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The innovation of value creation through a new generation business models

*An evaluative multiple-case study of the practical value creation in sustainable
business models constructed with the Business Model Template*

**Master Thesis
Strategic Management**

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Preface

Dear reader,

This master thesis is the final requirement of graduating the master Strategic Management at the Nijmegen School of Management. Over the last few months, I have worked in close collaboration with Jan Jonker as my supervisor, and Erik van den Oord and Dave van Schaijk as the providers of the data. I sincerely would like to thank them for the opportunity to complete this thesis. Furthermore, I would like to thank Moniek Kamm for her efforts as the second examiner. Finally, I would like to thank all the organizations that volunteered and provided their insights for this thesis.

Unfortunately, as a result of the measures taken due to the corona crisis, adjustments had to be made to the initial research plan, especially the data collection. At first, the data collection would consist of semi-structured interviews with practitioners. Since these practitioners are occupied with other activities to survive the lockdown, their plans for innovations are postponed or delayed. Therefore, the semi-structured interviews are replaced with a document research. These documents are already available, or accessible despite the lockdown. Mr. Van den Oord and Mr. Van Schaijk have been flexible under these circumstances and therefore I am very grateful.

I hope you will enjoy the read.

Kind regards,

Roy van den Heuvel

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Abstract

The popularity of sustainability has grown extremely in the last decennia. Current society wants to meet its needs, however, it does not want to compromise the needs of future generations. Companies have a large impact on a sustainability transition. One way to contribute to this transition is to change the way value is created. This new way of value creation is referred to as innovative value creation. To enable a change in value creation, businesses must adapt their business models. The business model is used as the logic through which value is created. To configure a business model, practitioners can use the help of templates, one of which is the Business Model Template (BMT). This BMT should help practitioners to configure a sustainable BM, and consequently, should enable innovative value creation. The purpose of this thesis is to research the extent to which the BMT facilitates innovative value creation. The research question to be answered is: *To what extent does the Business Model Template facilitate an innovation in value creation by sustainifying existing business models?* To answer this question, an evaluative multiple-case study has been used. The data is gathered through a document research. Analysis of the documents revealed that the BMT has a significant potential to facilitate innovative value creation. However, this potential is influenced by two factors (moderators). Firstly, the fundamentals of the case must fit with the fundamentals of the BMT. Secondly, the user must have a thorough understanding of the importance of the difference between the conventional way of thinking about value creation and business models, and the innovative way. An external consultant is found to be helpful as it positively impacts the understanding of the BMT itself, and the two moderators.

Keywords: innovative value creation, sustainable business models, Business Model Template.

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"So, to the best we can, what we do is focus on creating value for others, and how do we do that? We do it by trying to produce products and services that our customers will value more than their alternatives, and not just their alternatives today, but what the alternatives will be in the future. We try to more efficiently use resources than our competitors, and constantly improve in that, and we try to do the best job we can in creating a safe environment, and environmental excellence, and constantly improve at that."

- Koch (2015)

1. Introduction: Value creation meets sustainability

Without it, businesses cannot survive: value. The creation of value is essential and the starting point for every organization (Jorgenson, 2015). Value creation has been linked to a variety of business concepts. The logic that lays behind the creation is most commonly referred to as the business model (BM) (Osterwalder & Pigneur, 2005; Margretta, 2002; Richardson, 2008). In times where there is a great focus on sustainability, every participant of society needs to contribute and adapt to this sustainability demand, including businesses (Hofmann, 2019). Consequently, businesses need to change their fundamentals, such as their perspective on value creation. This thesis will focus on the changing nature of value creation, and the logic behind that value creation. This is done through the practical contribution of one specific tool for business model innovation (BMI), which is known as the Business Model Template (BMT) (Jonker & Faber, 2019).

Many conventional businesses in the world are designed linearly. The linear economy is based on a system in which raw materials are used to make products, and after its use, any waste is thrown away. One of the most important reasons for organizations to distance themselves from the linear economy is that they rather be part of a more sustainable environment. The need for sustainability has become crystal clear throughout the last decennia in reports of greenhouse gasses, pollution or plastic soups. To give an illustration: the global economy is only 8,6% circular (in contrast: two years ago, this was 9,1%); in 2017, material resource use breached the 100 billion tons for the first time in history; The International Resource Panel forecasts that by 2050 material use will amount to between 170 and 184 billion tons (PACE, 2020) and this would not have to be the end of the summation. Motives for being more sustainable are widespread. Some may attempt to enter a new customer market or are forced to do so by law. However, some organizations become sustainable rather voluntarily, as they feel responsibility or genuinely try to make a difference. Trends that aim to contribute to sustainability are known under many aliases. Possibly the most popular are the circular economy, the bio-based economy, the functional economy, the sharing economy, the collaborative economy, and the self-production economy, or do-it-yourself economy (Jonker & Faber, 2015). The need to change towards sustainability may be seen as both an opportunity for organizations to engage in sustainability principles, but also as an external pressure. On the one hand, there is a growing demand for new types of products and services (opportunity). On the other hand, society expects organizations to take their responsibility in terms of pollution and emissions (external pressure). It is not merely society that puts pressure on organizations. From a European level

for example, in 2015, the European Commission put forward a package to support the EU's transition to a circular economy. This 'EU Action Plan for the Circular Economy' outlines a set of both general and material-specific actions. From a national level, the Dutch government introduced 'A Circular Economy in the Netherlands by 2050'. This was a direct reaction to the EU's Action Plan. The purpose of A Circular Economy in the Netherlands by 2050 is to be fully circular in 2050 by setting up collaborations between businesses, science, governments, and consumers. Since circularity is the most tangible example of sustainification, institutions have a large focus on it. However, as already stated and as will be explained in the next sections, it is not merely circularity that contributes to a sustainable society.

Value creation and the BM lay at the very heart of organizations. In a sustainability transition, businesses will have to change both the way they create value and the logic behind it. Businesses vary in the way they incorporate sustainability principles. Easily put, the conventional BMs strive to create value in a rather financially driven way, with the purpose to gain competitive advantage (Stähler, 2002; Richardson, 2008). In sustainable BMs, the three most important features are sustainability, circularity, and inclusiveness (Jonker & Faber, 2019; Jonker, Stegeman & Faber, 2017). Taking these features into business causes an innovation at all kinds of levels, such as the BM, value creation, and the nature of transactions. In most sustainability-literature, value is divided into three sources, or levels: economic, social, and environmental (Boons & Lüdeke-Freund, 2013; Bocken et al., 2014; Oskam, Bossink & De Man, 2020). Among other features, the set above, and the different sources of value, lead to three different archetypes of sustainable BMs: platform business models, community business models, and circular business models (Jonker & Faber, 2019).

1.1. Sustainability, circularity, and inclusiveness

Within sustainable BMs, sustainability, circularity, and inclusiveness are the most important pillars (Jonker & Faber, 2019; Jonker et al., 2017). These three are widely used in literature, however, the meaning is not always as clear. Firstly, sustainability is an extremely popular topic in all kinds of academic fields. According to Johnston, Everard, Santillo and Robért (2007), there are around 300 definitions of sustainability. Due to the over- and misuse of the term sustainability, it has become a sort of catch-all term (Jonker & Faber, 2019). Based on the Brundtland Report (1987), sustainable *development* is about meeting the needs of the present without compromising the ability of future generations to meet their needs. Although this last definition is very broad, this is as good as it gets. In this thesis, sustainability is used in a

business context only. Secondly, within sustainability, there is a wide range of applications that strive to add to sustainability. In the light of various interrelated environmental, social, and economic problems, an increasing number of political, academic, and economic actors endorse fundamental societal change as inevitable to move toward sustainability (Hofmann, 2019). One trend that adds to sustainability is the circular economy (CE). The CE can be seen as a part of the bigger picture of sustainability (Jonker, Kothman, Faber & Montenegro, 2018). It can, however, also be seen as a driver for sustainability (Manninen et al., 2019). Apart from which angle one chooses, the CE is undeniably connected to sustainability. The central idea of the CE is one of closing loops (Jonker et al., 2018). *A contrario*, businesses have to move away from linear value chains. Thirdly, inclusiveness is the last pillar in sustainable BMs. An inclusive environment is one in which everyone is a part of, and can join, social, cultural, and economic activities (Jonker & Faber, 2019). It is a concept that aims for social involvement, integration of different target groups, and their participation (Jonker & Faber, 2019).

When, in the remainder of this thesis, the term ‘sustainable BMs’ is used, this includes the above-explained pillars, so: sustainability, circularity, and inclusiveness. Sustainable BMs thus have a broader definition than BMs including mere sustainability principles. When other features are included, this is explicitly stated.

In the remainder of this introduction, the problem formulation, objectives, research question, and relevance of this thesis will be explained. Subsequently, the theoretical framework will be discussed. Here, both the essence of, and logic behind conventional and innovative value creation are elaborated upon. After this theoretical framework, the methodology will be explained. The methodology of this thesis consists of an evaluative multiple-case study. Thereafter, the collected data will be described and then analyzed. After analyzing the data, a conclusion and discussion will be given.

1.2. Problem formulation

In this thesis, the focus will be on one of the essentials of businesses in a path towards sustainability: the changing nature of value creation. Consequently, since value creation is inextricably linked with the BM, it will also play a role as it functions as the logic through which value is created. In the mid-00s, Osterwalder and Pigneur (2005) designed a tool that later has been referred to as the Business Model Canvas (BMC). This canvas was designed to help businesses configure a BM aimed at economic value creation. A changing perception on

value creation, demanding for sustainability, circularity, and inclusiveness, increases the demand for BMs that incorporate other forms of value creation. Therefore, the BMC has become outdated. One of the methods that has been introduced as a replacement for the BMC, is the Business Model Template (BMT) (Jonker & Faber, 2019). The BMT aims to help and guide organizations in designing a sustainable BM. The BMC has always been praised for its simplicity and clearness (Jonker & Faber, 2019). The BMT strives to do the same.

Among others, one of the goals of the BMT is to help organizations to create value. However, as the BMT has just been recently introduced, the relationship between the BMT and its effect on value creation has not been researched yet. The question then arises what the actual practical contribution of the BMT is on new sustainable forms of value creation. This gap in research forms the fundament for this thesis.

1.3. Objective and research question

By incorporating sustainability into value creation, value will have to be created differently. Consequently, the logic through which value is created, which is known as the BM, changes with the value creation accordingly. Essentially, value is not merely created by one organization with a focus on one single source of value anymore. In an innovative manner of value creation, organizations will have to work together to be able to create value on different levels (Jonker & Faber, 2019). To guide organizations in these changes, the BMT has been constructed (Jonker & Faber, 2019). Multiple organizations have already used the BMT to reconfigure their existing BM. Others have used it to configure their first BM. Both types of organizations will be the research subjects of this thesis.

This thesis has multiple objectives. Firstly, it aims to understand and evaluate the changing nature of value creation, referred to as the innovation of value creation. This innovation is initiated by an urging demand for sustainability. Secondly, this thesis aims to understand and evaluate the changing nature of the BM. Since this can be seen as the logic through which value is created, it must develop new requirements that enable the creation of changed forms of value. The BMs that are subject to this thesis, are (re)configured with the support of the BMT (Jonker & Faber, 2019). Thirdly, the overall evaluation of this thesis is whether and to what extent the BMT facilitates an innovation in value creation by sustainifying existing BMs, and whether there are circumstances that influence this facilitation. The contribution in this sense is rather practical, as the research consists of a multiple-case study.

To be able to reach the objectives, the following research question is constructed:

To what extent does the Business Model Template facilitate an innovation in value creation by sustainifying existing business models?

To answer the research question, the following sub-questions are constructed:

- *What is the changing nature of value creation?*
- *What kind of new requirements does the changing nature of value creation imply for business models?*
- *What is the added value of the Business Model Template in making the changes in value creation?*
- *Which factors influence the impact of the Business Model Template on innovative value creation?*

1.4. Theoretical relevance

Sustainable BMs are discussed and explained thoroughly in literature (e.g. Boons, Montalvo, Quist & Wagner, 2013; Schaltegger, Hansen & Lüdeke-Freund, 2016; Rodrigo, 2018; Evans et al., 2017). The papers are mostly focusing on the BM in general. Only few aim their research at value creation specifically (e.g. Vargo, Maglio & Akaka, 2008). Although many researchers decided not to focus on value creation specifically, it is an important element for businesses (Jorgenson, 2015; Haksever, Chaganti & Cook, 2004; Schwartz & Carroll, 2009). Therefore, this thesis will scientifically be relevant as it contributes to an understanding of the changing manner of value creation. Since data will be gathered from practitioners, different views, applications, and perspectives on value creation can be explained.

Furthermore, this thesis aims to map the contributions of the BMT in the light of innovative value creation. In a broader sense, it contributes to Business Model Innovation-literature. BMI is a potential mechanism to integrate sustainability into business models (Jolink & Niesten, 2015). Amit and Zott (2001) set a high level of BMI research. Researches like the one of Amit and Zott (2001) strive to understand strategic issues when faced with BMI. This thesis will add to understanding these strategic issues. Besides that, there is a lack of case studies in BMI (Evans et al., 2017). This lack of knowledge delays the uptake of sustainable BMs (Linder & Williander, 2015) and the transition to a sustainable future (Boons et al., 2013). By carrying out case studies, this thesis adds to solving potential challenges.

1.5. Practical relevance

Sustainable BMs strive to create value differently than conventional BMs, as they incorporate a broader range of value, including sustainability, circularity, and inclusiveness principles. Whether this objective can be achieved by applying the BMT, and more importantly, how this could be done, is yet unclear. To contribute in a practical sense, this thesis will dive into the creation of value. It becomes more attractive for organizations to use a guiding tool such as the BMT when its way of working, relevance, and performance is measured. These results will help organizations that have already adapted their BMs with the help of the BMT in terms of its effect on innovative value creation. Besides that, it will help organizations that are about to change their BM, as they are aware of the results of applying the BMT. Furthermore, literature up till now has been very theoretically oriented. The set-up of this thesis allows a practical view on value creation.

By using an evaluative approach, an in-depth and up-close examination can be made of the innovation of the value creation (Yin, 2018). This will contribute to the practical relevance, as it strengthens the results and conclusions.

1.6. Chapter conclusion

In this chapter, the introduction of the thesis is given. Essentially, this thesis will research the changing nature of value creation and, consequently, the logic behind it. The research subjects are organizations that have worked with the BMT to (re)configure their BM. Therefore, the practical contribution of the BMT is measured in terms of its ability to create innovative value. This thesis will add to the current literature since value creation in its changing nature has only been discussed briefly up until now. Most focus has been on sustainable BMs, their origin, and features. As a result of the practice-orientated set-up of this thesis, it will go beyond theoretical ideas and construct a practical view on value

2. Conventional value creation

This chapter sets out the conventional way of creating value. Throughout this thesis, a distinction will be made between conventional value creation and innovative value creation. This distinction may not be used in the vast majority of literature, and if so, it may be slightly different than in this thesis. In the light of this thesis, conventional value creation is linked to the linear, old-fashioned way of making a financial profit within an organization. This chapter will further elaborate on this. The more traditional enterprises will incorporate this way of thinking. Conversely, and further discussed in [the next chapter](#), innovative value creation is most commonly linked to sustainable enterprises, operating within a dense network. They let go of the conventional value creation to be able to sustainify. Further differences will become clear throughout the course of the following chapters.

2.1. Conventional value

A much-used term in strategic management, and more general business literature, is value. It may even be argued that every business starts with the creation of value (Jorgenson, 2015); that it is the main objective of organizations (Haksever et al., 2004); and that the generation of it, is the fundamental element underlying the entire business field (Schwartz & Carroll, 2009). Before elaborating on value creation, value as an on-itself-standing concept will be explained and discussed.

Value finds its origin in neoclassical economics (Windsor, 2017). In the theory of the firm, value is “a surplus or gain in someone’s welfare relative to a previous condition” (Windsor, 2017, p. 76). This could be reflected in for example increased cash flow, income, wealth, or welfare. Windsor’s definition of value incorporates a change over time, which makes it a dynamic concept, also referred to as “economic gain” (Lieberman, Garcia-Castro & Balasubramanian, 2017). In contrast, Porter (1985) equals value to price, as he defines value as what buyers are willing to pay. This latter has been subject to a lot of critiques as it is formulated too limited. Following a thought introduced by Plato (Haksever et al., 2004), value can be distinguished into use value and exchange value (Lepak, Smith & Taylor, 2007). By doing so, multiple levels of analysis of value can be dealt with. Use value refers to the specific quality of a new job, task, product or service as perceived by users in relation to their needs (Lepak et al., 2004, p. 181). Judgments on the use value are subjective and individual-specific (Bowman & Ambrosini, 2000). Exchange value on the other hand, is either the monetary amount realized at a certain point in time when the exchange of the new task, good, service or product takes place,

or the amount paid by the user to the seller for the use value of the focal task, job, product or service (Lepak et al., 2007, p. 181). Within the neoclassical economic view, most focus is on the exchange value (Windsor, 2017). Therefore, value in the conventional way of value creation is best to be defined as done by Windsor (2017), where value is the surplus or gain in someone's welfare relative to a previous condition, where that surplus or gain is measured in the monetary amount realized or paid by the user (Lepak et al., 2004).

2.2. Value creation: an agency perspective

Businesses can survive because of the value they obtain. However, before the value can be captured by an organization, it has to be created. Value creation is “the generation of a surplus (gain) from trade, other transaction, investment, or relationship” (Windsor, 2017, p. 76). For many conventional thinkers, value creation, which in practice will mostly be done by making a profit, is an organization's only moral obligation (Haksever et al., 2004).

