

Master's Thesis Internship – Master Sustainable Business and Innovation

A Qualitative Embedded Case Study to Explore the Influence of Shared Value Creation on the Integration of Corporate Sustainability at Horticoop B.V.

(GEO4-2606)

Master Sustainable Business and Innovation

Utrecht University



| | |
|----------------------|--|
| Student name: | Marinus J. Luiten |
| Student number: | 4186087 |
| Student phone: | +31620780794 |
| Student email: | M.j.luiten@students.uu.nl |
| University name: | Utrecht University (UU) |
| UU supervisors: | Ir. S. Witjes (PhD candidate) Dr. W.J.V. Vermeulen (first reader) Dr. M.M.H. Chappin (second reader) |
| Supervisor email: | S.witjes@uu.nl / W.j.v.vermeulen@uu.nl / M.m.h.chappin@uu.nl |
| Company name: | Horticoop B.V. |
| Company address: | Klappolder 150, 2665 LP Bleiswijk, The Netherlands |
| Company supervisors: | J. Tuinhof (Commercial Director) J. Ruiter (KAMV) |
| Supervisor email: | J.tuinhof@horticoop.nl / J.ruiter@horticoop.nl |
| Course: | Master's Thesis Internship (Fulltime) |
| Course code: | GEO4-2606 |
| ECTS: | 45 |
| Date: | 25-6-2015 |
| Word count: | 18082 |
| Keywords: | Corporate Sustainability, Shared Value Creation, Continuous Improvement, Key Performance Indicators, Triple Bottom Line |

Abstract

The literature base on the integration of Corporate Sustainability (CS) can be divided in a theoretical perspective on firm-specific processes and an organizational collaboration perspective. An emerging type of collaboration is Shared Value Creation (SVC). Literature on SVC shows potential links between SVC and integration of CS. This thesis explores the question how SVC influences the integration of CS in an organization, thus aimed at exploring this link. Three imperatives from SVC theory are explored, being the inclusion of stakeholders outside the traditional boundaries of the value chain (I1), a scope for creating triple bottom line (TBL) value that includes economic, social and environmental dimensions (I2) and the co-creation of products/services in this sustainable value chain (I3). Integration items (i.e. activities, thoughts, interactions and outcomes) that emerge from these three imperatives are assessed on their successfulness of integration using a holistic organizational framework. In the organization Horticoop B.V., three collaboration projects that signify the three imperatives are explored in an embedded case study design. Findings of this research suggest that SVC negatively influence the integration of CS, because of three reasons. First, integration items that emerged from broadening the value chain (I1) lack integration in the organizational culture. Second, items that emerged from creating TBL value (I2) were not successfully integrated in the organizational learning dimension, because I2 items lacked monitoring and improvement steps in the PDCA cycle. Third, items that emerged from co-creation of new products and services (I3) lacked successful integration in the organizational structure and in the TBL. Possible explanations for the unsuccessful integration of CS for SVC items can be lack of awareness in organizations, a limited scope for creating value or lack of adoption of indicators related to ecological and social value creation. More empirical research on how integration items and imperatives influence each other is needed to support these claims.

Executive Summary

The integration of corporate sustainability (CS) from shared value creation projects is largely unsuccessful at Horticoop. Out of three collaboration projects aimed at shared value creation, the following observations were made.

Firstly, the RPP project, aimed at broadening the value chain to include a broader group of stakeholders, is not successfully integrated in the organizational culture. Many employees that are directly or indirectly linked to RPP are only to a limited extent aware of the project and its objectives. Values and intentions from the RPP project are also not shared throughout the organization. Secondly, the Optie C project, aimed at creating triple bottom line (TBL) value, does not display characteristics of organizational learning. The project lacks continuous improvement due to the lack of explicit key performance indicators. Moreover, the target setting is not clearly linked to the organizations objectives. Thirdly, the BoN project, aimed at the co-creation of products/services, is not embedded in the organizational structure, nor has it adopted a clear TBL scope. As a result, the project remains build on tactical objectives, instead of it being linked to Horticoop's strategic objectives. Also, objectives focused on co-creation are mostly focused on business continuity and not explicitly on improving social conditions or environmental quality.

The successful integration of CS at Horticoop means that sustainability oriented activities, thoughts and interactions that emerge from these projects should logically align in the organization. In this case, sustainability implies a broader scope for creating value: including economic, ecologic and social value creation when doing business. In the organizational structure, the sustainability objectives of strategic, tactical and operational levels should be logically aligned. This also means that short-, long- and longer-term objectives are coherently linked. In the organizational learning process, creating and executing sustainability oriented plans, monitoring the progress and consequently improving/adjusting the plans renders the integration of CS as successful. Lastly, integration of CS is more successful when behavior and intentions of employees is congruent with what their values and assumptions are regarding sustainability.

Based on the observations made at Horticoop vs. the theoretical foundation of successful CS integration, the managerial implications for Horticoop can be summarized in three manageable simplicities.

1. The interdependency of objectives, criteria, responsibilities and strategies towards CS can be more explicit. This implies that employees engaging with CS projects adopt the use of project plans with objectives linked to Horticoop's key objectives that are derived from vision statements.
2. Improvement of Horticoop's monitoring practices for TBL value can improve the company's insight in the progress of projects. In turn, measurable key performance indicators adopted to monitor progress will make project objectives more explicit and operational. Horticoop's TBL scope is then better reflected in the short-, long- and longer-term objectives of the projects. Consequently, operationalization of objectives can be translated in responsibilities of employees and new sets of criteria that improve Horticoop's sustainability strategies for reaching these objectives: a positive feedback loop.
3. Management of project plans and performance indicators concerned with TBL value co-creation is a prerequisite for the successful integration of CS. Central management of this process by e.g. a business architect can therefor increase the successfulness of sustainability integration at Horticoop.

It is necessary to introduce these manageable simplicities in order to understand and control the endless complexities that arise when engaging in corporate sustainability and the creation of shared value. The result is a holistic system for conducting business at Horticoop in a way that will continuously meet the desire to become a reliable frontrunner in the transition to a new sector that aims to co-create TBL value.

Table of Content

| | |
|---|----|
| Abstract | 3 |
| Executive Summary | 4 |
| List of Abbreviations | 7 |
| 1 Introduction | 8 |
| 2 Theory Review | 10 |
| 2.1 Integration of CS | 10 |
| 2.1.1 Integration in Organizational Culture | 11 |
| 2.1.2 Integration in Organizational Learning | 12 |
| 2.1.3 Integration in Key Performance Indicators | 13 |
| 2.1.4 Integration in Organizational Structure | 13 |
| 2.1.5 Integration Items | 14 |
| 2.1.6 Integration over Time | 14 |
| 2.2 Holistic Model | 15 |
| 2.3 Shared Value Creation | 15 |
| 3 Methods | 18 |
| 3.1 Strategy | 18 |
| 3.2 Design | 19 |
| 3.3 Case Study | 19 |
| 3.3.1 Responsibly Produced Peat Project | 21 |
| 3.3.2 Optie C Project | 21 |
| 3.3.3 Benefits of Nature Project | 22 |
| 3.4 Collection | 23 |
| 3.5 Analysis & Interpretation | 23 |
| 4 Findings | 25 |
| 4.1 Data | 25 |
| 4.1.1 Embedded Cases and Imperatives | 26 |
| 4.2 Sub Question 1: Company Profile | 28 |
| 4.2.1 Analysis | 28 |
| 4.2.2 Interpretation | 29 |
| 4.3 Sub Question 2: Redefining the Value Chain Boundaries | 29 |
| 4.3.1 Analysis | 29 |
| 4.3.2 Interpretation | 30 |
| 4.4 Sub Question 3: Creating TBL value | 30 |
| 4.4.1 Analysis | 30 |

| | |
|---|----|
| 4.4.2 Interpretation | 31 |
| 4.5 Sub Question 4: Co-creating value..... | 31 |
| 4.5.1 Analysis | 32 |
| 4.5.2 Interpretation | 32 |
| 4.6 Sub Question 5: Similarities and Differences..... | 32 |
| 4.7 Synthesis | 33 |
| 5 Discussion | 34 |
| 6 Conclusion | 35 |
| Reference List | 36 |
| Appendices | 39 |

List of Abbreviations

| | |
|--------|--|
| BoN | Benefits of Nature |
| BUA | Basic Underlying Assumptions |
| CAQDAS | Computer-Assisted Qualitative Data Analysis Software |
| CS | Corporate Sustainability |
| HR | Human Resource |
| I1 | Imperative 1 |
| I2 | Imperative 2 |
| I3 | Imperative 3 |
| KPIs | Key Performance Indicators |
| NGOs | Non Governmental Organizations |
| PDCA | Plan Do Check Act |
| QHSE | Quality, Health, Safety & Environment |
| R&D | Research & Development |
| RPP | Responsibly Produced Peat |
| SD | Sustainable Development |
| SVC | Shared Value Creation |
| TBL | Triple Bottom Line Scope |

1 Introduction

Sustainable development (SD) is currently at the top of the political and business agenda (Potts et al., 2014; Stocker et al., 2013). SD is defined as 'meeting the needs of present generations without compromising the ability of future generations to meet their needs' (WCED, 1987, p.43). As a result of the increased focus on SD over time, organizations are recognizing the relation between the economic, environmental and social dimensions over time (Lozano, 2013a), often referred to as the triple bottom line (TBL; Elkington, 2002). The increased focus on SD implies challenges and opportunities for organizations. Corporate Sustainability (CS) is proposed as a way to address these challenges and opportunities (van Marrewijk, 2003), as well as a way to address the interdependencies and relations in the TBL (Dyllick & Hockerts, 2002). Although many organizations adopt CS, the integration of CS has proven to lack focus; challenges and opportunities related to the environmental and social dimensions are pursued more coincidentally than with a clear vision (Lozano, 2013b). CS is often not integrated into the core mission and vision of the organization. Consequently, activities, thoughts, interactions and outcomes (integration items) related to the integration of CS tend to be uncoordinated and fragmented philanthropic and charitable actions (Baumgartner & Ebner, 2010). This indicates a misalignment between a company's sustainability vision and its corresponding integration items. In contrast, CS integration items that complement core business strategies are most likely to benefit the organizations performance (Benn, Dunphy, & Griffiths, 2007; Biggemann, Williams, & Kro, 2014; Doppelt, 2003; Lozano, 2008b). In this context, integration of CS should focus on creating alignment between the organization's vision and its integration items.

Two main trends dominate the research field of CS: research focused on CS integration within the organization (Benn, Dunphy, & Griffiths, 2014; Lozano, 2013) and research focused on the interaction amongst organizations that engage in CS (Andersen & Skjoett - Larsen, 2007; Finnveden et al., 2009; Power, 2013; Vermeulen & Ras, 2006; WBCSD, 2004). Some authors state that the integration of CS is dependent on an organization's internal dimensions (Benn et al., 2007; Lozano, 2013b), whereas others state that the influence of external imperatives, emerging from the collaboration amongst organizations, are key to understanding CS (Biggemann et al., 2014; Horvath, 2013; Payne, Storbacka, & Frow, 2007).

In this thesis, the proposition is made that both internal processes and external imperatives are important for the successful integration of CS. In both internal processes and external imperatives, integration items (i.e. thoughts, activities, interactions and outcomes) emerge that contribute to the successful integration of CS. Nevertheless, only a few authors emphasize the importance of bridging the gap between the two perspectives, i.e. exploring how external imperatives influence the integration of CS in the internal dimensions.

One concept that does offer a potential link between these two perspectives is Shared Value Creation (SVC). Porter & Kramer (2011) focus on the interaction between an organization's internal dimensions and the collaboration with other organizations by exploring the concept of SVC. SVC is defined as policies and operating practices within the organization that enhance the competitiveness of an organization while simultaneously advancing the economic, environmental and social conditions in the communities in which it operates by engaging in collaborative networks (Biggemann et al., 2014; Porter & Kramer, 2011). From this definition, three imperatives (I1, I2 and I3) emerge: An organization should include stakeholders from outside the boundaries of the traditional value chain when creating value (I1), it should adopt a scope for value creation beyond economical value, including the TBL (I2) and it should engage in the co-creation of products and services in this sustainable value chain (I3). A more elaborate exploration of the SVC concept is provided in the next section.

The theory base on SVC is rather new and has not been extensively researched. To explore the proposition that SVC influences the integration of CS in an organization, this thesis is aimed at answering the following research question:

'How does Shared Value Creation influence the successful integration of Corporate Sustainability in an organization?'

To explore the internal dimensions of an organization in which CS is integrated, a model is proposed consisting of five dimensions, i.e. the organizational structure (Baumgartner & Ebner, 2010) and culture (Baumgartner, 2009), the Key Performance Indicators (KPIs; Adams & Frost, 2008) and the Continuous Improvement (Moen & Norman, 2006) of the organization over time (Witjes, Vermeulen, & Cramer, 2014).

In this thesis, an embedded case study was explored, based on three projects linked to the three imperatives that have been initiated within the organization to engage in SVC. The embedded cases will be presented in the method section. The following sub-questions are researched:

- How does the case organization integrate CS?
- How does I1 influence the successful integration of CS?
- How does I2 influence the successful integration of CS?
- How does I3 influence the successful integration of CS?
- What differences and similarities can be identified between the imperatives regarding the successful integration of CS?

This thesis made three contributions to literature. First, a literature review is presented that explored the influence of SVC on CS integration based on current literature. Second, the framework was developed empirically via an exploratory embedded case study, which analyzed an organization to identify integration items that influenced the integration of CS. Three collaboration projects within the organization linked to the three imperatives were explored. Third, a discussion on the contribution of SVC theory to CS theory furthers the research field of SVC.

This thesis continues with a literature review, the methods used in this thesis, the findings (consisting of data, analysis and interpretation), a discussion on the methods/theory and a conclusion in which the research question is answered.

2 Theory Review

In order to explore the potential link between the successful integration of CS and SVC, the concept of CS is first reviewed. Although the concept has received much attention in organizational literature (Baumgartner & Ebner, 2010; Benn et al., 2007; Linnenluecke & Griffiths, 2010; Lozano, 2013), there is still limited insight in how integration of CS in an organization can be successful. Furthermore, this theory review outlines how the integration of CS and SVC share similarities to provide a conceptual foundation for a more thorough explorative empirical analysis.

2.1 Integration of CS

The concept of CS has its origin in the broader concept of sustainability that became well known on a global level through the WCED (1987) report 'Our Common Future', also known as the Brundtland report. The WCED related sustainability to environmental preservation, social equality and economic prosperity by defining the concept of SD as "development that meets the needs of current generations without compromising the ability of future generations to meet their own needs (WCED, 1987, p. 43).

Building on the concept of SD, many definitions emerged of SD in the context of organizations, referred to as CS (van Marrewijk, 2003). First, definitions vary in the degree to which they classify CS as an ecological concern, as social responsibility of the organization or to include economic activities of the firm (Linnenluecke & Griffiths, 2010). According to Elkington (2002), CS should include all three classifications, i.e. People (social justice), Planet (environmental quality) and Profit (economic prosperity), more commonly referred to as the Triple Bottom Line (TBL). Second, the variety of CS definitions includes a range of internal vs. external organizational orientation of sustainability commitment (Benn et al., 2007). Third, the definition by WCED (1987) implies that a balance between short-term profit and long-term objectives is needed when defining CS. Lozano (2008b) stresses the importance of a time dimension when defining CS, stating that CS is a continuous process of reaching a more sustainability oriented state. Therefore, CS should be understood as 'corporate activities that proactively seek to contribute to sustainability equilibria, including the economic, environmental, and social dimensions of today, as well as their inter-relations within and throughout the time dimension (i.e. the short-, long-, and longer-term), while addressing the company's system [...] as well as with its stakeholders' (Lozano, 2013, p.33).

While there is not only discussion about the inclusive claims of the concept of CS, the integration of CS in organizations is also disputed (Linnenluecke & Griffiths, 2010). The primary drivers behind adopting CS seem to be focused on internalizing externalities (Elkington, 2002) and managing pressures from customer groups and communities (Linnenluecke & Griffiths, 2010). As a result, the organization itself was mostly treated as a black box. According to Linnenluecke & Griffiths (2010), the multifaceted definition of CS shows that it is not possible to generalize the integration of CS for firms. Therefore, an organization's orientation towards CS is not only based on its external factors, but also on a firm's internal processes.

