

The Transition from Normal Business Models to Sustainable Business Models in the High-Tech Food & Beverages Industry

What are the key success factors and barriers for a successful transition?

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Abstract

The Transition from Normal Business Models to Sustainable Business Models in the High-Tech Food & Beverages Industry -What are the key success factors and barriers for a successful transition? By Arnold Looijen.

This MSc-thesis is about Sustainable Business Models (SBM) and what success factors and barriers are important for the innovation towards an SBM. The research contains a theoretical model that consists of Corporate Social Responsibility, Business Model Frameworks, Sustainable Business Models and Transition Management. The aim of this research is to define a science-based set of key success factors and barriers for the transition of BM's to SBM's at established SME's and sustainable start-ups in the HTFBI, by analysing cases of different companies in the food industry with a sustainable business model (N=14). The start-ups (n=8) were all founded on the basis of a SBM, whereas the SME's (n=6) innovated their BM into a SBM. The authors conducted an ex-ante analysis on the participating companies based on the Four Phases Model (FPM). The FPM is a model to indicate to what extent an organization is pro-actively involved in sustainability. After the interviews the authors conducted a qualitative analysis on the results to see per participant how they applied sustainability in their operations. The FPM and the Eight Archetypes model were used for the qualitative analysis. Consequently, the authors assessed where and how sustainability was implemented in the building blocks of the Business Model Canvas. Finally, the authors investigated what the key success factors and barriers for this business model innovation were.

The results indicate that regarding the Four Phases Model it is difficult for smaller companies to meet the reporting criterion. For the Eight Archetypes model, the conclusion is that SME's tend to focus on five out of the eight archetypes, whereas start-ups only focus on three of the five. The result of the Business Model Canvas is that SME's only focus on two building blocks and start-ups tend to focus on five of the nine building blocks. The final conclusion regarding the main research question about the key success factors and barriers is that Pro-active leadership, Aspiration and External factors are very important potential success factors whereas external factors seem to be the only barriers for business model innovation.

Keywords: Sustainable Business Models, High-Tech Food and Beverages Industry, Innovation, Sustainability, Business Canvas Model, Entrepreneurship, Transition Management, Corporate Social Responsibility.

Preface

This research is part of the final proof of proficiency for an MSc Student at Wageningen University. I am an MSc Student in Management, Economics and Consumer Studies. I have a BSc in Economics and Governance and I have experience with issues such as sustainability, innovation, strategy and management. I am also a co-founder of a small sustainability consultancy firm. For me as a student of the Master Management, Economics and Consumer Studies with the Specialization Management Studies this is the next-to-last phase of finishing my Master of Science degree at Wageningen University.

This research project has been supervised by the Wageningen University and was executed in The Netherlands. The support of many people during this project has been highly appreciated; I would like to take the opportunity to thank these individuals personally.

Firstly, I want to thank my supervisors: Vincent Blok and Thomas Long. Thank you both for your continued and valuable support, professional guidance, creative insights and constructive feedback on improving the quality of this final research paper. Your input, time, and effort can be seen as the external key success factors of this endeavour; you were both great coaches in my personal development as a researcher.

Secondly, I would like to thank the representatives of the organizations that participated in my research. I would like to thank them for their time, effort, and openness in providing empirical data and sharing thoughts.

Thirdly, I want to show my appreciation to my friends and family for their continuous interests in my subject and their continued support during the last six months.

Fourth and finally, I want to extend my gratitude to you, the reader. The fact that you are interested in this line of study means a lot to me, and I hope you enjoy this report about Sustainable Business Models.

Enjoy!

Arnold I.W. Looijen

Wageningen, The Netherlands
February 2015

Executive Summary

The aim of this research is to define a science-based set of key success factors and barriers for the transition of BM's to Sustainable Business Models (SBM's) at established Small and Medium Enterprises (SME's) and sustainable start-ups in the High-Tech Food and Beverage Industry (HTFBI).

The economic crisis has led to a critical attitude towards business models, especially about the real impacts of companies on sustainability. Many articles describe the importance of good business models. The added value of a business model is: „*in defining the manner by which the enterprise delivers value to customers, entices customers to pay for value, and converts those payments to profit*” (Teece, 2010). This research discusses multiple Business Model Frameworks (BMF's). For each BMF the advantages and disadvantages are discussed, eventually the authors discuss which BMF is used for this research. Currently there is a critical attitude towards Business Models (BM), this resulted in new articles about BM innovation, these articles describe how and why BM's should be adapted to sustainability (Roos, 2014). Current BM's seem to be out-dated because they lack a sustainability and innovation variable addressed as (separate) building blocks that are the basis of a BM (Lee and Casalegno, 2010). Some firms managed to implement sustainability in their BM by innovating their BM. Other firms do not address sustainability at all in their BM; here lies the crux of this. Many companies implement a sustainability strategy where they want to optimize environmental and social aspects in parallel to other strategic business opportunities; this is often in conflict with short-term financial goals. However, some companies implement a sustainable strategy where they manage financial, environmental and social aspects across all strategic priorities, where sustainability is understood as a key driver of the long-term success of the business.

This report combines the latest articles about BMF's, BM's, SMB's, Sustainable Innovation, and Transition Theories in order to describe the previously described transition from regular BM's to SBM's. The previously describes theories will be combined into a conceptual model that helps us in the future to detect dissonances at an early stage in the SBM formulation. In order to see if the developed conceptual model helps to answer the main research question, the authors conducted semi-structured interviews at fourteen different companies in the HTFBI with an SBM. The cases were selected on several criteria regarding sustainability. The authors investigated a total of fourteen companies varying from sustainable start-ups (n=8) and SME's (n=6).

The authors used The Four Phases Model of Sustainability (FPM) to assess whether companies in our sample are pro-actively involved with sustainability (Van Tilburg et al., 2012). In order to participate in this research, the participants had to be in the pro-active phase regarding sustainable entrepreneurship. The results of the interviews indicate that regarding the FPM all the companies focus on Vision on Sustainability, Orientation on External Developments, Business Case Elements, Transparency, Stakeholders, And Supply Chain Approach. Thirteen companies also focused on their Dominant Functional Discipline, and only three focused on sustainable reporting. The conclusion about the Four Phases Model is that the participating companies are in the pro-active phase and that they tend to implement sustainability in their operations. This is no surprise because this was a prerequisite for the participation of this research.

The Eight Archetypes Model is a model to check how the organization operationalizes sustainability in their company. The results of the Eight Archetypes Model were that fourteen companies focused on Efficiency and Stewardship. Thirteen focused on Repurpose and Scale-up. Twelve focused on Waste and Functionality. Eleven focused on Sufficiency, and only seven focused on Substitution. SME's tend to focus on five of the eight archetypes whereas the start-ups only tend to focus on three of the eight archetypes. A possible explanation for this is that most start-ups lack financial capital to invest.

This research addresses the different types of Business Model Frameworks (BMF's) and it describes the pros and cons of each variety. Ultimately, the authors chose for the Business Model Canvas (BMC) to implement in his research due to the easy applicability of the model, other BMF's are specifically for one sector or industry whereas the BMC is applicable to multiple sectors or industries. The results of the BMC indicate that SME's focus on Key Activities and Customer Relationships in their SBM's and that Start-ups focus on Key Partners, Key Resources, Key Activities, Customer Relationships, and Channels. These results indicate that start-ups focus more on sustainable building blocks in the BMC than SME's. An explanation for this result is that start-ups are intrinsically focused on sustainability; this means that these organizations can start with sustainable building blocks whereas the SME's have to force the transition from their non-sustainable building blocks towards sustainable building blocks. For some building blocks changing is not about flipping a switch, it requires more time and effort and this might be the reason why SME's tend to focus on fewer building blocks than start-ups.

The authors use the theory of Transition Management (TM) to identify the key success factors and the barriers for change. For this research this means the success factors and barriers for the sustainable business model innovation. For this research it is assumed that all business models started without any sustainability aspects in their building blocks, this indicates that all the building blocks that are currently sustainability driven went through a transition; these were the building blocks that were innovated towards sustainability. The results of the TM analysis were that Pro-active Leadership, Aspiration, and External factors are important key success factors, whereas only the External Factors were indicated as important barriers for business model innovation. This is no surprise because all participating companies were convinced of their intrinsic success, meaning that they identified their barriers externally instead of internally. In other words, the participating SME's and start-ups were all financially healthy and therefore they saw no profound internal barriers for their SBM innovation. The conclusion that can be drawn from the results of the Transition Management Model is that Pro-Active Leadership, Aspiration, and External Factors are very important for the success of the business model innovation. The most profound External Success Factors were: Government cooperation, growing awareness of consumers, growing attention of retail for sustainability, and food/meat scandals. The most profound barriers for business model innovation that were stated are: Lack of government cooperation, lack of customer awareness, pressure from retail, and the physical location of the organization. The conclusion of the external factors is that evidently the Government, the Consumers and the Retail are of a significant value for the participating organizations. On the one hand they can be seen as a potential success factor, but on the other hand they can also be seen as a potential barrier because of their power or lack of awareness. Multiple firms

indicated the lack of government cooperation and participation regarding sustainability, however the exact desired role of the government requires further research.

Because all the constructs of the models are general applicable and there were no constructs specifically for the HTBFI, one could state that the model might be applicable to other sectors. However this claim may require further research since this model is only applied to the HTFBI. On the other hand, the reporting construct in the Four Phases Model might be questioned because smaller companies have difficulties to realize a sustainability report, even though they might be more sustainable than SME's with a sustainability report. Finally, the report helps us to identify the key success factors and barriers for organizations that switched to SBM's; this implies that the identification of the success factors and barriers resulted in a basic best practice with tips and tricks on where to focus when your organization want to innovate their BM into an SBM.

List of Abbreviations

BM – Business Model
BMC – Business Model Canvas
BMF – Business Model Framework
BRM – Business Reference Model
CBM – Component Business Model
CM- Change Management
CSR – Corporate Social Responsibility
EAM – Eight Archetypes Model
FPM- Four Phases Model
ISBM – Industrialization of Services Business Model
HMO – Health Maintenance Organization
HTFBI – High-Tech Food & Beverages Industry
KPI – Key Performance Indicator
KSF – Key Success Factor
MNC – Multinational Corporation
OCM – Organizational Change Management
SBM – Sustainable Business Model
SME – Small and Medium Enterprises
SRE- Social Responsible Enterprising
TBM – Transitional Business Model
TT- Transition Theory

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1. Introduction

1.1 The Subject

This research focuses on Sustainable Business Models (SBM's) in the High-Tech Food and Beverages Industry (HTFBI). More specifically, the research focuses on the transition from regular Business Models (BM's) to SBM's at Small and Medium Enterprises (SME's) and sustainable start-ups in the HTFBI. The researchers constructed a theoretical framework in order to give a basic understanding of the used theories for this research. Eventually, the used theories are merged into one conceptual model that will be used to assess the key success factors and barriers of the transition to a SBM. The research comprises of the following theories: Transition Management, Business Model Frameworks, and (Sustainable) Business Models. Figure 1 displays the Essay Map; it gives the scope and direction of this report. The Essay Map shows what specific areas are covered in this research. The first level of the Essay Map is the subject of the research. The second level of the Essay Map gives an overview of the main ideas/theories of the research. The second level also comprises of the main aspects of the theories itself. The third and final level gives the aim of the research.

The aim of this research is to define a science-based set of key success factors and barriers for the transition of BM's to SBM's for established SME's and sustainable start-ups in the HTFBI.

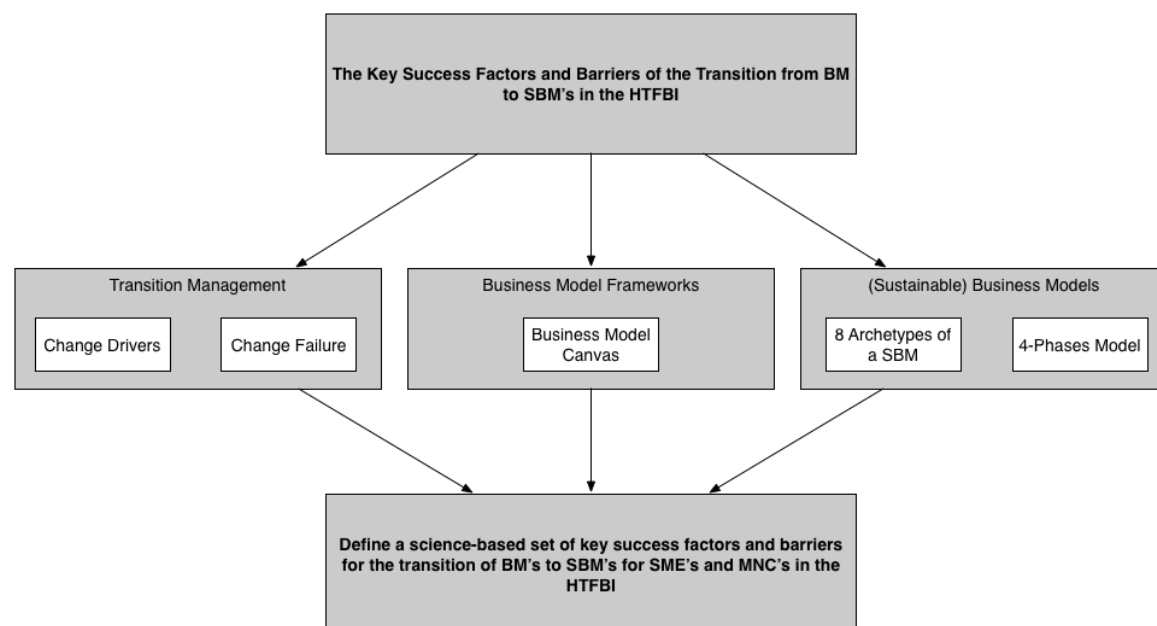


Figure 1 Essay Map

1.2 Problem Analysis

There are numerous reasons why the human race is exploiting the earth in a dreadful way. Human beings are depleting the fossil fuels at an alarming rate, they are cutting the forests swiftly, which results in deforestation, and they use too much water and energy that leads to parched lakes and energy shortages. Furthermore, the human race is exploiting low-wage countries and child labour is still condoned. These actions have led to a decrease in biodiversity and ultimately climate change. The fact that the world

population will increase to 9 billion in 2050 and the immense global growth of the middle-class results in irreversible damage to biodiversity and landscape, this results in skyrocketing food-prices, and it even leads to social disruption (Van Tilburg et al., 2012, Benn et al., 2014, Loorbach, 2010, Hockerts and Wüstenhagen, 2010, DSGC, 2012, Dirven et al., 2002, Geels, 2011).

The previously mentioned examples of social and environmental change indicate that a pro-active attitude is desired to reduce the impact of these developments. Change cannot only be implemented at individual level; it is only appropriate that companies also start to worry about these social and environmental issues. These issues can be addressed by pro-active organizations with a SBM (Van Tilburg et al., 2012). Many articles describe the importance of good business models. According to Teece, the added value of a business model is: *„The essence of a business model is in defining the manner by which the enterprise delivers value to customers, entices customers to pay for value, and converts those payments to profit”* (Teece, 2010). Companies often use the Business Model Canvas (BMC) as a Business Model Framework (BMF) of Osterwalder (Osterwalder and Pigneur, 2010, Upward, 2013). Next to the BMC of Osterwalder, there are also other BMF's such as the Business Reference Model (BRM) (Fettke and Loos, 2007), the Component Business Model (CBM) (Pohle et al., 2006), and the Industrialization of Services Business Model (ISBM) (Levitt, 1972). Some authors describe preferences to use one framework over another. Moritz Loock (2012), for example, describes the preference for investors to implement a service-driven business model for renewable energy. On the other hand there are also articles available on the innovation of BM's. These articles describe how and why BM's should be adapted to sustainability (Roos, 2014, Chesbrough, 2010, Clinton and Whisnant, 2014, Johnson, 2010, DSGC, 2012).

The increasing need for innovation and sustainability resulted in the fact that more and more companies implement sustainability in their business model. However, current BM's seem to be out-dated because they lack a sustainability and innovation variable addressed as (separate) building blocks (Lee and Casalegno, 2010). However, some firms managed to implement sustainability in their BM in another way, whereas other firms do not address sustainability at all, here lies the crux of this research. The reasons mentioned in the first paragraph that deplete our earth describe the urgency of sustainable strategies for companies, organizations and even countries. The increasing importance of sustainable strategies has led to a new era of business modelling, the rise of SBM's (Bocken et al., 2013, Benn et al., 2004, Chesbrough and Rosenbloom, 2002, Jolink and Niesten, 2013).

In studying transitions to sustainable business models, the focus in this thesis is on Small and Medium Enterprises (SME's) and sustainable start-ups in the food industry in the Netherlands. Western Europe, and therefore, the Netherlands is known for its dominant paradigm of efficiency, growth, and globalization, however, this paradigm is challenged by alternative ideas on sustainability where the results of the status quo on the political and social spectrum are questioned. In order to achieve higher performance levels, it is clear that our current systems need to go through structural change; this thesis focuses on transition management regarding the structural change in the business model paradigm. This thesis limits itself only to change drivers and change barriers regarding TM. This thesis focuses more on the aspect of sustainability within business

model innovation and the success factors and barriers of such transitions, rather than addressing TM as a whole (Loorbach, 2010, Loorbach and Rotmans, 2006, Dirven et al., 2002).

This report addresses the transition from regular BM's to SBM's, and it aims to find out why and how these transitions are managed, more specifically this paper seeks to investigate what the key success factors and barriers for such a transition are. In order to delimit this research, the focus will be in a singular industry, namely the HTFBI.

2. Research Overview

2.1 Research Objective

This report combines the latest research about Business Model Frameworks, Sustainable Innovation, Sustainable Business Models, and Transition Management. The researchers aim to determine the key success factors and barriers for the transition of BM's into SBM's. By doing so, the researchers stipulate the differences between BM's and SBM's. The approach of this report may help firms in the future to detect dissonances at an early stage in the SBM formulation. In short, the general objective of this research is **"To define a science-based set of key success factors and barriers for the transition of BM's to SBM's at established SME's and sustainable start-ups in the HTFBI"**.

Given this objective, it is important that the main factors that affect the transition to SBM's are identified. After this conceptualization, the research object has to be defined. The Research Object is according to de Vaus: *"The unit of analysis about which the author(s) collect information"* (De Vaus, 2001). Verschuren describes the Research Object as: *"the phenomenon under study about which you will be making statements based on the research to be carried out"* (Verschuren et al., 2010). This research shall address BFM's, BM's, SBM's, HTFBI, and Transition Theories as Research Objects.

2.2 Research Framework

The research framework as presented in Figure 2 consists of four phases, represented by (a), (b), (c) and (d). The objective of this research can be found on the right side of this framework.

(a) Based on scientific literature, the concepts Transition Theories, BMF's, SBM's and HTFBI will be assessed. The findings from this assessment will be combined, resulting in a theoretical framework.

(b) Established manufacturing and processing companies in the HTFBI will be selected based on the definition as described in this research project, this is also called theoretical sampling. Based on the theoretical framework as yielded in phase (a), these established firms in the HTFBI will be analysed, by conducting semi-structured interviews.

(c) The results from the interviews from the previous phase (b) will be combined and analysed in order to produce a list of aspects that affected the transformation from BM to SBM; this helps the researchers to get insight in the background, points of interest and interdependencies. In order to get a broader perspective of the transition of BM's to SBM's; the researchers shall compare the results of the interviews.

(d) The analysis of phase (c) results in an overview of points of interest for the transition of BM's to SBM's in the HTFBI.

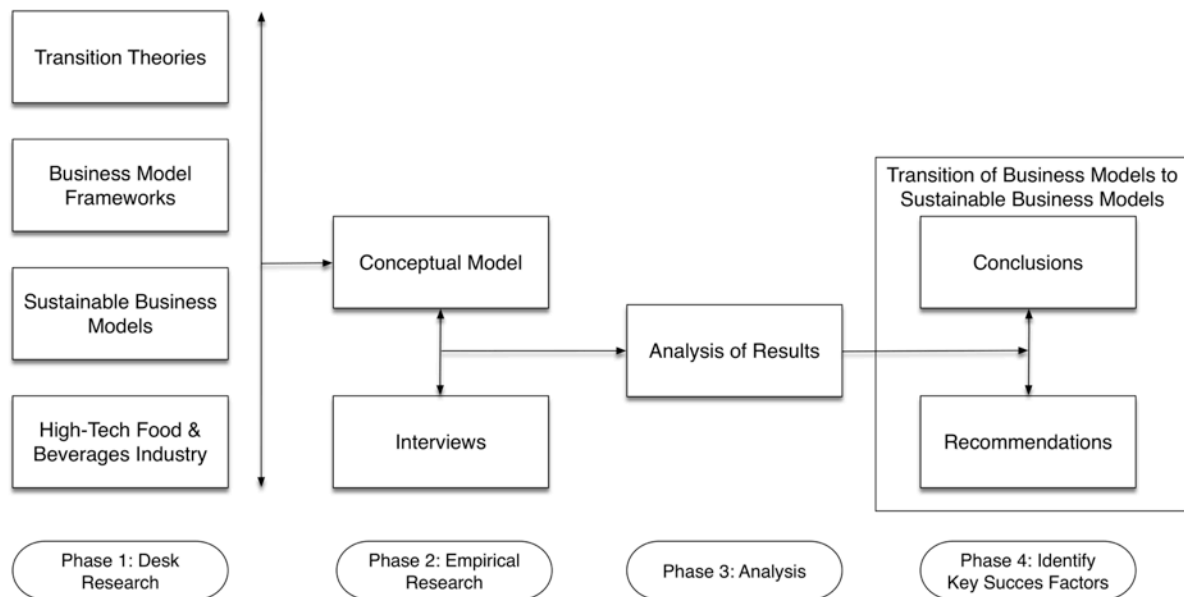


Figure 2 Research Framework

2.3 Research Questions

2.3.1 Main Research Question

The aim of this research is to identify the key success factors and barriers for the transition from BM to SBM in the HTFBI. The aim of the research resulted in the following Main Research Question (MRQ): *“What are the key success factors and barriers for a successful transition from a normal Business Model to a Sustainable Business Model in the High-Tech Food & Beverages Industry?”* By looking on how theories on the organizational level (f.e. dynamic capabilities) explain transformation, the authors address the transformation of BM's into SBM's of established firms and sustainable start-ups in the HTFBI (Schaltegger et al., 2014).

2.3.2 Sub Research Questions

When the MRQ is divided into segments, one finds that there are segments about key success factors and barriers of transitions, BM's, SBM's and HTFBI. Since not all segments need to be addressed in a SRQ, the authors choose to address some segments in the Theoretical Framework and some other segments as a SRQ. In order to answer the MRQ, the researchers developed the following SRQ's:

- What are the dynamics and characteristics of the methods involved in the (strategic) business model innovation and transformation processes?
- What are the most profound factors at the organizational level that start the transition from BM's to SBM's in the HTFBI?
- What are the most profound building blocks of the BMC that are affected by the transition from BM's to SBM's in the HTFBI?
- What are, according to the literature and the interviews, the key success factors for a successful transition?
- What are, according to the literature and the interviews, the main barriers that prevent a successful transition?
- To what extent are the criteria of SBMs applicable in practice?

3. CSR and Sustainable Strategies

3.1 Introduction

There are multiple definitions of sustainability. One of the oldest definitions originated from 1713, when Hans Carl von Carlowitz stated that sustainability is *“the long-term use of resources”*. In 1987, the Brundtland Commission of the UN stated that sustainability is to *“meet the needs of the present without compromising the ability of future generations to meet their own needs”*. Two more recent definitions come from Hasna and openSAP (a platform for online courses) respectively state: *“A continually evolving process that resolves the conflict between the competing goals of economic prosperity, environmental quality, and social equity”* and *“Balance short- and long-term profitability by holistically managing economic, social, and environmental risks and opportunities”* (Hasna, 2006, openSAP, 2014). Boons and Lüdeke-Freund stated in 2013 an important contradiction within the definition of sustainability that requires further research: *„How does the definition of sustainability, as constructed by business model stakeholders, compare to sustainability measures as employed by evaluators of sustainable innovations?”* (Boons and Lüdeke-Freund, 2013). This contradiction is based on the vagueness of the concept of sustainability and how this often is used for sustainable innovation in contrast with the attempts to define the concept of sustainability and innovation in a clear and objective way; this indicates that the way in which sustainability is organized by the actors involved in the value creation is an important topic for further research (Boons and Lüdeke-Freund, 2013).

The importance of Sustainability is mentioned before, but the connection between Sustainability and Innovation still has to be made. Albert Einstein did this many years ago in a perfect manner: *“We cannot solve problems by using the same kind of thinking we used when we created them”*. Here Einstein declares that each problem is unique and that each problem has its solution and that previous successful solutions may not work in the future. Einstein claims that one should be creative to overcome barriers and problems. Sustainability should be seen as an opportunity that should be seized with both hands. Combining this opportunity with the need to solve problems with a different way than how we created them results in the connection between Sustainability and Innovation: Sustainability inspires Innovation (openSAP, 2014).

In order to understand CSR it is important to stress the urgency of sustainable strategies. According to recent articles and literature, there is a growing awareness for sustainability and the need for businesses to manage sustainability in the society. A fitting CSR strategy may result in a breakthrough in this situation. CSR nowadays is a leading principle of entrepreneurs and managers. CSR focuses on People, Planet, and Profit and it aims to prevent the unwanted impact of our actions and it aims to contribute to daily societal challenges. CSR concentrates on developing a sustainable strategy that meets and ideally exceeds the expectations of the stakeholders (Van Tilburg et al., 2012, D’Amato et al., 2009, Garriga and Melé, 2004).

Since CSR comprises of both sustainability strategies and sustainable strategies, the researchers identified two types of CSR namely Shallow CSR and Deep CSR. Both aspects and their differences are discussed in the next sections. In the next section, the authors address the Four Phases Model (FPM). Companies that focus on Shallow CSR tend to be

in the active phase, where companies that implement Deep CSR are in the pro-active phase (Van Tilburg et al., 2012).

3.1.2 Sustainability Strategy/Shallow CSR

A Sustainability Strategy is a company's strategy where they aim to optimize environmental and social aspects in next to other, strategic business priorities, where sustainability is often in conflict with the short-term financial goals of the company (openSAP, 2014).

3.1.3 Sustainable Strategy/Deep CSR

A Sustainable Strategy is a strategy where companies aim to manage financial, environmental, and social aspects across all strategic platforms, and where sustainability is a key-driver of the long-term success of the company (openSAP, 2014).

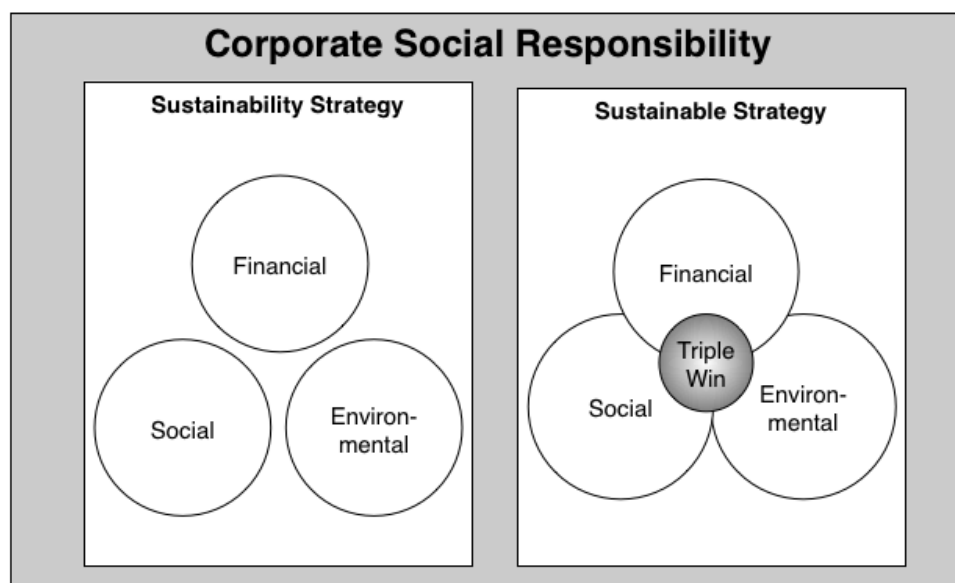


Figure 3 Sustainability Strategy versus Sustainable Strategy (openSAP, 2014)

Many companies implement a sustainability strategy where they want to optimize environmental and social aspects in parallel to other strategic business opportunities; this is often in conflict with short-term financial goals. Other companies only focus on Financial and Social goals or Financial and Environmental goals. The Financial-Social goal can be seen as a basic CSR-goal, whereas Financial-Environmental can be defined as "greenwashing". However, some companies implement a sustainable strategy where they manage Financial, Environmental and Social aspects across all strategic priorities, where sustainability is understood as a key driver of the long-term success of the business. The difference between a sustainability strategy and a sustainable strategy is displayed in Figure 3, where the Sustainability Strategy can be defined as CSR or "greenwashing" and where the Sustainable Strategy is known for its triple-win for the Financial, Social and Environmental goals (CleantechOpen, 2014).

3.2 Phases Model of Sustainable Entrepreneurship

Companies that claim to be sustainable can check if this is the case by implementing the Four Phases Model (FPM). The Phases Model of Sustainable Entrepreneurship (FPM)

helps to identify where a company stands regarding CSR and sustainability and if their sustainability beliefs are implemented in their BM (Van Tilburg et al., 2012). The model has four phases, namely the Inactive phase, the Reactive phase, the Active phase and the Pro-Active phase. It is obvious that it is desirable to be classified in the Pro-Active phase regarding sustainability, because the more pro-active you are as an organization, the more sustainability is implemented in the operations of the organization (Van Tilburg et al., 2012). There are regular BM's and SMB's; in the transition towards a SBM there are four different phases. The transition from a BM towards a SBM corresponds to the FPM; an organization begins in the inactive phase and it develops itself eventually towards the pro-active phase. This section describes the characteristics of the four phases and how it is possible to facilitate the transition to the Pro-Active phase. Their beliefs, business case, acknowledged stakeholders and codes of conduct describe each phase specifically. The overview of the Phases Model of Sustainable Entrepreneurship is given in Table 1, and the summary of the conduct per phase is given in Table 2.

Table 1 Phases Model of Sustainable Entrepreneurship (Van Tilburg et al., 2012)

Societal Responsiveness		Attitude			
		Liability		Responsibility	
	Intrinsic	Inactive		Active	Pro-Active
	Extrinsic		Reactive		
	Business Case	1: Classic	2: Defensive	3: Strategic	4: Societal

Table 2 Conduct of Phases Model of Sustainable Entrepreneurship (Van Tilburg et al., 2012)

Phase	Inactive	Reactive	Active	Pro-Active
Theme	Conduct			
Vision on Sustainability	None	General statements	Focus on societal contribution	Holistic, strategic
Orientation external developments	None	External adduced, business, location	Market and products or services	Cosmopolitan, society
Business case Elements	Costs, clients and law	Costs, clients, law and reputation	Costs, clients, law, reputation and identity	Costs, clients, law, reputation, identity, long-term continuity
Transparency	None	On request	Product and chain	Full transparency
Reporting	None, or legally obliged environmental reporting	Separate sustainability report focused on process	Sustainability reporting with focus on core-themes and products	Integrated with intertwined strategy
Stakeholders	Government, important clients	Government, clients, suppliers, some NGO's	Government, clients, suppliers, NGO's, employees	Society
Supply Chain approach	No sustainable aspects	Minor conduct codes for suppliers	Engagement and broad codes of conduct	Co-creation
Dominant Functional Discipline	Operations, legal	Public affairs	Corporate communication and HR	Management/Board and strategy

3.2.1 Inactive Phase

An organization is in the Inactive Phase when their beliefs are based on seeing sustainability as a task for the government, and where there are restrictions on entrepreneurship for sustainability. Organizations in the Inactive Phase lack a vision on sustainability, and they are compliance-oriented; they only follow regulation regarding environmental and social issues. Organizations in the Inactive Phase tend to believe in the principle of “level-playing-fields” where each player has an unequal chance of success, but where they play by the same set of rules (Roemer, 2009).

Most companies in the Inactive Phase manage their revenues by implementing classic BM's where they sell a product or service as an independent, repeatable transaction without trying to implement and integrate sustainability. The firms in the Inactive Phase only acknowledge customers, employees and owners as involved stakeholders; these are called the primary contract stakeholders. Organizations in the Inactive Phase are focused on cost efficient saving measures, tend to focus on optimisation and choose for a closed attitude as conduct towards society (Van Tilburg et al., 2012).

3.2.2 Reactive Phase

Organizations in the Reactive Phase are known for having beliefs based on moving along with the flow because they feel responsible since other organizations around them are also “reacting”; it could be said that they believe that preventing is better than curing. The social responsiveness of the company in the Reactive Phase can be described as extrinsic. Organizations in the Reactive Phase tend to have a classic BM that is based on reputation and active market demand. Reactive organizations acknowledge customers, the government and NGO's as stakeholders; they start the first stakeholder dialogue where they give answers to the questions and demand of the stakeholders (Van Tilburg et al., 2012).

Other typical codes of conduct for organizations in the Reactive Phase is that they start with reporting their CSR in their annual reports, they regulate a standardized basic CSR level within the firm, they set up Key Performance Indicators, collect information and set targets regarding sustainability, they set up management systems with ISO-certificates and they develop a supplier code of conduct to meet certain CSR requirements, an organization in the Reactive Phase is more transparent than an organization in the Inactive Phase (Van Tilburg et al., 2012).

3.2.3 Active Phase

Firms in the Active Phase are known for their belief that sustainability is a market opportunity, a driver for innovation and that sustainability contributes to society in a positive manner. Whereas the Inactive and the Reactive Phase were known for their classic BM, is the Active Phase known for developing the first characteristics of a SBM. The Active Phase organizations have a (sustainable) strategic, market-driven, reputational and active/latent market demand based business model (Van Tilburg et al., 2012).

The business model of organizations in the Active Phase is moral, ethical, strategic and society driven. Sustainability is a driver for entrepreneurs because “it is the good thing to do” and it can be told and sold with a “story”. The fact that sustainability is a grey area in this phase makes it difficult to develop a business case, especially for large, complex organizations. Firms in the Active Phase acknowledge their customers, the government,

NGO's, suppliers and clients as stakeholders (Van Tilburg et al., 2012). Firms in the active phase involve these stakeholders into the discussion of sustainability within their operations.

Their conduct is based on the focus on the societal contribution of their products and/or services. Furthermore, they focus on a cooperative supply chain, where companies implement a strategy of engagement and cooperation. Suppliers get audits, and when it comes out that there are shortcomings, the suppliers collectively look for pragmatic solutions. This phase is known for its commitment to improve the actors in the supply chain. Organizations in the Active Phase implement balanced reporting where they state their dilemmas, challenges and targets regarding sustainability, this is mostly done in the annual financial reports (Van Tilburg et al., 2012).

Firms in the Active Phase increasingly participate in initiatives to improve their products or services by implementing sustainable innovations; this makes it easier for the customer to choose for sustainability. The increasing implementation of sustainable innovations also indicates that firms should implement effective marketing of the sustainability aspects of their products and services. The final conduct characteristic of the Active Phase is that there is a stakeholder dialogue instead of the stakeholder answer situation as in the previous phases (Van Tilburg et al., 2012).

3.2.4 Pro-Active Phase

The phase where sustainability is closest connected with the business strategy is the proactive phase. Similar to the active phase, companies in the Pro-Active Phase act in from a sense of responsibility. However, at this stage, the strategy of the company is inherently intertwined with sustainability challenges. Active portfolio management focused on sustainability issues characterizes the Pro-Active Phase. An organization in the Pro-Active Phase is well aware of macro trends and megatrends that play in the global society. Unlike the Active Phase, this phase does not consider a company where only social developments affect the firm, but also developments that are not directly firm related (Van Tilburg et al., 2012). An example of this is that some organizations also create employment in developing countries and that they help local farmers with agricultural education.

The social, sustainable business model fits best for an organization in the pro-active phase. Companies make strategic and investment decisions for which no financial proof can be presented. These decisions are chosen on the basis of visionary leadership. Sometimes this manifests itself in pioneering partnerships with civil society or NGO's. The Pro-Active Phase is known for their acknowledgement of all possible stakeholders, this is also addressed in their business model in their key partners and customer segments. The dialogue with external partners is open and collaborative. Companies with problems and dilemmas earlier approach partners and vice versa. Dilemmas are shared and are based on sustainability, confidence and trust (Osterwalder and Pigneur, 2010, Van Tilburg et al., 2012).

