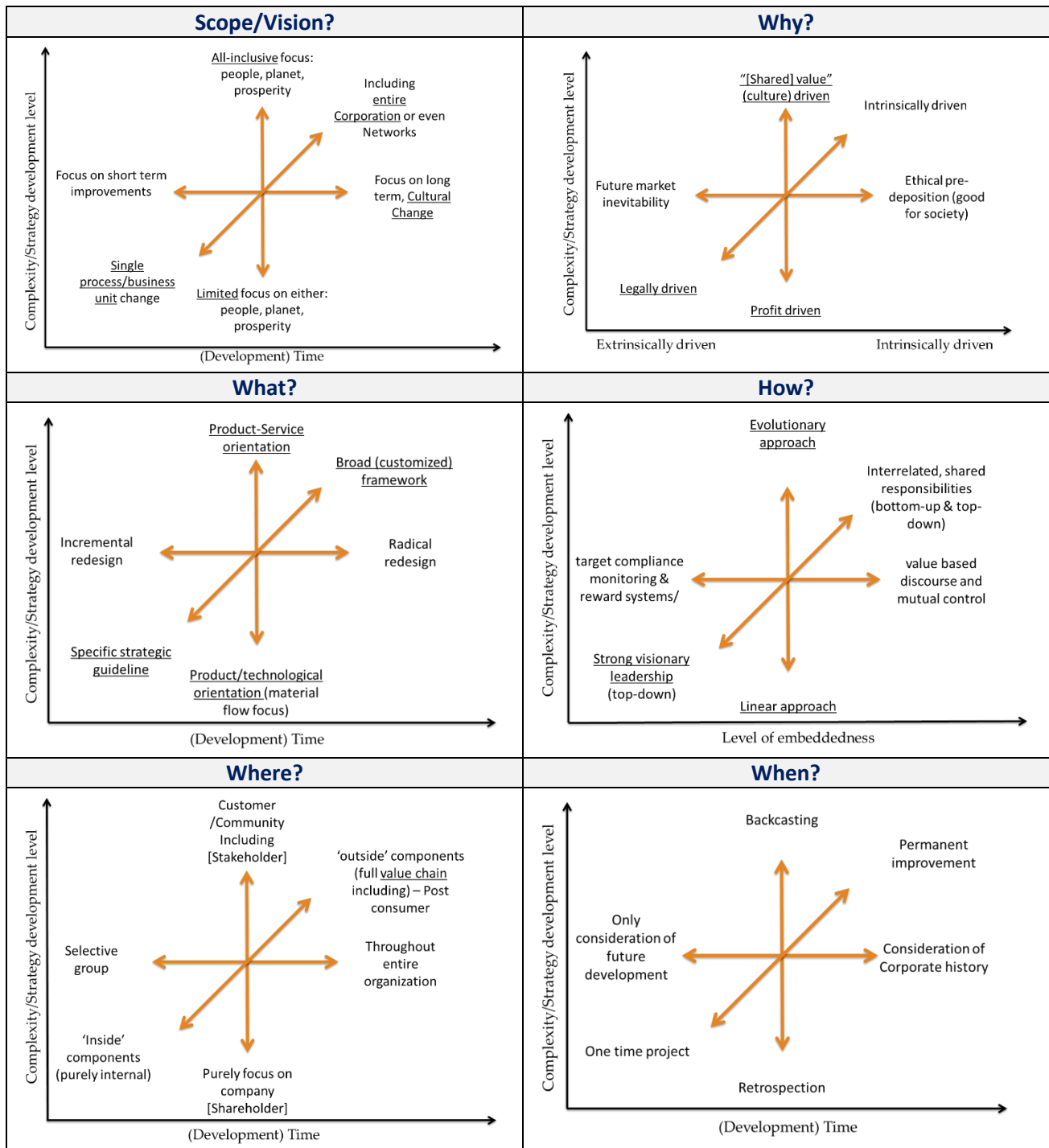
Since some questions are rather self-explanatory but others are not, the following table will provide a more detailed description of the intention and content of each question. Each pair of grey and white lines can be seen as a question pair where only one answer (see explanation column) can be given.

Table 9 - Detailed explanation of each question

Dimension	Explanation	Question
Scope	All-inclusive focus: people, planet, prosperity	Are all three dimensions considered?
Scope	Limited focus on either: people, planet, prosperity	Are only one or two dimensions addressed? And even if all three are originally mentioned, does a bias towards one or two exist?
Scope	Focus on short term improvements	Is the main goal short term improvements?
Scope	Focus on long term, cultural change	Is long-term, cultural change intended?
Scope	Single process/business unit change	Is only one single process or business unit addressed to be 'changed'?
Scope	Including entire corporation or even networks	Is the entire corporation or even the corporate network addressed to be 'changed'?
Why	"[Shared] value" (culture) driven	Is the reason for application based on values?
Why	Profit driven	Are profit gains the main driver for the application?
Why	Future market inevitability	Has the approach been developed because of anticipated future market inevitability?
Why	Ethical pre-deposition (good for society)	Has the approach developed due to ethical reasoning?
Why	Legally driven	Did the approach originate due to legal obligations?
Why	Intrinsically driven	Did the approach originate due to intrinsic motivation?
What	Product-Service orientation	Does the approach incorporate or envision a development towards servitization?
What	Product/technological orientation (material flow focus)	Does the approach have a dominant focus on the product and production technology?
What	Incremental redesign	Does the approach require incremental redesign of processes?
What	Radical redesign	Does the approach require a radical redesign of processes?
What	Specific strategic guideline	Can the approach rather be seen as a specific strategic guidelinei?
What	Broad (customized) framework	Can the approach rather be seen as a broad customized framework which needs to be deeply embedded?
How	Circular/evolutionary approach	Is the approach meant to be continuously assessed and improved in a circular manner?
How	Linear approach	Is the approach seen as a linear process of implementation?
How	Target compliance monitoring & reward systems	Is the success of the approach controlled by monitoring and reward systems?
How	Value based discourse and mutual control	Is the success envisioned by value based discourse and mutual control?
How	Strong visionary leadership (top-down)	Is the approach intended to be initiated by strong (top-down) leadership styles?
How	Interrelated, shared responsibilities (bottom-up & top-down)	Is the approach intended to be initiated by shared responsibilities (bottom-up & top-down)?
Where	Customer /Community Including [Stakeholder]	Are customers and indirectly affected stakeholders considered in the approach?

Where	Purely focus on company [Shareholder]	Does the approach mainly aim at the shareholder and thus internal focus of a company?
Where	Selective group	Does only a selective group within the company benefit/is affected from/by the approach?
Where	Throughout entire organisation	Does the approach address a company wide application?
Where	'Inside' components (purely internal)	Are mainly internal processes considered by the approach?
Where	'Outside' components (full value chain including) – Post consumer	Is the entire value chain considered by the approach?
When	Back- casting	Is a future goal envisioned and the path to get there defined after the goal is set?
When	Retrospection	Is the starting point of the strategy development the current situation with consideration of available resources?
When	Only consideration of future development	Is the company history irrelevant for the approach?
When	Consideration of Corporate history	Is it intended to consider the company history for follow-up steps?
When	One time project	Is the application of the approach meant to be a one-time implementation?
When	Permanent improvement	Is the application of the approach meant to be permanently improved and adjusted?

4.4   Mapping of selected sustainability approaches

In order to be able to compare the seven selected approaches in an illustrative way, they have been visualized in the axes system in this chapter. Based on the sources analysed to describe the approaches in the previous part, the mapping was conducted. In most cases clear answers and thus positions on the axis were given. However, in some cases the authors of the selected sustainability approaches did not elaborate on specific questions from the mapping methodology and thus the mapping position had to be based on interpretations of the underlying philosophy and mind set of each approach. In order to make the line of argumentation clear for the reader, one example (Cradle to Cradle) for how the mapping was carried out will be explained in further detail. However, due to time and space limitations, only the mapping itself will be presented for the other six approaches.

Cradle 2 Cradle sample mapping
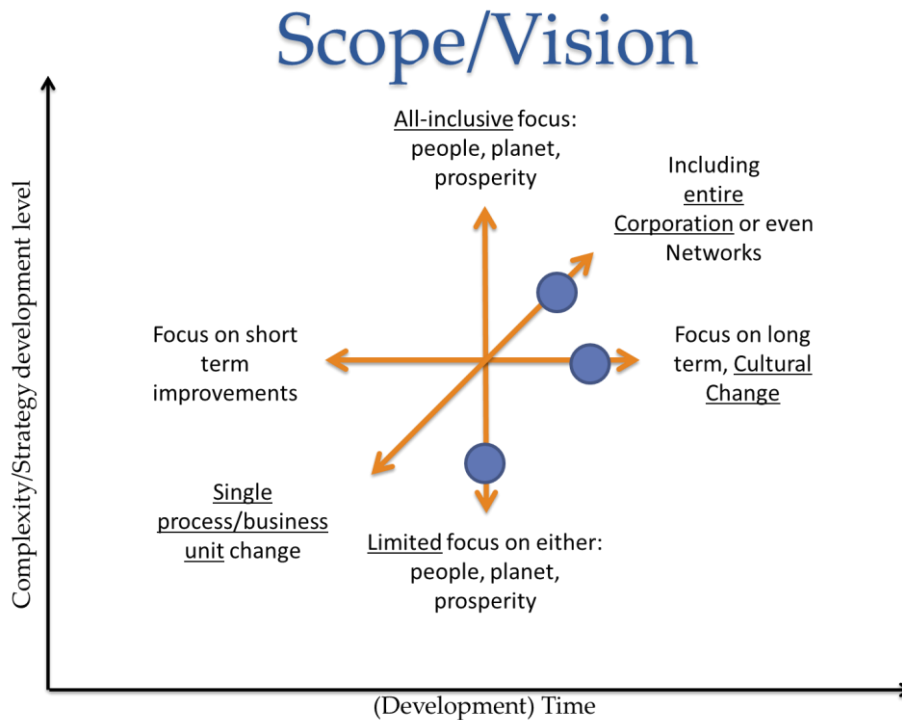
Figure 23 - Scope and Vision of C2C

Are all three dimensions considered OR are only one or two dimensions addressed? And even if all three are originally mentioned, does a bias towards one or two exist?

C2C has a strong focus on material characteristics and technical as well as biological nutrients and thus on the 'planet'. However, it is also clearly stated that the changes are meant to create financial gains. Also 'people' play a role in C2C, as for instance the whole purpose of using save chemicals is also to protect public health. Moreover, work environment considerations can play a role in C2C approaches. In general, however, the people dimension is rather subordinated in the C2C thinking (Braungart & McDonough, 2009).

Is the main goal short term improvements OR is long-term, cultural change intended?

C2C is meant as a new industrial revolution; in fact it has been called an industrial evolution, which clearly entails the call for cultural change in the long-term (Braungart & McDonough, 2009).

Is only one single process or business unit addressed to be 'changed' OR is the entire corporation or even the corporate network addressed to be 'changed'?

C2C cannot, or at least should not be applied to only one isolated process within a company, as its underlying philosophy propagates the consideration of the whole supply chain (Braungart & McDonough, 2009).
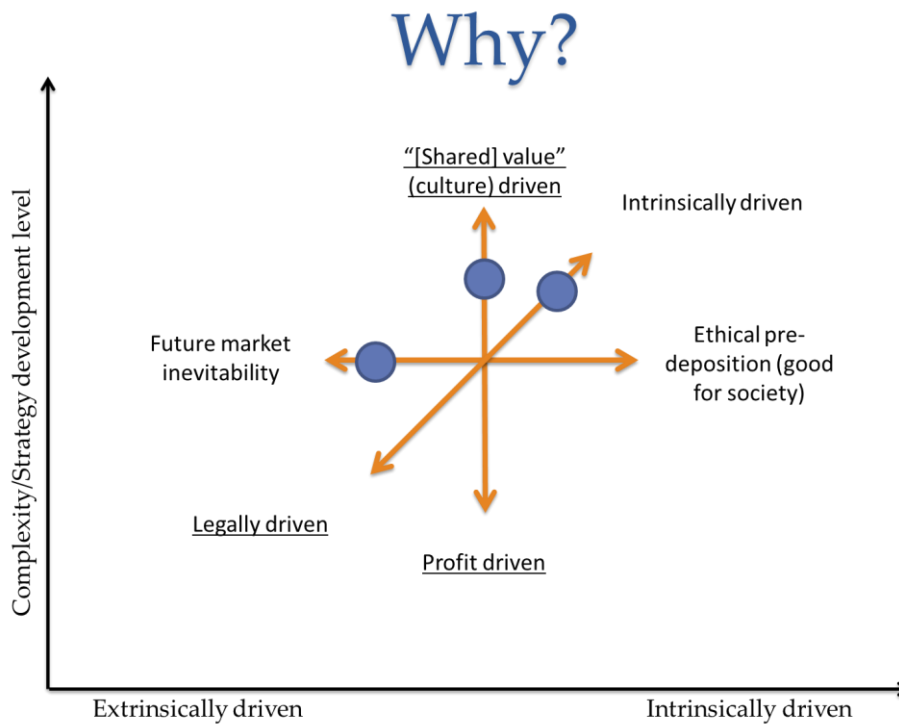
Figure 24 - Why does C2C promote sustainability?

Is the reason for application based on values OR are profit gains the main driver for the application?

This question cannot be answered in an 'either or way' since both aspects are fundamental drivers of the concept. C2C aims to come along with profit gains, however, the ideology is very much driven by the values and beliefs that stand behind the approach (Braungart & McDonough, 2009). Thus, it is rather a question that has to be answered by the applicants and is therefore context specific. In the analysed literature no clear motives that would justify the mapping for only one side of the questions were found.

Has the approach been developed because of anticipated future market inevitability OR has the approach developed due to ethical reasoning?

C2C is concerned with scarcity and wasting resources; with this concern the prospect of a future world that cannot shoulder its obligations anymore arises. It is hence proposed that it is crucial to reduce waste and create healthy products. A part of this reasoning is that all nutrients are supposed to remain within the system (Braungart & McDonough, 2009). Thus the reasoning is rather based on future requirements than on purely altruistic drivers.

Did the approach originate due to legal obligations OR did the approach originate due to intrinsic motivation?

By aiming to completely eliminate bad materials and creating a list of good materials, instead of just banning these which are considered toxic now (as e.g. according to REACH), C2C goes far beyond legal requirements and has a clearly intrinsically driven development (Braungart & McDonough, 2009).
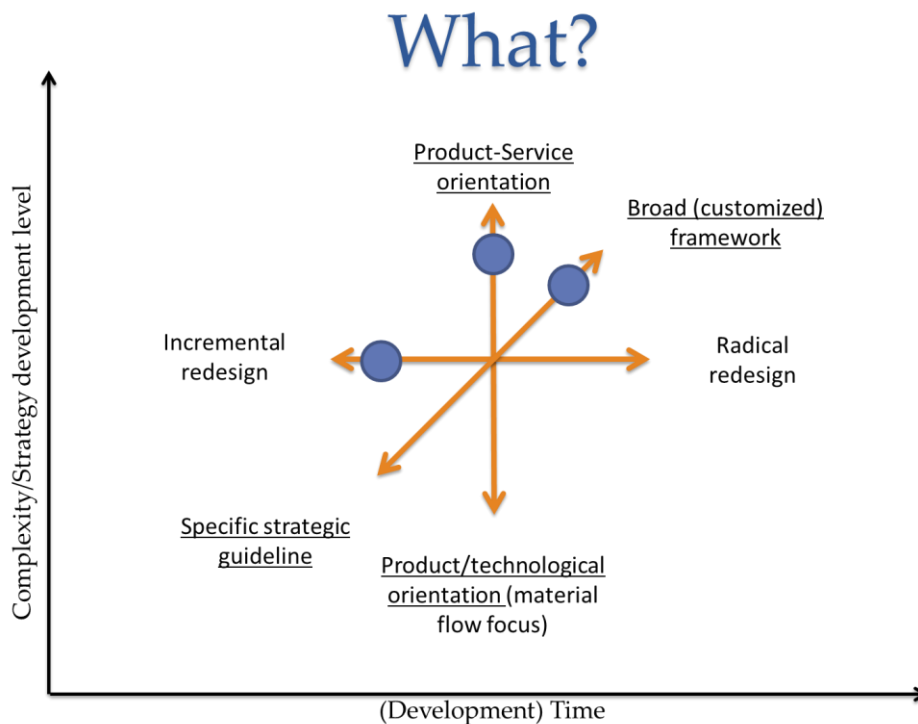
Figure 25 - What is being done when implementing C2C?

Does the approach incorporate or envision a development towards servitization[27] OR does the approach have a dominant focus on the product and production technology?

One of the main characteristics of the C2C approach is the continuous use of materials within their nutrient cycles (Braungart & McDonough, 2009). This thinking requires take-back-policies and a close connection and communication with the customers. The orientation thus goes beyond the mere product.

Does the approach require incremental redesign of processes OR does the approach require a radical redesign of processes?

C2C's five steps as mentioned above start with incremental steps, but the aim is to actually in the end create a completely new product (McDonough & Braungart, 2001a, 2001b, 2001c; Braungart et al., 2007). The approach therefore calls for a disruptive redesign.

Can the approach rather be seen as a specific strategic guideline OR can the approach rather be seen as a broad customized framework which needs to be deeply embedded?

C2C is often used as a practical tool similar to an LCA (Reay et al., 2011), but the proponents of C2C actually want it to gain a deep embeddedness within the whole corporation and thus for it to be implemented on the strategic level.

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[27] Describes the tendency of on-going growth of the service component behind manufacturing and production processes. Former products are continuously altered in the direction of becoming services.
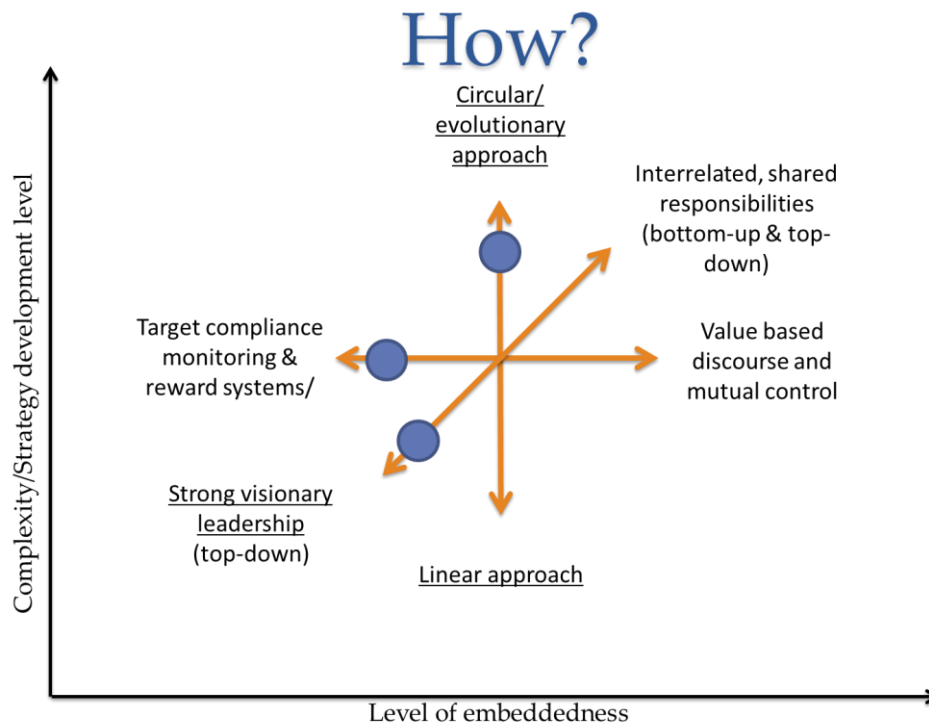
Figure 26 - How is C2C implemented on an organisational level?

Is the approach meant to be continuously assessed and improved in a circular manner OR is the approach seen as a linear process of implementation?

According to Braungart et al. (2007) the C2C philosophy of creating positive externalities is inherent to the approach. One might think in that case that once a product line is altered towards C2C principles, no further improvement in a circular manner would be necessary. However, since the ultimate goal is to move from efficiency gains to effectiveness gains, there is no limit to finding and applying new materials, processes etc. (e.g. with the help of the positive materials list) that provide an even more positive impact. Thus, when applying C2C to an organization, a continuous assessment of C2C products is desired.

Is the success of the approach controlled by monitoring and reward systems OR is the success envisioned by value-based discourse and mutual control?

C2C is an approach that has been made certifiable by its members and while it is also allowed to state ones ambition to produce according to C2C principles, the certification of C2C products by the C2C Products Innovation Institute (Cradle to Cradle Products Innovation Institute, 2011) represents a compliance, monitoring and reward system.

Is the approach intended to be initiated by strong (top-down) leadership styles OR is the approach intended to be initiated by shared responsibilities (bottom-up & top-down)?