Recent studies that focus on internal organizational processes for the integration of CS identify factors such as HR management, sustainability training, teamwork and leadership as important aspects for successfully integration of CS (Baumgartner, 2009; Harris & Crane, 2002; Lozano, 2013). Other authors argue that changes in values and assumptions of the organization's employees are needed to successfully integrate CS in the organization (Crane, 2000; Linnenluecke & Griffiths, 2010). These studies suggest that organizational change on different levels is needed to successfully integrate CS.

On a surface level, e.g. CS reports published by organizations, technical solutions and the integration of sustainability measures in employee performance or employee satisfaction make the integration of CS in an organization visible to the observer (Benn et al., 2007). On a value level, the employees' values, perceptions and beliefs towards CS embody the integration of CS (Crane, 2000). On an underlying level, a change in an employees' core assumptions regarding conducting business is required to successfully integrate CS in an organization (Linnenluecke & Griffiths, 2010). The different levels of CS are in line with the different levels of the organizational culture as described by Schein (2004), i.e. the artifact level, the value level and the basic underlying assumptions level.

2.1.1 Integration in Organizational Culture

Since the concept of organizational culture emerged in the 1970s and 1980s, many definitions have been formulated. A lack of consensus for a common definition resulted in a multitude of definitions ranging from culture being a template of patterns for acceptable behavior (Wilson, 2001) to culture as a being a set of shared values and beliefs, ideologies and assumptions. Furthermore, culture has been regarded as fixed (something an organization 'has') as well as a variable (something an organization 'is') (Baumgartner, 2009).

During this development of the concept's definition, a frequently cited definition is that of Schein's three-level typology (Schein 2004). Schein (2004, p.12) defines organizational culture as 'A pattern of shared basic assumptions that the organization learned as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think and feel in relation to those problems'. Using this definition, three levels can be distinguished by 'the degree to which the cultural phenomenon is visible to the observer' (Schein, 2004, p. 23). The author distinguishes three levels of visibility, being 'Artifacts', 'Espoused Beliefs & Values' and 'Basic Underlying Assumptions' (BUA). Artifacts are all the phenomena that an observer encounters in an organization that is new to the observer, e.g. the language that is used, the customs and traditions that evolve or the rituals that are employed in various situations (Schein, 2004). In contrast, espoused beliefs and values are justifications based on experiential knowledge. If a shared value justifies a certain approach, e.g. approaches aimed at the integration of CS, and the group experiences that this approach is structurally successful, the group will ultimately embed that value into its BUA (Baumgartner, 2009). According to Baumgartner (2009), the deeper and less visible BUA level of the organizational pyramid is represented by the behavior patterns or intentions of an organization and its employees. Bird (1988) states these intentions set the form and direction of organizations. Nevertheless, successful integration of CS is not necessarily always based on rational intention, but rather on subconscious behavior. In order to understand the less visible organizational levels, behavior and intention serve as a proxy to understand these values, espoused beliefs and BUA (Baumgartner, 2009). Therefore,

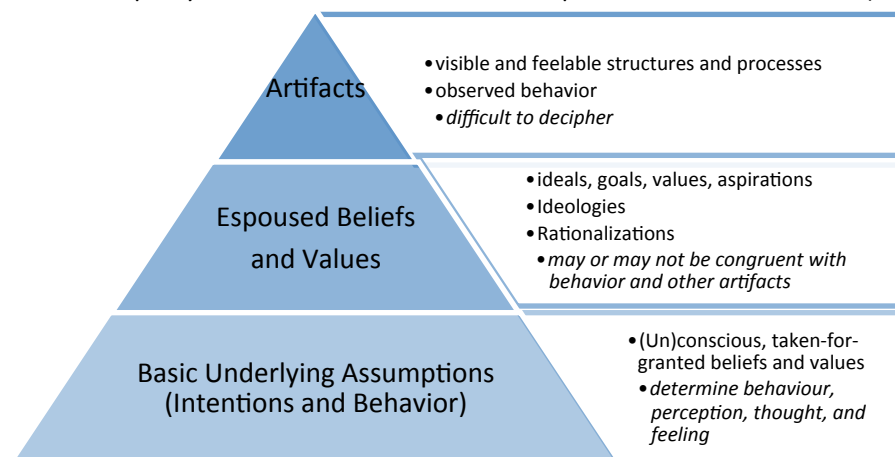


Figure 1 Organizational Culture Pyramid (adapted from Schein, 2004)

the cultural pyramid as proposed by Schein (2004) should include a distinction at the level of BUA in 'Intentions' and 'Behavior' (figure 1).

Although other definitions of the concept of organizational culture vary greatly, three common themes and similarities can be

identified in definitions of organizational culture (Parker & Bradley, 2000). First, the concepts used to define an organizational culture tend to overlap between studies, which resulted in attempts by scholars to provide a conceptual foundation by which organizational culture can be studied. Second, of these concepts, the ‘values, ideologies and beliefs’ are considered to be most reliable in representing an organization’s culture. Third, the organizational culture seems to be an important factor in integrating managerial as well as technological innovation (Linnenluecke & Griffiths, 2010). According to Linnenluecke & Griffiths (2010), organizational culture is often cited as the primary reason to explain the failure of organizational change programs aimed at integration of CS. Empirical evidence to support this claim is provided by Jarnagin & Slocum (2007), stating that successful integration of CS in the organizational culture might be largely dependent on the values and BUA of that culture. Based on Schein’s typology, Wilson (2001) states that in turn, the integration of CS in values and BUA of an organizational culture are largely dependent on the organizational learning process. Building on this, Jamali (2006) states that a heightened propensity for organizational learning ensures that an organization is more successful in integrating CS.

2.1.2 Integration in Organizational Learning

The integration of CS in an organization poses a challenge for organizational learning (Benn et al., 2007). Integration of CS is a process of continuously changing and refining. The cycle of continuous improvement over time can be used to explain this organizational learning process (Moen & Norman, 2006). In 1950, Deming coined the term PDCA cycle (Plan, Do, Check, Act) to describe continuous improvement in organizational learning (Deming, 1950; fig. 2). The cycle shows that learning occurs through four steps, namely the creation of a plan, the execution of this plan, reflecting on the execution and finally, redesigning/rethinking the plan to improve it for the next cycle.

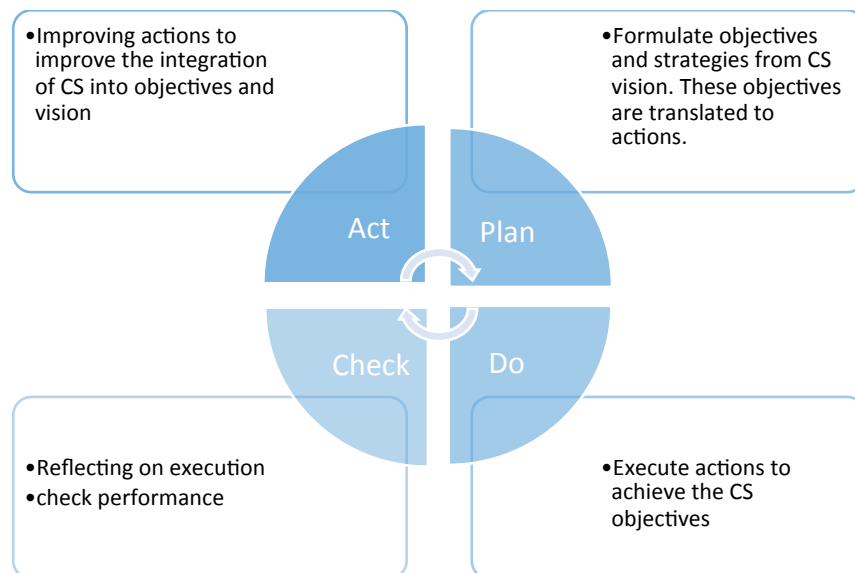


Figure 2 PDCA cycle (Deming, 1950) in the context of CS integration

An organization is a learning organization ‘to the degree that it has purposefully built its capacity to learn as a whole system and woven that capacity into its vision and strategy, leadership and management, culture, structure, systems and processes’ (Jamali, 2006, p814). In the context of integrating CS, Jamali (2006) states that managers create a sustainability vision in the planning phase. This vision is operationalized by strategies and objectives and executed in the do phase. In this phase, new practices or processes that will move the organization to a more sustainability oriented state are institutionalized (Lozano, 2014). The check phase entails tracking performance towards objectives and reporting on the sustainability performance (Adams & Frost, 2008). The act phase occurs when improvement efforts based on monitoring

processes are initiated (Jamali, 2006). In order for CS integration in the organizational learning dimension to be successful, the integration process needs to be embedded in all four steps of the learning cycle. Moreover, monitoring of these processes needs to be expressed in KPIs (Adams & Frost, 2008).

2.1.3 Integration in Key Performance Indicators

According to Adam & Frost (2008), KPIs are used by organizations as a tool to assess (check) if an action (do) is aimed at achieving the objectives (plan), in order to adapt, improve or discard processes (act). Nevertheless, properly measuring whether or not the business is performing in a way that is consistent with the organization's CS Vision to integrate CS and its corresponding objectives remains a challenging process. The KPIs represent and determine to a large extent the company's values and intentions (Adams & Frost, 2008). On the one hand, KPIs represent these values because they are aimed at monitoring progress for reaching CS objectives. On the other hand, the organization's set of KPIs are insightful when unraveling the organization's values and intentions, because KPIs are based on the TBL scope and corresponding sustainability aspects of CS an organization adopts (Baumgartner & Ebner, 2010). These aspects can be embedded and monitored in guidelines such as the Global Reporting Initiative (GRI, 2014).

Integration of CS is more successful if the set of KPIs is aligned with the CS vision and aligned throughout the organization (Adam and Frost, 2008). For example, the sets of KPIs used by a commercial manager, business development manager and product manager should reflect the aggregated set of KPIs that the commercial director adopts to check CS performance. Consequently, KPIs are used as a dimension of the proposed model.

Reflecting on the use of KPIs in aligning the organizational structure or culture, KPIs are ambiguous in their purpose to assess integration. On the one hand, KPIs can be regarded as a means to enforce a chain of command and to assess a set of responsibilities given to a department or individual and it serves as a tool to demonstrate the value of sustainability aspects. Epstein & Roy (2001, p. 589) state that KPIs '[...] allow managers to identify [...] the culture that a company can put into place to improve corporate financial and social performance', implying that KPIs are a means to change company culture towards the integration of CS. On the other hand, measuring the performance of managers and employees through KPIs can only be interpreted on an artifact level, because they can be classified as observed behavior. This implies that merely assessing a set of KPIs is not sufficient to label an integration item as successful. For example, a tactical manager that performs according to the targets and objectives set, does not necessarily need to share the espoused beliefs and values that top-management has. In this context, the organizational structure emerges as an organizational dimension on which the successful integration of CS is dependent.

2.1.4 Integration in Organizational Structure

Every organization displays levels that constitute the hierarchy of the organization (Ouchi, 1978). According to Ouchi (1978), three main organizational levels can be identified, i.e. Strategic (Top-management) level, Tactical (Middle-management) level and Operational (Shop floor) level. Generally, an organization is built up like a pyramid: a few very influential actors in top-management and the vast majority in the operational level. Azapagic (2003) states that integration of CS in an organization is more successful if the organizational structure is taken into account during the integration process. According to Azapagic (2003), this implies the identification of leadership and key personnel, aligning responsibilities through KPIs and communication via training internally and sustainability reporting externally. Consequently, the successful integration of CS is dependent on the organizational structure. As stated before, the strategic level is responsible for formulating a CS vision. If the integration of CS is to be successful, it must emerge from and be integrated into the organization's vision (Azapagic, 2003).

2.1.5 Integration Items

As an organization decides to integrate CS into its vision, it needs to formulate long term objectives to operationalize this vision (van de Kerkhof & Wieczorek, 2005). Baumgartner & Ebner (2010) state that CS strategies are formulated to reach these objectives (figure 3). Thus, the integration of CS in an organization is partially captured in actions that are aimed at reaching a more sustainability-oriented state.

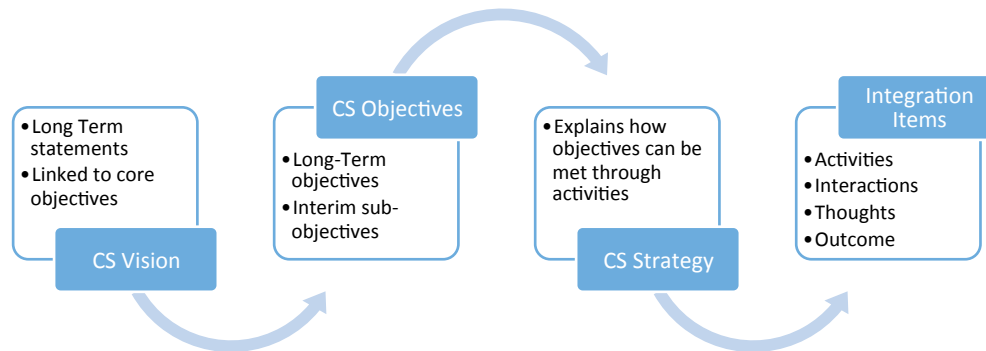


Figure 3 From vision to Integration Items and vice versa

Building on this, Linnenluecke & Griffiths (2010) propose that actions alone do not fully explain the integration of CS in an organization. According to Linnenluecke & Griffiths (2010), the successful integration of CS in the organizational culture is dependent on consensus among employees around a set of shared assumptions, values and beliefs. Therefore, the integration of CS also emerges at interactions amongst and thoughts of employees in the organization (figure 2; Eccles et al., 2012; Witjes et al., 2014).

The activities, interactions, thoughts and the outcome of the three are defined in this thesis as integration items. These integration items embody what is to be integrated when integrating CS in an organization, and are distinguished in four types of items:

- **Activities** – actions that happen at a specific moment in time with regard to activities, operations, programs, initiatives carried out by an organization.
- **Interactions** – how employees interact between themselves, interaction between employers and employees, or interaction between an organizations employees and its customers/suppliers.
- **Thoughts** – what people of different levels within an organization think. These thoughts can be about anything, e.g. initiatives & policies carried out by the organization, but also thoughts about public debate, organizational culture or material topics etc.
- **Outcome** – a resulting combination of the first three integration items.

2.1.6 Integration over Time

The set of integration items that constitute the integration of CS in an organization change over time (Baumgartner & Ebner, 2010; Linnenluecke & Griffiths, 2010; van de Kerkhof & Wieczorek, 2005). Under any circumstance, finding the link between integration of CS in an organization and the unruly or even disruptive practice in which these practices need to function remains one of the biggest challenges in SD to day (Baumgartner & Ebner, 2010). Integration of CS changes over time due to, among others, changes in societal needs, environmental and economic conditions (Elkington, 2002), changing organizational culture (Linnenluecke & Griffiths, 2010), structure (Azapagic, 2003), KPIs (Adams & Frost, 2008), autonomous innovation and development, changing legislation and stakeholder commitment (Porter & Kramer, 2006). Lozano (2008b, p. 1840) states that a time dimension is necessary when exploring the concept of SD, since it is ‘a journey, path or process to achieve sustainability, i.e. the capacity for continuance into the long-term future’.

2.2 Holistic Model

Five internal organizational dimensions in which CS can be integrated have been distinguished. This holistic model consists of the organizational culture, structure, learning and KPIs and the integration of CS in these dimensions over time (Witjes et al., 2014). The previous disquisition offers a holistic representation of the firm's internal dimensions that constitute the multidimensional model in which CS should be integration in order for CS integration to be successful. Nevertheless, an organization does not function autonomously, but engages with other organizations in order to survive (Horvath, 2001). In this context, 'one of the key elements in the transition towards more sustainable societies is collaboration' (Lozano, 2008, p. 370).

2.3 Shared Value Creation

The Japanese philosophy of Kyosei describes the 'spirit of collaboration' amongst individuals, groups and organizations (Kaku, 1997). In the context of collaboration, Kyosei is therefore defined as the practice of an organization in building strong relationships with their supply chain, government, natural environment and society. According to Kaku (1997), five stages of Kyosei can be distinguished. First, companies work to secure a predictable stream of profits (basic economic survival). Second, managers and workers begin to co-operate with each other within the company (co-operating with labor). Third, Co-operation outside the company is induced via partnership agreements, joint ventures and technical support for suppliers/customers. Fourth, organizations cooperate with foreign organizations; large organizations increase their base of business and enable themselves to address global imbalances. Fifth, organizations use their power and wealth to urge national governments to work toward rectifying global imbalances. Kyosei theory offers a pathway to becoming a more collaborative and sustainable oriented organization, but does not specify which conditions, prerequisites and ultimately imperatives an organization needs to conform to in order to reach a higher Kyosei stage.