Value creation essentially theorizes on how to manage a business, or more generally, any organization (Brandenburger & Nalebuff, 1997). One of the theories on how to manage an organization is the producer surplus maximization (Windsor, 2017). This theory focuses on increasing the producer surplus on behalf of the owners, more practically: the goal is to make a profit (Windsor, 2017). Within this theory, value creation is the core purpose and central process of economic exchange (Vargo et al., 2008). Furthermore, the firm is the sole creator of value, and value is measured by the amount of nominal value, i.e. the price received in exchange for a good or service (Vargo et al., 2008). This way of value creation is based on an agency perspective. The business, acting as the agent, creates and captures value for its owners, the principals (Windsor, 2017; Ross, 1973). The organization operates by creating value for its primary stakeholders, the ones that are directly linked to the organization, which are the customers, employees, and most importantly, its owners or shareholders (Windsor, 2017). Creating value for other stakeholders, such as society, is not in the organization's primary interests. In accordance with the exchange perspective of value as discussed in [the previous paragraph](#), each value creation is a contractual exchange in a market economy (Windsor, 2017).

In the case of a publicly listed company, the shareholders will be the owners of the company and therefore the principals in the agency perspective. The same principles remain for companies that are not publicly-listed, however, in this case, the principals will not be the

shareholders, but the owners of the business in another form of ownership (Jensen & Meckling, 1976).

2.3. Conventional logic of value creation: the business model

Creating value is one of the essential objectives for organizations since value is their means of existence. A concept that is closely related to value creation is the BM. Essentially, the purpose of the BM is to provide value creation (Teece, 2010; Richardson, 2008; Margretta, 2002). The groundwork for the concept is laid by Osterwalder, Pigneur and Tucci (2005). Up till their research on BMs, the topic was only discussed briefly. This paragraph will focus on the conventional BM.

Based on an extensive literature research, Osterwalder and his colleagues (2005, p. 10) defined the business model as follows:

“A business model is a conceptual tool that contains a set of elements and their relationships and allows expressing the business logic of a specific firm. It is a description of the value a company offers to one or several segments of customers and of the architecture of the firm and its network of partners for creating, marketing, and delivering this value and relationship capital, to generate profitable and sustainable revenue streams.”

Ever since, the BM has been linked to value creation. It can be seen as a description of the logic that lies behind the actual processes of a business (Richardson, 2008). In the design of a BM, Osterwalder and Pigneur (2004) captured nine building blocks. These nine building blocks are combined into a framework that later has been referred to as the Business Model Canvas (Osterwalder & Pigneur, 2010) (Figure 1). The function of the BMC is fivefold (Osterwalder et al., 2005): understanding and sharing, analyzing, managing, determining prospects of, and patenting business models.

Building block	Definition
<i>Customer Segments</i>	The different groups of people or organizations a company aims to reach and serve
<i>Value Propositions</i>	The bundle of products and services that create value for specific Customer Segments
<i>Channels</i>	The way a company communicates with and reaches its Customer Segments to deliver a Value Proposition
<i>Customer Relationships</i>	The types of relationships a company establishes with specific Customer Segments
<i>Revenue Streams</i>	The cash a company generates from each Customer Segment
<i>Key Resources</i>	The most important assets required to make a business model work
<i>Key Activities</i>	The most important things a company must do to make its business model work
<i>Key Partnerships</i>	The network of suppliers and partners that make the business model work
<i>Cost Structure</i>	All costs incurred to operate a business model

Figure 1. The building blocks of the Business Model Canvas (based on Osterwalder & Pigneur, 2010).

The BM as proposed by Osterwalder and Pigneur (2004) has a large focus on the competitive position of the organization. Teece (2010) describes the BM as a potential tool to assure competitive advantage through the successful creation of value for customers. Richardson (2008) states that the BM can be used in the strategy process to design or check on how the firm is executing its strategy, which is about competing effectively. In every discussion on the BM framework, the concept of value is incorporated. Following the stated argumentation of Richardson (2008) and Teece (2010), the conventional BM is eventually used to strategically create superior value for customers and capture a greater amount of that value than competitors to assure a well-established competitive position.

Based on a wide range of literature, Richardson (2008) proposed a consolidated view of the components of a BM as the value proposition, value creation and delivery, and value capture system.

Value proposition

The value proposition refers to “the reasons a customer will value a firm’s (proposed) offering” (Richardson, 2008, p. 139). This includes what the firm sells. Furthermore, it contains the targeted customer or market. The notion of value proposition is most important as you cannot

talk about the value of an offering, without talking about to whom this will be offered (Richardson, 2008). Besides that, it is important to ask why the market is, or the customers are not already well-served by other firms (Richardson, 2008). Connecting this to the building blocks in Figure 1, the value proposition relates to the Customer Segments, Value Propositions, and Customer Relationships (Osterwalder et al., 2005; Bocken, Short, Rana & Evans, 2014).

Value creation and delivery

This component of value describes how the proposed theory is put into action. It begins to flesh out the organization and architecture of the firm (Richardson, 2008). It also specifies the firm's resources and capabilities, i.e. the instruments through which competitive advantage can be achieved. It shows the logic of the firm's structure and how the organization is consistent with the firm's basic strategy (Richardson, 2008). Again, connecting this to the building blocks stated in Figure 1, the value creation and delivery relates to the Channels, Key Resources, Key Activities, and Key Partnerships (Osterwalder et al., 2005; Bocken et al., 2014). The system of creating and delivering value is also referred to as the organizational model (Jonker & Faber, 2019).

Value capture

Making a good value proposition and, subsequently, creating and delivering this value, is not enough for the firm to earn superior returns and gain a competitive position. For a firm to benefit, it must also have a model that produces revenue and provides a profit margin over its costs (Richardson, 2008). This revenue model describes the sources of revenue and different ways in which the firm receives money in exchange for its services (Richardson, 2008). This fits best with the building blocks Revenue Streams and Cost Structure (Figure 1) (Osterwalder et al., 2005; Bocken et al., 2014). The system of capturing value is also known as the revenue model (Jonker & Faber, 2019).

2.4. Chapter conclusion

Conventional value creation is a mostly embedded idea in organizations operating linearly. At the heart of the organization is the creation of value in the form of economic gain. This economic gain is a surplus in someone's welfare relative to a previous condition. The source of value is almost entirely monetary driven. The economic gain could be measured in for example increased cash flow, income, wealth, or welfare. The most acclaimed perspective on value creation in a conventional way is the agency perspective. This drives organizations towards

creating value on behalf of its owners primarily. These owners are most commonly the shareholders of a publicly listed company. Other forms of ownership can be applied as well, which is mostly the case in smaller (family) companies. A business tool that describes the logic behind value creation is the BM. The BM that organizes conventional forms of value creation is largely designed to contribute to the specific features of this kind of value creation. This means that conventional BMs focus on creating economic profit for the organization and its owners to achieve competitive advantage. A tool that helps practitioners to configure such a BM, was introduced by Osterwalder and Pigneur and later has been referred to as the Business Model Canvas, or BMC. With the help of nine building blocks, companies can to set up a BM. The essential components in these BMs are the value proposition, value creation and delivery (or organizational model), and value capture (or revenue model).

3. Innovative value creation

As discussed in the [Introduction](#) of this thesis, sustainability has become a very important principle in modern society. A sustainability transition requires a different way of thinking in almost every part of society. Consequently, sustainability transition research argues for a shift towards sustainability through far-reaching structural systematic changes (Wittmayer, Hölscher, Wunder & Veenhoff, 2018). This can be done along, for example, economic, political, institutional, and/or organizational spheres. The transitions are multi-dimensional, long-term, and fundamental change processes through which societal cultures, structures, and practices shift to more sustainable ones (Hofmann, 2019). This partly arises from “the co-evolution between societal sustainability transitions and fundamental shifts within individual businesses” (Loorbach & Wijsman, 2013, p. 20). As part of such a transition, amongst multiple other changes, sustainable business models have emerged (Markard, Raven & Truffer, 2012). The importance of BMs in such a transition is stressed by Bidmon and Knab (2017, p. 903): “Business models have been ascribed the potential to disrupt entire industries, because they connect multiple actors, mediate between the production and the consumption side of business and support the introduction of novel technologies into the market”. Changes in the BM lead to changes in value creation as the concepts are so strongly connected. This chapter will elaborate on the innovation of that value creation and the BM. This chapter can be seen as a synthesis of what is expected to be seen in sustainable BMs.

3.1. Innovative value

Businesses take an important place in the sustainability transition. To enable sustainification, businesses will have to rethink their perspective on value. The concept of value in conventional value creation has been discussed in [the previous chapter](#). The place that value takes within a sustainability-oriented organization is similar to conventional value; it is the fundamental element and objective of every business. In this paragraph, value will be discussed that contributes to sustainability principles.

Value from an innovative perspective, as opposed to the conventional view, goes beyond economic gain. Here, value is primarily created when a business meets society’s needs by efficiently producing goods and services while avoiding unnecessary negative externalities (Schwartz & Carroll, 2009). In this perspective, all organizations must work towards the generation of net societal value, i.e. business firms are expected to improve the general welfare of society or to help make the world a better place (Bakan, 2004). Consequently, value is not

merely measured in economic gain. A widely used method in the sustainability context is a distinction between economic, environmental, and social value (Boons & Lüdeke-Freund, 2013; Bocken et al., 2014; Oskam et al., 2020). A definition of value that allows sustainability principles is given by Haksever and colleagues (2004, p. 292). Here, value is “the capacity of a good, service, or activity to satisfy a need or provide a benefit to a person or legal entity”. This definition includes any type of good, service, or act that satisfies a need or provides a benefit, including those that positively contribute to the quality of life, knowledge, prestige, safety, physical, and financial security, as well as providing nutrition, shelter, transportation, income et cetera (Haksever et al., 2004). Both economic, environmental and, social value are included in this broad definition of value.

3.2. Value creation: a stakeholder perspective

As already mentioned in [the previous chapter](#), value creation is about the actual generation of value (Windsor, 2017). In the case of innovative value creation, this means that value creation is about the generation of the satisfied need or provided benefit that leads to economic, environmental, and/or social impact. This paragraph will discuss the perspective from which this value will be created, namely the stakeholder perspective.

Value creation from a stakeholder perspective means that the business and its managers have sufficient discretion to generate value for multiple stakeholders (Windsor, 2017). A stakeholder in an organization is “any group or individual who can affect or is affected by the achievement of the organization’s objective” (Freeman, 1984, p. 46). By placing this stakeholder perspective in the context of sustainability, circularity, and inclusiveness principles, it can be said that shared value is created within a network of actors, or a cluster of businesses. Such a cluster of businesses was originally referred to as a ‘business ecosystem’. This consists of co-evolving interdependent and interconnected actors: customers, agents, channels, sellers of complementary products and services, suppliers, and the firm itself (Moore, 1993). The ‘innovation ecosystem’ is a more recent term (Ritala, Agouridas, Assimakopoulos & Gies, 2013). Here, the ecosystem is viewed as a system of “collaborative arrangements through which firms combine their individual offerings into a coherent, customers-facing solution” (Adner, 2006, p. 98). An innovation ecosystem aims to create and capture value from innovation activities, related to either technological or business/entrepreneurial innovation (Ritala et al., 2013).

The relationship between an organization and its stakeholders operating in an innovation ecosystem in terms of value is not unidirectional (Haksever et al., 2004). It may be that for one stakeholder value is created, while for another this leads to a reduction of its benefits. Finding balance is of great importance for organizations (Schwartz & Carroll, 2009). Here, the concept of time plays an important factor (Haksever et al., 2004). Since society is (arguably) the most important stakeholder in innovative value creation, an illustration will be given to stress the importance of time. From a stakeholder perspective, a manufacturer that has incorporated linear principles in its process (so: take-make-dispose), may contribute to society in the short term as it pays taxes (economic value for stakeholders), and it provides a stable and reliable source of employment for the community (social value for stakeholders). However, in the long term, this manufacturer may disguise significant pollution problems (environmental value destruction for stakeholders). This means that, by incorporating time in value creation, there is an imbalance in value creation. Conversely, in the light of an agency perspective, this manufacturer may create sufficient value, as it creates short-term economic gain for its owners. From a stakeholder perspective, this manufacturer disappoints greatly, as pollution creates a significant imbalance in value creation in the long term. The goal for innovative organizations is to create value that balances economic, social, and environmental value in both the short and long term for all of its stakeholders in the innovation ecosystem.

3.3. Conventional versus innovative value creation: critiques

In the paragraphs on [conventional](#) and [innovative value creation](#), it has become clear that the two differ. This mainly has to do with their perspective on value creation. Conventional value creation targets shareholders, whereas innovative value creation focuses on all of its stakeholders in an innovation ecosystem. One may say that the innovative way of value creation derives its existence from critique on the conventional way of value creation. In this paragraph, the critique will be discussed.

Firstly, conventional value creation assumes that the focus of value creation is on one single organization exclusively (Jonker & Faber, 2019). This way of reasoning is incompatible with sustainability, circularity, and inclusiveness principles. Innovative value creation requires resources beyond one- or two-party systems, often involving an organization, its customers, suppliers, employees, shareholders, and other network partners (Vargo et al., 2008). As a reaction, value creation within a network has been labeled many names, for example, ‘shared value creation’, ‘co-creation of value’ or ‘multiple value creation’ (Windsor, 2017; Jonker &

Faber, 2019). In line with this critique, conventional value creation puts a large emphasis on creating value to gain competitive advantage. In the case of innovative value creation, the purpose depends on the specific project and is therefore significantly broader than gaining competitive advantage. It could for example be: reduction of CO2 impact, sharing energy within a community, or setting up a sustainable chain of partners.

Secondly, conventional value creation is mainly focused on economic value (Jonker & Faber, 2019). Focusing on merely one stakeholder, which is the shareholder, results in a limited perspective, ignoring most other values that could have been created for the organization (Lieberman et al., 2014). Continuing on the first point of critique, creating value in a shared, co-creating network means that the firm is able to generate economic value, and simultaneously may produce social and environmental value within the network by addressing all kinds of social and ecological issues (Windsor, 2017).

Thirdly, both types of value creation have a different view on the concept of time. In the case of conventional value, large emphasis is put on short-term goals, as this satisfies the shareholders. In innovative value creation, a long-term perspective is highly important, as negative short-term effects may be resolved in the future by positive long-term effects. It strives to balance the effects over time.

	Conventional value	Innovative value
<i>Purpose</i>	Competitive advantage	Depends on the specific project, but most commonly focused on sustainability or concepts related to innovation
<i>Focus</i>	One organization	A network, or ecosystem
<i>Sources of value</i>	Economic value	Economic value Social value Environmental value
<i>Concept of time</i>	Short-term	Long-term

Figure 2. Conventional value versus innovative value

3.4. Innovative logic of value creation: sustainifying the business model

The innovation of value creation comes with a different logic of value creation, as the conventional BMs do not leave room for the concepts introduced by sustainability principles, and the innovative manner of value creation. This means that the BMC as discussed in [the previous chapter](#) has become outdated and BMs have to be constructed differently. In this paragraph, the logic of value creation will be discussed from a sustainability angle.

In 2010, so only ten years ago, Osterwalder and Pigneur (2010), launched a new book on BMs, stating that: “you’re holding a handbook for visionaries, game changers, and challengers striving to defy outmoded business models and design tomorrow’s enterprises” (Osterwalder & Pigneur, 2010, cover page). This raises discussion, as one may argue that it is not merely a book for ‘visionaries’, nor ‘game changers’. Already around the 2010s, there were many indications and scenarios in which, for example, a limited amount of natural resources was appointed. When doing a word search in the handbook of Osterwalder and Pigneur (2010), zero hits on “circular”, “circularity” or similar terms were found. On “sustainability”, two hits were found, however, in these cases, “sustainability” was used in a different context than described in this thesis.

Luckily, many researchers do consider sustainability when working on BMs (e.g. Wells, 2008; Tukker et al., 2008). In the same year Osterwalder and Pigneur published their book, Lüdeke-Freund (2010) published a paper in which BMs are discussed that “can become subject to eco-innovation and thus support the realization of business cases for sustainability” (p. 1). Here it is argued that business models can also – besides creating and securing competitive advantage – support eco-innovations and contribute to pivotal ideas about value creation with regard to private and public benefits (Lüdeke-Freund, 2010). This latter notion supports the idea of creating value within a system of suppliers and customers.

Just as Lüdeke-Freund (2010), Wells (2008), Tukker and colleagues (2008) and many other scholars and practitioners, The European Commission, national governments (e.g. the Netherlands and Germany), and economic think tanks (e.g. Ellen MacArthur Foundation or EMF) assume that one powerful lever for the shift from a linear economy toward sustainability is bound to innovation among incumbent companies and entrepreneurs (Hofmann, 2019). The BM construct received increasing attention as an instrument to integrate sustainability principles into businesses.

To foster the innovative way of value creation as discussed in [the previous paragraph](#), BMs have to be adapted intensively (Jonker & Faber, 2019). Merely ‘going green’ is not sufficient. In the sustainability transition, BMs tend to have a crucial role (Bidmon & Knab, 2017). Sustainable BMs are inter-organizationally designed and thus depend on a joint approach (Jonker & Faber, 2019). Consequently, value is created collectively and the results are shared. The source of value that is created in a sustainable BM cannot be merely economic, it also has to be social and environmental (Jonker & Faber, 2019). Within this innovative logic of value creation, the same three basic elements are used as in the conventional BMs: value proposition, value creation and delivery (organizational model), and value capture (revenue model). However, in the revenue model of sustainable BMs, there is room for creating multiple sources of value (Jonker & Faber, 2019). Furthermore, collaborations and networks must play a more important role throughout the whole BM.

As organizations have to make several choices in the (re)configuration of a BM, there is a distinction in sustainable BMs: platform business models, circular business models, and community business models.

Platform business models

A lot of organizations and consumers do not fully utilize their possessions. This is for example the case with customers owning cars or organizations owning machinery. The heart of a platform business is to better utilize overcapacity (Jonker & Faber, 2019). The idea is to bring together different parties, where one party offers what the other is looking for. The value that is created through this BM is the facilitation of a transaction between two or more parties (Jonker & Faber, 2019). These transactions may come in different forms. An illustration of a platform business is Snappcar.nl. Here, owners of a car can offer the use of their car on the platform and other consumers can then ‘rent’ the car for a certain price. By doing so, the usage of the car can be better utilized. Consequently, fewer people have to buy their own car, which diminishes the demand and therefore the pressure on resources and the living environment.