Since C2C is clearly located in the production and design department of companies and since those departments fulfil core functions within a company, bottom up change of those processes is often unlikely. Fundamental changes within business processes are in most cases only possible if the top management agrees on them and sees the added value. Thus the approach is realistically meant to be initiated and implemented

with a strong top-down structure. However, this does not mean that the middle management and the operational workers should not be informed or integrated in the process either. On the contrary, the more the entire organization understands and believes in the philosophy, the more motivated will every employee be to support the process as well (**McDonough & Braungart, 2001a, 2001b, 2001c).**
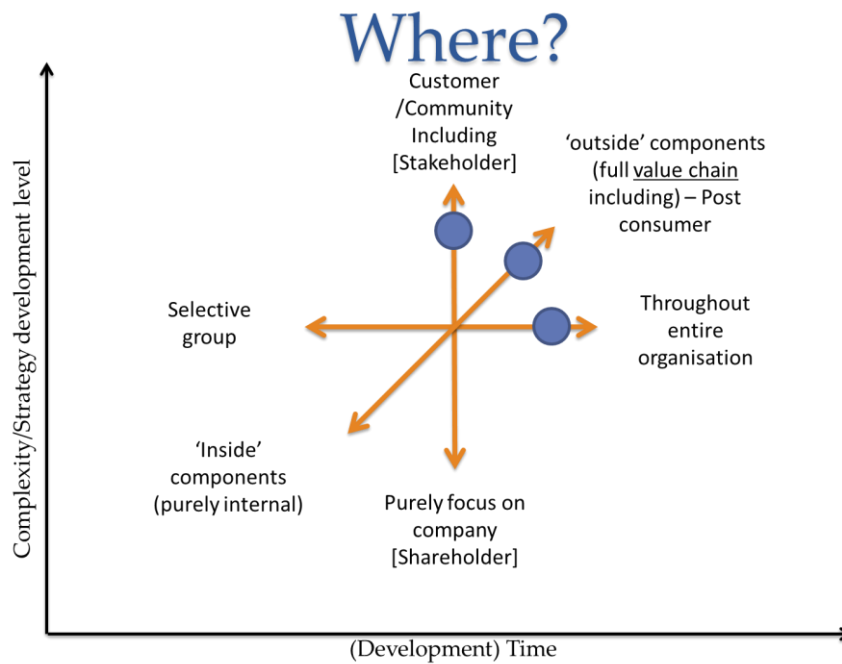
Figure 27 - Where is C2C being implemented?

Are customers and indirectly affected stakeholders considered in the approach OR does the approach mainly aim at the shareholder and thus internal focus of a company?

The role of customers in C2C is central, since the entire approach aims at a more circular economy mind-set where every participant has its role within the lifespan of a product. C2C products are often meant to be returned by the consumers to the place of purchase in order to guarantee a waste free recycling of the used materials. Puma for example has implemented an entire C2C collection which however still requires the customers to return the run out products to a Puma store.[28]

Does only a selective group within the company benefit/is affected from/by the approach OR does the approach address a company wide application?

Since C2C can be seen as an entirely new paradigm of production and thus entails a new business model as well, especially the underlying philosophy is meant to be applied to the entire organization (Braungart et al., 2007). Furthermore, it is not only the production department that has to be changed, but also the tacking-back logistics, the marketing department as well as the procurement. If C2C is applied holistically to an organization, the affects will range further than only the management level or a specific business unit.

Are mainly internal processes considered by the approach OR is the entire value chain considered by the approach?

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[28] https://www.youtube.com/watch?v=H3Hso-ycdx8

One of the main intentions of C2C is to abolish environmentally harmful and toxic substances within products and the procurement of environmentally friendly products is of central importance. Furthermore, the after sales services of the value chain become more important as well since within many C2C product lines the final responsibility of returning the used product to the place of purchase lies in the hands of the consumers. Proper incentives for return thus have to be set. C2C can thus never be holistically applied to a company, if only internal processes are considered and improved well (**McDonough & Braungart, 2001a, 2001b, 2001c**).
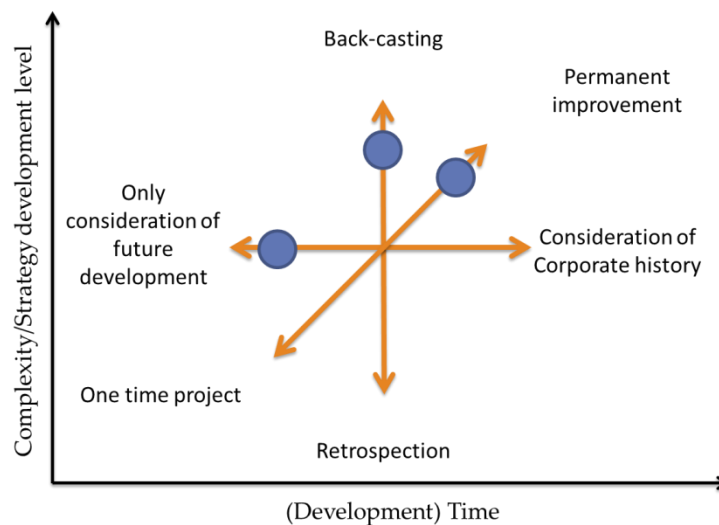
Figure 28 - **What is the time dimension that is considered by C2C?**

Is a future goal envisioned and the path to get there defined after the goal is set OR is the starting point of the strategy definition the current situation?

The future and thus ultimate goal of C2C products is to generate a positive impact on the planet with the produced products. Thus a clear target in the future is set and defined that an organization has to work towards. Even though Braungart & McDonough never use the term back-casting specifically, the used method is very similar to the concept of back-casting, as mentioned in the Natural Step Framework by Robért (2000).

Is the company history irrelevant for the approach? OR Is it intended to consider the company history for follow-up steps?

Since C2C will be an entirely new concept and line of thinking for most organizations, the history of a company is not of fundamental relevance. However, if companies have always been rather interested in creating a positive impact for society, the chances of successful implementation and application are significantly higher (Braungart et al., 2007).

Is the application of the approach meant to be a one-time implementation? OR Is the application of the approach meant to be permanently improved and adjusted?

C2C as such can only be applied one time to a product. However, this does not mean that the application as such should not be improved. On the contrary, continuous improvement, by the help of newer technologies

and better material is of vital importance to foster the environmental performance of a product well (McDonough & Braungart, 2001a, 2001b, 2001c).

MAPPING OF ALL APPROACHES IN THE DEVELOPED METHODOLOGY

In the following part all approaches are mapped in a comparative way. The line of justification was the same one as in the previous part. Papers and original sources were assessed in order to justify the positions on the axis scheme. The circles should not be confused with pie-charts (percentages) but rather symbolize which approach can be found on which side of each question.
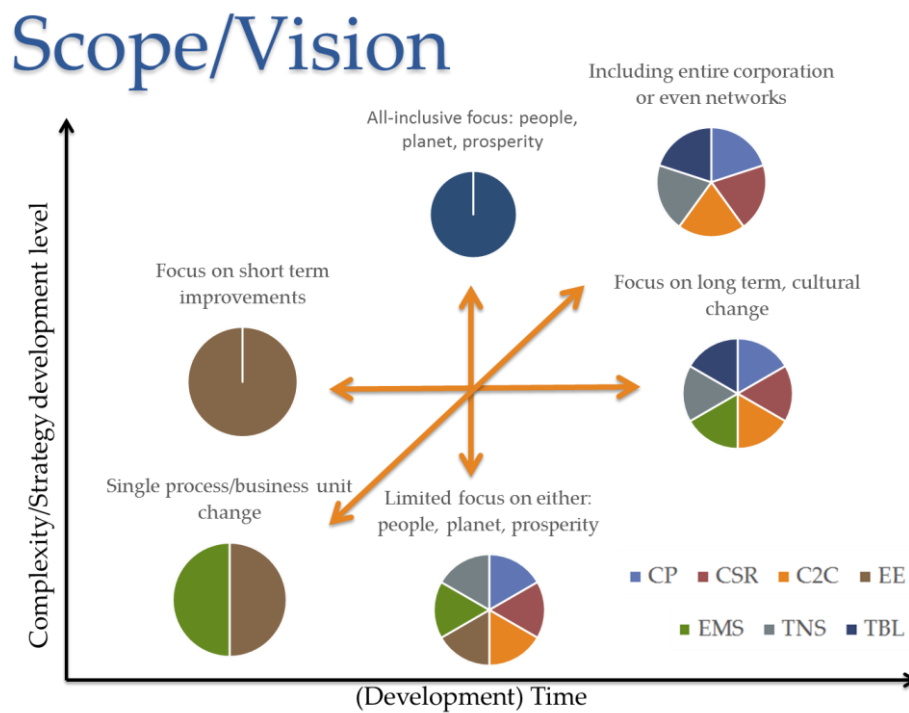
Figure 29 - Approaches mapping (Scope/Vision)
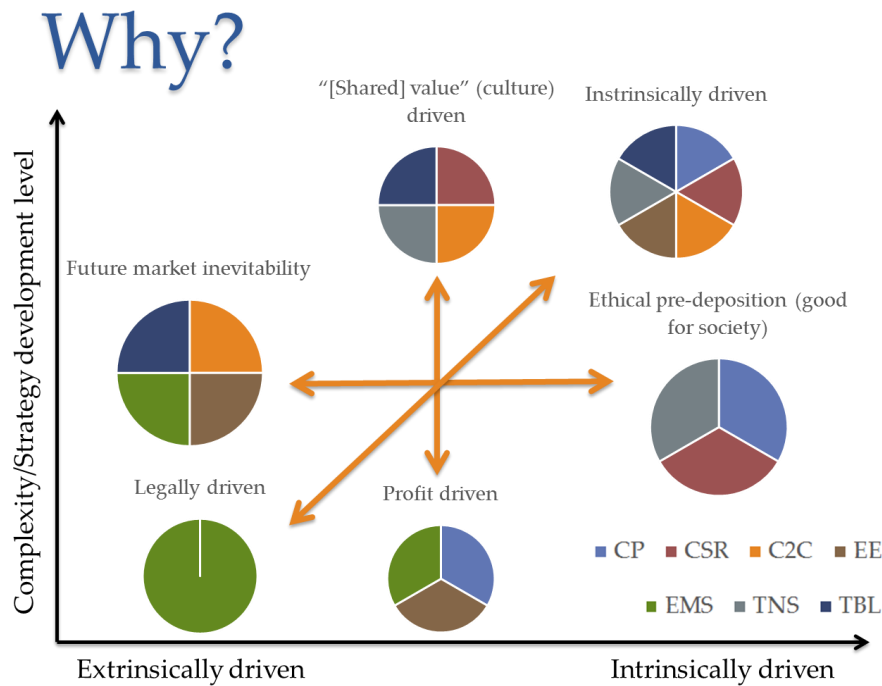
Figure 30 - Approaches mapping (Why)
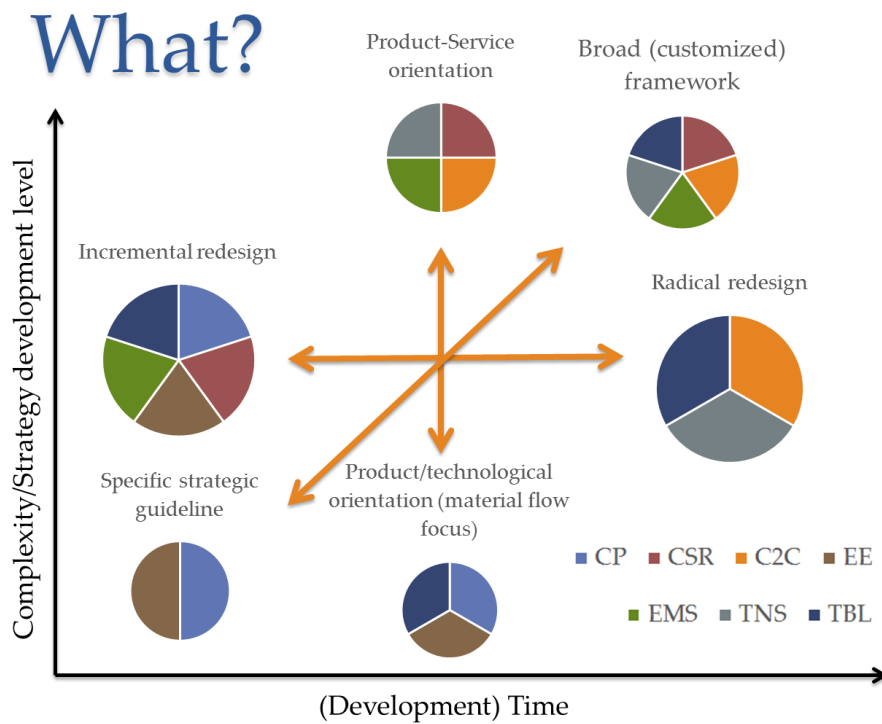
Figure 31 - Approaches mapping (What)
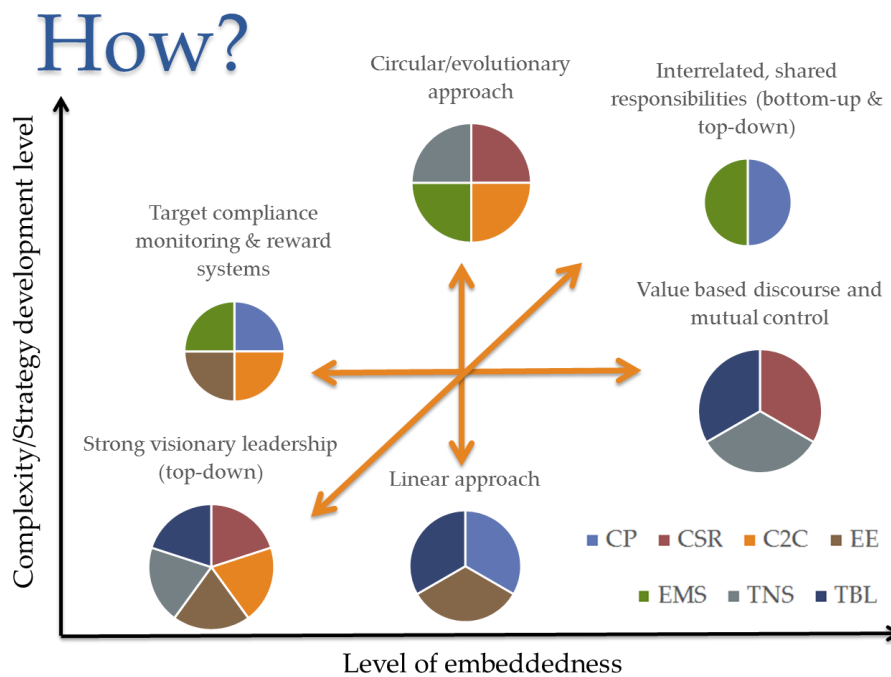
Figure 32 - Approaches mapping (How)
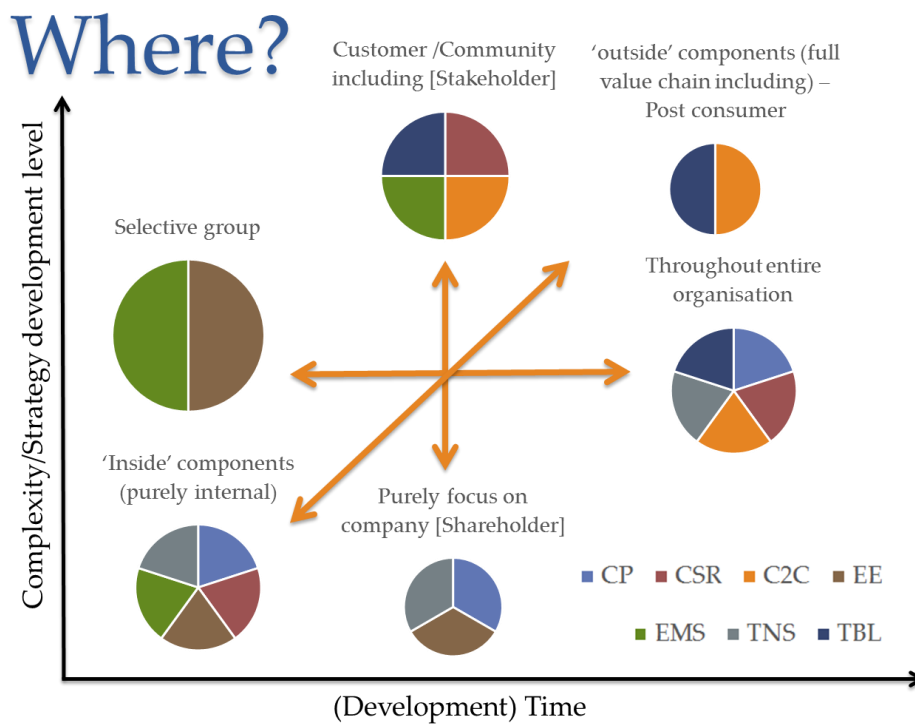
Figure 33 - Approaches mapping (Where)
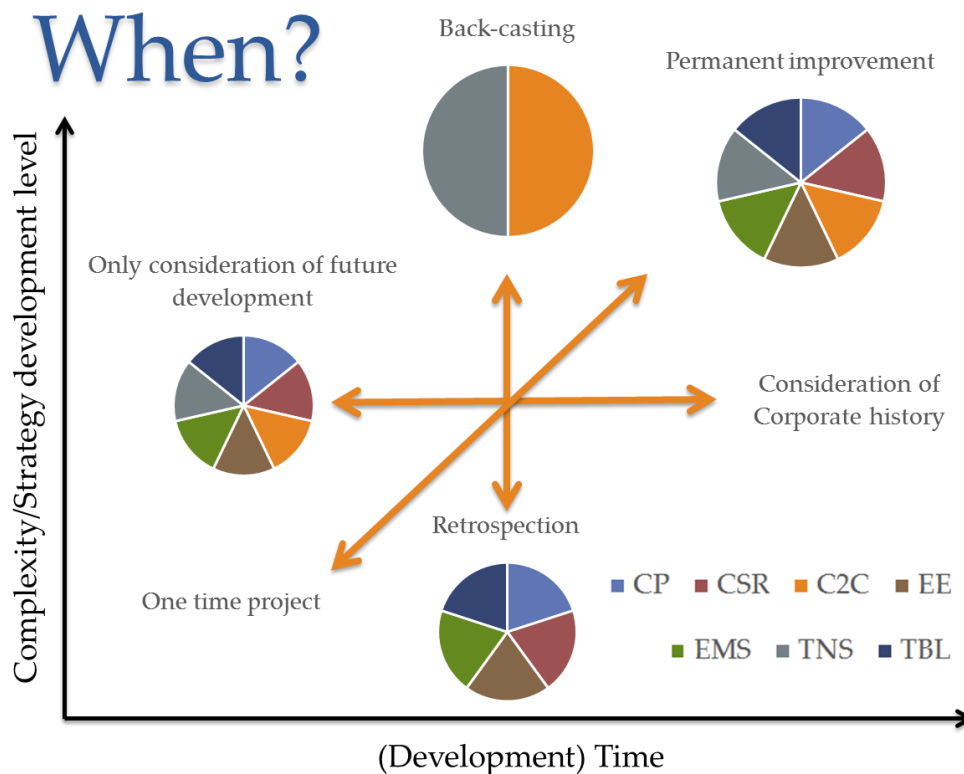
Figure 34 - Approaches mapping (When)

4.5   Practical implications and suggested application

The methodology, which was developed in the previous chapters, serves mainly to improve the assessment and comparison of current as well as future CS approaches. However, the acquired knowledge and insights can also serve practitioners significantly. In the following part, the practical implications of the research will be introduced and explained.

In the business world, companies often encounter difficulties to understand what the implementation of CS in their company could mean and even more importantly how it could be carried out (Waage et al., 2005). It is assumed that the underlying problems/challenges relate to the following:

I.   Uncertainty about practical meaning of corporate sustainability, its application and operationalization (Waage et al., 2005)
II.   Unawareness about available sustainability approaches
III. No sound possibilities to compare sustainability approaches based on their underlying criteria and characteristics – support for the decision about which ones would fit the best to the company (culture)
IV.   Many approaches are often chosen unaware by companies and thus are not used to their full potential

V.   Step from strategy definition (approach selection) to concrete actions to take (tools) is often problematic for companies due to unawareness about suitable and available tools

The following figure will provide an overview about for which different purposes the axes mapping methodology can be used and will be explained in further detail in the text below.

MoCSAs

(1) Increase understanding about key characteristics of sustainability approaches

(2) Useful for conducting a gap-analysis between current state and future ambitions of CSS

(3) Comparison how companies understand and apply a specific sustainability approach and how it is seen in academia

(4) Can be applied as a quick assessment tool for academics as well as consultants to create a basis for further decision-making

(5) Discrepancy analysis between theory and practice with the intention to reduce the gap through better matching of respective needs

Figure 35 - Application possibilities of the developed axes mapping methodology

The mapping methodology that was developed provides a comparative overview of core characteristics of sustainability approaches for academics as well as practitioners. This knowledge can (1) **increase the general understanding** about available approaches, their characteristics and thus their suitability for specific business challenges. Moreover, in the same manner as approaches were mapped (2) a company can choose to map their very own sustainability approach, combined with a mapping of both intentions and current state. As a result **specific gap-areas** between current state and intention can be identified and prioritized. (3) Moreover, if desired the mapping can be used to **compare the understanding** of how a company uses a specific sustainability approach with how it is understood in the academic environment. Based on this comparative and approach specific mapping, a company could investigate whether an approach is applied according to the academic expectations or not. Gaps could be analysed in a later stage and actions taken to eradicate the discrepancy. (4) The mapping methodology can also be used for researchers or consultants as a **quick assessment tool** that provides an overview about respective corporate sustainability strategies and their underlying characteristics. By interviewing companies all questions can be answered and a basis for further research or for the consulting process could be established. Lastly, (5) these comparative mappings could be of great value for academics since the **discrepancy analysis** could reveal differences between theory and practice based on which rather the approaches could be optimized or improved implementation guidelines for companies could be provided. Ultimately, it is thus intended to diminish the gap between theory and

practice and provide a methodology with which these divergences could be identified in order to be eliminated in a later stage.