From SVC theory, three imperatives can be identified that are used to explore the necessity of collaboration to successfully integrate CS in an organization. The imperatives can be linked to prerequisites and conditions needed to reach higher Kyosei stages of collaboration and consequently, a more sustainable state. This section provides a literature review of SVC that describes and distinguishes the three imperatives.

Porter & Kramer (2011) make the claim that the most important reason for an organization's challenges regarding long-term competitive strategy lies in an outdated approach to value creation. 'They continue to view value creation narrowly, optimizing short-term financial performance, missing the most important customer needs and ignoring the broader influence that determines their longer-term success' (Porter & Kramer, 2011, p 63). Although some promising models and efforts emerge to move away from this lock-in, organizations seem to stick to the philanthropic behavior when integrating CS, instead of regarding SVC as their core-business. Nevertheless, notable multi-nationals such as GE, Google, IBM, Intel, Nestlé, Unilever and Wal-Mart have increasingly decided to venture into efforts to regard SVC as key performance indicator for the organization. In turn, Porter and Kramer (2011) state that the full potential of capitalism as vehicle for meeting environmental and societal needs and creating wealth can be achieved when considering this SVC amongst organizations.

SVC is defined as policies and operating practices within an organization that enhance the competitiveness of the organization while simultaneously advancing the TBL scope through co-creation of products/services in a sustainable value chain (Biggemann et al., 2014; Porter & Kramer, 2011). According to Porter & Kramer (2011), shared value can be created by reconceiving products and markets, redefining productivity in the value chain and building supportive industry clusters at the companies' locations. The three approaches are

interlinked; improving value in one area generates opportunities in the other. Growing consensus on the benefits of SVC for the integration of CS has been displayed over the past decade (Pavlovich & Corner, 2013).

If SVC should occur in a sustainable value chain, the delivered value should also be defined in terms of economic, ecologic and social value. In contrast, the traditional value chain describes 'the full range of activities which are required to bring a product or service from conception, through the different phases of production, [...] delivery to final consumers, and final disposal after use' (Kaplinsky & Morris, 2001, p 4). According to Fearne et al. (2012), a traditional value chain can be defined by three characteristics. First, the material flow is aimed at improving quality, service and agility. Second, information is shared and used as source of competitive advantage. Third, collaborative relationships are built by sharing risks and benefits. In turn, the objective of the traditional value chain is to 'add [economic] value and segment the market with differentiated products designed to increase profitability at all stages in the chain' (ibid, p 576). Fearne et al. (2012) argue that existing definitions of the value chain need to adopt a more sustainable perspective, addressing the TBL value. In this context, the authors propose two imperatives (I1 & I2) that ensure that value is created sustainably in a value chain. The third imperative is derived from the concept of relational synergy.

First, the sustainable value chain should be expanded outside the supplier-customer-consumer boundary, thus taking into account economic, societal and environmental stakeholders outside the 'traditional' value chain (I1). Mentzer (et al., 2001) take into account three characteristics to explain this first imperative: (1) a system approach to viewing the value chain as a whole, (2) a strategic orientation toward cooperative efforts regarding intra-firm and inter-firm capabilities and (3) a customer focus to create unique and individualized sources of value.

Second, the ultimate value delivered should be considered in broader terms than merely price recovered minus costs incurred. Instead, the sustainable value chain should consider societal and environmental value of the product/service (I2). Lodder et al. (2014) suggest that, instead of focusing on negative externalities, the positive externalities should be considered when engaging in sustainable value chain collaboration. According to Lodder et al. (2014), this positive TBL approach is aimed at increasing ultimate value delivered and serves as a prerequisite for SVC.

Third, the sustainable value should be co-created in the chain. The research field of SVC can be divided into a traditional theory base of co-creating value and theory based on recent insights of TBL thinking in SVC. Borys & Jemison (1989) claim that two organizations have the ability to deliver more collective value than the value organizations acting independently could deliver. This phenomenon is called relational synergy, or value co-creation. The traditional approach provides a relatively narrow perspective to value, focusing on merely economic value. More recent studies by e.g. Biggemann et al. (2014) and Payne et al. (2007) aim at a similar process of co-creation of TBL value, including ecologic and social value in its proposition. As a TBL approach is a prerequisite for a sustainable value chain (Lodder et al., 2014), the third imperative (I3) is the co-creation of TBL value based on the concept of relational synergy.

Only few authors have researched the link between SVC in the integration of CS in the organization dimensions. First, Biggemann et al. (2014, p.304) aim to research 'how value can be created through social responsibility programs or other means, so that sustainability is achieved through increasing stakeholders' participation in the process of design and selection of such programs, so that [...] trust can be built with the lasting benefits of co-creation of value'. According to Biggemann et al. (2014), it is the co-creation of value

that ultimately supports sustainability. Although the authors argue that strategy building and development of KPIs is a rudimentary part of SVC for the integration of CS, these concepts are not operationalized for the empirical research. Instead, Biggemann et al. (2014) state that SVC influences an organization's orientation towards the TBL through a broadened value chain (I1). Second, Payne (et al., 2007) argue that SVC is a recursive process, in which the organization needs to learn in order for the SVC to be successful. According to Payne et al. (2007), the co-creation of value should be integrated in organizational learning and the organizations monitoring processes to increase business continuity over time. The importance of a time dimension for an organization to further develop opportunities for SVC is also emphasized by Porter & Kramer (2011). At this point, the influence of SVC on the integration of CS in the remaining organizational dimensions, i.e. the organizational structure and the organizational culture, has not yet been researched. Again, former research on the influence of SVC imperatives on the integration of CS is limited.

In order to explore how the imperatives for SVC influence the integration of CS, the proposition is made that new thoughts, activities, interactions and outcomes (or Integration Items) emerge in the process of collaboration to create shared value. Building on this proposition, the integration of CS is therefore not an autonomous process, but is rather influenced by the firm's collaboration with other entities. Integration items that emerge from collaborative projects (I1-I3) can therefore be positioned in the five-dimensional holistic model. The extent to which these integration items are successfully integrated in the organizational culture, structure, KPIs and a closed loop of learning (Plan Do Check Act) over time determines successfulness of CS integration per imperative and consequently, the influence of SVC on the successful integration of CS.

To sum up, the proposition is made in this thesis that successful integration of CS within an organization is dependent on how successful integration items are integrated in five internal dimensions. Externally, three SVC imperatives influence the integration of CS: A company should include stakeholders from outside the boundaries of the traditional value chain (I1), it should adopt a scope for value creation beyond economical value, including the TBL (I2) and it should engage in the co-creation of products and services in this sustainable value chain (I3). The disquisition provides initial evidence that SVC links a firm's internal dimensions with SVC. Furthermore, it constitutes similar principles as CS; increasing inter-firm collaboration (intra-/extra firm balancing), creating value in economy, ecology and society by obtaining long-term objectives (rather than maximizing short term profits), improving performance and consequently, contributing to improved objectives and business continuity. Furthermore, it is proposed that the assessment of the successfulness of CS integration (of integration items that emerge from these imperatives) in the holistic model can provide a qualitative basis for the exploration of the influence of SVC on CS integration. Nevertheless, empirical evidence to support this proposition is needed.

3 Methods

This section is dedicated to explaining how the research question was answered and elaborates on the research strategy & design, data collection and analysis/interpretation (figure 4). This thesis is based on an exploratory embedded case study as defined by Yin (2009).

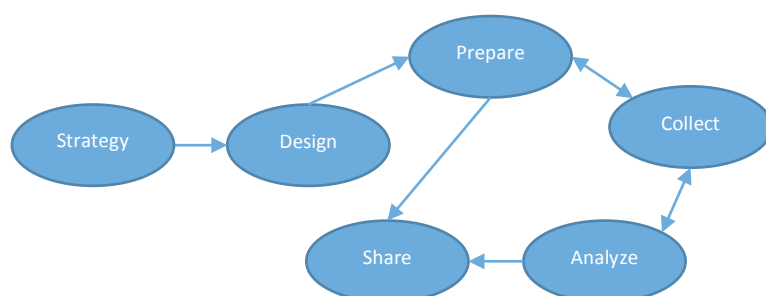


Figure 4 Steps conducted in this case study research (Yin, 2009)

3.1 Strategy

Yin (2009) argues that a case study approach is suitable if the analyzed entity has more variables than data points. In response, the use of multiple sources of evidence is needed, with data needing to converge in a triangulating fashion. Moreover, Yin (2009) states three main reasons for using an embedded case study. First, the research question should be on answering ‘how’ or ‘why’ a phenomenon occurs. Second, the case study aims to illuminate a decision or set of decisions as central. Third, the study focuses on contemporary events. As is clear from the previous two sections, the research question and sub-questions meet these criteria.

Based on the theory described in the previous section, three more reasons were identified to propose an exploratory embedded case study. First, a lack of current empirical evidence to explore the influence of SVC on successful integration of CS calls for an empirical study. Second, casuistry is suitable for this thesis because processes that influence integration of CS are firm specific (Lozano, 2008a). This emphasizes the need for in-depth analysis of an organization and their interaction with other firms in the value chain. Third, due to the complex nature of an organization in a value chain, it is valuable to explore an organization based on projects that are related to external imperatives, rather than exploring the organization as a whole. The latter option might have resulted in a lack of focus and too much data to clearly answer the research question. Therefore, this thesis empirically explored three projects within an organization that are presented in the ‘case study’ paragraph.

This qualitative research design poses questions towards the reliability, replication and validity of the research. The reliability and replicability of the case study was demonstrated through the availability of data categorization schemes in Nvivo. Transparency in the interpretation process and explicitly explaining the choices made further increased the reliability and replicability of the case study. Due to the large quantity of ethnographic and interview data, not all raw data is presented in this thesis. Instead, the exploration of pattern in the integration item analysis supported by a few qualitative examples aim to increase transparency of the interpretation process. Subject or participant error, subject bias and observer error and bias further threaten the reliability. Guidance of data collection through transparent, semi-structured interviews helped mitigate these challenges. The set-up of the semi-structured interviews and the content discussed during the interviews are presented in appendix A.

To continuously safeguard the transparency of the research, the actors connected to the data were asked to review the data collected. A transcript of the interviews was presented to the interviewee and approved before the data was adopted in the project database. Moreover, university supervisors checked the collection process regularly during the course of the internship. Consequently, any discrepancies were identified at an early stage.

3.2 Design

Figure 5 provides an overview of the research design. First, a literature review (previous section) provided insights in the current research field. Second, the method consisted of exploring three projects that have been initiated within an organization based on the three imperatives defined before. Therefore, the units of analysis are three embedded projects within an organization that are related to SVC (I1, I2 & I3). By analyzing these three projects, an initial exploration of the influence of SVC on the integration of CS in an organization could be provided.

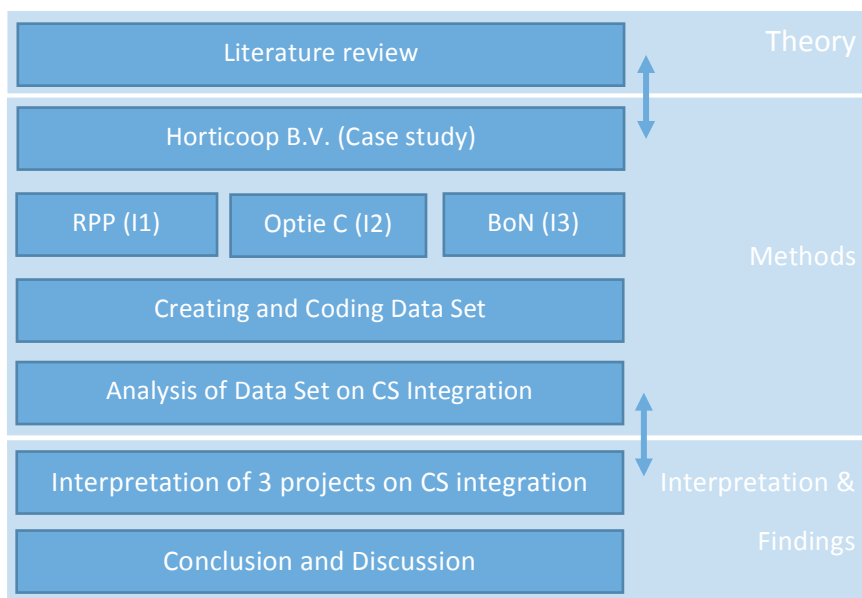


Figure 5 Research Design

The research method applied is focused on creating grounded theory. Grounded theory is defined as ‘theory that was derived from data, systematically gathered and analyzed through the research process. In this method, data collection, analysis, interpretation and eventual theory stand in close relationship to one another’ (Bryman, 2008, p 541). Grounded theory thus aims to build the conceptual model whilst data collection and analysis occurs. A continuous feedback loop of efforts in data collection, coding and interpretation is needed to safeguard this process. This constant comparative analysis refers to ‘the process of maintaining a close connection between data and conceptualization, so that the correspondence between concepts and categories with their indicators is not lost’ (Bryman, 2008, p542).

3.3 Case Study

The embedded case study was conducted at Horticoop B.V. Founded in 2005, Horticoop B.V. is a Dutch technical service provider for the horticulture industry, manufacturer of substrate and supplier of horticulture tools and supporting products (e.g. fertilizer/pesticides). It is supportive to three main sectors: greenhouse vegetables, potted plants and cut flowers. The company is part of a cooperation, in which the co-operative is the single shareholder (Appendix B). During the past 10 years, the company has experienced

many lay-offs, reorganizations and fusions in order to react to economic recession and growing market concentration at customers (figure 6).

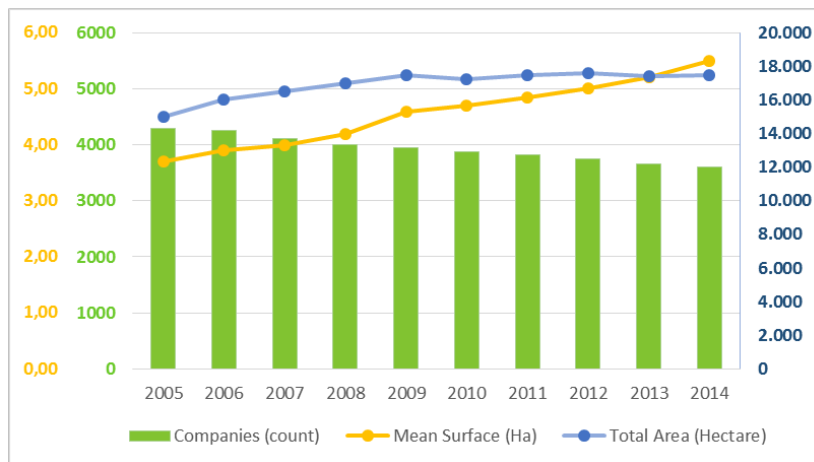


Figure 6 Economic development of sector (based on Van der Meulen et al., 2014)

Three key transitions are central to the 10-year development of the firm. First, top-management reorganized technical services & commercial department by embedding its research and development (R&D) into its commercial strategies. Second, market orientation was restructured from a regional segmentation to sector segmentation. This included integrating product groups, rationalization of the product portfolio and restructuring the sales department. Third, the company acquired two substrate factories (Lentse Substrate and Slingerland Substrate) through mergers. This altered the company’s core activities to include production processes. A comprehensive chart of developments in Horticoop B.V. is provided in Appendix C. Horticoop B.V. currently employs 360 people at two offices, two factories and eight stores. According to the 2013 annual report, the turnover in 2013 was €177 million.

In its 2015 Corporate Identity document, Horticoop B.V. states that its mission is to deliver continuity and a better yield for the horticulture sector through collaboration with its customers and suppliers. Derived from this statement, the company’s core values are: to be involved, integer and result-driven, to be a team player and to be a frontrunner in the market.

The company is suitable for this research, because of three reasons. First, Horticoop B.V. has been engaging in CS practices for the past three years. This implies that CS integration can be explored in the firm through the available integration items. Second, the company’s vision is to engage with their customers to create better products and services. In this way, the company aims at co-creating products and services for their customers as well as their end-consumers. This implies that data on value chain collaboration for SVC (I1, I2 & I3) could be collected in the embedded cases. Third, the company is part of a co-operation. This implies that it is imperative for the company to engage their customers (who are the only shareholders) and other value chain actors in value co-creation schemes.