Circular business models

Circular business models are about closing loops to minimize the use of resources and waste production (Jonker & Faber, 2019). The creation of value lies in the design, where retention of value of materials, components, products, and waste is taken into account. An example of a circular business is the ‘Revive Mattress’ of Auping. Mattresses are hard to recycle and in the

Netherlands, over 1,5 million mattresses are thrown away annually. In the award-winning Revive Mattress, all the separate components are recyclable and can be used in the production of new mattresses.

Community business models

The idea of community business models is to do things together. People collaboratively invest in their own services, their own community or their own energy. This means that they are decentrally organized and not dependent on a central distribution system (Jonker & Faber, 2019). Value creation is based on three principles: 1) investing together, 2) sharing the returns of the BM, and 3) multiple value creation. In the last principle, value creation is based on working on multiple cases that are of value to the community simultaneously (Jonker & Faber, 2019). An example of a community business model is De Kleefse Waard, an industrial park in Arnhem. Here, all kinds of organizations and businesses work closely together. They, for example, distribute energy on the park, share cars and bicycles, and together strive to utilize litter.

3.5. Business Model Innovation

The BMs discussed up until this point are static. It is about having a BM at a certain point in time. In practice, BMs will not be static. As organizations face changes constantly, both from inside and outside the firm, they have to be able to adapt. The adaptation, or clearer: the development of the BM is referred to as business model innovation. In this paragraph, the most important topics around BMI will be explained. By doing so, the barriers in BMI will be discussed as well.

BMI does not necessarily have to be combined with the innovation of processes or products. Some even state that BMI is not about the innovation of processes or products at all (Girotra & Netessine, 2013). These two could however be done simultaneously; innovating the BM and innovating processes or products. Innovations to improve processes and products are often expensive, time-consuming, and high in upfront investments (Amit & Zott, 2015). Yet, future returns on these investments are always uncertain. Instead of changing such sensitive and costly parts of the business, why not change the way business is done, i.e. the BM. In the sense of this thesis, BMI is not about merely ‘going green’ in process or product. Neither is it about changing the way ‘value’ is formulated in a BM by incorporating social and environmental value. The latter merely results in incremental improvements (Jonker & Faber, 2019). BMI in this sense is

about creating new BMs, not slightly adapting the current or old ones to be able to label it ‘green’. The definition of BMI that is recognized in this thesis comes from Guldmann and Huulgaard (2020) and is as follows: “The process of making changes to existing business models to devise new business model configurations (in a mature company) or crafting entirely new business models to create, deliver and capture value in novel ways (in a start-up or within a new business area of a mature company)” (p. 3). This definition captures the idea of a clear (re)configuration of the BM. Furthermore, it distinguishes mature companies from start-ups, which is useful in the data that will be gathered in this thesis.

From a strategic perspective, BMI matters for multiple reasons (Amit & Zott, 2015). It represents an often underutilized source of future value; competitors might find it more difficult to imitate or replicate an entirely novel activity system than a single novel product or process and, because BMI can be such a potentially powerful competitive tool, managers must be attuned to the possibility of competitors’ efforts in this area. Besides these strategic motives for BMI, it is also recognized as a fundamental approach to reach innovations for sustainability (Evans et al., 2017; Jolink & Niesten, 2015). For instance, BMs that align the incentives of users with the environmental impacts of their use can make existing products and technologies more sustainable (Girotra & Netessine, 2013).

As one may expect, there is no clear roadmap for BMI and success is not guaranteed. This lack of concepts and knowledge about the process delays the uptake of sustainable BMs (Linder & Willander, 2015) and the transition to a sustainable future (Boons et al., 2013). Having performed a literature review on BMI barriers, and a multiple-case study, Guldmann and Huulgaard (2020) listed the barriers they found. They found barriers at the market and institutional level, the value chain level, the organizational level, and the employee level. So, barriers come from all kinds of socio-technical levels. Facing these barriers along the way of BMI may discourage organizations to go through with the transition.

Concluding on BMI, the key point to take away from this paragraph is that BMI is not about going green in products or processes. It is about (re)configuring a BM. Circular BMI is an important step towards sustainability. However, this innovation process may be hindered by several known barriers.

3.6. Business Model Template

Continuing on the topic of BMI, there are multiple ways to innovate a BM. Luckily, some scholars have attempted to explain a sort of roadmap to follow in innovating BMs. Possibly the most popular is made by Osterwalder and colleagues (2004). They introduced the discussed BMC. This canvas provides an accessible, clear, and simple framework to design a BM. This is one way to do it. Without going too deep back into the discussion of its relevance when transitioning to sustainability, it is safe to say that it is outdated. Alternatives for the BMC are Kraaijenbrink's Strategy Sketch or Maurya's Lean Canvas. They provide templates to construct a BM similar to Osterwalder and colleagues' BMC. They, however, do not satisfy sustainability principles either. One template that does, is created by Jonker and Faber (2019), known as the Business Model Template. Since the data gathered for this thesis comes from companies who have used the BMT, the key takeaways of the template will be discussed.

The BMT is a tool to configure a BM, or reconfigure if there already was a BM. This makes it a guiding tool for BMI. It provides ten building blocks, divided into three phases. The first phase is the definition phase. During this stage in the process, it is stated what an organization will undertake. The building blocks of this stage are 'Motive and Context', 'Dream', and 'Proposition'. The second phase is about the design. Here, it is stated how an organization is going to execute what is stated in the first phase. The building blocks here are the 'Business Model Architype', 'Stakeholders', 'Strategy', 'Core Activities', and 'External Test'. The third and last phase is about the results. In this phase, it is about what an organization wants to achieve and how it will measure the results. This is done through the building blocks 'Impacts' and 'Value Created'. In this paragraph, the building blocks will be explained briefly.

Motive and Context

The first building block in the BMT is the one labeled Motive and Context. The most important question to answer in this stage is: What is your problem, opportunity or challenge and what is the context at play? It is important to answer the question as sharp and specific as possible. Context is essential, as it may play a role in a later stadium, during the guidance of opportunities and choices you may face. It may be advantageous to perform a SWOT or life cycle analysis if the motives are not clear yet.

Dream

What is the goal you are dreaming of? Where are you going to make the difference? These are the two most important questions in this sense. By answering these questions, the organization can evaluate the BM in a later stage.

Proposition

What are you going to do to solve the problem, grab the opportunity or face the challenge? And for whom? In this thesis, the proposition has been discussed before. The essence of a proposition in this phase is similar to the proposition discussed before. What is the value you are going to create and to whom are you delivering that value? The product or the service is merely a means through which value is created. Value can be multiple (economic, social, and environmental), shared or collective. This proposition is the central feature in value creation and the guiding principle in the building blocks discussed in this paragraph.

Business Model Archetype

This building block is the first one in the design phase of the BMT. In this building block, the type of BM will have to be chosen. The same distinction is made as discussed in [paragraph 3.4](#). This means that an organization can choose between platform business models, circular business models, and community business models. These are all BMs that focus on multiple value creation. A choice is not as strict as one may expect. Many BMs overlap to some or more extent. Choosing one BM does not necessarily exclude another.

Stakeholders

With whom are you going to work? Identifying the stakeholders is an essential step in designing a BM. Since the BMT is based on multiple value creation, collaborating within value chains and networks is essential. It is not merely about mapping the stakeholders, their individual role within the system is also of great importance. It may be advantageous to do a stakeholder or network analysis.

Strategy

What is the best strategy to use to realize the value proposition? The strategy is the route on how to get from one point to another. Within the BMT, there are six common strategies: 1) eco-efficiency, 2) servitization, 3) usage optimization, 4) life cycle improvement, 5) cascading, and 6) community building. To design a BM, the organization is free to choose one or more

strategies. Which strategy suits them best, depends on the specific circumstances at play and the choice of the type of BM.

Core Activities

What are the activities you will undertake to realize the chosen strategy? In this building block, the organization will concretize what it is going to do. The core activities have to fit with the strategy, contribute to the overarching goal or dream and fit with the value proposition.

External Test

The external test is the last step of the design phase. During this stage, an organization will test the viability of its new business and activities. External tests may also be performed after the value proposition and, more generally, it is advisable to check during the whole process. The organization will perform at least five checks on your BM: 1) Does it already exist? 2) Is it allowed by law? 3) Does it contribute to transition? 4) Are there any unforeseen impacts? 5) Valuable feedback. The last one is more of a bonus. During the first four checks, the organization will provide valuable feedback that may be of use in the external test.

Impacts

This building block is the start of the result phase. The most important question is what the positive and negative effects of the BM are, both now and in the future? To concretize the impact of the BM, you have to gain measurable results. An example is the reduction of greenhouse gasses. This is a measurable impact indicator.

Value Created

How are you going to shape transactions and what do you exchange? Companies cannot neglect the financial aspects of their BM. Normally, this will be measured in revenue or profit, however, this does not always have to be the case. All kinds of transactions can be used to create value.

3.7. Chapter conclusion

Critique on conventional value creation mostly comes from a lack of contribution to a sustainability transition. As a reaction to this critique, novel forms of value creation were sought. Innovative value creation strives to create value differently, so that it contributes to sustainification. Both in theory and practice, this new view has been incorporated. Within the new perspective, value comes from multiple sources. These can be divided into economic,

social, and environmental impacts. By incorporating two new features into value creation, which are the social and environmental impact, a contribution should be made to sustainification. Furthermore, value is created from a broad stakeholder perspective. This means that value is created with respect to all of its stakeholders in an innovative ecosystem. This should help entrepreneurs to create innovative value, since the ‘co-creation’ of value, which takes place in an ecosystem of partners, was not incorporated in the conventional way of thinking. Another difference lies in the fact that conventional value creation focuses on short-term competitive advantage, while innovative value creation is much more oriented towards a long-term balance of different goals. Consequently, sustainable BMs need to be developed to design opportunities for innovative value creation. These BMs need to incorporate the changing ideas of value creation. The old templates and guiding tools for BMI lack in facilitating these innovative ideas. To guide organizations, Jonker and Faber (2019) constructed a BMT. This template helps organizations in the (re)design of their BM.

4. Methodology: An evaluative multiple-case study

In this chapter, the proposed methodology used for the thesis will be elaborated upon. The methods used have an evaluative purpose. Since this thesis strives to describe and then evaluate the innovation of value creation, this is the most suitable method. To do an evaluation, data will be gathered through multiple case studies. The data is captured in BMTs that have been constructed for practical use. In the subsequent paragraphs, respectively, the research design and approach, data collection, analysis and operationalization, quality and limitations, and research ethics will be discussed.

The data analysis in this thesis is based on a document research. The initial plan was to conduct interviews to gather data. Due to a large impact of the corona crisis measure and the tight timetable of finishing the thesis, the interviews could not take place.

4.1. Research approach and design

One of the objectives of this thesis is to understand the changing nature of value creation in a sustainability-focused BM. This is essential in understanding the extent to which the BMT is able to facilitate this change. This extent is most importantly researched through the practical contributions of the BMT as a roadmap to sustainable BMs. In practice, this will be measured by the frequency at which indicators of dimensions for innovative value creation are present in the constructed BMs. A further explanation of how the data will be described and analyzed will follow in the subsequent paragraphs.

For this thesis, case studies will be used to gain understanding of the investigated topics. Although the use of case studies is not always recognized as a useful instrument in evaluation, Yin (2018) recognizes a functional and legitimate role. The primary purpose of the case studies in this thesis is to do the actual evaluation, instead of case studies being part of a larger evaluation. By performing case studies, an in-depth and up-close examination within the real-world context can be gained (Yin, 2018). More specific for this thesis, a program evaluation will be performed. This is “the systematic collection of information about the activities, characteristics, and results of programs to make judgements about the program, improve or further develop program effectiveness, inform decisions about future programming and/or increase understanding” (Patton, 2015, p. 178). The program here is the BMT, which is used for BMI.

Case studies make it possible to capture the complexity of the case (Ebneyamini & Moghadam, 2018), and completely incorporate contextual conditions (Yin, 2018). Compared with surveys for example, case study research has a strong advantage in examining the relevant process. The essence of a case study is that it tries to illuminate a decision or set of decisions, why they were taken, how they were implemented, and what results they gave (Schramm, 1971).

4.2. Data collection

The data for this thesis will be collected at several companies in the Netherlands. These companies all are consulted by Power-ED, a consultancy company that helps entrepreneurs in incorporating corporate social responsibility principles in a broad sense. The clients of Power-ED have used the BMT to (re)configure their BM. The activities and working field of their clients vary from recycling factories and sustainability parks, to energy hubs and precision climates. This means that there is a lot of variety and therefore, all kinds of different BMs will arise.

Documentation will be the most important source of evidence in this thesis. The documents which are referred to in this sense, are completed BMT and their explanations. These documents, therefore, contain broad information about sustainable BMs and value creation. The BMTs are constructed in two ways. They are either constructed by the people of Power-ED itself, or Power-ED provided me (as the writer of this thesis) with the information to construct the BM. In the last case, the BMT was filled in and subsequently sent back. Here, Power-ED had the opportunity to check and improve. This check and improvement are essential to be sure that everything is applied and translated correctly.

On the one hand, documentation as a source of evidence has multiple strengths (Yin, 2018). Firstly, it is a stable source; data can be reviewed repeatedly. Secondly, it is not created as a result of this case study, which makes it unobtrusive. Thirdly, it is very specific. It contains exact information, references, and details. On the other hand, this source of evidence also has weaknesses. However, the presence of Power-ED as a middleman could reduce the weaknesses. An important weakness is that organizations may hold back in sharing information. The relationship between Power-ED and their clients may be advantageous in this sense. Since there already is a well-established relationship, clients feel freer to share information. This improves the retrievability of the data (Yin, 2018). Furthermore, access to the data is better provided and there is less bias in the selection of the data subjects (Yin, 2018).

Yin (2018) recommends using multiple sources of evidence to strengthen data collection. Therefore, if possible under the corona crisis measures, additional interviews are strived for. To some extent, additional data will be gathered through observations in the field, as I will be part of some digital meetings with clients. Here, based on the questions opposed by the people from Power-ED, insights can be gathered. However, due to insecurities in times of corona crisis measures, this is highly insecure. This insecurity also applies to further data collection.

4.3. Data analysis and operationalization

Coding is a key step in qualitative data analysis and involves the categorization of the obtained data (Yin, 2014). In this thesis, the focus lies on the research and analysis of the documentation. To analyze the documents, an operationalization of the theory of innovative value creation has been constructed (Figure 3). Here, the theoretical definitions are operationalized, i.e. have become measurable (Vennix, 2011). The documentation will be researched to find indicators for innovative value creation. Concretely, this means that the documents are scanned thoroughly and the operationalized indicators for the dimensions will be highlighted and coded ([Appendix III](#)). Due to the set-up of the BMT, within one building block, multiple dimensions of innovative value creation, and even multiple indicators for one dimension may be found. This is caused by the fact that a specific way of creating value is incorporated repeatedly in different parts of the BMT. Consequently, the number of indicators found and thus dimensions will be much higher than the number of investigated BMTs. By performing this type of analysis, a contribution will be made to whether the BMT facilitates a logic through which value is created innovatively.

The operationalization (Figure 3) is mostly based on the literature that has been used in this thesis up to this point. This means that the content of chapters [1](#), [2](#), and [3](#) is leading. However, for the sake of the content validity (Vennix, 2011), the operationalized definitions of the dimensions and indicators will be explained. The dimensions of innovative value creation are divided into economic, social, and environmental impact, and co-creation of value. The distinction in economic, social, and environmental impact is widely used in literature, as discussed in [paragraph 3.1](#) (Boons & Lüdeke-Freund, 2013; Bocken et al., 2014; Oskam et al., 2020). Therefore, these are translated into dimensions of the concept of innovative value creation. In [paragraph 3.2](#), the importance of the co-creation of value in innovative value creation has been explained (Ritala et al., 2013; Jonker & Faber, 2019). This concept functions as the fourth dimension of innovative value creation.

Since there may arise confusion about the interpretation of these dimensions, they are strictly defined and limited for the remainder of this thesis. Firstly, in the case of ‘economic impact’, it is about the financial or economic contribution an organization makes to itself, or a given geographical area (Richardson, 2008; KPMG, 2015). The indicators used for economic impact are profit, economic growth, contribution to public finances, job creation and skill improvement, and investments (KPMG, 2015). Secondly, ‘social impact’ is the consequence to human populations, within or around the organization, of any action that alters how people live, work, play, relate to one another, organize to meet their needs and generally act as a member of society (Burdge & Vanclay, 1996; Brickson, 2007). The indicators are social capital, citizenship, creation of communities, social change, group coherence employees, and inclusiveness (Brickson, 2007; Jonker & Faber, 2019). Thirdly, ‘environmental impact’ is a very broadly defined concept in literature. However, in this thesis, it is closely linked to ecological impact. Environmental impact is therefore defined as the effect of human activities and natural events on living organisms and their non-living environment (OECD, 2001). The indicators are formulated as the effects on humanity, animals, landscape, water, air, soil, and light (OECD, 2001). Since circularity has a very broad impact on many levels (Jonker & Faber, 2019), it may be difficult to place it under one of these indicators for environmental impact. However, it does have a strong (in)direct impact on the environment. For the sake of the clarity and completeness of the operationalization, it has been incorporated in the operationalization as a free-standing indicator. The last dimension in the operationalization is co-creation. This is defined the same way as the innovation ecosystem in [paragraph 3.2.](#); the collaborative arrangements through which firms combine their individual offerings into a coherent, customers-facing solution (Adner, 2006, p. 98). This will have to be read from a stakeholder perspective. The indicators are directly selected from this paragraph as well. These are collaboration and network.