4.6   Limitations and further research fields

Limitations

As any methodology also MoCSAs comes with a number of limitations that need to be acknowledged. The mapping methodology is a **qualitative tool** and can thus **not provide for quantitative results** or even aggregation. This qualitative characteristic of MoCSAs has to do with the inherent normative character of approaches themselves as well as choices with regards to axis placements that have to be made. These also sometimes have to **rely on normative judgment** calls. In fact, they may not be easy to make at all, which may hamper the easy applicability of MoCSAs at times. Not in all cases sustainability approaches are coherently described; they are also evolving, changing and sometimes differently interpreted. It is thus sometimes **difficult** or even impossible **to find a consensual answer** that places an approach on one point on an axis, if a certain aspect has not been considered within the literature of a sustainability approach. Moreover, for approaches as well as companies goes that in some cases they might fulfil the conditions of two sides of one axis. Nevertheless, some of the limitations of MoCSAs may be overcome through future research.

Further research fields

Since the conducted research and especially the developed mapping methodology is a novel way in its kind further research has to be carried out in many fields. In the eyes of the authors, the most important research fields that open up are:

- Investigating the possibilities of adding a quantitative analysis to the methodology
- Case studies that carry out application option (1) and (2) of the application fields to see where it needs to be improved and clarified
- Academic research and application to test option (3), (4) and (5) of the possible application fields
- Mapping more approaches on the axes methodology in order to identify improvement areas
- Further research about the 'dimensions of sustainability' – how can they be assessed and used in a better way, supporting the approach choice of companies?

Research in these areas can help to improve the validity and feasibility of MoCSAs and thus the development to a useful and practical methodology that can help to improve company's sustainability understanding and performance in the long-term.

Continuation with individual part

5. Empirical research about Corporate Sustainability Implementation and Strategy

Chapter 2 of this thesis served to build-up a literature-based foundation which helped to understand the academic standpoint of the CS debate better. Chapter 3 provided an overview about the academic standpoint of CS implementation with respect to typical challenges/barriers, initiatives, implementation guidelines/frameworks and the special role of consultancies that can support the process. The developed mapping methodology in chapter 4 will also be used in this chapter as a methodology to asses next to academic approaches also corporate sustainability strategies/customized approaches. Thus, it will be tested whether the **fourth application suggestion** (see chapter 4.5) of the mapping methodology is also suitable for the application in the business context. In this chapter empirical findings from eight interviews (four companies and four consultancies) will be presented in order to assess which implementation approach practitioners chose and to investigate which success factors and barriers/challenges were encountered in the business context.

5.1   Methodological approach

The previously described implementation framework by Maon et al. (2009) (see chapter 3.1) and the developed mapping methodology (chapter 4) will serve as the methodological basis of this chapter. Empirical data was gathered by four interviews with front-running companies in the field of CS and four interviews with consultants from specialized sustainability consultancies. Each interview lasted between one and two hours. It was attempted to interview as many representatives from different departments of each company as possible, but due to time- and personnel constraints from the company sides, the interviewees were dominantly **Health-and Safety, Environmental, Sustainability and/or Quality managers**. As stated previously, the interview questions for the companies as well as the consultancies can be found in the appendix. Each interview was oriented along those questions, but depending on the development of the interview, certain questions were dealt with in further detail or lead to follow-up ones. Justifications for why the selected companies as well as consultancies were chosen will be made in the following sub-chapters.

In order to visualize the process and methodology, the following figure provides an overview that will be explained in the following part:
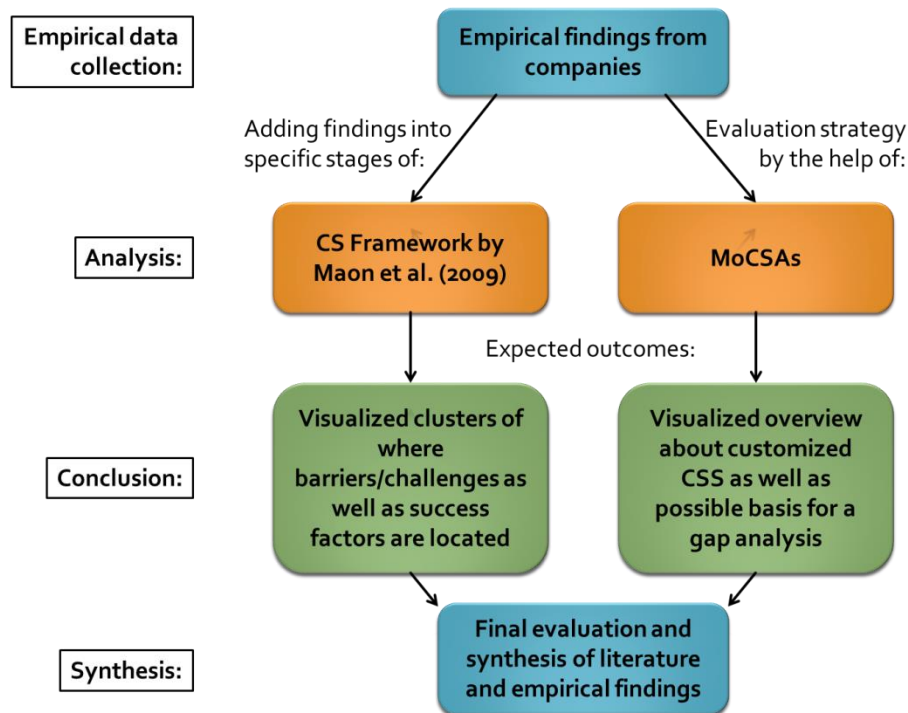
Figure 36 - Specific research approach for the case studies

The research methodology for the following case studies builds up upon two main elements.

a) First, the **CS framework** by Maon et al. (2009) will serve as a basis for a step-based CS implementation according to the researchers. The framework will serve in specific as a 'canvas' for indicating during which stages of implementation which barriers/challenges as well as success factors were found. Based on this visualization, a better overview about clusters of challenges and success factors is expected to be seen. Furthermore, this visualization is expected to be a fruitful basis for further research about optimizing similar frameworks with respect to incorporating those lessons-learned and making them available for newcomers in the field.

b) Secondly, the jointly developed **mapping methodology (MoCSAs)** from chapter 4 will be used in order to test, to which extent it can also be applied for corporate sustainability strategy/approach assessment and where limitations occur that could lead to follow up research. The intention is to use this mapping methodology in a 'quick-check-manner' for future researchers that need to get a snap-shot overview within a relatively short time about a specific corporate sustainability strategy. Furthermore, the outcome can help the respective practitioners to see, where certain gaps between the current status compared to the intended strategy level might be located and thus specific improvement areas can be visualized.

The main aim is thus to investigate barriers/challenges and success factors during specific stages of Maon et al.'s (2009) framework and to test the jointly developed mapping methodology from chapter 4 in the real

world business context. From those outcomes, academics as well as practitioners in the field of CS could benefit and use the lessons-learned for further research and empirical validation.

Before however, elaborating on the findings from the four case companies, valuable insights from four sustainability consultants will be presented in chapter 5.2 that have been interviewed about their experiences about CS implementation, success factors challenges and barriers.

5.2 Insights about CS implementation from specialized Consultancies

In chapter 3.4 a short introduction about the general role of consultancies in the subject of Corporate Sustainability was already explained. In this research consultancies were seen as important sources of alternative information about the implementation procedures of CS since they have a significantly broader range of experiences with various companies and thus also a better overview about general challenges/barriers and success factors. The findings from the four consultancy interviews will be mainly used for the final synthesis (chapter 6) in order to be able to see how much these findings go in line with the findings from the academics as well as the case study companies.

Out of 33 contacted sustainability consultancies, only four were able and willing to be available for a one hour Skype interview. The 33 consultancies were identified by the help of a google search for: "sustainability consultancies; green consultancies; environmental consultancies and CSR consultancies". No preferences for specific consultancies existed, as long as the consultancy itself was specialized in the field of CS. The four interviewed consultancies were: **BMD Advies**[29] (**Sjors Witjes**, The Netherlands), **The Environmental Consultancy**[30] (**Juhi Shareef**, Great Britain), **Footprint Partners**[31] (**Aleen Bayard**, USA), **Thrive Consulting Group**[32] (**Nathan Havey**, USA). The questions were clustered in the three categories: (1) Characteristics of Sustainability related projects (2) Consulting Strategy and (3) Finding during the implementation process. The findings will thus also be summarized in this clustered way. However, it has to be stated clearly that generalizations form the findings should not be conducted without caution since the number of interviews was too small. Nevertheless, the following findings do provide status quo insights into the sustainability consulting field and identify certain trends.

5.2.1 Characteristics of Sustainability related projects

Due to the differences in focus (Thrive Consulting Group focuses for example more on communication strategies, whereas the Environmental Consultancy focuses on the strategy definition and implementation of also technical solutions) as well as regional context the characteristics of the consultancies were different. However, a clear trend towards more clients that ask for advice about sustainability related questions was seen. As stated by Witjes (2013) the nature of questions is changing more and more from reactive based (help with compliance to legislation) to proactive based (assurance by management system instruments) questions and thus the impression arises that especially companies that are seeking for sustainability advices, are

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[29] http://www.bmdadvies.nl/website/
[30] http://www.eco-consultancy.com/
[31] http://www.footprintpartners.net/
[32] http://www.thriveconsultinggroup.com/

interested in taking on leadership roles that go beyond complying 'only' with the law. However, Bayard (2013) mentioned that at least in the USA one of the main reasons of sustainability implementation are the supply chain requirements which for example require reporting according to the GRI guideline. Thus, the previous finding of Witjes (2013) can at least not be fully supported by the experiences of Bayard (2013) in the USA. This might however be related to the (sustainability) cultural differences between the two geographic regions. Furthermore, it became clear that especially in the field of CS many companies do not even know about the potential benefits of CS actions and thus the pitch by consultancies was necessary to create this awareness (Shareef, 2013). However, if companies are aware of the sustainability debate, they often come with very open questions like: "We would like to become more sustainable but have no idea what it means for the business context and neither how to do it" (Shareef, 2013). According to Bayard (2013) the three most common foci and thus question areas are: 1. Measurement approaches and tools: finding resources to measure GHG emissions, for example, or develop metrics to measure the impact of the supply chain; 2. Disclosure and reporting: this is a big concern for organizations. Which standards should they adopt? GRI[33], SASB[34], SEDEX, Sustainability Consortium? 3. Integrated reporting is starting to gain momentum and companies seek advice for that. This finding confirms that the interest of companies to become more sustainable is present but that particularly many SMEs are overwhelmed by the translation and also understanding of SD into their business environment. Several companies however are already conducting their business in a very sustainable manner, but are rather looking for a proper way of honest external communication instead of 'green-washing' (Havey, 2013).

Overall, the impression emerged that consultancies are already frequently asked for supporting each step of the implementation phase, starting from very general questions about what CS could mean to the specific business, up to the communication of carried out actions. However, differences in underlying motives between Europe and America were seen, which should however not be generalized. Furthermore, the nature of the reasons for asking consultancies for support seemed to be also located in missing knowledge about technical possibilities to generate resource savings. Also specific questions regarding the reporting standards which are apparently getting more and more important were asked. Based on the interviews it became clear that especially newcomers in the field of CS implementation were seeking advice from consultancies and that their questions were dominantly of very broad and vague nature ("How can we become more sustainable?") instead of very technical. Thus, it became clear that CS still seems to be not fully understood by many business actors and that especially its operationalization poses significant challenges to enterprises.

5.2.2 Consulting Strategy

In this question part it was intended to investigate the **consulting approach** in further detail and thus to acquire knowledge about the used process and nature of advice given to the clients. The consulting strategy does differ between the four interviewed consultancies as expected. However, it is stated by every interviewee that the needs of the client are in the centre of importance and thus customised solutions are always the main ambition. As stated in the methodological part of this thesis, sustainability approaches are seen as an

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[33] https://www.globalreporting.org/
[34] http://www.sasb.org/

important support for translating sustainability into the business context and to help providing supportive structures for the implementation. Thus one question aimed at investigating, whether consultancies advise companies to opt for any specific approach, if it seems to meet the needs of the clients. As stated by Witjes (2013) BMD advies consultants will advise for specific sustainability approaches, if they seem to suit the needs of the client and if the respective consultant has the necessary knowledge about the approach. In general however, management systems are the most commonly demanded and fitting approaches for companies. Shareef (2013) stated a similar answer and added that the proven business case is of central importance. The ambitions during the consulting process go definitely beyond advising only on efficiency improvements but if applicable, radically new solutions are suggested as well. In a few projects for example, the advice was to implement the C2C approach. Even though Bayard (2013) has for example specific knowledge about the Natural Step approach, she stated clearly that this concept is vastly unknown in the USA and thus the demands and interested for this approach are low. However, CSR, LEED and Carbon Disclosure Projects seemed to be the most commonly used and advised approaches/certifications. However, CERES[35] is also becoming a more commonly used resource. Even though the GRI guideline for reporting is not understood as an approach as such, it is used often in the USA to understand the aspects and dimensions of sustainability better and thus by being required to report on all the necessary elements, several projects get initiated (Bayard, 2013).

The findings about the **used steps for the strategy definition phase** were slightly different between the consultancies. Witjes (2013) for example stated that it is a situation dependent question but if the budget is clear and no competition from other consultancies is present, the first step is to (1) investigate the real need of the company, followed by (2) putting this into context and showing it to the client by mirror-like reflection to ensure that it is understood correctly. Lastly, an action plan gets created and proposed. Generally, BMD Advies tries to initiate a small step as a beginning, from which larger projects could immerge, if the client is satisfied with the initial work. Since Shareef (2013) indicated that many clients are acquired by direct pitches to the clients and not by them asking specifically for support, the first step is in most of the cases the pitch about the benefits of CS. Following this, an analysis of needs is carried out and financial cost saving potential is presented. These savings account vastly for the facility level. Once the real potential is assessed, the CEO gets involved in the process and general awareness creation in the company is carried out. Similar to the BMD Advies, the Environmental Consultancy also suggests management systems as the most often used approach. According to Bayard (2013) the three main steps of each consultancy project are (1) Interviews with the stakeholders to determine materiality, (2) Interview internal business partners to understand their concerns and capacity to measure impact and implement solutions and (3) Benchmark against the competitive set. A significantly stronger incorporation of stakeholders can clearly be seen in the approach of the Footprint Partners.

In general there appears to be a resistance in the consultancy business to use standardised solutions. However, during the interviews it became clear that at least **various tools/instruments are used frequently**. Witjes

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[35] Ceres is a non-profit organization that advocates sustainable leadership and accelerates the adoption of sustainable business practices in organizations. For companies it is dominantly important to be in the network due to the chance of getting investments from the network or to benefit from the consultancy activities of the organization.

(2013) for example mentioned: "set up and maintain the register of legislative aspects, compliance/ internal and system audits, setting up and emergency help for management systems, health and safety risk assessments, awareness sessions, management reviews". Bayard (2013) stated as well, that the solutions are always different but that the GRI is serving the purpose of KPI definitions and guidance on materiality perfectly well and is thus used quite commonly. Furthermore, focus groups, surveys and CERES input (in form of strategic advice from the non-profit organization) are used often as specific tools that support the strategy definition phase. In order to guarantee the matching of the suggested strategy to the client specific needs, Witjes (2013) mentions that especially the communication with the client as well as the knowledge and experience of the consultants is a central element. If the process is continuously evaluated, a satisfying solution is very likely.

Regarding the consultancy strategy it can be concluded that all four consultancies used a very customized approach of CS implementation and that this approach had to fit the specific needs of a company. Thus, C2C for example would not be the best solution for every company and thus, it was seen to be more often the case that certain elements of the various CS approaches were used to fill the specific needs of an enterprise. Even though, the chosen steps of consultation between the different actors were different ones as well, the elements of internal assessment, stakeholder communication, internal communication as well as benchmarking seemed to occur in every interview. Thus, it might not be too important, which order of steps is actually chosen but rather that most of the important aspects are dealt with at some point in the consultation. Furthermore, it became clear that none of the consultants suggested that the concrete strategy gets defined by the consultancies themselves but rather that the definition always has to be carried out together with the respective company.

5.2.3 Findings during the implementation process

Since some of the interviewed consultancies carry out the strategy definition phase relatively simultaneously with the actual implementation, the steps taken were quite similar to the ones mentioned in the previous chapter. For the consultancies like for example BMD Advies that are more focused on the strategy definition than the actual implementation, the implementation steps are the same ones as they are in the strategy definition phase. Bayard (2013) made their planning Sustainability Life Cycle framework available which can be seen in Figure 37.

Figure 37 - Sustainable Life Cycle Framework

Source: Bayard (2013)

The **success factors** during the implementation were summarized by Shareef (2013) the following five points: (1) Importance of creating a common vision at the beginning in order to ensure that sustainability is understood by every important actor in the organization in the same way and to have the envisioned outcome already predefined. Even though having a vision is not necessarily the same as back-casting is, it still helps companies to think rather long-term and truly consider what the core purpose of the entire ambition of becoming more sustainable is. Once this vision is defined, (2) the translation of it into concrete action plans which have to (4) include stakeholders as well, is one of the most important success factors. If the translation from rather vague and strategic thoughts cannot be done into concrete tasks, sustainability will remain unclear and thus not successful in the organization. Lastly, (5) a successful sustainability strategy can only function, if it is clearly part of the core business of a company and thus fully integrated. If sustainability however, is simply seen as an add-on, and thus not integrated in the core mission statement of an organization, the chances are very high that it will not be taken seriously and might not even fit the needs of the organization. The last success factor is also confirmed by Bayard (2013). The success factors mentioned by Havey (2013) will be explained in the following part since they are directly related to the encountered barriers.

Barrier-wise, Shareef (2013) stated that the barriers are very organization dependent but that certain findings occurred to her relatively frequently. Thus, resistance to change for the middle management was one of her most dominant experiences. Often, the CEO and top-management are interested in a change process towards sustainability and therefore often also the initiators (Shareef, 2013). The awareness creation process and encouragement for changing business procedures for the middle management seems to be a critical factor. In detail they often do not understand the meaning and necessity of sustainability. Specific strategies that are used by the Environmental Consultancy to overcome this barrier are to be as supportive as possible in order to be seen as a resource and not an external change agent. Furthermore, several presentations are created to ensure a common understanding of the content and benefits of CS as well as incorporating the middle management deeper in the process with the aim of giving them also a stronger role in the rearranged organizational structure. The second most important barrier are financial constraints. Often companies have only financial resources for short term and thus rather less cost intensive actions and so it requires significant convincing-work that the incorporation of a long-term strategy and thus long-term financial planning is absolutely vital (Bayard, 2013; Shareef, 2013). Cost benefit analysis to incorporate potential long-term benefits of sustainability projects have therefore turned out to be very helpful instruments (Shareef, 2013). Since the Thrive consultancy focuses entirely on the external communication strategies of sustainability, Havey (2013) sees the largest (external) barrier in getting the message across, and thus breaking through the 'noise' that is created by the flood of information consumers currently encounter. His strategy to overcome these difficulties is to focus more on the soft and value oriented needs of the customers and connect values with the organizations in the marketing message. Especially, storytelling[36] seemed to enjoy the largest success. Another success factor identified by Havey (2013) was the community involvement which could mean that each participating member of a company and thus responsible person for the final products states in a short way who they are and which values they believe in. Generally, each marketing message that tries to communicate

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[36] Storytelling is understood as conveying a certain message by embedding it into a story that one of the actors has experienced him/herself.

the sustainability intention of a company and its products should be highly visual, entail elements of inspiration and empowerment, should be easily spreadable, simple and be relevant to the business (Havey, 2013). Bayard (2013) emphasised the barriers within the supply chain management as important ones since many companies do not have sufficient resources to ensure compliance standards and important technical insights are often missing (Bayard, 2013). Thus, many barriers are already overcome to a large extent and according to Bayard (2013) the next wave is in the area of leadership, culture change and communication. During this phase the adoption and implementation will be significantly accelerated.

The question about **tools that are used during the implementation process** remained surprisingly unanswered or at least not answered in a sufficient way. Tools were seen as very person specific knowledge that is either available or not (Witjes, 2013). However, since consultancies are known for developing continuously new project specific tools, a generalization was apparently difficult to make. For the communication strategy Havey (2013) mentioned a variety of tools that have the clear intention to create further attachment by the consumers with the products and he advised clients for example to implement sourcing maps[37], short videos on the homepage that explain the core business purpose and mission or the detailed overview about the product with all involved actors to communicate transparency and clarity. According to Bayard (2013) the most commonly used tools are LCAs, the introduction of KPIs and using the GRI guidelines as a tool to ask the necessary questions.

CONCLUSION OF CONSULTANCY INTERVIEWS

The overall conclusion from the interviews carried out with the consultancies will be visualized in the following figure. The findings from the four consultancies were very similar to each other and only minor differences in their nature were found. Thus no major contradictions can be stated. When comparing the empirical findings with the literature analysis in chapter 3.4 the functions mentioned by Martinuzzi et al. (2002) were found as well to a large extent. The *information and sensitisation* function for example was especially emphasised by Shareef (2013) when mentioning the active pitches about the potential of CS projects. Bayard (2013) mentioned the needs of technical solutions and thus the *dissemination function*. All interviewees confirmed the *optimization function* due to the fact that the projects always fostered the performance of their clients. The *knowledge function* was also clearly confirmed by the interviews especially with regard to the introduction of new approaches like C2C into the business strategy. Lastly, the *network and the moderation function* can be found within the role of the consultancies of bringing together the necessary stakeholders and moderating the meetings based on which win-win situations for all stakeholders were developed.