The embedded case study explores three cases that have been initiated at Horticoop. The proposition is made that these three embedded cases serve as exemplifying for the three imperatives identified in SVC literature. A short overview of the three embedded cases aims to provide initial evidence that the cases can be linked to the three imperatives. In the findings section, the validity of this proposition is supported by empirical data.

3.3.1 Responsibly Produced Peat Project

The Responsibly Produced Peat (RPP) foundation consists of sector suppliers concerned with peat production and the use of peat in products. The ultimate aim of the foundation is to develop alternatives for peat, together with lobbying to government institutes and consequently initiate R&D projects in product design (e.g. substrates). To reach this goal, the foundation was founded in August 2013 with three goals:

- To develop and administrate a certification scheme for the responsible and transparent production of peat resources
- To stimulate and facilitate the certification of companies based on that scheme. And to do everything that is related therewith or that may be conducive thereto
- To safeguard the foundation's bodies' transparency and value by providing a balanced representation of the peat-producing industry, producers of growing media, growers and retail, environmental NGOs and science

In order to realize these goals, the RPP foundation actively involves all interested stakeholder groups in the development of the certification schemes, aims to continuously develop and improve the certification scheme and actively promoting the RPP label among target groups.

In September 2013, the board was formally installed. During that time, Horticoop B.V. decided to enter into collaboration as a peat-producer representative. Beginning 2014, Horticoop's substrate factory manager Ben van de Geest was installed as interim chairman for the foundation. During this year, the certification was prepared and developed together with multiple stakeholder groups. The resulting certification scheme relies on principles and criteria that assure the compliance of peateries in legality, good governance, site selection criteria, site preparation, peat extraction and after-use solutions.

As the foundation is actively pursuing a broad group of stakeholders, inside as well as outside the traditional value chain, the project seems closely related to the first SVC imperative of broadening the value chain actors to include economic, societal and environmental stakeholders in the process. In line with Mentzer et al. (2011), the aim of the project is to adopt a system approach to viewing the value chain as a whole. Also, the strategic orientation towards cooperative efforts is pursued in the platform. By including social and environmental NGOs, the creation of unique and individualized sources of value is to some extent safeguarded. Therefore, the proposition is made that this project can be linked to collaboration outside the traditional value chain (I1). Empirical findings to further support this proposition are presented in the findings section.

3.3.2 Optie C Project

Optie C is a type of substrate used in Orchid cultivation that shows significant savings in gas use, delivers higher crop-yield and reduces water use. The goal of the project is to measure and decrease the final product's (a potted Orchid) footprint and capture the supplier products' value based on the final value the product delivers.

In early 2013, an orchid cultivator requested a test at his greenhouse to experiment with different types of substrates. The aim of the experiment was to determine which substrate showed the most homogeneous distribution of water in the substrate water buffer. According to the customer, more homogeneous distribution would in turn result in a more consistent quality of the produce. Horticoop initiated the experiment at its R&D department by suggesting 6 types of substrates, differing in density, composition and material: Optie A-F. After 40 weeks of cultivation, the results of the experiment showed that Optie C proved most successful in meeting the needs of the customer. Apart from a better distribution of water in the substrates, the Optie C substrate yielded an acceleration of growth up to two weeks, a reduction of gas

usage of 12,5m³/m² greenhouse and around 1,500 m³ water usages annually. Less water usages result in less evaporation into the greenhouse air. In turn, drying the air using gas-fired heaters to lower the humidity in the greenhouse is needed less often. This explains the reduction of gas usage. Moreover, the experiment showed that specific cultivation strategies were important for increasing the crop yield.

Based on this knowledge, Horticoop decided to adopt a value based approach in the marketing strategy. Instead of selling the product based on the costs incurred plus margin, the value of the potential savings at the greenhouse should be internalized in the price. This forced Horticoop to let go of the monetary value approach, but focus on the benefits the product displayed from a TBL perspective: integrate the ecological benefits of gas- and water-savings in the market strategy. Moreover, Horticoop needed to approach the customer in a different manner. The value proposition was not merely the product Optie C, but also using Horticoop's expertise to advise the customer in cultivation strategies to optimize yield. In order to do so, a new way of communication and collaboration with the customer was needed. Greenhouse data collected by the cultivator needed to be shared with Horticoop in order to provide real-time, firm-specific advice.

In this thesis, the proposition is made that this project can be linked to TBL value creation (I2). The value delivered is considered in broader terms than merely price recovered minus costs incurred. Instead, the Optie C project considers societal and environmental value of the products and service it provides. Lodder et al. (2014) state that a positive TBL approach towards considering this societal and environmental value in product and service creation is a key characteristic of the second imperative (I2). The characteristics of this embedded case are in line with the second imperative (I2) of shared value creation. In the findings section, empirical data is used to support this claim.

3.3.3 Benefits of Nature Project

The Benefits of Nature (BoN) project is aimed at strengthening collaboration between knowledge institutes, sector companies, NGOs and government by facilitating a communicative platform to innovate with interdisciplinary actors. Moreover, it is aimed at setting product standards by life cycle assessment, creating commercial opportunities in collaborative product and service development and facilitate lobby towards policy makers.

BoN was founded as a spin-off from Waterdrinker, a cash-and-carry company that manages purchase and marketing for retailers such as Ahold and Ikea. BoN's goal is to create a social platform in which multi-disciplinary projects can be initiated by various value chain actors, research institutes, certification organizations and government. The foundation facilitates this collaboration process by connecting suitable actors in every project that is initiated through BoN. For example, BoN started a project in January 2015 to assess the life cycle of a potted orchid plant. The aim of the project was to determine what is the most sustainable way to cultivate a plant. In turn, value chain actors adapt and redesign their production processes to conform to this 'most sustainable' scenario and co-create a product that puts less pressure on the environment. In order for the project to be successful, collaboration with all value chain actors from the potter orchid plant value chain is needed.

In this thesis, the proposition is made that this project is linked to the imperative of co-creation (I3) of value. It displays similar characteristics: the co-creation of products and services whilst adopting a TBL scope (Biggemann et al., 2014; Payne et al., 2007). Moreover, the project is aimed at relational synergy: by co-creating products/services, the value chain is optimized, waste and energy use are reduced and the ultimate value delivered from a TBL scope is higher (Borys & Jemison, 1989). Empirical findings to further support this proposition are presented in the findings section.

3.4 Collection

Based on the three projects, the influence of the imperatives on the integration of CS was explored by identifying and assessing integration items that emerge in the projects. The data was collected within the company at all organizational levels based on the project teams that have been involved in the aforementioned projects. Data was collected on the role of CS and the influence of SVC in the organization in general and the role of SVC and CS in the project as specific. The data was collected using three methods:

- The data was primarily collected ethnographically. Ethnographic data was gathered via notes and organized in Nvivo using codes. Ethnographic data collection occurred during a period of 8 month of full-time employment at the firm, attendance at 31 strategic and tactical meetings and engagement in project meetings, conferences and kick-offs. During this ethnographic data collection, the researcher acted as a participant-as-observer as described by Bryman (2008).
- 10 separate semi-structured interviews provided data on CS integration within the organization based on integration items and the influence of the external imperatives. The interviews were conducted at strategic and tactical level within the firm. The interviews took between 1 and 3 hours. Transcripts of the interviews were used as input for the database. The interviews were based on the coding structure as presented in Appendix D. The focus of the interviews was on exploring how the project influenced the five internal dimensions and consequently, the integration of CS.
- Data from the company database (digital and hardcopy) and correspondence are collected to explore the availability of data for employees and communication within the organization to support the interviews and the identification of themes. A document was used as input for the analysis if it was referred to in interviews or during ethnography (e.g. in a meeting).

The triangulation of collected data types is adopted because of three reasons. First, two of the embedded cases (I2 & I3) have started at the beginning of the data collection processes. Therefore, an ethnographic approach is most suitable to collect data. Second, one embedded case (I1) has started one year before the data collection, but is still running. Therefore, interviews and databases are needed to support the ethnographic data collection. Third, interviews and database data help support ethnographic data collection. On the one hand, semi-structured interviews allow for in-depth, rich data of separate actors in the company. On the other hand, the company database data allows for collection of data that any actor in the company can access. This is used to provide a basis for e.g. interview questions and ethnographic focus. Triangulation of data collection took place in a constant comparative analysis.

3.5 Analysis & Interpretation

In order to organize the collected data, a computer-assisted qualitative data analysis software (CAQDAS) package was used, named Nvivo. Using a grounded theory approach, data collection, coding, interpretation and analysis were conducted in tandem. The coding of data resulted in the code structure provided in Appendix D. The coding was divided into descriptive coding (based on dimensions and imperatives from the theory section) and interpretative coding (based on integration items).

The goal of the interpretative coding was to identify integration items that emerged from the three projects. The set of integration items were not limited to the three imperatives. Due to the scope of the data collection, many statements derived from interviews and ethnography were not directly linked to one of the embedded cases. Nevertheless, these integration items prove to be insightful in understanding the context of the case in which these embedded cases took place. Integration items identified within the organization that are not linked to the three imperatives were analyzed to provide a profile of the company. These integration items are called reference items. The company profile is useful to compare and interpret the findings from the embedded cases. Without this profile, it would be impossible to state

whether or not the imperatives influence the integration of CS compared to how the company deals with CS that is not linked to collaborative projects.

The integration items were then assessed based on the successfulness of integration through the five internal dimensions. The three embedded cases were compared based on patterns that emerge from the set of integration items identified in the cases.

The analytical and interpretative approach is not normative, but explorative. The goal is not to offer a 'best practice' protocol for collaboration in a sustainable value chain, but to offer initial insights into the influence of SVC imperatives on the integration of CS. Patterns identified in the coding and data collection were reflected on the theory on successful integration of CS, as well as SVC theory. By reflecting the patterns that emerged from the interpretation on the theory, a comparison of the existing theory and the practice can be made. Consequently, theory building based on the cases was aimed at gaining initial insights into the influence of SVC on integration of CS.

The analysis followed the logic of the research sub-questions. Analysis of the integration items identified and categorization showed how an integration item within a project influenced the integration of CS based on the 5 dimensions. By answering the sub-questions, an exploration of the influence of SVC on the integration of CS in an organization was provided.

4 Findings

This section serves to present the data, to provide an analysis and to interpret the results. First, an overview of the collected data is provided. Second, the company profile based on reference items is presented to establish a clear case in which the three projects (I1, I2 & I3) are embedded. This profile is based on integration items and is aimed to answer the first sub-question. Third, integration items on the three imperatives are distinguished and interpreted separately to answer sub-question 2, 3 and 4. Fourth, a set on observations in similarities and differences between the three imperatives and the case organization is provided. Fifth, a synthesis on the findings aims to interpret why certain patterns arise to provide an initial explanation of the influence of SVC on the integration of CS.

4.1 Data

Table 1 provides an overview of all the data collected, categorized by the three collection methods and specified per embedded case. The data was collected during an 8-month fulltime internship at the case organization and coded at 7295 references using the coding tree (table 2, Appendix D).

Table 1 Collected data per collection method

| Unit | Ethnography | | | Interviews Description in Appendix E | Firm Database document count |
|------|--------------|---------|---------------------|---|---------------------------------|
| | Jotted notes | Minutes | Field notes (pages) | | |
| I1 | 35 | 1 | 46 | BG, RJ, DV, JR | 2 |
| I2 | 213 | 10 | 140 | IJ, BG, RJ, DV, JR, JT, JS, GZ | 5 |
| I3 | 98 | 6 | 93 | IJ, BG, RJ, DV, JR, JT, JS, GZ, JB | 3 |
| Case | 163 | 18 | 236 | IJ, BG, RJ, DV, JR, JT, JS, GZ, JB, HM | 13 |

Table 2 Reference count of coded data

| Codes in coding tree | Reference Count |
|-------------------------------|-----------------|
| Five-dimensional model | 4770 |
| TBL scope | 1269 |
| Learning | 830 |
| Structure | 1222 |
| Culture | 1419 |
| Time | 310 |
| Imperatives | 171 |
| I1 RPP | 49 |
| I2 Optie C | 69 |
| I3 BoN | 53 |
| Integration Items | 2354 |

After coding of the data, the integration items could be categorized in sets, linked to imperatives and assessed on successfulness of integration. This is an interpretative and iterative process, in which e.g. statements of individuals during meetings and interviews were compared, assessed and interpreted. The following simplified example is based on data collected for Integration Item11 and aims to illustrate this process.

This example consists of three statements. First, the CEO (IJ) states that a value-based approach to product sales is vital for business continuity. According to him, Optie C is a pilot project to test the willingness in the market to pay a premium for a cost-saving, more sustainable product. Second, the product manager substrates (RJ) has been closely involved in the R&D of the Optie C product. According to him, the product needs to be further developed to substantiate the claims made in cost-savings. This implies that market entry should be restricted to pilot tests and demo's. Third, the manager new business development (GZ) claims that Optie C should be treated as a concept. According to him, the value derived is not only embedded in the cost savings, but also in the growing protocols and consultancy provided in using the product. By providing these extra services, the higher price of the substrate and market entry without fully substantiated claims is justified.

Using the example (II11, Appendix F/G), four observations were made. First, there is a clear focus on profit in the TBL; there is no proof of explicit focus on ecological indicators. Ecological benefits are incidental to

the business model (cost-saving for the customer). Second, the item is in a plan and execution phase. There is no proof of explicit indicators to monitor the progress or acting on this knowledge about the value-based approach. Third, the basic intention (value-based approach) is shared throughout the organizational structure. Nevertheless, in the organizational culture, there is a lack of congruence in the values (e.g. substantiating claims before entry) and the behavior of the individuals. Fourth, the activity takes place in the present and in the future. In contrast, past projects were only designed as cost-based business models. In appendix F, the observations are captured in the five-dimensional model. Obviously, assessing the successfulness of integration of an item is far more complex than this example. In practice, more data sources were used to verify whether claims about integration could be substantiated. The example is merely aimed at illustrating how the data was processed during the coding and analysis phase.

4.1.1 Embedded Cases and Imperatives

This subsection is dedicated to supporting the proposition that the three embedded cases can serve as exemplifying for the characteristics of the three SVC imperatives as defined in the literature review. Only after this link between the proposition and the data is established, can the successfulness of integration items that emerge from the embedded cases be explored.

4.1.1.1 RPP and Stakeholder Collaboration

During the data collection on the RPP project, the RPP foundation has engaged in collaborative schemes with several stakeholder groups. In the early stages of the foundation, the collaboration with stakeholders was limited to the traditional value chain actors in the supplier-customer-consumer chain. After the foundation was formally established, the need for a broader stakeholder group emerged. This was caused by an increased focus on target setting, criteria setting and the development of the certification scheme. Currently, the collaborations schemes do not only include the traditional value chain actors, but also research, economic and environmental stakeholders. Table 3 provides a short overview of the key stakeholder groups that are represented in the RPP foundation.

Table 3 Stakeholder groups in the RPP project

| Stakeholder | Type | Name |
|-------------------------------------|--------------------------------------|---|
| Economic | Growing Media Production Association | Industrieverband Garten (IVG) |
| | | German Substrate Production Association |
| | Peat Production Association | Dutch Growing Media Association (VPN) |
| | | EPAGMA |
| | | Baltic Peat Production |
| Environmental & Societal | Non Governmental Organization | Wetland International |
| | | Estonian Fund for Nature |
| Scientific | Research & Development Agency | Nature Conservation Agency |

The increased focus on stakeholder participation from a broad group of stakeholders is in line with the first imperative of SVC. Therefore, this development supports the proposition that the RPP project can be linked to imperative 1; the imperative for collaboration with a broad stakeholder group when engaging in SVC. Continuing this thesis, the data collected in the embedded case of RPP is therefore linked to I1.

Optie C and TBL Scope

The Optie C project started out as an R&D service project for one orchid cultivator in early 2013. The commercial department of Horticoop B.V., which adopted the new product into their portfolio in late 2014, started to develop the market viability and scalability of the product in late 2014. The main challenge of the marketing team was to translate the ecological benefits of the product gained at the cultivator into the pricing structure of the substrate. In other words, a value-based strategy instead of a cost-based

proposition was needed. The TBL scope that Horticoop applied in the strategy forming is exemplified by three decisions.