Some indicators used in the operationalization may not be as clear as other indicators. To reduce room for discussion and interpretation, and to improve the reliability and validity of the study, a short description of every indicator has been given in [Appendix I](#).

The analysis is rather deductive, and therefore, the document research should strive to seek affiliation with literature (Bleijenbergh, 2016). However, not every indicator will have to be incorporated in the current operationalization, since the literature used in the theoretical framework is not all-encompassing. An obvious smaller part of the research is inductive, as new

indicators may arise (Bleijenbergh, 2016). The dimensions however are set in stone in advance, so there will be no new dimensions. If any new indicator arises during the analysis, it must meet the definition of the dimensions as set above.

Theoretical concept	Dimensions	Indicators
Innovative value creation	<i>Economic impact</i>	Profit
		Economic growth
		Contribution to public finances
		Job creation and skill improvement
		Investments
	<i>Social impact</i>	Social capital
		Citizenship
		Creation of communities
		Social change
		Group coherence employees
		Inclusiveness
	<i>Environmental impact</i>	Humanity
		Animals
		Landscape
		Water
		Air
		Soil
		Light
		Circularity
	<i>Co-creation</i>	Collaboration
		Network

Figure 3. Operationalization

4.4. Reliability, validity, generalizability, and limitations

The quality of empirical research can be established through several types of logic (Yin, 2018). The three logical tests that are used in this thesis are the reliability, validity, and generalizability (Cooper & Schindler, 2008).

The reliability of empirical research refers to the ability to repeat the operations of the study with the same results (Yin, 2018). The goal of reliability is to minimize the errors and biases in a study. The data that will be used for this thesis is gathered by experienced practitioners. This positively affects the reliability, as they control the quality of the data. Furthermore, the data will be looked into before analyzing, to check for and discuss possible mistakes or errors.

Another measure taken to increase reliability is the constructed operationalization and demarcation of the definitions, and *a priori* set indicators. Despite these measures being taken, repetition of the study might lead to different outcomes, as there will be some subjectivity in the analysis. Furthermore, reliability is difficult to guarantee in qualitative research, as there is a small number of observations (Bleijenbergh, 2016). Lastly, as the data comes from a party (Power-ED) that has initially gathered it for another purpose than for the sake of this thesis, some data may be confusing or useless. These last two remarks will be taken into account during the analysis and conclusions.

In general, validity refers to the ability to measure what is supposed to be measured (Yin, 2018). Especially construct validity is challenging in case study research (Yin, 2018). Construct validity controls for the identification of correct operational measures for the concepts being studied (Yin, 2018). To make the theoretical concepts measurable, these have been operationalized in the [previous paragraph](#). To make the purpose of this thesis clear, the dimensions have been defined and existing literature has been used to construct the indicators. This should contribute to the construct validity. To clarify the definitions of the indicators, these are incorporated in [Appendix I](#).

The external validity shows whether and how a case study's findings can be generalized (Yin, 2018). Since Power-ED works with multiple clients in different business areas, the generalizability is relatively high. However, the generalizability is negatively influenced, as the number of organizations is limited, the organizations may be biased through Power-ED, and they are all from one specific region, which may affect the way they do business compared to other regions.

4.5. Research ethics

Research ethics are considered to be an important element in doing research (Yin, 2018). Since this thesis will mostly depend on secondary data, direct contact with organizations other than Power-ED is minimal. However, in my role as the author of this thesis, I have been asked by Mr. Van den Oord and Mr. Van Schaijk to help them where possible in gathering additional information concerning the BMT. Therefore, it is important to act ethically, with integrity and the greatest respect towards the clients of Power-ED and the people from Power-ED. Not only because this is much advised in case study research (Yin, 2018), but also because of the efforts of Power-ED in the provision of the data. If preferred by anyone, names, and contact

information will be removed from the documentation. Furthermore, every step will be discussed in close collaboration with Mr. Van den Oord and Mr. Van Schaijk and no contact will be sought with clients without their explicit prior approval.

4.6. Chapter conclusion

In sum, this thesis will be executed through an evaluative multiple-case research. The collected data will almost entirely come from Power-ED as they have completed full BMTs with their clients. Consequently, this thesis will be focused on secondary data. To do the analysis, the theoretical framework has been operationalized. This makes it more convenient to analyze the data. Furthermore, the operationalization and definitions of the dimensions and indicators improve the reliability and construct validity. Analysis will be done through codification of the documentations. If possible, additional data will be gathered other than through the documentation, for example through interviews. Within the data collection and analysis, the necessary measures will be taken to improve reliability, validity, and generalizability, by taking into account the possible limitations. Lastly, to perform this research as ethically as possible, contact with everyone involved in this thesis is done with the utmost respect, integrity, and ethics.

5. Results: A Business Model Template-research

In this chapter, the collected data as explained in [the previous chapter](#) will be discussed. All of the data comes from the BMTs discussed in [Appendix III](#) and the outcomes are a result of the Business Model Template-research. The purpose of this chapter is to describe the data to, consequently, analyze the findings. The course of this chapter recognizes the different dimensions of innovative value creation as explained in the operationalization: economic, social, and environmental impact, and co-creation of value (Figure 3). Every dimension will be discussed in a separate paragraph. Here, the existence, application, and details of the specific dimension in the BMT will be evaluated.

The data shows a wide variety of ideas and innovations to which the BMT can be applied. Motives for (re)configuring the BM differ greatly. To illustrate this variety; one organization was encouraged by an increasing amount of people suffering from diabetes due to an unhealthy lifestyle. Another initiator was emotionally touched by an image of 50,000 humans living in the Sinjar mountains, without any access to sanitation. Some entrepreneurs dreamed of conquering the world with their innovative idea. Others would be happy with merely saving a historical farm from demolition. Although the motives, context, dreams, and other building blocks vary extremely, the shared component of the projects is that the basis of their BMI lies in the BMT.

Based on the existing literature, an operationalization of innovative value creation was constructed before the document research. Here, innovative value creation was divided into the four dimensions. Within the 15 researched cases, indicators for all four dimensions have been found in great numbers. A frequency table has been constructed in Figure 4 to show these numbers.

Dimension	Frequency
Economic impact	67
Social impact	43
Environmental impact	127
Co-creation	57

Figure 4. Frequency table dimensions of innovative value creation

5.1. Economic impact

The first dimension of innovative value creation in this result section is the economic impact. Economic impact has been defined as the financial or economic contribution an organization makes to itself, or to a given geographical area. The definition given to economic impact fits within innovative value creation, as it incorporates a stakeholder perspective. Consequently, economic impact can be made to both the organization itself and its stakeholders. The indicators for economic impact as constructed in Figure 3 are profit, economic growth, contribution to public finances, job creation and skill improvement, and investments. During the research of the documents, one indicator has been found that was not incorporated *a priori*, namely cost reduction. To illustrate how many indicators have been found in the documents, a frequency table has been constructed in Figure 5.

Indicator	Frequency
Profit	21
Economic growth	19
Contribution to public finances	17
Job creation and skill improvement	6
Investments	1
<i>Cost reduction</i>	3

Figure 5. Frequency table indicators economic impact

Although economic impact is defined from an innovative point of view, ‘conventional’ profit is still one of the goals for sustainable enterprises as it is necessary for existence. This also came forward in the research of the BMTs. In the case of De Brabantse Boerderij, making a (very limited) profit provided the means to operate and exist. Making a profit therefore becomes necessary to survive. However, profit in this sense differs extremely from conventional profit as discussed in [paragraphs 2.1](#) and [2.2](#). De Brabantse Boerderij’s purpose of making a profit is existence, not the satisfaction of shareholders.

Proposition	Ten verkoop aanbieden van karakteristieke Noord-Brabantse schuren en boerderijen aan lokale ondernemers	Verkoop van oude boerderijen die gesloopt moeten worden. Boerderijen worden dan met precisie uit elkaar gehaald om ergens anders weer in elkaar gezet te kunnen worden.	Profit	Economic impact
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Another example in which profit played an important role is Duurzaamheidspark Lith. Here, the costs of research and development of new products are high. Although Lith is, and will be, supported by governments, making a profit enables them to invest in the research and development of their products.

Core activities	(Door)ontwikkelen zonnepanelen	Het (door)ontwikkelen van de verrijd- en verschuifbare zonnepanelen. Opschaling gebruik.	Profit	Economic impact
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Again, making a profit is not in favor of the owners of the company, but it enables them to improve. These examples illustrate that the BMT has not made it impossible to make ‘conventional’ profit. However, the circumstances and reasons for making a profit have changed.

Although the purpose of making a profit has changed, it is still considered to be mostly in favor of the organization itself. This contradicts with the stakeholder perspective in innovative value creation. In contrast to profit, the remaining indicators for economic impact are mostly concerned with the stakeholders of the organization. As can be seen in Figure 5, economic growth has been recognized in the BMTs many times. In almost every case in which a certain impact has been labeled as economic growth, it is about improving and strengthening the local economy, or the partners in the chain. In the case of the KipCaravan, this was recognized since one of the core activities of this platform business was to develop a subscription model for its users. The primary purpose of this model was not to make a profit for KipCaravan itself, but to develop a revenue model for other partners in the chain.

Core activities	Kippen naar het voer brengen	Realisatie off grid mobiele kippenstal. Organisatie locaties en ‘hulpboeren’. Ontwikkeling ‘abonnementsmodel’.	Network Economic	Co-creation Economic
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In the case of CO2 Fonds Eindhoven Airport, the project positively impacts the local economy. The project provides strong relationships between several local suppliers and demanders, creates jobs in the region, and increases the demand for multiple products and services in general.

Impact	Lokale CO2 compensatie, verbetering leefbaarheid omgeving, versterking lokale economie	Positief: CO2 wordt lokaal gecompenseerd Leefbaarheid bewoners (verrijkte bodem, betere gewasopbrengst, waterregulatie, waterkwaliteit en biodiversiteit) Versterking lokale economie	Air Humanity Economic growth	Environmental impact (2) Economic impact
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As with economic growth, contributions to public finances do not directly affect the financial situation of the organization itself. It aims to improve, mostly indirectly, the economic situation of society. One case in which the BM facilitates an economic impact through a contribution to public finances is Fitnezzplaza. Here, the dream is to diminish costs for health insurers by making society healthier and bringing down the number of diabetes patients. Eventually, this will contribute to public finances, as the decreased costs for insurers lead to a lower monthly premium for the insured.

Dream	Zorgkosten voor de maatschappij	De kosten voor zorgverzekeraars en de maatschappij verminderen door een lagere druk op eerste- en tweedelijns zorg.	Contribution to public finances	Economic impact
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Another example of a similar situation is the BeeApp. The BeeApp is an application where people with hay fever are linked to an area-specific honey that makes them to some extent immune to pollen. Eventually, this will lead to fewer health complaints from hay fever patients, less medicine use, less demand for health care, and thus lower premiums.

Impact	Verbetering leefomstandigheden, minder medicijngebruik, pollen-determinatie,	Verbetering leefomstandigheden hooikoortspatiënten → minder ziekteverzuim en hogere productiviteit. Minder medicijngebruik → lagere kosten Geautomatiseerde pollenherkenning → lagere kosten	Humanity Contribution to public finances	Environmental impact Economic impact (2)
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An indicator that has a direct and potentially large economic impact is the creation of jobs and the potential to improve skills. To some or more extent, almost every organization that has been subject to the data collection creates jobs. For some of the organizations, one of the primary purposes is to create jobs. During a meeting with one of Power-ED's clients, they strongly stimulated their client to search for ways to employ people with a disability within their business. Later on, this happened to be a common practice. The BMT facilitates this kind of economic impact, as can be illustrated with the BMT of the KipCaravan. By working together with different stakeholders, KipCaravan can employ people with a disability as 'help farmers'. Now, these people have scheduled daytimes activities and they contribute to society.

Stakeholders	(Natuur)organisaties met locaties	Partijen met locaties (gemeenten, Defensie, Brabants landschap, hotels, bedrijven). Partijen met toeleiding 'hulpboeren' zorgcliënten (gemeenten, GGZ, Prisma).	Collaboration Job creation and skill improvement	Co-creation Economic impact
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As mentioned, almost every organization creates jobs by existing. So, although not many forms of impact have been labelled as 'job creation and skill improvement', it is present in the BMT as an indirect effect to a greater extent.

Investments as an indicator of economic impact have not been found in large numbers throughout the research. This may insinuate that it has a limited contribution to innovative value creation. In one organization, there was invested a great amount of money in an economical and sustainable energy system. Kusters installed a solar energy system on the roof of its building. This investment was meant to enable them to sustainify, but also to eventually make economic impact. The money that will be saved in the long term, will be invested in the development of sustainable operations.

Dream	Duurzame oplossing voor temperatuurregeling in	Zuinig en duurzaam energiesysteem waarbinnen de temperatuur met grote precisie geregeld kan worden.	Investments	Economic impact
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An indicator of economic impact that was not mentioned in the literature was cost reduction. This may be caused by the fact that it has a conventional character, while value creation as operationalized was driven by innovation literature. However, the analysis showed that within the BMTs, there is still room for cost reduction. Combined with the fact that making profit also takes place in the BMT, research showed that the BMT further elaborates on the conventional templates for BMI, rather than turning against them.

Value created	Vergoeding, betere benutting grondstoffen, bewustwording bij	Vergoeding voor advies Beter benutting grondstoffen in de bouwsector → minder kosten, hogere duurzaamheidsimpact	Profit Cost reduction	Economic impact (2)
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5.2. Social impact

The second dimension in innovative value creation as defined in this thesis is the social impact. Economic impact was said to be present in both conventional and innovative ways of value creation. In the case of social impact, it was never clearly considered in conventional value creation or business models. Since innovative value creation incorporates a much broader aspect of stakeholders, consequences to 'people' have also become important. In this thesis, social impact is defined as the consequence to human populations, within or around the

organization, of any action that alters how people live, work, play, relate to one another, organize to meet their needs and generally act as a member of society. This is a relatively broad definition as social impact comes in many forms. The indicators that had been constructed *a priori* are social capital, citizenship, creation of communities, social change, group coherence employees, and inclusiveness. During the research, two novel indicators for social impact were recognized. The first indicator is cultural history. Preservation of cultural history affects the way people think about or look at a part of a city, town or community. It provides a feeling of nostalgia. The second indicator is research and education. Projects affecting research and education contribute to society by improving the quality of research and provide locations for it. This has consequences to both the way scholars and researchers work, and indirectly to society in general as the quality of research and education improves. In Figure 6, the frequency table of the indicators of social impact is stated.

Indicator	Frequency
Social capital	5
Citizenship	1
Creation of communities	12
Social change	14
Group coherence employees	1
Inclusiveness	3
<i>Cultural history</i>	6
<i>Research and education</i>	1

Figure 6. Frequency table indicators social impact

Social capital can take many forms, as can be seen in [Appendix I](#). Within the BMTs subjected to this thesis, impact was mostly recognized in intangible sources of social capital, such as the goodwill or reputation of an industry or a particular profession. One of the goals of the KipCaravan for example, is to improve the reputation of the agricultural industry. By so doing, it affects the reputation of the agricultural industry as a whole, by showing the sustainable development of farmers.

tegengaan	De kippen maken eieren en vlees, van voeding uit de natuur en restproducten (verloren fruit) en 'schoffelen' de grond (geen bestrijdingsmiddelen nodig). De agrarische sector positief op de kaart zetten.	Landscaping Soil Social capital	Environmental impact (2) Social impact
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In terms of improving social capital in the case of the BeeApp, it is about strengthening the position of the beekeeper. This could be explained from an economic point of view, as it provides for economic growth. However, in this particular case, it is about the reputation and additional value of the beekeeper in a social context.

	Versterken van de positie van de imker en het vergroten van biodiversiteit.	Social capital Landscaping	Social impact Environmental impact
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An example of a more tangible form of social capital can also be found in the research. Fitnezzplaza has a specific focus on supporting a healthy lifestyle in deprived neighborhoods. The effect on the social situation could on one hand be found in intangible sources. Most deprived neighborhoods carry a stigma of being unhealthy. Fitnezzplaza's project can then improve the reputation of these neighborhoods, adding to the intangible social capital. However, improvements could also be made through more tangible sources, such as a lower amount of overweight people, fewer diabetes patients, and lower pressure on health care demand.

Core activities	Ontwikkelen, stimuleren en ondersteunen	Ontwikkelen programma's Ondersteuning en begeleiding bij bewegen en voeding Stimuleren bewoners achterstandswijken	Social capital / inclusiveness	Social impact
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Social citizenship is closely related to inclusiveness. As can be concluded from the definitions in [Appendix I](#), citizenship is a consequence, or result, of a successful inclusiveness strategy. The best example to illustrate this comes from the KipCaravan and its help farmers, as discussed earlier in this chapter. KipCaravan drives on a strategy of inclusiveness; people with a disability are employed and given a useful task. This strategy provides the terms under which a specific group takes part in society. The consequence of this strategy is that the help farmers become part of that society, i.e. gain citizenship.

Both the concepts of inclusiveness and citizenship, however, can also be absolute. Within the same project of the KipCaravan, inclusiveness takes a separate role. In that case, it is about making a 'connection' between cities and rural areas. The aim is to connect the two, making the one part of the other, as the separation between the city and rural areas is found to be

problematic. This fits with the definition of inclusiveness abstractly, but has nothing to do with citizenship.

Motive and Context	Toekomstgericht produceren	Externe vraag verbinding stad – land. Ondernemerswens om toekomstgericht te produceren	Inclusiveness	Social impact
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An important indicator of social impact is the creation of communities. As discussed in [paragraph 3.4](#), community-based BMs make up a whole archetype of BMs. In a community, people share a particular way of thinking. As can be seen in Figure 6, community building is recognized in several BMs. Communities can be created between individuals, within an industry (horizontally) or in a chain network (vertically). The creation of a community between individuals is recognized in Euromeat Oss' BMT. In essence, Euromeat Oss strives to create a hub where they can share excess generated solar energy. Here, residents from the neighborhood and employees can charge electric vehicles. During the waiting time, Euromeat provides replacement vehicles in the form of (e-)bikes and electric scooters. Residents also have the opportunity to do groceries and buy Euromeat's sustainable products. The purpose of this hub, is to create an environment in which sustainability takes a central position.