Organizations often see themselves as a stakeholder; other organizations are contacted, and there is an active participation in stakeholder dialogues of other organizations. The stakeholder dialogue is based on equality and reciprocity (Van Tilburg et al., 2012). Other well-known codes of conduct for organizations in the Pro-Active Phase are the ability to cross-connect different sectors, the systematic approach, the visionary

approach, the industry and sector initiatives and the long-term vision development & commitment (Van Tilburg et al., 2012). A good example of this is the co-creation regarding sustainability in the supply chain, some organizations collaborate with other companies on sustainable logistics for example.

Other important aspects of this phase are, for example, the implementation of new (sustainable) business models; sustainable business models that are more focused on services, leasing and circular economics. Next to the new business models, there is a change from a business case to value creation, but the most important aspect is that the business is not sector oriented anymore, but society oriented (Van Tilburg et al., 2012, Stoughton and Ludema, 2012).

3.3 The Eight Archetypes of a Sustainable Business Model

In order to have a practical approach to SBM development, Short et al. (2012) developed eight archetypes to describe innovations for sustainability, those eight different archetypes were adapted by Bocken in 2013 (Bocken et al., 2013). This model can be used for seeking ways to transform negative into positive outcomes, to tackle the demands of stakeholders and seek new unique ways for sustainable value creation. However, this research uses this tool the other way around to identify SBM's. This research uses the Eight Archetypes Model (EAM) to address to what extent organizations operationalize their sustainability claims. The relation between the EAM and the FPM is that the EAM is used to identify how a company operationalizes their sustainability conduct. This does not mean that a company should be in the pro-active phase in order to meet one of the archetypes; the archetypes are non-phase-dependent. There are three different categories for the archetypes: technological, social and organisational (Bocken et al., 2014). The technological category comprises of the archetypes (1.) Maximise material and energy efficiency, (2.) Create value from waste, (3.) Substitute with renewables and natural processes. The social category has (4.) Deliver functionality rather than ownership, (5.) Adopt a stewardship role and (6.) Encourage sufficiency as archetypes. Finally, the organisational category consists of (7.) Repurpose for society/environment and (8.) Develop scale up solutions as archetypes (Bocken et al., 2013, Bocken et al., 2014). Because this research only focuses on participants in the pro-active phase, no further research is conducted for the interaction between the other phases and the EAM.

- (1.) **Maximising material and energy efficiency** is about laying the focus on doing more with fewer resources. By doing so, the company generates less waste, emissions and pollution. Companies in each of the four phases of the FPM can implement this archetype.
- (2.) **Creating value from waste** means that waste streams, emissions and discarded products should be processed into other products and processes and thereby making best use of under-utilised capacity. Companies in each of the four phases of the FPM can implement this archetype.
- (3.) **Substitute with renewables and natural processes** means that an organization reduces the impact on the environment and simultaneously increase business resilience by addressing resource constraints associated with fossil fuels and contemporary production systems. Companies in each of the four phases of the FPM can implement this archetype.

- (4.) By **delivering functionality**, rather than ownership a company provides services that satisfy the stakeholders' needs without having to own physical products. Companies in the active and pro-active phase of the four phases of the FPM can implement this archetype.
- (5.) When a company **adopts a stewardship role**, it proactively engages with all stakeholders to ensure a long-term relationship with a long-term health and well being. Companies in the active and pro-active phase of the four phases of the FPM can implement this archetype.
- (6.) The **encourage sufficiency** archetype encompasses solutions that actively seek to reduce consumption and production of all involved stakeholders. Companies in the active and pro-active phase of the four phases of the FPM can implement this archetype.
- (7.) **Repurpose for society/environment** means that the business is focused on delivering social and environmental benefits, instead of being focused on economic profit maximisation. Companies in the pro-active phase of the four phases of the FPM can implement this archetype.
- (8.) By **developing scale up solutions**, a company aims to deliver sustainable solutions at a larger scale to maximise the benefits for the society and the environment rather than the company itself. Companies in the pro-active phase of the four phases of the FPM can implement this archetype.

An overview of examples of the archetypes is given in Figure 4 based on (Bocken et al., 2014).

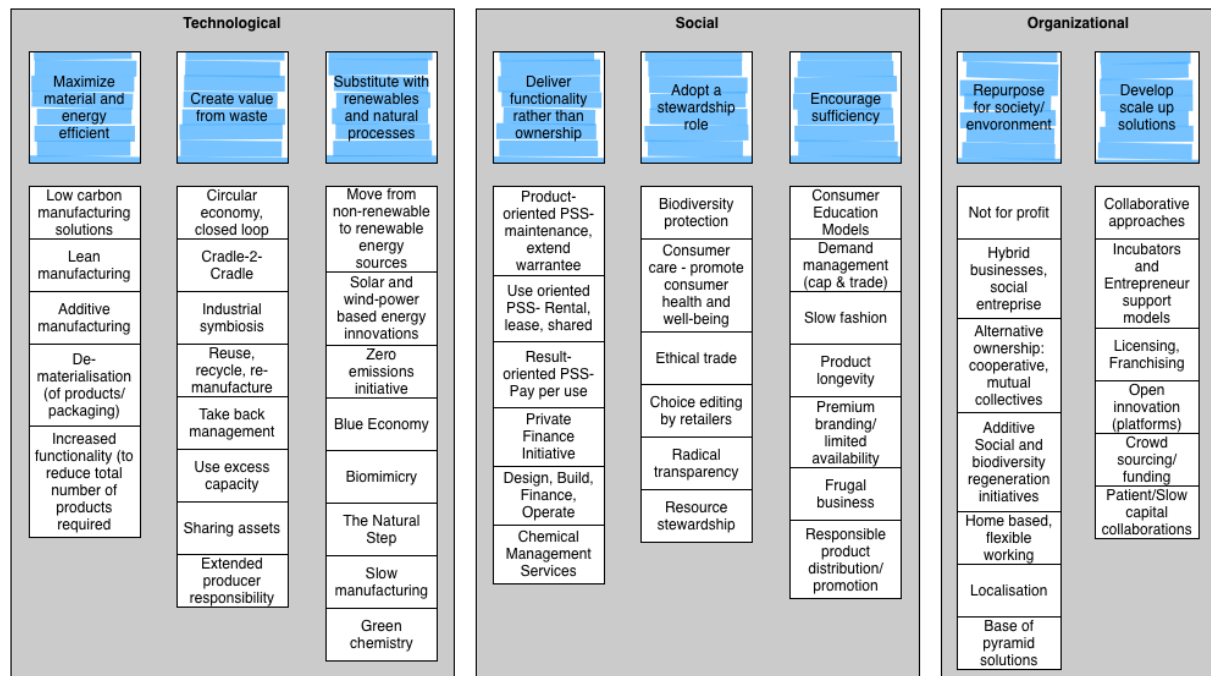


Figure 4 The Sustainable Business Model Archetypes (Bocken et al., 2014)

4. Business Models and Sustainable Business Models

4.1 Introduction on Business Models

This chapter describes the theory behind BM's and SBM's. The first section describes regular BM's and the second section describes what SBM's are and what the relation is with the previous chapter.

BM's are conceptual tools to understand how firms organize their business, and they can be used for analysis, comparison, performance assessment, management, communication and innovation (Osterwalder et al., 2005, Benijts, 2014, Magretta, 2002, Molinari, 2013). Business models can be seen as the engine of the organization; they are the underlying structure of how companies create and capture value (Clinton and Whisnant, 2014). Rasmussen states that BM's are concerned with how organizations define their competitive strategy by designing products or services they offer to the market, what they charge for it, how much it costs to produce, how it differentiates itself from their competitors by the value proposition and how they integrate their own value chain with those of similar firms in the value network (Rasmussen, 2007).

According to Teece (2010), the BM is the architecture of a business in the organizational and financial way. A BM includes assumptions about customers, their needs and the behaviour of competitors, customers, costs and revenues (Teece, 2010). Others claim that a BM is a series of elements; Osterwalder claims that the value proposition, activities, resources, partners, distribution channels, cost structure and revenue model are the key elements of success for a good BM (Osterwalder and Pigneur, 2010). Some authors claim that the key of a successful BM is the quality of management; through their capabilities and abilities to acquire one can combine and utilize valuable resources in unique ways that deliver the desired value proposition to customers (Beltramello et al., 2013).

Recently, the literature and industries paid increasing attention to BM's and BM innovation; they suggest that BM innovation is the key to a business success (Chesbrough, 2010, Schaltegger et al., 2014). The increasing global pressure on sustainability leads to the desire to increase collaboration and key stakeholder dialogues (Lowitt, 2013). In order to meet the new sustainability standards, collaboration is key; formal alliances where firms act together with external parties is a prerequisite to meet those standards (Van Tilburg et al., 2012). Regular BM's are typically concerned with product and service offering to generate economic returns. SBM's, on the other hand, are concerned with a measurable ecological and/or social value proposition in concert with added economic value (Boons et al., 2013, Bocken et al., 2014). A company can choose to innovate their business model into a SBM in order to become more sustainable. The next section addresses SBM's and their characteristics.

4.2 Sustainable Business Models

SBM's are a new paradigm within the world of business models; SBM's are the result of a very specific way of BM innovation. SBM's aim to generate profit by providing products and/or services that directly and/or indirectly reduce the pressure on the (social) environment while still generating profits equal to or greater than traditional business models that are mainly focused on sales of goods and/or services. Furthermore, in the SBM profit is not only a financial gain, but also a social gain such as increased

employment or job creation (Chun and Lee, 2013, Bohnsack et al., 2014, Enterprise and Insider, 2013).

Early definitions of a Sustainable Business Model origin from 2008, where Stubbs and Cocklin (Stubbs and Cocklin, 2008) claim that SMB's deal with the organizational foundation of models that add value to corporate sustainability. Later on, different authors modified the definition of a SMB to their area of expertise. Schaltegger et al. (Schaltegger et al., 2011) investigated the link between BM's and business cases to support sustainability management where incremental development of processes can be implemented in the current BM, whereas radical changes may require a new BM. This means that minor sustainable changes can be implemented in the regular BM whereas radical changes only can be implemented in a new SBM (Schaltegger et al., 2011).

Some authors state that a SBM must consist of a value proposition that provides ecological, social and economic value by offering products and services that are rooted in sustainability. For company infrastructure, this implies that there is a focus on sustainability in the supply chain management (f.e. sustainable logistics and co-creation); for the customer services it implies that the firm is capable of maintaining prolonged relationships with customers and stakeholders and that firms are able to take responsibility for their production and consumption systems (f.e. consumer education models, product assistance and transparency); for the finance aspect it implies that the costs and benefits should be equally distributed amongst the involved actors (f.e. ethical trade) (Boons and Lüdeke-Freund, 2013).

Bob Willard (a leading expert on the business value of corporate sustainability strategies) describes the characteristics of a SBM in his blog that is based on (Hawken et al., 2013). Willard (2014) describes "5 criteria for a Sustainable Business Model". A SBM does not have to meet all criteria, but the more criteria the SBM meets, the more sustainable it is. He describes (1.) radical resource productivity (eliminate dependencies on natural resources), (2.) investment in natural capital (restore, maintain, and expand ecosystems to meet society and business needs), (3.) ecological redesign (implement closed-loop production systems where waste is treated as a resource), (4.) service and flow economy (replace goods with services; lease products and solutions to customers and when they become obsolete, recycle or remanufacture the returned product), and (5.) responsible consumption (responsible consumption reduces the demand for products and it reduces pollution, waste and resource-use) as the five criteria to identify a SBM (Willard, 2012). In practice, with this model is easy to claim that you are sustainable as an organization. If you look at the criteria in a modest way than an organization can easily claim that they are sustainable, on the other hand, if you are very strict, than an organization can meet those criteria very difficult. For this reason, this research also uses the FPM and the EAM to indicate to what extent an organization is sustainable. These five criteria can also be combined with the EAM. Radical resource productivity, investment in natural capital, and ecological redesign can be linked to the "Technological" and "Social" archetypes. Whereas the service and flow economy can be linked to the "Organizational" archetypes. Finally, the responsible consumption criterion can be linked to all archetypes.

4.2.3 The Sustainable Business Model Characteristics Model

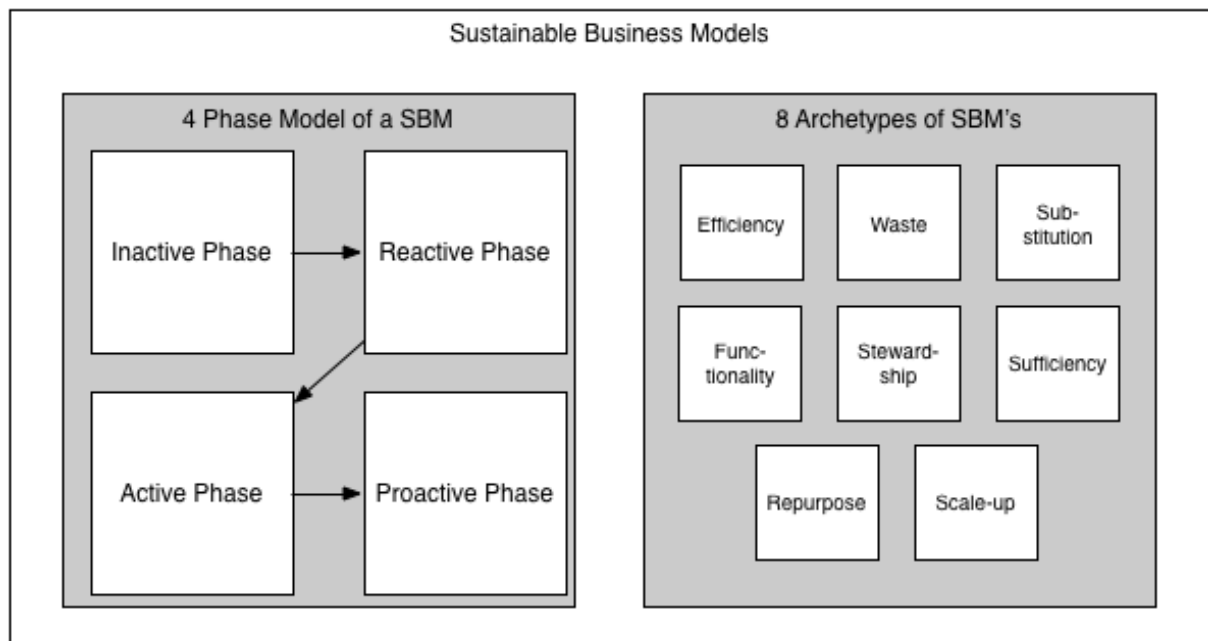


Figure 5 The Sustainable Business Model Characteristics Model based on (Van Tilburg et al., 2012) and (Bocken et al., 2014)

The theories on SBM's discussed in the previous sections have led to the development of the model displayed in Figure 5. This model is developed by the researchers to give a clear overview of the SBM theories based on (Van Tilburg et al., 2012, Bocken et al., 2014). The link between the models is that the EAM is used to check the claims of conduct of the FPM. The FPM is about claims of conduct regarding sustainability and the EAM can be used to check how this conduct is operationalized in one of the eight archetypes.

The theories on SBM's are quite clear, however, in practice it seems to be more difficult to apply the criteria of the theory. This research uses the Four Phases Model (FPM) of Van Tilburg to identify whether a company has a SBM or not.

A company that is in the Pro-Active phase requires a SBM. Once it is stated that the organization has a SBM, then the EAM is used to assess what types of sustainability is implemented in the company's operations. The researchers use the theory of the eight different archetypes to identify if the organization is really that sustainable as the results of the FPM indicate; if the FPM indicates that the organization is pro-active, then it is included as participant for the research. In the next phase the AEM is used to see which different types of sustainability are implemented in the operations. This method is slightly different from Bocken et al. (2014) because in this article the authors use the archetype model to develop a SBM, whereas this research uses the archetypes to identify whether the claims of sustainability performance are legitimate. Table 3 describes the criteria for a Pro-Active Organization, whereas Figure 4 gives an overview of the different SBM archetypes with some examples.

Concluding, the criteria that result from the combination of the previously discussed theories that the authors use for the ex ante selection of participants are: **(1) The**

company should have sustainability initiatives incorporated in their business model; (2) Company should ex ante meet all of the criteria of the pro-active phase; (3) Company should ex post meet at least one of the 8 archetypes.

Table 3 Criteria for an organization with a SBM (Van Tilburg et al., 2012)

Phase	Pro-Active
Criteria	Conduct
Vision on Sustainability	Holistic, strategic
Orientation external developments	Cosmopolitan, society
Business case Elements	Costs, clients, law, reputation, identity, long-term continuity
Transparency	Full transparency
Reporting	Integrated with intertwined strategy
Stakeholders	Society
Supply Chain approach	Co-creation
Dominant Functional Discipline	Management/Board and strategy

4.3 Business Model Frameworks

Business Model Frameworks (BMF's) help firms to develop a broad approach to define the business value streams. BMF's represent the core aspects of any firm; BMF's define how firms select their customers, how they differentiate from competitors, how they delegate processes, how they go to the market and how they capture profits. Each BMF has its own type of architecture of the business in the organizational and financial way (Teece, 2010). This report addresses the different types of BMF's and it discusses the pros and cons of each framework. Eventually, the authors describe the BMF that is best applicable to this type of research.

4.3.1 Business Reference Model (Fettke and Loos, 2007)

The Business Reference Model (BRM) is a BMF that focuses on firms with a core focus on services or government agencies. For this reason, the BRM is not used as BFM for this research. A Reference Model generally is a model that embodies basic goals or ideas at a reference for various purposes. The BRM describes the core business of the organization in an architectural way. A BRM describes an organization's business operation independent of the organizational structure; this BFM is more focused on the architecture of the organization, rather than its activities. For this reason, this BMF is left out of consideration for this research. An overview of the BRM is displayed in Figure 6 (Fettke and Loos, 2007)

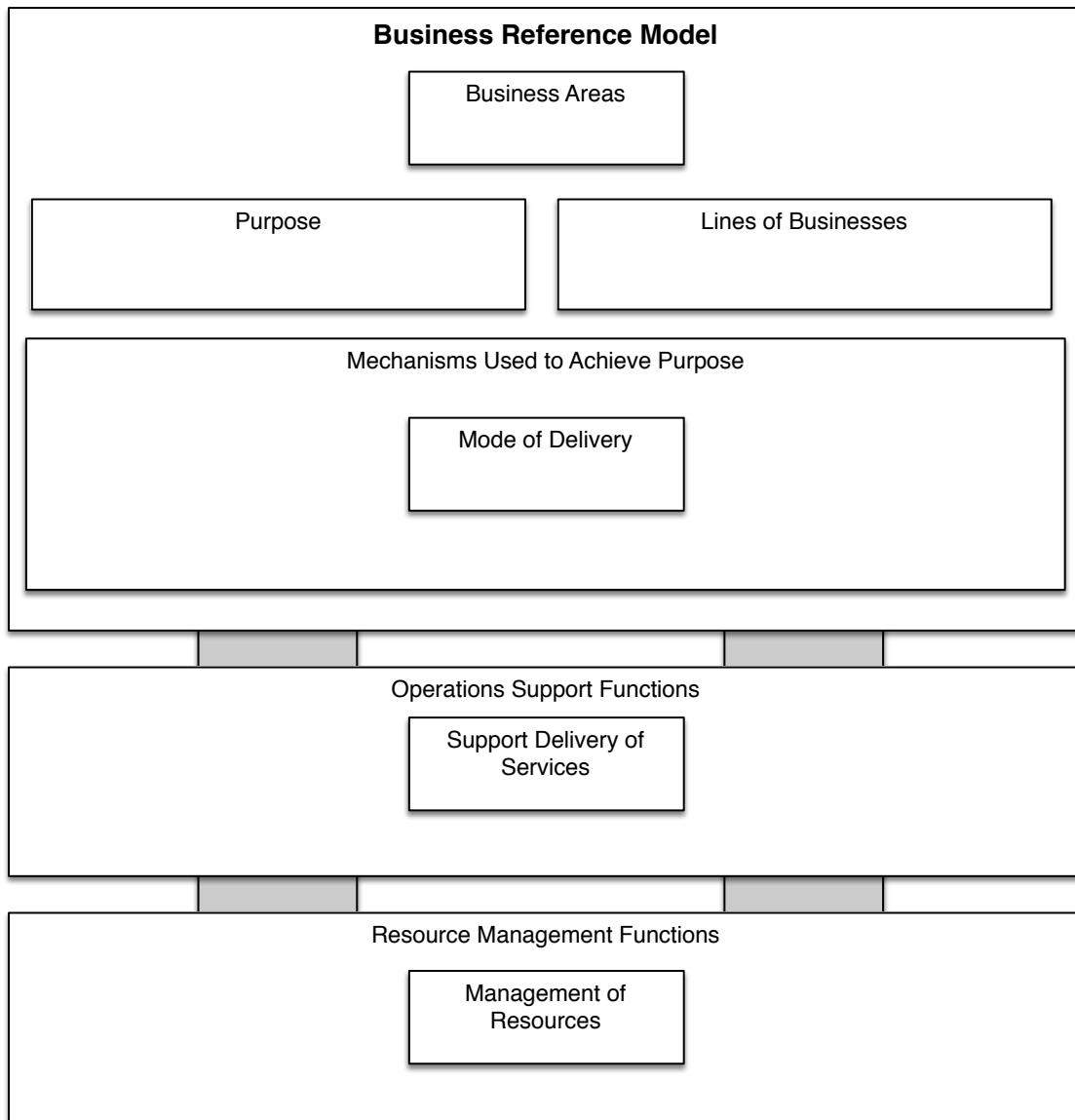


Figure 6 Business Reference Model (Fettke and Loos, 2007)

4.3.2 Component Business Model (Pohle et al., 2006)

IBM developed the Component Business Model. The aim of the model is to analyse an enterprise on a single page with a simple map of the business components. The CBM is used to analyse the strategy of a firm based on the capabilities and investments, it also shows overlapping business capabilities and it analyses options for different components. The CBM shows the business components in the columns and the operational levels in the rows, an example of the retail banking sector is given in Figure 7: Component Business Model (Pohle et al., 2006). This model is left out of consideration for this research because of its complexity, the BMC is more straightforward to use and is therefore used for this research.

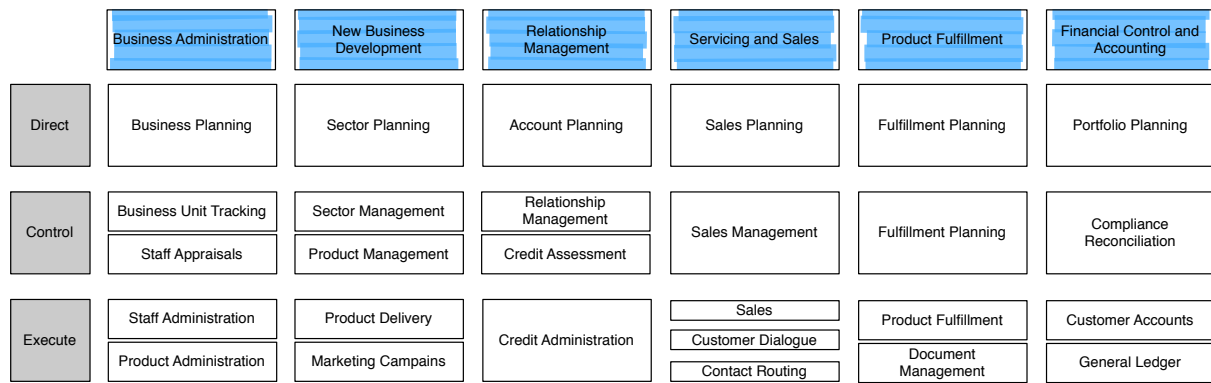


Figure 7 Component Business Model (Pohle et al., 2006)

4.3.3 Industrialization of Services Business Model (Levitt, 1972).

Theodore Levitt developed the Industrialization of Services Business Model in 1972. The model focuses on management and services marketing; it handles the service provision as an industrial process based on industrial optimization procedures. The best example of this model is the business model of McDonalds and other mass service providers where the focus was on serving as much as clients possible (Levitt, 1972). This report leaves the ISBM out of consideration since this BM has a lot of negative aspects, mainly because many aspects of the model are out-dated and do not apply to sustainability.

4.3.4 Business Model Canvas (Osterwalder and Pigneur, 2010)

The Business Model Canvas of Osterwalder and Pigneur is a well-known and frequently used BMF that is fully displayed in Figure 8: Business Model Canvas. The BMC is known for its strategic management and lean start-up template for developing a new business model (Osterwalder and Pigneur, 2010). The difference between the BMC and the BRM is that the BRM focuses on the architectural aspects of the organization whereas the BMC focuses on the description of the activities within the building blocks. The BMC is known for its building blocks that are based on the similarities of other BMF's. With this business model design template (as displayed in Figure 8), enterprises can easily develop their business model and describe their activities (Osterwalder and Pigneur, 2010). A great advantage of this BFM is that it is a very straightforward tool to describe the activities of the organization. Another advantage is that in contrast to the CBM or the ISBM, that the BCM is applicable to multiple sectors. The previously mentioned disadvantages of the other BMF's and the easy applicability of sustainability aspects on the canvas for the HTFBI resulted in the choice for the BMC for this research.

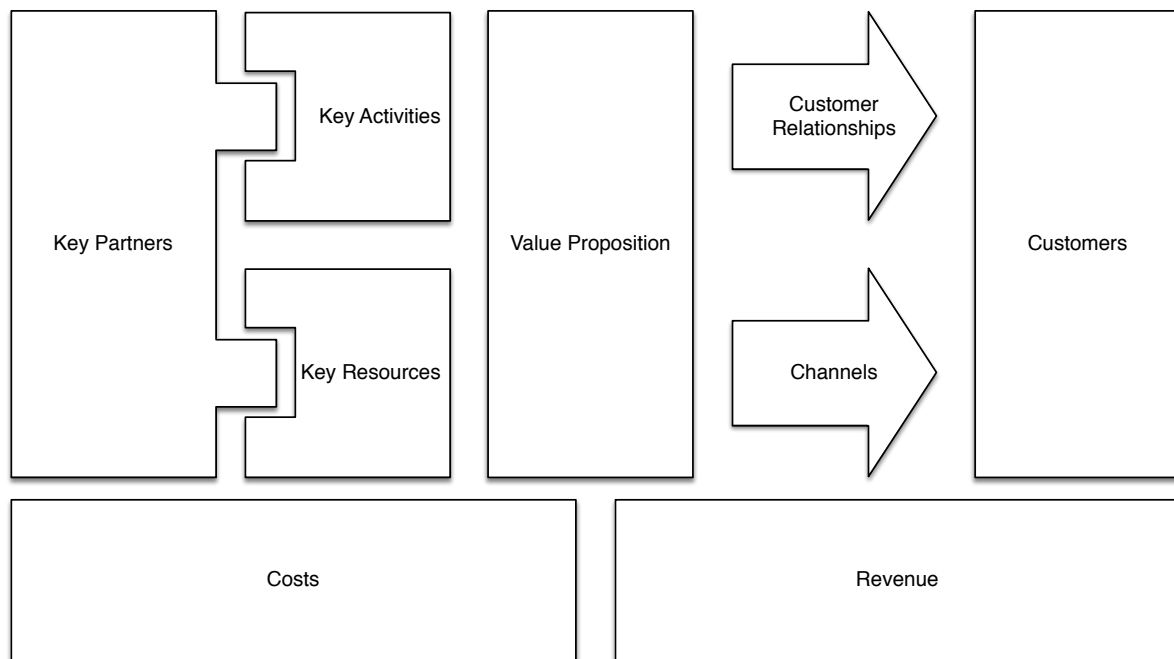


Figure 8 Business Canvas Model (Osterwalder and Pigneur, 2010)

5. Transition Theory

5.1 Introduction

This report handles different Transition Management Theories (TM). The researchers use the Transition Management Framework of Loorbach as described in the article where Loorbach describes that there is a Strategic, Tactical and Operational Transition Management Type (Loorbach, 2010). Next to the research of Loorbach, the authors also use the research of Lozano and multiple other important sources of Change Management. The theory of TM is used to address the key success factors and the barriers for change. This section briefly discusses all the aspects of TM but the research only focuses on the theoretical part of the change drivers.

Early definitions of Change Management (CM) state that it handles the *“process of continually renewing an organization’s direction, structure and capabilities to serve the ever-changing needs of external and internal customers”* (Moran and Brightman, 2001). Furthermore, CM aims to implement a shift from the current state in a organization to a more desired state, to achieve the desire to implement minor and/or radical changes (Lozano, 2009). Change often comes with opportunities, e.g. economic benefits. Economic benefits mostly are a primary justification to implement change in organizations (Cannon, 1994). On the other hand, it can be stated that, organizations that refuse to change, may suffer from economic failure. The refuse to change can be ideological, government regulatory, technological, production-related, workforce-related and competition related. CM comes with difficulties, it is fairly easy to identify change in an organisation after the occurrence, it becomes more difficult to analyse on-going change, whereas it is most difficult to predict the direction and speed of organizational change; CM therefore is complex, continuous, iterative and an uncertain process (Benne and Birnbaum, 1969, Dawson, 1994, Pettigrew and Whipp, 1991).

A brief overview of the theory of TM is displayed in Figure 9. The figure describes how organizations as social systems are organized, it describes the aspects of organizational change management, the figure describes the attitudinal changes, and finally, it describes the aspects of resistance to change. This research discusses the change typologies, the change drivers, change failure, and the ways to facilitate change.

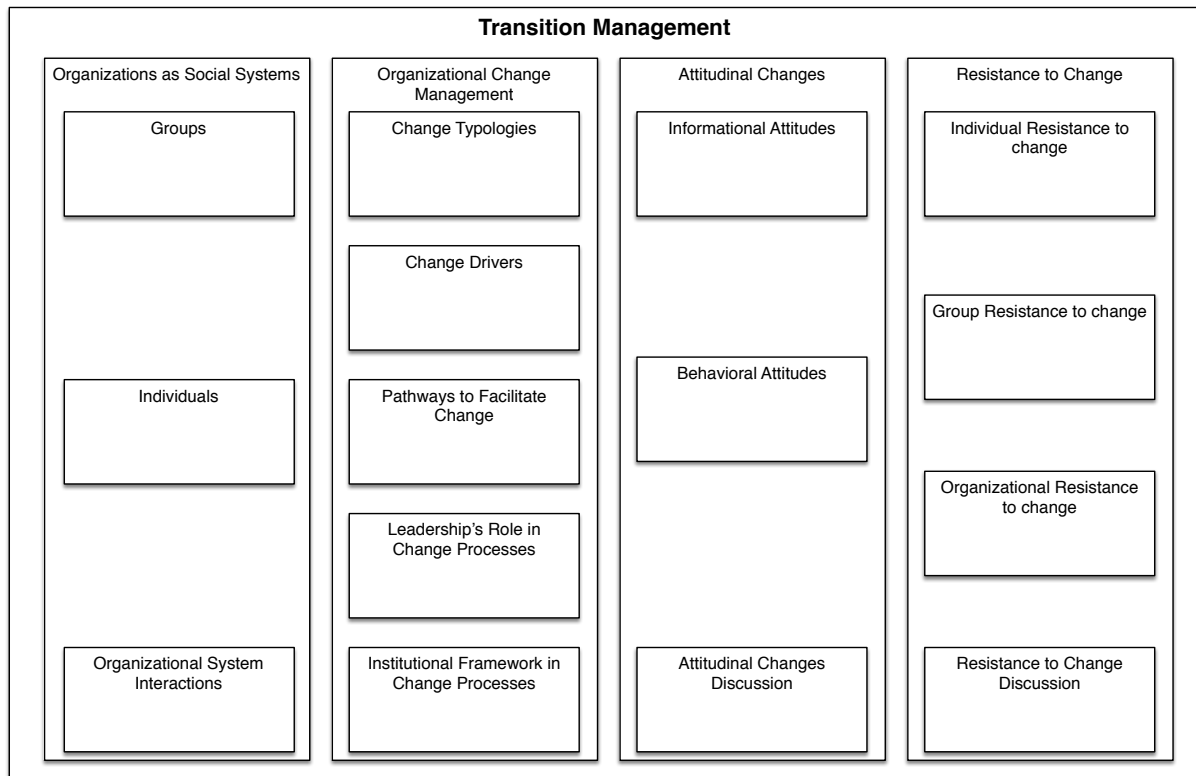


Figure 9 The Transition Management Framework based on Lozano (2009)

5.2 Change Typologies

According to Lozano (2009), the Organizational Change Management (OCM) consists of different change typologies. These different change typologies can be divided into: Rate, Stakeholder Focus, Intervention, Predictability and Organizational Focus (Lozano, 2009).

The Rate Typology can be divided into two different types: on the one hand: incremental or evolutionary change, and, on the other hand, radical change. Progressive change states that gentle, minor and leisurely improvements or adjustments take place within an organization through adaptation. Incremental or evolutionary change can lead to comprehensive and abiding shifts without much resistance; it also comes with relative stability. The second Rate typology, radical change, refers to the drastic actions that mostly come with distress and discontinuity means that the more radical the change is, the more difficult the shift will be. Sometimes, radical change with new mental models, require an increasing necessity of survival. Radical change often comes with high levels of resistance. High levels of resistance may cause an instable organization; proper management could prevent this (Lozano, 2009, Doppelt, 2009, Gill, 2002, Meyerson, 2001, McGahan, 2004, Garvin and Roberto, 2005, Stacey, 2007, Maurer, 1996).

The next change typology is **Stakeholder Focus**. Stakeholder Focus can be divided into internal change and external change. Internal change handles the constant reassessment of objectives and policies that affect (or are affected by) the primary stakeholders (f.e. the employers and the employees) of the organization. External change happens outside the organization's influence, i.e. developments that affect or are affect by the secondary stakeholders. External change can be focused on political or economic change. The internal changes typically have a higher level of control; this gives the organization the

opportunity to be pro-active, this pro-activeness is applicable to each phase of the FPM. External change, on the other hand, comes with unpredictability, which forces the company to be reactive; this reduces the window of opportunity for change towards sustainability (Lozano, 2009).

The Intervention Typology has three different varieties: non-intervention, radical intervention and planned change (Bennis, 1969). Non-intervention means that managers aim to maintain the status quo; there is little or no direction or guidance. The radical intervention emphasises on conflict and struggle; managers may restrict the responsibilities and freedom of individuals and groups (Lozano, 2009). Planned change offers guidance where there is little serendipity; it is based on evaluation, criticised values, experience, and research knowledge (Chin and Benne, 1961).

The Predictability Change Typology means that the closer the system is to its equilibrium, the easier it is to forecast the effects of change. Predictability knows three different types: closed change, where behaviour of the system is perfectly predictable; contained change, where behaviour is predicted with change and probability; and open-ended change, where behaviour is impossible to predict (Lozano, 2009, Stacey, 2007).

The final change typology is **Organizational Focus**. This typology consists of three orders, First-order, Second-order, and Third-order. The First-order change is where there is a relatively unchanged system but where there are incremental variations in procedures and processes. The Second-order change comprises changes in strategies, often due to crises or threats. The Third-order change is where there is a pro-active change in strategy. Additionally, Organizational Focus has four different types of change: operational, strategic, cultural, and political. Operational changes affect the way the organization conducts their operations. Strategic changes change the business direction. Cultural changes alternate the basic organisation philosophies and beliefs by which the business is conducted. Political change means a change in personnel due to political reasons, this indicates that organizations can make a switch in personnel or management structure because other candidates are more driven towards sustainability (Lozano, 2009, Lorenzi and Riley, 2000).

5.3 Change Drivers and Barriers

There are many different change drivers since every organization is different; the heterogeneity of organizations and the innumerable possible change drivers make it difficult to discuss all the possible drivers. All potential drivers are discussed because the drivers are categorized and therefore, smaller drivers can be categorized in the overarching drivers. This thesis addresses some general drivers for change and it tries to identify the success factors based on the change drivers; one can say that the change drivers can be addressed as potential success factors. This thesis encompasses Pro-active leadership, Economic benefits, Fear, External Factors, Diagnosis, and the Upsurge of visible crises (Lozano, 2009, Dawson, 1994, Cannon, 1994, Senge, 2000, Carr, 2001, Kotter, 1996).

5.3.1 Pro-Active Leadership vs. Non-Active Leadership

The first change driver this research addresses is Pro-active leadership. A pro-active leader understands the power of, and uses the team in solving problems. The pro-active leader is coaching oriented and requests that team members actively take part in the decision-making process. A pro-active leader is known for sharing their vision in such a

compelling way that the team wants to move towards it. Furthermore, they foresee and influence change, and they teach their teams to be self-reliant. Being able to model teamwork and concern for the greater good and giving up control in order to yield the best outcome is also an important characteristic of a pro-active leader (Lozano, 2009, Dawson, 1994). A pro-active leader is needed for a sustainable organization with a SBM because the pro-activeness of the leader ultimately flows through the entire organization and the pro-active leader can be the origin of radical change towards sustainability.