First, the economic sustainability of the value-based proposition becomes apparent in the pricing structure of the proposition. To ensure the willingness of the customer to pay a relatively high price for the product, a cost structure based on actual yield in production was applied. If the expected yield improvement of e.g. 10% is met, the cost of the substrate will be e.g. €180,-/m³ or 200% compared to actual costs. Nevertheless, if the yield improvement stabilizes at 5%, the price will be reduced to €135,-/m³ or 150%. The transparency of the cost structure, shared financial risk and value-based proposition to the customer ensure a more stable relationship with the customer.

Second, the increased focus on environmental sustainability becomes apparent in the value-based proposition by internalizing the environmental (and ultimately financial) benefits of Optie C into the pricing structure of the product. This provides the customer with the incentive to become more responsible in watering strategies and gas usage. A long-term commitment and collaboration was needed to successfully implement the strategies.

Thirdly, the social sustainability becomes apparent in the new partnerships agreements needed for the successful implementation of the Optie C strategy. The successful implementation relies on redefining the relationship with the customer from merely financial commitment to continuous exchanging data and knowledge to improve the use of water, gas, fertilizer and pesticides during the cultivation process. The result is that intellectual property was protected via non-disclosure agreements and new customer data management systems were implemented at Horticoop.

The broadened economic, social and environmental scope adopted in the Optie C project is in line with second imperative of SVC. As proposed in the method section, the Optie C project will therefore be used in this thesis as an embedded case. Consequently, the data collected in this embedded case is linked to the I2: the need for a broad TBL scope in SVC.

BoN and the Co-creation of Products

The BoN foundation facilitates collaboration of sector companies, research institutes, certification organizations, NGOs and government institutions into new development projects. As a founding father since BoN start in January 2015, Horticoop B.V. has a priority position in substrate related R&D projects. Horticoop is engaging in the BoN foundation in the co-creation of products by collaboration with EcoChain to develop the most sustainable potted orchid plant. As a partner, EcoChain develops the life cycle assessment tools needed to analyse the steps in the chain, determines high impact points and suggests improvements. Together with pot developers, seedling producers, cultivators, biological fertilizer and pesticide producers, Horticoop aims to co-create a final product by optimizing yield in production and increase shelf life of the final product.

The co-creation and collaboration with partners was an imperative for designing viable, ecologically sustainable products. The integral product approach was needed to understand how the separate semi-finished products influence the ultimate TBL value of the final product. This is why the project BoN is adopted in this thesis as an embedded case. As proposed in the method section, the BoN project will therefore be used in this thesis as an embedded case. Consequently, the data collected in this embedded case is linked to I3: the need for co-creation of products in SVC.

The data collection and coding process provided a comprehensive set of 85 integration items (Appendix F/G). Seven items were linked to I1, thirty were linked to I2, fifteen to I3 and forty reference items emerged from the data collection and coding that serve to provide the company profile.

4.2 Sub Question 1: Company Profile

Coding of the data revealed forty integration items that were linked to the company, but not to the collaboration projects/imperatives. These internal integration items range from waste reduction in production processes to educational programs for employees. Table 4 shows a comprehensive list of the items. The integration items in the list are analyzed based on the successfulness of integration in the five dimensions.

Table 4 Set of integration items unlinked to imperatives (*See Appendix G for description of integration item)

| code* | Type | Triple Bottom Line | | | Learning | | | | Structure | | Culture | | | | Time | | |
|-------|---------------------|--------------------|--------|--------|----------|----|-------|-----|-----------|----------|-----------------------|--------|-----------|----------|------|---------|--------|
| | | People | Planet | Profit | Plan | Do | Check | Act | Strategic | Tactical | Operational Artifacts | Values | Intention | Behavior | Past | Present | Future |
| I02 | Activity | | | | | | | | | | | | | | | | |
| I03 | Activity | | | | | | | | | | | | | | | | |
| I05 | Activity | | | | | | | | | | | | | | | | |
| I06 | Activity | | | | | | | | | | | | | | | | |
| I12 | Activity | | | | | | | | | | | | | | | | |
| I16 | Thought | | | | | | | | | | | | | | | | |
| I18 | Activity | | | | | | | | | | | | | | | | |
| I23 | Activity | | | | | | | | | | | | | | | | |
| I26 | Outcome | | | | | | | | | | | | | | | | |
| I29 | Activity/Thought | | | | | | | | | | | | | | | | |
| I30 | Activity | | | | | | | | | | | | | | | | |
| I31 | Activity | | | | | | | | | | | | | | | | |
| I36 | Activity | | | | | | | | | | | | | | | | |
| I39 | Activity | | | | | | | | | | | | | | | | |
| I40 | Activity | | | | | | | | | | | | | | | | |
| I42 | Activity | | | | | | | | | | | | | | | | |
| I43 | Activity | | | | | | | | | | | | | | | | |
| I44 | Thought | | | | | | | | | | | | | | | | |
| I45 | Thought | | | | | | | | | | | | | | | | |
| I46 | Thought | | | | | | | | | | | | | | | | |
| I47 | Thought | | | | | | | | | | | | | | | | |
| I51 | Thought/Outcome | | | | | | | | | | | | | | | | |
| I57 | Thought | | | | | | | | | | | | | | | | |
| I59 | Activity/Thought | | | | | | | | | | | | | | | | |
| I61 | Activity/Thought | | | | | | | | | | | | | | | | |
| I62 | Thought | | | | | | | | | | | | | | | | |
| I63 | Activity | | | | | | | | | | | | | | | | |
| I65 | Activity | | | | | | | | | | | | | | | | |
| I66 | Thought/Interaction | | | | | | | | | | | | | | | | |
| I67 | Thought | | | | | | | | | | | | | | | | |
| I68 | Activity | | | | | | | | | | | | | | | | |
| I69 | Activity | | | | | | | | | | | | | | | | |
| I70 | Activity | | | | | | | | | | | | | | | | |
| I71 | Activity/Outcome | | | | | | | | | | | | | | | | |
| I72 | Activity/Outcome | | | | | | | | | | | | | | | | |
| I73 | Thought | | | | | | | | | | | | | | | | |
| I79 | Activity/Thought | | | | | | | | | | | | | | | | |
| I80 | Thought | | | | | | | | | | | | | | | | |
| I81 | Activity | | | | | | | | | | | | | | | | |
| I85 | Activity | | | | | | | | | | | | | | | | |

* the darkness of the color indicates the substantiation of data from interviews and (recorded) ethnography.

| |
|--|
| insufficient recorded data |
| some claims verified (more unrecorded ethnography) |
| most claims verified (some unrecorded ethnography) |
| all claims verified by dataset |

4.2.1 Analysis

Based on the integration of items in the five-dimensional organizational model, five patterns can be identified (table 4).

First, many of the items are activities. This indicates that CS integration items are more often than not developed beyond the point of discussing CS measures to executing them. Second, items are predominantly focused on improving sustainable profit or to improve social conditions (People and Profit). Items that are linked to improving environmental conditions are usually initiated to reduce costs (Quote 1), to improve the image of the company (e.g. less polluting cars for the sales team) or to comply with legal standards. Third, the company does not have many KPIs in place to monitor (check, Quote 2) the progress of their activities and processes that relate to CS. This means that the organizational learning loop is usually not closed. Consequently, the data provided little evidence of the ‘act’ phase in organizational learning. Improving processes happens ad hoc and without sufficient proof that substantiates decisions to change the process. Fourth, the integration items showed a strong link between time and integration in the organizational structure. Items that have been initiated in the past are more successfully integrated on the

Quote 1 – on Planet and Profit

‘Initially, sustainability just seems to cost us money. You need to buy an expensive electro motor, or integrate a more sustainable resource in your substrate. And the customer does not immediately pay these extra costs. In that case, we usually decide to pump the brakes.’ - Ben van der Geest, Manager Substrate Factory

organizational levels. In contrast, items such as thoughts about future developments tend to be present at only one organizational level. Fifth, Integration in the organizational culture is more successful if the item is an activity. Many of the activity type integration items occur on an artifact level of the organizational culture, i.e. the items are visible to the observer (e.g. reports, minutes from meetings or on the website/banners/PR). Thoughts about developments are less visible, but usually display the intention or value of an individual or group. In both cases, a link is visible between the artifact and intentions level.

Quote 2 – on Monitoring

We have no clue what happens when the substrate mixer stops, how many man-hours, or maintenance, how much that costs. And moreover, what efficiency we can reach if we make those indicators explicit and improve these processes. This is something we see in internal audits, that it is simply not measured – Jan Ruiter, QHSE Manager

4.2.2 Interpretation

To answer sub question 1, the integration of CS at Horticoop is most successful if the focus is on sustainable profitability and business continuity. More successful integration is characterized by a closed PDCA cycle, more activities instead of thoughts, more present instead of future and better integration in the organizational culture. CS integration items focused on improving social or environmental conditions are less successful. This might be because the company’s mission and core values do not include these elements.

4.3 Sub Question 2: Redefining the Value Chain Boundaries

The Responsibly Produced Peat (RPP) project is linked to imperative 1, which is focused on redefining the value chain boundaries to include societal and environmental stakeholders. The RPP foundation was formally established in August 2013 of which the board is characterized by a multi-stakeholder representation. The goal of RPP is to develop a certification scheme for the responsible and transparent production of peat resources, to stimulate and facilitate this certification and to promote the RPP label. The manager Substrate Factory is currently interim chairman to the foundation. Seven integration items emerged from the RPP project, ranging from tactical positioning for future legislation to developing new peat-free products (table 5).

Table 5 Set of integration Items linked to imperative 1

| code* | Type | Triple Bottom Line | | | Learning | | | | Structure | | Culture | | | | Time | | |
|--|---------------------|--------------------|--------|--------|----------|----|-------|-----|-----------|----------|-----------------------|--------|-----------|----------|------|---------|--------|
| | | People | Planet | Profit | Plan | Do | Check | Act | Strategic | Tactical | Operational/Artifacts | Values | Intention | Behavior | Past | Present | Future |
| I15 | Activity | | | | | | | | | | | | | | | | |
| I37 | Activity/Thought | | | | | | | | | | | | | | | | |
| I48 | Activity/Thought | | | | | | | | | | | | | | | | |
| I76 | Thought | | | | | | | | | | | | | | | | |
| I77 | Thought | | | | | | | | | | | | | | | | |
| I78 | Activity | | | | | | | | | | | | | | | | |
| I14 | Thought/Interaction | | | | | | | | | | | | | | | | |
| insufficient recorded data | | | | | | | | | | | | | | | | | |
| some claims verified (more unrecorded ethnography) | | | | | | | | | | | | | | | | | |
| most claims verified (some unrecorded ethnography) | | | | | | | | | | | | | | | | | |
| all claims verified by dataset | | | | | | | | | | | | | | | | | |

4.3.1 Analysis

Four patterns can be identified in the set that illustrate the successfulness of CS integration of I1 in the organization.

First, all integration items are focused on improving environmental conditions. Although this is mostly due to the nature of the project, it is notable that only two items are also linked to improving business continuity (profit). In other words, the data lacks proof that integration items that emerge from I1 are linked to the mission and core values of the company (improve business continuity and yield). Second, the organizational learning dimension shows a similar successfulness as in reference items (table 1). Due to a lack of the ‘check’ phase, many items are not explicitly improved. The result is that continuous

improvement and organizational learning happens more at hoc and reactive for I1 items. Third, items are not successfully integrated in the organizational culture. Gaps can be identified in the cultural values throughout the organization. For example, individuals and groups on strategic and tactical level disagree on the benefits of RPP. For some managers, the objective that is derived from the core values is to manage future legal risk (Quote 3). For others, the intention is to diminish use of peat in substrates (Quote 4).

Quote 3 – on intentions for RPP

'If the environmental NGOs ban the use of peat, they win. Then, the worldwide horticulture industry has a huge problem. We wanted to work with the NGOs, not against them. That's why we decided to collaborate in the RPP, to manage future risk' – René Janssen, Manager Substrates

4.3.2 Interpretation

To answer sub question 2, the integration items identified in I1 negatively influence the integration of CS; items linked to I1 are not successfully integrated in the organizational dimensions. Redefining the value chain to include social and environmental stakeholders renders items that are not linked to the core values of the company and are not successfully integrated in the company's organizational dimensions.

Quote 4 – on intentions for RPP

'We have decided on three key steps: to make the use of peat transparent in the chain, to do it as sustainable as possible for now and to look at alternatives' – Ben van de Geest, Manager Substrate Factory

4.4 Sub Question 3: Creating TBL value

The 'Optie C' project is linked to imperative 2, which is focused on creating economic, ecologic and societal value (TBL). The Optie C project started in 2012 as a R&D project with the goal to create a phalaenopsis substrate that has better moisture buffer qualities in the growing medium. As a result the crops can be watered less often and the humidity stays relatively low. This means that gas usage for lowering the greenhouse humidity is reduced by almost 80%. In November 2014, the R&D project was finalized and the product was commercialized. The business model included a value capture approach: the reduced costs in gas usage for the cultivator is (partially) internalized in the price of the substrate. In turn, Horticoop B.V. provides real-time advice for growing protocols to the select group of Optie C users. The goal of the Optie C project is to further develop this business model, engage the cultivators in knowledge exchange through social platforms to improve yield and develop new products with similar characteristics. Thirty integration items are linked to I2 (table 6), ranging from thoughts about monitoring gas usage at customers to optimizing sales-team synergy through value based approach training.

4.4.1 Analysis

Three patterns can be identified in the set that illustrate the successfulness of CS integration of I2 in the organization.

First, many of the items are thoughts about how the project will develop in the future. Many of these focus on managing customer data to increase awareness of gas water, fertilizer and pesticides usage. Consequently, many of the integration items focus on current/future development and are in a plan phase. Second, integration items that emerge from I2 are aligned well through the organizational structure. Thoughts and activities are shared by strategic, tactical and operational level. This indicates that lines in communication are short and there is little disagreement between the organizational levels. Third, almost all integration items are intentions of a group or individual, but only few are visible to the observer (artifact). This can partially be explained by the fact that the project still has to mature. Nevertheless, the data lacks support that the intentions are translated to behavior. This indicates that although people intent to act in a certain way, they cannot or do not behave accordingly.

Table 6 Set of integration items linked to imperative 2

| code* | Type | Triple Bottom Line | | | Learning | | | | Structure | | | Culture | | | | Time | | |
|-------|--------------------------|--------------------|--------|--------|----------|----|-------|-----|-----------|----------|-------------|-----------|--------|-----------|----------|------|---------|--------|
| | | People | Planet | Profit | Plan | Do | Check | Act | Strategic | Tactical | Operational | Artifacts | Values | Intention | Behavior | Past | Present | Future |
| I14 | Thought/Interaction | | | | | | | | | | | | | | | | | |
| I1 | Thought | | | | | | | | | | | | | | | | | |
| I4 | Thought | | | | | | | | | | | | | | | | | |
| I8 | Thought | | | | | | | | | | | | | | | | | |
| I11 | Activity/Thought | | | | | | | | | | | | | | | | | |
| I17 | Activity/Thought | | | | | | | | | | | | | | | | | |
| I19 | Thought | | | | | | | | | | | | | | | | | |
| I21 | Thought | | | | | | | | | | | | | | | | | |
| I22 | Thought | | | | | | | | | | | | | | | | | |
| I22 | Activity/Thought | | | | | | | | | | | | | | | | | |
| I23 | Thought | | | | | | | | | | | | | | | | | |
| I35 | Activity/Thought/Outcome | | | | | | | | | | | | | | | | | |
| I41 | Activity/Thought/Outcome | | | | | | | | | | | | | | | | | |
| I49 | Thought | | | | | | | | | | | | | | | | | |
| I50 | Activity/Thought/Outcome | | | | | | | | | | | | | | | | | |
| I53 | Thought/Outcome | | | | | | | | | | | | | | | | | |
| I54 | Thought/Outcome | | | | | | | | | | | | | | | | | |
| I58 | Activity/Thought | | | | | | | | | | | | | | | | | |
| I60 | Thought | | | | | | | | | | | | | | | | | |
| I64 | Activity | | | | | | | | | | | | | | | | | |
| I74 | Thought | | | | | | | | | | | | | | | | | |
| I82 | Thought | | | | | | | | | | | | | | | | | |
| I83 | Thought | | | | | | | | | | | | | | | | | |
| I84 | Thought | | | | | | | | | | | | | | | | | |
| I10 | Interaction | | | | | | | | | | | | | | | | | |
| I13 | Thought | | | | | | | | | | | | | | | | | |
| I20 | Thought | | | | | | | | | | | | | | | | | |
| I27 | Thought | | | | | | | | | | | | | | | | | |
| I28 | Thought | | | | | | | | | | | | | | | | | |
| I34 | Activity | | | | | | | | | | | | | | | | | |
| I55 | Thought | | | | | | | | | | | | | | | | | |

* the darkness of the color indicates the substantiation of data from interviews and (recorded) ethnography.
insufficient recorded data
some claims verified (more unrecorded ethnography)
most claims verified (some unrecorded ethnography)
all claims verified by dataset

4.4.2 Interpretation

To answer sub question 3, the integration items that emerged from I2 most strongly influence the intentions of employees in the organization. Furthermore, I2 items are well integrated throughout the organizational structure. This indicates that agreement about the creation of TBL value approach occurs in the organization and that communication regarding TBL based business models is successful.