	Een omgeving creëren waarin wordt gewerkt aan bewustwording van verduurzaming → workshops, verkoop van duurzaam vlees of -vervangers, duurzaam opwekken van energie etc.	Creation of communities	Social impact
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The creation of communities is also seen at a higher level, namely between different firms in an industry, or different industries, and thus horizontally. Both Van der Kaa Podiatry and SCAB Accountants aim to increase awareness for circularity in their industry. In the case of Van der Kaa, they try to set up a project that collects waste of cuts and consequently increases awareness through a collaborating network of podiatrists.

afval, bewustwording	Vergroten van MVO-bewustzijn onder 400 aangesloten bedrijven in de Benelux.	Creation of communities/ social change	Social impact
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SCAB Accountants aims to provide a platform and consult clients in the construction industry. By helping their clients to configure circular BMs, they aim to increase the number of circularity projects in the industry.

Strategy	Bewustwording circulariteit bouwsector	Community building: stimuleren, adviseren en ondersteunen van circulaire business modellen.	Creation of community	Social impact
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A third level of the creation of communities exists between partners in the chain, and thus vertically. In Duurzaamheidspark Lith's BMT, it is about creating a community that goes beyond individuals or industries. Here, a community is created between multiple customers, sellers, sustainability projects, schools, and universities. All of the chain partners strive for a common purpose, namely improving the results of the product and in the long term, add to different facets of sustainability in general.

BM Architype	Community based BM	Community based BM: door dit initiatief ontstaat er een groep mensen dat op vele terreinen bijdraagt aan duurzaamheids-doelstellingen.	Creation of communities Network	Social impact Co-creation
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Social impact does not necessarily have to take place outside the organization. The definition of social impact also allows for an effect within the organization. The indicator measuring this impact is 'group coherence employees'. Although the coherence of employees may be an (unforeseen) effect in many cases, the research shows only mere indications of group coherence under employees to be a targeted purpose of (re)configuration of the BM. Only in one case, CSS Schoonmaak, employees are actively stimulated and facilitated to decrease their CO2 emissions. The purpose is to create sustainability awareness within and around the firm.

circulaire producten en duurzame bedrijfsvoering	Werknemers stimuleren en de mogelijkheid bieden zo veel mogelijk duurzame keuzes te maken, bijvoorbeeld fiets i.p.v. autorijden.	Group coherence employees	Social impact
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The first indicator that had not been incorporated in the operationalization *a priori* is cultural history. In two cases, a form of social impact was recognized that did not fit with one of the set indicators. However, they did fit in the definition of social impact and could, therefore, be incorporated in retrospect. Cultural history is a part of society and a part of the shared norms and values of a region. In the case of De Brabantse Boerderij, the cultural history lies in the preservation of cultural heritage in the form of historical farms and barns.

Behoud van cultureel erfgoed	Behouden van cultureel erfgoed.	Cultural history	Social impact
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In the case of Peppel, it is about restoring the traditional landscape of the region. The landscape in this sense is a part of the cultural heritage, as poplars were undeniably connected to the

former regional landscape. The restoration of the landscape adds to a feeling of nostalgia among the residents.

	maatschappelijke impact	Cultuurlandschap wordt behouden.	Cultural history	Social impact
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The second indicator that was not incorporated in the operationalization is the effect on research and education. This indicator was recognized in the project of Duurzaamheidspark Lith. Within a dense network of partners, higher education, and research programs were connected to the project. Schools and universities were provided with a location where they could do tests, experiments, and gather data. Research programs became a partner of the project as they could help to improve and test the product.

landbouw & zonne-energie, maatschappelijke impact	Bieden van data en voorzieningen voor test- en ontwikkelingsruimte voor universiteit, scholen en andere duurzaamheidsinitiatieven.	Research and education Collaboration	Social impact Co-creation
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5.3. Environmental impact

Environmental and ecological impact are two closely related and mostly interchangeably used concepts. In this thesis, environmental impact has been chosen as the third form of impact. The choice for a view on environmental impact, instead of ecological impact, has paid off during the research. Due to a broader view, some forms of value creation could be indicated that may not have been labeled as ecological impact

During the research, forms of environmental impact have been indicated to a great extent. Corporate social responsibility (CSR) has become a very popular concept for entrepreneurs in the last couple of years. Many entrepreneurs try to incorporate as many CSR principles as possible. Most of the time, this results in innovative projects and ideas, contributing to sustainability in many ways. Sometimes, entrepreneurs strongly feel the urge or pressure to ‘act CSR’, without really having a plan. This has also been the case in the organizations subjected to this thesis and has consequences for the applicability of the BMT.

In a more general note on environmental impact, many of the organizations were truly able to affect ‘living organisms and their non-living environment’. The distinction between effects was not always as clear, which, in some cases, made it difficult to label a form of impact. Many events have an effect on multiple levels over time, for example on air, water, and soil. To

illustrate this difficulty, in the near future, preservation of forests has a positive effect on the landscape. In the long run, the preservation also affects the air as it absorbs the CO₂. In such a case, for the sake of the structure of the analysis, the (expected) most effective, or previously decided upon, form of impact has been coded. In some cases, an event may have multiple similar impacts. Here, multiple codes have been given to that event.

The indicators that had been operationalized for the environmental impact dimension are humanity, animals, water, air, soil, light, and circularity. As can be seen in [Appendix I](#), the first six indicators refer to their quality. Since circularity is a very broadly defined indicator ([Appendix I](#)), no new indicators were identified during the research. In Figure 7, the frequency table for environmental impact has been constructed.

Indicator	Frequency
Humanity	16
Animals	6
Landscape	18
Water	12
Air	29
Soil	18
Light	0
Circularity	28

Figure 7. Frequency table indicators environmental impact

The first indicator of environmental impact is the quality of human life. Based on the findings in the BMTs, a distinction can be made between a direct effect on the quality and an indirect effect. A form of direct effect on the quality of human life can be found in the case of Pitlatrine. Pitlatrine has invented a fully circular sanitation kit to build a toilet, shower, and urinal. The kit can be set up on a variety of locations, such as festivals. However, this is not where the true effect on human life can be seen. Pitlatrine's dream is to collaborate with NGOs to provide clean and working sanitation in Third World countries. This truly affects the quality of life for the people in those countries. With the help of Pitlatrine, they have access to clean drinking water and sanitation.

Impact	Minder waterverspilling, verbeterde leefomstandigheden	Minder waterverspilling. Verbeterde leefomstandigheden in derdewereldlanden	Water Humanity	Environmental impact (2)
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As already mentioned at the beginning of this paragraph, effects on the environment exist at many levels. Sometimes, an indirect effect can be targeted. This is the case at the CO2 Fonds Eindhoven Airport project. The main purpose is to compensate for CO2 emissions and thus directly improving the quality of the air. However, a very important by-product, ultimately described as a second purpose of the project, is to improve the quality of life for the people living around Airport Eindhoven. The measures taken to accomplish CO2 compensation, also result in better crop yield and water regulation. Consequently, improving the livability of the residents.

Impact	Lokale CO2 compensatie, verbetering leefbaarheid omgeving, versterking lokale economie	Positief: CO2 wordt lokaal gecompenseerd Leefbaarheid bewoners (verrijkte bodem, betere gewasopbrengst, waterregulatie, waterkwaliteit en biodiversiteit)	Air Humanity Landscape	Environmental impact (3)
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The other ‘living organisms’ within the limits of environmental impact are animals. Within sustainability practices, the quality of life for animals is also expected to be taken into account. Unfortunately, and largely due to the nature of the subjected organizations, there are not many cases in which the quality of life for animals is a focus. In the case of the KipCarvan, there is a clear goal to improve the quality of life for chickens. This is done by giving the chickens a free-living environment. The effects on the chickens are great. Chickens living in a portable hen house live longer, lose fewer feathers, and lay more eggs. Another organization that strives to improve the quality of life for animals is Euromeat Oss. Although the specific BM they have configured with the help of the BMT, does not include a better standard of life for animals, their regular business does.

Environmental impact is not necessarily, although often, linked to the quality of a certain environmental feature. However, in the case of the landscape as an indicator, it could very well be that the aesthetic appeal of an area can be a form of value creation. Therefore, the landscape is defined differently than the already discussed indicators. In the definition of the landscape, quality is relevant. However, also the quantity and the already mentioned aesthetics may be important (see [Appendix I](#)). In the investigated BMTs for example, a contribution to the biodiversity of an area is recognized multiple times. In the case of Duurzaamheidspark Lith,

the initial reason to develop new solar panels was to recover the occurred damage to biodiversity caused by conventional solar panels.

Dream	Juiste balans van behoud natuur en landbouw en opwekken zonne-energie	Verbeteren van de flora en fauna op zonnepaneelparken. Herstellen van de gepleegde roofofbouw op grond door conventionele zonnepanelen.	Landscape Landscape	Environmen- tal impact (2)
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An example with a more aesthetic foundation comes from Peppel. The initiators of the project are born in an area where poplars used to occur naturally. However, due to its arguable lack of usefulness, the trees started to vanish from the landscape. To encourage the restoration of the poplar in the street scene, they invented an economic revenue model to stimulate growth. Consequently, at the heart of a nowadays fully-functioning organization, lies a desire to restore the landscape.

Dream	Terugbrengen van de populariteit van populierenhout	De populariteit van populierenhout weer terugbrengen, zodat het hout meer en beter gebruikt kan worden en er veel nieuwe bomen worden terug geplant.	Social change Landscape	Social impact Environmen- tal impact
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Most of the detected environmental impact within the subjected organizations is on the non-living environment; water, air, and soil. Starting with water, the quality in oceans, rivers, and lakes has decreased in the last decennia. This partly has to do with an extreme amount of plastic that ends up in the waters. Furthermore, caused by climate change, the quality of drinking water has decreased and will decrease in the coming years (RIVM, 2012). A positive impact on the quality of water in the oceans is made by Spectro. Spectro developed the Recycle Factory. Here, plastic packaging of cleaning products will be collected and used for new packaging. Within the cleaning industry, recycling had been highly neglected. Due to Spectro's actions, the waste of plastic in the industry will be reduced. The Recycle Factors thus results in a lower waste of plastic and reduces the influx of plastics into waters.

Impact	Minder zwerfafval, lager gebruik ruwe grondstoffen, lagere CO2	Positief: Minder gebruik van kunststof → minder ruwe grondstoffen, minder zwerfafval op land en in zee.	Soil/water	Environmen- tal impact
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Another project that was already discussed before is Pitlatrine. Their goal is to provide clean drinking water and sanitation in as good as every part of the world. In prosperous countries, the need for clean drinking water is currently negligible. However, due to climate change, in the future, access to clean drinking water may not be as natural as it always has been. Here,

Pitlatrine may have some impact in the future. Nowadays, Pitlatrine already makes a large difference in Third World countries. Access to clean water is highly necessary and the sanitation kit contributes to this need.

Dream	Wereldwijd aanbieden van schoon (drink)water en sanitaire	Op wereldwijze schaal uitzetten van projecten waarin de producten van Pitlatrine zorgen voor goede sanitaire voorzieningen en schoon (drink)water.	Humanity Water	Environmen- tal impact (2)
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Besides positive effects on water, many projects contribute to the quality of the air. One of the biggest threats to clean air is CO₂. Emissions from many industries, consumer goods, vehicles, and many more, pollute the air. One project that is entirely built around making a positive impact on the quality of the air is the CO₂ Fonds Eindhoven Airport. The project has already gained national media attention and ought to make a large contribution to sustainability. The project aims to bring local farmers and the airport of Eindhoven together to compensate for CO₂ emissions. In 2018, in the Netherlands alone, the aviation industry emitted over 13 million kilograms of CO₂ (CBS, 2018). Through a collaboration between many partners, including Eindhoven Airport's customers, farmers in the surroundings of the airport compensate for the CO₂ emissions. The land and corps of the farmers can absorb the CO₂ from the air and store it. By so doing, the farmers are able to compensate for a large amount of the CO₂ emitted by the airport. This results in a reduction of CO₂ in the air, and therefore a better quality.

Dream	Nauwe samenwerkingen tussen regionale partijen om CO ₂ lokaal te compenseren	CO ₂ compensatie laten plaatsvinden in de regio door lokale agrarische ondernemingen en grondbezitters samen te laten werken en CO ₂ vast te leggen door verhoging van de organische stof in de bodem.	Air Collaboration	Environmen- tal impact Co-creation
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Although the CO₂ Fonds Eindhoven Airport is the only project that primarily aims to improve the quality of the air, many projects have an indirect impact. This could for example be caused by localizing production. This reduces the need to transport products and thus lead to less CO₂ emissions. Another example is to encourage employees to travel by bike, or to facilitate and stimulate the use of electronic vehicles. Impact on CO₂ reduction is a very important and a clear by-product for a lot of projects and initiatives.

Contributions to the quality of the soil are comparable with contributions to water. Most of the recognized forms of soil improvement have to do with a reduction in the production of plastics and other raw materials. As with the quality of water, the quality of the soil can be affected due to plastic waste. Two researched projects contribute to an improvement in the quality of the soil

rather innovatively. The first one is the KipCaravan. Due to a new form of collaboration, landowners can work together with the KipCaravan. A portable hen house can be placed on the land of a fruit farmer. The chickens living in the hen house will roam around the fields for a couple of days to scrape. During that time, they will both clean up and hoe the property. Consequently, the soil of the land is taken care of and the farmer does not have to use pesticides. This improves the quality of the land.

tegengaan	De kippen maken eieren en vlees, van voeding uit de natuur en restproducten (verloren fruit) en 'schoffelen' de grond (geen bestrijdingsmiddelen nodig).	Landscape Soil	Environmental impact (2)
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Another innovative example comes from De Collectieve Kringloop. De Collectieve Kringloop is a collaboration between local Water Authorities and farmers. While mowing the roadsides, a certain type of compost is collected by the Water Authorities. This compost is a very useful soil improver for local farmers. Through the collaboration arranged by De Collectieve Kringloop, the local farmers are provided with a very useful and sustainable soil improver.

bodemstructuur en vochthuishouding, verbetering	Organische stoffen in de bodem (uit het bermmaaisel) zorgen voor betere bodemstructuur en vochthuishouding.	Soil (2)	Environmental impact (2)
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Within the sample of organizations, there was no indicator found whatsoever that contributed to the quality of light as defined. On the contrary, there were many BMs that incorporate some form of circularity in their BM. Circularity is a very broad concept (Jonker & Faber, 2019). For the sake of a clear overview, all of the forms of circularity were taken into one indicator. In the analysis, a lot of BMTs referred to circularity in some way. This could be the consequence of a strong pressure from governments, societies, NGOs et cetera. More and more organizations start to incorporate circularity. Spectro for example set up a whole business in the form of a Recycle Factory in which they collect, reuse, and recycle plastic. SCAB Accountants set up a platform where they, as a service provider, advise, guide, and stimulate circularity initiatives in the construction industry. Pitlatrine invented a kit where water is used circularly all the time. The water is used for many purposes, from drinking water to shower water, irrigation water, and flush water. Measures could also be taken at the decision-making level. In that sense, CSS Schoonmaak chose to work with partners in the chain that only use circular products. In almost every case, circularity plays a role or comes as a consequence.

5.4. Co-creation

The co-creation of value is one of the essentials in the new, sustainable generation of BMs (Jonker & Faber, 2019). Making a true contribution is more likely to happen in a collaborative environment. By applying the BMT, organizations are forced to think about collaborations and partnerships, as it is one of the ten building blocks of the template. Therefore, in every BMT researched for this thesis, some form of collaboration is recognized. There is, however, a difference in the intensity and purpose of working together. This can already be seen in the definitions of the two indicators for co-creation; collaboration and network. Collaboration refers to the action of working together. This type of working together remains on the surface and mostly consists of an economic transaction or pay-off. In contrast, working together in a network insinuates a deeper and stronger connection between the parties. When working together like this, organizations aim for a more long-term relationship and creating value together, instead of merely exchanging value. The results of the research show that a ‘collaboration’ was mostly a first stage of trying to operate within a ‘network’. Therefore, it remains an important factor in innovative and collective value creation. In Figure 8, the frequency table shows how many times each indicator has been found in the BMTs.

Indicator	Frequency
Collaboration	25
Network	32

Figure 8. Frequency table indicators co-creation

The first example of a collaboration recognized in the BMTs is within the project of Fitnezzplaza. Since the results of the project are expected to make society healthier, they have tried to work together with insurance companies. As already discussed, the project aims for lower costs for society as the demand for health care decreases. This would also lead to lower costs for insurance companies. In setting up a revenue model to make the project viable, they seek a financial compensation from the insurance companies. In practice, this means that Fitnezzplaza receives a sum of money if they show a positive result for the insurance company. Such a form of working together is merely a collaboration. It can be seen as an exchange of money and not a way of ‘creating value together’. This has a slightly conventional character. However, placed within the context of Fitnezzplaza, where social impact is a significantly greater goal than financial wealth, it still can fall under the concept of innovative value creation.