The final aspects of a pro-active leader are that he/she focuses on achieving performance outcomes and that they help their teams to learn from their errors. Regarding sustainability, there are more aspects of a Sustainable Pro-Active Leader. A sustainable pro-active leader is known for its vision on depth, length, breadth, justice, diversity, resourcefulness, and conservation (Hargreaves and Fink, 2012).

The **depth** aspect means that Sustainable Pro-active leadership matters; the focus of the leader should be on preserving, protecting, and promoting the education of the employees on what sustaining life is (Hargreaves and Fink, 2012).

The **length** aspect is known for the fact that Sustainable Pro-active leadership lasts longer than a single generation; one should focus on preserving and advancing the precious aspects of life. The longevity of leadership lies in the heart of educational change and sustainable leadership (Hargreaves and Fink, 2012).

Breadth means that Sustainable Pro-active leadership spreads; the success of sustainable leadership is in the distribution of responsibilities of its employees. This means that employees are also responsible for the sustainable aspects in the organization. (Hargreaves and Fink, 2012).

Justice states that Sustainable Pro-active leadership does no harm to and actively improves the surrounding environment; resources shall not be parched, it does not prosper at others' expense, but it actively finds ways to share knowledge, expertise and resources with the community (Hargreaves and Fink, 2012).

The aspect of **diversity** is known for the promotion of Sustainable Pro-active leadership regarding cohesive diversity. Diversity is the secret of a successful organization; alignment sustains a dependency in the hierarchy of organizations that are brittle and easy to break. Sustainable leadership, on the other hand, encourages and learns from diversity in teaching and learning and moves things towards by creating cohesion and networking among its stakeholders (Hargreaves and Fink, 2012).

Resourcefulness means that Sustainable Pro-active leadership develops and does not deplete material and human resources; a sustainable leader recognizes and rewards talent in early stages. It does not drain its employees through unnecessary innovation or unrealistic forced change; there is no waste of financial or human resources (Hargreaves and Fink, 2012).

Finally, for the **conservation** aspect it is known that Sustainable Pro-active leadership honours and learns from the best of the past to create an even better future;

organizational change is only successful if it is revisited and revived, this helps organizations to use the wisdom and expertise of the valuable memories in the history of the organization (Hargreaves and Fink, 2012).

Whereas for the potential success factor we have Pro-Active Leadership, the change barrier is **Non-Active Leadership**. Evidently a non-active leader does not meet any of the criteria of a pro-active leader. Non-active Leadership decreases the desire for change. For this research this indicates that non-active leaders may not focus on sustainability and therefore decrease the willingness to become sustainable for an organization.

5.3.2 Economic Benefits vs. Lack of Economic Benefits

A second driver for change is the potential for economic benefits. The higher the potential for economic benefits, the more important it becomes as change driver. The failure to obtain economic benefits diminishes the potential and need for change (Cannon, 1994). A high potential of economic benefits to become more sustainable evidently results in a higher willingness to implement sustainability in the organization. **The lack of potential economic benefits** is the change barrier that follows from the potential success factor of Economic Benefits. If there is a lack of potential economic benefits, then this can imply that change is not expedient.

5.3.3 Aspiration vs. Fear

Aspiration is one of the drivers for change; in management terms it means that it is the individual's (e.g. the employee) need for meeting realistic goals, receiving feedback from their supervisors, and experiencing a sense of accomplishment. The level of aspirational fostering determines an organization's learning and changing capacity. Aspiration produces continuous learning and growth. Furthermore, it promotes the vision of the organization, aspiration is about to what extent sustainability is covered in the ambitions and mission statement of the organization (Senge, 2000). The opposite of aspiration is **Fear or the lack of aspiration**. Fear produces extraordinary short-term changes, but with negative vision. Fear is the antonym of Aspiration, and it is, therefore, the opposite of the change driver Aspiration. Fear diminishes the need and desire for change (Senge, 2000).

5.3.4 External Factors

External factors can be of crucial influence in the decision-making process for implementing change in an organization. External factors, such as political and financial upheaval, new technologies, regulatory change, worldwide competition and consumer preferences can have a positive influence on the need for change (Dawson, 1994). External factors can influence if and how sustainability is implemented in an organization, for example: the lack of government assistance may decrease the willingness to implement sustainability in an organization. External factors can be of crucial influence for change. Whereas the change driver describes the positive effect of external factors, there are also **external factors** that can be described as change barriers. For example, no change in external factors may imply that it is desirable to maintain the status quo, and it, therefore, has a negative influence on the need for change (Dawson, 1994).

5.3.5 Diagnosis

The diagnosis of problems in an organization may result in a change, and it is, therefore, a change driver. When an organization diagnoses that a change is needed, then it has a positive effect on change and therefore is a change driver, however, diagnosis can also be a change barrier (Carr, 2001). A company can diagnose that the organization should become sustainable in order to decrease their operational costs for example. This means that a good internal diagnosis of the organization indicates that this increases the willingness to become more sustainable. The **diagnosis** of a specific problem can also lead to the prevention of change within an organization. A diagnosis can be a change barrier because the outcome of a diagnosis can be to maintain the status quo, which results in a negative effect on change (Carr, 2001) .

5.3.6 Upsurge of Visible Crises

The identification of a visible crisis may implicate that change is needed within the organization. The upsurge of a visible crisis attracts increasing attention of the board, and this may lead to increasing urgency for change. Therefore, the upsurge of visible crises is a positive change driver (Kotter, 1996). If the result of a market analysis is that the market will radically change towards sustainable products for example, than the upsurge indicates that the organization should become more sustainable. The downturn of visible crises, or the lack of visible crises implicates that maintaining the status quo might be more desirable than implementing change within the organization. If there is no indication of an upcoming crisis then there is no urgency to implement change. Therefore, the downturn of visible crises has a negative effect on change (Kotter, 1996).

6. Conceptual Model/Theoretical Framework

6.1 Introduction

This chapter combines the different elements from literature in a conceptual model, which is displayed in Figure 11 and Figure 12. The simplified model is displayed in Figure 10. Note that the conceptual model comprises of two parts: the eight Archetypes of SBM's fitted into the BMC and the Transitional Model where the transition from BM to SBM is modelled. The purpose of this conceptual model is to outline the significant aspects of the theory that need to be applied in the empirical study. The application of the theory into the empirical part should contribute to an answer to the main research question and the sub research questions.

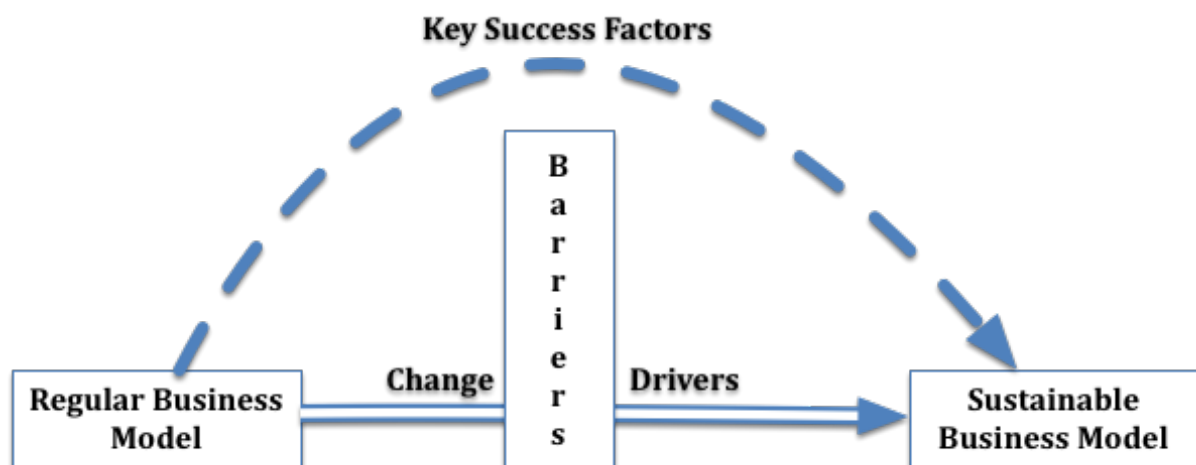
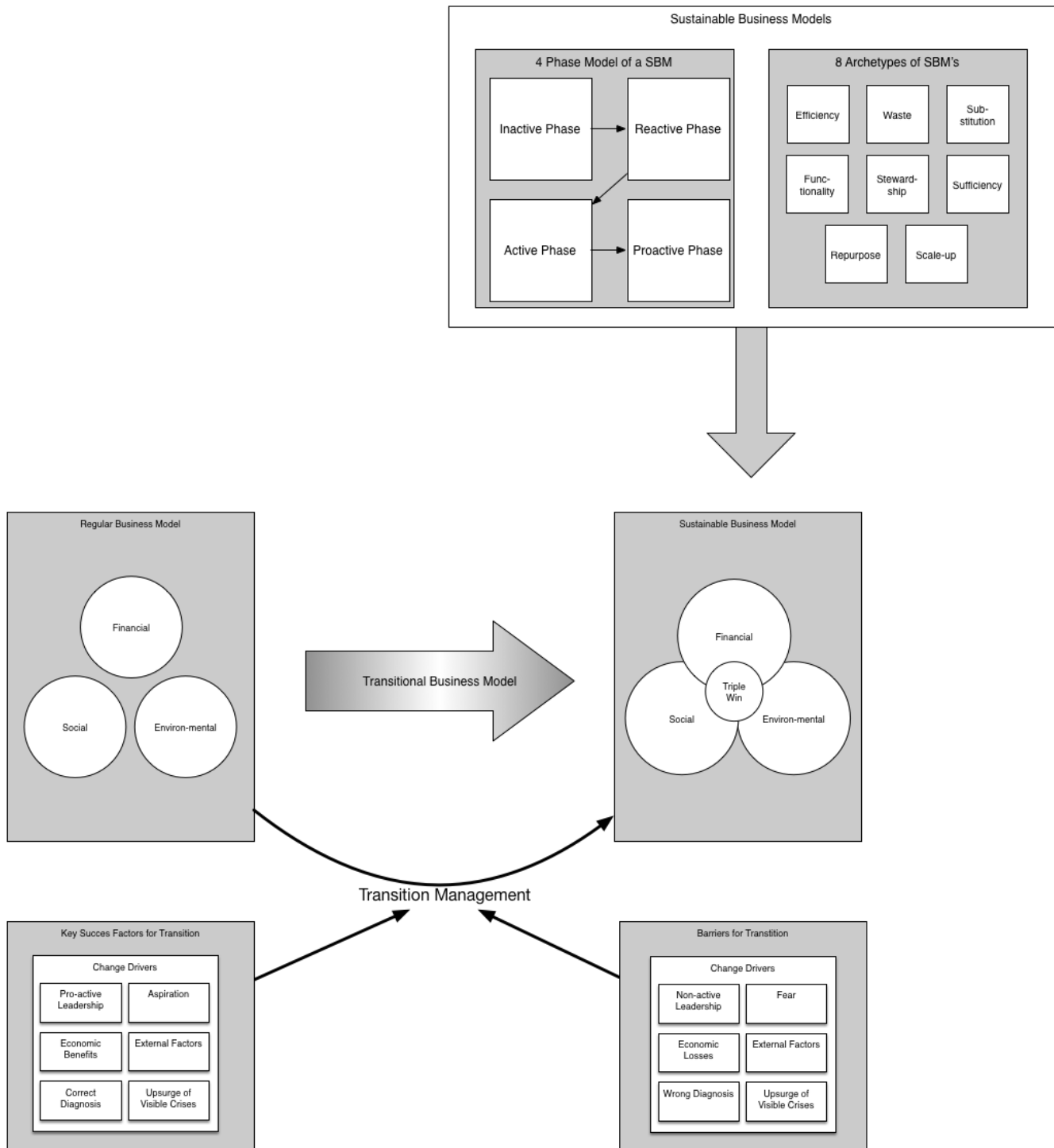


Figure 10 Simplified Model

The first part of the conceptual model is implementing the eight Archetypes of SBM's into the BMC. This implementation means that the archetypes are linked to one or more building blocks of the BMC. These links are very straightforward; e.g. creating value from waste may come with cost reductions, therefore the waste archetype is linked to the Cost building block of the BMC. The result of the other linkages is displayed in Figure 11. The figure displays how the different archetypes seem to affect the building blocks of the BMC of Osterwalder.

Figure 12 displays the second part of the conceptual model where the theories of BM's, TM and SBM's merge in one conceptual model. The model describes three phases: (1) The Regular Business Model; (2) The Transitional Business Model; and (3) The Sustainable Business Model. As stated in Chapter 5 a BM is pro-actively sustainable when it meets these three criteria: (1) The company should have sustainability initiatives incorporated in their business model; (2) Company should ex ante meet all of the criteria of the pro-active phase; (3) Company should ex post meet at least one of the 8 archetypes. If a BM does not meet all of these three criteria, it is a TBM, if a BM meets none of the criteria then it is a regular BM. Evidently an organization can choose to implement change and aim to develop a SBM. This planned change goes hand in hand with TM; it describes how change is managed, what the success factors are, and what the potential barriers for change are. For this research, the focus of TM lies on the key success factors and barriers of implementing change. The key success factors of the transition are based on the theory of TM on change drivers, in this thesis; the change drivers will be addressed as potential success factors. Furthermore, the change failure is addressed through the change barriers.

Figure 12 Conceptual Model



6.2 Model interaction

This section describes the interaction within the model as described in the previous section. This section describes the following interactions: (1) The interaction between the FPM and the EAM; (2) The interaction between Sustainability and The BMC; (3) The interaction between TM and SBM's; (4) The interaction between the success factors vs. barriers and the change drivers vs. change barriers.

The first interaction is between the FPM and the EAM. As stated in Section 5.4, the FPM is used to assess whether an organization is proactively involved in sustainability, whereas the EAMs how many and how an organization implements sustainability in their operations. The interaction between those models is to show how the pro-active attitude of the FPMs is translated into the eight different sustainability archetypes. So the interaction is that the EAM is a check on the FPM; the more archetypes you focus on, the more pro-active your organization is.

The second interaction is between Sustainability and the BMC. Sustainability encompasses the FPM and the EAM. The interaction between sustainability and the BMC is that the BMC is used to display in what segments of the business model lies a focus on sustainability. It is assumed that the higher the score for the Sustainability models are, the more segments of the BMC are focused on sustainability.

The third interaction contains the TM and the SBM's. This interaction is about how TM describes the motivation behind and the way that companies chose to implement a SBM. This interaction describes the drivers and barriers for change, specifically the change to a SBM.

The fourth and final interaction is between the success factors vs. barriers and the change drivers vs. change barriers. The change drivers and change barriers of the TM literature are translated into key success factors and key barriers for transition. This has both internal as external validity because the theory addresses the internal organization very specific and also addresses the external factors extensively.

7. Research Methodology

7.1 Research Methods

This chapter describes the methodology the authors used to achieve his research objective. This section gives a brief overview of this chapter. In Section 7.1, the research methods are discussed. Section 7.2 describes the cases for the interviews. Section 7.3 describes how the interviews are conducted. Section 7.4 discusses the method of analysis. Moreover, finally, Section 7.5 discusses the validity and reliability of this research.

7.1.1: Types of Research Strategies

Figure 13 displays the Research Strategies in the Research Framework. The researchers will conduct desk research and retrospective Case Studies as strategies to achieve the research objective. The definition of and motivation for both strategies shall be described in respectively Section 7.1.2 and Section 7.1.3.

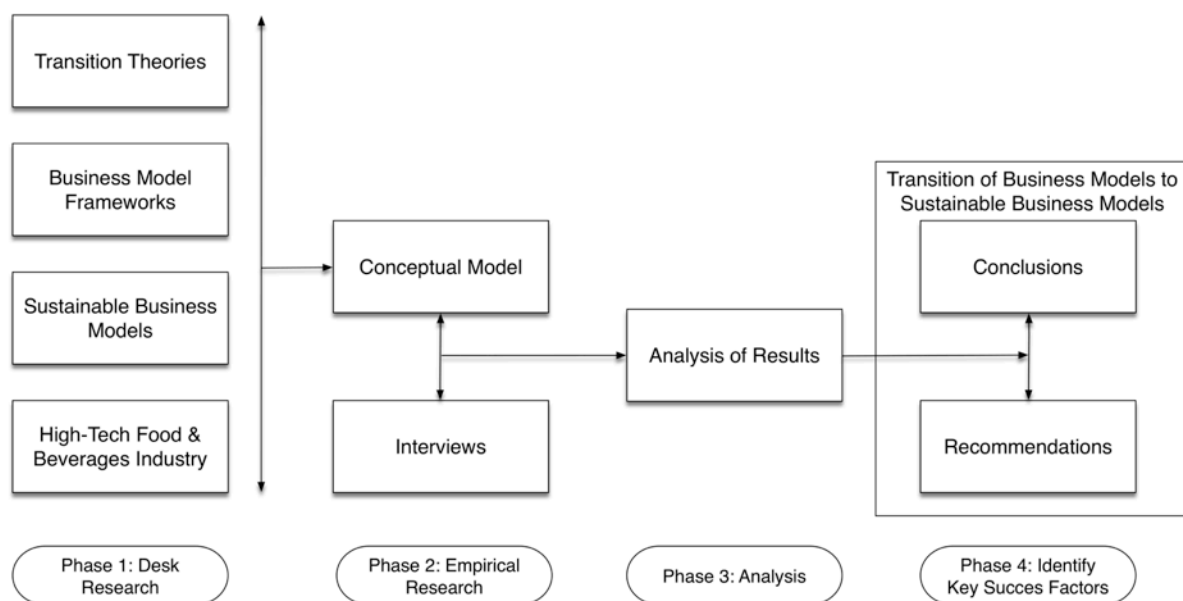


Figure 13 Research Strategies in the Research Framework

7.1.2: Desk Research

According to Verschuren, Doorewaard, and Mellion, the research strategy “Desk Research” is known for: *“its use of existing material in combination with reflection; the absence of direct contact with the research object”; and that the material is used from a different perspective than at the time of its production* (Verschuren et al., 2010). This research exists of a literature survey regarding the object of this research. The literature survey is used to map out the latest theories of Sustainable Business Models. In order to achieve the research objective, the authors chose to compare the perceptions on the subjects: BMF’s, (S)BM’s, HTFBI, and Transition Management in a qualitative literature study, and thereby build a conceptual model to display the transition from BM’s to SBM’s.

7.1.3: Interviews

The Interview Strategy is known for its small number of research units; the semi-structured conversations; the in-depth approach; the assertion concerning the object as a whole; an open observation on site; and the qualitative data and research methods (Verschuren et al., 2010). This research conducts comparative semi-structured interviews at fifteen established companies in the HTFBI. In the first stage, the fifteen companies are studied independently from each other. In this independent stage, the authors identify whether the organization has a SBM on the basis of the described criteria. If the organization meets the SBM criteria, then the authors shall conduct a semi-structured interview on-site with an employee of the organization to identify the key-success factors and barriers for that specific organization, this accounts for each organization. When all the interviews are conducted, the authors shall analyse the results. After analysing the cases and describing the results, the researchers aim to establish a pattern between the transitions of BM to SBM. Then in the next stage, the results of the first stage are used as input for a comparative analysis of the coherent body of all studied cases. In the final stage, the researchers aim to find explanation for the similarities and differences between the companies and their transitions from BM to SBM. This strategy is called the Comparative Case Study (Verschuren et al., 2010).

This research conducts an empirical enquiry of established manufacturing and processing companies in the HTFBI to investigate their transition of BM's to SBM's, the presence of Sustainability and Innovation in their Business Model, and includes quantitative evidence, relies on multiple sources of evidence, and benefits from the prior development of theoretical propositions/conceptual model. The interviews are set up in such a way that this model is properly tested and in such a way that all the RQ's can be answered.

7.1.4: Analysis

The third stage consists of the analysis of the Conceptual Model and the Case Studies. In this phase, the researchers compare the outcomes of the Conceptual Model and the Case Studies. This phase is known for the first confrontation of the Theoretical and the Empirical aspect of this research.

7.1.5: Identification of Key Success Factors and Barriers

After the Analysis phase, it is time to address the aim of the research and to identify the key success factors and barriers of the transition from BM to SBM. All the outcomes of the previous phases shall be compiled to one section where the researchers succeed in their aim to **“to define a science-based set of key success factors and barriers for the transition of BM's to SBM's at established SME's and sustainable start-ups in the HTFBI”**.

7.2 Industry Selection: The High-Tech Food & Beverages Industry

The High-Tech Food & Beverage Industry consists of the best practicing companies in the Food & Beverage sector. It is a global collective of diverse world-leading companies that supply a significant amount of the food and beverages consumed by most of the world population. The Dutch Food & Beverage sector was the largest industrial sector in the Netherlands in 2011 with a total value of €304,3 billion (FNLI, 2012).

This research focuses on the HTFBI and SBM's because since 2008 there is a big transition and a growing awareness towards sustainability in the food industry.

However, the transition from BM's to SBM's in the HTFBI is not yet addressed specifically in the literature, therefore, the authors saw an opportunity to conduct research in this specific matter.

The growing awareness towards sustainability resulted in a large amount of sustainable start-ups in the HTFBI. Sustainable start-ups are interesting to include in the research because sustainable start-ups have the tendency to have sustainable aspects throughout their entire organization, one can say that sustainability is part of the company's genetics. Furthermore, it is riveting to identify the differences regarding sustainability between start-ups and SME's since start-ups mostly start with a SBM whereas the SME's mostly encounter the transition towards a SBM.

This research focuses on the Dutch HTFBI because The Netherlands can be seen as a pioneer in the sustainable food and beverages industry. The focus is also on the food and beverages industry because the growing numbers of obese children is the result of the low prices for junk food and the high prices of healthy food; this indicates that the food and beverages industry is desperate for sustainable innovation.

7.3 Company Cases

This section describes the companies where the researchers aim to conduct his case studies. The section describes how these companies meet the requirements of SBM's. The companies are chosen through theoretical sampling; the companies meet the criteria of a SBM ex ante.

Table 4 Cases overview

Company	Company size/type	Supply Chain Phase	Sustainability Phase
Company 1	Start-up	Operator	Pro-active ex. reporting
Company 2	SME	Producer	Pro-active ex. reporting
Company 3	SME	Operator	Pro-active
Company 4	Start-up	Distributor	Pro-active ex. reporting
Company 5	SME	Producer	Pro-active ex. reporting
Company 6	Start-up	Producer	Pro-active ex. reporting
Company 7	Start-up	Distributor	Pro-active ex. reporting
Company 8	SME	Producer	Pro-active ex. reporting
Company 9	Start-up	Producer	Pro-active ex. reporting
Company 10	Start-up	Distributor	Pro-active ex. reporting
Company 11	Start-up	Operator	Pro-active ex. reporting
Company 12	SME	Producer	Pro-active
Company 13	Start-up	Producer	Pro-active ex. reporting
Company 14	SME	Producer/Distributor	Pro-active

Table 5 Ex ante analysis of participants

Theme	Vision on Sustainability	Orientation external developments	Business case Elements	Transparency	Reporting	Stakeholders	Supply Chain approach	Dominant Functional Discipline	Score	Company Type
Company 1	✓	✓	✓	✓	X	✓	✓	✓	7/8	Start-up
Company 2	✓	✓	✓	✓	X	✓	✓	✓	7/8	SME
Company 3	✓	✓	✓	✓	✓	✓	✓	✓	8/8	SME
Company 4	✓	✓	✓	✓	X	✓	✓	✓	7/8	Start-up
Company 5	✓	✓	✓	✓	X	✓	✓	✓	7/8	Start-up
Company 6	✓	✓	✓	✓	X	✓	✓	✓	7/8	SME
Company 7	✓	✓	✓	✓	X	✓	✓	✓	7/8	Start-up
Company 8	✓	✓	✓	✓	X	✓	✓	✓	7/8	Start-up
Company 9	✓	✓	✓	✓	X	✓	✓	✓	7/8	SME
Company 10	✓	✓	✓	✓	X	✓	✓	✓	7/8	Start-up
Company 11	✓	✓	✓	✓	X	✓	✓	✓	7/8	Start-up
Company 12	✓	✓	✓	✓	X	✓	✓	✓	7/8	Start-up
Company 13	✓	✓	✓	✓	✓	✓	✓	✓	8/8	SME
Company 14	✓	✓	✓	✓	X	✓	✓	✓	8/8	SME

7.3.1 Company 1

Company 1 is a start-up that is a home-delivery of (sustainable) groceries. They put together boxes of varied fresh fruit, vegetables, bread, eggs, juice meat and fish. Company 1 fills their boxes with homegrown organic products for a very competitive price. With the Company 1 come matching and easy recipes so that the consumer easily can prepare a healthy meal. The subscription is flexible in use and the regional Company 1 entrepreneurs provide a very personal service. The farmers of Company 1 receive a fair price for their organic products, in this way the consumer contributes to the development of the agriculture in the Netherlands.

Since June 27 2014, Company 1 is officially B-Corp certified. A B-Corp certification means that the organization is amongst the international movement for sustainable businesses that show that making a profit and making a positive contribution to society go well together. Next to Company 1, Tony Chocolonely's, Double Dividend and Dobber belong to the first Dutch B-Corps. Company 1 focuses on a fair and transparent supply chain. By only selling products from the Netherlands, Company 1 also reduce the CO2 emissions of their food, they contribute to biodiversity and they support their own food system and supply chain.

The ex ante analysis of the researchers resulted in a seven out of eight score for the FPM. The only aspect that Company 1 lacked was having a sustainability report. However,

since they are fully transparent and since they have a sustainable B-Corp certification, one can say that they meet the requirements of having a SBM.

7.3.2 Company 2

Company 2 is a SME that produces the product Company 2, a well-known meat and fish substitute that is founded in 2010. Company 2 is the first producer of meat substitutes with imitation fibres of meat fibres in real meat.

In 2006, three entrepreneurs discovered a process of 'texturing' vegetable proteins. The essence: vegetable flour and water mixing, kneading, cooking and pressing. No chemicals or additives. Their greatest ambition: to stimulate the consumption of sustainable protein products. They are rewarded with the title of Most Innovative SME Netherlands because of this innovation. Anno 2014 Company 2 has become a widely respected producer with employees and customers around the world.

The ex ante analysis of the researchers resulted in a seven out of eight score for the FPM. The only aspect that Company 2 lacked was having a sustainability report.

7.3.3 Company 3

Company 3 is a SME that started with some sustainability aspects during their start-up phase, but they became more and more sustainable since 2008. Company 3 is a reliable biological brand with a wide range of tasty products of natural origin. According to Company 3 sustainability is about being cared for and treated with respect for people, animals and the environment. Company 3 is founded in order to sustain a fair balance between farmers and nature. By working with only the best suppliers, from farmer to manufacturer, the products of Company 3 are fresh, good quality and naturally healthy.

In the production and cultivation of Company 3 products, multiple sustainable parties are involved. Farmers, gardeners and growers follow strict legal rules so that the origin of all products is 100% organic. Company 3 only chooses the best biological and organic products in order to promote their sustainability.

The ex ante analysis of the researchers resulted in a eight out of eight score for the FPM, therefore, Company 3 has a SBM and is therefore included as a case.

7.3.4 Company 4

Company 4 is a start-up that is founded in 2013. Company 4 is a sustainable fish wholesaler that combines the two passions of the founders: tasteful food and creating awareness about sustainable caught fish. The founders of Company 4 believe that the best fish comes from fishermen that handle the oceans with great care and passion and in a sustainable way. Company 4 wants a transparent chain so that consumers can learn more about fish, their origin and eventually get to know the fisheries in a personal way. Company 4 aims to connect the origin of the supply chain with the final stage of the supply chain and they aim to operate in a sustainable way.

The ex ante analysis of the researchers resulted in a seven out of eight score for the FPM. The only aspect that Company 4 lacked was having a sustainability report.

7.3.5 Company 5

Company 5 is a SME that specializes in the production of freshly squeezed fruit juices, smoothies, fruit nectars and vegetable juices. Company 5 supplies to the retail, catering, service and food-processing industries. With the innovative and unique HPP technology, Company 5 guarantees a long-lasting shelf life of their products.

Company 5 aims to provide their clients with high quality, healthy convenience products and they use innovative productions techniques in doing so. Company 5 continuously operates in such a way so that there is a healthy balance between People, Planet and Profit. Innovation, Quality, and Sustainability are important pillars for the organization.

The ex ante analysis of the researchers resulted in an eight out of eight score for the FPM.

7.3.6 Company 6

Company 6 is a sustainable start-up that breeds oyster mushrooms and shiitake on the waste streams of coffee and carton. The output of others is the input of Company 6. Company 6 aims to work locally, traditional and without chemical resources. Company 6 strives to operate completely self-sufficient.

The ex ante analysis of the researchers resulted in a seven out of eight score for the FPM. The only aspect that Company 6 lacked was having a sustainability report.

7.3.7 Company 7

Company 7 is a sustainable start-up that aims to develop a platform where farmers, sustainability entrepreneurs and consumers can meet to do business. Since the platform requires a high level of capital for the investment, Company 7 started with delivering food-boxes locally in Groningen. The supermarket shelves are filled with artificial processed foods full of refined fats, crystallized sugars, artificial flavours and preservatives, Company 7 thinks that this should change. The vegetables of Company 7 look different. Their organic vegetables come directly from the farmer. The vegetables get the time to grow, mature and come to taste; no flavours, colours or other additives are added.

The ex ante analysis of the researchers resulted in a seven out of eight score for the FPM. The only aspect that Company 7 lacked was having a sustainability report.

7.3.8 Company 8

Company 8 is an SME that produces ready-to-eat-meals. The basic ingredients of the dishes are sourced as locally as possible. In this way, Company 8 guarantees a high quality, minimal impact on the environment and fair support to local entrepreneurs. In other words, Company 8 looks for suppliers as close as possible to bring down their food miles. The dishes do not contain additional preservatives and artificial additives for flavour, colour, and taste. Company 8 also focuses on other sustainability aspects; they were nominated for a regional sustainable entrepreneurship award. Company 8's ambition is to get food out of the anonymity by making their entire supply chain and operations transparent.

The ex ante analysis of the researchers resulted in a seven out of eight score for the FPM. The only aspect that Company 8 lacked was having a sustainability report.

7.3.9 Company 9

Company 9 is a sustainable start-up that produces healthy and natural food products that are affordable and attainable for everyone. The products of Company 9 are additive-free, do not have unwanted E-numbers or other flavour preservatives. Company 9 works with honest ingredients and preferably together with small organic farms or businesses. The products are packed in “social” packaging warehouses, just to provide socially disrupted people with meaningful daily work. In order to invest in people and nature, the Company 9 Foundation was established. Through this foundation, the entire net profits of Company 9 benefit people who need it in the Netherlands. Throughout the country, Company 9 supports care farms that are sustainable and organic.

The ex ante analysis of the researchers resulted in a seven out of eight score for the FPM. The only aspect that Company 9 lacked was having a sustainability report.

7.3.10 Company 10

Company 10 is a sustainable start-up that, among other sustainable activities, delivers sustainable lunchboxes to offices. Company 10 believes in a new food chain; A chain that is transparent, without middlemen, directly from the farmer, accessible, with fair profit margins for producers and sustainable products at a competitive, affordable price. Through Company 10 consumers now get easy access to many different, local, healthy and sustainable products by ordering together.

The ex ante analysis of the researchers resulted in a seven out of eight score for the FPM. The only aspect that Company 10 lacked was having a sustainability report.

7.3.11 Company 11

This company is a sustainable start-up that provides services to help catering companies to become more sustainable. They can be seen as sustainability consultants for the catering companies and restaurants that want to implement sustainability in their operations. Company 11 helps caterers and food businesses to achieve a lower footprint and healthier employees through sustainable canteens and company restaurants. They make the benefits of change visible; they give advice on the product range, suppliers and communications. Company 11 develop tools and concepts for engaging internal and external communication and education regarding sustainability.

The ex ante analysis of the researchers resulted in a seven out of eight score for the FPM. The only aspect that Company 11 lacked was having a sustainability report.

7.3.12 Company 12

Company 12 is an SME that produces bakery ingredients that operates in multiple countries; they are a supplier of an extensive assortment of bread improvement agents, bread and pastry mixes and release agents. Company 12 supplies these products to traditional and industrial bakeries. Company 12 is known for its innovativeness. Company 12 focuses on sustainability and SRE. They do this on three pillars: People, Planet and Profit. There is a SRE working group, which started in 2011, they focus on the sustainability aspects amongst all the departments of the organization.

The ex ante analysis of the researchers resulted in a eight out of eight score for the FPM, therefore, Company 12 has a SBM and is therefore included as a case.

7.3.13 Company 13

Company 13 is a farm with water buffaloes. In 2010, the farm started with the purchase of nine female water buffalo calves. In August 2012 the first calves were born and started the production of organic buffalo milk. The herd currently consists of 25 water buffalos and they run throughout the year outside in a number of fields in Son en Breugel, near Eindhoven. Company 13 produces buffalo milk, buffalo ice and buffalo meat. The buffalo milk and buffalo meat is officially certified organic. The founder of The Company 13 also started a transparency platform “Keurigmerk” where he aims to share as much as interesting information as possible. Other farmers can use this transparency platform for free.

The ex ante analysis of the researchers resulted in a seven out of eight score for the FPM. The only aspect that Company 13 lacked was having a sustainability report.

7.3.14 Company 14

Company 14 is a SBM in the healthcare sector that delivers meals to different care institutions. Company 14 has emerged from two independent HMO kitchens. The value and importance of a tasty and varied meal every day is the key pillar of Company 14. Company 14 specializes in innovative concepts for meal preparation: fresh every day, all the way to the customer's wishes and "with the taste of home". Also thanks to the advanced automation and Internet ordering the meals are always tailored to the clients needs, this means that it comes in small or large quantities and in exactly the portioning desired by the customer.

Because there is a crisis in the healthcare sector, Company 14 recently developed a new product and business model: “Menu Natuurlijk”. This menu is all about local sourcing and sustainable production and distribution. Furthermore, Company 14 also focuses on sustainability in their existing operations.

The ex ante analysis of the researchers resulted in a eight out of eight score for the FPM, therefore, Company 14 has a SBM and is therefore included as a case.

7.4 Interviews

As stated in Section 7.1.3, the authors conducted fifteen interviews at different companies with a sustainable business model. One company was excluded from the analysis since it was not comparable with the other cases. This company was excluded because this was the only participating MNC. The authors chose to exclude this case since the other participants were SME's (n=6) and sustainable start-ups (n=8). The authors made the company selection based on several criteria, which were described in Section 6.1 and Section 7.2. Eventually the authors managed to conduct interviews at eight different start-ups and six different SME's.

The interviews were semi-structured and contained questions for each model as described in the literature section. The authors based the questions on the variables and constructs of the different models, as can be seen in the Operationalization Matrix in Appendix A. The Operationalization Matrix shows the models that are used for this research; it shows the constructs and the origin in the literature. The interviews lasted between the 45 minutes and one hour and 45 minutes. Some interviews were face to face, others were conducted by telephone, all the interviews were transcribed in Dutch,

the summarized quotes of the transcripts can be found in the Appendices, the full transcripts are digitally available via the authors.

7.5 Method of Analysis

The transcription phase is followed by the phase of analysis. This section describes how the authors analysed the results and which methods were applied. After the transcriptions, the constructs need to be coded. All the quotes from the interviews about the constructs were coded in the transcriptions. Subsequently, the coded quotes were linked to the constructs in the Operationalization Matrix. The companies and the constructs were numbered so that the authors had a clear overview of the quotes for each construct per participating company.

Coding per company and construct = X_i

Where X = *Company* #

And i = *Construct* #

The next phase of analysis was the assessment of the FPM and the EAM. In this phase, the authors scored the companies on a score from 0-8 for both models. In both models, it is important to meet as many of the criteria as possible.

After the sustainability assessment, the authors addressed the BMC to see what segments of the BMC were focused on sustainability for each participating organization. In this case, it is not necessary important to score on all segments, in this phase it is more interesting to see why the companies chose to implement sustainability in specific segments. The same accounts for the TM assessment. For the TM assessment, it is important to see what the key success factors and the barriers for the transition are per company. Again, in this case it is not important what the score is, but the personal remark on each specific construct is important.

The final phase of analysis is about the observation of the results of the previous phases. In this phase, it is important to observe the results per case and variable/construct. Eventually, it is important to see if there are any differences between the companies and if there are differences between the start-ups and the SMEs.

7.6 Validity

External validity of interviews results while applying to a broader context or similar cases may be questioned due to a limited number of research objects (Verschuren et al., 2010). For this research it is important to account for internal and external validity. In this project, the interview results are for this reason compared within and across the selected cases for internal validity. The cases are not assessed from a broader perspective by deploying an outsider for external validity; therefore, this research may lack external validity.