4.5 Sub Question 4: Co-creating value

The Benefits of Nature (BoN) project is linked to imperative 3, which focuses on co-creation of value. The BoN project was initiated in December 2014 as a social platform for value chain actors in the horticulture industry. The goal is to facilitate collaboration through the value chain by initiating co-operative R&D projects, product development, certification schemes, integrated product management and the development of life cycle assessment tools. The BoN foundation emphasizes the importance of ‘sustainable value’, i.e. TBL value. Fifteen integration items are linked to I3 (Table 7), ranging from improving collaboration to key suppliers to integrated product approaches in sector markets.

Table 7 Set of integration Items linked to imperative 3

| code* | Type | Triple Bottom Line | | | Learning | | | | Structure | | | Culture | | | | Time | | |
|-------|--------------------------|--------------------|--------|--------|----------|----|-------|-----|-----------|----------|-------------|-----------|--------|-----------|----------|------|---------|--------|
| | | People | Planet | Profit | Plan | Do | Check | Act | Strategic | Tactical | Operational | Artifacts | Values | Intention | Behavior | Past | Present | Future |
| I10 | Interaction | | | | | | | | | | | | | | | | | |
| I13 | Thought | | | | | | | | | | | | | | | | | |
| I20 | Thought | | | | | | | | | | | | | | | | | |
| I27 | Thought | | | | | | | | | | | | | | | | | |
| I28 | Thought | | | | | | | | | | | | | | | | | |
| I34 | Activity | | | | | | | | | | | | | | | | | |
| I55 | Thought | | | | | | | | | | | | | | | | | |
| I7 | Interaction | | | | | | | | | | | | | | | | | |
| I9 | Interaction | | | | | | | | | | | | | | | | | |
| I24 | Outcome | | | | | | | | | | | | | | | | | |
| I25 | Thought | | | | | | | | | | | | | | | | | |
| I38 | Activity/Thought/Outcome | | | | | | | | | | | | | | | | | |
| I52 | Thought | | | | | | | | | | | | | | | | | |
| I56 | Thought | | | | | | | | | | | | | | | | | |
| I75 | Thought | | | | | | | | | | | | | | | | | |

* the darkness of the color indicates the substantiation of data from interviews and (recorded) ethnography.
insufficient recorded data
some claims verified (more unrecorded ethnography)
most claims verified (some unrecorded ethnography)
all claims verified by dataset

4.5.1 Analysis

Three patterns can be identified from the I3 integration items. First, the items show a balance in the TBL in which improving environmental conditions and improving business continuity (planet and profit) are more closely related. Second, many of the items are thoughts about the future and plans of tactical and strategic level. This can be explained by the fact that the project is still being developed, and outcomes/results are still scarce. However, if a plan is executed (do) there is still a lack of monitoring (check) and no proof of a closed loop of continuous improvement (act). Third, the items all emerge on the cultural level of intention, but are almost never displayed in behavior or on an artifact level.

4.5.2 Interpretation

To answer sub question 4, the influence of I3 on the integration of CS is inconsistent. On the one hand, the dispersion of items throughout the TBL indicates that co-creation of value renders a holistic scope. On the other hand, the items are not successfully integrated in the organizational culture and learning processes.

4.6 Sub Question 5: Similarities and Differences

To answer sub question 5, a set of observations based on similarities and a set based on differences amongst the imperatives is presented.

Five observations were made based on the similarities in patterns amongst imperatives from the data set (appendix F/G). First, integration items that are linked to the imperatives are overall less successfully integrated than reference items. More gaps in the dimension of organizational learning, culture and structure were identified in the coded data. Second, intentions in the organizational culture were identified in abundance from the items that emerge from the imperatives. However, the items did not successfully integrate in the organizations artifacts, values and behavior. Third, most items from imperatives are thoughts about the future. In contrast, reference items are usually activities from the past or present. Fourth, only one of the items related to imperatives has a closed loop of PDCA, which indicates a lack of pro-active continuous improvement. Reference items proved relatively more successful, although many items also did not show a closed PDCA loop. Fifth, items from imperatives are fairly well distributed throughout the organizational structure, but are seldom integrated in all organizational levels. Reference items were better distributed in the organizational structure.

Two observations were made based on the differences in patterns between imperatives from the data set. First, the overall successfulness of integration differs between the imperatives: items related to I2 are least successfully integrated, items related to I1 are slightly more successfully integrated and items related to I3 are most successfully integrated. Second, I1 items are strongly related to improving environmental conditions (Planet), I2 items are equally distributed in TBL focus and items related to I3 are more focused on creating sustainable yield and business continuity (Profit).

4.7 Synthesis

Table 8 shows a comprehensive overview of the similarities and differences in the imperatives and the reference items. Based on the findings, three interpretations were made.

Table 8 Overview of CS integration per imperative. Darkness indicates where items are more successfully integrated

| Unit | TBL | | | Learning | | | | Structure | | | Culture | | | | Time | | |
|------|--------|--------|--------|----------|---|---|---|-----------|---|---|---------|------|------|------|------|---------|--------|
| | People | Planet | Profit | P | D | C | A | S | T | O | Arti | Valu | Inte | Beha | Past | Present | Future |
| I1 | | | | | | | | | | | | | | | | | |
| I2 | | | | | | | | | | | | | | | | | |
| I3 | | | | | | | | | | | | | | | | | |
| Case | | | | | | | | | | | | | | | | | |

First, integration of CS from SVC imperatives is less successful than CS integration from reference items. Two interpretations are possible to explain the lack of CS integration in the organization from SVC imperatives. On the one hand, SVC as a concept can be rather new to the organization, which explains the lack of data from the past. On the other hand, the organization can be less committed to SVC items, resulting in a lack of integration. Based on the data, it is unclear which interpretation is most accurate.

Second, integration in organizational learning dimension is similar for items that emerge from imperatives as for reference CS items. Integration of CS is most notable on the 'plan' and 'do' phase of the learning cycle. This can be explained by the lack of KPIs in SVC items. SVC items are not (yet) linked to the organization's core values and mission, resulting in a clear lack of monitoring of SVC items. This is to a lesser extent true for reference CS items that are connected to the mission and core values of the firm.

Third, the integration of SVC items in the organizational culture is most successful on the level of 'intentions'. Employees seem to be highly motivated to engage in SVC and CS related projects throughout the organization. However, this commitment does not become clear on an artifact level. The lack of integration can be interpreted in two ways. On the one hand, the maturity of the SVC projects can explain the lack of integration. If the projects were more mature, they could have been more successfully integrated in the organization. On the other hand, the lack of artifact level might indicate that the organization does not yet regard SVC projects as a integral part of the organization.

5 Discussion

The main purpose of this thesis has been to explore the influence of SVC on the integration of CS in an organization. The findings show that the integration items from SVC imperatives are less successfully integrated in most organizational dimensions in comparison to the reference items. This is however not fully in line with the theory reviewed. Two distinct points can be made in reflection to the theory base.

First, the positive effects of SVC on the increased sustainability in the TBL scope are not reflected in the successfulness of integration of CS in the organization. Porter & Kramer (2011) state that the full potential of organizations to meet environmental, societal and economic needs can be achieved when considering SVC as their core business. According to Biggemann et al. (2014), it is value co-creation that ultimately supports CS, stating that an organization should consider stakeholders outside the traditional value chain (I1) in their CS strategies. Biggemann et al. (2014) argue that this inclusion increases the responsiveness towards the demands of these different stakeholders. According to Biggemann et al. (2014), engagement in SVC forces companies to include stakeholders and consequently, integrate CS in the TBL dimension of the organization more successfully. In contrast to these claims, this thesis shows that the integration items that emerge from I1 are only partially integrated in the TBL dimension. Moreover, the I1 integration items are not successfully integrated in the organizational culture and learning dimensions.

Second, Payne et al. (2008) states that co-creation of TBL value (I2/I3) should be integrated in the organizational learning process to increase an organizations business continuity over time. From the empirical findings, this claim is partially supported. Integration items linked to I2 & I3 were most successfully integrated in the TBL at the level of ensuring business continuity (Profit). Nevertheless, the findings do not support that I2 & I3 integration items were successful in the organizational learning dimension. Not one of the I2 or I3 items were successfully integrated in the organizational learning dimension.

Apart from the reflection on current theory, the findings provided two contributions that explain the influence of SVC on the integration of CS in an organization. First, findings on the integration of CS in the organizational culture showed that items are most successfully integrated on the level of intentions. This might indicate that, although not visible on an artifact level, employees are highly willing to adopt SVC and recognize the influence and to some extent the importance of SVC. Second, the influence of SVC on the integration of CS in the organization structure shows that integration items linked to SVC imperatives are most successfully integrated in strategic and tactical management. A possible explanation for this is that in the case of Horticoop B.V., there is a clear commitment from top-management to actively engage in SVC. Consequently, integration items that emerge from SVC imperatives are more successfully integrated.

This thesis has addressed only the question of how SVC influences the integration of CS in an organization. As such, the conceptual model needed to be simplified to support the explorative design of the thesis. As a result, the conceptual model did not allow for the identification of how separate integration items or imperatives influenced each other. This lack of overlap between integration items resulted in a coarse, black and white delineation of integration items. The items were either labeled as part of an imperative of SVC or as a reference item for the case firm. On the one hand, this allowed for a clear comparison of the successfulness of integration per item. On the other hand, the capacity of the model to explain the integration of CS in an organization as a continuous, iterative process was heavily reduced. The delineation also limited the exploration of correlation amongst imperatives in sets of items. The lack of overlap between imperatives also posed another challenge. Although the model performed well in delineating the imperatives, it did only partially justify this categorization. Integration items could sometimes be allocated to e.g. both I1 & I2. In further research, the model could be adapted to allow for a more accurate assessment and categorization of the integration items & imperatives.

6 Conclusion

In this thesis, the influence of SVC on the successful integration of CS in an organization was researched. First, this thesis sought to explore what constitutes the theoretical link between SVC and the integration of CS in an organization based on a literature review. Second, the research gap between SVC and integration of CS in an organization was established by proposing that integration items not only emerge from internal processes concerned with CS, but can also be identified in external imperatives from SVC. Based on empirical evidence from an exploratory embedded case study, a set of 85 integration items coded from ethnographic data, interviews and company databases was created. From this set, patterns were identified to interpret the successfulness of CS integration (table 8) of the three imperatives from SVC. From the findings, the conclusion can be drawn that integration items that emerge from imperatives are generally less successfully integrated than reference items.

To answer the research question, the empirical findings from the embedded case study show that SVC negatively influences the integration of CS in an organization, because of three reasons. First, integration items that emerged from broadening the value chain (I1) lack integration in the organizational culture. Second, items that emerged from creating TBL value (I2) were not successfully integrated in the organizational learning dimension, because I2 items lacked monitoring and improvement steps in the PDCA cycle. Third, items that emerged from co-creation of new products and services (I3) lacked successful integration in the organizational structure and in the TBL. If co-creation of products/services was initiated in the cases, the focus was largely on establishing business continuity (Profit) and not explicitly on improving social conditions (People) or environmental quality (Planet).

Based on the discussion on method and findings, two suggestions for further research are made. First, the method needs to be developed to allow for a more specific delineation of the internal and external integration items. Using the current method, an integration item is either allocated as a reference item (internal to the organization) or allocated to the imperatives. The findings might have been different if integration items are not strictly linked to one or the other, but are rather positioned on a range from strictly internal to external. This would allow for an assessment that accounts for interaction amongst and connections between integration items.

Second, more empirical data is needed to support the claim that SVC negatively influences the integration of CS in an organization. Based on the method used, the findings from this thesis cannot be generalized to a broader context. However, the findings show patterns that are not in line with theory on the benefits of SVC for CS integration.

Reference List

- Adams, C. A., & Frost, G. R. (2008). Integrating sustainability reporting into management practices. *Accounting Forum*, 32, 288–302.
- Andersen, M., & Skjoett-Larsen, T. (2007). Corporate social responsibility in global supply chains. *Long Range Planning*, 40(3), 341–356.
- Azapagic, A. (2003). Systems approach to corporate sustainability. *Chemical and Process Engineering*, 81, 303–316.
- Baumgartner, R. J. (2009). Organizational culture and leadership: A sustainable corporation, 113(3), 102–113.
- Baumgartner, R. J., & Ebner, D. (2010). Corporate sustainability strategies: Sustainability profiles and maturity levels. *Sustainable Development*, 18(2), 76–89.
- Benn, S., Dunphy, D., & Griffiths, A. (2007). *Organizational change for corporate sustainability*. Routledge.
- Biggemann, S., Williams, M., & Kro, G. (2014). Building in sustainability, social responsibility and value co-creation. *Journal of Business & Industrial Marketing*, 29(4), 304–312.
- Bird, B. (1988). Implementing entrepreneurial ideas: The case for intention. *Academy of Management Review*, 13(3), 442–453.
- Borys, B., & Jemison, D. B. (1989). Hybrid arrangements as strategic alliances: Theoretical issues in organizational combinations. *Academy of Management Review*, 14(2), 234–249.
- Bryman, A. (2008). *Social research methods*. Oxford: Oxford University Press.
- Crane, A. (2000). Corporate greening as amorization. *Organization Studies*, 21(4), 673–696.
- Deming, W. E. (1950). *Elementary principles of the statistical control of quality*. Tokyo: Nippon Kagaku Gijutsu Renmei.
- Doppelt, B. (2003). *Leading change toward sustainability: a change-management guide for business, government and civil society*. Sheffield, UK: Greenleaf Publications.
- Dyllick, T., & Hockerts, K. (2002). Beyond the business case for corporate sustainability. *Business Strategy and the Environment*, 11(2), 130–141.
- Eccles, R. G., Ioannnis, I., & Serafeim, G. (2012). *The impact of a corporate culture of sustainability on corporate behavior and performance*. Boston: Harvard Business School Press.
- Elkington, J. (2002). *Cannibals with forks*. Oxford: Capstone Publishing Limited.
- Epstein, M. J., & Roy, M.-J. (2001). Sustainability in action: Identifying and measuring the key performance drivers. *Long Range Planning*, 34(5), 585–604.
- Fearne, A., Garcia Martinez, M., & Dent, B. (2012). Dimensions of sustainable value chains: Implications for value chain analysis. *Supply Chain Management: An International Journal*, 17(6), 575–581.