Furthermore, in the long term, this collaboration could truly create value collectively when they scale the project up nationally, or intensify the contact.

bijdrage maatschappij	Financiering. Samenwerkingen met zorgverzekeraars.	Collaboration	Co-creation
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Another example comes from the KipCaravan. This example shows that within one project, it is possible to incorporate both a collaborative form of working together, and a kind of value creation within a network. This is possible because, in many projects, there is a form of working together with other parties on multiple levels. KipCaravan incorporates one form of purely economic exchange. They work together with all kinds of parties that have property. This property is useful for the KipCaravan as it can be used for the chickens to scrape on. It can then be seen as an exchange of assets. However, by intensifying this collaboration, and more importantly, including other parties in this collaboration, the KipCaravan starts to be part of a network of collective value creation.

voor onderhoud/biodiversiteit	Locaties (standplaatsen en scharrelgebieden in ruil voor onderhoud omgeving – biologische onkruidbestrijding).	Collaboration	Co-creation
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Working in a network and supporting each other in each part of the chain is the true form of the co-creation of value. The best example found in the documents used in this thesis comes from Peppel. It has already been discussed above, so the context must be clear. In essence, Peppel sells all kinds of products made from poplar wood; walls, floors, ceilings et cetera. This can be seen as their core activity. By doing so, Peppel has organized a full chain from planting the tree up to the moment the product arrives at the customer. They work together with the growers, transporters, sawmills, and sustainable processors. All of these chain partners have their own tasks and the end product is an environmentally friendly and sustainable product, that re-introduced the poplar as a local raw material.

waarde creatie gehele keten, verbeterde lokale	Nauwe samenwerking binnen de gehele keten → meervoudige waarde creatie met op duurzaamheid georiënteerde partners.	Network Economic	Co-creation Economic
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5.5. Chapter conclusion

The purpose of this chapter was to describe the data. In the BMT-research, it has become clear that the four dimensions of innovative value creation are present in the BMTs in great numbers.

Especially impact on the environment has been highly present. Besides the set indicators *a priori*, for some dimensions, new indicators were found.

As for the economic impact recognized in the BMTs, there is a large difference between the innovative and conventional way of measuring economic impact. Making ‘conventional’ profit is for some organizations still a key driver. However, the context in which this profit is created is extremely different. A lot of economic impact is created for the stakeholders, rather than for the organization itself. This was already explained in [chapter 3](#) and could be seen in the definition of economic impact.

Social impact was the first dimension researched that was truly novel to the new generation of value creation in comparison with conventional value creation. The BMT encourages organizations to genuinely think about their impact on society, rather than to incorporate this as a mere by-product. This fits with the principles of creating value innovatively. In practice, this encouragement has paid off. Within the investigated BMTs, social impact has been found in many forms. *A priori*, several indicators of this form of impact had been explained. During the research, even more indicators with an effect on society surfaced. Compared to economic impact, which was present in almost every project, not every organization has been able to have a social effect. However, this is mainly because of the origin and the characteristics of an organization. Some organizations simply cannot make a direct impact on society.

The most recognized form of impact in the BMTs was on the environment. This may be caused by a large pressure on organizations to act with respect to their environment. Furthermore, environmental impact can be made with relatively slight changes in for example the decision-making process.

Lastly, co-creation of value was mostly recognized in the BMT as organizations worked in a ‘network’. Then, partners found a way to truly create value in collaboration. Although it may not be as clear initially, co-creation may be the most important dimension in a distinction between conventional and innovative value creation. Co-creation, collaborations and working in a network, provide the circumstances of making a true impact. Making an impact working alone is highly difficult, due to many reasons, for example a lack of knowledge, assets or time.

6. Analysis: The potential of the Business Model Template

Based on the outcomes of the document and literature research in the previous chapters, this chapter will follow up with an analysis of the findings. The purpose of this analysis is to be able to determine the potential of the BMT in innovative value creation. Consequently, the research questions of this thesis can be answered. The analysis will elaborate on the main contributions of the researched data within the limits of the discussed literature in this thesis.

The main contributions as distinguished in this chapter both contribute to the research questions, but also a broader potential of the BMT. First and foremost, the analysis aims to contribute to the objective of this thesis, which is to research the extent of the BMT's facilitation in the innovation of value creation. Secondly, other contributions have been found that may lay the groundwork for further research.

6.1. Innovative value creation in sustainified business models

The first contribution of this thesis aims for the presence of innovative forms of value creation in the BMTs. As discussed in [chapter 3](#) of this thesis, the concept of value creation has changed due to a demand for sustainability. The frequency of novel forms of value creation can be seen in the tables that have been constructed in [chapter 5](#). Here, Figure 4 shows that environmental impact has been detected most in the BMTs. The other dimensions – economic and social impact, and co-creation of value – are also present in large numbers.

The large presence of environmental impact as a form of innovative value creation may be explained by various reasons. Comparing the BMT with conventional templates for BMI, the building block 'impact' has made a significant difference. By incorporating this building block, entrepreneurs are forced to think about the impact their business has, instead of merely thinking about a revenue model. With relatively minor changes in the business, more or less impact can be made to the environment in for example CO₂ emissions or waste reduction. Contributions to social impact, for example, may be more difficult to accomplish as they mostly need a more deep-seated change in culture, norms, values et cetera. Another reason for the high presence of environmental impact may be the pressure of stakeholders on organizations to sustainify. Furthermore, governments subsidize many environmentally friendly initiatives. This was also found in the data. Subsidies make these initiatives economically scalable and thus more interesting.

Although the high presence of environmental impact might be partly caused by other factors, the BMT plays an indispensable role. Firstly, the BMT provides an opportunity to incorporate environmental impact into the BM, and secondly, it strongly stimulates entrepreneurs to do so. In the discussed BMC (Osterwalder & Pigneur, 2010), there was no intention for such a form of impact, or at least, entrepreneurs were not stimulated to investigate it. This makes the BMT a great addition to the landscape of sustainable BMI. Besides making environmental impact, many organizations made a social impact. In contrast to environmental impact, this may be seen as a more revolutionary and future-proof outcome. In the current literature, social impact is not often incorporated as a factor in 'sustainable business models'. Jonker and Faber (2019) are one of the few that explicitly refer to 'inclusiveness' as a part of the new generation sustainable BMs, whereas other scholars refer to social BMs as a separate category of BMs. Another reason why this outcome is rather revolutionary is that, from a governmental level, there is not so much pressure on making a social impact. There are some forms of subsidy, but far less than in the case of environmental impact. These may be reasons why social impact is not incorporated as much in the BMTs as environmental impact is. However, the presence of social impact in multiple BMTs, shows that the BMT does again provide and stimulate entrepreneurs to think about their social impact.

Economic impact is a factor that has been an important part of the BM ever since its existence. Every organization needs some form of income to survive. This is not neglected by the BMT. However, in the BMT, economic impact is put in a significantly different context. Economic impact must find balance with the other forms of innovative value creation. Based on the outcomes, and in combination with the last dimension of innovative value creation, which is the co-creation of value, economic impact is largely created in a collaborating environment, or an innovation ecosystem.

In interpreting the outcomes of the data, and by translating this into practice, one dimension of sustainable BMs is found to be most important as it functions as the glue between all other dimensions. This is the co-creation of value. The co-creation of value makes the fundamental difference in the new generation of BMs as initiatives live or die due to the effect of co-creation in the BM. The BMT forces practitioners to take this into account in its building blocks, whether intentionally and directly, or unintentionally and indirectly. In conventional BMs, 'partnerships' were already an important part of the business. However, the essential difference between creating value conventionally and innovatively, is that in the conventional BM, parties

were working together ‘to make the business model work’ (Osterwalder & Pigneur, 2010). In the new generation of BMs, it is about ‘creating value together’ (Jonker & Faber, 2019). This nuance is found to be extremely important as it is recognized in as good as every part of a well-constructed innovative, sustainable, circular, and/or inclusive BM. The BMs that were built around an ecosystem of collaborating partners, were found to be most efficient in creating innovative value. Consequently, these BMs were most useful for this thesis. These were the BMs of CO2 Fonds Eindhoven Airport, Duurzaamheidspark Lith, KipCaravan, Peppel, and Pitlatrine.

6.2. Fit between case and the Business Model Template

During the research of the data, it became clear that the BMT can be a useful tool to (re)configure a sustainable BM and, consequently, innovate value creation. However, the BMT was not the best method imaginable in every case. To be able to use the BMT to its full potential, the organization’s case has to fit. If there is a misfit between the fundamentals of the project and the fundamentals of the BMT, or in a broader sense: the fundamentals of innovative BMs and value creation, organizations have a hard time applying the BMT.

When the project includes forms of innovative value creation, the BMT is a perfectly suitable method. This is the case in the previously mentioned projects of Eindhoven Airport, Lith, KipCaravan, Peppel, and Pitlatrine. Here, the fundament of the projects is in line with the fundamentals of the BMT. There are, however, cases in which the BMT has a limited fit with the project. This is seen in the projects of Kusters and De Brabantse Boerderij. In the case of Kusters, there was no clear vision of any collaborative form of value that was ought to be created in the project. Since this is such a key feature of the BMT, complications arose in the application of the template. These complications lead to a reduction of the potential value that could be created through the BMT. In such a case, it may be better to use another, more conventional instrument, or to change the fundamentals of the project and extend the opportunities. De Brabantse Boerderij may be seen as a relatively odd project since it is not a ‘standard’ business case. There are no financial goals whatsoever, it intentionally operates on a small scale, and it lacks in professionalism and business knowledge. Again, the fundamentals of this project do not meet the fundamentals of the BMT. The forms of impact and the transaction forms are rather far-fetched, when ‘fitting’ them into the theory of the BMT. This raises multiple difficulties in the application of the BMT in a sense that filling in the building blocks stammers, whereas in other projects, it is applied with almost no problems. These cases made

it clear that sometimes, it may be better to cut your losses during the application and to search for another method to configure a BM, as the BMT will not be helpful in that particular case.

Achieving the potential of the BMT in the case of Kusters is not completely infeasible. After some adaptations of the project and a more thorough understanding of how to create value innovatively, the BMT can reach its full potential. However, in the case of De Brabantse Boerderij, the BMT is not the most suitable method. Despite this, the theory on which the BMT is grounded could still have a supportive purpose. The goal of the BMT then becomes to provide some guidance in a sustainable project, rather than configuring a BM.

6.3. Thorough understanding distinction between conventionalism and innovation

As already mentioned in the handbook of the BMT (Jonker & Faber, 2019, p. 37), the BMT is not meant for organizations that merely want ‘to go green’. The results of the BMT should be more deep-seated than that. Within the data, it is seen that some organizations largely remain on the surface of sustainification. Even though there is a lot of potential. This may be caused by a misunderstanding of the importance of a change in value creation and BMs.

The change is not something to be taken lightly. This is where the largest difference may be made; the realization of entrepreneurs that a deeper understanding of the changed context is necessary to accomplish the decided upon goals. In literature, the distinction has already been made and applied; the notion of innovative value creation, as a counterpart to conventional value creation, has been made by scholars in great numbers. To a larger extent, they refer to social, environmental, and economic impact (or: people, planet, profit). To a lesser extent, they incorporate the importance of an ecosystem as the glue between these three. The importance of this changed nature does not seem to be sufficiently present at practitioners. This could be explained by the large investment and dedication needed. This does, however, have a great effect on the potential of the BMT. If the practitioners who apply the BMT, are not fully aware of the potential it has when having a thorough understanding of the difference between conventional BMs and value creation, and innovative BMs and value creation, then this potential will never be fully used.

6.4. Maximizing the positive relationship between the Business Model Template and innovative value creation

Based on the findings in the data, it can be said that the BMT has a positive effect on innovative value creation. Forms of innovative value creation are significantly present within organizations that have used the BMT to configure their BM. During the analysis, two moderating effects were found that either negatively or positively influence the impact of the BMT on innovative value creation. Firstly, a better fit between the fundamentals of the organization's case and the fundamentals of the BMT leads to a better result on innovative value creation. Secondly, a better understanding of the importance of a difference between conventional value creation and BMs, and innovative value creation and BMs, positively influences the impact. However, if there is a low fit and understanding, these two negatively influence the impact that the BMT has on innovative value creation. These relationships are schematically shown in Figure 9.

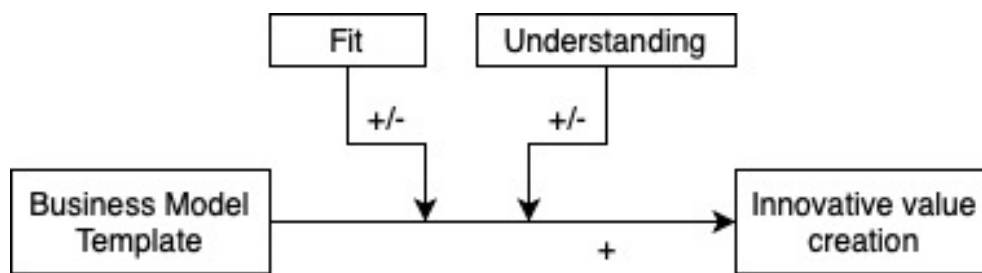


Figure 9. Overview concepts; direct and moderating effects.

Consequently, the extent to which an organization is able to create value innovatively, depends on how well the BMT fits and how well it is understood within the limits as set in this chapter. Practically, this places the responsibility of the effectiveness of the BMT partly on the practitioner who is about to use the BMT. The potential of the BMT then depends on each individual case and the knowledge and expertise that is present in the organization.

Due to how the data in this thesis is collected, one practical contribution of maximizing the positive impact of the BMT on innovative value creation has already been recognized. This is found in the positive effect that an external consultant has on the understanding of the BMT itself, and the two moderating factors in Figure 9. During the research of the data, but more importantly, during the contact with Power-ED, this effect has become clear. Firstly, Power-ED explained the content of the BMT itself. Since they assisted in writing the workbook on the BMT, they have a good understanding of it. Secondly, as a consultant, they are able to act as a sort of gatekeeper to whether the organization's case fits with the BMT. If there is no fit, they

can assist in the adjustment of the case. Thirdly, they have a consulting role in providing the practitioners with the information and knowledge they need to truly understand the importance of a changed manner of creating value. Schematically, the effects of a consultant are shown in Figure 10.

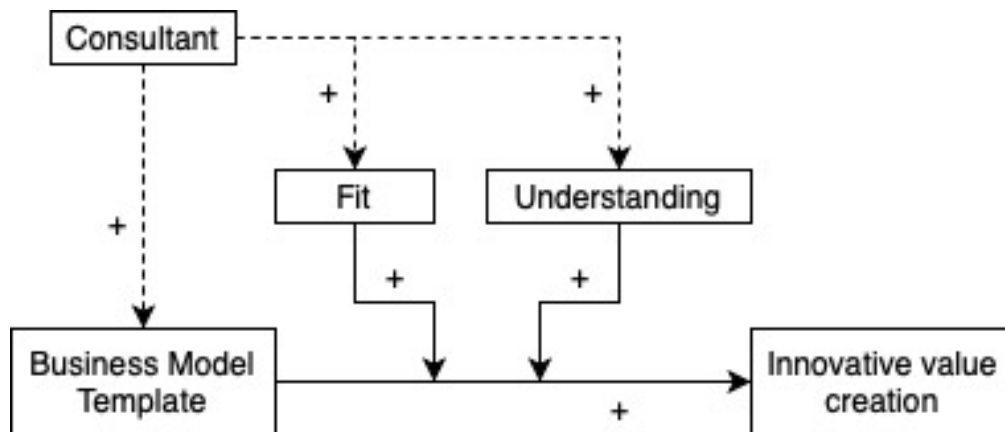


Figure 10. Overview concepts; incorporating a consultant.

6.5. Chapter conclusion

In the analysis of the results, it has become clear that the BMT has a significant potential to positively impact the extent to which value is created innovatively. Although environmental impact was found to be most present in the researched cases, the presence of social impact may be most revolutionary. Current literature and more importantly practice, has a limited view of sustainable BMs. This limited view may be caused by the fact that sustainability is used interchangeably with circularity, while sustainability in this thesis has been said to be broader than this. Consequences of BMI do not merely affect circularity, but also sustainability in a wider sense, such as inclusiveness, and other related forms social impact. The set-up of the BMT intentionally strives to incorporate inclusiveness, which can be seen as a substitute, or part, of social impact. The notion of economic impact has mainly been changed due to a focus on the co-creation of value. In the analysis, co-creation of value is seen as the glue between the other dimensions of innovative value creation. A focus on co-creating value is highly important to improve the chances of successful innovative value creation.

Two main contributions that have been found are the moderating effects on the impact that the BMT has on the extent to which an organization is able to create value innovatively. Firstly, this is the fit between the fundamentals of the organization's case and the fundamentals of the BMT. The BMT strives to push organizations to a maximal incorporation of sustainability,

circularity, and inclusiveness. These three pillars have been stretched and interpreted for the sake of this thesis, however, the essence has remained the same. If an organization does not recognize these fundamentals, it has a negative influence on the extent to which innovative value is created. Vice versa, if an organization does recognize these fundamentals, it will be more able to create innovative value. Secondly, a true understanding of the importance of a difference between conventionalism and innovation positively influences the relationship between the BMT and innovative value creation.

Due to the close collaboration with Power-ED in the data collection, the positive impact that a consultant can make in different areas has become clear. With the help of an external expert, essential knowledge, and information can be gathered.

7. Conclusion and discussion

In this chapter, the conclusion of the research questions will be given. Furthermore, this chapter contains a discussion. Here, the limitations of the research are discussed, as well as the theoretical implications, practical recommendations, methodological limitations, and suggestions for further research.

In the [introduction](#) of this thesis, the research question is stated. The research question is: *To what extent does the Business Model Template facilitate an innovation in value creation by sustainifying existing business models?* To embody this research question, four sub-questions were formulated. The first sub-question covers the changing nature of value creation. The second sub-question focuses on new requirements for BMs as the nature of value creation is changing. The third sub-question refers to one specific form of BMI, which is the BMT. In this sub-question, the BMT's added value in making changes in value creation is discussed. The last sub-question targets factors that influence a possible relationship between the BMT and innovative value creation.

7.1. Conclusion

In this paragraph, the four sub-questions and the main research question as stated above will be answered respectively. The conclusions that will be given in this paragraph are based on an extensive literature research and the analysis of 15 researched BMTs.