8. Results

This chapter describes the results of the interviews for each participating company and evidently for each model with its constructs. This chapter briefly discusses the results; a full overview of the results is displayed in the Appendices. Each participating company and model has its own operationalization matrix. The table of contents shows where to find each company or model in the Appendices. Table 6 gives an overview of the overall results of each company and each construct. A green square indicates that the company scored positive on this construct, a grey square that the company has no focus on the construct or that it is not affected by the construct, and a red square indicates that the company is negatively affected by the construct. All the results will be described per company in individual sections.

Table 6 Overview of overall results

Theme	Model	Constructs	Comp. 1	Comp. 2	Comp. 3	Comp. 4	Comp. 5	Comp. 6	Comp. 7	Comp. 8	Comp. 9	Comp. 10	Comp. 11	Comp. 12	Comp. 13	Comp. 14
Sustainable Business Models	4-Phases Model	Vision on sustainability														
		Orientation external developments														
		Business case elements														
		Transparency														
		Reporting														
		Stakeholders														
		Supply chain approach														
		Dominant functional discipline														
	8-Archetypes Model	Efficiency														
		Waste														
		Substitution														
		Functionality														
		Stewardship														
		Sufficiency														
		Repurpose														
		Scale-up														
Business Model Frameworks	Business Model Canvas	Key Partners														
		Key Resources														
		Key Activities														
		Costs														
		Value Proposition														
		Customer Relationships														
		Channels														
		Customers														
		Revenue														
Transition Management	Change Drivers	Pro-Active leadership														
		Aspiration														
		Economic benefits														

on the revenue component. The representatives of Company 1 stated that: *“Each box that we sell to the consumer has the same value of what we pay to our suppliers; the value perception is always the same.”* This obviously has no specific sustainability aspects and this is the reason why Company 1 has no sustainable focus on their review component of the BMC.

Table 8 The BMC for Company 1

Business Model Canvas	Key Partners	Organic & Local, collaborations with sustainable organizations, B-Corp, ABN-Amro
	Key Resources	Financial and Human Capital
	Key Activities	Social Enterprise
	Costs	Standardization of products & Shortening the Supply Chain
	Value Proposition	Social enterprise with a solution for the daily problems in the food-industry. Focus on a shorter supply chain, ethical trade, transparency, and innovation for farmers, fair share, creating social employment and many more. Fully holistic approach on sustainability
	Customer Relationships	“We are working hard on our customer intimacy strategy. It is important that our local entrepreneurs represent Beebox and our vision.”
	Channels	“We are active on social media and we focus on “green” logistics and distribution”
	Customers	“We try to maintain our customers by working with the deposit system for the crate and the customer intimacy strategy. One third of our new customers are based on mouth-to-mouth advertising.”
	Revenue	“Each box that we sell to the consumer has the same value of what we pay to our suppliers; the value perception is always the same.”

Table 9 gives an overview of the success factors and the barriers of Company 1.

Table 9 Key Success Factors and Barriers of Company 1

Theme	Model	Constructs	Company 1 (Start-up)
Transition Management	Change Drivers	Pro-Active leadership	“Sustainability is the fundament of our organization. Innovation is another very important aspect. The management is very proactive regarding sustainability and motivating their employees.”
		Aspiration	“We have a lot of potential in mind with regard to sustainability and we are trying to achieve this in cooperation with the supplier, courier, entrepreneur, central organization and consumer.”
		Economic benefits	“Sustainability is our drive, it is not a business opportunity for us. We want to improve the chain and decrease the power of the retail. These elements are the basis of our business model.”
		External factors	Consumers positive factor because of growing awareness Farmers positive factor because organic market is growing Both lead to larger sales potential

		Correct diagnosis	"We don't need a wake up call, we are the wake up call. Company 1 is the pharmacy of the future."
		Upsurge of visible crises	Need to develop sustainable packaging strategy, incentive program for entrepreneurs, and consumer awareness program.
	Change Barriers	Non-active leadership	-
		Fear	-
		Economic losses	The lack of investment capabilities for the farmer is often quite a problem.
		External factors	There is an explosion of initiatives so there is a lot of competition. UVW (government) is a very fragmented organization and that makes it difficult because each region has another contact Very difficult to comply with the needs of the consumer. "Power of the retail is a negative factor for us. They have too much power and they influence the entire chain in a bad way."
		Wrong diagnosis	-
		Upsurge of visible crises	"Our threat is that there are so many initiatives and that makes it difficult to crystallize which initiatives are sustainable and which are not."

8.2 Company 2

This section describes the results for Company 2. It describes the results for the FPM, the EAM, The BMC, and the Success Factors and Barriers. The first model is the FPM. Company 2 scored 6 out of 8 in the FPM. Company 2 has no focus on reporting about their sustainability. Furthermore, Company 2 had no specific future orientation regarding sustainability; Company 2 has their focus more on survival rather than further sustainable improvements. The representatives of Company 2 stated that Company 2 has no time for a sustainability report; they also do not see the use of such a report. Company 2 stated: *"We do research on sustainability, and environmental issues and their results always indicate that we are sustainable. We also work with sustainable investors and they want us to meet several sustainability requirements."* Regarding their dominant discipline they stated: *"Our future approach is for the upcoming five to ten years. For us it is more important to focus on the survival of our company, rather than to focus on the next 30 years, this is more for MNC's".*

The second model is the EAM. Company 2 scored 7 out of 8 for the EAM. Company 2 has no focus on substitution. Company 2 stated about their lack of focus on substitution: *"We don't do anything with solar power, we have thought about it but it was not profitable enough. We use cooling water but in such small volumes that it has a marginal effect."*

Table 10 The EAM for Company 2

8- Archetypes Model	Efficiency	"We aim to be as efficient as possible; this also results in lower costs, so there also is a large economic drive. Daily monitoring of production. Efficiency is KPI. We try to focus on minimizing the losses in our production."
	Waste	"We focus on having a closed-loop production, so for this reason we minimize our waste... Waste is the same as efficiency, the lower the waste, the lower the costs."
	Substitution	"We don't do anything with solar power, we have thought about it but it was not profitable enough. We use cooling water but in such small volumes that it has a marginal effect."
	Functionality	"We work together with a very capable product-development department. If you are as innovative as we are, then you are obliged to deliver product assistance."
	Stewardship	"We are dealing with ethical trade, transparency, biodiversity protection and of course consumer health, we don't have specific KPI's for this, but we actively discuss this with our suppliers. Next to this, we also have our HCCP and other certificates for hygiene and health."
	Sufficiency	"We are working on sufficiency, but the trick is to create consumer awareness about sufficiency."
	Repurpose	"Platform is good example of repurpose. We have mutual collectives with herbal suppliers and packaging companies. We want to cooperate with firms that fit within our mission, vision and strategy and most importantly, that have faith in the meat transition."
	Scale-up	Cooperations or mutual collectives and sustainable venture capitalists to look for new financing in order to scale-up.

The third model is the BMC of Osterwalder. Company 2 scored 8 out of 9 for the BMC. Company 2 does not focus on sustainability aspects on the revenue component. There is no specific reason why Company 2 has no focus on sustainable revenue.

Table 11 The BMC for Company 2

Business Model Canvas	Key Partners	"Suppliers based on several sustainability requirements and we also chose our investors based on their sustainable vision. Cooperate with the Triodos bank, and organizations such as the Vegetarian Butcher."
	Key Resources	Financial capital: Triodos bank and sustainable VC's Human capital: we create employment for people who struggle to find a job and were absent for a long time at the labor market
	Key Activities	Organize a lot of workshops and seminars, almost monthly. Cooperation with organizations such as FoodValley and the government/province. Cooperate with the media because we have a lot of media attention regarding our activities.
	Costs	"Sourcing is very important. We make very conscious choices for our sustainable suppliers. We are willing to pay more for a product that is fair, than saving costs and selling incomplete truths to our consumers."
	Value Proposition	"Sustainability by itself is our biggest incentive for the success of our product. If our story doesn't fit our product, then consumers won't buy our

		products.”
	Customer Relationships	Free sampling of products in collaboration with sustainable organizations, participating in sustainability campaigns, product assistance
	Channels	“We have our website where we communicate with our customers... Our media attention is important for us... We cooperate with “Stichting Natuur en Milieu”...”
	Customers	“We make our selection for potential customers who fit into our vision and share our story.”
	Revenue	“We don't do anything sustainable with our revenue.”

Table 12 gives an overview of the success factors and the barriers of Company 2.

Table 12 Key Success Factors and Barriers of Company 2

Theme	Model	Constructs	Company 2 (SME)
Transition Management	Change Drivers	Pro-Active leadership	“If we weren't pro-active, then we would have never started. Pro-activeness is inherent for entrepreneurship. The management discusses sustainability issues weekly.”
		Aspiration	“Our vision regarding sustainability is focused on our activities internally en externally for our company. Our ambition is very important for our organization, all of our employees share this ambition and vision.”
		Economic benefits	“We wouldn't exist without the business opportunity for meat substitutes. However, the reduction of animal proteins is the business opportunity, not sustainability.”
		External factors	“We did a lot of research during our start-up phase, the government subsidized us during this process.” “I find that there is an increase in the consumers that are interested in the origin and nutrition values of food, and that is important for us.” Success noticeable because products are available at discount supermarkets but also in the high-end luxury supermarkets and wholesalers.
		Correct diagnosis	“Sustainability is the basis of our business model so the correct diagnosis was not important.”
		Upsurge of visible crises	“The meat crisis was not of direct influence, but it made our story stronger. We don't benefit from scandals because we also are affected by the suspicion of the consumers.”
	Change Barriers	Non-active leadership	-
		Fear	-
		Economic losses	“Our products are more expensive than normal meat products; we have more expenses but I don't think that this is a barrier for us.”

		External factors	"We started during the economic crisis, so it was very hard for us to get some starting capital. I also think that the crisis was a problem for us because a lot of consumers stated to save their expenses on luxury products."
		Wrong diagnosis	-
		Upsurge of visible crises	-

8.3 Company 3

This section describes the results for Company 3. It describes the results for the FPM, the EAM, The BMC, and the Success Factors and Barriers. Company 3 scored 7 out of 8 in the FPM. Company 3 has no focus on reporting about their sustainability, unfortunately, they had no specific reason for why they did not focus on reporting.

Company 3 scored 7 out of 8 for the EAM. Company 3 has no focus on substitution. The representative of Company 3 had no specific reason for why they lacked focus on substitution

Table 13 The EAM for Company 3

8- Archetypes Model	Efficiency	"If you look at our holistic approach, we try to address all of the themes as much as possible. We strive to be a champion on the sustainability-around, wants to be the best all-rounder instead of excel on a particular theme. We find narrowing down sustainability to CO2 reduction incomplete and therefore we focus on efficiency, waste, stewardship, and repurpose."
	Waste	See efficiency
	Substitution	-
	Functionality	Platform function
	Stewardship	See efficiency
	Sufficiency	"We say to consumers that they should consume based on sensible portion sizes. A meatball need not be 150 grams, 80 grams is sufficient for the required daily consumption"
	Repurpose	See efficiency
	Scale-up	"Our participation is based on belief rather than setting rules for companies. Convincing means that you can achieve the objective of Company 3 and that you add value instead of decrease value in the chain"

Company 3 scored 6 out of 9 for the Business Canvas Model. Company 3 does not focus on sustainability aspects on the key resources, costs and revenue components. Company 1 did not have an explanation for their lack of sustainable resources. About their costs and revenue, the representative stated: *"We don't do anything with our pricing since that is illegal to make price agreements within the supply chain. The producers can only give advices on the price.... Regarding our revenue, we don't see sustainability as an business*

opportunity, sustainability is a prerequisite for doing business. But we have no specific focus on sustainable revenue.”

Table 14 The BMC for Company 3

Business Model Canvas	Key Partners	“We are a platform, we are entrepreneurship 2.0. We are a network organization, small is the new big. Currently, there is a transition going from business to network organizations and we do this now on a fairly small scale. We work together with suppliers and retailers.”
	Key Resources	-
	Key Activities	See key partners
	Costs	“We don’t do anything with our pricing since that is illegal to make price agreements within the supply chain. The producers can only give advices on the price.”
	Value Proposition	See vision on sustainability and dominant functional discipline
	Customer Relationships	“Awareness creation regarding sustainability is our greatest challenge.”
	Channels	See Key partners and Customers
	Customers	“It is very difficult to have influence on the consumer behaviour. Which buttons do we need to press to create consumer awareness? We don’t have the solution ourselves. Awareness creation regarding sustainability is our greatest challenge.”
	Revenue	See costs; “We don’t see sustainability as an business opportunity, sustainability is a prerequisite for doing business. Non-sustainable businesses cease to exist”

Table 15 gives an overview of the success factors and the barriers of Company 3.

Table 15 Key Success Factors and Barriers of Company 3

Theme	Model	Constructs	Company 3 (SME)
Transition Management	Change Drivers	Pro-Active leadership	“The problem was that the retailers weren’t able to realize this on their own, therefore a network needed to be created. Bringing together all the different parties from the entire supply chain resulted in building and sharing together a larger pie, in stead of competing with each other on the a smaller pie.”
		Aspiration	“Our organization started from a sustainability perception. We foresaw an increasing demand to sustainability and especially in the food sector and we took that opportunity to start our platform.”
		Economic benefits	-
		External factors	“We try to follow organic regulations, but we also try to operate as autonomously as possible.”

		Correct diagnosis	"We started with a SBM, so in our case there is no innovation regarding sustainability in our business model, therefore, correct diagnosis is not applicable"
		Upsurge of visible crises	"Our organization started because my predecessors saw the opportunity to create the platform and the network for the entire supply chain."
	Change Barriers	Non-active leadership	-
		Fear	-
		Economic losses	-
		External factors	"The government doesn't do that much to advertise on sustainable entrepreneurship. I think they are more obstructing sustainable entrepreneurship than enforcing it. We try to follow organic regulations, but we also try to operate as autonomously as possible."
		Wrong diagnosis	-
		Upsurge of visible crises	-

8.4 Company 4

This section describes the results for Company 4. It describes the results for the FPM, the EAM, The BMC, and the Success Factors and Barriers. Company 4 scored 7 out of 8 in the FPM. Company 4 has no focus on reporting about their sustainability. The founder of Company 4 stated: *"Why I don't have a sustainability report? I do not need to write a report in which I show that I instead of 1 billion kilowatts, I use 10% less. Nobody is waiting for us to do that, for us it's more important that we as a brand stand for something."*

The EAM is the second model that was discussed with Company 4 during the interview. Company 4 scored 8 out of 8 for the EAM. Company 4 focuses on all aspects of the EAM for sustainability.

Table 16 The EAM for Company 4

8- Archetypes Model	Efficiency	"Efficiency is reducing costs, this means being frugal with your resources and raw materials. We aim to be as efficient as possible within our possibilities. Entrepreneurs should be free to choose where they want to invest and sustain."
	Waste	"Raw materials are a significant part of the total costs, therefore it is important to use the fish as efficient as possible, this also means reducing the waste of raw materials. Our suppliers have to ensure us that they use their raw materials as efficient as possible in order to reduce the waste."
	Substitution	"Green energy and we pay environmental taxes for our flights"
	Functionality	"We create employment at the local fisheries."

	Stewardship	"We help consumer to create healthy meals. Show how sustainable fishing works. Educate consumer about seasonality, availability, ethical trade and transparency."
	Sufficiency	Limited availability, educate about sufficiency in short (Instagram) movies.
	Repurpose	Production cooperations, investment fund for sustainable fisheries.
	Scale-up	New licences focus on cooperation, if there is a share in vision and ambition than we want to cooperate.

Company 4 scored 7 out of 9 for the Business Canvas Model. Company 4 does not focus on sustainability aspects on the customers and the revenue component. The founder of Company 4 stated about their customers and their revenue: *"Our brand proposition must fit within the proposition of the customer. I cannot link it in any way to sustainability because I just want to sell my product, and I see a lot of opportunities.... We have dynamic pricing, but this is dependent on the supply, this is not directly sustainability driven"*

Table 17 The BMC for Company 4

Business Model Canvas	Key Partners	Choose partners based on sustainability and gut-feeling. Sustainability should be intrinsic in the organization.
	Key Resources	Human capital
	Key Activities	Setting up sustainable fisheries network, making movies about fishing and sustainability. "Everything we do is based on sustainability."
	Costs	"Value driven model, we are building a sustainable brand. Create value based on creativity and sustainability, deliver value to the entire chain."
	Value Proposition	High focus on performance, accessibility en sustainability.
	Customer Relationships	Active on social media, give a lot of support, cooking books, co-creation with customer.
	Channels	Social media, efficient logistics, retailer cooperation, brand proposition should fit with the vision of the client/retail.
	Customers	"Our brand proposition must fit within the proposition of the customer. I can not link it in any way to sustainability because I just want to sell my product, and I see a lot of opportunities."
	Revenue	"We have dynamic pricing, but this is dependent on the supply, this is not directly sustainability driven."

Table 18 gives an overview of the success factors and the barriers of Company 4.

Table 18 Key Success Factors and Barriers of Company 4

Theme	Model	Constructs	Company 4 (Start-up)
Transition Management	Change Drivers	Pro-Active leadership	"We are way ahead with pro-active leadership, we go to seminars to speak about sustainability, and we share our vision about sustainability and fish. We believe in two things: inspire and taking responsibility, and this is what we do best."
		Aspiration	"Our vision and ambition were the key to our success"
		Economic benefits	"Transparency was our business opportunity. Teaching people about sustainable fish and building a transparent chain was important for us."
		External factors	Vacuum of the organic agriculture because this increases the status quo If the retail sells the story in a right way, than the willingness to buy our products increase.
		Correct diagnosis	-
		Upsurge of visible crises	"There are too much private labels. Private label is driven by cheap products and not sustainability or transparency. The consumer wanted motor transparency; we provided a solution for this."
	Change Barriers	Non-active leadership	-
		Fear	-
		Economic losses	-
		External factors	"The government is dramatic. They are far behind with innovation and entrepreneurship. The government has the urge to regulate everything; this obstructs the innovation and therefore sustainability." "There is a lot of criticism on the MSC certificate, some people think that it is only a commercial way to show you are sustainable, so it is hard to convince these people."
		Wrong diagnosis	-
		Upsurge of visible crises	-

8.5 Company 5

This section describes the results for Company 5. It describes the results for the FPM, the EAM, The BMC, and the Success Factors and Barriers. Company 5 scored 8 out of 8 in the FPM.

Company 5 also scored 8 out of 8 for the EAM. This indicates that Company 5 focuses on all aspects of the EAM for sustainability.

Table 19 The EAM for Company 5

8-Archetypes Model	Efficiency	"We focus on waste reduction, reuse, we use 95% of our waste streams for recycling or for human or animal consumption, and of course energy reduction. We think that products loss is worse than energy loss so we focus on the reduction of production loss and thus an increase in efficiency."
	Waste	New conservation techniques, packaging reduction, we reuse 95% of our waste.
	Substitution	Green energy, solar power or wind turbines were not feasible or allowed by the government. Energy saving office.
	Functionality	"We take over some tasks of other organizations in the supply chain and we give service to start-ups."
	Stewardship	"We are a role model for start-ups. Also a role model with our conservation techniques, we are well-known for our innovations."
	Sufficiency	"Sugar reduction, we sell healthy products but we cant put these claims on our labels anymore."
	Repurpose	Co-creation in supply chain for better taste, colour, quality, freshness, reduce losses, efficient logistics etc.
	Scale-up	Cooperation with start-ups, new cooperation abroad, open innovation, new conservation techniques.

Company 5 scored 6 out of 9 for the Business Canvas Model. Company 5 does not focus on sustainability aspects on the costs, channels and revenue component. Company 5 has no specific explanation for why they do not focus on sustainable revenue but for their costs and channels they stated: *"We produce premium products, so costs are relatively less important in the selling price. Raw materials are most important regarding costs, we only want the best raw materials, but no specific sustainability aspects."* And: *"Sustainability is a standard for us because the client demands that but we don't have specific sustainable channels."*

Table 20 The BMC for Company 5

Business Model Canvas	Key Partners	Regarding suppliers, sustainability is one of the aspects that is a consideration, if a supplier is not sustainable enough, we don't do business with them
	Key Resources	Physical capital: energy efficient cooling, hybrid cars, good isolation Human capital: creating employment for unemployed people.
	Key Activities	"We provide healthy products and that is sustainable. Within our niche, we focus on the healthy segment. But sustainability is another prerequisite and not an objective in itself. In addition, of course, one of our activities is to take over tasks within the supply chain, herein we are a kind of platform for the entire supply chain."

	Costs	"We produce premium products, so costs are relatively less important in the selling price. Raw materials are most important regarding costs, we only want the best raw materials, but no specific sustainability aspects."
	Value Proposition	"Our value proposition is about innovation and healthy and fresh products."
	Customer Relationships	Co-creation, product assistance, advice on market, full service
	Channels	"Sustainability is a standard for us because the client demands that but we don't have specific sustainable channels."
	Customers	"Our clients think that sustainability is important and therefore they buy our products."
	Revenue	"We don't focus on sustainability within our revenue streams"

Table 21 gives an overview of the success factors and the barriers of Company 5.

Table 21 Key Success Factors and Barriers of Company 5

Theme	Model	Constructs	Company 5 (Start-up)
Transition Management	Change Drivers	Pro-Active leadership	"We are very pro-active in our organization, but not necessary regarding sustainability"
		Aspiration	"Sustainability is not a goal, it is the result of your practices and we aim to do that as good as possible, and this resulted in our success"
		Economic benefits	"In order to get economic benefits, you have to calculate your extra costs to your client and eventually the consumer. Our mission is to help the retailer to convince the consumer of our sustainable products."
		External factors	Consumer buys more healthy products. Scandals in food-industry resulted in increased transparency. Sustainability pressure on retail. The increasing need for high-quality products resulted in more sustainability. Our success is also in providing services to other organizations so that they can focus on marketing and selling.
		Correct diagnosis	"Becoming more sustainable is an on-going process. There is a continuous urge to become more efficient and sustainable. Daily monitoring of production and operations."
		Upsurge of visible crises	"Due to food scandals and crisis a lot of new regulations, so we had to adapt. The sustainability trend is always important because it becomes a standard condition for your product so you need to adapt in order to create more value than your competition."
	Change Barriers	Non-active leadership	-
		Fear	-
		Economic	-

		losses	
		External factors	"The government makes it difficult and more complicated with their new regulations. B2B is not willing to pay for sustainability because they see it as a basic condition for our products."
		Wrong diagnosis	-
		Upsurge of visible crises	"The crisis did not affect us, the premium segment is still growing."

8.6 Company 6

This section describes the results for Company 6. It describes the results for the FPM, the EAM, The BMC, and the Success Factors and Barriers.

Company 6 scored 7 out of 8 in the FPM. Company 6 has no focus on reporting about their sustainability. The representative of Company 6 was very sceptical against sustainability reports, she stated: *"We don't have a sustainability report, we don't see the use of it. This is full of marketing soaked fake sustainability."*

Company 6 scored 8 out of 8 for the EAM. The full score on the EAM indicates that Company 6 focuses on all aspects of the EAM for sustainability.

Table 22 The EAM for Company 6

8-Archetypes Model	Efficiency	"Our production utilities are from recycled materials, we use LED cultivation lights, low use of packaging materials. Efficient logistics, local for local, biodegradable production."
	Waste	"We produce mushrooms on the waste of coffee producing companies."
	Substitution	Blue-economy. Open source scientific solutions for producing mushrooms. Looking for production in containers, this is easy for standardized expansion. Crowd-funding
	Functionality	"We educate consumers about sustainability. And we deliver the service that we collect and re-use the waste of other companies."
	Stewardship	Biodiversity protection, no sterilisation or pasteurization. Biodegradable substrates. Very high nutrition value, healthy products, consumer health and well-being.
	Sufficiency	Education models. Healthy products with high nutrition value
	Repurpose	Large network with sustainable organizations and other mushroom producers. Social enterprise.
	Scale-up	Co-creation with other organizations. Open innovation. Renting/Leasing materials/machines.

Company 6 scored 8 out of 9 for the Business Canvas Model. Company 6 does not focus on sustainability aspects on the revenue component. The reason for this lack of focus on sustainable revenue was because Company 6 is still in their start-up phase and that they

do not sell their products yet; since there is no focus on sales, there is no focus on sustainable revenue.

Table 23 The BMC for Company 6

Business Model Canvas	Key Partners	Business model is based on sustainable key partners.
	Key Resources	Physical capital: location and materials Human capital very important
	Key Activities	Sustainable production. Education models. Producing from waste.
	Costs	"We stand for quality and sustainability so our choices are based on this. But also consideration between sustainability and keeping start-up feasible. Investments always based on long-term and sustainability."
	Value Proposition	"We are a sustainable start-up so you can also see this in our value proposition."
	Customer Relationships	Focus on quality of relations. Education. Participating in open days, seminars, and markets.
	Channels	Sales via restaurants. Cooperate with food-boxes in future. Social media. Efficient logistics
	Customers	Prototype customer with sustainable vision. "We want to deliver our product to the employees of our suppliers so that we hit two birds with one stone."
	Revenue	"You pay for our experience and not just the mushroom. But we don't sale that much so not focused on sustainability yet."

Table 24 gives an overview of the success factors and the barriers of Company 6.

Table 24 Key Success Factors and Barriers of Company 6

Theme	Model	Constructs	Company 6 (SME)
Transition Management	Change Drivers	Pro-Active leadership	"We are a very pro-active start-up and this was very important for us. Leadership is difficult because we are only with the two of us but we want to inspire so if we grow in the future, this will be the case."
		Aspiration	"Aspiration goes hand-in-hand with our pro-active leadership, our vision was very important"
		Economic benefits	"Sustainability is not a business opportunity for us, it is more natural to us, we hope have economic benefits in the future."
		External factors	"Municipality Amersfoort was a good helping hand. The consumer is very important, we do everything for a healthy world and this starts with a healthy consumer. Our continuous drive to be sustainable is very important, because we tried not to be affected by the economic pressure, we were able to develop our organization."
		Correct diagnosis	-

		Upsurge of visible crises	"No this was not applicable, we started ourselves and not because there was a change in the market or a crisis or whatsoever."
	Change Barriers	Non-active leadership	-
		Fear	-
		Economic losses	"We have more costs than profit at the moment and that is difficult."
		External factors	"It is difficult to be strong and don't get affected by the economical drivers. A lot of organizations are pulling and demanding economic value, we want to deliver sustainable products and it is difficult to give a price tag to that. This influences your entire operation." Economic pressure
		Wrong diagnosis	-
		Upsurge of visible crises	-

8.7 Company 7

This section describes the results for Company 7. It describes the results for the FPM, the EAM, The BMC, and the Success Factors and Barriers.

Company 7 scored 7 out of 8 in the FPM. Company 7 has no focus on reporting about their sustainability. The representative of the Company 7 had no comment on why they do not have a sustainability report.

Company 7 scored 7 out of 8 for the EAM. Company 7 has no focus on substitution. Company 7 has no focus on substitution yet due to the lack of priority regarding this matter. They have future ambitions for sustainable investments and renewable energy sources.

Table 25 The EAM for Company 7

8- Archetypes Model	Efficiency	Use for retail declined products, results in 30% less waste for farmers. For future only produce the demand and on order so no waste. Make supply chain as short as possible. Local supply, low transport and efficient logistics. In future more precision agriculture.
	Waste	Reduce waste at the farm by buying rejects (30% less waste at farms), in addition, we only buy on order so we do not have waste, this means 10-15% less waste.
	Substitution	No substitution at the moment. For future ambitions for sustainable investments and renewable energy sources.
	Functionality	Platform function, creating employment

	Stewardship	Biodiversity protection. Fair price for farmers. Stimulate farmers to become more sustainable. Only organic farms. Aim for positive ecological footprint. Transparency. Create employment. Role model. Get the consumer and the farmer close together.
	Sufficiency	Create awareness about organic products for consumer, consumer education, teach consumers how meals from the supermarket are prepared, create awareness of the difference in prices between the retail and us.
	Repurpose	Platform function, social enterprise. Local sourcing, local employment. Cheap products, very accessible, low overhead costs
	Scale-up	Crowd-funding, open innovations, scale-up production of farmers, precision agriculture, knowledge sharing.

Company 7 scored 9 out of 9 for the Business Canvas Model. Company 7 focus on sustainability aspects on all BCM components.

Table 26 The BMC for Company 7

Business Model Canvas	Key Partners	"Obviously, it is very important for us to search our local suppliers and that they are on a certain level of sustainability and we only want organic farmers, some farmers are even biodynamic."
	Key Resources	Human capital and Intellectual capital Financial capital Physical capital.
	Key Activities	Platform function
	Costs	Fair price for farmers. Short supply chain and therefore low costs. Try to bundle logistics as much as possible for economies of scale.
	Value Proposition	"This of course is reflected in everything we do, we want to be as accessible and organic as possible, and that is reflected in our brand, the price, the quality, in everything."
	Customer Relationships	Platform. Education. Stimulate consumer to get to know the supply chain. Transparency.
	Channels	Efficient and sustainable distribution. Online communication. Short supply chain.
	Customers	Focus on early adapters that are aware of sustainable food and try to convince other non-aware consumers together with the early adapters and the farmers.
	Revenue	Transparent value chain. Scaling platform nation-wide. Keep profit margins as low as possible to keep organic food payable and obtainable for everybody.

Table 27 gives an overview of the success factors and the barriers of Company 7.

Table 27 Key Success Factors and Barriers of Company 7

Theme	Model	Constructs	Company 7 (Start-up)
Transition Management	Change Drivers	Pro-Active leadership	"We try to share our ideas in a pro-active way with the staff and the organization, we also try to prepare the platform for supply chain pro-active with all other actors in the supply chain."
		Aspiration	"Our vision and aspiration was very important. If we lacked vision and aspiration then we would not have even started. So there is a strong connection between leadership and aspiration."
		Economic benefits	"Sustainability is not a business opportunity, it is in our DNA. Our business opportunity was the distance between farmer and consumer. We saw an opportunity in the organic market and we thought that we should exclude the retail. There were too many initiatives that saw sustainability as an opportunity and therefore it became too mainstream, we wanted to become more honest, cheap and easy for the consumer."
		External factors	"The consumer is very important, when they buy our products, they give a clear signal that the retail is too expensive. The increasing attention for organic food and the increasing awareness for the consumer is also very important. The power of the retail is also important because because of their power and high prices, consumers come to us because we are cheaper. The more expensive the retail becomes, the more clients we get."
		Correct diagnosis	-
		Upsurge of visible crises	"The (food)crisis was important and interesting because due to the increasing European attention for food waste, consumers became more aware and that results in the growth of the organic market."
	Change Barriers	Non-active leadership	-
		Fear	-
		Economic losses	High threshold of investments for the platform, this makes it difficult to start developing.
		External factors	"The lack of cooperation of the government is not a barrier for us, the growing competition and all the initiatives in our sector are."
		Wrong diagnosis	-
		Upsurge of visible crises	Growing competition in a growing organic market

8.8 Company 8

This section describes the results for Company 8. It describes the results for the FPM, the EAM, The BMC, and the Success Factors and Barriers.

Company 8 scored 7 out of 8 in the FPM. Company 8 has no focus on reporting about their sustainability. The representative of Company 8 had no comment on why they do not have a sustainability report.

Company 8 scored 8 out of 8 for the EAM. Company 8 focuses on all aspects of the EAM for sustainability.

Table 28 The EAM for Company 8

8- Archetypes Model	Efficiency	"We want to use as much as possible of the animals. We guarantee our suppliers that we want 100% of their meat because we know how to use all of it. This gives them the possibility to expand their livestock. We decrease our foodmiles because we buy locally and we support the local farmers by buying locally. We also use the heat that we collect, we have solar energy and we collect our waste water. We have a full list of planned investments regarding sustainability."
	Waste	A lot of technical challenges to decrease waste-streams, use waste for production instead of decrease waste. Monitoring waste-streams. Animal friendly ingredients. Meat substitutes. Cooperation with Pater Poels, Voedselbank and Red-Cross type of organizations.
	Substitution	Solar energy. "We have a logistics cooperation very sustainable transport organization, wit very low emissions." Multi-annual Energy Savings and Efficiency Program. Heat exchanger that uses the heat from the production as a product to heat our cleaning water. Green energy. Working on further research regarding substitution.
	Functionality	Sustainable product development for customers. Full service. Product assistance. Co-creation. Help clients to sell sustainable meals. Services are free. Knowledge sharing.
	Stewardship	Help consumer with daily-recommended portions. Radical transparency. Local and ethical trade. Local sourcing. Fair-trade ingredients. Three pillars for employees: Health, Satisfactions, and Progress.
	Sufficiency	Daily recommended portions. Share story to consumer about our healthy and sustainable products. Vision sharing. Anticipate on growing awareness. Consumer education.
	Repurpose	SKAL-certification. Cooperation with labels. Fresh ingredients. Clean label, non-GMO, no additives, no E-numbers, etc.. Furthermore, Ale D'huzes catering, Stichting Broodnodig, Vencentiusvereniging & Voedselbank.
	Scale-up	New channels. Sales at EKO-Plaza. Clean label. Cooperation with meat suppliers. LIVAR.

Company 8 scored 9 out of 9 for the Business Canvas Model. Company 8 focuses on sustainability aspects on all BCM components.

Table 29 The BMC for Company 8

Business Model Canvas	Key Partners	Choose partners as local as possible. Chose partners on their sustainability qualities. Basic requirements and certification for suppliers.
	Key Resources	Physical capital: sustainable production machinery, sustainable logistics Human capital: Sustainability is in our DNA. We look to all our processes and try to see where we can become more sustainable. We want that every employee is involved in the process.
	Key Activities	Innovation trajectory. Looking for sustainable cooperations. Open innovation. Share story.
	Costs	"Our costs should fit our story, our products should be available so the price cant be to high. Our sustainable products might be a bit more expensive, but we are healthier."
	Value Proposition	"Sustainability is in our DNA and we try to communicate that externally."
	Customer Relationships	Services. Knowledge sharing. Sharing passion and vision. Story telling. Inspire customers to become sustainable. Create enthusiasm within organization.
	Channels	"We want to help the entire supply chain to become more sustainable, so the suppliers and the consumers."
	Customers	"We aim to make the entire chain more sustainable, that includes our customers but also our suppliers. We don't choose our customers specifically but we see that the sustainable retail comes to us for sustainable products, so we are in a sustainable niche regarding customers."
	Revenue	"The price must fit within our story, but we don't have specific sustainability requirements for this."

Table 30 gives an overview of the success factors and the barriers of Company 8.

Table 30 Key Success Factors and Barriers of Company 8

Theme	Model	Constructs	Company 8 (Start-up)
Transition Management	Change Drivers	Pro-Active leadership	"Pro-active leadership has been very important to us, it is in our DNA and we try to radiate with all our programs."
		Aspiration	"Aspiration is very important for us, it is the same as pro-active leadership."
		Economic benefits	"Yes, but you should not approach it that way, that's the wrong way. It is an inspiration for innovation. Sustainability has to come from the core instead of seeing it as a sauce that is poured on top. So it's an inside-out story rather than an outside-in story. For us, the experience there and we are sustainable; we do not make movies to show that we are in a sustainable farmer."
		External factors	"Consumers worry more about what they eat, this is in relation with sustainability, not only at the environmental aspect but also regarding health, and this will lead to a huge shift. I think that the growing awareness of health food will

			lead to a decrease in chronically diseases.”
		Correct diagnosis	“There is always room for improvement and we always try to become more sustainable, I hope that this accounts for everybody, but this was not a direct switch, it was gradually.”
		Upsurge of visible crises	-
	Change Barriers	Non-active leadership	-
		Fear	-
		Economic losses	“Yes but it is double, the good raw materials cost more, sustainability has not caused higher costs. It results in even more revenue and added value, the organization is more unified, so everyone works harder, there is unity.”
		External factors	“The government makes it harder for entrepreneurs. Especially regarding administration. The taxes are also wrong, the government doesn't help us to become more sustainable.” “Not everybody in the supply chain shares your opinion, this can be difficult if you have some specific sustainability requirements and you need the supplier because there is no alternative.”
		Wrong diagnosis	-
		Upsurge of visible crises	-

8.9 Company 9

This section describes the results for Company 9. It describes the results for the FPM, the EAM, The BMC, and the Success Factors and Barriers.

Company 9 scored 7 out of 8 in the FPM. Company 9 has no focus on reporting about their sustainability. Company 9 has no sustainability report because they currently focus on market positioning and making profits.