It should however be clearly stated that sustainability consultancies are not a guarantee for success and that they themselves also differ significantly with regard to their skills and expertise. Especially, for the implementation support of various certifications (very standardised procedures) their experiences can be seen as valuable ones but for the entire strategy definition, it is of core importance that the strategy is developed together with the client. All mentioned aspects of the strategy pyramid (see Figure 14) have to be considered

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[37] The customers can see where certain parts of the product was produced (especially effective if agricultural products come from the region).

and especially underlying values of the corporate culture have to be understood. Hence, a sustainability strategy has to be perfectly aligned with the core business purpose and translated into more concrete follow-up steps. Consultancies can be supportive in asking the right questions and providing the necessary inspiration but shall never develop 'solutions' that are not in line with what the clients need, understand and convinced of. Therefore, the challenges of inspiring clients to leap-frog with their CSS into new levels that are not yet tested but maybe necessary for future success are seen to be vast challenges that require especially significant soft-skills from the specific consultants.

Project characteristics
- Demand driven in America (for example: supply chain requirements)
- Rather pro-active (EU)
- However, also pitch about CS by consultants happens (Great Britain)
- External communication related questions

Consulting Strategy
- Customized approach and clients 'need' oriented
- Different steps for consultation, however, stakeholder involvement, reflection and internal communication were always found
- Customized and different tools are used, depending on the project

Implementation process
- **Success factors**: pragmatism, trustful relationship, common vision, action plans, stakeholder involvement, alignment with core business strategy
- **Barriers**: Insufficient communication with client, resistance of middle management, no mutual understanding of goals, lack of financial resources, lack of technical insights

Figure 38 - Summary of findings from consultancy interviews

Due to the fact that the subject of CS enjoys a constant change and development and is seemingly moving also more towards circular economy thinking as well as symbiotic relationsships between actors, the need of consultancies, especially due to their previously described functions, can be clearly seen (Martinuzzi et al., 2010). The more difficult the challenges get and the more 'low-hanging-fruits' are picked, the more necessary the support of specialized consultancies will get. However, it should not be concluded that a company would not be able to implement CS successfully without the help if a consultancy. The benefits however are clearly

visible and if sufficient financial ressources are available, the chances of benefitting from the consultation are given. Nevertheless, the problems mentioned in 3.4 shall also not be overseen. Especially, the non-existance of quality standards and transparency is seen as a risk for the reputation of the consutancy business but also as problematic for the clients since they cannot know if the suggested strategy is a 'good' one or not.

5.3   Introduction to the chosen case companies

In this research four companies were chosen that were known for having an advanced sustainability strategy or appeared based on recommendations by the supervisors of this thesis as well as their company homepages to be front-runners in the field. It is however, not the case that all four companies are at the same stage of their CS development level and neither do all of them use the same procedure nor have the same understanding and ambitions of CS. However, this thesis does not aim at judging or evaluating how far developed a strategy is and it is thus not about comparing companies with each other with the aim of ranking them. The intention is rather to **test if the MoCSAs methodology is applicable** to very different companies as well as to see, **if all encountered success factors and barriers are possible to be visualized** on Maon et al.'s (2009) framework. The cases were intentionally selected due to their different characteristics, industry fields, products, sizes and understanding of CS in order to keep the bias towards a too homogenous group relatively low. However, it has to be clearly stated that four case studies cannot serve as a valid and sufficient base for generalization. In the eyes of the researcher, a generalization would only be possible with a very large number of companies, that a) represent all major industry fields, b) are located in different cultural areas, c) have a different size, resources and founding date and d) are embedded in different contexts. Only by the help of very diverse research groups, the subject of CS implementation could be generalized. But since this is also not the intention of this thesis, the relatively small number of case studies is not seen as a problem. This study is rather a first attempt to test the previously stated ambitions and thus, a more in-depth analysis based on the interviews as well as the publicly available information about the companies was possible. All information in the following chapter are based on the interviews as well as the webpages mentioned in the table below. The following table will provide a short overview about the core data of each company.

Table 10 - Company overview

Company	Van Houtum	Cofely	De Ree Holland	Interface
Type	Private	Stock company	Private	Stock company
Founded	1935	1984	1914	1973
National Headquarters	Swalmen, Netherlands	Bunnik, Netherlands	Lisserbroek, Netherlands	Scherpenzeel, Netherlands
Industry	Paper industry	Facility management	Flower industry	Carpet industry
Products	Toilet paper	Energy solutions	Flower bulbs	Carpet tiles
Employees	200	6300	51 (during season 225 temporary)	3700
Interviewee	Bas Gehlen Jos Manders	Hero Boonstra	Henk Bakker	Geanne van Arkel
Position of interviewee	QHSE-officer CEO	HSE manager	Total Quality Manager	Sustainability Manager
CS(R) report	Yes	Yes	No	Yes
Website	http://www.vanhoutum.nl/en/	http://www.cofely-gdfsuez.nl/	http://www.deree-holland.nl/	http://www.interfaceflor.nl

Based on the positions of the interviewees it becomes clear that especially **Health- and Safety-, Environmental-, Quality-, and or Sustainability Managers/Officers were interviewed**. This choice was made intentionally, since those employees are generally the main responsible personnel for sustainability implementation and thus have the best overview about the steps that have been taken. Furthermore, they usually have a close relation to the upper management as well as to the employees. In the following a short overview about the underlying reasons for CS implementation of the selected companies will be given.

THE UNDERLYING REASONS AND DRIVERS FOR CORPORATE SUSTAINABILITY IMPLEMENTATION

The following short explanations shall serve as a quick insight into the drivers for CS implementation which will be deepened within the next chapter. The intention is to point out that motives for CS implementation can both lie in internal as well as external factors and all four companies represent those differences.

The two interviewees from **Van Houtum** stated that the core ideas about sustainability have been part of Van Houtum since the beginning of the corporate history. Working conditions as well as environmentally friendly behaviour were always important elements, even though other significant improvements have been carried out during the last decades. The underlying drivers for CS were thus of intrinsic origin. However, according to Manders (2013) customers have been asking for (not necessarily demanding) certificates and also the idea of integrating C2C came from the chamber of commerce and was not developed internally. This shows that external inspiration and not pressure is important.

Cofelys reasons for CS implementation were stated by Boonstra (2013) as being the three following drivers: (1) General public awareness about sustainability from the customer as well as from the supplier side. It was stated that no concrete demands or pressure was initiated by the stakeholders but rather that Cofely felt the need to reflect on its actions and take a more future oriented scenario and line of thinking into consideration. Furthermore, (2) the ambitions about improving the energy- and asset efficiency as well as the human comfort [working environment] were considered continuously more important and thus already in line with the requirements of the triple bottom line to consider all three pillars. Lastly, (3) the process of becoming more sustainable was already initiated by the 'mother company' GDF Suez and thus, certain demands and expectations from its side were put upon Cofely.

The underlying reasons for CS implementation of **De Ree Holland** can be found in its intensified communication with its final customers. Bakker (2013) stated in the interview that especially the requirements of the retail sectors have initiated the process of CS development, starting with quality requirements at the beginning. The starting phase in particular was very difficult for De Ree Holland since the corporate culture was a very traditional one and the family company was run ever since in the same way as it had always been. However, once it became clear that sustainability was required by the market and that changes had to occur, the "macho culture" (Bakker, 2013) had started to change and the ambitions of learning from mistakes became more dominant.

The story of **Interface's** reasons for incorporation sustainability into the core business strategy and DNA of the company, can be mainly attributed to the visionary ambitions of the founder Ray Anderson about approaching

the sustainability challenges of the 21st century. On the one hand side, Interface realized that future success is only possible with the incorporation of sustainability and innovation and on the other hand, the intrinsic motivation of moving the business strategy towards becoming a restorative company that creates societal value in every possible way.

5.4   Corporate Sustainability Implementation of case companies

For this thesis, the implementation process is of central interest and thus this chapter will deal with the specific way of how the companies have implemented their sustainability strategy. Encountered success factors as well as barriers/challenges were of specific interest within the interviews.

As stated already previously, **Van Houtum** has a long-standing history in sustainability, even though it has not always been named like this. The foundation of its current sustainability strategy was the implementation of different Management Systems throughout time and with their help Van Houtum ensured to cover different facets of sustainability in many different areas. In 1995 the ISO 9001 norm (quality management) was integrated, in 1998 the ISO 14001 (environmental management), followed by the OHSAS 18001 (occupational health and safety) in 2005 and relatively recently the CSR guidelines ISO 26000 (2010) and the Energy Management System ISO 50001 in 2012. Furthermore, Van Houtum product line *Satino Black* got Cradle to Cradle certified and the premium product line has also the FSC label[38] as well as the CO_2 neutral certificate. During the interviews it became clear that Management Systems seemed to work perfectly fine for Van Houtum and that the framework the ISO norms provided, offers several possibilities to even integrate novel approaches like C2C. The rough steps that were

1995	ISO 9001 (quality)
1998	ISO 14001 (environment)
2005	OHSAS 18001 (Working Conditions)
2010	ISO 26000 (CSR)
2010	NEN-EN 16001 (energy); converted to
2012	ISO 50001 (energy)
2008	FSC recycled certificate; 100% recycled paper
2008	European Ecolabel certificate; sustainable production process
2009	Cradle to Cradle certificate; harmless for both People and Planet
2009	Green energy certificate; CO2-neutral

Figure 39 - Self-presentation of (certification) steps towards sustainability

Source: Van Houtum (2013)

undertaken were: (1) Awareness creation within the labour force, (2) policy formulation, (3) inventory about the relevant topics, (4) prioritizing of the aspects, (5) improvement themes and (6) evaluation. Tool-wise Van Houtum used typical management tools like a stakeholder matrix[39], formation of project groups for each challenge, strong internal communication by the help of training sessions and mentoring programs, academic collaborations, goal setting through KPIs, whole performance analysis, environmental benchmarks, participation at front-runner meetings and participation at specific sustainability sessions. According to Manders (2013) there have never been conflicts occurring where one system would have required the opposite of what another system required and since the changes were carried out by a heterogeneous team[40], a good fit into the organizational structures was possible.

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[38] https://ic.fsc.org/
[39] All stakeholder groups are listed and their specific needs and characterstics added
[40] Representatives of different departments of the company were formed together to a diverse team

Cofely has a long standing history of making early moves towards sustainability as well. The company implemented the ISO 9001 norm in the early 90s and became thus familiar with the PDCA cycle and the usage of management systems that had the clear aim at improvement. Similarly to Van Houtum, also Boonstra (2013) stated that the implementation was not too difficult since most of the requirements of the ISO 9001 as well as the later implemented ISO 14001 norm had been in place beforehand. Furthermore, risk management as well as compliance issues always enjoyed a special role within Cofely. According to Boonstra (2013) the provided guideline by the ISO has proven to be sufficient for implementing each sustainability target so far. Furthermore, Cofely's approach towards CS appears to be a certification based one and thus, it clearly oriented the target setting in accordance with the ISO requirements. Regarding the specific steps that Cofely underwent during the implementation process of its customized sustainability strategy, it was mentioned that always many quality assurance specialists were part of every implementation team and that (1) the respective norm was carefully analysed on requirements. (2) Then, a gap analysis was carried out and (3) specific responsible persons for closing this gap were selected. (4) The inventory of each step was assed and risks to be controlled analysed. (5) Risks got weighed and (6) issues prioritized. After the (7) time and budget got defined, the specific needs and priorities got connected to the 5 year goals. After continuous assessment, the (8) feedback went into the planning loop again and each carried out initiative got checked for its effectiveness. In general, Boonstra (2013) stated that especially internal communication about the 'why' certain steps are taken has always played a central role in the company. Responsible for the implementation was mainly the middle management and the outcomes were reported to the CEO. However, Boonstra (2013) stated that some ideas did also emerge from the organisational bottom of Cofely and brought up to the middle management through the culture of open communication.

De Ree Holland started in 2008 to search for different implementation guidelines but decided that most of them were too far ranging and thus the choice was made to define a customized approach towards sustainability. Hence, the process started from a top-down manner but was still fuelled by bottom-up ideas of employees. The general philosophy was to involve the employees as much as possible and give them room to express their own needs. Step-wise, the first initiative taken was awareness creation within the workforce. The guiding question was how each employee could be better involved into the sustainability strategy and thus the future orientation of the company. In a next step, the outcome was translated into concrete waste, energy and quality elements and it was communicated that sustainability was more than 'only' energy-saving. Lastly, the lessons-learned as well as the feedback got integrated into the corporate strategy paper. Since 2010, one annual meeting takes place in the company during which sustainability is discussed and communicated internally. Throughout the year, the employees are informed via a newsletter about the sustainability news in the company. Communication-wise, especially quality- and waste related aspects are discussed and communicated in a two-way manner. According to Bakker (2013) especially, listening to the employees about their thoughts and needs was a central element during the implementation phase.

As being one of the very early movers towards sustainability, **Interface** has a long track-record of steps that have been taken to incorporate the ambitions to become a company that creates significant socio-economic value besides reducing its ecological impact in a rapid way. The defining year was 1994, when the CEO Ray Anderson read the book "Ecology of Commerce" by Paul Hawken that truly inspired him to let Interface

transform into a new era. During an important Interface meeting/conference on Hawaii, the participants tried to find ways of translating Andersons vision: "To be the first company that, by its deeds, shows the entire industrial world what sustainability is in all its dimensions: People, process, product, place and profits and in doing so we will become restorative through the power of influence" into the business context and two months after the first idea about installing solar panels on one of the factories was implemented. The so called Eco-dream team was initiated by Anderson in 1994 as well and meant to find solutions for the severe challenges the world was facing by that time and to translate them into the business context. The 'dream team' consisted currently of Janine Benyus, William D. Borwning, Robert Fox, Paul Hawken, Amory Lovins, L. Hunter Lovins, John Picard, Jonathon Porritt, Daniel Quinn, D. Karl-Henrik Robert and Walter Stahel. Those well-known and prominet scientists, architects, book authors, activists, great thinkers and entrepreneurs have had a significant influence on the chosen strategy of Interface and especially due to the fact that they had an outside and rather consulting perspective, many new ideas were brought into the company. Simultaneously, a sustainability progress team was initiated that from this moment on carried out several sustainability initiatives on the corporate level. Especially, when the principles of Biomimicry and the Natural Step were implemented in the company, it moved major steps ahead due to the product innovations that were realized through the approaches. Currently, the sustainability strategy is vastly pursued by the metaphor of the 'mount sustainability' which symbolizes the ambitions Interface has to become in a "fully sustainable" company in 2020 (Interface, 2013).

The framework used for this ambition consists of seven specific 'fronts' which can be seen as the guiding principles and goals Interface pursues. In the following, they are directly quoted from the homepage:

- Front 1 – Eliminate Waste: Eliminate all forms of waste in every area of business.
- Front 2 – Benign Emissions: Eliminate toxic substances from products, vehicles and facilities.
- Front 3 – Renewable Energy: Operate facilities with 100% renewable energy.
- Front 4 – Close The Loop: Redesign processes and products to close the technical loop using recovered and bio-based materials.
- Front 5 – Resource Efficient Transportation: Transport people and products efficiently to eliminate waste and emissions.
- Front 6 – Sensitize Stakeholders: Create a culture that uses sustainability principles to improve the lives and livelihoods of all of our stakeholders – employees, partners, suppliers, customers, investors and communities.
- Front 7 – Redesign Commerce: Create a new business model that demonstrates and supports the value of sustainability-based commerce.

5.4.1   Identified barriers and challenges

Each company has identified and encountered different barriers/challenges during the implementation process and the intention is to understand those barriers better in order to map them at a later stage in the Framework by Maon et al. (2009). The following table will provide an overview about the main barriers/challenges identified by the interviewees and explain every single one in a short way. The abbreviations in the brackets stand for the company name and the specific number. It is important to mention that there is no hierarchical order in the mentioned barriers. This will help in a later stage to see, which

barrier/challenge occurred during which stage of the implementation. The evaluation of these findings will be carried out in the discussion chapter 6.

Table 11 - Identified barriers and challenges by the case companies

Van Houtum	Cofely	De Ree Holland	Interface
(VH1) Sometimes minor **technical problems** for example the smell of the production facilities occurred. Generally, technical barriers seemed to be the dominant factors but also solved by the help of new innovations.	(C1) **Cultural resistance towards change** from the employee and middle management level. However, this attitude seemed to change slowly according to Boonstra (2013) after the mission was communicated even more clearly.	(DR1) The **traditional corporate culture** which is apparently closely related to the industry itself was identified as the major resistance towards change in any way. Thus, especially the initial understanding of CS was difficult to achieve.	(I1) Certain business models and actions like leasing **were introduced too early** to the market. Some customers could not see the benefits in the offered services since long-term thinking is not on the agenda of many companies yet.
(VH2) **Stakeholder communication**. The process still appears too much like a one-way communication from Van Houtums side. Stronger alliances with stakeholders would be preferred as well as better communication from their side.	(C2) Sometimes **lacking understanding** of the employees why certain initiatives are carried out. This lack of understanding was also closely related to a potential ignorance for sustainability issues.	(DR2) **Older and long-term employees** that were used to carry out their tasks in the same way as usual turned out to be resistant to change and this was accepted by the management.	(I2) Certain sustainability initiatives were carried out (for example new product lines out of bio-based products) that were **not successful financially** seen. Challenges thus are to identify also profitable sustainability initiatives.
(VH3) Necessity of **radically new ways of thinking** and leaving old paradigms behind. Certain cultural changes were difficult to make since it required employees to think in an entirely new way. This challenge required significant amounts of internal as well as external communication.	(C3) **Ownership situations and incentives to buy the more sustainable solution** are challenges for certain products since the buyer is only interested in a low purchase price, but the operator would also benefit from lower energy consumption.	(DR3) **Governmental regulations and requirements** were seen as general challenges and according to Bakker (2013) they were making certain processes even more difficult without necessarily adding value to sustainability.	(I3) Challenges of **moving from efficiency gains to effectiveness.** Since Interface has already achieved significant progress, the current challenges are lying rather in finalizing the ambitions of the Zero Mission strategy and to maintain the current culture.
(VH4) **Supply chain restrictions** occurred when Van Houtum was asking for C2C products for their washroom solutions. However, after several negotiations and research, this challenge was overcome.	(C4) **Stakeholder collaboration and network building**. In order to carry out certain plans, a strong stakeholder network is required which has to this point not been able to be established.	(DR4) **Resistance to change from the upper management level**, especially from some of the founders of the company turned out to be a major obstacle as well.	(I4) Another challenge was as well **to keep an overview about 'old' ideas** that might have been put on hold years ago but might suits the needs of the current times perfectly well.

5.4.2   Identified success factors

Since the implementation is not only influenced by barriers and challenges but also by success factors, the intention of the interviews was to identify those success factors as well and thus be able to derive lessons-learned that might help newcomers as well as already successful companies in the field to carry out similar actions. However, it should be clarified that generalizations should only be made with caution since the respective business environment does differ significantly between companies. Success factors in this context were also understood as specific initiatives that were carried out by the companies that lead to a positive outcome. In order to be a success factor, the outcome does not necessarily have to be successful directly in the financial performance, but rather foster the sustainability strategy as a whole. According to Lankoski (2008) most sustainability initiatives are eventually represented anyway in an indirect way in the financial performance of a company.