- Finnveden, G., Hauschild, M. Z., Ekvall, T., Guinée, J., Heijungs, R., Hellweg, S., ... Suh, S. (2009). Recent developments in life cycle assessment. *Journal of Environmental Management*, 91(1), 1–21.
- GRI. (2014). *Global Reporting Initiative: G4 sustainability reporting guidelines*. Amsterdam: GRI.
- Harris, L. C., & Crane, A. (2002). The greening of organizational culture. *Journal of Organizational Change Management*, 15(3), 214–234.
- Horvath, L. (2001). Collaboration: The key to value creation in supply chain management. *Supply Chain Management: An International Journal*, 6(5), 205–207.
- Jamali, D. (2006). Insights into triple bottom line integration from a learning organization perspective. *Business Process Management Journal*, 12(6), 809–821.
- Jarnagin, C., & Slocum, J. W. (2007). Creating corporate cultures through mythopoetic leadership. *Organizational Dynamics*, 36(3), 288–302.
- Kaku, R. (1997). The path of kyosei. *Harvard Business Review*, 75(4), 55–63.
- Kaplinsky, R., & Morris, M. (2001). *A handbook for value chain research*. Canada:IDRC.
- Linnenluecke, M. K., & Griffiths, A. (2010). Corporate sustainability and organizational culture. *Journal of World Business*, 45(4), 357–366.
- Lodder, M., Hufenreuter, R. L., Braungart, M., & Den Held, D. (2014). Regenerative sustainable development: Towards a triple top line approach and increasing positive externalities. In *5th International Sustainability Transitions Conference* (pp. 1–22). Utrecht: DRIFT.
- Lozano, R. (2008a). Developing collaborative and sustainable organisations. *Journal of Cleaner Production*, 16(4), 499–509.
- Lozano, R. (2008b). Envisioning sustainability three-dimensionally. *Journal of Cleaner Production*, 16(17), 1838–1846.
- Lozano, R. (2013a). A holistic perspective on corporate sustainability drivers. *Corporate Social Responsibility and Environmental Management*.
- Lozano, R. (2013b). Are companies planning their organisational changes for corporate sustainability? An analysis of three case studies on resistance to change and their strategies to overcome it. *Corporate Social Responsibility and Environmental Management*, 20(5), 275–295.
- Lozano, R. (2014). Creativity and organizational learning as means to foster sustainability. *Sustainable Development*, 22(3), 205–216.
- Mentzer, J. T., DeWitt, W., Keebler, J. S., Min, S., Nix, N. W., Smith, C. D., & Zacharia, Z. G. (2001). Defining supply chain management. *Journal of Business Logistics*, 22(2), 1–25.
- Moen, R., & Norman, C. (2006). Evolution of the PDCA cycle. *Society*, 1–11.
- Olchi, W. G. (1978). The transmission of control through organizational hierarchy. *Academy of Management Journal*, 21(2), 173–192.
- Parker, R., & Bradley, L. (2000). Organisational culture in the public sector: Evidence from six organisations. *International Journal of Public Sector Management*, 13(2), 125–141.

- Pavlovich, K., & Corner, P. D. (2013). Conscious enterprise emergence: Shared value creation through expanded conscious awareness. *Journal of Business Ethics*, 121(3), 341–351.
- Payne, A. F., Storbacka, K., & Frow, P. (2007). Managing the co-creation of value. *Journal of the Academy of Marketing Science*, 36(1), 83–96.
- Porter, M. E., & Kramer, M. R. (2006). Strategy and society. *Harvard Business Review*, 84(12), 78 – 90.
- Porter, M. E., & Kramer, R. . (2011). Creating shared value. *Harvard Business Review*, 89(1), 62–77.
- Potts, J., Lynch, M., Wilkings, A., Huppe, G., Cunningham, M., & Voora, V. (2014). *The state of sustainability initiatives: Review 2014 standards and the green economy*. Winnipeg: International Institute of Sustainable Development.
- Power, D. (2013). Supply chain management integration and implementation: A literature review. *Supply Chain Management: An International Journal*, 10(4), 252–263.
- Schein, E. H. (2004). *Organizational culture and leadership*. San Francisco: John Wiley & Sons, Inc.
- Stocker, T. F., Qin, D., Plattner, G.-K., Tignor, M. M. B., Allen, S. K., Boschung, J., ... Wuebbles, D. (2013). *Climate Change 2013: The physical science basis: Working Group I Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge: Cambridge University Press.
- Van de Kerkhof, M., & Wieczorek, A. (2005). Learning and stakeholder participation in transition processes towards sustainability: Methodological considerations. *Technological Forecasting and Social Change*, 72(6), 733–747.
- Van der Meulen, H., Van Everdingen, W., Smit, B., & Silvis, H. (2014). *Actuele ontwikkeling land- en tuinbouw in 2014*. Wageningen: LEI WUR.
- Van Marrewijk, M. (2003). Concepts and definitions of CSR and corporate sustainability: Between agency and communion. *Journal of Business Ethics*, 44(2), 95–105.
- Vermeulen, W. J. V., & Ras, P. J. (2006). The challenge of greening global product chains : Meeting both ends. *Sustainable Development*, 14(4), 245–256.
- WBCSD. (2004). *Vision 2050: A new agenda for business*. Geneva: Atar Roto Presse.
- WCED. (1987). *World commission on environment and development: our common future*. Oxford: Oxford University Press.
- Wilson, A. M. (2001). Understanding organisational culture and the implications for corporate marketing. *European Journal of Marketing*, 35(3/4), 353–367.
- Witjes, S., Vermeulen, W. J. V., & Cramer, J. (2014). Exploring the gap between vision and practise of corporate sustainability in SMEs, experiences from 18 Dutch cases. In *ERSCP*. Portoroz, Slovenia.
- Yin, R. K. (2009). *Case study research: design and methods*. Thousand Oaks, California: Sage Publications, Inc.

Appendices

Appendix A

Interview Set-up

Introduction

- Responsibilities, job description, time spend at Horticoop

Sustainable development

- Definition of sustainability for interviewee?
- Definition for Horticoop?
- How does Horticoop deal with sustainability?
- How long will it take for sustainability to be an integral part of the organization?
- Can we speed up this process? How?
- Drivers and barriers
- Opportunities from your position
- Who is involved with sustainability at Horticoop?
- Who should be involved?

Co-creation of value

- Importance of collaboration for Horticoop?
- Successful projects in which collaboration is important?
- Drivers and Barriers?

Discuss projects: Responsibly Produced Peat (I1)/Benefits of Nature (I2)/Optie C (I3)

- Setting up timeline
- Important actions and contributions
- Influence in five dimensions
- Role in the project of individual
- Influence of individual in project
- Shared vision in collaboration projects
- Pro's and con's towards business continuity
- Opportunities of project

Sustainability in the context of projects

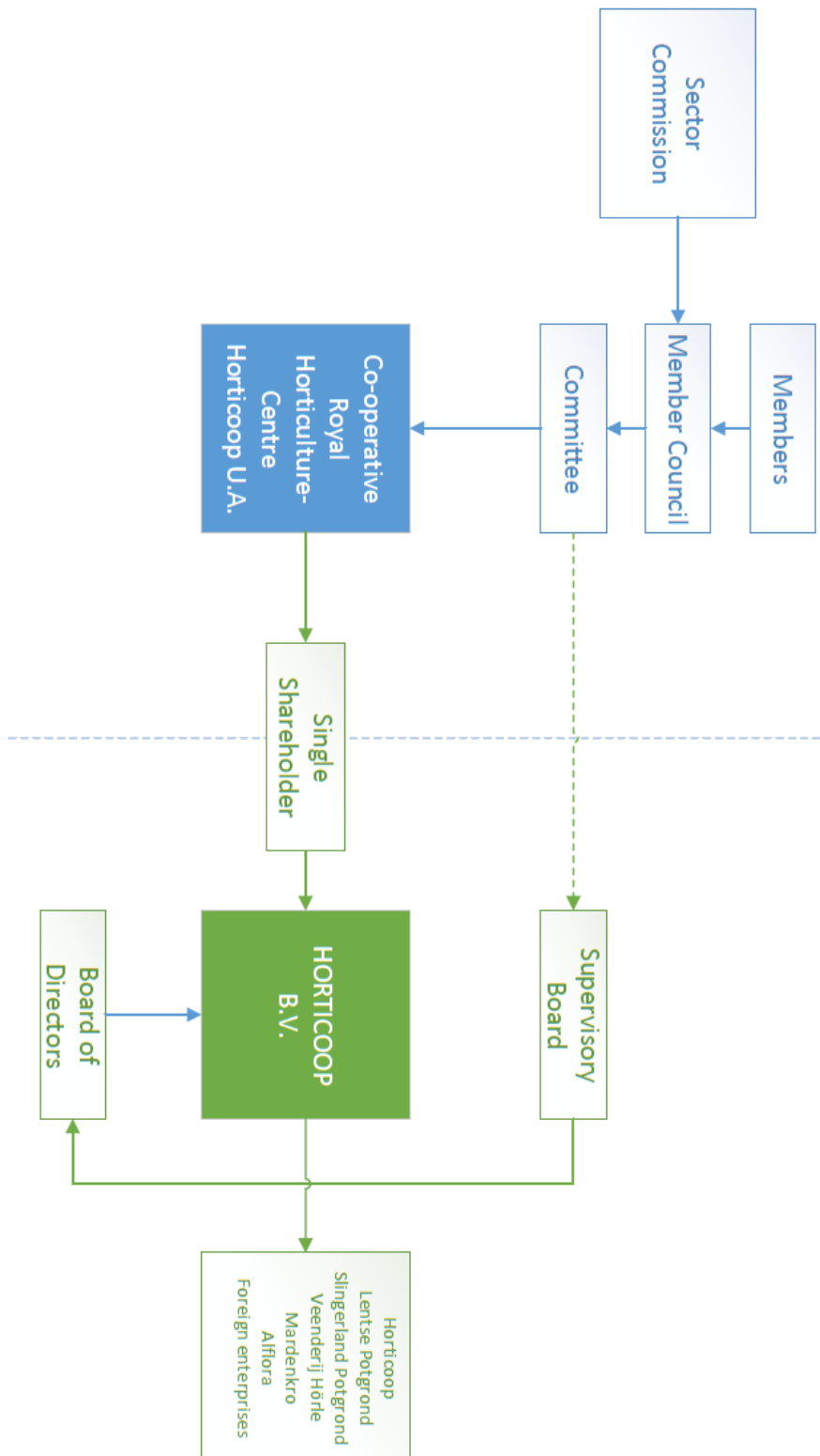
- Are decisions made from an internal or external organizational perspective? Why?
- Are decisions made based on short-term or long-term objectives? Why?
- Should sustainability be a central part of Horticoop's strategy?

TBL scope and Horticoop

- Interaction of economic, ecologic and social value creation strategies
- Link between aspects

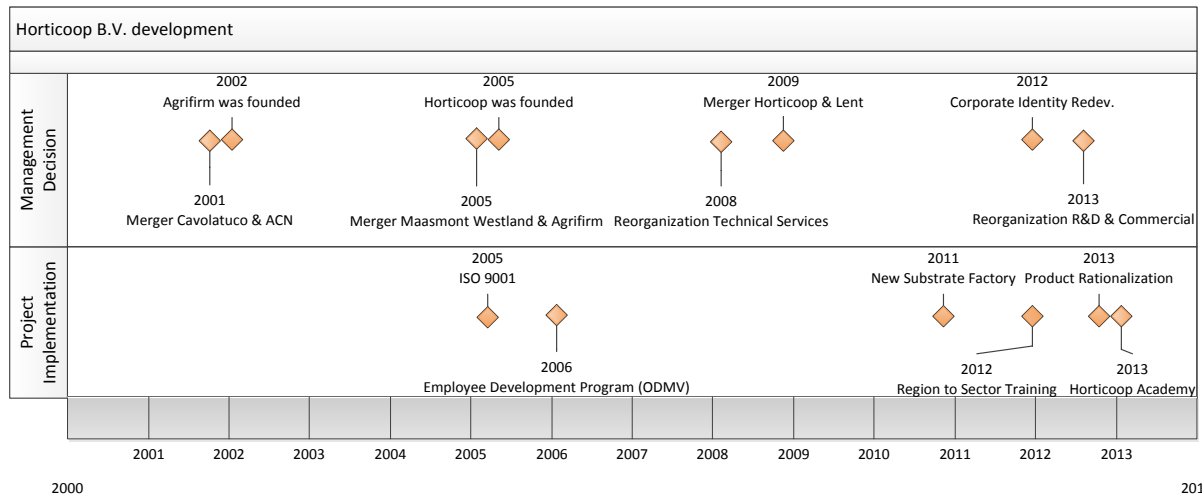
Appendix B

Horticoop B.V. Organizational Chart

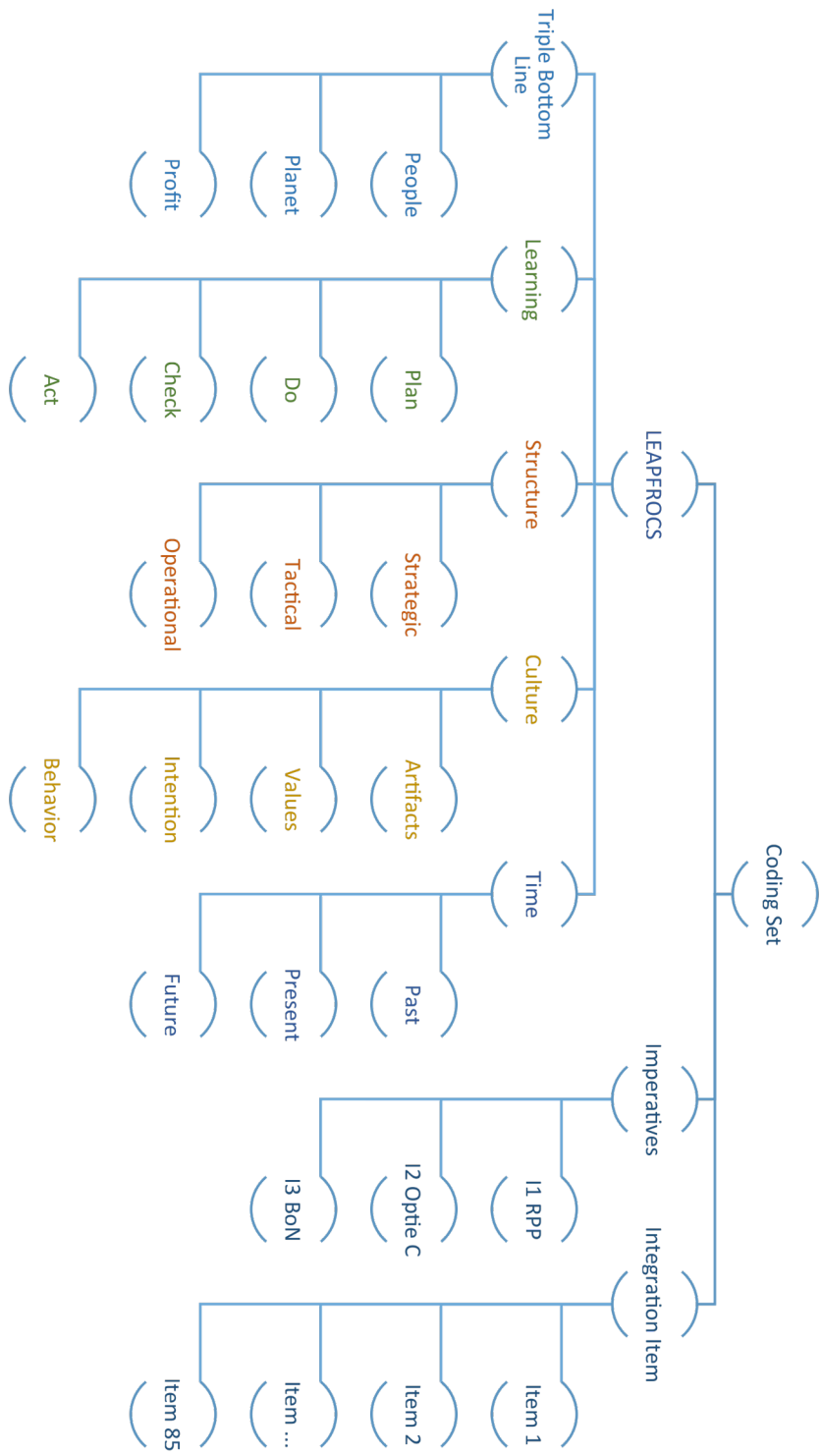


Appendix C

Horticoop Development



Appendix D
Coding Scheme



Appendix E

List of interviewees

| Name | Code | Position | Role in projects |
|-----------------------|------|----------------------------------|--|
| Igo Janssen | IJ | Executive Director | Strategic Responsibility (I1, I2, I3) |
| Johannes Tuinhof | JT | Commercial Director | Strategic Responsibility (I1, I2, I3) |
| Jan Ruiter | JR | Manager QHSE | Process responsibility (I1) |
| John Sonneveld | JS | Manager Sector 'Potted Plants' | Operational/Tactical responsibility (I2, I3) |
| René Janssen | RJ | Manager R&D Substrate | Product Development (I2 & I3) |
| Ben van de Geest | BG | Manager Substrate Factories | Chairmen at RPP (I1) |
| Jurjen Boeringa | JB | Commercial Manager | Tactical Responsibility (I2 & I3) |
| Daan Verbeek | DV | Manager R&D | Development responsibility (I2 & I3) |
| Geert-Jan van der Zon | GZ | Manager New Business Development | Business case development (I2 & I3) |
| Henk van der Meer | HM | HR Manager | Overall support in human resources (I2) |