Company 9 scored 5 out of 8 for the EAM. Company 9 has no focus on waste, substitution and functionality. The only thing that Company 9 does with their waste is waste separation, this is not sustainable enough since according to the theory waste management is about Circular economy, closed loop; cradle-2-cradle; industrial symbiosis; reuse, recycle, remanufacture; take back management; use excess capacity; sharing assets; extended producer responsibility. Obviously, just separating your waste is not enough to score at this construct. Company 9 stated about their substitution: “No, we don't have solar power or other ways of renewable energy. Our manufacturers are free to make their own choices in it. We have little impact on our manufacturers to tell them to

put solar panels on their roof." The representative of Company 9 had no comment on the lack of focus on functionality.

Table 31 The EAM for Company 9

8- Archetypes Model	Efficiency	Products should be certified. Products should meet several efficiency requirements. By sourcing organic products as locally as possible we have a low footprint. Suppliers should be sustainable and efficient. "We try to be CO2 neutral without increasing our price, affordability is more important. Products should be healthy, affordable and obtainable."
	Waste	Waste separation. "We are looking for most sustainable way of packaging, is not necessary biodegradable plastics because we still want to be affordable."
	Substitution	"No we don't have solar power or other ways of renewable energy. Our manufacturers are free to make their own choices in it. We have little impact on our manufacturers to tell them to put solar panels on their roof."
	Functionality	-
	Stewardship	"We want the consumers to eat healthier, tastier, more affordable and organic. In addition, we also have the care farms and the charities involved. Good for yourself and another, live and let live, this is also on our packaging and we find this very important."
	Sufficiency	"It is important that we educate the consumers to consume less. We want a consumer that makes its own well-considered decisions regarding sustainability, we try to help them."
	Repurpose	Cooperation with care-farms and charities
	Scale-up	"Due to our growth, we are trying to get more impact in the supply chain so that we can make the chain more sustainable. Our supply chain is secured by passing the bio certificates so here we also play a significant role. Volume is important, so here we must first focus on."

Company 9 scored 8 out of 9 for the Business Canvas Model. Company 9 does not focus on sustainability aspects on the costs component. Company 9 claims about their costs: *"If the costs are rising because we have to make a sustainable choice, we choose an alternative which ensures that our product remains affordable, only as our volume increases, we can make the more expensive and more sustainable choice."*

Table 32 The BMC for Company 9

Business Model Canvas	Key Partners	"All our partners should be organic and sustainable. We have labels and certificates and other minimal requirements for our suppliers and we choose our partners based on these constructs."
	Key Resources	Human capital
	Key Activities	"We are of course concerned with the charities and the care farms and our own operation is very sustainable, internally and externally."

	Costs	"If the cost is rising because we have to make a sustainable choice, we choose an alternative which ensures that our product remains affordable, only as our volume increases, we can make the more expensive and more sustainable choice."
	Value Proposition	"Our entire value proposition and vision is based on sustainability."
	Customer Relationships	"This is important for us because we want to adapt consumer behaviour and we want to make them more sustainable."
	Channels	Story telling. Creating awareness. Educate consumer
	Customers	"Our customers, the retail, want our products in their stores because we produce sustainable products. So we are in a niche market but supermarkets choose us specifically because we are known for our sustainability."
	Revenue	"The accessibility is the most important. So our products might be a little more expensive but we try to communicate our added value and why we seem to be more expensive."

Table 33 gives an overview of the success factors and the barriers of Company 9.

Table 33 Key Success Factors and Barriers of Company 9

Theme	Model	Constructs	Company 9 v(SME)
Transition Management	Change Drivers	Pro-Active leadership	"All of our decisions are based on sustainability, I am a huge example in this for my team and the organization. Vision sharing, internally and externally. Inspire your surroundings and environment."
		Aspiration	"Aspiration and pro-active leadership go hand in hand in our organization."
		Economic benefits	"You obviously do not get in a market without potential. It is important that you see a chance and that you tackle that opportunity. Sustainability has therefore been important for us but it was important that it happened in a feasible manner, and that the products would be accessible to consumers."
		External factors	"The retail is becoming more sustainable so that is good for us. The consumers are also becoming more aware so that is also very good."
		Correct diagnosis	-
		Upsurge of visible crises	"I looked at how I thought that the food-industry would develop, this was based on vision and willingness to take risk and entrepreneurship, and during my previous job I saw that the organic market would grow. I thought that healthy food would become more important and therefore I started this organization."
	Change Barriers	Non-active leadership	-
		Fear	-
		Economic	-

		losses	
		External factors	<p>"The government should me more pro-active regarding sustainability. They don't help entrepreneurs to tell their story to the consumer."</p> <p>"There are only 5 retailers with all the power, this is unfair for the smaller retailers."</p>
		Wrong diagnosis	-
		Upsurge of visible crises	-

8.10 Company 10

This section describes the results for Company 10. It describes the results for the FPM, the EAM, The BMC, and the Success Factors and Barriers.

Company 10 scored 7 out of 8 in the FPM. Company 10 has no focus on reporting about their sustainability. The founder stated about reporting: *"We have no time and no money for a sustainability report, we are examined by national institute for transitions and they do some things with sustainability."*

Company 10 scored 7 out of 8 for the EAM. Company 10 has no focus on substitution. The lack of investment capital was the reason why Company 10 has no focus on substitution; their focus is now on the other aspects of the EAM.

Table 34 The EAM for Company 10

8-Archetypes Model	Efficiency	Efficient logistics. Low carbon-footprint. Consumers bring own packaging material so very efficient and no waste.
	Waste	"Everything is on orders so we have no waste."
	Substitution	"This is not yet applicable due to lack of capital. Focus is on other aspects."
	Functionality	"We deliver products and services. Organizing events, workshops, training for employees and consumers."
	Stewardship	"We create a lot of local employment. Biodiversity protection through local sourcing. Transparency. Fair trade. Transparent value chain. Ethical trade. Consumer health and well-being."
	Sufficiency	Workshops for consumers, efficiency, waste, recipes, nutrients, etc.
	Repurpose	Co-creation with similar initiatives. Workshops for ZLTO. A lot of exposure in media.
	Scale-up	Expand to other cities. Franchises/Licensee ambitions. Sustainable cars, hybrid or electric lease cars.

Company 10 scored 9 out of 9 for the Business Canvas Model. Company 10 focus on sustainability aspects on all BCM components.

Table 35 The BMC for Company 10

Business Model Canvas	Key Partners	"We take sustainability into account when choosing our partners. We have very strict requirements for our suppliers regarding sustainability."
	Key Resources	Physical capital: sustainable cars in the future Financial capital: Triodos Bank Human capital: founders
	Key Activities	Local for Local. Products and operations are fully sustainable. Fair price. Workshops. Education. Efficiency tips
	Costs	"We begin with the costs of our product, and we take care of the sales, if our selling price is too high, we adjust the profit margins. We want a good price for our suppliers and customers. Furthermore, we are working to keep our cost or low, but not at the expense of the farmer."
	Value Proposition	"We believe in a transparent supply chain. No middleman, directly at the farmer, approachable for everyone. Fair price for farmer and delicious and honest products for an affordable price."
	Customer Relationships	Newsletters, our chefs have an important network-function in their district. Workshops. Knowledge sharing
	Channels	Supply chain as short as possible, backwards integration. Efficient logistics.
	Customers	"Not all of our consumers are durable, good taste is also important. Our consumers differ from foodies, to gastronomes, we have something for everyone and we choose our customers not on sustainability, customers simply come naturally to us."
	Revenue	"Transparency and a transparent value chain is very important for us. We also have dynamic profit margins, if our costs increase, our margin decreases."

Table 36 gives an overview of the success factors and the barriers of Company 10.

Table 36 Key Success Factors and Barriers of Company 10

Theme	Model	Constructs	Company 10 (Start-up)
Transition Management	Change Drivers	Pro-Active leadership	"We are too small for leadership, but our enthusiasm was very important for our organization."
		Aspiration	"We saw with our previous employers that too little was done with sustainability so therefore we tried to inspire them to become more sustainable, but this did not work so that's why we started our own."
		Economic benefits	"Off course, without the potential benefits we wouldn't even have started."
		External factors	"The consumers make their own decisions, so for us the local for local was very important. The Russian boycott from Europe was important for us because this resulted in a wake up call for farmers and thus for us a nice opportunity to sell their products."
		Correct diagnosis	-

		Upsurge of visible crises	"We saw at our previous employees that they weren't sustainable enough. Therefore we thought that it should be done better and we could realize this with our organization."
	Change Barriers	Non-active leadership	-
		Fear	-
		Economic losses	
		External factors	Time because extra personnel is not always a solution.
		Wrong diagnosis	-
		Upsurge of visible crises	Competition.

8.11 Company 11

This section describes the results for Company 11. It describes the results for the FPM, the EAM, The BMC, and the Success Factors and Barriers.

Company 11 scored 7 out of 8 in the FPM. Company 11 has no focus on reporting about their sustainability. The representative of Company 11 stated about their lack of sustainable reporting: *"We don't have a sustainability report. It feels like an unwanted control mechanism. We are busy enough with our start-up. We know how sustainable we are for ourselves."*

Company 11 scored 7 out of 8 for the EAM. Company 11 has no focus on substitution. Company 11 has no focus on substitution yet.

Table 37 The EAM for Company 11

8-Archetypes Model	Efficiency	"We give a lot of advice on this topic regarding food. But regarding energy we have some experts for this. We give advice on efficient packaging and other efficiency aspects."
	Waste	"We don't have waste ourselves but we do give tips and workshops about waste and biodegradable packaging."
	Substitution	"No we don't do anything with renewable energy yet."
	Functionality	"Our entire organization is based on functionality. We only deliver services, we don't have any products so that is very sustainable."
	Stewardship	"Health is an important sustainability aspect and we try to convince catering companies to go on the sustainability tour. Salt-reductions, less meat, no animal proteins, less fats."
	Sufficiency	"We create awareness with the Experience"
	Repurpose	Social enterprise. "We are the missing link between the suppliers, the catering companies and the consumer."

	Scale-up	"We want to do more with co-creation. We discuss a lot of aspects with the catering companies: water-use, health, packaging, every sustainability aspect has its own expert and we want to have more experts and new cooperations with large companies such as Unilever."
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Company 11 scored 8 out of 9 for the Business Canvas Model. Company 11 does not focus on sustainability aspects on the revenue component. The representative said about their revenue streams: *"The longer you exist, the more credibility you have, and this means that we can increase our prices. We are still pioneers on the advice and service approach so here it is more difficult. We don't do anything specific with the revenue."*

Table 38 The BMC for Company 11

Business Model Canvas	Key Partners	Cooperation with sustainability experts. A lot of (sustainable) sponsors, we give away a lot of goodie bags with sustainable products from our key partners.
	Key Resources	Human capital
	Key Activities	Experience, knowledge sharing, services, sustainable catering. Our entire operation is based on sustainable activities.
	Costs	"No we don't do anything specific with sustainability and our costs."
	Value Proposition	"Sustainability is the most important aspect of our organization and you can also see this in our value proposition."
	Customer Relationships	"Co-creation obviously is important because together the caterer we go towards sustainability. We offer service and knowledge."
	Channels	Social Media. Large network of other sustainable entrepreneurs. Events. FoodQuake network.
	Customers	"Companies approach us because they want the Experience. We approach caterers actively to preserve them as client. We actively search for non-sustainable clients so that we can help them."
	Revenue	"The longer you exist, the more credibility you have, this means that we can increase our prices. We are still pioneers on the advice and service approach so here it is more difficult. We don't do anything specific with the revenue."

Table 39 gives an overview of the success factors and the barriers of Company 11.

Table 39 Key Success Factors and Barriers of Company 11

Theme	Model	Constructs	Company 11 (Start-up)
Transition Management	Change Drivers	Pro-Active leadership	"By being very pro-active, we show that we excel in leadership within the chain and the economy. We can set an example for everyone and that is a success for us. We really want to set an example for the rest."
		Aspiration	"We were founded because of the combination between aspiration and pro-active leadership."

		Economic benefits	“Sustainability is a business opportunity for us because we can help non-sustainable catering companies. There is still a lot to do and there has to change a lot, so I think that Company 11 will also be important for the future. For the businesses that we assist it is also a great opportunity because we help them to become more sustainable.”
		External factors	“We work together with the government. They are a lobby for us, because we help them to set new regulations in the catering business. The government is the most important link in the sustainability development.” “Another important factor is the lack of pro-activeness of other organizations, because if they don’t become sustainable, we have the opportunity to help them.”
		Correct diagnosis	-
		Upsurge of visible crises	“We saw that the catering companies were way behind with sustainability, this was a crisis in the market in our eyes, and therefore we started with this concept.”
	Change Barriers	Non-active leadership	-
		Fear	-
		Economic losses	-
		External factors	Lack of awareness at consumer level. Too little media attention for sustainability.
		Wrong diagnosis	-
		Upsurge of visible crises	-

8.12 Company 12

This section describes the results for Company 12. It describes the results for the FPM, the EAM, The BMC, and the Success Factors and Barriers.

Company 12 scored 8 out of 8 in the FPM. Company 12 scored 8 out of 8 for the EAM. Company 12 focuses on all aspects of the EAM for sustainability.

Table 40 The EAM for Company 12

8- Archetypes Model	Efficiency	Higher productivity and waste reduction. Healthy catering within organization. Healthy food, sustainable sourcing, energy efficiency.
	Waste	Full chain approach regarding food-waste. With new enzymes longer shelf life so less waste.
	Substitution	Green energy. Highest quality in the sector. BHC+ status.
	Functionality	Pre-audits. Products assistance. Open innovation.
	Stewardship	We help our partners to become more sustainable. Pre-audits. EBIC.

		Project in Africa and South America.
	Sufficiency	Durable enzymes, longer shelf life, less production, less waste. Salt reduction. Health innovations
	Repurpose	Cooperation with EBIC. Product development. Open innovation
	Scale-up	Transparent innovation funnel. Incubator. Invest in new channels. Consortium with Sodexo. Cooperation with universities.

Company 12 scored 5 out of 9 for the Business Canvas Model. Company 12 does not focus on sustainability aspects on the Key Partners, Key Resources, Value Proposition and the Channels component. Regarding their partners, the representative claimed: *“We have no specific choice on sustainable suppliers. We help our clients to become more efficient, but no focus on sustainable clients.”* About the channels, the representative stated the following: *“We do everything through the customer. We deliver directly to them, or through wholesalers. There are no specific targets for us to sustain here. We want to sustain existing channels and we also look for new channels, but we are not trying to tackle this based on sustainability.”* The representative had no comment about their Value Proposition and their Key Resources.

Table 41 The BMC for Company 12

Business Model Canvas	Key Partners	“No specific choice on sustainable suppliers. We help our clients to become more efficient.”
	Key Resources	“No we don’t focus on sustainable key resources.”
	Key Activities	Product leadership, customer intimacy operational excellence. Projects in Africa
	Costs	“We have made some choices for sustainability that raised our costs.”
	Value Proposition	Transparency. No real focus on sustainability.
	Customer Relationships	Pre-audits. Help with efficient and sustainable production.
	Channels	“We do everything through the customer. We deliver directly to them, or through wholesalers. There are no specific targets for us to sustain here. We want to sustain rather existing channels and we also look for new channels, but we are not trying to tackle this based on sustainability.”
	Customers	“It is important that we help our customers to become more sustainable. The non-durable companies don’t come to us not because they want the cheapest, these companies will encounter themselves in the future. We’ll refuse clients who do not meet food safety requirements. We often have an opinion, but we can not condemn, our customers are of course audited so when they are bad they only can blame themselves for it.”
	Revenue	“Sustainability has reduced our selling price because sustainability has ensured that we became more efficient and thus cheaper.”

Table 42 gives an overview of the success factors and the barriers of Company 12.

Table 42 Key Success Factors and Barriers of Company 12

Theme	Model	Constructs	Company 12 (Start-up)
Transition Management	Change Drivers	Pro-Active leadership	"I think this was very important for us. When we went really on the sustainability tour we established a bottom-up program where we were conceived ideas related to sustainability from the staff. We then organized a couple of workshops to discuss sustainability. The bottom-up approach was very important for the involvement of employees. In addition, we have also established targets for sustainability for example on waste and energy."
		Aspiration	"Yes it is an element of leadership off course. If you want to think about adding value to the bakery chain then you are sustainable as a company and as an individual. It is about thinking together with the customer about the whole package, the suppliers, the classification of production and open innovation."
		Economic benefits	"No we have said from the beginning that this was not an opportunity, but it was more a way of operating. You could see it as a kind of social duty we felt, but also as an acknowledgment of how sustainable we already were."
		External factors	"We have been encouraged by the government to make the chain more sustainable, this was based on projects. And we still feel some pressure from some research programs of the government."
			"Our clients have a lot of restrictions. The key lies for the bakeries very much in waste reduction. So here the project "Broodzonde" is again very important and interesting."
			"We see as a result of the crisis that bread consumption has decreased, but I do not think people ate less bread, so then you can conclude that there is less waste, so consumers have become more efficient and we have contributed to this with our enzyme story."
	Change Barriers	Correct diagnosis	"From the main organization we are forced to continue to improve our operations, in addition the rising energy and raw material costs are important as motivation to be more economical. And every year we have to grow at least 10% so there is a high innovation and cost pressure on us."
		Upsurge of visible crises	"This ensures that you always have to stay sharp and that you should always focus on innovating and sustainability."
		Non-active leadership	"We first looked at how our processes could be salvaged, that was step 1, the efficiency. As a logical follow-on there was sustainability. So we started a sustainability program with the following aspects: Drivers: chain responsibility, risk mitigation, innovation, quality assurance and thereby we set targets on chain development, planet, health & nutrition, People, Transparency & Profit."
		Fear	-

		Economic losses	High investments and low profitability of renewable energy sources such as solar power.
		External factors	Power of retail makes it hard for bakeries
		Wrong diagnosis	-
		Upsurge of visible crises	-

8.13 Company 13

This section describes the results for Company 13. It describes the results for the FPM, the EAM, The BMC, and the Success Factors and Barriers.

Company 13 scored 7 out of 8 in the FPM. Company 13 has no focus on reporting about their sustainability. Company 13 has no sustainability report, but they do have their transparency model, however this is not enough to score on this construct.

Company 13 scored 4 out of 8 for the EAM. Company 13 has no focus on waste, substitution, functionality and sufficiency. De owner of the Company 13 has no specific argumentation on the lack of focus on waste and functionality. The lack of focus on substitution was due to the high investment threshold, and the lack of sufficiency was due to the lack of ambition to adjust consumer behaviour.

Table 43 The EAM for Company 13

8- Archetypes Model	Efficiency	Decrease energy consumption. Cooperations with government organizations. Local production. Animal welfare.
	Waste	No specific focus on waste.
	Substitution	"No we don't do anything with substitution due to the high investment threshold."
	Functionality	"No we don't do anything with functionality."
	Stewardship	Biodiversity protection. Animal welfare. Consumer health. Radical transparency.
	Sufficiency	"No ambition to adjust consumer behaviour."
	Repurpose	Use buffalos for mowing locally. Cooperate with Staatsbosbeheer and Natuurmonument . Transparency model.
	Scale-up	"I have no ambitions of scaling up."

Company 13 scored 6 out of 9 for the Business Canvas Model. Company 13 does not focus on sustainability aspects on the value proposition, customers and revenue component. The owner stated about the value proposition: *"I want to operate as sustainable as possible but I don't have a specific sustainability mission."* The owner of the

Company 13 has no sustainable aspects for his revenue and he has very diverse customers so here is also no focus on sustainability.

Table 44 The BMC for Company 13

Business Model Canvas	Key Partners	"I choose all my partners based on sustainability. Local for local."
	Key Resources	Use resources as little as possible. No tractor. Being sustainable with your physical capital. Human capital
	Key Activities	Try to exclude middleman and retail, short supply chains. Organize activities to get consumer at the farm. Sustainable productions.
	Costs	"Most of my decisions or investments are based on sustainability. But for minor things I often make the choice for easy instead of more expensive sustainable options."
	Value Proposition	"I want to operate as sustainable as possible but I don't have a specific sustainability mission."
	Customer Relationships	Crowd funding. Involve customers in production process. Story telling. Social media. Open days.
	Channels	Web-sales and pick-up points
	Customers	Very diverse customers, no focus on sustainability.
	Revenue	No focus on sustainability.

Table 45 gives an overview of the success factors and the barriers of Company 13.

Table 45 Key Success Factors and Barriers of Company 13

Theme	Model	Constructs	Company 13 (SME)
Transition Management	Change Drivers	Pro-Active leadership	"I run the company by myself so I don't think that leadership is important."
		Aspiration	"Yes this was very important. Without my vision and aspiration this farm wouldn't exist."
		Economic benefits	"I saw an opportunity in the market. I thought that the consumer would pay more for good meat and I saw the opportunity of the combination between unique products and sustainability."
		External factors	"It is a nice challenge to convince the consumer to buy sustainable products. " "Meat scandals were a success for me because this resulted in more transparency and more attention for my products." "My unique products are a success factor."
		Correct diagnosis	-

		Upsurge of visible crises	"I started from my ethical sense to be more sustainable but I also saw that the market was changing and so I saw an opportunity to earn a living, so I started this company."
	Change Barriers	Non-active leadership	-
		Fear	-
		Economic losses	-
		External factors	"It is a barrier that I only have this location for my sales. Not all the consumers are willing to take a trip to my farm to buy my products. " Hard to think of distribution model for online sales
		Wrong diagnosis	-
		Upsurge of visible crises	"The potential competition can throw a spanner in the works but that's for a later concern because I am still ahead of them."

8.14 Company 14

This section describes the results for Company 14. It describes the results for the FPM, the EAM, The BMC, and the Success Factors and Barriers.

Company 14 scored 8 out of 8 in the FPM.

Company 14 scored 6 out of 8 for the EAM. Company 14 has no focus on sufficiency and repurpose. The director had no argumentation on why there is no focus on sufficiency and repurpose for society.

Table 46 The EAM for Company 20

8- Archetypes Model	Efficiency	Daily monitoring of efficient production. Efficient logistics.
	Waste	Waste separation and reduction. Investment for waste machinery was too expensive. Biodegradable packaging.
	Substitution	Energy saving in office. Looking for solar energy possibilities. Sustainable cooling equipment.
	Functionality	Optimal logistics. Service for customers. Tailor made solutions for customers.
	Stewardship	Healthy food. Regional employment and job creation.
	Sufficiency	No specific sustainability aspects.
	Repurpose	No specific sustainability aspects.
	Scale-up	Open innovation with key partners.

Company 14 scored 3 out of 9 for the BMC. Company 14 does not focus on sustainability aspects on the key resources, key activities, value proposition, channels, customers, and the revenue component. The director gave one comment on why they had a low score on the BMC: *“No real focus on sustainability in healthcare sector and therefore too little in our company and you can see this back in the business model.”*

Table 47 The BMC for Company 14

Business Model Canvas	Key Partners	Pulsar Network Capital. Local sourcing for Menu Natuurlijk. Organic suppliers.
	Key Resources	No real focus on sustainability.
	Key Activities	No real focus on sustainability.
	Costs	Reduce costs by working sustainable and efficient. Daily monitoring. Encourage personnel to become more sustainable. Sustainability program with targets.
	Value Proposition	No real focus on sustainability in healthcare sector and therefore too little in our company.
	Customer Relationships	Give advice regarding waste and recycling. Product assistance. Minimal packaging. Sustainable packaging.
	Channels	No real focus on sustainability.
	Customers	Niche market with sustainable customers. No focus on sustainability
	Revenue	No real focus on sustainability.

Table 48 gives an overview of the success factors and the barriers of Company 14.

Table 48 Key Success Factors and Barriers of Company 14

Theme	Model	Constructs	Company 14 (SME)
Transition Management	Change Drivers	Pro-Active leadership	Pro-active leadership was very important.
		Aspiration	“Cooperate with nation-wide initiatives. Share vision and strategy regarding sustainability that this was important for us.”
		Economic benefits	“We saw an opportunity in the market regarding sustainability; therefore we started with Menu Natuurlijk.”
		External factors	“Scandals were a very good wake up call for us.”
		Correct diagnosis	“With all the food scandals we had diagnosed that something had to change and that we needed to become more sustainable.”

		Upsurge of visible crises	“Especially the crisis in the health care was important to us. Because it went bad in the healthcare, we were obliged to look for new channels. We also see the crisis in the food industry and the food crisis as an opportunity, we look at the problems and we try to make our own business distinction and thus find solutions and opportunities.”
	Change Barriers	Non-active leadership	-
		Fear	-
		Economic losses	The problem is the availability of capital to invest.
		External factors	“Our existing infrastructure is a barrier, even if you want to change and you can invest then you find out that your current building is not good enough, these are some things that are unfortunate.”
		Wrong diagnosis	-
		Upsurge of visible crises	-

9. Conclusion

This section describes the overall conclusions for the used models in this research. It describes the conclusion for the FPM, the EAM, The BMC, and the Success Factors and Barriers.

9.1 Sustainable Business Models

This section describes the conclusion of all the companies about the Sustainable Business Model theory, this comprises of the FPM and the EAM. Each model has eight variables that will be discussed briefly in this section. Appendix P gives a clear overview of the results per construct.

The FPM does not need a thorough conclusion since all the companies were chosen on the constructs ex ante. If a company did not meet the required number of constructs than it would not participate in this research. The only construct that might need some discussion is the reporting construct. Only three of the fourteen participants scored positive on this construct. Small companies and start-ups do not see the use of a sustainability report. Furthermore, some claim that it is too costly and that it takes too much time. Some companies stated: *“This is full of marketing soaked fake sustainability”*, or: *“We don’t have a sustainability report. It feels like an unwanted control mechanism. We are busy enough with our start-up. We know how sustainable we are for ourselves”*. In Figure 14, a radar graph of the FPM is presented to get a clear overview of how the participating companies scored on the sustainability constructs.

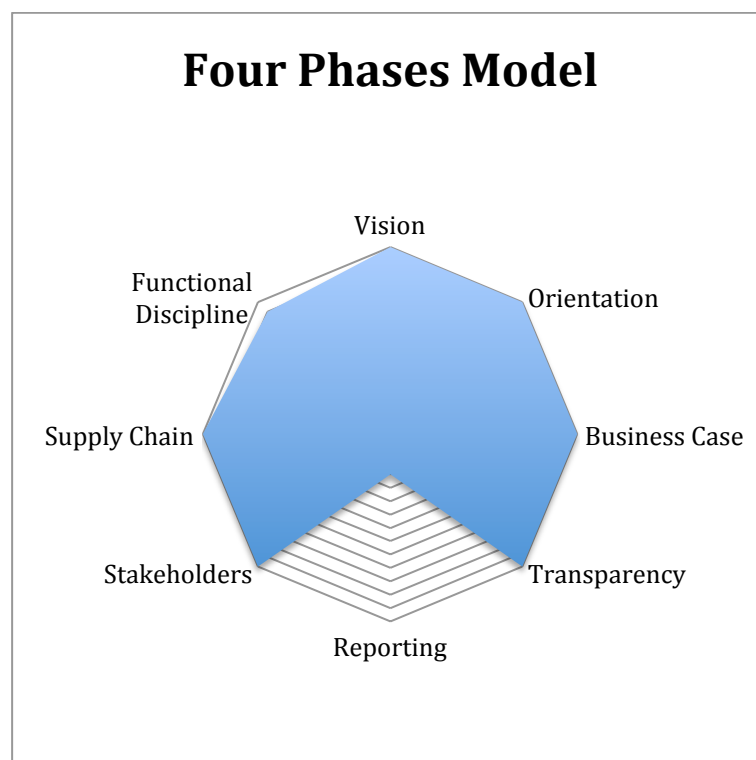


Figure 14 Radar graph of the FPM

The next model that needs to be discussed is the EAM. The first construct of this model is about Efficiency. All companies focus on efficiency, and five companies specifically said that it also was important for cost-reduction. So for this construct we see a sustainable and economic driver.

The second construct is about Waste. For this construct, two companies did not focus on sustainable aspects for their waste. One company only focuses on waste separation and has ambitions for biodegradable packaging if it doesn't influence the cost price and this is not sustainable. One company has no focus on sustainable waste management. All the companies that do have a focus on waste first focus on waste reduction, other companies stated that their raw materials were very expensive and that they therefore should be very efficient and therefore, reduce waste. Some companies do not have waste at all because they only produce/deliver on order or because they only provide services and no products.

The third construct is about Substitution. Only half of the participants focus on Substitution and renewable energy sources. The companies that do not focus on this construct indicated that the threshold for investments is too high and that solar energy is not profitable enough. Some organizations rent their building, so they have no leverage to choose for solar energy or green energy.

The fourth construct is Functionality. Two participating organizations have no focus on this construct. These two companies rather focus on other aspects. Some functionality aspects that the other participants deliver: convenience and service for client/customer; high service product assistance; platform functions; social job creation; education models; co-creation; and organizing events.

The fifth construct of the EAM is Stewardship. All companies focus on stewardship. The focus at the companies lies on promoting consumer health, ethical trade, radical transparency, biodiversity protection, education models, and knowledge sharing.

The sixth construct is Sufficiency. Eleven of the fourteen companies focus on Sufficiency. The other three companies have no specific sustainable aspects to influence consumer behaviour. The companies that focus on sufficiency focus on creating awareness regarding sufficiency at consumer level, for example smaller daily recommended portion sizes.

The seventh construct is about Repurpose for Society. There was one company that has no focus on this construct because there were no specific sustainability aspects regarding this construct. The other thirteen companies have for example a deposit system for their delivery crate, a platform/network function, some focus on flex-working (however this is not applicable for the production companies), some are social enterprises, and a lot focus on the localization of their operations.

The eighth construct is Scale-up. All companies, but one, want to scale-up by collaborative approaches; incubators and entrepreneur support models; open innovation; or crowd sourcing/funding. One company stated: *"Due to our growth, we are trying to get more impact in the supply chain so that we can make the chain more sustainable. Our supply chain is secured by passing the bio certificates so here we also play a significant role"*.

Figure 15 presents an overview of the scores on the EAM. The radar graph gives a clear overview of how the participating companies scored on the sustainability constructs.

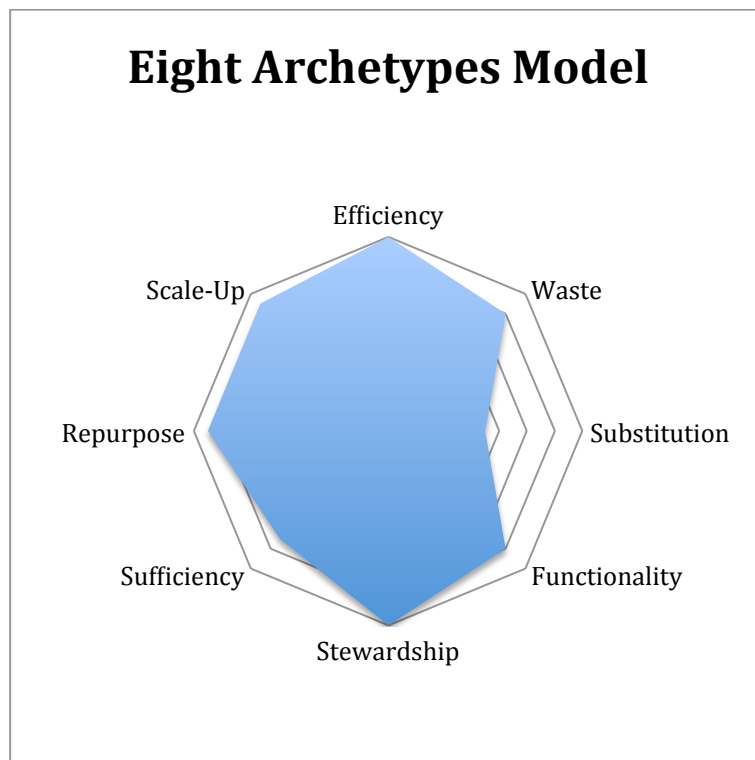


Figure 15 Radar graph of the EAM

9.2 Business Model Canvas

This section describes the conclusion of the interviews about the BMC, it describes if and how the participating companies implemented sustainability into the nine constructs of the BMC. The first construct is about the Key Partners. Thirteen out of fourteen companies focus on sustainability when choosing Key Partners. One organization has no focus on sustainable partners. All other organizations state that they have specific requirements regarding sustainability for their key partners.

The second construct is about the Key Resources. Eleven companies indicate that they have sustainability considerations when choosing their Key Resources. Six companies focus on physical capital, four on financial capital (green investors, and Triodos bank for example), eleven focus on human capital, and three have no focus on sustainability regarding key resources.

The Key Activities is the third construct. All companies indicate that they focus on sustainability with their Key Activities. The companies state that they are social enterprises that organize workshops, have collaborations with sustainable key partners, and some of them founded a platform or a network where other sustainable entrepreneurs can meet.

The cost structure is the fourth construct of the BMC. Three companies have no sustainability aspects in their Cost structure. The companies that don't focus on sustainable costs sometimes choose for affordability instead of sustainability. The other companies are willing to pay a bit more for a sustainable solution, but they also believe that sustainability reduces costs due to efficiency. Sourcing and shortening the supply chain is important, so is ethical trade.

The fifth construct is about the Value Proposition of the company. Eleven companies indicated that sustainability is an important aspect of their Value Proposition. The companies that do not have a focus on this construct state that they are not the company type to be very specific on sustainability in their mission or vision, this is because they focus on B2B and not on B2C. The other eleven companies have a strong focus on sustainability when it comes to satisfying consumer needs and solving consumer problems.

The sixth construct, Customer Relationships, was important for all participating organizations. The companies focus on: Personal assistance, customer intimacy, free sampling, full-service, education, co-creation, and organizing events. All the companies indicated that they aim to implement sustainability as much as possible in these activities.

The seventh construct is about the Channels. Eleven companies focus on sustainable channels. Some companies do not have a focus on sustainable channels. The others focus on efficient distribution/logistics, social media, and co-creations with other actors in supply chain.

The eighth construct is about the Customers. Eleven out of the fourteen participating organizations indicate that there are sustainability aspects in their Customer construct. The companies that do not have a sustainable focus state that they have no sustainability aspects due to diversity of potential customers. Companies focus on getting more consumers by putting focus on awareness creation regarding sustainability. Companies also focus on “sustainable” consumers and early adapters.

The ninth and final construct of the BMC is about the Revenue streams of the organizations and how sustainability is addressed in this construct. Five companies indicate that sustainability is an important aspect for their Revenue. Companies with sustainable revenues have dynamic profit margins and transparent value chain. The other companies have no sustainability aspects for their profits.

If we compare the results of the BMC for the SME's and the Start-ups than we see some interesting results. As can be seen in the radar graph in Figure 16, the SME's especially focus on Key Activities, Customer Relationships, Customers and Key Partners. For the Start-Ups the most profound building blocks for a SBM are Key Partners, Key Resources, Key Activities, Costs, Value Proposition, Customer Relationships, and Channels. This difference can be explained because start-ups are intrinsically focused on sustainability; this means that these organizations can start with sustainable building blocks whereas the SME's have to force the transition from their non-sustainable building blocks towards sustainable building blocks. For some building blocks changing is not about flipping a switch, it requires more time and effort and this might be the reason why SME's tend to focus on fewer building blocks than start-ups.