Table 12 - Identified success factors by the case companies

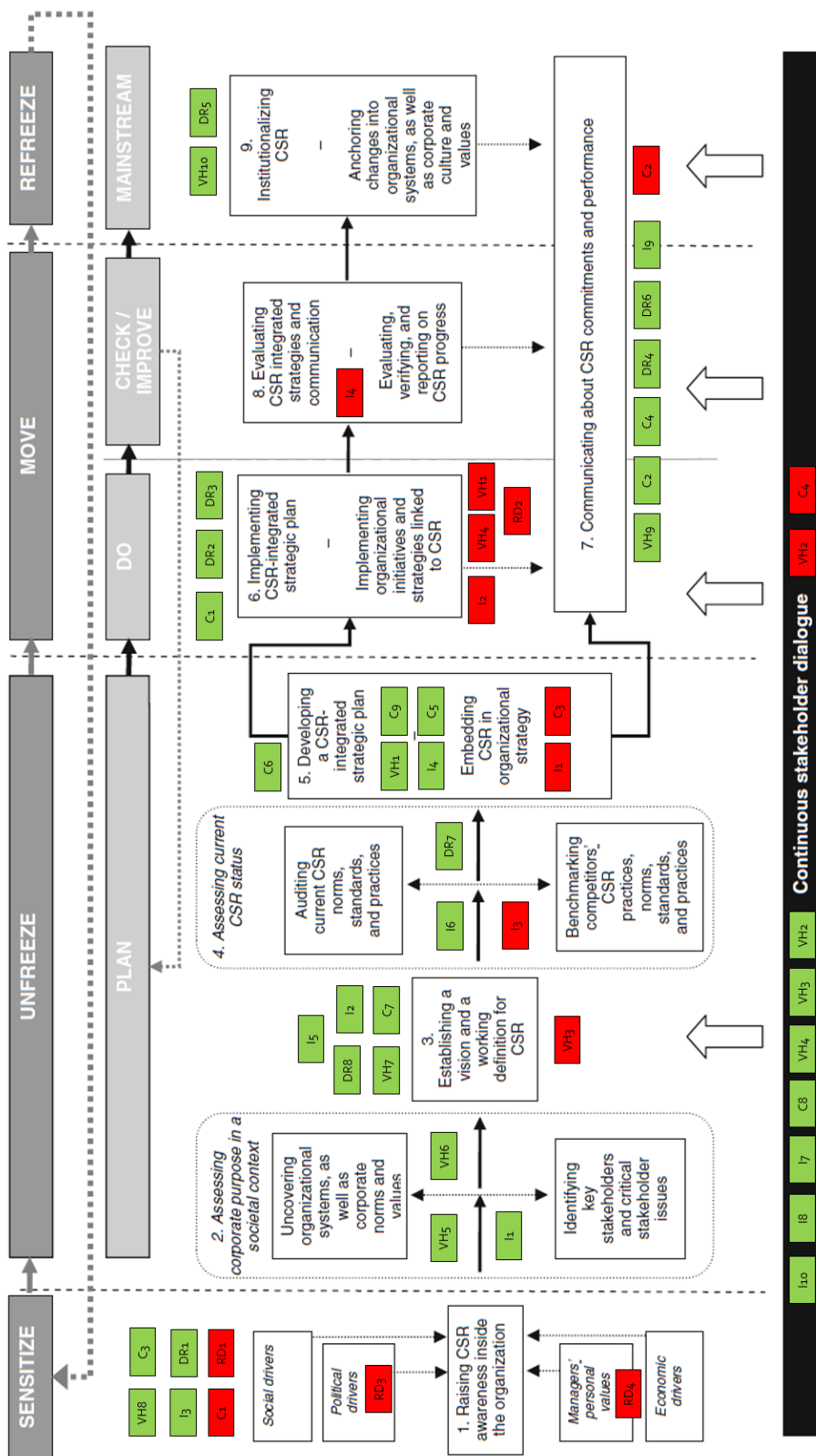| Van Houtum	Cofely	De Ree Holland	Interface
(VH1) The Satino black line was seen as a major success since its market acceptance showed all employees how successful a more **sustainable product line** can be.	(C1) **Small initiatives** like the introduction of special recyclable paper cups for coffee that created significant amounts of positive discussions and awareness within the employees.	(DR1) Since De Ree Holland has hundreds of temporary workers, it was stated that **close contact** with them and basically listening to them was a vital factor.	(I1) **Having high requirements to the suppliers** in order to foster sustainable innovation and also assure that the own products are consisting of optimal materials.
(VH2) **Round tables with regional government** representatives about environmental legislations.	(C2) **Intensive internal communication** and exchange about sustainability.	(DR2) Furthermore, the **active involvement** of them in the **innovation process** was very successful.	(I2) Having an **ambitious vision** that is clear but also challenging to be achieved.
(VH3) **Strong stakeholder interactions**. One example were 'open ears' for neighbours and their complaints.	(C3) '**The Green Quest**' that helped employees to think more creatively about energy reduction methods.	(DR3) Employees were **encouraged through bonus payments** for good (sustainability) ideas.	(I3) Carrying out **employee training** in order to assure that sustainability as well as its meaning for the individual is understood
(VH4) Invitation of schools and open for **academic collaborations**. Pupils and students will spread the word and win-win situations get created.	(C4) **Using slogans inside the company** that indicated that emphasize that the development towards sustainability is the goal of the company and not only the goal of individuals.	(DR4) At least **annual meetings** about sustainability that create a same level of understanding between the management and the employees.	(I4) Having an **idea database** and management in order to involve everyone to contribute with innovations. Be open for internal input.
(VH5) **Staying with the core business** and not doing sustainability for the sake of it. Both things have to be aligned with each other.	(C5) Giving employees **room for their own ideas**. Once they were challenged with certain sustainability goals they exceled themselves.	(DR5) Making **sustainability visual** to the employees and pointing out why it is necessary for the success of the company.	(I5) Being inspired by nature (**Biomimicry**) and actively searching for ways to make the company learn from it.

(VH6) Starting to work with the **already existing strengths** in order to achieve a competitive advantage even earlier.	(C6) Providing a **comparative overview about sustainability characteristics** of each offered solution to the customers.	(DR6) **Communicating closely with the customers** and helping them to use and store De Rees' products in an optimal way	(I6) **Carrying out LCA** and be transparent about products as well as processes. Measuring impacts and optimizing them.
(VH7) Having **a positive agenda** and not only trying to make certain processes only less bad.	(C7) **Having clear CO_2 reduction goals** that encourage the employees to act more accordingly.	(DR7) **Realizing quick-wins and low hanging fruits** with respect to waste management to make sustainability obviously beneficial.	(I7) Focusing on maintenance and long-term customer relationships through the help of **Product-Service-Systems**.
(VH8) **Internal- and external awareness creation** turned out to be a major success factor.	(C8) **Participating at national platforms** that carry out research and help to exchange ideas about sustainability. In this example the 'leaders for nature' (LFN) group.	(DR8) **Not always talking about the word 'sustainability'** but letting employees find their own interpretation of what it means for them	(I8) **Strong cooperation with partners and NGOs** has helped Interface to overcome several challenges and brought-in new business ideas.
(VH9) Making sure that all **employees understand sustainability** and get an adequate **training** about what it means to the individual.	(C9) Focusing besides optimizing internal processes also on providing even more **customized and sustainable solutions** to the customers.		(I9) **Making SD relevant for the individual and celebrating success**. Story telling can be for example one way to do it. People have to choose their own words for sustainability.
(VH10) Giving each employee a **specific mentor** that can help to improve the sustainability behaviour.			(I10) **Close collaboration with academics**. Especially, the quite unique 'eco dream team' has helped Interface significantly to improve its strategy.

Van Houtum has even created a specific document with CSR tips and tricks for other companies which can be found in the appendix III of this thesis.

5.4.3 Integration of findings into the Sustainability Framework of Maon et al. (2009)

In this chapter the developed CSR implementation framework by Maon et al. (2009) which was already explained in chapter 3 will be used as a basis to assess to which extend the interviewed companies underwent similar stages of their implementation and where the mentioned barriers/challenges and success factors were located. All green boxes indicate the success factors and the red ones the barriers/challenges. The discussion of the findings will be carried out in chapter 6.

Figure 40 - Integrations of findings from case studies into Maon et al.'s (2009) guideline

5.5 Corporate Sustainability Strategies of case companies

In the next step further insights about the respective Corporate Sustainability Strategy of each company will be provided. This includes the mission statement, an overview about which approaches were used, which concrete initiatives were carried out and how the companies can be mapped on the MoCSAs mapping methodology. All information was extracted from the interviews and the official homepages of each company.

5.5.1 Vision, Mission & Policy

This chapter should serve as a short overview about the self-declared vision, mission and/or policy of each company. These statements alone already provide a good overview about the underlying philosophies of each corporation and it is as well interesting to see that the understanding of sustainability as well as its translation into the business context does vary between the selected companies.

Table 13 - Vision- and Mission statements of the companies

Company	Vision, mission & policy
Van Houtum	"As a producer of hygienic paper, our mission is to develop innovative solutions for better toilet hygiene in combination with exceptional environmental performance. While many companies strive to reduce their negative impact on the environment, we have decided to adopt a more effective approach of striving to achieve a positive impact on society and the environment. For example, we aim to be fully carbon-neutral in a few years' time. Moreover, we want to be able to pass on our excess energy to our surroundings. So we are more than just a friendly neighbour who doesn't bother you: we are the generous neighbour who provides electricity and gas for the whole neighbourhood."
Cofely	"To contribute to a better world through sustainable technology" Cofely has extensive knowledge, experience and passion for technology. This enables us to deliver sustainable customer solutions in the areas of Energy Efficiency, Asset Efficiency and Human Comfort. By getting the most of resources, Cofely ensures comfortable and energy efficient working and living conditions, and the optimisation of technical installations and production processes.
De Ree Holland	You are assured of custom work from us. In addition to the very best quality flower bulbs we offer optimum service and efficiency. You will also benefit from our large capacity which was expanded again in June 2007 with a highly modern 16,000 m² production and distribution space. Our total floor area is now 46,000 m². Our product is more than just packaged bulbs. De Ree Holland works towards long-term relationships. You will notice this in our low threshold, high degree of service, meticulous administration and complaints handling, and our flexibility. We are satisfied only when you are. We also make an active contribution to the healthy development of the flower bulb sector and export. We take our social responsibilities seriously, caring for the environment and those living in the vicinity. Our employees are given a pleasant work environment in which they are able to develop their full potential.
Interface	**Vision** To be the first company that, by its deeds, shows the entire industrial world what sustainability is in all its dimensions: People, process, product, place and profits — by 2020 — and in doing so we will become restorative through the power of influence.

> **Mission**
> Interface® will become the first name in commercial and institutional interiors worldwide through its commitment to people, process, product, place and profits. We will strive to create an organization wherein all people are accorded unconditional respect and dignity; one that allows each person to continuously learn and develop. We will focus on product (which includes service) through constant emphasis on process quality and engineering, which we will combine with careful attention to our customers' needs so as always to deliver superior value to our customers, thereby maximizing all stakeholders' satisfaction. We will honor the places where we do business by endeavoring to become the first name in industrial ecology, a corporation that cherishes nature and restores the environment. Interface will lead by example and validate by results, including profits, leaving the world a better place than when we began, and we will be restorative through the power of our influence in the world.

Van Houtum for example has already incorporated the core philosophy of C2C into their mission statement since it wants to create a positive impact instead of 'only' reducing negative factors. Furthermore, at least according to the mission statement, the mind-set of Industrial Symbiosis is part of their long term mission and seemingly a very visionary approach is chosen in which a company is seeing itself rather as a part of a regional production- and living system instead of a separated entity. However, no clear time goals are set and thus the danger remains that the goals are pushed and not taken too serious.

Compared to Van Houtum, **Cofely** chose a very comprehensive mission statement that does contain the ambition to contribute towards sustainable development by the help of the clearly stated means of technology. Furthermore, the time dimension as well as the concrete intended impact is not mentioned and that thus the ambition remains rather vague.

DeRee Holland on the contrary chose a more indirect sustainability mission statement in which the term as such is not mentioned at all. However, a clear focus on quality statements and long-term customer relationships is set. The internal aspects of sustainability towards their own employees and the environment are specifically mentioned as well. According to Bakker (2013) it was a conscious choice not to use the term sustainability and to rather 'do' instead of 'talk' about it. However, in the internal strategy document, CSR is defined as: "Corporate Social Responsibility means that in addition to the pursuit of profit (profit) also takes into account the effect of all activities of De Ree Holland BV on the environment (planet) and that eye for human aspects within and outside the company (people). It is a balance between people, planet and profit."

As being worldwide one of the absolute front-runners in the field of Corporate Sustainability implementation, **Interface** has a very ambitious vision, in which the company is aiming at actively producing socio-economic wellbeing with the help of its influential and inspiring role. It is however surprising that the environment (in this respect 'planet') is not concretely mentioned in the vision. The reason for that could also not be answered during the interview with van Arkel (2013). However, the mission statement does specifically mention all three pillars of sustainability and connects the core business purpose very well with the restorative ambitions of the company.

When looking back at chapter 2.4 (Corporate Sustainability Strategy) it can be concluded that all four companies have translated their core believes/values into very unique vision and mission statements that all emphasize on specific aspects of their overall sustainability strategy. Only Interface has however made a specific differentiation between vision and mission and the others have rather merged the both terms together. Nevertheless, all statements seem credible, authentic and matching to the specific companies.

5.5.2 Used approaches

Each company used several different approaches in order to translate the concept of CS into practice. Certain approaches were used in a rather aware (for example management systems) others in a more unaware way (for example Industrial Ecology in its very early steps within assessing regional potential and starting to contact potential partners).

Van Houtum is consciously using (Environmental) Management Systems, Eco-Efficiency, CSR (in form of having carried out the ISO 26000 guideline) and Cradle to Cradle. The approach of Industrial Ecology is currently in the stage of evaluation but due to the relatively secluded location of the factory, the potential of conducting industrial symbiosis ambitions with neighbouring companies does not seem to be possible. According to Manders (2013) all above mentioned approaches were very compatible with each other and were one after another integrated into their overarching Management System.

Cofely is clearly focusing on the Eco-Efficiency approach, which is supported by Environmental Management Systems (currently applied at 75% of the companies' departments). Furthermore, a customized form of CSR is applied as well, since Cofely is actively involved in assuring high health and safety standards, as well as a 'Quality of Life at Work' programme.

The approach of **De Ree Holland** to implement CS into their business strategy is purely achieved by the help of a Total Quality Management System (TQMS). CSR is mentioned in the strategy document and rather understood as a company internal way of treating own employees better in relation to health- and safety aspects. External stakeholders (except direct customers) are not part of the strategy yet. Thus, the approach of management systems is the clear choice of De Ree Holland.

Interface is one of the few companies that uses a large variety of available and prominent sustainability approaches and managed to align them perfectly with each other under the general 'mission zero' ambition. Management systems (ISO 9001 and 14001, as well as industry specific ones) Eco-Efficiency, CSR, Biomimicry, The Natural Step, Life Cycle Management and Cleaner Production are used. Partly, approaches are rather mingled together and understood as an organic approach (for example eco-efficiency and cleaner production). Furthermore, according to van Arkel (2013), most products would be already in line with C2C requirements but due to the fact that third party verification for this is not yet possible, Interface has decided to wait a bit more for this next step.

5.5.3 Concrete initiatives carried out by the selected companies

Since the understanding of CS as well as the (financial) possibilities to carry out certain activities vary significantly between the different companies, the concrete choices for specific initiatives differ as well. In the

following part the specific initiatives will be listed in order to gain insights about practical elements of the respective sustainability strategy. It has to be stated however, that this list will focus only on the major initiatives with greater impact, carried out by the companies and mentioned by the interviewees. Each element will be categorized according to the main intention of fostering: (S) social-, (E) environment- and/or (F) financial- performance orientation. Some of the following initiatives are also represented in the success factors (see chapter 5.4.2) mentioned during the interviews. The ones which are not mentioned above are rather small initiatives that are in line with the overall strategy but not considered as major success factors. However, they are concrete initiatives that were carried out and thus supposed to be mentioned in the following table.

Table 14 - Carried out sustainability initiatives of the companies

	Van Houtum	Cofely	De Ree Holland	Interface
Initiatives	(S) Sponsoring of sport and sustainability events	(S) Quality of Life at Work programme gets currently initiated	(F) Continuous assessment of existing as well as new regulations	(S) Having created an idea database to collect innovations from employees
	(S) Encouraging employees to participate at the *Samenloop voor Hoop* (running event)	(S) Internal coaching's and seminars about sustainability related topics	(F, S) On-going risk assessment and management	(E, F) Installation of PV arrays in the Netherlands, California and Georgia
	(S) "Fruit on Tuesday" tradition to encourage a healthy nutrition	(E, F) Continuous CO_2 reduction by the help of technological improvements	(E) Initiatives to reduce industrial waste and separate it better	(E, F) LEED Certifications for manufacturing plants to reduce their footprint
	(E, F) Having turned one product line entirely C2C. Furthermore, being the first player on the market who has done this within the product category	(E) Increasing purchase of energy produced by renewable resources	(S) Continued training and motivation of staff by the help of personal coaching and presentations	(E, F) Intensive application of LCAs to identify awareness about and improvement potential of the products
	(F) Offering already complete wash-room solutions with leasing models for certain products	(F) Collaboration and exchange with potential partners to generate win-win situations for all involved actors	(E, S) The promotion of environmentally friendly and healthy working conditions in the supply chain	(F, E) Actively applying Biomimicry for product innovations
	(F, E) Having local partnerships about circular economy aspects. Former waste	(S, E, F) Initiation of the 'Green Quest' which encourages employees to save energy at home and in the company	(E) Determining the Carbon Footprint in packaged bulbs	(E, S) Launched globally first Environmental Product Declaration in

products can thus be used by Van Houtum	and fosters innovative thinking and awareness rising		the industry to improve transparency
(F) Exceptional service offers that ensure highest customer satisfaction (loyalty commitments, strong brand support and free taking back policies, customized logistics, quick and reliable client service within 24h)	(E) Plastic coffee cup replacement to foster awareness about easy quick wins and every day actions that foster environmentally friendly behaviour	(S) Compliance standards and improve all activities that do not conflict with human rights, discrimination and child labour	(E, F) Several initiatives were carried out that focused on reuse and recycling of materials from e.g. fishing nets, landfills, etc. to move closer to closed loop products
(S) Employee surveys about health and working conditions	(S) Sponsoring and fund raising for cancer patients	(S, E) Suppliers review to encourage continuous improvement within the supply chain	(S, E, F) Having initiated the Eco-Dream-Team that brought in new ideas about applications of sustainability
(E) Purchase of 100% green energy	(E) Regulation that only a and b label cars (CO_2 emission labels) were allowed	(E) Monitoring of waste and energy management	(S, E) Encouragement of related companies to join the Mission Zero campaign
(S, F) Employee trainings and competence management courses		(S) Working on minimizing adverse effects in the field of corruption and cartel movements	(E) Dominant usage of renewable electricity (8 of 9 facilities) and ISO 14001 certifications for each facility
(S) Personal mentoring systems that support the working atmosphere but also create stronger relationships and effective ways of teaching		(S) A positive contribution to the local economy, this by promoting the involvement of services, personnel and goods from the local area	(E, F) Significant research about waste reduction programs (also by the help of novel technology) that saved $433 million since 1995
(S, F) Very strong safety policies which resulted in 1000 days accident free record.			(F) Introduction of novel leasing models that saved materials, created work for third parties and generated income for Interface without production

(E, F) Continuous energy saving potential scans			
(E, F) Specific water treatment facilities that ensure the least water consumption possible			

Based on the list of initiatives it becomes clear that the four companies have chosen partly very different initiatives to foster their sustainability performance. Several small scale projects like sponsoring or sport events, cup replacements and idea databases were mentioned. Commonalities within the initiatives can rather be found in 'quick-wins' regarding energy saving or waste reduction initiatives. Furthermore, all four companies have developed their own employee safety and wellbeing approach. Thus the conclusion can be drawn that rather advanced companies do try to cover the three prominent pillars of sustainability (social, environmental and economic) by the help of different initiatives. Those initiatives are however very company specific and often novel in their characteristics. However, it can be anticipated that a broad gathering of different initiatives based on a multitude of case studies could provide a basis for inspiration that newcomers could choose from. Especially initiatives like the 'fruit on Tuesday' or the abolition of plastic cups in a company can be imagined to be applicable to numerous enterprises and thus potentially result in positive outcomes as well.

When comparing those findings with Table 5 (Typical CS activities in SMEs) the analysed case studies represent the literature based findings to a large extent. Norms like the ISO 14001 one are implemented and all companies are actively trying to improve their *environmental performance* by the help of waste minimization and energy saving initiatives. However, the phrasing of the different initiatives does differ to some extent but the general tendencies are very similar. Also with regard to the *employee related activities*, the wellbeing and education of the workforce is seen as an important factor in the case studies as well as in the literature analysis. Also mentoring programs and trainings are used. However, flexible working times or flat management structures were not specifically mentioned. Also the *supply chain/B2B* related activities were partly similar to each other. The ISO 9001 norm or close supplier dialogs were found in the literature and in the case studies. Lastly, also the *societal engagement* was very similar and sponsorships as well as voluntary activities were mentioned in both sources. It can thus be concluded that the general ideas of how to operationalize sustainability are partly very company specific ones (e.g. 'fruits on Tuesday' or 'paper cup replacement') and very often typical and industry wide initiatives like CO_2 measurements, energy saving programs, employee wellbeing programs and so forth.

5.5.4 Strategy mapping of case companies by the help of MoCSAs

In this chapter all four corporate strategies will be mapped by the help of the previously developed mapping methodology and after each questions a short explanation and justification for each position will follow. The situation mapped represents only the current state and not the envisioned scenario. Limitations and problems

of the mapping methodology will be described as well. All information is based on the conducted interviews of the respective companies and additional sources are quoted explicitly.
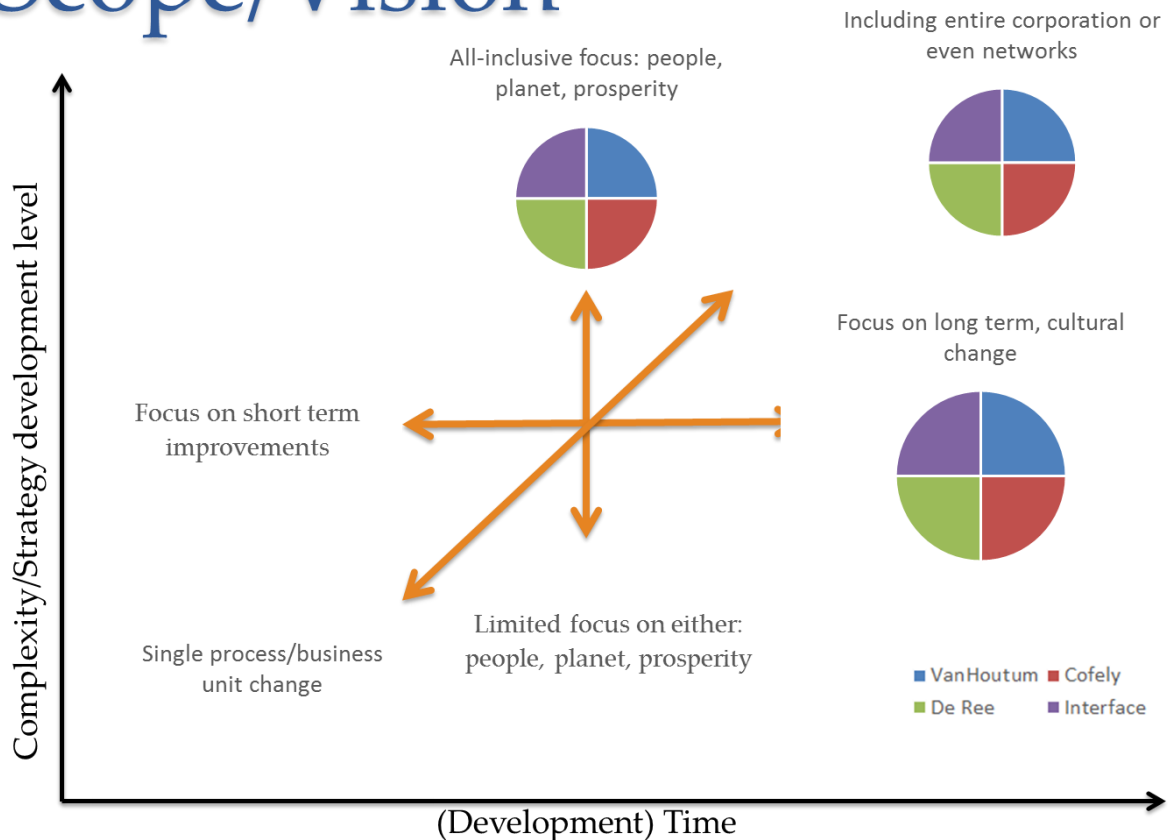

Figure 41 - "Scope/Vision" mapping of case studies

Due to the fact that **Van Houtum** considers all three pillars of the triple bottom line very thoroughly, the mapped position is justified. Social as well as environmental goals are already aligned positively with the financial perspective and so far no obvious conflicts were seen. However, a general problem in this mapping aspect is the difficulty of saying when all three pillars are considered equally. Would a company that carries out just one minor social program and environmental program deserve to be considered all-inclusive? On the (development) time axis Van Houtum can be considered to be truly aiming for a long-term cultural change since it has already adopted C2C into its business strategy and also intends to move way beyond being a secluded producer of paper but rather becomes an active provider for the region. The strategy applies for the entire corporation and it is envisioned to improve the already existing relations with direct and indirect stakeholders even more. In the interview recycling partnerships, C2C demands to the suppliers as well as sponsorships in the regional context were mentioned as examples.