Firstly, the nature of value creation has changed due to a more sustainability-focused society. The novel form of value creation is referred to as innovative value creation. Innovative value creation derives much of its existence from critique on conventional value creation. The difference between these two forms of value creation is fourfold. Firstly, the purpose of creating conventional value will mostly be gaining competitive advantage. The purpose of innovative value creation differs from case to case, however, it focuses on sustainability, or concepts that are closely related to sustainability innovation. Secondly, the source of value that gets almost all the attention in conventional value creation is economic value. This fits within the purpose of gaining competitive advantage, as economic value enables this. In comparison, innovative value creation contains three sources of value: economic, social, and environmental value. These forms of value are of the same importance and may be created simultaneously. Thirdly, the context within which conventional value is created is focused around the organization itself. This is caused by incorporating an agency perspective, where the organization operates as the

agent, and the owners, most commonly: the shareholders, are the principal. The organization ought to provide financial gain in favor of the owners. In the case of innovative value creation, value ought to be created in a dense network of collaborating partners, also referred to as an innovation ecosystem. This is in line with the stakeholder perspective. The collaborating parties are driven by a joint approach to value creation. Fourth and lastly, conventional value creation focuses on short-term results, whereas innovative value creation focuses on long-term results.

Secondly, the changing nature of value creation implies new requirements for BMs, since BMs function as the logic through which value is created. As value creation is much more focused on sustainability, BMs also have to incorporate new features. This will mostly be done through BMI; the configuration of new BMs, or the reconfiguration of existing BMs. This process is mostly referred to as the sustainification of BMs. Abstractly put, sustainable BMs must be able to facilitate the changed value creation, i.e. innovative value creation. This means that, where possible, sustainable BMs must incorporate forms of innovative value creation. Practically, the BM must make room for and stimulate the creation of both economic, social, and environmental value. Conventional BMs are lacking in this sense, as they are built around the provision of economic value. Furthermore, there must be a much larger focus on the co-creation of value in sustainable BMs. Conventional BMs seem to already do this, as they incorporate ‘partnerships’. However, in practice, these partnerships merely add to the creation of value for one organization, or the exchange of value between different organizations. The essence of the *co-creation* of value is that value will be created together, focusing on a joint approach. This requires a different perspective on collaborating. By incorporating these two requirements in sustainable BMs, – so: facilitating economic, social, and environmental value, and a focus on the co-creation of value – they will be better able to provide a logic for innovative value creation.

Thirdly, the BMT may help practitioners in (re)configuring a sustainable BM. The (re)configuration of BMs is referred to as BMI. The BMT has the potential to guide businesses in BMI and to stimulate them into the creation of innovative value. Practically, the BMT provides users with a tool to set up a sustainable BM. By doing so, it contributes to the creation of innovative value, as sustainable BMs facilitate this form of value creation. Furthermore, it teaches practitioners about the importance of sustainability, circularity, inclusiveness, and other related concepts. By providing the (re)configuration of sustainable BMs, and consequently, the creation of innovative value, the BMT leads to a positive effect on the innovative value creation.

Fourthly, factors that may influence the above-stated positive relationship between the BMT and innovative value creation, have been found in the analysis. The first factor that may either positively, or negatively moderate the relationship of the BMT on innovative value creation is the fit between the fundamentals of the BMT and the fundamentals of the specific case. The most important fundamentals of the BMT are the fact that value creation is not built around economic value, but also includes social and environmental value, and that value must be created in a co-operative environment. If a specific case fails to include these fundamentals, it will have a negative effect on the relationship between the BMT and innovative value creation. If the specific case does recognize these fundamentals, then the BMT has a greater positive effect on innovative value creation. The second factor that may have an impact on the relationship between the BMT and innovative value creation is the BMT-user's understanding of the importance of a difference between conventionalism and innovation. If a user does not see, apply, or understand the importance of such a distinction, it has a negative moderating effect on the relationship between the BMT and innovative value creation. If the user does understand the importance of this distinction, and consequently acts upon this, it has a positive moderating effect. In practice, an external consultant that is acquainted with the BMT can be helpful in a trajectory of BMI. Firstly, this consultant may have a positive effect on the understanding of the BMT itself. Secondly, it may help to optimize the fit between the BMT and the case, and the understanding between conventionalism and innovation. The consultant then makes it possible to optimize the relationship between BMT and innovative value creation.

To answer the main research question, the BMT has a significant potential to contribute to innovative value creation, and thus, the extent to which the BMT facilitates an innovation in value creation by sustainifying existing BMs is significant. The BMT guides practitioners in the (re)configuration of sustainable BMs. These sustainable BMs facilitate and stimulate innovative value creation. The extent to which the BMT has an actual positive effect on innovative value creation, firstly, depends on the fit between the fundamentals of the BMT and the fundamentals of the organization's case. Secondly, the extent depends on a thorough understanding of the user on the difference between conventionalism and innovation. Both of these effects could be optimized with the help of an external consultant that has specific knowledge about the BMT.

7.2. Discussion

7.2.1. Limitations

The practical limitations of this thesis were mostly caused by the coronavirus measures. Due to the tight schedule of the thesis, and the fact that entrepreneurs were occupied with surviving the quarantine, the data collection of this thesis had to be changed drastically. Instead of conducting interviews, data had to be gathered by a document research.

7.2.2. Theoretical implications

The findings of this thesis have multiple implications for theory. These implications are partly found through an extensive literature search, and partly through the analysis of the data. Firstly, literature largely focuses on the sustainification of the BM. However, this does not necessarily imply a sustainification of the way value is created as well. A sustainification of the BM alone has little impact if a conventional way of value creation is still applied. Therefore, these two should be more closely related and with greater attention. Secondly, the BMT has been found to be a great addition to the landscape of BMI. The BMT's potential in sustainification of BMs, and consequently, the innovation of value creation has been laid down in this thesis. Thirdly, a larger focus should be on the importance of co-creation in innovative value creation, or closely related forms of value creation. The economic, social, and environmental impact seem to be larger in a co-operative environment. In much of the literature, the focus is merely on new sources of value, instead of the way it is created. Based on the importance of this specific way of working together, the stakeholder perspective has been found to be fundamental in innovative value creation. This link has not been recognized in the vast majority of existing literature yet. Lastly, this thesis has provided a set of dimensions and indicators, which may be helpful to measure the existence of innovative value creation.

7.2.3. Practical recommendations

The positive relationship between the BMT and innovative value creation has important implications for the BMT's use in practice. This means that with the help of the BMT, businesses may be able to create innovative value. This positive relationship is, however, not self-evident. The BMT's user has to put time and effort into preparation to achieve a successful end-result in which innovative value may be created. Practically, the user has to make sure that there is a fit between the fundamentals of the BMT and the fundamentals of the user's case. This means that the user has to focus on economic, social, and/or environmental value. If there

is a mere focus on economic value, then the BMT will not be used to its full potential. Even more importantly, the user has to recognize that these sources of value will be created best in a co-creative environment. Practically, this means that the user has to seek preferably deep and long-term partnerships. Furthermore, the user has to understand the importance of the difference between conventional BMs and value creation, and innovative value creation and sustainable BMs. Only then will the BMT reach its full potential to facilitate innovative value creation. These implications mean that the user has to gather information before using the BMT. An external consultant, such as Power-ED, will be very helpful to apply the BMT.

7.2.4. Methodological limitations

Unfortunately, but unforeseeable, the methods used in this thesis have their limits. Firstly, the data that has been used is not gathered by a random sample. The data is rather subjective and may be biased, as it is gathered by Power-ED. The data was not collected for this thesis specifically and therefore could be limited. Furthermore, there was little direct contact with the organizations. Almost all contact has taken place with the intervention of Power-ED. Secondly, the initial plan was to conduct interviews. In retrospect, this method would have been more reliable and useful. The limitations of a documentation research, such as the impossibility to ask for an explanation or have a focused question related to one specific topic, may lead to different results. Interviews would have provided a more practical and broader view of the reasons behind decisions that had to be taken in the light of the BMI. Thirdly, the sources of evidence are limited. Due to the quarantine, conclusions had to be made based on the 15 BMTs and some information that had been gathered during online meetings between Power-ED and its clients. However, this last source of evidence is rather limited and difficult to apply. Consequently, Yin's (2018) recommendation to have multiple sources of evidence could not be realized.

7.2.5. Suggestions for further research

The first suggestion for further research is to find empirical evidence for the actual impact that the BMT has on innovative value creation. Many of the BMTs that have been analyzed for this thesis are not brought into practice yet. Empirical evidence of its results is therefore lacking. Another suggestion is to build a research around interviews with the users of the BMT. This research could for example focus on the intentions behind using the BMT; the importance of an external consultant or; the practical hurdles of the application of the BMT. Researches like

these, based on interviews, should give a more specific view on particular elements of the BMT. Another research could take the relationships found in this thesis as a synthesis. The objective then becomes to find empirical evidence for the existence and strength of the stated relationships. The current empirical proof may come short in stating irrefutable conclusions.

8. References

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9. Appendices

9.1. Appendix I: Definitions indicators

Air

The quality of the air.

Animals

The quality of life for animals.

Circularity

The closing of material loops, including the strategic activities of refusing, redesigning, bio-based redesigning, rethinking, reducing, reusing, repairing, refurbishing, repurposing, recycling, recovering and conversing.

Citizenship

The position or status of being a citizen of a particular community or country.

Collaboration

The action of working together with someone.

Contribution to public finances

An action by which costs for governments or other public organizations are affected, resulting in lower costs for society as a whole.

Creation of communities

Providing or creating an environment with a group of people living in the same place or having particular interests, and cultural values and norms in common.

Economic growth

The increase in market value of goods and services produced by an economy over time.

Group coherence employees

A bond that links the workers in an organization to one and another and the group as a whole.

Humanity

The quality of life for humans.

Inclusiveness

The terms on which individuals and groups take part in society.

Investments

The action or process of investing money with the purpose to improve a financial situation.

Job creation and skill improvement

An increase in employment opportunities and the facilitation of an environment where the quality of work can be affected positively.

Landscape

All the visible features of an area of land or water, including the quality, quantity and aesthetic appeal.

Light

The quality of light.

Network

Operating within an arrangement of intersecting horizontal and vertical relations.

Profit

A financial gain, especially the difference between the amount earned and the amount spent in buying, operation, or producing something.

Social capital

A measure of the value of resources in a social group, both tangible and intangible.

Social change

A significant alteration in behavior and cultural value and norms over time.

Soil

The quality of the soil.

Water

The quality of the water.

9.2. Appendix II: Shortlist organizations

Company name	Short description
<i>BeeApp</i>	An application using AI that makes it possible to couple the right regional honey to hay fever patients to reduce their allergies.
<i>CO2 Fonds Eindhoven Airport</i>	An initiative that brings together different parties in the region of Eindhoven to compensate for the airport's CO2 emission.
<i>CSS Schoonmaak</i>	Developing a more sustainable business in a network of circular partners and creating a more sustainability-oriented working environment.
<i>De Brabantse Boerderij</i>	A sell and buy platform for historical farms and barns that are planned to be broken down.
<i>De Collectieve Kleine Kringloop</i>	Facilitation of collaboration between Water Authorities and local farmers.
<i>Duurzaamheidspark Lith</i>	Development of translucent mobile and slidable solar panels.
<i>Euromeat Oss</i>	Creation of an energy hub.
<i>Fitnezzplaza</i>	Project on improving health in society by stimulating diabetic patients to exercise and eat healthily.
<i>KipCaravan</i>	A community for daytime activities of people with a disability where a portable henhouse is used to bring chicken to their food.
<i>Kusters Metaalbewerking</i>	A sustainable and economical solar energy system that contributes to the highly precise regulation of temperature.
<i>Peppel</i>	Adding economical value to poplar wood to bring back its popularity.
<i>Pitlatrine</i>	Development and scaling of a circular kit for sanitation.
<i>SCAB Accountants</i>	A project of advising on and stimulating circular innovations in the construction industry.
<i>Spectro (Recycle Factory)</i>	Recycle Factory collects plastics packages from their customers to reuse the packages where possible, otherwise to recycle the material for new packages.
<i>Van der Kaa</i>	Re-use of thermoplastic waste.

9.3. Appendix III: Business Model Templates

BeeApp

Definition phase	Building block	Explanation	Indicator	Dimension
Motive and Context	(Toenemende) klachten van hooikoortspatiënten	Veel mensen hebben last van hooikoorts en dit wordt door opwarming van de aarde alleen maar erger.		
Dream	Hooikoortspatiënten voorzien van de juiste gebiedseigen honing	Hooikoortspatiënten voorzien van de juiste gebiedseigen honing. Het verminderen van hooikoortsklachten met als gevolg dat minder medicijnen nodig zijn. AI gebruiken voor pollendeterminatie. Versterken van de positie van de imker en het vergroten van biodiversiteit.	Humanity (2) Soil Contribution to public finances Social capital Landscape	Environmental impact (3) Economic impact Social impact Environmental impact
Proposition	Platform om patiënten te koppelen met de juiste honing, AI gebruiken voor pollendeterminatie	BeeApp is een platform waarin op basis van data hooikoortspatiënten gekoppeld worden aan specifieke gebiedseigen honing. AI wordt gebruikt voor pollendeterminatie.	Humanity	Environmental impact
Design phase				
BM Architype	Platform based BM	Platform based BM: de applicatie wordt gebruikt op hooikoortspatiënten te voorzien van de juiste honing.		

Stakeholders	BeeApp Power-ED Ziekenhuizen Onderzoeks- en onderwijsinstellingen	BeeApp Power-ED Nederlandse vereniging Allergologie Ziekenhuizen TNO Hogescholen	Collaboration	Co-creation
Strategy	Platform voor optimaal koppelen patiënten met honing	Samenbrengen van de juiste honing met de hooikoortspatiënten AI gebruiken voor pollenherkenning	Humanity	Environmental impact
Core activities	Ontwikkelen/onderhouden Opschalen Pollendeterminatie	Ontwikkelen en onderhouden BeeApp Opschalen van de BeeApp Toepassen van AI in pollendeterminatie		
External test	Wetenschappelijke basis	Er wordt gewerkt aan versterken van de wetenschappelijke basis.		
Result phase				
Impact	Verbetering leefomstandigheden, minder medicijngebruik, pollen-determinatie, betere biodiversiteit, beter vestigingsklimaat	Verbetering leefomstandigheden hooikoortspatiënten → minder ziekteverzuim en hogere productiviteit. Minder medicijngebruik → lagere kosten Geautomatiseerde pollenherkenning → lagere kosten Betere biodiversiteit en indirect beter vestigingsklimaat in de regio.	Humanity Contribution to public finances (3) Landscape	Environmental impact Economic impact (3) Environmental impact

			Economic growth	Economic impact
Value created	Uitwisseling data, verbetering kwaliteit leven samenleving, biodiversiteit	<p>Verzamelde data kan worden ingezet als verdienpotentieel</p> <p>Eventuele financiering n.a.v. kostenvermindering voor overheden</p> <p>Hooikoortspatiënten worden geholpen doordat hun kwaliteit van leven vooruitgaat.</p> <p>De positie van de imker wordt sterker door verdienstelijking.</p> <p>Beter vestigingsklimaat in de regio.</p> <p>Grotere biodiversiteit.</p>	<p>Profit</p> <p>Contribution to public finances</p> <p>Humanity</p> <p>Social capital</p> <p>Economic growth</p> <p>Landscape</p>	<p>Economic impact</p> <p>Economic impact</p> <p>Environmental impact</p> <p>Social impact</p> <p>Economic impact</p> <p>Environmental impact</p>

CO2 Fonds Eindhoven Airport

Definition phase	Building block	Explanation	Indicator	Dimension
Motive and Context	CO2 compensatie vindt voornamelijk plaats in verre oorden	CO2 compensatie vindt overwegend plaats buiten Nederland. Beperkte samenwerking tussen lokale partijen om CO2 in de regio te compenseren.		
Dream	Nauwe samenwerkingen tussen regionale partijen om CO2 lokaal te compenseren	CO2 compensatie laten plaatsvinden in de regio door lokale agrarische ondernemingen en grondbezitters samen te laten werken en CO2 vast te leggen door verhoging van de organische stof in de bodem. Regionale economie versterken; bijdragen aan (in)directe klimaat mitigerende maatregelen; Leefbaarheid voor omwonenden verbeteren.	Air Network Economic growth Air Humanity	Environmental impact Co-creation Economic impact Environmental impact Environmental impact
Proposition	Oprichting van het CO2 Fonds om Eindhoven Airport te laten samenwerken met een	Oprichting CO2 Fonds. Matchen van bedrijven uit de omgeving Eindhoven met grondeigenaar in de regio. CO2 vastlegging door verhoging van organische stof in de bodem.	Network Air	Co-creation Environmental impact

	cluster agrarische ondernemers in de regio	Nauwe samenwerking tussen Eindhoven Airport en lokale agrarische ondernemers.	Collaboration	Co-creation
Design phase				
BM Architype	Community-based BM/ Platform BM	Community-based BM: verschillende (regionale) partijen komen samen om te werken aan lokale CO2 compensatie . Platform: CO2 fonds fungeert als verbinder	Network Air	Co-creation Environmen- tal impact
Stakeholders	CO2 Fonds Airport Eindhoven Lokale agrarische ondernemers Particuliere grondbezitters	CO2 Fonds Eindhoven Airport Lokale agrarische ondernemers Particuliere grondbezitters	Collaboration	Co-creation
Strategy	Gezamenlijk lokaal CO2 compenseren	Eco-efficiëntie: het compenseren van CO2 uitstoot . Community-building: het creëren van een netwerk voor gezamenlijke waarde creatie.	Air Network	Environmen- tal impact Co-creation
Core activities	Matchen van betrokken partijen	Matchen van Eindhoven Airport met lokale agrarische ondernemers en grondbezitters. Leden voorzien van verdienpotentieel .	Network Economic growth	Co-creation Economic impact
External test	Voldaan	Lijk aan voldaan te zijn (tegendeel blijkt niet uit input).		