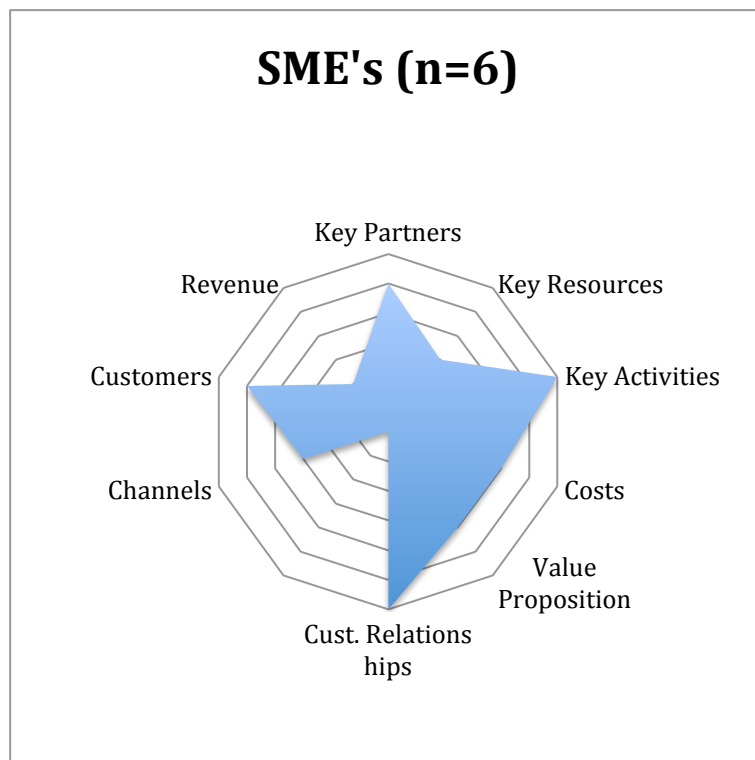


Figure 16 Radar graph of BMC and SME's

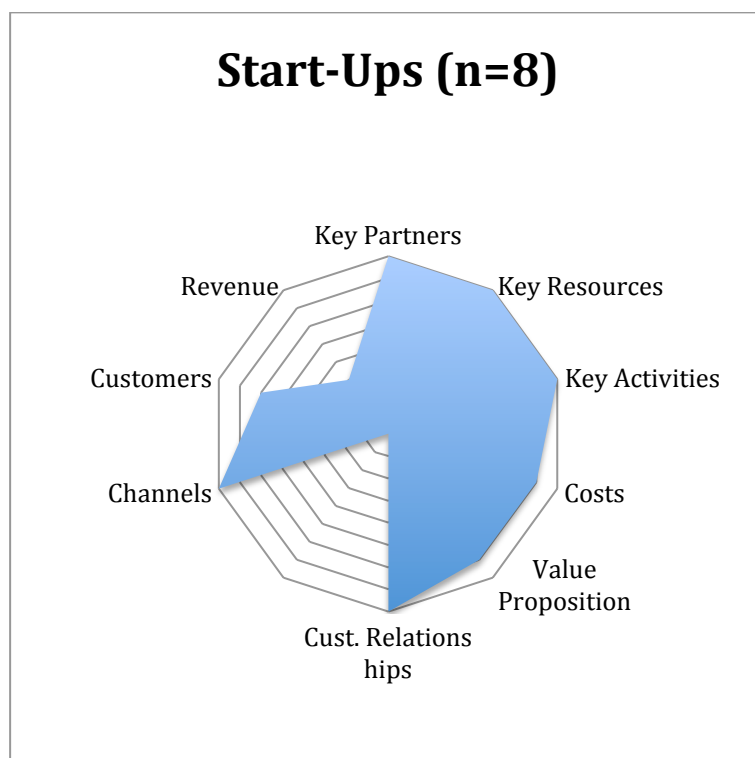


Figure 17 Radar graph of BMC and Start-ups

Figure 18 gives an overview of how the participating organizations scored on sustainability aspects within the BMC. A further explanation of the results of the BMC is displayed in a table that can be found in Appendix Q.

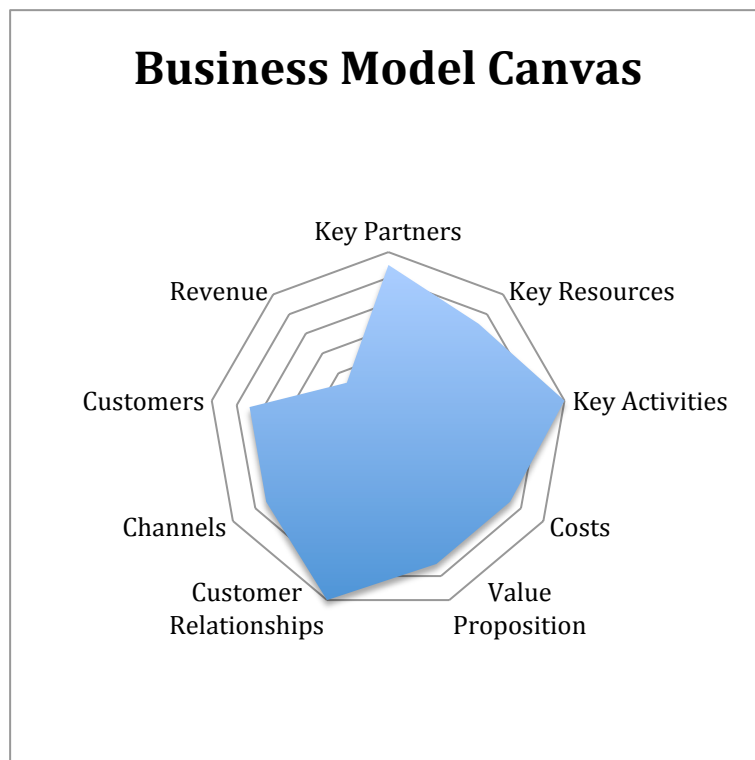


Figure 18 Radar graph of the Business Model Canvas

9.3 Transition Management

This section describes the outcomes and the conclusions of the interviews about TM. This section encompasses the conclusions of the success factors and the barriers of the transition to the SBM's of the participating organizations. The first half of this section handles the success factors for change, whereas the second part handles the change barriers.

The success factors contain the following constructs, Pro-Active Leadership, Aspiration, Economic Benefits, External Factors, Correct Diagnosis, and Upsurge of Visible Crises. The first construct is Pro-Active Leadership. Twelve companies indicated that this was an important success factor for them. Two companies indicated that this was not important for them, this was because one company was pro-active, but not regarding sustainability. The other company was a one man-sized company so "leadership" was not the case.

The second construct, Aspiration, was very important for each participant. All organizations focus on producing continuous learning and growth, and have a positive vision on sustainability. One company stated: *"Our vision and aspiration were very important. If we lacked vision and aspiration then we would not have even started. So there is a strong connection between leadership and aspiration"*. More companies shared this statement: *"Yes it is an element of leadership off course. If you want to think about adding value to the supply chain then you are sustainable as a company and as an individual. It is about thinking together with the customer about the whole package"*.

The third construct is Economic Benefits. Eight out of the fourteen companies stated that the potential Economic Benefits of their operations were an important success factor for their transition to or start with a SBM. However, some see sustainability as a way of life;

it is something that has nothing to do with economic benefits. Other companies saw a lack of transparency, healthy food, or other sustainable aspects as a reason to start with a SBM.

The fourth construct is the External Factors as potential success factor. Thirteen companies indicated that there were External Factors that were good for the transition to or the start with a SBM. The most profound external success factors were the increasing attention of consumers towards sustainable food, the government cooperation and participation and the sustainable strategies of the retailers. All the external factors together: The government (4), consumers (8), retail (4), scandals (3), farmers (1), vacuum of organic agriculture (1), Russian boycott (1), lack of pro-activeness of other organizations (1), pressure from clients or mother organization (2), the economic crisis (1). A further explanation of these external factors can be found in the TM section per organization.

The fifth construct is Correct Diagnosis. Four companies indicated that an internal diagnosis was important for them in order to set the change towards sustainability in motion. It is important to note that this variable is not applicable to start-ups. Some companies stated that the diagnosis led to a direct change but other companies stated that it is about a continuous process of diagnosing and developing your processes and your sustainability performance.

The sixth construct is about the Upsurge of Visible Crises as a potential success factor. Ten companies indicated that this construct was important for them, meaning that the changes in the market and the upsurges of crises helped them to become more sustainable. The various problems in the food industry resulted in an urge to become more sustainable for the ten companies. The problems that they indicated were: (food) scandals, too much private labels, the lack of transparency in the chain, increasing regulations, lack of sustainability at previous jobs, and the growing awareness towards sustainability.

Figure 19 gives a clear overview of how many participating organizations mentioned each of the potential success factors. As can be seen, the Correct Diagnosis scored lower than the other Success Factors, this is no surprise due to the high amount of start-up participants. A further explanation of the constructs is displayed in the table that can be found in Appendix R. Figure 19 also indicates that the most profound success factors for SBM innovation are Aspiration, Pro-Active Leadership and External Factors. According to most of the participants, the combination between Aspiration and Leadership was the most important success factor for their SBM innovation. This implies that being pro-active with a good vision can be the key success factor of a successful transition towards a SBM. The most profound External Success Factors were the Government, the Retailers, and the Food Scandals.



Figure 19 Radar graph of the Success Factors

The second and final part of this section addresses the barriers for change as indicated by the participating organizations during the interviews. The constructs of the barriers are the opposites of the key success factors. The barriers encompass Non-Active Leadership, Fear, Lack of Economic Benefits, External Factors, Wrong Diagnosis, and Upsurge of Visible Crises. Evidently Non-Active Leadership and Fear are not an issue because all companies already stated that Pro-Active Leadership and Aspiration were important success factors. Therefore, we start with the third construct: Lack of Economic Benefits.

The Lack of Economic Benefits was mentioned five times during the interviews. The participating companies mentioned the following problems regarding Economic Benefits: Lack of investment capital (4), still in start-up phase so too little profits (1), low profitability of renewable energy (1), increasing competition (1).

The fourth construct is about the external factors. Each company mentioned one or more external factors that had a negative influence on the change to a SBM. The most profound external factors were the lack of government cooperation, the power of the retail, the lack of consumer awareness and the physical location of the operations. The specific external factors were: The government (6), customers (2), power of the retail (3), the economic crisis (1), the criticism on MSC certification (1), the economic pressure of external parties (1), the lack of cooperation in supply chain (1), the lack of media attention (1), the physical location of the operations (2), the difficulties to develop online sales model (1), and time (1). A further explanation of these external factors can be found in the TM section per organization.

The Wrong Diagnosis is the fifth construct that was discussed during the interviews. However, this construct is not applicable because all organizations had correct diagnosis and/or upsurge of visible crises as key success factor.

The final construct, Upsurge of Visible Crises, was mentioned four times during the interviews. They all indicated that the growing competition in the market might be important as barrier and was therefore stated at the Upsurge of Visible Crises construct. There were no real barriers in the current market developments.

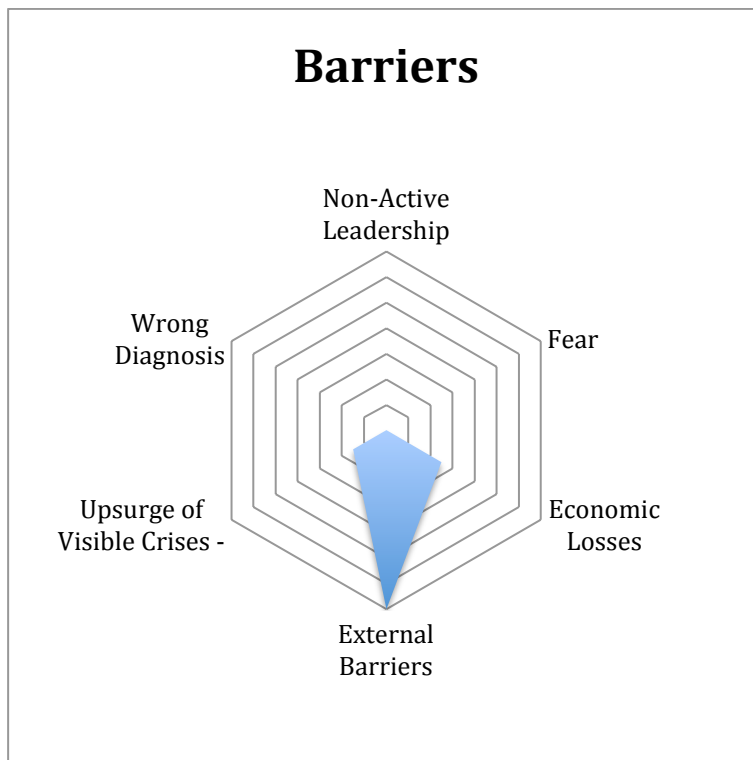


Figure 20 Radar graph of Barriers for change

Figure 20 displays a radar graph of the barriers for change. As can be seen the most profound barrier is the External Factors. This is no surprise since most of the success factors immediately exclude the opposing barrier for transition. A further explanation of the constructs is displayed in Table Appendix R.

10. Discussion

This section describes the discussion of the results as presented in the previous chapter. The conclusions are presented in the following order: (1) Four Phases Model (Van Tilburg et al., 2012), (2) The Eight Archetypes Model (Bocken et al., 2014), (3) Sustainability and The Business Model Canvas (Osterwalder and Pigneur, 2010), (4) Transition Management and the Success Factors and Barriers (Lozano, 2009), (5) The Research Questions, and finally (6) The Overall Conclusions.

The results of the FPM are no surprise since the participants were chosen based on an ex-ante analysis of the FPM and the aimed participant. The only conclusion that can be drawn is that it seems that start-ups do not focus on sustainability reporting and that the more mature a sustainable organization is, the more they tend to focus on sustainable reporting. This is quite evident because companies focus on survival in the starting phase, whereas they can broaden their focus if business goes well. An important remark about the FPM is that the Reporting construct may be considered as a non-decisive variable for the FPM assessment. This is an important point for discussion because the literature tells us to use the Reporting construct as an important variable to assess whether a company is sustainable or not, while on the other hand reality shows us that this is a difficult variable for smaller companies, further quantitative research should indicate whether this variable should be decisive or not (Van Tilburg et al., 2012).

Table 49 Conclusion Four Phases Model

Theme	Model	Constructs	SME's (n=6)	Start-Ups (n=8)
Sustainable Business Models	4-Phases Model	Vision on sustainability	6	8
		Orientation external developments	6	8
		Business case elements	6	8
		Transparency	6	8
		Reporting	2	1
		Stakeholders	6	8
		Supply chain approach	6	8
		Dominant functional discipline	6	7
	Score		7/8	6/8

Some constructs of the EAM need a separate discussion due to the company diversity; only the constructs with a specific conclusion are discussed. The constructs that are not discussed are because all companies implemented the construct, or because there is no specific conclusion about the construct because only one or two companies failed to implement the construct, ergo: the conclusion about the constructs that are not discussed is that companies that are in the pro-active phase tend to implement that construct in their operations.

The first construct that will be discussed is Efficiency. All participating companies focused on Efficiency, but five of them specifically stated that this also was very important for their cost-reduction, so for Efficiency there is also an economic driver.

The second construct that requires discussion is Substitution. Only 50% of the interviewed companies focused on Substitution. The high threshold of investments and the fact that solar energy is not yet profitable enough seems to be the biggest problem. Some organizations rent their building, so no they leverage for solar energy or green energy. Some companies indicated that they missed the contribution of the government regarding renewable energy sources, so here we can draw two conclusions: (1) The high threshold of investments reduce the opportunity to implement Substitution; (2) The lack of Government contribution tends to reduce the willingness to invest in Substitution.

If we compare SME's and start-ups for the EAM than we see some remarkable results. The overall results of where the constructs scored 100% (meaning that all the SME's or start-ups focused on the construct) indicate that SME's tend to focus on five of the eight archetypes whereas the start-ups only tend to focus on three of the eight archetypes. A possible explanation for this is that most start-ups lack financial capital to invest.

Table 50 Conclusion Eight Archetypes Model

Theme	Model	Constructs	SME's (n=6)	Start-Ups (n=8)
Sustainable Business Models	8-Archetypes Model	Efficiency	6	8
		Waste	6	6
		Substitution	4	3
		Functionality	6	6
		Stewardship	6	8
		Sufficiency	5	6
		Repurpose	5	8
		Scale-up	6	7
	Score		5/8	3/8

The next model that is up for discussion is the BMC. Since all the BMC segments are important to answer the SRQ's, all the segments will be discussed in this section. The first segment of the BMC is the Key Partners, thirteen out of the fourteen participants indicated that they had specific requirements regarding sustainability for their Key Partners; this indicates that companies with an SBM focus on sustainable Key Partners.

The next segment of the BMC is the Key Resources. Eleven companies focused on sustainable Key Resources, six of them focus on physical capital, four focus on financial capital (green investors, Triodos Bank), eleven focus on human capital, and three companies have no focus on sustainability regarding key resources. All start-ups focus on sustainable Key Resources, so for start-ups the conclusion is that sustainable start-ups also seem to implement sustainable Key Resources in their operations, whereas this is difficult to say for sustainable SME's.

The Key Activities is the next segment of the BMC. All participating companies indicated that they focused on sustainability within their Key Activities. Since all companies implement sustainability in their Key Activities, the conclusion is that sustainable organisations also tend to focus on sustainability in their business model regarding Key Activities.

The next segment in the BMC is the Cost structure. Eleven companies indicated that they implemented sustainability in their cost structure. The companies that don't focus choose for affordability instead of sustainability. The other companies are willing to pay a bit more for a sustainable solution, but they also believe that sustainability reduces costs due to efficiency. Sourcing and shortening the supply chain is important, so is ethical trade. From the three companies that did not have a focus on sustainable costs, there was one start-up and two SME's. It is difficult to draw a clear conclusion here due to the spread of the results.

The Value Proposition is the next BMC segment. Again, eleven companies indicated that they implemented sustainability in their Value Proposition. The companies that indicated that they do not have a focus here stated that they are not the company type to be very specific on sustainability in mission or vision. The three companies that indicated that they do not have a sustainable Value Proposition were all production companies, one of them is a start-up, and the other two are SME's. The other eleven companies have a strong focus on sustainability when it comes to satisfying consumer needs and solving consumer problems. Again, it is difficult to draw a clear conclusion here due to the spread of the results.

The next segment is the Customer Relationships. All participating companies indicated that they focus on sustainability within their Customer Relationships. The companies indicated that they focus on: Personal assistance, customer intimacy, free sampling, full-service, education, co-creation, and sustainability events and workshops. The conclusion that can be drawn is that companies with a SBM also tend to focus on sustainable Customer Relationships.

The Channels is the next segment of the BMC. Eleven companies stated that they focus on sustainable Channels for their SBM. Some companies do not focus on sustainable channels. The others focus on efficient distribution/logistics, social media, and co-creation with other actors in supply chain. All the companies that did not focus on sustainable Channels were SME's, indicating that all start-ups tend to focus on sustainable Channels for their SBM.

The next segment for the BMC is the Customers. This construct also scored an eleven out of fourteen. Some organisations have no sustainability aspects due to the diversity of potential customers. Other companies focus on getting more consumers by putting focus on awareness creation regarding sustainability. Companies also focus on "sustainable" consumers. Since two start-ups and one SME had no focus on sustainable Customers, it is again difficult to draw a clear conclusion.

The final segment of the BMC is the Revenue. Only five companies indicated that they focus on a sustainable Revenue structure. Companies with a sustainable Revenue structure have dynamic profit margins and transparent value chain. The lack of

transparent value chains indicates that organizations with a SBM do not focus on a sustainable Revenue structure.

The overall results of the BMC indicated that all participating SME's focused sustainability within two of the nine segments of the BMC, namely Key Activities and Customer Relationships, whereas the all the participating start-ups focus on five out of the nine segments, namely Key Partners, Key Resources, Key Activities, Customer Relationships and Channels. An explanation for this result is that start-ups are intrinsically focused on sustainability; this means that these organizations can start with sustainable building blocks whereas the SME's have to force the transition from their non-sustainable building blocks towards sustainable building blocks. For some building blocks changing is not about flipping a switch, it requires more time and effort and this might be the reason why SME's tend to focus on fewer building blocks than start-ups. This is contrasting with the literature because the authors expected that all building blocks were based on sustainability for the selected participants. For further research it might be an idea to use the CBM instead of the BMC since the CBM is more focused to analyse the strategy of an organization, for sustainability purposes this might give better results. The BMC is a good tool to get an overview of a firms activities (Osterwalder and Pigneur, 2010) but the CBM is also an option to consider since this model is focused on strategy (Pohle et al., 2006).

Table 51 Conclusion Business Model Canvas

Theme	Model	Constructs	SME's (n=6)	Start-Ups (n=8)
Business Model Frameworks	Business Model Canvas	Key Partners	5	8
		Key Resources	3	8
		Key Activities	6	8
		Costs	4	7
		Value Proposition	4	7
		Customer Relationships	6	8
		Channels	3	8
		Customers	5	6
		Revenue	2	3
	Score		2/9	5/9

The next model up for discussion is the Transition Management theory with the Success Factors and the Barriers. The first construct and potential Success Factor is Pro-Active Leadership. Twelve companies indicated that Pro-Active Leadership towards sustainability was an important factor for their success. One company indicated that they are pro-active, but not regarding sustainability. The other company was a one man-sized company so "leadership" is out of the question here. All other organizations are very pro-active regarding sustainability. For this construct, the conclusion is that Pro-Active Leadership is an important Success Factor for the transition towards SBM's.

The next potential success factor is Aspiration. All participating organizations indicated that this was an important Success Factor for their start-up or transition towards their SBM. All organizations focus on producing continuous learning and growth and have a positive vision of sustainability indicating that we can conclude that Aspiration is an important Success Factor for the transition towards SBM's.

The Economic Benefits are also an important potential Success Factor. Some organizations see sustainability as a way of life; it is something that has nothing to do with economic benefits. Other companies saw a lack of transparency, healthy food, or other sustainable aspects as a reason to start with an SBM. All in all, eight companies indicated that this was an important success factor for them, but this is not enough to state that the Economic Benefits are an important success factor for the transition towards SBM's.

The next potential Success Factors are the External Factors. Thirteen participants indicated that there were external factors that were important for their transition towards an SBM or their start-up. Evidently the participants stated different external factors. The following External Success Factors were stated: Government cooperation (4x), growing awareness of consumers (8x), growing attention of retail for sustainability (4x), food/meat scandals (3x), more organic farmers (1x), vacuum of growing organic agriculture (1x), the Russian boycott (1x), the lack of pro-activeness of other organizations (1x), the pressure from clients or mother organization (2x), and the economic crisis (1x).

The Correct Diagnosis can be another potential Success Factor. Since this factor is not applicable to start-ups, only four participants stated that this was important for them. The companies stated that it was about a continuous process of diagnosing and developing your processes and your sustainability performance. The other two SME's stated for this construct that their operations are based on sustainability and that they started with a SBM so for this reason this driver for change was not important, therefore, the conclusion for this factor is that it was an important success factor for SME's that did not start with an SBM.

The final potential Success Factor is the Upsurge of Visible Crises. Ten companies indicated that this was applicable to their successful transition towards their SBM. The companies claimed that the various problems in the food industry resulted in an urge to become more sustainable for these ten companies. The problems were: scandals, too many private labels, lack of transparency, increasing regulation, lack of sustainability at previous jobs, growing awareness towards sustainability. From those ten were seven start-ups and three SME's, meaning that it is difficult to draw a clear conclusion for this potential Success Factor.

Table 52 Conclusion Success Factors

Theme	Model	Constructs	SME's (n=6)	Start-Ups (n=8)
Transition Management	Success Factors	Pro-Active leadership	5	7
		Aspiration	6	8
		Economic benefits	3	5

		External factors	5	8
		Correct diagnosis	4	0
		Upsurge of visible crises	3	7

The final part of the TM model is up for discussion: the Barriers for change. The Barriers are the opposites of the Success Factors and for that reason there were zero companies that indicated that Non-Active Leadership and Fear were Barriers for change since they all indicated that Pro-Active Leadership and/or Aspiration were important Success Factors for them.

The next potential Barrier is the Lack of Economic Benefits or the potential of Economic Losses. Five companies indicated that the Lack of Economic Benefits were a Barrier for their change towards their SBM. Four companies stated that the lack of investment capital was a barrier, one company stated that they were still in the start-up phase and that they lacked profits at the moment, one company indicated that the low profitability of renewable energy sources is a barrier for change, and one company indicated that the high level of competition resulted in a low amount of sales. Since only five out of the fourteen participants indicated Economic Losses as Barrier it cannot be said that this factor is an important Barrier for change towards SBM's.

The External Factors were already discussed as potential Success Factors; however, they can also be seen as Barriers. All the participants indicated one or more External Factors as Barriers. The following External Barriers were stated: Lack of government cooperation (6x), Lack of customer awareness (2x), pressure from retail (3x), economic crisis (1x), the criticism on MSC certification (1x), the economic pressure of external parties (1x), the lack of cooperation in supply chain (1x), the lack of media attention (1x), the physical location (2x), the difficulties to develop online sales model (1x), and the lack of time (1x).

The Wrong Diagnosis is also a potential Barrier for change. However, none of the participants indicated this as a barrier. Therefore it can be concluded that this is not a barrier that affects the change towards SBM's.

The final Barrier is the Upsurge of Visible Crises. Four companies indicated this as a barrier and their opinion was that the growing competition in the market might affect their willingness to change. There were no other barriers in current market developments. Due to the low amount of companies that indicated this Barrier, it is assumed that this construct is not important as a barrier towards SBM development.

The final discussion about the TM part is the reflection on the application of the model to reality. Since the authors only used the change drivers of the TM it is difficult to discuss the entire TM framework of Lozano (2009). The change drivers were very easy to use in reality, especially because all potential variables were covered due to the "general" application of the constructs; this was especially the case for the External Factors. For further research it is an option to include the Resistance to Change aspect of the TM framework since that also discusses individual, group, and organizational resistance to change (Lozano, 2009).

Table 53 Conclusion Barriers

Theme	Model	Constructs	SME's (n=6)	Start-Ups (n=8)
Transition Management	Change Barriers	Non-active leadership	0	0
		Fear	0	0
		Economic losses	2	3
		External factors	6	8
		Wrong diagnosis	0	0
		Upsurge of visible crises	0	3

This part of this section discusses the answers to the research questions. The questions shall be answered concisely since most of the conclusions are already drawn in this section. The first SRQ is: “What are the dynamics and characteristics of the methods involved in the (strategic) business model innovation and transformation processes?” As evidenced by the literature and the interviews, the change drivers as described in Section 3.3 are the dynamics and characteristics of the methods that are involved in the business model innovation towards SBM's.

The second RQ is: “What are the most profound factors at the organizational level that start the transition from BM's to SBM's in the HTFBI?” The outcomes of the interview are used to answer this question. During the interviews, the authors asked what the most profound factors for change were for the participating companies. The companies indicated that Pro-Active Leadership, Aspiration, and different External Factors were the most important factors for change. Correct diagnosis was also important for most of the SME's, whereas the upsurge of visible crisis was very important for most of the start-ups.

The third SRQ was: “What are the most profound building blocks of the BMC that are affected by the transition from BM's to SBM's in the HTFBI?” The answer to this question is different for SME's and start-ups. For SME's the most profound building blocks seem to be the Key Partners, Key Activities, Customer Relationships, and the Customers. Whereas for the start-ups the most profound building blocks are Key Partners, Key Resources, Costs, Value Proposition, Customer Relationships, and Channels.

The fourth SRQ was: “What are, according to the literature and the interviews, the key success factors for a successful transition?” The answer to this question results especially from the interviews. The representatives of the participating organizations stated that Pro-Active Leadership, Aspiration, and External Factors were the most important success factors for a successful transition towards an SBM.

The fifth SRQ was: “What are, according to the literature and the interviews, the main barriers that prevent a successful transition?” The main barrier that was indicated by the participants was the External Factors Barrier. The participants mentioned different External Factors, but the most profound were: Lack of government cooperation, Lack of customer awareness, pressure from retail, the physical location, and the growing

competition. Some participants also indicated the lack of Economic Benefits as barrier for change.

The sixth and final SRQ was: “To what extent are the criteria of SBMs applicable in practice?” This question is already addressed and the conclusion was that the criteria and the FPM are almost fully applicable, however the reporting construct might be questioned because smaller companies have difficulties to realize a sustainability report, even though they might be more sustainable than SME’s with a sustainability report.

The final part of the conclusion section is about the Overall Conclusion and an answer to the question how the results fit into a broader context. The theoretical implication of the results is that the theory and the models used in this report help us to identify the success factors and barriers for business model innovation. The practical application of the results suggests that this report can be used as a Sustainability Assessment Tool for companies with an SBM. Another important practical aspect is whether the model is applicable to other sectors. As stated previously in this discussion, each model had its advantages and disadvantages, however the combination of the models seems to be applicable to other sectors. The theoretical model is applicable to other sectors because all the models individually were generalized models, the authors made them into one theoretical model for the food industry but it is also applicable to other sectors since no specific food aspects were taken into account during the model development. Finally, it is important to discuss the big picture: “Do the findings help us understand a broader topic?” The findings of this report help us to understand the broader topic of sustainability and how organizations can put this into practice. Furthermore, this report can help people to do a quick sustainability check on their organization; the model can be seen as an easy sustainability assessment tool. The report also helps us to identify the key success factors and barriers for organizations that switched to SBM’s; the identification of KSF and Barriers resulted in a basic best practice with tips and tricks on where to focus when your organization want to innovate their BM into an SBM. The final conclusion that can be drawn is that the approach of this report helps firms in the future to detect dissonances at an early stage in the SBM formulation because they can learn from the outcomes of the interviews.

11. Limitations

This section presents the reflection on the research with clarifications and interpretations of the project process. The reflection section elaborates on the hiccups during the process and main the limitations of the research. The first problem that the authors encountered was the problem with the criteria and choosing the companies for the interviews. The authors contacted ca. 60 MNC's, SME's and Start-ups in the HTFBI, however, a lot of companies did not meet the ex-ante criteria for SBM's and a lot of other companies did not want to cooperate with the research. The problem here lies in the criteria and the willingness to cooperate. The willingness to cooperate might be difficult to address. Changing the scope of the research or adapting the criteria for the case selection can solve this problem, unfortunately, for this research this was not applicable. Therefore, the authors had to look further for other participants.

Another important point for reflection is the FPM. The discussion is whether the FPM applicable is to all company types. The results of the reports indicate that smaller companies have more difficulties with sustainable reporting due to lack of finances or because they don't see the use of it. For small companies, it is not realizable, feasible, or useful to make a sustainability report. So here rises the discussion for the FPM: Should companies meet all criteria in order to be identified as a pro-active sustainable organization? Small companies should not be questioned when they don't have a sustainability report but instead the sincerity of sustainability reports should be questioned.

The next point of reflection is also about the case selection. It had taken a long time before the authors were able to contact the companies due to the criteria and the ex-ante assessment. Because it took until November to select the cases, it was very hard to set meetings with the participants due to the busy months with Christmas and other festivities; some companies were not able to meet for an interview and therefore were excluded as a case. This made it very difficult to find new participants during these busy months.

The external validity is also a point for reflection. The researchers only used subjects in the HTFBI and therefore one can state that this research lacks external validity. The cases for this research are not assessed from a broader perspective by deploying an outsider for external validity, this is a limitation of the research, and this shall be further addressed in the Recommendations section.

The final limitation of the research is that because of the lack of time (amongst other reasons), the research is only limited to the Dutch food industry and that only SME's and Start-ups were included as cases. The fact that only SME's and Start-ups were included as cases is also because the authors assumed that smaller companies are more sincere regarding sustainability than MNC's. This statement, however, requires further research.

12. Recommendations

This section describes the recommendations for further research. Evidently the authors encountered some topics that could be addressed in future research. The propositions for further research resulted from the conceptual model and the interview outcomes. Since this research is the first to combine the theories of sustainable businesses, business models and transition management, further researchers that focus on this topic should take these recommendations in consideration.

The first recommendation is about the number of companies and the validity of the research. In order to increase the validity of the research, one should include more companies and especially existing companies and MNC's. Furthermore, the inclusion of MNC's can shine a new light on the current results and conclusions. Another way to increase the validity of the research is to include companies from other sectors; this will guarantee the external validity of the research.

Increasing the number of participants may also indicate that in the future quantitative research is possible. The current qualitative approach is too narrow and quantitative may help us to get a clearer overview of the bigger picture of this research.

Another recommendation for further research is to contact companies at an earlier stage; the authors lost a significant amount of time with waiting for responses and finding new cases when cases did not meet the ex-ante criteria. It may also be considered to include the companies that do not meet the criteria of the ex-ante analysis because then these companies can be used to guarantee the external validity and the future research can help these companies to become more sustainable and meet the criteria in the future.

The researchers stated that this thesis is applicable to other sectors; this statement, however, is not scientifically proven. Further research should investigate whether this statement is true or false. If proven right, it would indicate that this conceptual model could help to make an easy assessment of how sustainable an organization is.

The literature review for this thesis revealed that many of the studies addressing sustainable business models include reporting as a variable, further research should investigate whether this variable is necessary because this seemed to be very difficult and expensive for start-ups.