Cofely as well considers all three pillars of the TBL in its sustainability strategy and according to Boonstra (2013) especially the occupational health aspects are central points of focus. On the environmental pillar, mainly, CO_2 savings are focused on, which however go in line with general ambitions to become more resource efficient. The ambitions of Cofely are to incorporate sustainability even deeper into its culture and while maintaining its core

People:
- Employees stay longer with the company, 17.1 years on average.
- The number of accidents occured that resulted in sickness absenteeism is less than 1 per year.
- Low sickness absenteeism: fluctuates around the 3% mark for many years.
- A low frequency of sickness absenteeism: approximately 0.7 for many years.

Planet:
- We have achieved 80% efficiency by generating our own electricity, as opposed to a maximum of 50% if we were to purchase power from an external energy company.
- Our gas consumption has reduced from 12.4 to 10.7 GJ/tonne.
- Our water consumption has reduced from 11.5 to 9.5 m3/tonne.
- Our NOx emissions have dropped from 0.7 to 0.5 kg/tonne.
- Our CO2 emissions have dropped from 719 to 532 kg/tonne.
- We have achieved a saving of 15,000 tonnes of waste by making it available to third parties as a raw material.

Profit:
- We have achieved a cost reduction of 1 million euros by recycling our paper residu, through increased output from paper machine 4, reduced use of chemicals, lower material losses and lower energy and water consumption.
- Turnover has increased from 51,216,000 to 63,667,000 euros.
- The unique Satino Black concept generates more satisfied customers and turnover growth.

* Figures of 2012 compared to 2006

Figure 42 - TBL achievements according to Van Houtum

Source: Van Houtum (2013)

activities, new forms of partnership but also business models are intended to be developed. One concrete new ambition is thus to investigate the potential of EIPs even more and to help their own customers with using this potential. A new business model could thus be to connect a client with other clients in the region and help them all to achieve energy and resource efficiency by closing material loops. Thus, also the last question gets answered since Cofely is already applying its CSS to clients as well (sustainability in form of product specifics is a part of each sales proposal) but is planning to enlarge these strategies even further.

De Ree Holland's sustainability approach does already cover all three pillars of sustainability, even though it has to be stated clearly that the concrete initiatives carried out are not yet in a very sophisticated stage. This finding already indicated that limitations of the mapping methodology can be found, since no quantitative measurement of when a company truly considers the triple bottom line can be carried out. Cultural change-wise it was clearly stated in the interview, that the ambitions exist to move De Ree to an entirely new awareness and understanding of sustainability that does require however, a strong change within the rather traditional culture of the company. Lastly, the scope of the sustainability strategy does involve the entire corporation and also influences the supply networks to some extent. Since the market of De Ree is strongly demand driven, the chances of influencing the customers are relatively low. However, De Ree is strongly customer focused and tries to serve their needs in the best way possible.

Like the other three companies, **Interface** does consider all three pillars of sustainability thoroughly in its business strategy. Furthermore, it does appear that the economic benefits are continuously more a natural side-effect of the initiatives carried out in the social and environmental area and thus not necessarily mentioned as clear targets anymore. Interface has furthermore already undergone a significant cultural change process but is still intending to continue developing further and exploring entirely new business opportunities that might require even more significant changes in the business strategy as well as in the culture

strategy?. Lastly, the CSS of Interface does noticeably include entire networks of suppliers and customers. A clear goal of having a positive influence on all stakeholders is formulated and actively applied.
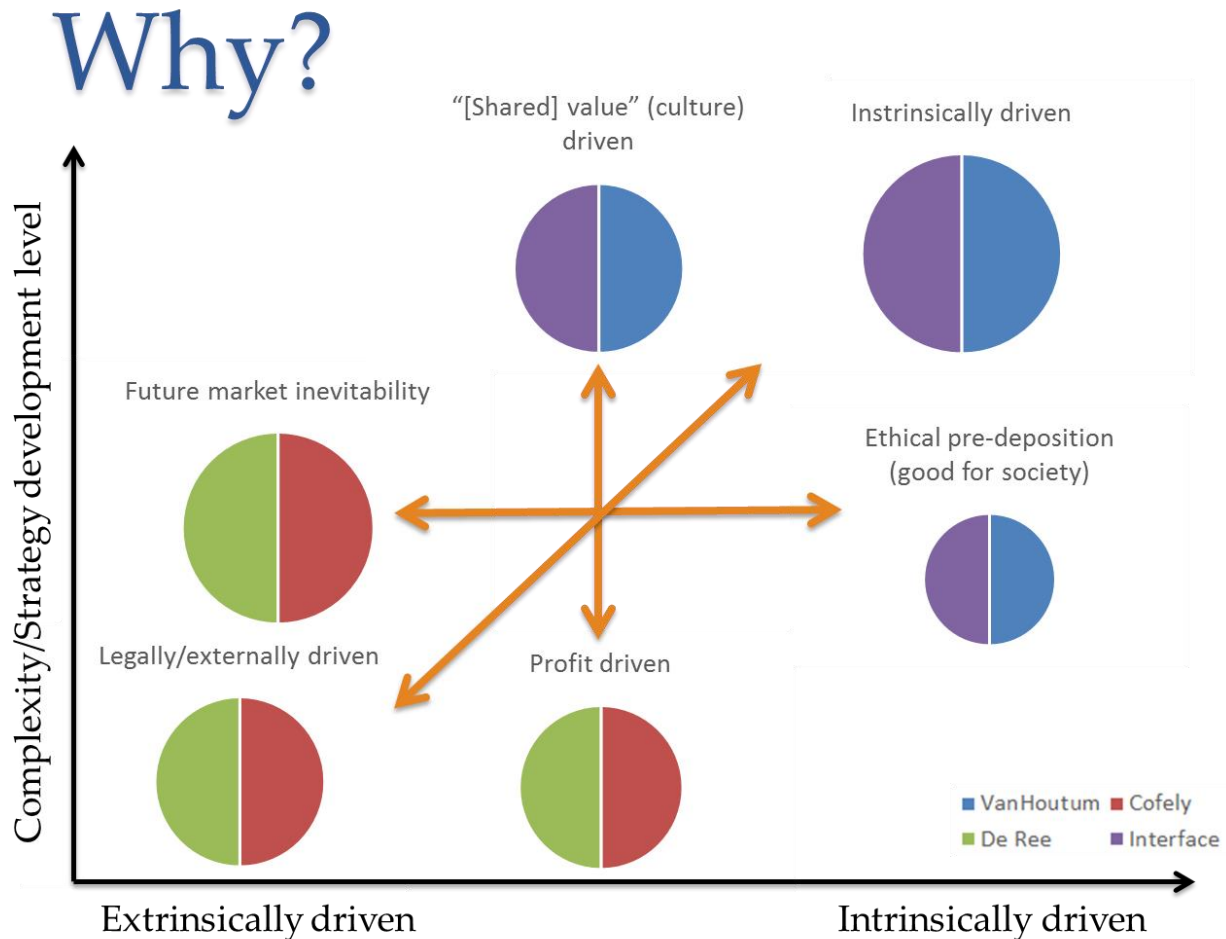

Figure 43 - "Why" mapping of case studies

In the 'why' axis system **Van Houtum** can be mapped on the shared value driven point since being 'truly' sustainable on all three P's is entirely envisioned. Profit is certainly an important aspect that was stated by Gehlen (2013) also openly but it is not the only driver. The next question about future market inevitability or ethical pre-dispositions is difficult to be answered in an un-biased way. C2C might become at some point a requirement by the market but whether Industrial Symbiosis approaches will, is highly questionable. This can also only be found out by further empirical research on a large scale. Furthermore, governments might play a central role in turning circular economy thinking into directives and thus requiring companies to cooperate with each other. These subjects are however, not a focus of this research and thus will be mentioned for further research. However, looking at the current demands of the market Van Houtum already moves many steps ahead of their competitors and upcoming legal or market requirements for its actions are not yet visible. Thus, the mapping on ethical pre-depositions seems justifiable. Lastly, the closely connected question about

whether the initiatives were externally or internally driven can also be answered by the latter since it was a conscious and independent choice of Van Houtum to implement for example the ISO 26000 guideline or investigate the potential for the C2C product line. However, as stated before already, the ideas for C2C came from the Chamber of Commerce but the choice to actually implement it, was an intrinsic one.

According to Boonstra (2013), potential profit gains from sustainability initiatives are the main driver for **Cofely** to become more sustainable. Shared value ideas are existent but not considered a dominant driver. Furthermore, it was stated that a clear trend especially in the energy business can be seen at that the tendencies certainly move towards decentralized energy solutions and that also 'green energy' is playing continuously a larger role. Since energy based companies are tending to be very risk adverse as well, a clear demand for long-term contracts and solutions is visible, too. Generally, the sustainability strategy of Cofely is rather extrinsically driven since the market needs are clearly moving in this direction.

For **De Ree Holland** the incorporation of sustainability initiatives was clearly driven by future market inevitability. Customers are already now asking for higher quality products that are also produced in the most sustainable way. In detail that means that certain clients have been asking for CO_2 data about the flower bulbs. Besides the requirements from external parties, the internal cost-saving potential was also a core reason for the implementation of sustainability initiatives. It was stated that the current actions carried out have already resulted in more productive and satisfied employees but also in cost reduction due to optimized production processes as well as waste reduction. Lastly, it can be concluded that the reasons for CS implementation were predominantly of external nature and necessary for De Ree to stay successfully in the market and realize the growth potential.

The reasons for **Interface's** CSS implementation are clearly located with the intrinsic motivation of the company to add its part to societal value creation. Obviously, profit that is generated by the strategy is an intended side effect but not the main reason. Since Interface has already established the roots of the strategy in 1994, in a time when the word sustainability has not conquered the business world and neither the heads of consumers as much as it has now, Interface already moved ahead of the market by actively searching for 'greener' strategies. By that time, the requirements of future markets were not clearly identifiable and thus not a core reason. Finally, no clear legal obligations have 'forced' Interface to pursue its strategy.
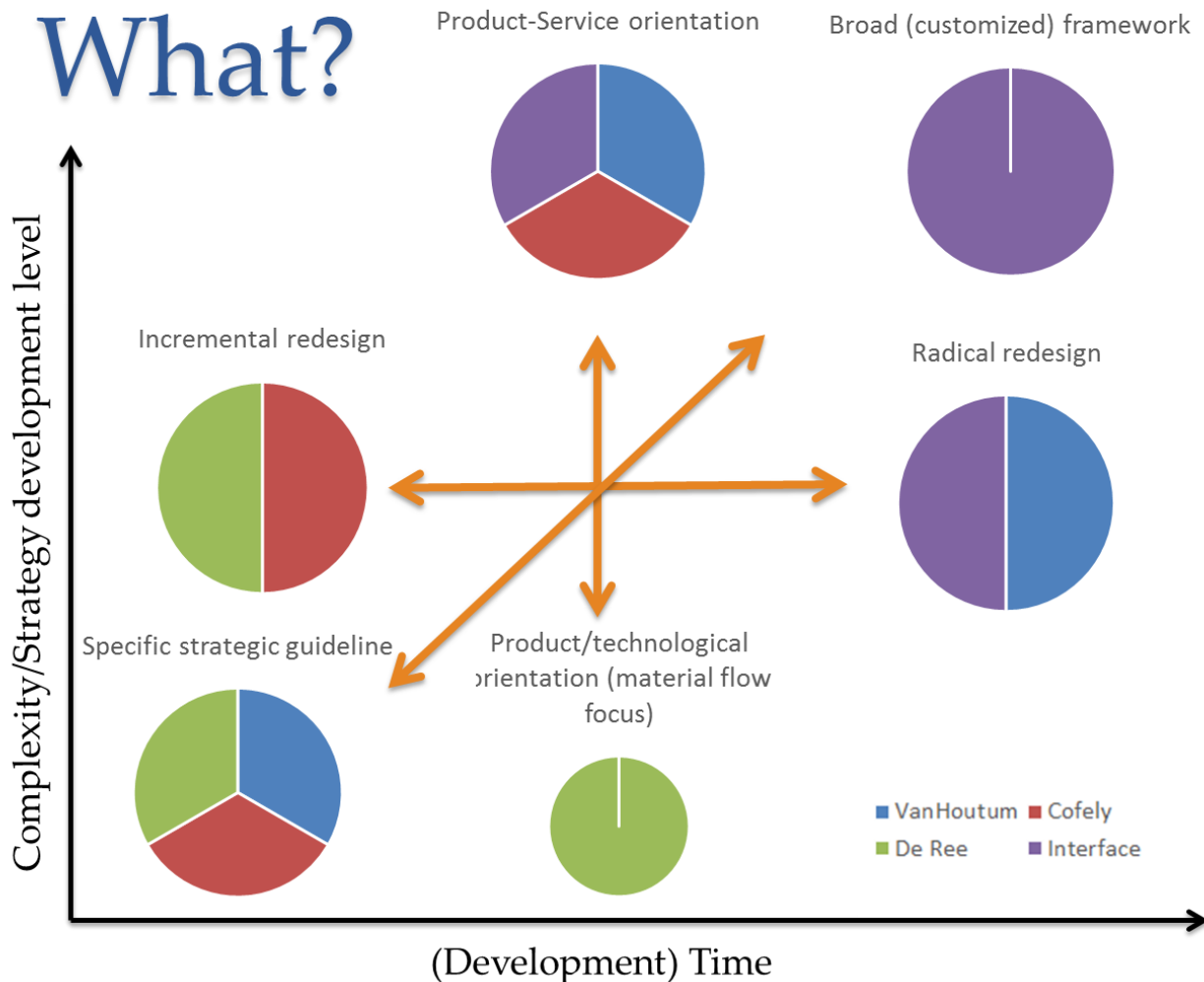
Figure 44 - "What" mapping of case studies

Van Houtum as being originally a pure paper producer has already diversified itself towards becoming a service provider for entire washroom solutions which include all necessary products, produced in a sustainable way and offered as a service. Several products are already distributed in form of leasing contracts and diversification ambitions are growing significantly. Thus, Van Houtum has already proven by established products that the product-service mapping is justified. Furthermore, especially the lead product (Satino Black) can be seen as a radical redesign of a product at least with respect to the used materials. However, this radical redesign was not carried out with all products and thus a fair mapping is difficult. Finally, sustainability is used entirely as a strategic guideline and deeply embedded in the organization. The mission, vision and values are deeply connected to sustainability.

Cofely's products are as well already customized and solution oriented ones that are partly sold as services. Even though thoughts about maintaining the ownership of products are present since the cash-flow of

material costs is vast and thus significant saving potential is seen, these projects have not yet been established. Furthermore, the way Cofely improves its processes and products is rather done in an incremental (redesigning) way. Finally, sustainability is incorporated into Cofely's 'DNA' in form of clear strategic guidelines, which are part of its management system.

The different sustainability initiatives carried out by **De Ree Holland** are predominantly incremental steps of innovation and product/process redesign. So far no radical changes have been carried out since there was a) not yet the necessity and b) since the cultural surrounding of the company requires a sensitive change process. Furthermore, due to the nature of the company and its products, the sustainability initiatives are focused on the production and the products as such and not aiming at introducing Product-Service-System models into the business. Lastly, sustainability was implemented by the help of a strategic guideline, taken from the ISO 9001 and ISO 14001 norm that was in accordance with the PDCA cycle. This methodology was then applied to the various processes encountered in the organization.

With regard to what was done in specific within **Interface's** strategy definition, a major step for a carpet tile producer was the step towards becoming also a service provider with a product which is usually a designated product to be sold as such. However, not only the business model as such got changed but also the product. Principally, most products offered by Interface are already in line with C2C requirements (even though the current decision was made not to get certified yet due to the fact that no third party certification agencies are available (van Arkel, 2013). The radical redesign of a product can also be seen in the fact that Interface used the Biomimicry approach to come up with the idea to produce carpet tiles instead of entire carpets which was also a revolutionary step in the industry. Lastly, Interface has used a rather broad and customized framework, which got inspired by the Natural Step, in order to implement the strategy. No clear guideline was available by the time Interface had started its strategy definition phase.
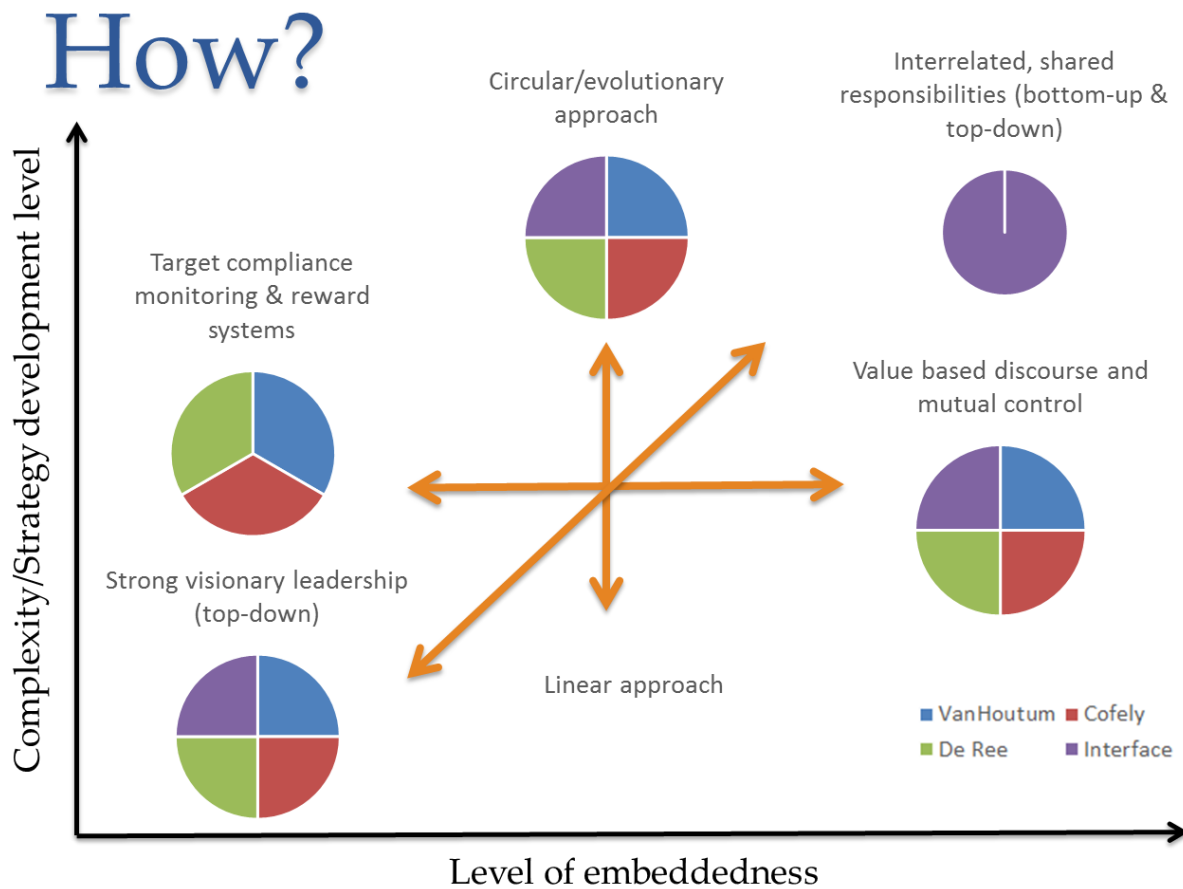
Figure 45 - "How" mapping of case studies

Every interviewed company understands CS as a circular approach and is thus using it like that, which means that corrective actions as well as continuous improvements and -adjustments are carried out. Since **Van Houtum** is using the ISO based Management Systems as its main support, continuous management reviews are required and thus the mapping is justified at this point. About the question how the behaviour of employees towards fostering sustainability is 'ensured' both options are used by Van Houtum. On the one hand side quality and thus safety aspects have to be controlled and on the other hand soft factors like coaching and extensive informal communication is essential as well. Leadership-wise the initiatives are defined by the top- management and implemented in a cascading way into the organization. It has to be said however, that the top- and middle management are always open for suggestions from the operational level and that a certain exchange is carried out.