Appendix F

Set of Integration Items

| Code* | Integration Item | Project | Type | TBL** | | |
|-------|---|-------------|--------------------------|--------|--------|--------|
| | | | | People | Planet | Profit |
| I07 | Improve collaboration with key suppliers | BoN | Interaction | | | |
| I09 | Improve collaboration with key customers | BoN | Interaction | | | |
| I24 | Improving financial successfulness of R&D projects | BoN | Outcome | | | |
| I25 | Increase knowledge of market trends | BoN | Thought | | | |
| I38 | Increase percentage of sales in biological fertilizers/crop protection | BoN | Activity/Thought/Outcome | | | |
| I52 | Improve sales of clean-tech products/innovations | BoN | Thought | | | |
| I56 | Increase use of consumer market data | BoN | Thought | | | |
| I75 | Increase importance of value chain collaboration | BoN | Thought | | | |
| I10 | Exchange of information with customers | BoN/Optie C | Interaction | | | |
| I14 | Improve knowledge of product life cycle (including impact of stages) | BoN/RPP | Thought/Interaction | | | |
| I01 | Reduce waste water disposal at customer | Optie C | Thought | | | |
| I04 | Improving order management to manage peak production | Optie C | Thought | | | |
| I08 | I-crop customer data management system | Optie C | Thought | | | |
| I11 | Increase value-based approach in market | Optie C | Activity/Thought | | | |
| I17 | Sales team training in value based approach | Optie C | Activity/Thought | | | |
| I19 | Improve communication about responsibilities in projects | Optie C | Thought | | | |
| I21 | Increase long term relations with customers | Optie C | Thought | | | |
| I22 | Increase loyalty from customers in procurement strategy | Optie C | Thought | | | |
| I32 | Improve commercial mind-set of R&D department | Optie C | Activity/Thought | | | |
| I33 | Increase intercontinental export (Russia) | Optie C | Thought | | | |
| I35 | Improve use of fertilizer/pesticides at customer location though consultancy/protocols | Optie C | Activity/Thought/Outcome | | | |
| I41 | Improve efficiency/yield of customer | Optie C | Activity/Thought/Outcome | | | |
| I49 | Increase pride in product and quality thereof | Optie C | Thought | | | |
| I50 | Decreasing use of fertilizer at customer location | Optie C | Activity/Thought/Outcome | | | |
| I53 | Decrease gas use at customer location | Optie C | Thought/Outcome | | | |
| I54 | Optimize yield at customer location | Optie C | Thought/Outcome | | | |
| I58 | Improve customer margin | Optie C | Activity/Thought | | | |
| I60 | Increase use of climatological data | Optie C | Thought | | | |
| I64 | Optimizing team synergy through a sector-based approach (instead of product-based approach) | Optie C | Activity | | | |
| I74 | Need for increased enthusiasm in doing business | Optie C | Thought | | | |
| I82 | Monitoring of production speed at customer | Optie C | Thought | | | |
| I83 | Monitoring of gas usage at customer | Optie C | Thought | | | |
| I84 | Customer loyalty is a prerequisite for successful product development | Optie C | Thought | | | |
| I13 | Integrated product (concept) approach in sector markets | Optie C/BoN | Thought | | | |
| I20 | Improve communication in target setting per project | Optie C/BoN | Thought | | | |
| I27 | Increase customer's margin by value chain management | Optie C/BoN | Thought | | | |
| I28 | Increase control of consumer market by value chain management | Optie C/BoN | Thought | | | |
| I34 | Increase shelf life of final product (potted orchids) | Optie C/BoN | Activity | | | |
| I55 | Optimize production in value chain | Optie C/BoN | Thought | | | |
| I15 | Decrease use of irresponsibly produced peat in substrates | RPP | Activity | | | |
| I37 | Improve monitoring of production performance | RPP | Activity/Thought | | | |
| I48 | Proactive position towards future legislation | RPP | Activity/Thought | | | |
| I76 | Develop alternatives for peat production | RPP | Thought | | | |
| I77 | End use of peat-based growing media for plants | RPP | Thought | | | |
| I78 | Agenda setting in Responsibly Product Peat foundation | RPP | Activity | | | |
| I02 | Reduce waste in factory | | Activity | | | |
| I03 | Optimize logistics | | Activity | | | |
| I05 | Improving knowledge of employees (specialist) through Horticoop Academy | | Activity | | | |
| I06 | Employee cars in A/B-label | | Activity | | | |
| I12 | Increase margin of wholesale products (no production) through product rationalization | | Activity | | | |
| I16 | Application of ISO 14001 standard | | Thought | | | |
| I18 | Transition from product groups to market segments | | Activity | | | |
| I23 | Improvement of performance and quality using ISO 9001 | | Activity | | | |
| I26 | Improve business unit profitability by product rationalization | | Outcome | | | |
| I29 | Improve pro-activity in product development/market approach | | Activity/Thought | | | |
| I30 | Communication channel for complaints/recommendations | | Activity | | | |
| I31 | Improve employment development (promotion/specialization) | | Activity | | | |
| I36 | Improve use of AX Customer Relation Management system | | Activity | | | |
| I39 | Legal compliance of sales in crop protection products | | Activity | | | |
| I40 | Improve business model for consultancy practises | | Activity | | | |
| I42 | Improvement of employee health, occupancy | | Activity | | | |
| I43 | Decrease rate of injury during operational practices | | Activity | | | |
| I44 | Optimizing employee throughput | | Thought | | | |
| I45 | Sustainable development must be economically viable | | Thought | | | |
| I46 | Defining sustainability as a core value | | Thought | | | |
| I47 | Integrate sustainability in company culture | | Thought | | | |
| I51 | Improve continuity in sales | | Thought/Outcome | | | |
| I57 | Increase efficiency oriented mind-set at employees (through Enterprise Resource Planning) | | Thought | | | |
| I59 | Influence customer procurement habits by price incentives | | Activity/Thought | | | |
| I61 | Migrate customers from retail units purchase to wholesale | | Activity/Thought | | | |
| I62 | Increase planned (periodic) purchases of customers | | Thought | | | |
| I63 | Customer categorization based on turnover | | Activity | | | |
| I65 | Investment in fundamental research at Wageningen University (club van 100) | | Activity | | | |
| I66 | Need for stabilization of organizational structure | | Thought/Interaction | | | |
| I67 | Need for integration of core values in operational level | | Thought | | | |
| I68 | Compliance with PGS 7/15 (hazardous substances) | | Activity | | | |
| I69 | Integration of certificates in QHSE management system | | Activity | | | |
| I70 | Education/training of employees on legal compliance of certificates through QHSE | | Activity | | | |
| I71 | Implementation of cascade heating system | | Activity/Outcome | | | |
| I72 | Transition to T5 fluorescent lighting | | Activity/Outcome | | | |
| I73 | Impact of mergers on integration of CS | | Thought | | | |
| I79 | Institutionalization of reorganization from product groups to sector | | Activity/Thought | | | |
| I80 | Need for integration of business unit cultures (production and wholesale) | | Thought | | | |
| I81 | Packaging remodelling from big bags to big bales | | Activity | | | |
| I85 | Build of less polluting substrate factory 'Slingerland Potgrond' | | Activity | | | |

LEGEND

Insufficient recorded data

Some claims verified (more unrecorded ethnography)

Most claims verified (some unrecorded ethnography)

All claims verified in QACDAS

Imperative 1

Imperative 2

Imperative 3

Reference Items

* The darkness of the colour indicates the substantiation of data from interviews and (recorded) ethnography.

** Coloured box means item is successfully integrated in that sublevel of the dimension

| code | Learning** | | | | Structure** | | | Culture** | | | | Time** | | |
|------|------------|----|-------|-----|-------------|----------|-------------|-----------|--------|-----------|----------|--------|---------|--------|
| | Plan | Do | Check | Act | Strategic | Tactical | Operational | Artifacts | Values | Intention | Behavior | Past | Present | Future |
| I07 | | | | | | | | | | | | | | |
| I09 | | | | | | | | | | | | | | |
| I24 | | | | | | | | | | | | | | |
| I25 | | | | | | | | | | | | | | |
| I38 | | | | | | | | | | | | | | |
| I52 | | | | | | | | | | | | | | |
| I56 | | | | | | | | | | | | | | |
| I75 | | | | | | | | | | | | | | |
| I10 | | | | | | | | | | | | | | |
| I14 | | | | | | | | | | | | | | |
| I01 | | | | | | | | | | | | | | |
| I04 | | | | | | | | | | | | | | |
| I08 | | | | | | | | | | | | | | |
| I11 | | | | | | | | | | | | | | |
| I17 | | | | | | | | | | | | | | |
| I19 | | | | | | | | | | | | | | |
| I21 | | | | | | | | | | | | | | |
| I22 | | | | | | | | | | | | | | |
| I32 | | | | | | | | | | | | | | |
| I33 | | | | | | | | | | | | | | |
| I35 | | | | | | | | | | | | | | |
| I41 | | | | | | | | | | | | | | |
| I49 | | | | | | | | | | | | | | |
| I50 | | | | | | | | | | | | | | |
| I53 | | | | | | | | | | | | | | |
| I54 | | | | | | | | | | | | | | |
| I58 | | | | | | | | | | | | | | |
| I60 | | | | | | | | | | | | | | |
| I64 | | | | | | | | | | | | | | |
| I74 | | | | | | | | | | | | | | |
| I82 | | | | | | | | | | | | | | |
| I83 | | | | | | | | | | | | | | |
| I84 | | | | | | | | | | | | | | |
| I13 | | | | | | | | | | | | | | |
| I20 | | | | | | | | | | | | | | |
| I27 | | | | | | | | | | | | | | |
| I28 | | | | | | | | | | | | | | |
| I34 | | | | | | | | | | | | | | |
| I55 | | | | | | | | | | | | | | |
| I15 | | | | | | | | | | | | | | |
| I37 | | | | | | | | | | | | | | |
| I48 | | | | | | | | | | | | | | |
| I76 | | | | | | | | | | | | | | |
| I77 | | | | | | | | | | | | | | |
| I78 | | | | | | | | | | | | | | |
| I02 | | | | | | | | | | | | | | |
| I03 | | | | | | | | | | | | | | |
| I05 | | | | | | | | | | | | | | |
| I06 | | | | | | | | | | | | | | |
| I12 | | | | | | | | | | | | | | |
| I16 | | | | | | | | | | | | | | |
| I18 | | | | | | | | | | | | | | |
| I23 | | | | | | | | | | | | | | |
| I26 | | | | | | | | | | | | | | |
| I29 | | | | | | | | | | | | | | |
| I30 | | | | | | | | | | | | | | |
| I31 | | | | | | | | | | | | | | |
| I36 | | | | | | | | | | | | | | |
| I39 | | | | | | | | | | | | | | |
| I40 | | | | | | | | | | | | | | |
| I42 | | | | | | | | | | | | | | |
| I43 | | | | | | | | | | | | | | |
| I44 | | | | | | | | | | | | | | |
| I45 | | | | | | | | | | | | | | |
| I46 | | | | | | | | | | | | | | |
| I47 | | | | | | | | | | | | | | |
| I51 | | | | | | | | | | | | | | |
| I57 | | | | | | | | | | | | | | |
| I59 | | | | | | | | | | | | | | |
| I61 | | | | | | | | | | | | | | |
| I62 | | | | | | | | | | | | | | |
| I63 | | | | | | | | | | | | | | |
| I65 | | | | | | | | | | | | | | |
| I66 | | | | | | | | | | | | | | |
| I67 | | | | | | | | | | | | | | |
| I68 | | | | | | | | | | | | | | |
| I69 | | | | | | | | | | | | | | |
| I70 | | | | | | | | | | | | | | |
| I71 | | | | | | | | | | | | | | |
| I72 | | | | | | | | | | | | | | |
| I73 | | | | | | | | | | | | | | |
| I79 | | | | | | | | | | | | | | |
| I80 | | | | | | | | | | | | | | |
| I81 | | | | | | | | | | | | | | |
| I85 | | | | | | | | | | | | | | |

Appendix G

Integration Items Coded

| code | Integration Item | code | Integration Item |
|------|--|------|---|
| I01 | Reduce waste water disposal at customer | I43 | Decrease rate of injury during operational practices |
| I02 | Reduce waste in factory | I44 | Optimizing employee throughput |
| I03 | Optimize logistics | I45 | SD must be economically viable |
| I04 | Improving order management to manage peak production | I46 | Defining sustainability as a core value |
| I05 | Improving knowledge through Horticoop Academy | I47 | Integrate sustainability in company culture |
| I06 | Employee cars in A/B-label | I48 | Proactive position towards future legislation |
| I07 | Improve collaboration with key suppliers | I49 | Increase pride in product and quality thereof |
| I08 | I-crop customer data management system | I50 | Decreasing use of fertilizer at customer location |
| I09 | Improve collaboration with key customers | I51 | Improve continuity in sales |
| I10 | Exchange of information with customers | I52 | Improve sales of clean-tech products/innovations |
| I11 | Increase value based approach in market | I53 | Decrease gas use at customer location |
| I12 | Increase margin of wholesale products (no production) through product rationalization | I54 | Optimize yield at customer location |
| I13 | Integrated product (concept) approach in sector markets | I55 | Optimize production in value chain |
| I14 | Improve knowledge of product life cycle (including impact of stages) | I56 | Increase use of consumer market data |
| I15 | Decrease use of irresponsibly produced peat in substrates | I57 | Increase efficiency oriented mind-set at employees (through Enterprise Resource Planning) |
| I16 | Application of ISO 14001 standard | I58 | Improve customer margin |
| I17 | Sales team training in value based approach | I59 | Influence customer procurement habits by price incentives |
| I18 | Transition from product groups to market segments | I60 | Increase use of climatological data |
| I19 | improve communication about responsibilities in projects | I61 | Migrate customers from retail units purchase to wholesale |
| I20 | Improve communication in target setting per project | I62 | Increase planned (periodic) purchases of customers |
| I21 | Increase long term relations with customers | I63 | Customer categorization based on turnover |
| I22 | Increase loyalty from customers in procurement strategy | I64 | Optimizing team synergy through a sector based approach (instead of product based approach) |
| I23 | Improvement of performance and quality using ISO 9001 | I65 | Investment in fundamental research at Wageningen University (club van 100) |
| I24 | Improving financial successfulness of R&D projects | I66 | Need for stabilization of organizational structure |
| I25 | Increase knowledge of market trends | I67 | Need for integration of core values in operational level |
| I26 | Improve business unit profitability by product rationalization | I68 | Compliance with PGS 7/15 (hazardous substances) |
| I27 | Increase customer's margin by value chain management | I69 | Integration of certificates in QHSE management system |
| I28 | Increase control of consumer market by value chain management | I70 | Education/training of employees on legal compliance of certificates through QHSE |
| I29 | Improve pro-activity in product development/market approach | I71 | Implementation of cascade heating system |
| I30 | Communication channel for complaints/recommendations | I72 | Transition to T5 fluorescent lighting |
| I31 | Improve employment development (promotion/specialization) | I73 | Impact of mergers on integration of CS |
| I32 | Improve commercial mind-set of R&D department | I74 | Need for increased enthusiasm in doing business |
| I33 | Increase intercontinental export (Russia) | I75 | Increased importance of value chain collaboration |
| I34 | Increase shelf life of final product (potted orchids) | I76 | Develop alternatives for peat production |
| I35 | Improve use of fertilizer/pesticides at customer location though consultancy/protocols | I77 | End use of peat-based growing media for plants |
| I36 | Improve use of AX Customer Relation Management system | I78 | Agenda setting in RPP foundation |
| I37 | Improve monitoring of production performance | I79 | Institutionalization of reorganization from product groups to sector |
| I38 | Increase percentage of sales in biological fertilizers/crop protection | I80 | Need for integration of business unit cultures (production and wholesale) |
| I39 | Legal compliance of sales in crop protection products | I81 | Packaging remodelling from big bags to big bales |
| I40 | Improve business model for consultancy practises | I82 | Monitoring of production speed at customer |
| I41 | Improve efficiency/yield of customer | I83 | Monitoring of gas usage at customer |
| I42 | Improvement of employee health, occupancy | I84 | Customer loyalty is a prerequisite for successful product development |
| | | I85 | Build of less polluting substrate factory 'Slingerland Potgrond' |