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Appendices

Appendix A Operationalization Matrix

Theme	Model	Constructs	Operationalization	Questions	References
Sustainable Business Models	4-Phases Model	Vision on sustainability	Holistic, strategic	How important is sustainability for your company? What is the/your definition of sustainability? What is the role of sustainability within your organization? What is your business purpose of sustainability?	Van Tilburg, Van Tulder, and Francken 2012 Stoughton, A. M. and J. Ludema (2012). "The driving forces of sustainability." <i>Journal of Organizational Change Management</i> 25(4): 501-517.
		Orientation external developments	Cosmopolitan, society	What is your (external) orientation regarding sustainability?	Van Tilburg, Van Tulder, and Francken 2012
		Business case elements	Costs, clients, law, reputation, identity, long-term continuity	To what extent is sustainability part of your Business Model?	Van Tilburg, Van Tulder, and Francken 2012
		Transparency	Full transparency (transparency vs. competitive advantage)	How sustainable is your company at this moment regarding sustainability?	Van Tilburg, Van Tulder, and Francken 2012
		Reporting	Integrated with intertwined strategy	Can I have a copy of your Sustainability Report?	Van Tilburg, Van Tulder, and Francken 2012
		Stakeholders	Society	How does your organization see itself regarding sustainability within the society?	Van Tilburg, Van Tulder, and Francken 2012
		Supply chain approach	Co-creation	What do you think of the role of the suppliers regarding sustainability issues? What is the role of the suppliers regarding sustainable entrepreneurship?	Van Tilburg, Van Tulder, and Francken 2012
		Dominant functional discipline	Management/Board and strategy	What is the vision on sustainability for the organization and what are the long-term plans for sustainability?	Van Tilburg, Van Tulder, and Francken 2012
	8-Archetypes Model	Efficiency	Low carbon manufacturing costs; lean manufacturing; additive manufacturing; dematerialization; increased functionality	Does your organization focus on maximizing material and energy efficiency? If so, how?	Bocken et al. 2014
		Waste	Circular economy, closed loop; cradle-2-cradle; industrial symbiosis; reuse, recycle, remanufacture; take back management; use excess capacity; sharing assets; extended producer responsibility	Does your organization focus on creating value from waste? If so, how?	Bocken et al. 2014
		Substitution	Renewable energy sources; solar and wind-power based energy innovations; zero emissions initiative; blue economy, biomimicry; the natural step; slow manufacturing; green chemistry	Does your organization focus on the substitution to renewable energy and natural processes? If so, how?	Bocken et al. 2014

		Functionality	Product oriented PSS-maintenance, extend warrantee; use oriented PSS-rental, lease, share; result-oriented PSS pay per use; private finance initiative; design, build, finance, operate; chemical management services	Does your organization focus on delivering functionality rather than ownership? If so, how?	Bocken et al. 2014
		Stewardship	Biodiversity protection, consumer care - promote consumer health and well-being; ethical trade; choice editing by retailers; radical transparency; resource stewardship	Does your organization focus on adopting a stewardship role? If so, how?	Bocken et al. 2014
		Sufficiency	Consumer education models; demand management; slow fashion, product longevity; premium branding/limited availability; frugal business; responsible product distribution/promotion	Does your organization focus on encouraging sufficiency? If so, how?	Bocken et al. 2014
		Repurpose	Not for profit; hybrid businesses social enterprise; alternative ownership: cooperative, mutual collectives; additive social and biodiversity regeneration initiatives; home based, flexible working; localization; base of pyramid solutions	Does your organization focus on repurposing for society? If so, how?	Bocken et al. 2014
		Scale-up	Collaborative approaches; incubators and entrepreneur support models; licensing, franchising; open innovation; crowd sourcing/funding; patient/slow capital collaborations	Does your organization focus on developing scale-up solutions If so, how?	Bocken et al. 2014
Business Model Frameworks	Business Model Canvas	Key Partners	Some activities are outsourced and some resources are acquired outside the enterprise. (Optimization and economy of scale, Reduction of risk and uncertainty, Acquisition of particular resources and activities)	Did you adapt something in your business model regarding key partners? If so, how?	Osterwalder and Pigneur 2010
		Key Resources	Key resources are the assets required to offer and deliver the previously described elements... (Physical, Intellectual, Human, Financial)	Did you adapt something in your business model regarding key activities? If so, how?	Osterwalder and Pigneur 2010
		Key Activities	...by performing a number of Key Activities (Production, Problem Solving, Platform/Network)	Did you adapt something in your business model regarding key resources? If so, how?	Osterwalder and Pigneur 2010
		Costs	The business model elements result in the cost structure. (Cost-driven vs Value-driven, Fixed costs vs Variable Costs, Economies of scale vs Economies of scope)	Did you adapt something in your business model regarding costs? If so, how? Did your cost-price increase after you implemented your SBM?	Osterwalder and Pigneur 2010
		Value Proposition	Organization seeks to solve customer problems and satisfy customer needs with value propositions. (Newness, Performance, Customization, „Getting the job done“, Price, Design, Brand/Status, Cost reduction, Risk reduction,	Did you adapt something in your business model regarding your value proposition? If so, how?	Osterwalder and Pigneur 2010

			Accessibility, Convenience, (Sustainability))		
		Customer Relationships	Customer relationships are established and maintained with each Customer Segment. (Personal assistance, Dedicated personal assistance, Self-service, Automated services, Communities, Co-creation)	Did you adapt something in your business model regarding customer relationships? If so, how?	Osterwalder and Pigneur 2010
		Channels	Value propositions are delivered to customers through communication, distribution, and sales Channels. (Own vs Partner, Direct vs Indirect; Sales force, Web sales, Own stores, Partner stores, Wholesaler; Phases: Awareness, Evaluation, Purchase, Delivery, After sales)	Did you adapt something in your business model regarding your channels? If so, how?	Osterwalder and Pigneur 2010
		Customers	An organization serves one or several Customer Segments. (Mass, Niche, Segmented, Diversified, Multi-sided platforms)	Did you adapt something in your business model regarding your customers? If so, how?	Osterwalder and Pigneur 2010
		Revenue	Revenue streams result from value propositions successfully offered to customers. (Asses sale, Usage fee, Subscription fees, Lending/Renting/Leasing, Licensing, Brokerage fees, Advertising; Pricing mechanism: fixed menu pricing and dynamic pricing)	Did you adapt something in your business model regarding revenue? If so, how? Did your revenue increase after you implemented your SBM? Did your selling-price increase after you implemented your SBM?	Osterwalder and Pigneur 2010
Transition Management	Change Drivers	Pro-Active leadership	Understands the power of, and uses team in solving problems; Is coaching oriented; Requests that team members make decisions; Shares a vision so compelling the team wants to move towards it; Foresees and influences change; Teaches team to be self-reliant; Models teamwork and concern for greater good; Creates and communicates values first; Knows giving up control yields the best outcomes; Focuses on achieving performance outcomes; Helps team to learn from errors	Do you, or does your supervisor has a pro-active attitude towards sustainable change, if so, how?	Dawson 1994
		Aspiration	Organization produces continuous learning and growth, and has positive vision	Does your organization has a positive vision on sustainability, if so, how?	Senge 1999
		Economic benefits	The higher the potential for economic benefits, the more important it becomes as change driver.	Do you see sustainability as an business opportunity, if so, how?	Cannon 1994

		External factors	Political and financial upheaval, new technologies, regulatory change, worldwide competition and consumer preferences	What do you think of the role of the government regarding sustainability issues? What is the role of the government regarding sustainable entrepreneurship? What do you think of the role of the customers regarding sustainability issues? What is the role of the customers regarding sustainable entrepreneurship?	Dawson 1994
		Correct diagnosis	Diagnosis of something being wrong in the organisation and needing to be changed	Is your transition to a SBM due to the diagnosis of something being wrong within the organization? If so, how?	Carr 2001
		Upsurge of visible crises	The upsurge of visible crises that can attract attention and push up urgency levels	Is your transition to a SBM due to the upsurge of visible crises, which resulted in increased attention and a push up of sustainability urgency?? If so, how?	Kotter 1996
	Change Barriers	Non-active leadership	The lack of a pro-active attitude towards sustainability		Dawson 1994
		Fear	Organization produces extraordinary short term changes, but with negative vision		Senge 1999
		Economic losses	The failure to obtain economic benefits diminishes the potential and need for change.	Did the lack of a business case had an influence on the implementation of your SBM? Did the extra costs of transparency had an influence on your SBM?	Verduurzaming in de Nederlandse levensmiddelenketen; Cannon 1994
		External factors	Political and financial disruption, new technologies, regulatory change, worldwide competition and consumer preferences	Did the economic crisis had influence on the implementation of your SBM?	Verduurzaming in de Nederlandse levensmiddelenketen; Dawson 1994
		Wrong diagnosis	The lack of the ability to diagnose problems within the organization		Carr 2001
		Upsurge of visible crises	The upsurge of visible crises that can attract attention and push up urgency levels		Kotter 1996

Appendix B Company 1 Results

Theme	Model	Constructs	Company 1
Sustainable Business Models	4-Phases Model	Vision on sustainability	Social enterprise with a solution for the daily problems in the food-industry. Focus on a shorter supply chain, ethical trade, transparency, and innovation for farmers, fair share, creating social employment and many more. Fully holistic approach on sustainability.
		Orientation external developments	By being there and doing we create support in the society. Education models, communicate vision on sustainability by organizing master classes, open days at the farmers, newsletters and other ways to share our sustainability expertise.
		Business case	Sustainability is fully integrated in business model

		elements	
		Transparency	Traceability of products, only unprocessed, pure products, consumer always knows the origin of products
		Reporting	No report, B-Corp certification, a lot of reporting and KPI's for ABN-Amro, ambition for sustainability report for future
		Stakeholders	Recover relationship between farmer and consumer, address problems in food-industry, creating awareness for consumer, organizing events, markets, open days and other creative ways
		Supply chain approach	Co-creation with farmers and entrepreneurs, high level of customer intimacy, shortening the supply chain
		Dominant functional discipline	Tackle food problem, involve farmers in sustainability issues, more sustainable packaging, encourage entrepreneurs to become more sustainable, reduce threshold for investments, electric cars
	8- Archetypes Model	Efficiency	Standardized product, high added value because of convenience for consumer, help consumer to become sustainable and efficient
		Waste	Minimal waste because of ordering system, minimal packaging so minimal waste, no-waste tips for consumers, deposit system crate so no cardboard boxes for packaging
		Substitution	Incentive program for sustainable driving, stimulate farmers to invest in geothermal heat storage and renewable energy, durable lease program for the future, ambitions for electric cars
		Functionality	Convenience for customer, delivery and recipe service, alternative forms of value creation
		Stewardship	Recipes, App, SMS-service, awareness creation for healthy and sustainable food
		Sufficiency	Flexible membership system ≠ Sufficiency
		Repurpose	Deposit system with crate, crates are multi-functional
		Scale-up	Easy to double operations, crowd-funding, cooperations with (sport-) associations
Business Model Frameworks	Business Model Canvas	Key Partners	Organic & Local, collaborations with sustainable organizations, B-Corp, ABN-Amro
		Key Resources	Financial and Human Capital
		Key Activities	Social Enterprise
		Costs	Standardization of products & Shortening the Supply Chain
		Value Proposition	Social enterprise with a solution for the daily problems in the food-industry. Focus on a shorter supply chain, ethical trade, transparency, innovation for farmers, fair share, creating social employment and many more. Fully holistic approach on sustainability
		Customer Relationships	We are working hard on our customer intimacy strategy. It is important that our local entrepreneurs represent Company 1 and our vision
		Channels	We are active on social media and we focus on "green" logistics and distribution
		Customers	We try to maintain our customers by working with the deposit system for the crate and the customer intimacy strategy. One third of our new customers are based on mouth-to-mouth advertising.
		Revenue	Each box that we sell to the consumer has the same value of what we pay to our suppliers, the value perception is always the same.
Transition Management	Change Drivers	Pro-Active leadership	Sustainability is the fundament of our organization. Innovation is another very important aspect. The management is very proactive regarding sustainability and motivating their employees.
		Aspiration	We have a lot of potential in mind with regard to sustainability and we are trying to achieve this in cooperation with the supplier, courier, entrepreneur, central organization and consumer.
		Economic benefits	Sustainability is our drive, it is not a business opportunity for us. We want to improve the chain and decrease the power of the retail. These elements are the basis of our business model.

		External factors	<p>Consumers positive factor because of growing awareness Farmers positive factor because organic market is growing</p> <p>Both lead to larger sales potential</p>
		Correct diagnosis	We don't need a wake up call, we are the wake up call. Company 1 is the pharmacy of the future.
		Upsurge of visible crises	Need to develop sustainable packaging strategy, incentive program for entrepreneurs, and consumer awareness program.
	Change Barriers	Non-active leadership	-
		Fear	-
		Economic losses	The lack of investment capabilities for the farmer is often quite a problem.
		External factors	<p>There is an explosion of initiatives so there is a lot of competition.</p> <p>UVW (government?) is a very fragmented organization and that makes it difficult because each region has another contact</p> <p>Very difficult to comply with the needs of the consumer.</p> <p>Power of the retail is a negative factor for us. They have too much power and they influence the entire chain in a bad way.</p>
		Wrong diagnosis	-
		Upsurge of visible crises	Our threat is that there are so much initiatives and that makes it difficult to crystallize which initiatives are sustainable and which are not.

Appendix C Company 2 Results

Theme	Model	Constructs	Company 2
Sustainable Business Models	4-Phases Model	Vision on sustainability	"We have a holistic approach to sustainability. Sustainability is about the environment, the sourcing of the raw materials, being sustainable and efficient with your energy and material use. Sustainability is inherent to our company type."
		Orientation external developments	"Communication via website. Cooperation with restaurants, catering, and well-known chefs to create consumer awareness. Constantly working on encouraging the consumer to eat meat substitutes. Started a platform (www.HetPlaneet.nl) to exercise power against the meat industry."
		Business case elements	"Sustainability is the basis of our business model"
		Transparency	"We are transparent about everything, except about some technical production issues. Lots of media attention for our unique products, so we are very open about a lot of things."
		Reporting	"No, we don't have time for it and we don't see the use of it. We do research on sustainability, and environmental issues and their results always indicate that we are sustainable. We also work with sustainable investors and they want us to meet several sustainability requirements."
		Stakeholders	"We think that our role is about setting the good example. We try to do this with the platform, the media coverage and our cooperation with the government. In addition, we also are a role model for the consumer because we make them aware that eating meat substitutes is easy and healthy."
		Supply chain approach	Co-creation by cooperating with customers, restaurants, catering companies, chefs, the government, the media and of course with our platform members... "We choose our suppliers very specifically regarding several sustainability requirements."

	8- Archetypes Model	Dominant functional discipline	"Our future approach is for the upcoming five to ten years. For us it is more important to focus on the survival of our company, rather than to focus on the next 30 years, this is more for MNC's"
		Efficiency	"We aim to be as efficient as possible; this also results in lower costs, so there also is a large economic drive. Daily monitoring of production. Efficiency is KPI. We try to focus on minimizing the losses in our production."
		Waste	"We focus on having a closed-loop production, so for this reason we minimize our waste... Waste is the same as efficiency, the lower the waste, the lower the costs."
		Substitution	"We don't do anything with solar power, we have thought about it but it was not profitable enough. We use cooling water but in such small volumes that it has a marginal effect."
		Functionality	"We work together with a very capable product-development department. If you are as innovative as we are, then you are obliged to deliver product assistance."
		Stewardship	"We are dealing with ethical trade, transparency, biodiversity protection and of course consumer health, we don't have specific KPI's for this, but we actively discuss this with our suppliers. Next to this, we also have our HCCP and other certificates for hygiene and health."
		Sufficiency	"We are working on sufficiency, but the trick is to create consumer awareness about sufficiency."
		Repurpose	"Platform is good example of repurpose. We have mutual collectives with herbal suppliers and packaging companies. We want to cooperate with firms that fit within our mission, vision and strategy and most importantly, that have faith in the meat transition."
		Scale-up	Cooperations or mutual collectives and sustainable venture capitalists to look for new financing in order to scale-up.
Business Model Frameworks	Business Model Canvas	Key Partners	"Suppliers based on several sustainability requirements and we also chose our investors based on their sustainable vision. Cooperate with the Triodos bank, and organizations such as the Vegetarian Butcher."
		Key Resources	Financial capital: Triodos bank and sustainable VC's Human capital: we create employment for people who struggle to find a job and were absent for a long time at the labor market
		Key Activities	Organize a lot of workshops and seminars, almost monthly. Cooperation with organizations such as FoodValley and the government/province. Cooperate with the media because we have a lot of media attention regarding our activities.
		Costs	"Sourcing is very important. We make very conscious choices for our sustainable suppliers. We are willing to pay more for a product that is fair, than saving costs and selling incomplete truths to our consumers."
		Value Proposition	"Sustainability by itself is our biggest incentive for the success of our product. If our story doesn't fit our product, then consumers won't buy our products."
		Customer Relationships	Free sampling of products in collaboration with sustainable organizations, participating in sustainability campaigns, product assistance
		Channels	"We have our website where we communicate with our customers... Our media attention is important for us... We cooperate with "Stichting Natuur en Milieu"..."
		Customers	"We make our selection for potential customers who fit into our vision and share our story."
		Revenue	"We don't do anything sustainable with our revenue."
Transition Management	Change Drivers	Pro-Active leadership	"If we weren't pro-active, then we would have never started. Pro-activeness is inherent for entrepreneurship. The management discusses sustainability issues weekly."
		Aspiration	"Our vision regarding sustainability is focused on our activities internally and externally for our company. Our ambition is very important for our organization, all of our employees share this ambition and vision."

		Economic benefits	"We wouldn't exist without the business opportunity for meat substitutes. However, the reduction of animal proteins is the business opportunity, not sustainability."
		External factors	"We did a lot of research during our start-up phase, the government subsidized us during this process." "I find that there is an increase in the consumers that are interested in the origin and nutrition values of food, and that is important for us." "Success noticeable because products are available at discount supermarkets but also in the high-end luxury supermarkets and wholesalers."
		Correct diagnosis	"Sustainability is the basis of our business model so the correct diagnosis was not important."
		Upsurge of visible crises	"The meat crisis was not of direct influence, but it made our story stronger. We don't benefit from scandals because we also are affected by the suspicion of the consumers."
	Change Barriers	Non-active leadership	-
		Fear	-
		Economic losses	"Our products are more expensive than normal meat products; we have more expenses but I don't think that this is a barrier for us."
		External factors	"We started during the economic crisis, so it was very hard for us to get some starting capital. I also think that the crisis was a problem for us because a lot of consumers stated to save their expenses on luxury products."
		Wrong diagnosis	-
		Upsurge of visible crises	-

Appendix D Company 3 Results

Theme	Model	Constructs	Company 3
Sustainable Business Models	4-Phases Model	Vision on sustainability	"We think that the general definition of sustainability is not a single issue but it supposes to have a more holistic approach. We assume that the next generations can also make use of the environment."
		Orientation external developments	"Available, accessible, and affordable food is our goal: Food for All. Everyone should have access to good nutrition."
		Business case elements	"We started with a SBM, so in our case there is no innovation regarding sustainability in our business model"
		Transparency	"Transparency is our trademark. We want to be as transparent as possible throughout the supply chain and especially for consumers."
		Reporting	-
		Stakeholders	"Food for all, available, accessible and affordable food"
		Supply chain approach	"We are a platform, we are entrepreneurship 2.0. We are a network organization. Currently, there is a transition going from business to network organizations and we do this now on a fairly small scale. We work together with suppliers and retailers."
		Dominant functional discipline	"We work in three-year periods. We propose formal and informal goals for the next three years. Longer periods are confusing. For the long term, so 20 years, we have our strategy, which is linked to the importance of sustainability, and to achieve this we cut those 20 years in small bites of three-year goals."
	8-Archetypes Model	Efficiency	"If you look at our holistic approach, we try to address all of the themes as much as possible. We strive to be a champion on the sustainability-around, wants to be the best all-rounder instead of excel on a particular theme. We find narrowing down sustainability to CO2 reduction incomplete and therefore we focus on efficiency, waste, stewardship, and repurpose."

		Waste	See efficiency
		Substitution	-
		Functionality	Platform function
		Stewardship	See efficiency
		Sufficiency	"We say to consumers that they should consume based on sensible portion sizes. A meatball need not be 150 grams, 80 grams is sufficient for the required daily consumption"
		Repurpose	See efficiency
		Scale-up	"Our participation is based on belief rather than setting rules for companies. Convincing means that you can achieve the objective of Company 3 and that you add value instead of decrease value in the chain"
Business Model Frameworks	Business Model Canvas	Key Partners	"We are a platform, we are entrepreneurship 2.0. We are a network organization, small is the new big. Currently, there is a transition going from business to network organizations and we do this now on a fairly small scale. We work together with suppliers and retailers."
		Key Resources	-
		Key Activities	See key partners
		Costs	"We don't do anything with our pricing since that is illegal to make price agreements within the supply chain. The producers can only give advices on the price."
		Value Proposition	See vision on sustainability and dominant functional discipline
		Customer Relationships	"Awareness creation regarding sustainability is our greatest challenge."
		Channels	See Key partners and Customers
		Customers	"It is very difficult to have influence on the consumer behaviour. Which buttons do we need to press to create consumer awareness? We don't have the solution ourselves. Awareness creation regarding sustainability is our greatest challenge."
		Revenue	See costs; "We don't see sustainability as an business opportunity, sustainability is a prerequisite for doing business. Non-sustainable businesses cease to exist"
Transition Management	Change Drivers	Pro-Active leadership	"The problem was that the retailers weren't able to realize this on their own, therefore a network needed to be created. Bringing together all the different parties from the entire supply chain resulted in building and sharing together a larger pie, instead of competing with each other on the a smaller pie."
		Aspiration	"Our organization started from a sustainability perception. We foresaw an increasing demand to sustainability and especially in the food sector and we took that opportunity to start our platform."
		Economic benefits	See costs and revenue
		External factors	"We try to follow organic regulations, but we also try to operate as autonomously as possible."
		Correct diagnosis	"We started with a SBM, so in our case there is no innovation regarding sustainability in our business model, therefore, correct diagnosis is not applicable."
		Upsurge of visible crises	"Our organization started because my predecessors saw the opportunity to create the platform and the network for the entire supply chain."
	Change Barriers	Non-active leadership	-
		Fear	-
		Economic losses	-
		External factors	"The government doesn't do that much to advertise on sustainable entrepreneurship. I think they are more obstructing sustainable entrepreneurship than enforcing it. We try to follow organic regulations, but we also try to operate as autonomously as possible."

		Wrong diagnosis	-
		Upsurge of visible crises	-

Appendix E Company 4 Results

Theme	Model	Constructs	Company 4
Sustainable Business Models	4-Phases Model	Vision on sustainability	"Sustainability is no longer a distinguishing aspect for the positioning of your brand in the long term, and hopefully in the short term, in the future it should be standard for everybody. Therefore sustainability is in our base. Sustainability is a holistic concept and the carbon food print expression is one of the components, but the social aspects therein are equally important."
		Orientation external developments	"Sustainable organization needs external orientation. We guide our ambition through the chain. Be careful that Western ambition may not fit with other cultures. We try to create employment in third world countries. We help fisheries to get MSC certification."
		Business case elements	"Bart and I believe that you need to embed sustainability into your business model."
		Transparency	"With all the scandals in the food chain, more and more consumers become focused on the need to have transparency in the kitchen. We focused on transparent cooperation with our suppliers. Ambition is to connect consumers and fisheries together."
		Reporting	"I do not need to write a report in which I show that I instead of 1 billion kilowatts, I use 10% less. Nobody is waiting for us to do that, for us it's more important that we as a brand stand for something."
		Stakeholders	"Sustainable organization needs external orientation. We guide our ambition through the chain. Be careful that Western ambition may not fit with other cultures. We try to create employment in third world countries. We help fisheries to get MSC certification."
		Supply chain approach	"We focused on transparent cooperation with our suppliers. We start at the source, so we work with other fisheries worldwide. Our ambition is to connect consumers and fisheries together. We have a long term relationship with a number of fishing communities worldwide. We want to look for new fisheries to help them with an MSC certification."
		Dominant functional discipline	"We want to look for new fisheries to help them with an MSC certification. I also think that the major parties have to take responsibility. Each link in the chain must accept its responsibility to preserve the entire chain."
	8-Archetypes Model	Efficiency	"Efficiency is reducing costs, this means being frugal with your resources and raw materials. We aim to be as efficient as possible within our possibilities. Entrepreneurs should be free to choose where they want to invest and sustain."
		Waste	"Raw materials are a significant part of the total costs, therefore it is important to use the fish as efficient as possible, this also means reducing the waste of raw materials. Our suppliers have to ensure us that they use their raw materials as efficient as possible in order to reduce the waste."
		Substitution	"Green energy and we pay environmental taxes for our flights"
		Functionality	"We create employment at the local fisheries."
		Stewardship	"We help consumer to create healthy meals. Show how sustainable fishing works. Educate consumer about seasonality, availability, ethical trade and transparency."
		Sufficiency	Limited availability, educate about sufficiency in short (Instagram) movies.
		Repurpose	Production cooperations, investment fund for sustainable fisheries.
		Scale-up	New licences focus on cooperation, if there is a share in vision and ambition than we want to cooperate.
Business Model	Business Model	Key Partners	Choose partners based on sustainability and gut-feeling. Sustainability should be intrinsic in the organization.

Frameworks	Canvas	Key Resources	Human capital
		Key Activities	Setting up sustainable fisheries network, making movies about fishing and sustainability. "Everything we do is based on sustainability."
		Costs	"Value driven model, we are building a sustainable brand. Create value based on creativity and sustainability, deliver value to the entire chain."
		Value Proposition	High focus on performance, accessibility en sustainability.
		Customer Relationships	Active on social media, give a lot of support, cooking books, co-creation with customer.
		Channels	Social media, efficient logistics, retailer cooperation, brand proposition should fit with the vision of the client/retail.
		Customers	"Our brand proposition must fit within the proposition of the customer. I can not link it in any way to sustainability because I just want to sell my product, and I see a lot of opportunities."
		Revenue	"We have dynamic pricing, but this is dependent on the supply, this is not directly sustainability driven."
Transition Management	Change Drivers	Pro-Active leadership	"We are way ahead with pro-active leadership, we go to seminars to speak about sustainability, we share our vision about sustainability and fish. We believe in two things: inspire and taking responsibility, and this is what we do best."
		Aspiration	"Our vision and ambition were the key to our success."
		Economic benefits	"Transparency was our business opportunity. Teaching people about sustainable fish and building a transparent chain was important for us."
		External factors	"Vacuum of the organic agriculture because this increases the status quo." "If the retail sells the story in a right way, than the willingness to buy our products increase."
		Correct diagnosis	-
		Upsurge of visible crises	"There are too much private labels. Private label is driven by cheap products and not sustainability or transparency. The consumer wanted motor transparency, we provided a solution for this."
	Change Barriers	Non-active leadership	-
		Fear	-
		Economic losses	-
		External factors	"The government is dramatic. They are far behind with innovation and entrepreneurship. The government has the urge to regulate everything, this obstructs the innovation and therefore sustainability." "There is a lot of criticism on the MSC certificate, some people think that it is only a commercial way to show you are sustainable, so it is hard to convince these people."
		Wrong diagnosis	-
		Upsurge of visible crises	-

Appendix F Company 5 Results

Theme	Model	Constructs	Company 5
Sustainable Business Models	4-Phases Model	Vision on sustainability	"We have some aspects we focus on that fall under the umbrella definition of sustainability. Sustainability is also about financial sustainability. Being sustainable is inherently connected to our company type. We are proactive to be sustainable and to improve the profitability of our company."
		Orientation external developments	Regional employment, facilitator for retail for sustainable products, co-creation within entire supply chain, incubator role for start-ups.
		Business case elements	"Being sustainable is inherently connected to our company type and therefore our business model"
		Transparency	"We are very transparent, origin, production, transport and logistics, everything except strategic information. All the information is available on the label and the website."
		Reporting	"We have a sustainability report in our annual report."
		Stakeholders	"We take good care of our employers, we support a lot of organisations and charities, we have a role to be a facilitator for start-ups and we developed a conservation technique that increased the shelf life so we are also on the innovation part a role model."
		Supply chain approach	Co-creation, incubator for start-ups, product assistance
		Dominant functional discipline	On-going process to become more sustainable
	8-Archetypes Model	Efficiency	"We focus on waste reduction, reuse, we use 95% of our waste streams for recycling or for human or animal consumption, and of course energy reduction. We think that products loss is worse than energy loss so we focus on the reduction of production loss and thus an increase in efficiency."
		Waste	New conservation techniques, packaging reduction, we reuse 95% of our waste.
		Substitution	Green energy, solar power or wind turbines were not feasible or allowed by the government. Energy saving office.
		Functionality	"We take over some tasks of other organizations in the supply chain and we give service to start-ups."
		Stewardship	"We are a role model for start-ups. Also a role model with our conservation techniques, we are well-known for our innovations."
		Sufficiency	"Sugar reduction, we sell healthy products but we cant put these claims on our labels anymore."
		Repurpose	Co-creation in supply chain for better taste, colour, quality, freshness, reduce losses, efficient logistics etc.
		Scale-up	Cooperation with start-ups, new cooperation abroad, open innovation, new conservation techniques.
Business Model Frameworks	Business Model Canvas	Key Partners	Regarding suppliers, sustainability is one of the aspects that is a consideration, if a supplier is not sustainable enough, we don't do business with them
		Key Resources	Physical capital: energy efficient cooling, hybrid cars, good isolation Human capital: creating employment for unemployed people.
		Key Activities	"We provide healthy products and that is sustainable. Within our niche, we focus on the healthy segment. But sustainability is another prerequisite and not an objective in itself. In addition, of course, one of our activities is to take over tasks within the supply chain, herein we are a kind of platform for the entire supply chain."
		Costs	"We produce premium products, so costs are relatively less important in the selling price. Raw materials are most important regarding costs, we only want the best raw materials, but no specific sustainability aspects."

		Value Proposition	"Our value proposition is about innovation and healthy and fresh products."
		Customer Relationships	Co-creation, product assistance, advice on market, full service
		Channels	"Sustainability is a standard for us because the client demands that but we don't have specific sustainable channels."
		Customers	"Our clients think that sustainability is important and therefore they buy our products."
		Revenue	"We don't focus on sustainability within our revenue streams"
Transition Management	Change Drivers	Pro-Active leadership	"We are very pro-active in our organization, but not necessary regarding sustainability."
		Aspiration	"Sustainability is not a goal, it is the result of your practices and we aim to do that as good as possible, and this resulted in our success"
		Economic benefits	"In order to get economic benefits, you have to calculate your extra costs to your client and eventually the consumer. Our mission is to help the retailer to convince the consumer of our sustainable products."
		External factors	Consumer buys more healthy products. Scandals in food-industry resulted in increased transparency. Sustainability pressure on retail. The increasing need for high-quality products resulted in more sustainability. Our success is also in providing services to other organizations so that they can focus on marketing and selling.
		Correct diagnosis	Becoming more sustainable is an on-going process. There is a continuous urge to become more efficient and sustainable. Daily monitoring of production and operations.
		Upsurge of visible crises	"Due to food scandals and crisis a lot of new regulations, so we had to adapt. The sustainability trend is always important because it becomes a standard condition for your product so you need to adapt in order to create more value than your competition."
	Change Barriers	Non-active leadership	-
		Fear	-
		Economic losses	-
		External factors	The government makes it difficult and more complicated with their new regulations. B2B is not willing to pay for sustainability because they see it as a basic condition for our products.
		Wrong diagnosis	-
		Upsurge of visible crises	"The crisis did not affect us; the premium segment is still growing."

Appendix G Company 6 Results

Theme	Model	Constructs	Company 6
Sustainable Business Models	4-Phases Model	Vision on sustainability	"We have a holistic approach on sustainability. It is a lifestyle, not a definition."
		Orientation external developments	Media attention, create awareness, work with other's waste, transparency, cooperate with sustainability consultants, co-creation with other organizations, positive footprint, give back something to the earth.
		Business case elements	"Sustainability is our lifestyle, so it is also in our business model"

		Transparency	"Transparency is on the auto-pilot, we are transparent in our education, production, traceability, origin, everything."
		Reporting	"We don't have a sustainability report, we don't see the use of it. This is full of marketing soaked fake sustainability."
		Stakeholders	"We see ourselves as a role model. We give education about sustainability. We create awareness by our way of operating."
		Supply chain approach	Co-creation is very important, local for local, short supply chains. Quality in relations, suppliers, product.
		Dominant functional discipline	"Our production should be sustainable from the start because it comes with high investment. We have ambitions to have a closed-circuit water-use plan, solar energy, LED lights."
	8- Archetypes Model	Efficiency	"Our production utilities are from recycled materials, we use LED cultivation lights, low use of packaging materials. Efficient logistics, local for local, biodegradable production."
		Waste	"We produce mushrooms on the waste of coffee producing companies."
		Substitution	Blue-economy. Open source scientific solutions for producing mushrooms. Looking for production in containers, this is easy for standardized expansion. Crowd-funding
		Functionality	"We educate consumers about sustainability. And we deliver the service that we collect and re-use the waste of other companies."
		Stewardship	Biodiversity protection, no sterilisation or pasteurization. Biodegradable substrates. Very high nutrition value, healthy products, consumer health and well-being.
		Sufficiency	Education models. Healthy products with high nutrition value
		Repurpose	Large network with sustainable organizations and other mushroom producers. Social enterprise.
		Scale-up	Co-creation with other organizations. Open innovation. Renting/Leasing materials/machines.
Business Model Frameworks	Business Model Canvas	Key Partners	Business model is based on sustainable key partners.
		Key Resources	Physical capital: location and materials Human capital very important
		Key Activities	Sustainable production. Education models. Producing from waste.
		Costs	"We stand for quality and sustainability so our choices are based on this. But also consideration between sustainability and keeping start-up feasible. Investments always based on long-term and sustainability."
		Value Proposition	"We are a sustainable start-up so you can also see this in our value proposition."
		Customer Relationships	Focus on quality of realtions. Education. Participating in open days, seminars, markets.
		Channels	Sales via restaurants. Cooperate with food-boxes in future. Social media. Efficient logistics
		Customers	Prototype customer with sustainable vision. "We want to deliver our product to the employees of our suppliers so that we hit two birds with one stone."
		Revenue	"You pay for our experience and not just the mushroom. But we dont sale that much so not focused on sustainability yet."
Transition Management	Change Drivers	Pro-Active leadership	"We are a very pro-active start-up and this was very important for us. Leadership is difficult because we are only with the two of us but we want to inspire so if we grow in the future, this will be the case."
		Aspiration	"Aspiration goes hand-in-hand with our pro-active leadership, our vision was very important."

		Economic benefits	"Sustainability is not a business opportunity for us, it is more natural to us, we hope have economic benefits in the future."
		External factors	"Municipality Amersfoort was a good helping hand. The consumer is very important, we do everything for a healthy world and this starts with a healthy consumer. Our continuous drive to be sustainable is very important, because we tried not to be affected by the economic pressure, we were able to develop our organization."
		Correct diagnosis	
		Upsurge of visible crises	"No this was not applicable, we started ourselves and not because there was a change in the market or a crisis or whatsoever."
	Change Barriers	Non-active leadership	
		Fear	-
		Economic losses	"We have more costs than profit at the moment and that is difficult."
		External factors	"It is difficult to be strong and don't get affected by the economical drivers. A lot of organizations are pulling and demanding economic value, we want to deliver sustainable products and it is difficult to give a price-tag to that. This influences your entire operation." Economic pressure
		Wrong diagnosis	-
		Upsurge of visible crises	-

Appendix H Company 7 Results

Theme	Model	Constructs	Company 7
Sustainable Business Models	4-Phases Model	Vision on sustainability	Efficient production, local for local, organic farmers, no fertilizing, burden the environment as little as possible, reduce waste, everything on environmental and social level. Combine the environment and the social aspect for the long term, for the next generations. Organic, local and healthy food should be a choice instead of privilege. We are a lean start-up. Organic food should be obtainable for everybody.
		Orientation external developments	Platform, role model. "We create employment, share stories about farmers and products, create awareness for consumers. This gives the farmer, the consumer, and us the possibility to act."
		Business case elements	"It is important that if you're doing something sustainable that your organization has a sustainable business model. So you could say sustainability is in our DNA, access to good food is important."
		Transparency	"Our ambition is to be as transparent as possible. Our platform is all about transparency; we want to share as much and as useful information as possible. We also have a transparent value chain."
		Reporting	-
		Stakeholders	"We also help the farmers with composing the packages and delivering them to the consumers. In time we will outsource the distribution, so we create employment. We are working together with the UWV to help long unemployed people to get a job in our organization."
		Supply chain approach	"We want to develop a platform for sustainable entrepreneurs in the food industry. We want to grow in volume so that we can grow in sustainability together with the entire supply chain. We want the chain to be as short as possible, so you have the farmer/entrepreneur, us, and then the consumer."
		Dominant functional discipline	"We are a lean start-up so we want to grow with stepping-stones towards sustainability. So if we grow in volume, we are able to grow in sustainability."

	8- Archetypes Model	Efficiency	Use for retail declined products, results in 30% less waste for farmers. For future only produce the demand and on order so no waste. Make supply chain as short as possible. Local supply, low transport and efficient logistics. In future more precision agriculture.
		Waste	Reduce waste at the farm by buying rejects (30% less waste at farms), in addition, we only buy on order so we do not have waste, this means 10-15% less waste.
		Substitution	No substitution at the moment. For future ambitions for sustainable investments and renewable energy sources.
		Functionality	Platform function, creating employment
		Stewardship	Biodiversity protection. Fair price for farmers. Stimulate farmers to become more sustainable. Only organic farms. Aim for positive ecological footprint. Transparency. Create employment. Role model. Get the consumer and the farmer close together.
		Sufficiency	Create awareness about organic products for consumer, consumer education, teach consumers how meals from the supermarket are prepared, create awareness of the difference in prices between the retail and us.
		Repurpose	Platform function, social enterprise. Local sourcing, local employment. Cheap products, very accessible, low overhead costs
		Scale-up	Crowd-funding, open innovations, scale-up production of farmers, precision agriculture, knowledge sharing.
Business Model Frameworks	Business Model Canvas	Key Partners	"Obviously, it is very important for us to search our local suppliers and that they are on a certain level of sustainability and we only want organic farmers, some farmers are even biodynamic."
		Key Resources	Human capital and Intellectual capital Financial capital Physical capital.
		Key Activities	Platform function
		Costs	Fair price for farmers. Short supply chain and therefore low costs. Try to bundle logistics as much as possible for economies of scale.
		Value Proposition	"This of course is reflected in everything we do, we want to be as accessible and organic as possible, and that is reflected in our brand, the price, the quality, in everything."
		Customer Relationships	Platform. Education. Stimulate consumer to get to know the supply chain. Transparency.
		Channels	Efficient and sustainable distribution. Online communication. Short supply chain.
		Customers	Focus on early adapters that are aware of sustainable food and try to convince other non-aware consumers together with the early adapters and the farmers.
		Revenue	Transparent value chain. Scaling platform nation-wide. Keep profit margins as low as possible to keep organic food payable and obtainable for everybody.
Transition Management	Change Drivers	Pro-Active leadership	"We try to share our ideas in a pro-active way with the staff and the organization, we also try to prepare the platform for supply chain pro-active with all other actors in the supply chain."
		Aspiration	"Our vision and aspiration was very important. If we lacked vision and aspiration then we would not have even started. So there is a strong connection between leadership and aspiration."
		Economic benefits	"Sustainability is not a business opportunity, it is in our DNA. Our business opportunity was the distance between farmer and consumer. We saw an opportunity in the organic market and we thought that we should exclude the retail. There were too many initiatives that saw sustainability as an opportunity and therefore it became too mainstream, we wanted to become more honest, cheap and easy for the consumer."

		External factors	"The consumer is very important, when they buy our products, they give a clear signal that the retail is too expensive. The increasing attention for organic food and the increasing awareness for the consumer is also very important. The power of the retail is also important because of their power and high prices, consumers come to us because we are cheaper. The more expensive the retail becomes, the more clients we get."
		Correct diagnosis	-
		Upsurge of visible crises	"The (food)crisis was important and interesting because due to the increasing European attention for food waste, consumers became more aware and that results in the growth of the organic market."
	Change Barriers	Non-active leadership	-
		Fear	-
		Economic losses	High threshold of investments for the platform, this makes it difficult to start developing.
		External factors	The lack of cooperation of the government is not a barrier for us., the growing competition and all the initiatives in our sector are.
		Wrong diagnosis	-
		Upsurge of visible crises	Growing competition in a growing organic market

Appendix I Company 8 Results

Theme	Model	Constructs	Company 8
Sustainable Business Models	4-Phases Model	Vision on sustainability	Impoverish the earth as little as possible. Producers need a healthy way to deal with their land. Reduce waste. All aspects are environmental and social level. Sustainability is in our DNA. Access to healthy food is important. Clean label.
		Orientation external developments	"We are nominated for a regional sustainable entrepreneurship prize. Communication via supermarket and internet. You create credibility by being sustainable. It is all about being consequent in your communications. We create employment for returners to the labour market."
		Business case elements	"You have sustainability intrinsically in you or not, we have that, even in our business model"
		Transparency	"We try to make our products as transparent as possible when it comes to raw materials, we try to buy our raw materials as much as possible locally. With transparent I mean that we reveal where the raw materials come from. So if you're talking about meat, we work a lot with eco food."
		Reporting	-
		Stakeholders	Role model for society. Sustainability prize. Get food out of the anonymity. Involve everybody in your organization. Drive to change the society. Eager to show and share.
		Supply chain approach	"We select suppliers on specific sustainability requirements, especially regarding transparency. Being sustainable starts at the origin; if your raw materials are not sustainable then it is impossible to be sincere about sustainability."