Since **Cofely** is also using ISO based management systems, its understanding of CS is also oriented towards a circular approach in which the CSS gets adjusted continuously. In the area of compliance control, a target based as well as a mutual control based approach is used. Specific managers are for example rewarded financially, if sustainability targets are achieved. On the other hand, other employees are rather encouraged

to act in accordance with sustainability goals by the help of value based communication of the company's vision. The sustainability strategy as such was implemented in a top-down manner, influenced by the mother company GDF Suez as well as from the top management of Cofely itself.

De Ree Holland also understands sustainability as a circular approach that has to be checked and verified in a continuous way. Regarding the way of controlling and ensuring that the employees act upon the intended strategy, the company uses on the one hand side target based/reward systems for encouraging a more sustainable behaviour of its employees but on the other hand also communicates the voluntariness of the actions. In detail the rewards can be found within bonuses resulting from innovations suggested by employees and the rather value based approach can be found in intensive communication of the quality and environmental manager with the employees. The entire sustainability strategy had clear top down characteristics and was thus very much driven by the HSEQ manager (Bakker) in exchange with the CEO.

Interface is one of the most prominent examples for its evolutionary approach towards sustainability. Throughout time, continuously new elements were added to the strategy and by the help of intensive collaborations with academics, novel ways of translating sustainability into the core business were found. In the current state Interface made the active choice not to couple 'sustainable' behaviour to specific reward systems, but rather ensure it through a value based discourse. Employees are rather passively encouraged to participate at the journey towards sustainability but actively asked to contribute by the help of innovations and new ideas. Furthermore, the developers of successful ideas do get specifically mentioned on the website. Generally, it is however intended to achieve an intrinsic motivation to work towards sustainability. Lastly, the entire corporate culture is defined in a way that each employee can contribute new ways of operationalizing sustainability and thus the strategy is a very interrelated one that was however initiated by Ray Anderson but currently lived and fuelled by the entire corporation.
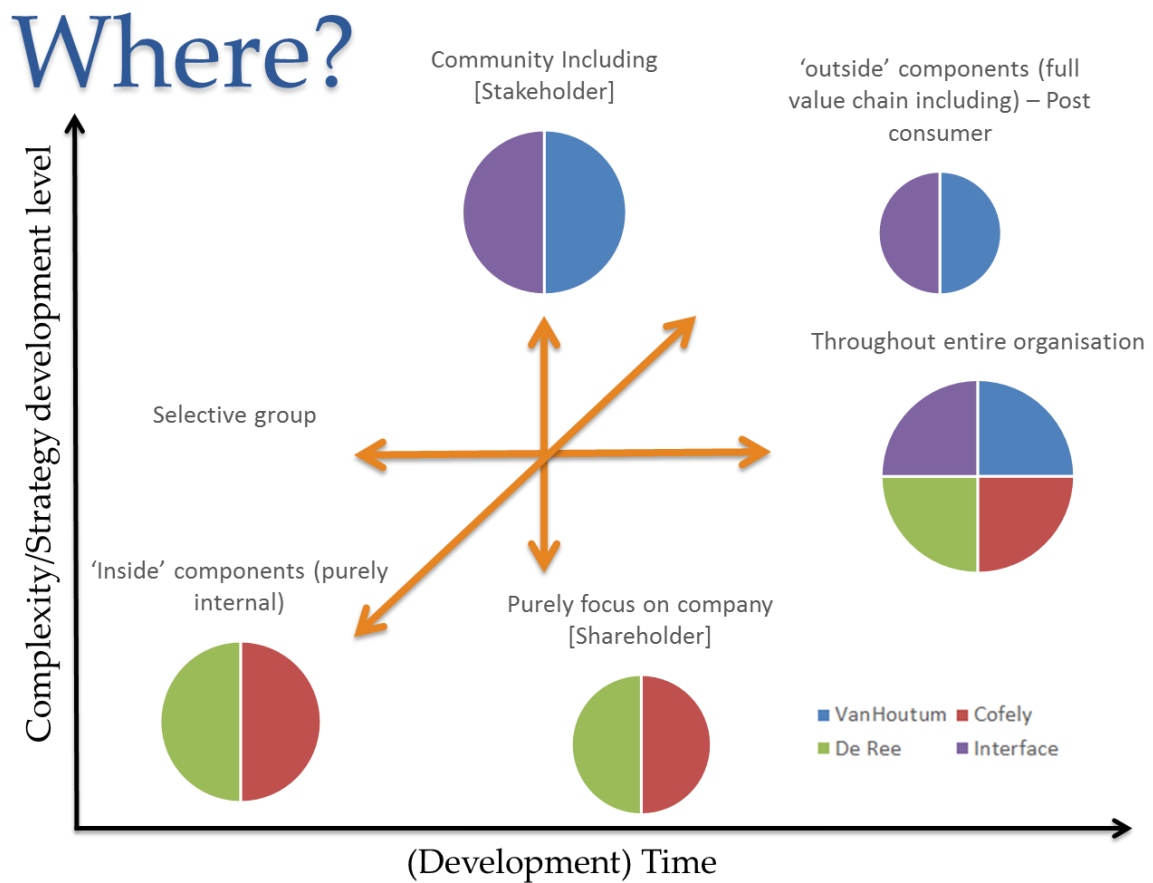
Figure 46 - "Where" mapping of companies

Regarding where sustainability strategy applies to, **Van Houtum's** Stakeholder matrix[41] can be seen as far reaching ones. Especially, the consideration and cooperation with neighbours proves that Van Houtum is taking its (indirect) stakeholder responsibility seriously. Furthermore, the strategy applied to the entire company and not only to for example the production level. Value-chain related Van Houtum is developing in both directions and thus influencing the supply side by higher sustainability demands[42] positively, as well as taking the consumers into consideration due to the fact the certain products are already leased and that take-back policies thus exist.

Cofely's current strategy focuses beside the company internal elements also on its customers as well as partly on the community. However, the limitation has to be made that only direct stakeholders are considered and

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[41] Specific matrix developed for their stakeholder management. All important stakeholder (groups) with their needs are mapped in order to be able to 'manage' them better

[42] Van Houtum interacts for example intensely with providers of raw materials for their washroom solutions (e.g. soap dispensers) and demands from them to be able to produce those devices in a C2C way. Even though, primary resistance was encountered, the suppliers finally agreed on researching the possibilities for such product requirements and eventually managed to provide the needed product.

not indirect ones. The strategy itself is applied throughout the entire organization and according to Boonstra (2013) not every employee could give the same definition of sustainability but would certainly know what is meant by it in broader terms for the organization and how he or she can contribute to fulfilling the underlying targets. However, value chain wise, Cofely considers vastly the internal value chain as its field of responsibility, and so far post consumer incentives for recycling or also sustainable sourcing of raw materials were not considered.

Regarding the questions where the sustainability strategy of **De Ree Holland** applies to, it became clear from the interview that the strategy is communicated throughout the entire organization in the same way but might apply most to the production workers. The strategy itself does also apply only to the direct stakeholders of the company and post-consumer processes are not considered.

Interface's strategy is clearly applied to a far stakeholder circle due to the fact that it is actively achieved to involve even far stakeholders like fishers in the Philippians that are encouraged to collect dumped fishing nets from the shore and get them delivered to the Interface production facilities. Regarding the value chain of a carpet tile, all involved actors are influenced by Interface's strategy. Suppliers of raw materials were for example asked already several years ago to provide bio-based or recycled materials to Interface. These requirements have helped the supplying companies according to van Arkel (2013) to boost their own market position significantly. Also consumer and post-consumer-wise does the strategy apply. Interface offers for example very interesting take back policies of carpet tiles, or cleaning and exchange possibilities. In the interview it was for example stated that it does happen occasionally, that the consumers are even advised to get their entire carpets removed, cleaned and replaced again to save significant amounts of money compared to getting a new carpet. Those models provide Interface with a service fee, since the cleaning and maintenance is outsourced and help to build up strong customer relationships. The content of the strategy does apply to the entire organization and not only to selected departments.
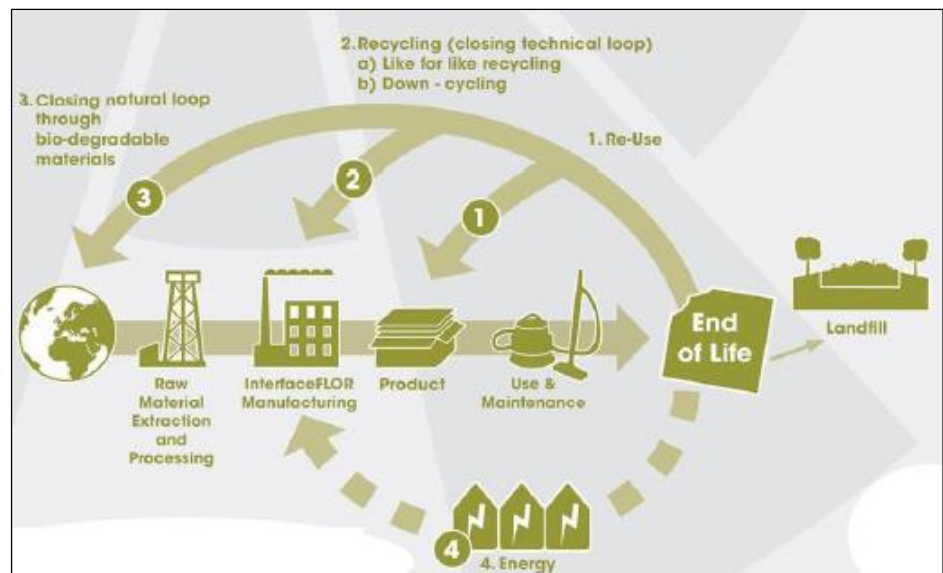

Figure 47 - Interfaces' partnership model

Source: Interface (2013)
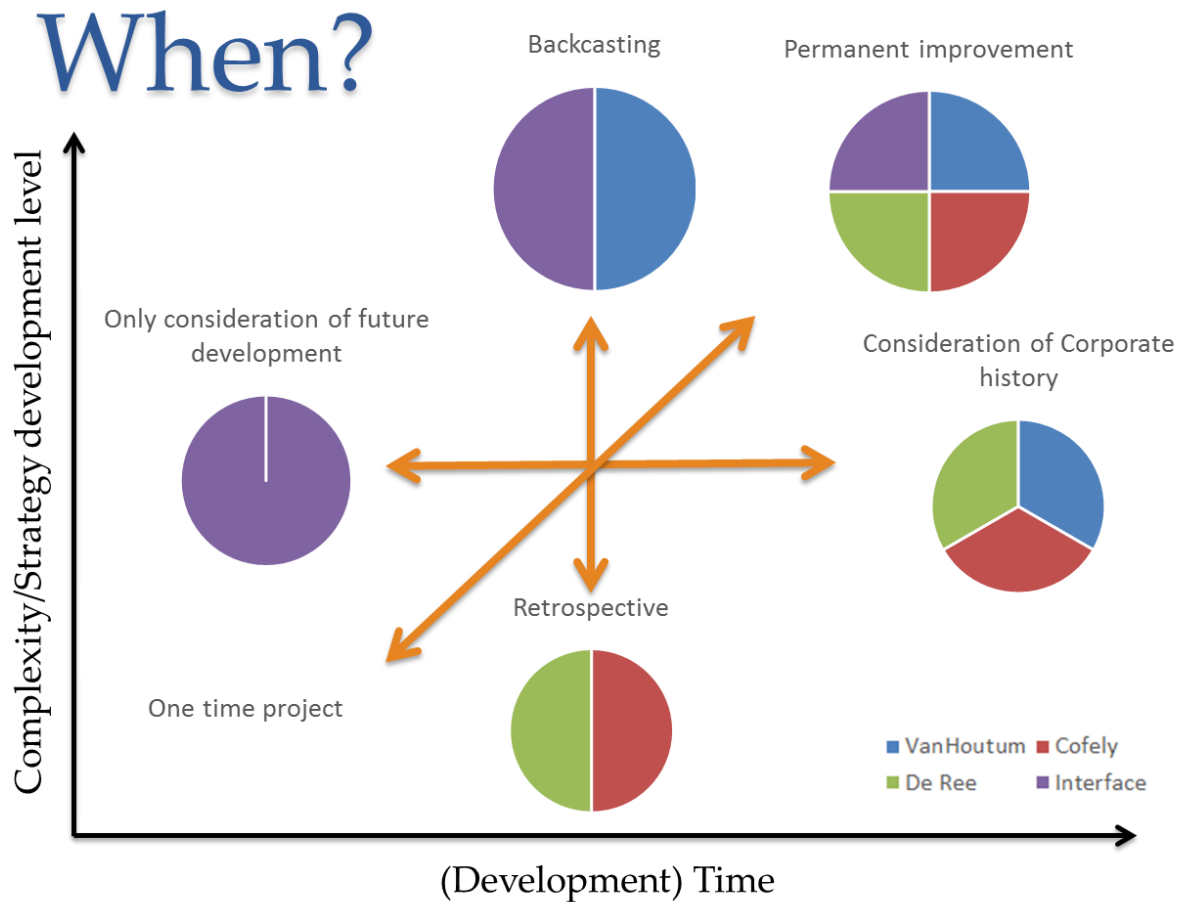
Figure 48 - "When" mapping of companies

The time dimension of **Van Houtum's** strategy could be seen as already organized according to the back-casting principles since goals like being entirely CO_2 neutral in the future are set and ways to get there identified. However, back-casting is on the other hand not yet used is an as sophisticated way as the Natural Step would suggest it for instance. For the development of the CS strategy, the company's specific characteristics were taken into account and the strategy was built up upon them. Finally, sustainability is seen as a process of permanent improvement and the strategy is reviewed at least twice annually.

Cofely's way of strategy definition is based on retrospective techniques that consider the 'past' as a basis for further strategy planning. Available resources and capabilities are thus taken into account. This point is closely related to the fact that Cofely has considered the corporate history for the definition of its sustainability strategy. As also stated in the interview, the core business fields are meant to remain the same but the way of carrying them out might change over time. Continuous improvement is very clearly stated as a core ambition and a vital way of staying competitive in the long run.

De Ree Holland uses for its strategy definition also the method of resource-based retrospective planning and especially considers the corporate history and culture of all its sustainability plans. In particular the traditional culture is considered carefully and every new element of the strategy has to go in line with the core business of De Ree. Since the company is very aware of its relatively late start in the field of sustainability, and also well aware of the cultural barriers, it has written in its agenda that continuous improvement is of central importance and that learning form mistakes is absolutely essential for the upcoming steps.

For the strategy finding, **Interface** uses the method of back-casting which helps to define ambitious goals without being held back by considerations of the current status. For many ambitious sustainability approaches that were applied by Interface, only future goals were important and the mountain metaphor which is used by Interface to visualize the path towards the Mission Zero goal symbolizes as well, that the corporate history is history and that future matters the most. To end with, the Mission Statement and Mission Zero goal of Interface is very clear and remains as the guiding target but the strategy to reach this goal is adjusted continuously and added by new innovations and tactics throughout the year.

6. Discussion of findings

The previous chapter has mainly served as a **descriptive summary** of the findings from the carried out case studies and only some findings were already compared to the literature analysis from chapter 2 and 3. The following discussion however, shall serve as more in-depth evaluation of the findings from the case studies in order to create a basis for the final conclusions that can be drawn from this thesis.

To start with, the findings from the **interviews with the consultancies** were in line with what the literature research suggested and also with what was found in the case studies (see evaluation from "CONCLUSION OF CONSULTANCY INTERVIEWS"). The main roles and benefits of consultancies in the process of CS implementation were described as their external perspective on the respective situation, their specific knowledge about CS as well as the broad experience-base that consultants have. Especially, these three aspects could significantly contribute to the support of solving specific challenges and barriers that were identified. The fact that the case companies were often **struggling with stakeholder management**, consultancies that usually have a broad network would know better about the specific needs of the actors and could thus help to find strategy adjustments that actually foster partnerships and thus win-win situations. This next step forward would however also require from consultancies to extend their strategy to intensified stakeholder consultation that goes beyond finding solutions for only one client. Especially, with regard to **implementation of Industrial Ecology approaches** that require symbiotic relationships between different companies, consultancies could enjoy an essential and valuable role with regard to their *moderation-* and *network functions.*

6.1 Discussion of findings from the implementation process

When comparing the **internal motives for CS implementation** from the four case studies with the motives encountered during the research by Bonini & Görner (2011) (see Figure 13) the findings are mainly in line with each other. All four case study companies have mentioned *energy and waste saving potential* as important drivers for CS implementation and also *increases in the reputation* of the company were understood as positive by-effects. The same counts for the *management of products throughout the entire value chain* and achieving *higher income* by the *improved product performance*. However, *water reduction and specific investments into R&D* about sustainable products were only carried out by Interface and Van Houtum. This finding however is mainly attributed to the characteristics of the companies. Thus, it can be concluded that the findings from the desk research as well as the empirical research are not contradicting each other.

Also the comparison of the findings during the literature research from Campbell (2007) (see chapter 2.3) about the **external drivers** for CS implementation revealed a partly overlapping picture. Van Houtum as well as Interface have implemented further sustainability programs due to the fact that there was a harsh competition (Campbell's driver 2) within their product categories and a diversification towards more environmentally friendly products offered them a competitive advantage. Surprisingly, none of the companies did mentioned the pressure from the civil society or NGOs as a driver. However, influential publications and the participation in organizations that foster CS were mentioned as important drivers for Interface, Van Houtum and Cofely. Finally, It was clear that not all drivers were found since Campbell analysed all possible

factors and did not describe them as necessary conditions that all have to be in place. One or two drivers alone can already be reason enough for 'walking the sustainability path'.

The **detailed comparison of the four case studies** with each other revealed several similarities but also the existence of differences between the companies. Since all four companies do differ significantly within their characteristics, size and industry, it was not expected to find exactly the same approach towards CS implementation. Furthermore, the differences in the starting time of CS implementation did vary a lot as well and thus companies like Interface had a significant benefit in terms of development time compared to relative new-comers like De Ree Holland. Based on these dissimilar starting points but also industry specific factors, the following main commonalities as well as differences within the chosen approaches can be found:

Table 15 - Communalities and Differences during the implementation procedure of the case companies

Commonalities	Differences
CS implementation was always a **top-down management decision**. However, different bottom-up influences were found as well, but rather in a later stage of the implementation.	The **scope of stakeholder consideration** was found to be different between the companies and thus the circle of responsibility and stakeholder consideration was a different one. For De Ree Holland for example, the direct Share- and Stakeholder were of central importance and Interface tried to incorporate a very far reaching circle of stakeholders.
Internal communication as major success factor. All companies stated very clearly that internal communication was a crucial factor that helped to get also the employees on board and to encourage them to participate actively in the strategy. Communication was thus mainly understood as awareness creation for the necessity for CS implementation as well as the translation into concrete actions that have to be taken by the employees.	The **carried out initiatives** by the four companies did differ due to several factors. The industry specific possibilities with regard to material and energy saving are one example. Furthermore, certain products have characteristics (for example to be sold as a service) that offer possibilities that other products (flower bulbs) cannot offer. Thus, how sustainability looks like in detail, is a very company specific matter.
The **realization of quick wins** that have a direct positive influence on the financial performance as well as on the awareness creation were used by all companies and seen as valuable steps in the envisioned direction.	The **understanding and scope of corporate sustainability** differs a lot in-between the companies and this can be seen clearly in the various vision/mission statements. For some it is rather a customer satisfaction instrument that has also positive impacts on the environment and the employees and for others it is seen even more as a philosophy of creating positive value for the socio-economic system.
The decision to incorporate sustainability into the business strategy was also seen as an important choice which was not regretted by any of the companies	**Leadership** within the CS debate was understood differently between the companies, and Van Houtum as well as Interface see their role in

	actively convincing other players to join them on their path towards sustainability.
Furthermore, there was consensus about the **vital importance of even further initiatives** and development of the CSS in order to be prepared for the future.	Also the underlying **reasons for CS implementation** differed between the companies. For some it was rather about external requirements and future market inevitability and for others way more dominated by intrinsic motivation and value based reasons.
All four companies **opted for certifications** in one way or another in order to be able to communicate the initiatives easier externally as well as enjoying the benefits of a more structured implementation procedure. The ISO 14.001 as well as ISO 9.001 norm was implemented in every company but differences in the other norms were discovered.	Even though this research was not aiming at analysing the **level of embeddedness of the respective strategy**, it became obvious that the quantity and depth of carried out strategies differed significantly between the companies. The sustainability strategy of interface for example appeared very clear and far reaching, whereas the strategy of De Ree Holland is still in a relatively early stage of maturity.
The first and most important actions towards sustainability were in every company **energy and waste reduction initiatives**.	Lastly, the research pointed out that the companies have chosen **different approaches** for the sustainability implementation. Again, this finding was partly related again to the industry specific possibilities as well as to the availability of human- and capital resources.

Thus, it can be confirmed that the findings from the literature research about the need for customized solutions towards CS implementation are reflected in the carried out case studies. Companies differ significantly in their core characteristics, context and influences. Thus there will be no possibility for developing a 'one-fit-all' solution how exactly CS should be carried out and implemented. On the other hand, the framework by Maon et al. (2009) did reflect the main stages of CS implementation of the case studies quite accurately and specific challenges and success factors could be identified during each phase. Thus, it can be stated that the conscious usage of implementation frameworks could support the implementation process with a better structure and also help to point out important questions that need to be answered. As long as a framework can still provide the necessary 'freedom' and possibility for customization and is used rather as an orientation instead of a recipe, the implementation process is likely to be carried out faster and more thoroughly. In this respect it was seen, that the ISO based PDCA cycle and implementation guideline was used by two of the four companies in a quite detailed way and has helped significantly to carry out the necessary steps. Thus, the findings by Sebhatu and Enquist (2007) about the usability of the ISO 14.001 norm as a basis and useful starting point for CS implementation can be confirmed. Lastly, it can be concluded as well, that the **'jungle' of different CS approaches is not that much of a barrier or problem** for companies since the integration of various approaches into one customized strategy did not pose any contradictions or problems within any of the interviewed companies. In the eyes of the researcher it is however more important to provide better overviews about the available CS approaches as well as providing comprehensive and practical

guidelines about how those approaches can be integrated into a company. The impression during the interviews emerged that companies **are not always aware of the available approaches** and if they are, significant knowledge about the potential applicability to the company is missing.

During the analysis of the **visualized success factors and barriers/challenges during the implementation process** it became evident that technical problems of CS implementation were rather minor barriers which were nearly all solved eventually. But especially the stakeholder management and the internal organizational barriers to change (many in form of older employees) were larger challenges. Effective internal and external communication were dominantly seen as essential aspects that helped to solve the previously mentioned challenges. More specifically, the personal communication with the employees, customers and more distant stakeholders was preferred written communication that did not turn out to be too effective. Furthermore, with regard to the success factors, the mentioned aspects were partly very company specific findings. Thus, not every company could for example launch new C2C product lines, make use of Biomimicry or have a visionary leader like Ray Anderson. However, on the other hand, many mentioned success factors could be generalized and translated easily into new businesses. The general recommendation to stay with the core business fields, developing a sustainability strategy based on the already existing strengths and having a positive agenda are clearly applicable to all companies. Furthermore, it turned out that the sustainability vision and understanding of CS inside the corporation is of essential importance. Employees have to know what it means for the company but also for them as individuals. Concrete CO_2 reduction targets, waste minimization or energy saving goals could help to make the steps towards sustainability measurable and thus better understandable as well. By creating this kind of a sustainability culture, employees, customers and also more distant stakeholders are encouraged to help the company develop successfully in the envisioned direction by means of innovations and commitment (employees), loyalty (customers) and positive viral marketing (distant stakeholders). The clear conclusion can hence be drawn, that identified success factors (preferably from other studies as well) should be better incorporated into the existing implementation guidelines and maybe even be made publically available to all interested new-comers in the field of CS. For nearly each step in the framework that was used as a canvas for the mapping, a variety of generalizable success factors was identified and thus the possibility is seen to specify the steps of implementation with those findings.

6.2 Interpretation of findings with the MoCSAs methodology

The developed mapping methodology (MoCSAs) had the main purpose to offer possibilities for assessing current as well as future sustainability approaches in order to provide further insights into their core characteristics and thus point out for example, in which elements they could be improved. However, the mapping of corporate strategies/customized sustainability approaches with the same methodology was possible as well and helped significantly to understand a chosen strategy better.

The interpretation of the findings from the mapping methodology can be drawn as following:

1. Even though the MoCSAs methodology was not intending to be seen as a tool with which CS approaches and thus corporate strategies can be 'ranked' and thus compared to each other in an ordinal way it revealed at least within certain questions like the *'scope/vision'* or the *'where' question*

a **certain maturity level of a strategy**. Especially, within the first question (scope) all companies showed that their strategy is at least 'on paper' far reaching. In the latter question (where) especially the vertical (stakeholder or shareholder including) and the diagonal (inside- or outside components considering) did provide important information about how far reaching a strategy is and thus gives also some indications about the extent of impact a strategy might have. Thus, the **upper right corner of most questions does indicate a certain maturity level**. Since the 'y' (complexity/strategy level) and 'x' axis ((development) time) do already hint in this direction, this finding does not come as a complete surprise.

2. In relation to the first finding (point 1 mentioned above), **Van Houtum and Interface were predominantly found in the upper right corner** of most questions and thus represented the expected finding about their maturity level of the chosen strategy, due to the fact that they have been actively involved with a strategy development for many years. This finding should however not be understood in a way that **development time is the most critical factor** for a well working sustainability strategy. Companies might be able to leap-frog ahead of others in a quick way, if available information is used properly and applied effectively. This would however be a subject for other research.

3. However, within other questions like for example the *'how'* or '*what'* one, each option can be seen as a rather **neutral characteristic** where a company decided for one specific 'side' of the question and thus the mapping did not necessarily indicate how 'advanced' a strategy is. It would be for example a very subjective judgement to say whether radical or incremental redesign of products and processes is better or worse.

4. Furthermore, it was discovered, that in some cases the **mapping had to be done on both sides of one axis**. Within the *'how'* question for example companies decided for a mixed strategy of target compliance monitoring as well as a value based discourse about ensuring that the chosen strategy is also implemented and practiced by the employees. However, this finding was only made in the '*how'* question and within all other five ones, a clear mapping for one side of an axis was possible.

5. It could be possible to use the methodology also for an **active strategy development**. Corporate strategists could use the guiding questions for the development of a customized strategy from the very beginning on and implement the strategy at a later stage by the help of an implementation framework as for example the one from Maon et al. (2009).

All in all the MoCSAs methodology turned out to be an interesting tool for researchers as well as consultants or other practitioners to get a quick overview about the chosen CSS of a company in order to have a basis for further and customized actions. Especially due to the fact that strategies are often not entirely transparent/clear with regard to their specific characteristics, the MoCSAs methodology has helped to understand also the fine nuances of the various strategies and could thus help to create awareness for the strategic management department to improve the strategy in selected fields. Lastly, larger comparative studies of organizations could potentially lead to clusters of CSS, from which certain strategy categories could be derived (see Baumgartner, 2009).

6.3   Encountered challenges and limitations

A general difficulty of this thesis was to acquire the necessary information to answer the defined research questions in the **limited available time during each case study interview**. In most cases it was **not possible to interview the CEO** for example that could have explained more about the origins of the implementation procedure. Furthermore, in some cases the respective interviewee was **not employed by the company from the beginning of the implementation process** onwards and thus the information acquired, might have a certain bias. Furthermore, the interviewees themselves were not entirely objective due to the fact that they are working for the companies and thus no (neutral) external observers. Even though this thesis had a clear focus on the CS strategy, it would have been beneficial to carry out a **more longitudinal study** with a company that is actively applying the strategy to see, which new and maybe hidden challenges and success factors could have been identified. This study would have then on the other hand only provided a more in-depth insight about one single company, which was not the intention of the researcher. The last important limitation of the applied MoCSAs methodology was the fact that only dominant characteristics (for example that a company predominantly focuses on internal Shareholders and only very little on external Stakeholders) were mapped. Insights about small steps in the other direction of the axis were thus lost.

6.4   Further research fields

This research can be seen as a suggestion how corporate sustainability strategies can be assessed in a 'quick-check' manner by the help of the developed MoCSAs methodology. However, as was also stated in the chapter 4, where it was introduced, significantly more research has to be carried out in order to add for example a **(1) quantitative dimension** to the mapping. The case study chapter 5 of this thesis has used the methodology in one specific way but as proposed as well in chapter 4.5, various **(2) other application proposals** do exist. All those and possibly other ways of application should be tested and optimized during additional research. When looking back on the introduced figure about the 'house of corporate sustainability', additional research about the supporting pillars, meaning the **(3) suitable tools,** is recommended as well. This research has vastly focused on the general approaches but not too much on which specific tools were beneficial for supporting the implementation of the approaches. Furthermore, tools are seen as generally useful for supporting companies also during their customized implementation of a sustainability strategy since certain questions and issues will be automatically addressed by using for example a Life Cycle Analysis. Lastly, **(4) implementation frameworks** as the one suggested by Maon et al. (2009) are recommended to be **added with further insights about success factors and typical challenges** as well as possibilities to overcome those. It is not expected that the possibility exists of developing a one-fit-all framework that will already provide a solution for every specific company but a better database of typical lessons-learned in combination with the most common stages of CS implementation is seen as a valuable research field that could make the implementation process of CS for newcomers significantly easier. Researchers as well could benefit from those lessons-learned and **(5) optimize currently existing approaches** with respect to encountered challenges and situational aspects found in the world of practitioners. If academic concepts are not well adjusted to the needs of practitioners, they do not add any value for the real world. In general the gap between theory and practice has to be closed even further and this thesis can be seen as one attempt to do so.

7. Conclusion

This thesis has focused on the larger subject of Corporate Sustainability and in specific on the sub-fields of sustainability approaches, implementation procedures and sustainability strategies. The aim was to investigate the underlying processes and experiences of four front-running companies during their implementation procedure and evaluate their sustainability strategies.

The list of **internal as well as external drivers** for CS implementation is large and reasons for the incorporation of this 'new way' of carrying out business activities range from improvements of the corporate reputation up to pure financial performance enhancements. Even thought, CS is currently still understood as being a **voluntary 'add-on' to an organization**, rising tendencies of making it a necessary element of a successful company can be seen. Especially, in times of rising pressure from the civil society and increased competition, companies cannot afford anymore to carry out ruthless business activities. However, during the literature analysis it became visible that the subject is still in a **relatively immature phase and no clear consensus** about definitions and neither about how CS can be implemented into the corporate world exists. Although, it cannot be stated that the opinion of the researchers about what CS is supposed to be differs significantly, but rather that fine nuances are present that however do not cause any serious contradictions. The range of suggestions and proposals is nevertheless anything but insignificant and especially the **(financial) benefits of CS implementation are vastly accepted** by academics as well as practitioners. Resulting from external pressure but also from increasing intrinsic motives, the need for thoroughly defined sustainability strategies is clearly identifiable and especially new-comers in the field require often external support during the implementation process. Especially**, sustainability consultancies are seen as potential sources of support** to master the challenges that successful CS implementation poses due to their six essential functions.

In order to **reduce the gap between theory** (development of specific sustainability approaches) **and practice** (customized strategies that might be based on the academic approaches) **the developed mapping methodology for corporate sustainability approaches is seen as a suitable tool to analyse approaches** on their key characteristics and thus offer the chance to improve approaches within specific elements and match them better to the needs of practitioners. Approaches that cannot be implemented successfully in the business context do not contain any value if they only remain on paper.

Based on the case study chapter, the main conclusion can be drawn, that implementation frameworks can help new-comers in the field of CS to leap-frog in the process of CS implementation. The structured way of implementing CS in connection with the **recommendations about success factors and challenges in each stage could provide a valuable basis for inspiration and support**. Furthermore, more research about better ways of tackling the common challenges and barriers should be carried out and the findings should be integrated into the implementation frameworks. Lastly, the developed MoCSAs methodology was successfully applied in one of the five suggested application possibilities and is highly recommended to be tested and improved further. The intended function of the methodology to provide a structured way of **quick-assessing a corporate strategy was fulfilled** and can thus be used for other research projects as well that aim at understanding CS strategies of a variety of organizations in an efficient way.

Ultimately, the interpretation and potential follow-up research about this thesis should be carried out with the **consideration of the limitations encountered in the research-design**. The information basis was rather biased towards the company-self presentation (based on the publications and interviews) and especially for the identification of success factors and barriers it is suggested – assuming the research resources are sufficient – to interview as well the respective stakeholders of the companies. Furthermore, the mapping methodology was developed based on the current characteristics and needs of sustainability approaches but might **need to be adjusted for novel approaches** that entail new characteristics which cannot be covered by the currently defined questions.

In the eyes of the researcher, this research provided **valuable insights into CS implementation and –strategy research** that opened up new research fields with specific regard to methodological assessment possibilities. The challenges within the field are still vast and efficient ways still have to be found to a) match the needs of practitioners better with theory and b) to provide support for the actual understanding and implementation of CS into a company. It will remain vital that the **guidelines and frameworks still remain customizable** and are thus able to incorporate the specific challenges, situations and characteristics of organizations. Sustainability will very likely become a necessary element of each successful company in the near future and especially the **clarity and translation of the developed CS approaches from theory into practice** will be one of the most determining success factors for the entire field. Overall, the mentioned system crisis at the beginning of this thesis could be vastly solved by a full commitment towards a sustainable behaviour of companies and a full incorporation of the principles mentioned for example by the Natural Step Framework. Significant opportunities and possibilities for improving the overall performance of a company have been identified and now it is the task of companies to develop their own sustainability strategies and to implement the (customized) approaches into their business strategy in order to become successful role models for the entire economy.

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Appendix

I.   Interview Questions for Companies

1. Sustainability culture and history

a.   What/who was the driving 'force' for the ambition to become more sustainable?

b.   How is the (sustainability) vision communicated internally?

c.   How deep is sustainability being integrated in the company culture? E.g. would each employee know about it?

2. Sustainability strategy

a.   What are the main reasons for implementing sustainability?

b.   Is a long-term cultural change intended?

c.   Is one or more specific sustainability approach used (Cradle 2 Cradle, Natural Capitalism, Natural Step Framework, Eco-Efficiency, Environmental Management Systems, etc.)? If so, which one(s)?

d.   How often does the sustainability strategy get adjusted throughout a year?

e.   Is it intended to integrate the 3P's to the corporate strategy? If so, how does it look like in practice?

f.   Are/were relevant stakeholders involved in the vision/strategy definition phases?

g.   Are the changes that have been made rather incremental or of radical nature?

h.   Is it intended to develop more towards a product-service provider in the future?

i.   Where (which employees) are responsible within the corporation to work towards sustainability?

j.   How is the development towards sustainability 'controlled'/'ensured'? Is it monitored or rather based on a value based discourse?

k.   How involved are the employees and the middle management into the responsibilities for the success of the sustainability strategy?

l.   Does the same sustainability strategy exist for each department?

m.   Where are the boundaries of responsibility towards stakeholders drawn?

n.   How much was the corporate history for the CS strategy development taken into consideration?

o.   How are strategies developed? Are for example tools like back- or forecasting used?

3. Implementation process

a.   Was a specific guideline/framework for the implementation used?

b.   Could you indicate the main steps you underwent during the implementation?

c.   Who was responsible for the implementation process?

d.   Which were the success factors during the implementation phase?

e.   Which were the main barriers? And how did you overcome them?

f.   Which specific tools (employee interviews, balanced score card, competitions, etc.) were used?

II.   Interview Questions for Consultancies

1. Characteristics of sustainability related projects

   a. How many sustainability related projects are carried out within one year?
   b. What are the most common questions companies ask for?

2. Consultation strategy

   a. Does the consultancy advice companies to opt for a specific sustainability approach/or even a combination of different approaches? (E.g. Cradle 2 Cradle, Eco-Efficiency, The Natural Step, Environmental Management Systems, etc.?)
   b. What are the main steps that are usually undergone during the strategy finding/definition phase with the client?
   c. Are the 'solutions' provided always customized or can certain elements be found within every project?
   d. Which specific tools are used for the strategy definition phase?
   e. How is it guaranteed that the recommended strategy matches the company needs?

3. Findings during the implementation process

   a. What are the main steps during the implementation process?
   b. What are the most important success factors that were encountered during the implementation process / which elements have turned out to be nearly always successful?
   c. What are the main barriers that were encountered during the implementation process? And how were they overcome?
   d. Which specific tools are used during the implementation process? (E.g. Sustainability Balanced Score Card, internal competitions, business games, etc.)
   e. How is it ensured that the recommended strategy is actually implemented within the entire corporation?

III.   CSR Implementation recommendations by Van Houtum

Corporate Social Responsibility – tips and tricks

Doing business in accordance with CSR and making profit at the same time. How do you do that? And what things should you avoid doing at all costs?

The tips and tricks of our CSR Academy below will certainly help you out.

They also give you a behind-the-scenes look into how we operate at Van Houtum: we show you how our organisation applies each tip in practice.

Because that is also an essential element of successful CSR policy:sincere and open sharing of knowledge and skills in the field of applying CSR in business.

Tip 1
Don't view CSR as something you can do 'on the side': make sure you apply CSR in close proximity to your organisation's core activities and make it part of those activities.

We are firmly convinced that disposable products may only be produced using recycled fibres. Which is why we have used 100% recycled paper as a raw material for more than 50 years. In 2010, we took this a step further and developed Satino Black, the world's first and only toilet paper that is Cradle to Cradle certified.
However, Satino Black is not just a product that we have made commercially available, it is a complete Cradle to Cradle concept that helps customers to achieve their sustainability objectives.

Tip 2
Create focus by formulating a CSR policy: select a number of specific themes that fit the organisation.

Healthy people radiate vitality. They look cheerful, they get things done seemingly effortlessly and are pleasant company. It's great to feel vital, both at a personal level and for those around you. Which is why we have a strong focus on vitality management.
And our staff has also picked up this theme with great enthusiasm. Runners have formed a company team and run in competitions together and the mountain bikers meet up to ride strenuous routes.

Tip 3
Mobilise the external environment: for example, don't be afraid to make demands on suppliers and enter into a CSR dialogue with them.

Our purchase policy includes reviewing how suppliers perform in terms of their environmental impact and working conditions. 98% of our purchases comes from Europe.
We challenged our existing suppliers to play a role in the development of our Satino Black products. Many of them decided to participate enthusiastically.
We also encourage paper producers and printers to introduce Cradle to Cradle in their operational management to ensure that our most important raw material, recovered paper, no longer contains harmful substances.

Tip 4
Set appealing goals in the area of CSR, for example: 'We want to be climate-neutral in 2015'.

Ten years ago we had approximately 20 accidents that resulted in time off work each year. We found that unacceptable. That is why we set up and implemented an intensive safety programme in which the directors and staff accepted joint responsibility for resolving and preventing unsafe situations. Our goal: within a period of five years, no more accidents resulting in work disability. That has succeeded.
Because we have implemented our ambitious plan in a structured way across the whole company, our staff returns home happy and healthy at the end of each day.

Tip 5
Increase CSR awareness among staff: for example, by organising activities such as a Sustainable Tuesday.

Van Houtum and the river Swalm have been neighbours for more than 75 years; the river is indispensable to the process of manufacturing hygienic paper. We are happy to do something in return:we have created a green corridor between the river Swalm and the factory where butterflies, insects and birds feel totally at ease and at home.
The corridor was landscaped by our own staff and their families who planted large numbers of shrubs and hedgerows. While ploughing and digging, many colleagues had an opportunity to get to know each other better in a completely different, green, setting.

Tip 6
Do not simply invest in People and Planet without carefully considering the added value of those investments for the organisation: Profit.

Satino Black is our organisation's flagship. At the moment, the turnover percentage lies below 10%, but we expect this to grow to 25 to 30% within a few years. This expectation is supported by the results up until now: turnover has doubled every six months since the introduction.
Satino Black has resulted in steadily increasing media attention. This free publicity is invaluable to both the organisation and the product: editorial publicity is after all much more credible than an advertisement.

Tip 7
Ensure a steady flow of internal communication so that all your staff members understand what CSR means for the organisation and what the goal is.

Corporate Social Responsibility is in our DNA; it is part of who we are as an organisation. We constantly publicise this theme in our internal communication. Satino Black is our showpiece product in this area. Structured internal communication keeps our staff informed and up-to-date with developments. They contribute ideas and put them into practice. All aspects of the way we think and act promote CSR. Consequently, our employees are also true ambassadors for Van Houtum and Satino Black.

Tip 8
Call attention to employees with good initiatives in the area of CSR by rewarding them or publicising their activities within the company.

In 2010, operator Mohan Ramachandra started to sweep the car park outside the processing factory once a week on his own initiative. Since then, the car park, which is one of the company's main visiting cards, always looks neat and tidily kept. So we decided to publish Mohan's story in our newsletter along with a photograph. As a token of thanks for his contribution.
But also to show that there are more than enough opportunities to think of ideas and put them into practice. We stimulate entrepreneurship at every level. Which explains why our organisation has a flat structure where everybody works closely with everybody else.

Tip 9
Rather than ignoring stakeholders enter into a dialogue with them: work together and learn from each other.

Continual dialogue with stakeholders is an important element of CSR. We have developed a stakeholder communication matrix especially for this. This matrix identifies the stakeholders, assigns priorities and defines topics for dialogue. These aspects are matched to those responsible for the dialogue, dialogue time windows and forms of communication. The Netherlands Standardization Institute, NEN, has included our matrix as an example of good practice in its publication called 'The implementation of CSR; Practical business cases and tools for ISO 26000'.

Tip 10
Be transparent about the organisation's CSR results: draw up and publish a CSR report. This is an excellent motivational tool.

We have published an annual report on our organisation's performance for nearly 20 years now. We send it to all our stakeholders.
We adopted the guidelines of the Global Reporting Initiative, the international standard for CSR reporting, for the first time in 2010. The CSR report informs our stakeholders of our goals and our results in the area of sustainability and, furthermore, allows us to achieve the level of openness that we find so important. Every two years, we also hold a session combined with a company tour for neighbouring residents in order to explain the report.

As you can see, doing business in accordance with Corporate Social Responsibility and making profits at the same time are not at all incompatible.

- For example, initiatives for **reducing your environmental footprint** generate immediate profit because they have been proven to offer an **almost immediate payback**.
- In addition, **consumers** are growing increasingly critical and are very well informed: businesses that operate in accordance with CSR clearly satisfy a **need**. That pays for itself.
- Furthermore, people like to work for a company that truly embraces CSR. A **pleasant working climate and atmosphere are motivating**, thereby reducing sickness absenteeism and staff turnover.

All very beneficial for your bottom line!