		Dominant functional discipline	"Ambition is to open new channels. Aim to be less dependent on retail to get products at consumer level. We have a lot of ambitions to invest and become more sustainable. There are some interesting technical challenges ahead. We want to cooperate with schools and universities to do research to the possibilities."
	8- Archetypes Model	Efficiency	"We want to use as much as possible of the animals. We guarantee our suppliers that we want 100% of their meat because we know how to use all of it. This gives them the possibility to expand their livestock. We decrease our foodmiles because we buy locally and we support the local farmers by buying locally. We also use the heat that we collect, we have solar energy and we collect our waste water. We have a full list of planned investments regarding sustainability."
		Waste	A lot of technical challenges to decrease waste-streams, use waste for production instead of decrease waste. Monitoring waste-streams. Animal friendly ingredients. Meat substitutes. Cooperation with Pater Poels, Voedselbank and Red-Cross type of organizations.
		Substitution	Solar energy. "We have a logistics cooperation very sustainable transport organization, with very low emissions." Multi-annual Energy Savings and Efficiency Program. Heat exchanger that uses the heat from the production as a product to heat our cleaning water. Green energy. Working on further research regarding substitution.
		Functionality	Sustainable product development for customers. Full service. Product assistance. Co-creation. Help clients to sell sustainable meals. Services are free. Knowledge sharing.
		Stewardship	Help consumer with daily-recommended portions. Radical transparency. Local and ethical trade. Local sourcing. Fair-trade ingredients. Three pillars for employees: Health, Satisfaction, and Progress.
		Sufficiency	Daily recommended portions. Share story to consumer about our healthy and sustainable products. Vision sharing. Anticipate on growing awareness. Consumer education.
		Repurpose	SKAL-certification. Cooperation with labels. Fresh ingredients. Clean label, non-GMO, no additives, no E-numbers, etc.. Furthermore, Ale D'huizes catering, Stichting Broodnodig, Vencentiusvereniging & Voedselbank.
		Scale-up	New channels. Sales at EKO-Plaza. Clean label. Cooperation with meat suppliers. LIVAR.
Business Model Frameworks	Business Model Canvas	Key Partners	Choose partners as local as possible. Choose partners on their sustainability qualities. Basic requirements and certification for suppliers.
		Key Resources	Physical capital: sustainable production machinery, sustainable logistics Human capital: Sustainability is in our DNA. We look to all our processes and try to see where we can become more sustainable. We want that every employee is involved in the process.
		Key Activities	Innovation trajectory. Looking for sustainable cooperations. Open innovation. Share story.
		Costs	"Our costs should fit our story, our products should be available so the price can't be too high. Our sustainable products might be a bit more expensive, but we are healthier."
		Value Proposition	"Sustainability is in our DNA and we try to communicate that externally."
		Customer Relationships	Services. Knowledge sharing. Sharing passion and vision. Story telling. Inspire customers to become sustainable. Create enthusiasm within organization.

Transition Management		Channels	"We want to help the entire supply chain to become more sustainable, so the suppliers and the consumers."
		Customers	"We aim to make the entire chain more sustainable, that includes our customers but also our suppliers. We don't choose our customers specifically but we see that the sustainable retail comes to us for sustainable products, so we are in a sustainable niche regarding customers."
		Revenue	"The price must fit within our story, but we don't have specific sustainability requirements for this."
	Change Drivers	Pro-Active leadership	"Pro-active leadership has been very important to us, it is in our DNA and we try to radiate with all our programs."
		Aspiration	"Aspiration is very important for us, it is the same as pro-active leadership."
		Economic benefits	"Yes, but you should not approach it that way, that's the wrong way. It is an inspiration for innovation. Sustainability has to come from the core instead of seeing it as a sauce that is poured on top. So it's an inside-out story rather than an outside-in story. For us, the experience there and we are sustainable, we do not make movies to show that we are in a sustainable farmer."
		External factors	"Consumers worry more about what they eat, this is in relation with sustainability, not only at the environmental aspect but also regarding health, this will lead to a huge shift. I think that the growing awareness of health food will lead to a decrease in chronic diseases."
		Correct diagnosis	"There is always room for improvement and we always try to become more sustainable, I hope that this accounts for everybody, but this was not a direct switch, it was gradually."
		Upsurge of visible crises	"This was not applicable for us."
	Change Barriers	Non-active leadership	-
		Fear	-
		Economic losses	"Yes but it is double, the good raw materials cost more, sustainability has not caused higher costs. It results in even more revenue and added value, the organization is more unified, so everyone works harder, there is unity."
		External factors	<p>"The government makes it harder for entrepreneurs. Especially regarding administration. The taxes are also wrong, the government doesn't help us to become more sustainable."</p> <p>"Not everybody in the supply chain shares your opinion, this can be difficult if you have some specific sustainability requirements and you need the supplier because there is no alternative."</p>
		Wrong diagnosis	-
		Upsurge of visible crises	-

Appendix J Company 9 Results

Theme	Model	Constructs	Company 9
Sustainable Business Models	4-Phases Model	Vision on sustainability	Don't deplete the earth any further. Put back in the earth what you have used. Become more aware and careful at individual level. Consume better, for people, planet, animals and the environment. Food should be tastier, healthier and more affordable. Restore balance between production and environment. Cooperation with charities and care farms. Company 9 is based on sustainability. Financially, it is the biggest challenge for us to make our products affordable for consumers.
		Orientation external developments	"By doing, you inspire your surroundings and your environment. We do this by working together with care farms and charities. But we also offer the consumer easy and sustainable products and we give them easy alternatives for their current consumption pattern."
		Business case elements	"Sustainability is the theme of our organization and this is certainly reflected in our organization and business model. This is reflected in our business, how we stand in life, in how we invest in where we buy our raw materials."
		Transparency	"Share as much useful information as possible. SKAL certification. If we make more revenue, we will invest more in transparency, ambitions for transparent value chain."
		Reporting	"We don't have a sustainability report. The focus is now on making money and market positioning."
		Stakeholders	Role model. Be inspiring for retail, consumer, suppliers. Show consumers that it is possible to change your consumption pattern. Being innovative, have sustainable products for affordable prices.
		Supply chain approach	"Dominance in the chain. From farm to fork. With our dominance we want to implement backwards integration and set high sustainability standards." Decrease power of retail. Influence the consumer, improve consumer behaviour.
		Dominant functional discipline	"We want to show as easy as possible that change is needed. If we would share more, eat healthier and become more sustainable then the world would be a lot better."
	8-Archetypes Model	Efficiency	Products should be certified. Products should meet several efficiency requirements. By sourcing organic products as locally as possible we have a low footprint. Suppliers should be sustainable and efficient. "We try to be CO2 neutral without increasing our price, affordability is more important. Products should be healthy, affordable and obtainable."
		Waste	Waste separation. "We are looking for most sustainable way of packaging, is not necessary biodegradable plastics because we still want to be affordable."
		Substitution	"No we don't have solar power or other ways of renewable energy. Our manufacturers are free to make their own choices in it. We have little impact on our manufacturers to tell them to put solar panels on their roof."
		Functionality	-
		Stewardship	"We want the consumers to eat healthier, tastier, more affordable and organic. In addition, we also have the care farms and the charities involved. Good for yourself and another, live and let live, this is also on our packaging and we find this very important."
		Sufficiency	"It is important that we educate the consumers to consume less. We want a consumer that makes its own well-considered decisions regarding sustainability, we try to help them."
		Repurpose	Cooperation with care-farms and charities
		Scale-up	"Due to our growth, we are trying to get more impact in the supply chain so that we can make the chain more sustainable. Our supply chain is secured by passing the bio certificates so here we also play a significant role. Volume is important, so here we must first focus on."
Business Model Frameworks	Business Model Canvas	Key Partners	"All our partners should be organic and sustainable. We have labels and certificates and other minimal requirements for our suppliers and we choose our partners based on these constructs."

		Key Resources	Human capital
		Key Activities	"We are of course concerned with the charities and the care farms and our own operation is very sustainable, internally and externally."
		Costs	"If the cost is rising because we have to make a sustainable choice, we choose an alternative which ensures that our product remains affordable, only as our volume increases, we can make the more expensive and more sustainable choice."
		Value Proposition	"Our entire value proposition and vision is based on sustainability."
		Customer Relationships	"This is important for us because we want to adapt consumer behaviour and we want to make them more sustainable."
		Channels	Story telling. Creating awareness. Educate consumer
		Customers	"Our customers, the retail, want our products in their stores because we produce sustainable products. So we are in a niche market but supermarkets choose us specifically because we are known for our sustainability."
		Revenue	"The accessibility is the most important. So our products might be a little more expensive but we try to communicate our added value and why we seem to be more expensive."
Transition Management	Change Drivers	Pro-Active leadership	"All of our decisions are based on sustainability, I am a huge example in this for my team and the organization. Vision sharing, internally and externally. Inspire your surroundings and environment."
		Aspiration	"Aspiration and pro-active leadership go hand in hand in our organization."
		Economic benefits	"You obviously do not get in a market without potential. It is important that you see a chance and that you tackle that opportunity. Sustainability has therefore been important for us but it was important that it happened in a feasible manner, and that the products would be accessible to consumers."
		External factors	"The retail is becoming more sustainable so that is good for us. The consumers are also becoming more aware so that is also very good."
		Correct diagnosis	-
		Upsurge of visible crises	"I looked at how I thought that the food-industry would develop, this was based on vision and willingness to take risk and entrepreneurship, and during my previous job I saw that the organic market would grow. I thought that healthy food would become more important and therefore I started with this company."
	Change Barriers	Non-active leadership	-
		Fear	-
		Economic losses	-
		External factors	The government should be more pro-active regarding sustainability. They don't help entrepreneurs to tell their story to the consumer. There are only 5 retailers with all the power; this is unfair for the smaller retailers.
		Wrong diagnosis	-
		Upsurge of visible crises	-

Appendix K Company 10 Results

Theme	Model	Constructs	Company 10
Sustainable Business Models	4-Phases Model	Vision on sustainability	Aim to operate above the benchmark. Labels, certification, government requirements. Environmental and social aspect, everybody should have an equal change for healthy food. It is not only about food so also create employment. Implement our ideas about sustainability as much as possible.
		Orientation external developments	Creating employment for youth and long unemployed adults. Do something for society. Access to local, healthy and sustainable products for a fair price. Support local farmers by giving them a fair price.
		Business case elements	Sustainable start-up so this comes back in the business model.
		Transparency	"Transparency is one of our main pillars: transparent value chain, who are the suppliers, where our products come from, these are things that we really are doing. We have no secrets for that matter."
		Reporting	"No, we have no time and no money, we are examined by national institute for transitions and they do some things with sustainability."
		Stakeholders	Aim is to grow through chain innovation. Add value to society and environment. Local sourcing is good for local farmers and entrepreneurs.
		Supply chain approach	Supply chain as short as possible, backwards integration. Co-creation.
		Dominant functional discipline	"We intend for the future to continue our sustainable standard and we try to grow, so we also have the ambition for a sustainable car-fleet in the future, but this will be last 5 to 10 years."
	8-Archetypes Model	Efficiency	Efficient logistics. Low carbon-footprint. Consumers bring own packaging material so very efficient and no waste.
		Waste	"Everything is on orders so we have no waste."
		Substitution	"This is not yet applicable due to lack of capital. Focus is on other aspects."
		Functionality	"We deliver products and services. Organizing events, workshops, training for employees and consumers."
		Stewardship	"We create a lot of local employment. Biodiversity protection through local sourcing. Transparency. Fair trade. Transparent value chain. Ethical trade. Consumer health and well-being."
		Sufficiency	Workshops for consumers, efficiency, waste, recipes, nutrients, etc.
		Repurpose	Co-creation with similar initiatives. Workshops for ZLTO. A lot of exposure in media.
		Scale-up	Expand to other cities. Franchises/Licensee ambitions. Sustainable cars, hybrid or electric lease cars.
Business Model Frameworks	Business Model Canvas	Key Partners	"We take sustainability into account when choosing our partners. We have very strict requirements for our suppliers regarding sustainability."
		Key Resources	Physical capital: sustainable cars in the future Financial capital: Triodos Bank Human capital: founders
		Key Activities	Local for Local. Products and operations are fully sustainable. Fair price. Workshops. Education. Efficiency tips
		Costs	"We begin with the costs of our product, and we take care of the sales, if our selling price is too high, we adjust the profit margins. We want a good price for our suppliers and customers. Furthermore, we are working to keep our cost or low, but not at the expense of the farmer."
		Value Proposition	"We believe in a transparent supply chain. No middleman, directly at the farmer, approachable for everyone. Fair price for farmer and delicious and honest products for an affordable price."
		Customer Relationships	Newsletters, our chefs have an important network-function in their district. Workshops. Knowledge sharing

		Channels	Supply chain as short as possible, backwards integration. Efficient logistics.
		Customers	"Not all of our consumers are durable, good taste is also important. Our consumers differ from foodies, to gastronomes, we have something for everyone and we choose our customers not on sustainability, customers simply come naturally to us."
		Revenue	"Transparency and a transparent value chain is very important for us. We also have dynamic profit margins, if our costs increase, our margin decreases."
Transition Management	Change Drivers	Pro-Active leadership	"I think we are too small for leadership, but our enthusiasm was very important for our organization."
		Aspiration	"We saw with our previous employers that too little was done with sustainability so therefore we tried to inspire them to become more sustainable, but this did not work so that's why we started our own."
		Economic benefits	"Of course, without the potential benefits we wouldn't even start."
		External factors	"The consumers make their own decisions, so for us the local for local was very important. The Russian boycott from Europe was important for us because this resulted in a wake up call for farmers and thus for us a nice opportunity to sell their products."
		Correct diagnosis	-
		Upsurge of visible crises	"We saw at our previous employees that they weren't sustainable enough. Therefore we thought that it should be done better and we could realize this with this organization."
	Change Barriers	Non-active leadership	-
		Fear	-
		Economic losses	
		External factors	Time, extra personell is not always a solution.
		Wrong diagnosis	-
		Upsurge of visible crises	Competition.

Appendix L Company 11 Results

Theme	Model	Constructs	Company 11
Sustainable Business Models	4-Phases Model	Vision on sustainability	"Our definition of sustainability is that you do more on social and environmental level than is expected by society. This stems from a desire to improve something socially and ecologically. For us this is an iterative process, you have to just keep working to get better at it. It is important to us that we strive for food preservation, so this is our goal and we want the whole chain to become more sustainable."
		Orientation external developments	"We try to inspire. Experience. Share knowledge on a creative and sustainable way, this is a combination of knowledge and taste, and therefore experience."
		Business case elements	Sustainable start-up so this comes back in the business model.
		Transparency	"We want the entire chain to become sustainable and transparent. We try to tell the story of the origin, the sourcing and the processes of the food in the catering."
		Reporting	"We don't have a sustainability report. It feels like an unwanted control mechanism. We are busy enough with our start-up. We know how sustainable we are for ourselves."
		Stakeholders	"The goal of the experience is to create awareness at consumer level and being a role model for the consumer. We address the need to be aware regarding sustainability."
		Supply chain approach	"Co-creation is very important wit the catering companies. We teach them everything about the principles of sustainability."

		Dominant functional discipline	"Our ambition is to have the required level of revenue so that we can live from our income, that is difficult during the start-up. We want to expand with interns so that we can share our vision with them. But the biggest ambition is to get a large catering company for 100% sustainable. We also have targets for ourselves that we want to achieve the next couple of years."
	8- Archetypes Model	Efficiency	"We give a lot of advice on this topic regarding food. But regarding energy we have some experts for this. We give advice on efficient packaging and other efficiency aspects."
		Waste	"We don't have waste ourselves but we do give tips and workshops about waste and biodegradable packaging."
		Substitution	"No we don't do anything with renewable energy yet."
		Functionality	"Our entire organization is based on functionality. We only deliver services, we don't have any products so that is very sustainable."
		Stewardship	"Health is an important sustainability aspect and we try to convince catering companies to go on the sustainability tour. Salt-reductions, less meat, no animal proteins, less fats."
		Sufficiency	"We create awareness with the Experience"
		Repurpose	Social enterprise. "We are the missing link between the suppliers, the catering companies and the consumer."
		Scale-up	"We want to do more with co-creation. We discuss a lot of aspects with the catering companies: water-use, health, packaging, every sustainability aspect has its own expert and we want to have more experts and new cooperations with large companies such as Unilever."
Business Model Frameworks	Business Model Canvas	Key Partners	Cooperation with sustainability experts. A lot of (sustainable) sponsors, we give away a lot of goodie bags with sustainable products from our key partners.
		Key Resources	Human capital
		Key Activities	Experience, knowledge sharing, services, sustainable catering. Our entire operation is based on sustainable activities.
		Costs	"No we don't do anything specific with sustainability and our costs."
		Value Proposition	"Sustainability is the most important aspect of our organization and you can also see this in our value proposition."
		Customer Relationships	"Co-creation obviously is important because together the caterer we go towards sustainability. We offer service and knowledge."
		Channels	Social Media. Large network of other sustainable entrepreneurs. Events. FoodQuake network.
		Customers	"Companies approach us because they want the Experience. We approach caterers actively to preserve them as client. We actively search for non-sustainable clients so that we can help them."
		Revenue	"The longer you exist, the more credibility you have, this means that we can increase our prices. We are still pioneers on the advice and service approach so here it is more difficult. We don't do anything specific with the revenue."
Transition Management	Change Drivers	Pro-Active leadership	"By being very pro-active, we show that we excel in leadership within the chain and the economy. We can set an example for everyone and that is a success for us. We really want to set an example for the rest."
		Aspiration	"This company was founded because of the combination between aspiration and pro-active leadership."
		Economic benefits	"Sustainability is a business opportunity for us because we can help non sustainable catering companies. There is still a lot to do and there has to change a lot, so I think that Company 11 will also be important for the future. For the businesses that we assist it is also a great opportunity because we help them to become more sustainable."

		External factors	<p>"We work together with the government. They are a lobby for us, because we help them to set new regulations in the catering business. The government is the most important link in the sustainability development."</p> <p>"Another important factor is the lack of pro-activeness of other organizations, because if they don't become sustainable, we have the opportunity to help them."</p>
		Correct diagnosis	-
		Upsurge of visible crises	"We saw that the catering companies were way behind with sustainability, this was a crisis in the market in our eyes, therefore, we started with this concept."
	Change Barriers	Non-active leadership	-
		Fear	-
		Economic losses	-
		External factors	Lack of awareness at consumer level. Too little media attention for sustainability.
		Wrong diagnosis	-
		Upsurge of visible crises	-

Appendix M Company 12 Results

Theme	Model	Constructs	Company 12
Sustainable Business Models	4-Phases Model	Vision on sustainability	PPP. Family company is prototype sustainable organization. Growth is sign of life. Innovate. Invest in future. RSPO-palm. Sustainable relations. Salt reduction. Energy reduction. Product development. Projects in Africa. Being sustainable for your employees.
		Orientation external developments	Waste reduction, salt reduction. Workshops. Bake for Life. Projects in Africa. Train clients for sustainability. Healthy food
		Business case elements	"We have multiple business models, but if you look to customer intimacy, operational excellence and product leadership, you see that it is not enough anymore to keep them at subsistence level, you must continue to excel and sustainability is of course one of the elements. So for us it is a part of, not the main objective, we have to be the best in our competitive field also at the level of sustainability."
		Transparency	Most transparent company in baking industry. We have nothing to hide. Open innovation and open communication, sharing knowledge is important for the supply chain. New database: Risk and Specs Plaza. Sustainability reporting
		Reporting	<p>"We are the first in our industry to link our database with a network for risks and specifications. We are working on a platform for commodities of claims for transparency. We also have a sustainability report on our website, which we use both internally and externally."</p> <p>"In addition, we have our first database linked to a network that is called Risk and SpecsPlaza, here we were the first in our industry. So we are working on a platform for commodities with claims for transparency. We also have a sustainability report on our website, which we use both internally and externally."</p>
		Stakeholders	Financial sustainability. Switch from regular raw materials to sustainable raw materials. Enzymes instead of E-numbers. Communication within B2B.
		Supply chain approach	Co-creation with enzymes. Longer shelf life. RSPO. Help clients with pre-audits.
		Dominant functional	Increase efficiency, reduce waste. Sustainability for employees. Sustainable lease cars. Training personnel.

		discipline	
	8- Archetypes Model	Efficiency	Higher productivity and waste reduction. Healthy catering within organization. Healthy food, sustainable sourcing, energy efficiency.
		Waste	Full chain approach regarding food-waste. With new enzymes longer shelf life so less waste.
		Substitution	Green energy. Highest quality in the sector. BHC+ status.
		Functionality	Pre-audits. Products assistance. Open innovation.
		Stewardship	We help our partners to become more sustainable. Pre-audits. EBIC. Project in Africa and South America.
		Sufficiency	Durable enzymes, longer shelf life, less production, less waste. Salt reduction. Health innovations
		Repurpose	Cooperation with EBIC. Product development. Open innovation
		Scale-up	Transparent innovation funnel. Incubator. Invest in new channels. Consortium with Sodexo. Cooperation with universities.
Business Model Frameworks	Business Model Canvas	Key Partners	"No specific choice on sustainable suppliers. We help our clients to become more efficient."
		Key Resources	"No we don't focus on sustainable key resources."
		Key Activities	Product leadership, customer intimacy operational excellence. Projects in Africa
		Costs	"We have made some choices for sustainability that raised our costs."
		Value Proposition	Transparency. No real focus on sustainability.
		Customer Relationships	Pre-audits. Help with efficient and sustainable production.
		Channels	"We do everything through the customer. We deliver directly to them, or through wholesalers. There are no specific targets for us to sustain here. We want to sustain rather existing channels and we also look for new channels, but we are not trying to tackle this based on sustainability."
		Customers	"It is important that we help our customers to become more sustainable. The non-durable companies don't come to us not because they want the cheapest, these companies will encounter themselves in the future. We'll refuse clients who do not meet food safety requirements. We often have an opinion, but we can not condemn, our customers are of course audited so when they are bad they only can blame themselves for it."
Transition Management	Change Drivers	Pro-Active leadership	"I think this was very important for us. When we went really on the sustainability tour we established a bottom-up program where we were conceived ideas related to sustainability from the staff. We then organized a couple of workshops to discuss sustainability. The bottom-up approach was very important for the involvement of employees. In addition, we have also established targets for sustainability for example on waste and energy."
		Aspiration	"Yes it is an element of leadership off course. If you want to think about adding value to the bakery chain then you are sustainable as a company and as an individual. It is about thinking together with the customer about the whole package, the suppliers, the classification of production and open innovation."
		Economic benefits	"No we have said from the beginning that this was not an opportunity, but it was more a way of operating. You could see it as a kind of social duty we felt, but also as an acknowledgment of how sustainable we already were."

		External factors	<p>"We have been encouraged by the government to make the chain more sustainable, this was based on projects. And we still feel some pressure from some research programs of the government."</p> <p>"Our clients have a lot of restrictions. The key lies for the bakeries very much in waste reduction. So here the project "Broodzonde" is again very important and interesting."</p> <p>"We see as a result of the crisis that bread consumption has decreased, but I do not think people ate less bread, so then you can conclude that there is less waste, so consumers have become more efficient and we have contributed to this with our enzyme story."</p> <p>"From the main organization we are forced to continue to improve our operations, in addition the rising energy and raw material costs are important as motivation to be more economical. And every year we have to grow at least 10% so there is a high innovation and cost pressure on us."</p>
		Correct diagnosis	"This ensures that you always have to stay sharp and that you should always focus on innovating and sustainability."
		Upsurge of visible crises	"We first looked at how our processes could be salvaged, that was step 1, the efficiency. As a logical follow-on there was sustainability. So we started a sustainability program with the following aspects: Drivers: chain responsibility, risk mitigation, innovation, quality assurance and thereby we set targets on chain development, planet, health & nutrition, People, Transparency & Profit."
	Change Barriers	Non-active leadership	-
		Fear	-
		Economic losses	High investments and low profitability of renewable energy sources such as solar power.
		External factors	Power of retail makes it hard for bakeries
		Wrong diagnosis	-
		Upsurge of visible crises	-

Appendix N Company 13 Results

Theme	Model	Constructs	Company 13
Sustainable Business Models	4-Phases Model	Vision on sustainability	Organic farm. Sustainability is about environment and society. Be aware that the earth is exhaustible. Sustainability is in entire operation. Sell local. Low food miles.
		Orientation external developments	"By setting an example we create awareness. Transparency is important. Organize events for knowledge sharing and experiences. Create sympathy in an creative way about sustainability."
		Business case elements	"Sustainability is fully integrated in the business model. We try to be as sustainable as possible within our constraints."
		Transparency	Most transparent farm of the Netherlands. Developed own transparency model, Keurig Merk.
		Reporting	"No, we only have the transparency model."
		Stakeholders	Role model. Setting an example. Healthy food. Highest quality meat in Brabant. Share your message
		Supply chain approach	"Quite restricted because we are small and a production company, no room for backwards integration. Cooperation on biodegradable packaging. Sustainable food for my animals, and local sourcing."
		Dominant functional discipline	Cooperation with Brabantse Milieu Federatie and Waterschappen. Continue with this way and grow within constraints. Sustainable growth.

	8- Archetypes Model	Efficiency	Decrease energy consumption. Cooperations with government organizations. Local production. Animal welfare.
		Waste	No specific focus on waste.
		Substitution	"No we don't do anything with substitution due to the high investment threshold."
		Functionality	"No we don't do anything with functionality."
		Stewardship	Biodiversity protection. Animal welfare. Consumer health. Radical transparency.
		Sufficiency	"No ambition to adjust consumer behaviour."
		Repurpose	Use buffalos for mowing locally. Cooperate with Staatsbosbeheer and Natuurmonument . Transparency model.
		Scale-up	"I have no ambitions of scaling up."
Business Model Frameworks	Business Model Canvas	Key Partners	"I choose all my partners based on sustainability. Local for local."
		Key Resources	Use resources as little as possible. No tractor. Being sustainable with your physical capital. Human capital
		Key Activities	Try to exclude middleman and retail, short supply chains. Organize activities to get consumer at the farm. Sustainable productions.
		Costs	"Most of my decisions or investments are based on sustainability. But for minor things I often make the choice for easy instead of more expensive sustainable options."
		Value Proposition	"I want to operate as sustainable as possible but I don't have a specific sustainability mission."
		Customer Relationships	Crowd funding. Involve customers in production process. Story telling. Social media. Open days.
		Channels	Web-sales and pick-up points
		Customers	Very diverse customers, no focus on sustainability.
		Revenue	No focus on sustainability.
Transition Management	Change Drivers	Pro-Active leadership	"I run the company by myself so I don't think that leadership is important."
		Aspiration	"Yes this was very important. Without my vision and aspiration this farm wouldn't exist."
		Economic benefits	"I saw an opportunity in the market. I thought that the consumer would pay more for good meat and I saw the opportunity of the combination between unique products and sustainability."
		External factors	"It is a nice challenge to convince the consumer to buy sustainable products." "Meat scandals were a success for me because this resulted in more transparency and more attention for my products." "My unique products are a success factor."
		Correct diagnosis	-
		Upsurge of visible crises	I started from my ethical sense to be more sustainable but I also saw that the market was changing and so I saw an opportunity to earn a living, so I started the Company 13.
	Change Barriers	Non-active leadership	-
		Fear	-
		Economic losses	-
		External factors	"It is a barrier that I only have this location for my sales. Not all the consumers are willing to take a trip to my farm to buy my products." Hard to think of distribution model for online sales
		Wrong diagnosis	-

		Upsurge of visible crises	The potential competition can throw a spanner in the works but that's for a later concern because I am still ahead of them.
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Appendix O Company 14 Results

Theme	Model	Constructs	Company 14
Sustainable Business Models	4-Phases Model	Vision on sustainability	4 P's, People, Planet, Profit, Purpose. Holistic approach. Relation between health and consumption patterns.
		Orientation external developments	Create employment. Healthy food. Media attention. Menu Natuurlijk, local food. SKAL certification. Organic. No additives.
		Business case elements	"Yes it is definitely a part of our business model. Decisions on management level always have a sustainability consideration."
		Transparency	Local organic menu, traceability of ingredients.
		Reporting	"We have a sustainability section in our annual report."
		Stakeholders	Healthy meals for consumers. No additive. Honest communication. Being better than competitors regarding freshness, taste and nutrition value.
		Supply chain approach	Local sourcing. Backwards integration is difficult. Efficient logistics and cooperation and co-creation within classical supply chain.
		Dominant functional discipline	Invest in sustainability. Look for more sustainable suppliers. Stop with classical supply chain. Take good care of your employees.
	8-Archetypes Model	Efficiency	Daily monitoring of efficient production. Efficient logistics.
		Waste	Waste separation and reduction. Investment for waste machinery was too expensive. Biodegradable packaging.
		Substitution	Energy saving in office. Looking for solar energy possibilities. Sustainable cooling equipment.
		Functionality	Optimal logistics. Service for customers. Tailor made solutions for customers.
		Stewardship	Healthy food. Regional employment and job creation.
		Sufficiency	No specific sustainability aspects.
		Repurpose	No specific sustainability aspects.
		Scale-up	Open innovation with key partners.
Business Model Frameworks	Business Model Canvas	Key Partners	Pulsar Network Capital. Local sourcing for Menu Natuurlijk. Organic suppliers.
		Key Resources	No real focus on sustainability.
		Key Activities	No real focus on sustainability.
		Costs	Reduce costs by working sustainable and efficient. Daily monitoring. Encourage personnel to become more sustainable. Sustainability program with targets.
		Value Proposition	No real focus on sustainability in healthcare sector and therefore too little in our company.
		Customer Relationships	Give advice regarding waste and recycling. Product assistance. Minimal packaging. Sustainable packaging.
		Channels	No real focus on sustainability.
		Customers	Niche market with sustainable customers. No focus on sustainability
		Revenue	No real focus on sustainability.
Transition Management	Change Drivers	Pro-Active leadership	Pro-active leadership was very important.

		Aspiration	Cooperate with nation-wide initiatives. Share vision and strategy regarding sustainability that this was important for us.
		Economic benefits	"We saw an opportunity in the market regarding sustainability; therefore we started with Menu Natuurlijk."
		External factors	"Scandals were a very good wake up call for us."
		Correct diagnosis	"With all the food scandals we had diagnosed that something had to change and that we needed to become more sustainable."
		Upsurge of visible crises	"Especially the crisis in the health care was important to us. Because it went bad in the healthcare, we were obliged to look for new channels. We also see the crisis in the food industry and the food crisis as an opportunity, we look at the problems and we try to make our own business distinction and thus find solutions and opportunities."
	Change Barriers	Non-active leadership	-
		Fear	-
		Economic losses	The problem is the availability of capital to invest.
		External factors	"Our existing infrastructure is a barrier, even if you want to change and you can invest then you find out that your current building is not good enough, these are some things that are unfortunate."xs
		Wrong diagnosis	-
		Upsurge of visible crises	-

Appendix P The Sustainable Business Model Results

Theme	Model	Constructs	Score	Remark/Conclusion
Sustainable Business Models	4-Phases Model	Vision on sustainability	14 of 14	All companies have a holistic vision on sustainability.
		Orientation external developments	14 of 14	All companies have an external oriented vision towards sustainability developments in society.
		Business case elements	14 of 14	All companies have elements in their business model that is based on sustainability.
		Transparency	14 of 14	All companies focus on (full-chain) transparency
		Reporting	3 of 14	Small companies and start-ups don't see the use of it. Furthermore, it is too expensive and it costs too much time.
		Stakeholders	14 of 14	All the companies handle the society as stakeholders instead of for example only shareholders.
		Supply chain approach	14 of 14	All companies focus on co-creation (also with regards towards sustainability)
		Dominant functional discipline	13 of 14	Some companies focus on survival of organization, mostly combined with sustainability.
	8-Archetypes Model	Efficiency	14 of 14	All companies focus on efficiency, and five companies scenically said that it also was important for cost-reduction.
		Waste	12 of 14	One company only focuses on waste separation, has ambitions for biodegradable if it doesn't influence the cost price. One has no focus. All the companies that do have a focus on waste first focus on waste reduction (12 of 14)

		Substitution	7 of 14	High threshold of investments, solar energy is not profitable enough. Some organizations rent their building, so no leverage for solar energy or green energy.
		Functionality	12 of 14	Two companies focus on other aspects. Some functionality aspects: convenience and service for client/customer; high service product assistance; platform functions; social job creation; education models, co-creation; organizing events
		Stewardship	14 of 14	All companies focus on stewardship. Consumer health, ethical trade, radical transparency, biodiversity protection, education models, knowledge sharing
		Sufficiency	11 of 14	No specific sustainable aspects to influence consumer behaviour. The companies that focus on sufficiency focus on creating awareness regarding sufficiency at consumer level (smaller daily recommended portion sizes)
		Repurpose	13 of 14	No specific sustainability aspects. The other 13 companies have for example a deposit system for their delivery crate, platform/network function, some focus on flex-working (however this is not applicable for the production companies), social enterprises, localization
		Scale-up	13 of 14	All companies, but one, want to scale-up by collaborative approaches; incubators and entrepreneur support models; open innovation; crowd sourcing/funding

Appendix Q The Business Canvas Model Results

Theme	Model	Constructs	Score	Remark/Conclusion
Business Model Frameworks	Business Model Canvas	Key Partners	13 of 14	Organization has no focus on sustainable partners. All other organizations state that they have specific requirements regarding sustainability for their key partners.
		Key Resources	11 of 14	6 companies focus on physical capital, 4 on financial capital (green investors, Triodos bank), 11 focus on human capital, 3 have no focus on sustainability regarding key resources.
		Key Activities	14 of 14	Social enterprises, workshops, collaborations with key partners, setting up sustainable networks/platforms
		Costs	11 of 14	The companies that don't focus sometimes choose for affordability instead of sustainability. The other companies are willing to pay a bit more for a sustainable solution, but they also believe that sustainability reduces costs due to efficiency. Sourcing and shortening the supply chain is important, so is ethical trade.
		Value Proposition	11 of 14	Not the company type to be very specific on sustainability in mission or vision. The other 11 companies have a strong focus on sustainability when it comes to satisfying consumer needs and solving consumer problems.
		Customer Relationships	14 of 14	Personal assistance; customer intimacy, free sampling, full-service, education, co-creation, events
		Channels	11 of 14	Some companies don't focus on sustainable channels. The others focus on efficient distribution/logistics, social media, co-creations with other actors in supply chain

		Customers	11 of 14	No sustainability aspects due to diversity of potential customers. Companies focus on getting more consumers by putting focus on awareness creation regarding sustainability. Companies also focus on “sustainable” consumers.
		Revenue	5 of 14	Companies with sustainable revenue have dynamic profit margins and transparent value chain

Appendix R The Transition Management Results

Theme	Model	Constructs	Score	Remark/Conclusion
Transition Management	Change Drivers	Pro-Active leadership	12 of 14	1 company was pro-active, but not regarding sustainability. 1 company was a one man-sized company so no “leadership”. All other organizations were very pro-active regarding sustainability.
		Aspiration	14 of 14	All organizations focus on producing continuous learning and growth, and have a positive vision on sustainability
		Economic benefits	8 of 14	Some see sustainability as a way of life, it is something that has nothing to do with economic benefits. Other companies saw a lack of transparency, healthy food, or other sustainable aspects as a reason to start with a SBM.
		External factors	13 of 14	Government (4), Consumers (8), Retail (4), Scandals (3), Farmers (1), Vacuum of organic agriculture (1), Russian boycott (1), lack of pro-activeness of other organizations (1), pressure from clients or mother organization (2), crisis (1)
		Correct diagnosis	4 of 14	This variable is not applicable to start-ups. Other companies state that it is about a continuous process of diagnosing and developing your processes and your sustainability performance.
		Upsurge of visible crises	10 of 14	The various problems in the food industry resulted in an urge to become more sustainable for 10 companies. Problems were: scandals, too much private labels, lack of transparency, increasing regulation, lack of sustainability at previous jobs, growing awareness towards sustainability.
	Change Barriers	Non-active leadership	0 of 14	Not applicable because all organizations had pro-active leadership and/or aspiration as key success factor.
		Fear	0 of 14	Not applicable because all organizations had pro-active leadership and/or aspiration as key success factor.
		Economic losses	5 of 14	Lack of investment capital (4), still in start-up phase so too little profits (1), low profitability of renewable energy (1), competition (1)
		External factors	14 of 14	Government (6), Customers (2), Retail (3), Crisis (1), Criticism on MSC certification (1), Economic pressure of external parties (1), No cooperation in supply chain (1), Lack of media attention (1), Physical location (2), Difficult to develop online sales model (1), Time (1)
		Wrong diagnosis	0 of 14	Not applicable because all organizations had correct diagnosis and/or upsurge of visible crises as key success factor.
		Upsurge of visible crises	4 of 14	Growing competition (4). No real barriers in current market developments.

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