Result phase				
Impact	Lokale CO2 compensatie, verbetering leefbaarheid omgeving, versterking lokale economie	Positief: CO2 wordt lokaal gecompenseerd Leefbaarheid bewoners (verrijkte bodem, betere gewasopbrengst, waterregulatie, waterkwaliteit en biodiversiteit) Versterking lokale economie (Mogelijk) negatief: Minder compensatie in de verre oorden Mogelijke negatieve effecten van CO2 vastlegging	Air Humanity Landscape Economic growth	Environmental impact (3) Economic impact
Value created	Ledenvergoeding, CO2 compensatie/vastlegging, verbeterde leefomgeving	CO2 fonds werkt met leden, dus leden betalen vergoeding Passagiers op Eindhoven Airport kunnen betalen ten gunste van CO2 compensatie. De CO2 compensatie vertegenwoordigt een bepaalde waarde voor alle betrokken partijen (agrarische ondernemers, grondbezitters, Eindhoven Airport, passagiers) en die kan worden uitgewisseld. Omwonenden en betrokkenen worden gecompenseerd in een beter leefomgeving.	Profit Profit Network Humanity	Economic impact (2) Co-creation Environmental impact

CSS Schoonmaak

Definition phase	Building block	Explanation	Indicator	Dimension
Motive and Context	Verspilling van bruikbare producten Kansen voor verduurzaming	Bruikbare producten, zoals verpakkingen en schoonmaakmiddelen worden te snel afgeschreven. Mogelijkheden om CO2 uitstoot te verlagen.		
Dream	Duurzaam bedrijf met gebruik van volledig circulaire producten	Alleen gebruikmaken van schoonmaakproducten en -verpakkingen gebruiken die gerecycled of hergebruikt zijn, en kunnen worden. Vervoersmiddelen moeten zo efficiënt mogelijk gebruikt worden en er moeten manieren gezocht worden waarop de CO2 uitstoot wordt gereduceerd.	Circularity Air	Environmental impact Environmental impact
Proposition	Samenwerkingen met leveranciers van circulaire producten en duurzame bedrijfsvoering	Samenwerken met leveranciers die gebruikmaken van gerecyclede en hergebruikte producten. Werknemers stimuleren en de mogelijkheid bieden zo veel mogelijk duurzame keuzes te maken, bijvoorbeeld fiets i.p.v. autorijden.	Collaboration Group coherence employees	Co-creation Social impact
Design phase				
BM Architype	Circulair BM	Circulair BM: samenwerkingen aangaan met leveranciers die circulaire producten aanbieden.	Collaboration	Co-creation

Stakeholders	CSS Schoonmaak Leveranciers Medewerkers	CSS Schoonmaak Leveranciers Werknemers	Collaboration	Co-creation
Strategy	Duurzame keuze strategie en beleid	Eco-efficiëntie: in strategie- en beleidskeuze kiezen voor de duurzame/circulaire optie	Circularity	Environmental impact
Core activities	Circulair inkoopbeleid Faciliteren duurzame optie	Inkoop van circulaire producten. Faciliteren van mogelijkheid voor duurzame opties werknemers. Bewustwording.	Circularity Social change Social change	Environmental impact Social impact Social impact
External test	Onvoorziene impact	Onvoorziene omstandigheden → juiste (product)keuzes? Geen addertjes?		
Result phase				
Impact	Lager gebruik ruwe grondstoffen, minder afval, lagere CO2 uitstoot	Lagere productie kunststof. Lagere productie schoonmaakmiddelen. Minder afval. Minder vervoer per auto → lagere CO2 uitstoot.	Soil/water (3) Air	Environmental impact (6) Environmental impact

Value created	Betere marktpositie, bijdrage samenleving, duurzaam waarde creëren	Betere marktpositie door aanbieden duurzame oplossing → economisch voordeel. Bijdrage aan samenleving in de vorm van stimuleren circulaire economie. Onderlinge duurzame waarde creatie door samenwerkingen met juiste leveranciers	Economic growth Social change Network	Economic impact Social impact Co-creation
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De Brabantse Boerderij

Definition phase	Building block	Explanation	Indicator	Dimension
Motive and Context	Verlies van karakteristieke schuren en boerderijen	Verlies van karakteristieke schuren en boerderijen in Noord-Brabant door nieuwbouw.		
Dream	Nieuwe bestemming geven aan te slopen schuren en boerderijen	Eeuwenoude karakteristieke boerderijen in Noord-Brabant een andere bestemming geven.	<i>Cultural history</i>	Social impact
Proposition	Ten verkoop aanbieden van karakteristieke Noord-Brabantse schuren en boerderijen aan lokale ondernemers	Verkoop van oude boerderijen die gesloopt moeten worden. Boerderijen worden dan met precisie uit elkaar gehaald om ergens anders weer in elkaar gezet te kunnen worden.	Profit	Economic impact
Design phase				
BM Architype	Platform BM	Platform BM: de karakteristieke boerderijen gebruiken op een nieuwe bestemming.		
Stakeholders	De Brabantse Boerderij Overheden Lokale ondernemers	De Brabantse Boerderij Overheden Lokale ondernemers	Collaboration	Co-creation

Strategy	Verlengen van levensduur Behoud van cultureel erfgoed	Levensduurverlening: boerderijen krijgen een nieuwe bestemming. Behouden van cultureel erfgoed.	Circularity <i>Cultural history</i>	Environmental impact Social impact
Core activities	Aanbieden van platform ten verkoop Begeleiding in verkoop	Voorzien van platform waar te slopen boerderijen ten verkoop worden aangeboden. Faciliteren van verkoop.	Economic growth	Economic impact
External test	Wijzigingen rondom regelgeving	Eventuele aanpassing subsidie- en overige regelgeving		
Result phase				
Impact	Behoud cultureel erfgoed, verlengen levensduur materialen, minder grondstoffen	Oude materialen krijgen een nieuw doel → minder grondstoffen. Cultureel erfgoed blijft bewaard.	Circularity Soil <i>Cultural history</i>	Environmental impact (2) Social impact
Value created	Bijdrage aan cultuur en historisch erfgoed, ondersteuning om behoud te stimuleren	Karakteristieke boerderijen worden in ere hersteld. Nieuwe bestemming oude boerderijen Nieuwe eigenaren wordt meer beleidsvrijheid gegeven.	<i>Cultural history</i> Circularity	Social impact Environmental impact

			Economic growth	Economic impact
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De Collectieve Kleine Kringloop

Definition phase	Building block	Explanation	Indicator	Dimension
Motive and Context	Succesvolle samenwerkingen waterschappen en lokale ondernemers	Op plekken wordt in een korte kringloop samengewerkt tussen het waterschap en agrarische ondernemers om bermmaaisel te gebruiken als gebiedseigen bodemverbeteraar. Gebiedseigen bodemverbeteraar levert voor meerdere partijen grote voordelen op.		
Dream	Collectieve kleine kringloop met zoveel mogelijk betrokkenen	Het principe van een kleine kringloop waarin waterschappen bermmaaisel aanbieden als gebiedseigen bodemverbeteraar aan agrarische ondernemers collectief uitzetten. Het professionaliseren van de huidige kleinschalige opzet . Het betrekken van andere partijen in de kringloop (bijvoorbeeld IVN).	Collaboration Circularity Economic growth Network	Co-creation Environmental impact Economic impact Co-creation
Proposition	Door waterschappen verzameld bermmaaisel aanbieden bij lokale agrariërs ondernemers als bodemverbeteraar	Het bij elkaar brengen van waterschappen en agrarische ondernemers in een korte kringloop waarin bermmaaisel van het waterschap als bodemverbeteraar lokaal wordt aangewend op landbouwpercelen.	Network Circularity	Co-creation Environmental impact
Design phase				

BM Architype	Platform based BM	Platform based BM: het project voorziet in het bij elkaar brengen van vraag naar bodem-verbeteraars en overschot van (overbodig) maaisel.	Network	Co-creation
Stakeholders	Lokale agrariërs Waterschappen Natuurverenigingen	Agrarische ondernemers (gebiedsbod) Waterschappen Natuurverenigingen Schouwplichtigen Ivanhoe/Power-ED	Collaboration	Co-creation
Strategy	Samenbrengen betrokken partijen, impact klimaat vergroten	Community-building: samenbrengen van belanghebbende partijen Eco-efficiëntie: Verbeteren van klimaatimpact en verminderen uitstoot.	Network Air Soil	Co-creation Environmen- tal impact (2)
Core activities	Businesscase ontwikkelen, voorzien in platform	Tot stand brengen van businesscase voor collectieve korte kringloop. Voor zien in een platform waar partijen elkaar kunnen vinden.	Network	Co-creation
External test	Leren van tekortkomingen huidig concept	Idee bestaat reeds, maar wordt uitgerold om schaalbaarheid te verbeteren. Dit als voorbeeld gebruiken Concept voldoet aan wet- en regelgeving.		
Result phase				

Impact	Voedingsstoffen benutten, impact klimaatmitigatie, lagere CO2 uitstoot, lagere transportkosten, vrijwilligerswerk, minder zwerfafval	<p>Voedingsstoffen uit bermmaaisel spoelen niet uit naar oppervlaktewater.</p> <p>Mineralen en organische stof blijft binnen de regio → meer impact klimaatmitigatie.</p> <p>Transportafstand wordt verkort → lagere CO2 uitstoot en transportkosten.</p> <p>IVN (en andere natuurverenigingen) kunnen worden vergoed.</p> <p>Minder zwerfafval en betere bodemverbeteraar.</p>	<p>Water</p> <p>Soil</p> <p>Air</p> <p>Contribution to public finances</p> <p>Soil (2)</p>	<p>Environmental impact</p> <p>Environmental impact</p> <p>Environmental impact</p> <p>Economic impact</p> <p>Environmental impact (2)</p>
Value created	Vergoedingen, verbeterde bodemstructuur en vochthuishouding, verbetering leefomgeving	<p>Deelnemende boeren of terreinbeheerders krijgen een vergoeding.</p> <p>Organische stoffen in de bodem (uit het bermmaaisel) zorgen voor betere bodemstructuur en vochthuishouding.</p> <p>Voedingsstoffen in oppervlaktewater verminderen; minder CO2 uitstoot door lokale verwerking.</p> <p>Natuurverenigingen kunnen financieel worden vergoed voor bijdragen.</p>	<p>Contribution to public finances</p> <p>Soil (2)</p> <p>Water</p> <p>Air</p> <p>Contribution to public finances</p>	<p>Economic impact</p> <p>Environmental impact (2)</p> <p>Environmental impact (2)</p> <p>Economic impact</p>

Duurzaamheidspark Lith

Definition phase	Building block	Explanation	Indicator	Dimension
Motive and Context	Negatieve effecten conventionele zonnepanelen	Conventionele zonnepanelen houden licht, water en wind tegen. Komst van conventionele zonnepanelen gaat vaak ten koste van onderliggende flora en fauna.		
Dream	Juiste balans van behoud natuur en landbouw en opwekken zonne-energie	Verbeteren van de flora en fauna op zonnepaneelparken. Herstellen van de gepleegde rooibouw op grond door conventionele zonnepanelen. Ontwikkeling van zonnepanelen die zich op vele vlakken onderscheiden van conventionele zonnepanelen.	Landscape Landscape	Environmental impact (2)
Proposition	Lichtdoorlatende verrijd- en verschuifbare zonnepanelen	Ontwikkelen en verbeteren van hoogwaardige lichtdoorlatende verrijd- en verschuifbare zonnepanelen die de flora en fauna op het land verbeteren. Duurzaamheidsparken en bijvoorbeeld agrariërs kunnen dit op grote schaal gebruiken.	Landscape Economic growth	Environmental impact Economic impact
Design phase				
BM Architype	Community based BM	Community based BM: door dit initiatief ontstaat er een groep mensen dat op vele terreinen bijdraagt aan duurzaamheidsdoelstellingen.	Creation of communities Network	Social impact Co-creation
Stakeholders	Duurzaamheids-parken	Duurzaamheidspark Lith	Collaboration	Co-creation

	Hoger onderwijs Duurzaamheidsini- tiatieven	Universiteiten en scholen MyEarth Veel potentiële partners		
Strategy	Samenbrengen duurzaamheids- initiatieven Verbeteren flora en fauna	Community-building: samenbrengen van partijen ter verbetering product en prestaties. Eco-efficiëntie: Verbeteren van flora en fauna en klimaatimpact .	Creation of communities Landscape Soil Air	Social impact Environmen- tal impact (3)
Core activities	(Door)ontwikkelen zonnepanelen	Het (door)ontwikkelen van de verrijd- en verschuifbare zonnepanelen. Opschaling gebruik.	Profit	Economic impact
External test	Uniek ontwerp	Octrooi op de technische aspecten. Op veel terreinen uniek in de wereld.		
Result phase				
Impact	Verbetering lokale flora en fauna, CO2 impact, toegang schone en betaalbare energie, ontwikkelen	Verbeterde kwaliteit van de grond op lokaal niveau. Bijdragen aan CO2 impact op globaal niveau. Opwekking betaalbare en schone energie → sterke en duurzame lokale gemeenschap . Bijdragen aan het organiseren van klimaat neutrale gemeenschappen .	Soil Air Creation of communities Creation of communities	Environmen- tal impact (2) Social impact Social impact

	gemeenschap, biodiversiteit	Verbeterde biodiversiteit.	Landscape	Environmental impact
Value created	Samengaan natuur, landbouw & zonne-energie, maatschappelijke impact	<p>Samengaan van natuur, landbouw en zonne-energie.</p> <p>Bieden van data en voorzieningen voor test- en ontwikkelingsruimte voor universiteit, scholen en andere duurzaamheidsinitiatieven.</p> <p>Unieke en beschermde technieken → schaalbaar.</p> <p>Bijdrage aan de gemeenschap en in bredere zin maatschappij.</p>	<p>Network</p> <p><i>Research and education</i></p> <p>Network</p> <p>Profit</p> <p>Social change</p>	<p>Co-creation</p> <p>Social impact</p> <p>Co-creation</p> <p>Economic impact</p> <p>Social impact</p>

Euromeat Oss

Definition phase	Building block	Explanation	Indicator	Dimension
Motive and Context	Overschot aan duurzaam opgewekte zonne-energie	Dankzij de zonnepanelen op het dak van het pand is er een overschot aan duurzaam opgewekte zonne-energie.		
Dream	Creëren van een hub waar duurzaamheid centraal staat	Het creëren van een energie hub op het parkeerterrein waar werknemers en mensen uit de omgeving hun elektrische auto kunnen opladen. Een omgeving creëren waarin wordt gewerkt aan bewustwording van verduurzaming → workshops, verkoop van duurzaam vlees of -vervangers, duurzaam opwekken van energie etc.	Air Creation of communities	Environmental impact Social impact
Proposition	Overbodig opgewekte zonne-energie wordt aangeboden aan klanten, werknemers en overige particulieren	De overbodig opgewekte zonne-energie wordt aangeboden aan werknemers of particulieren op een energie hub zodat zij hun elektrische auto daar kunnen opladen. Op de hub zijn ook elektrische steps en fietsen aanwezig ter vervanging van het autovervoer.	Air Air	Environmental impact (2)
Design phase				
BM Architype	Community & Platform BM	Community based BM: een lokale energie hub draagt bij aan een duurzame community. Platform BM: overbodige energie wordt verdeeld.	Creation of communities Network	Social impact Co-creation

			Profit	Economic impact
Stakeholders	Euromeat Oss Klanten Werknemers Omwonenden	Euromeat Oss Medewerkers Klanten Omwonenden	Collaboration	Co-creation
Strategy	Benutten van overwaarde	Cascadering: overbodige energie wordt uitgewisseld met werknemers, klanten en andere particulieren. Community building: binnen een bepaalde groep wordt gewerkt aan verduurzaming.	Network Creation of communities	Co-creation Social impact
Core activities	Opwekken en opslaan zonne-energie Realiseren van een energie hub	Opwekken en opslaan van zonne-energie. Ontwikkeling van een energie hub. Stimuleren van duurzaamheid.	Air Creation of communities (2)	Environmental impact Social impact (2)
External test	Kosten/baten perspectief	Kan er voldoende resultaat geboekt worden → is er op dit moment in de omgeving voldoende vraag? Of gaan de kosten te veren te lang voor en boven de baten uit?		
Result phase				
Impact	Afname gebruik fossiele brandstoffen,	Minder gebruik fossiele brandstoffen.	Air	Environmental impact

	bewustwording, benutten overwaarde	Bewustwording van duurzaamheid. Benutten van overwaarde aan zonne-energie.	Social change Profit	Social impact Economic impact
Value created	Vergoeding zonne- energie, creëren duurzame community	Er wordt een vergoeding gevraagd voor gebruikte energie. Gebruikers van de energie hub worden gestimuleerd te winkelen bij Euromeat Oss (lijdt tot economisch voordeel), en breder: Euromeat Oss creëert een 'duurzame community'. Overwaarde wordt benut door vraag en aanbod van zonne-energie op elkaar aan te sluiten.	Profit Profit Creation of communities Profit	Economic impact (2) Social impact Economic impact

Fitnezzplaza

Definition phase	Building block	Explanation	Indicator	Dimension
Motive and Context	Hoge kosten zorg diabetespatiënten	Veel mensen hebben een ongezonde levensstijl met mogelijke gevolgen als diabetes of andere klachten. Diabetes is een grote kostenpost voor zorgverzekeraars door opnames in de eerste- en tweedelijns zorg.		
Dream	Zorgkosten voor de maatschappij terugdringen	De kosten voor zorgverzekeraars en de maatschappij verminderen door een lagere druk op eerste- en tweedelijns zorg . Deelnemers van het project zich beter laten voelen en hun kwaliteit van leven verbeteren . Afname opnames, medicijngebruik en -afval .	Contribution to public finances Social change Humanity Social change Soil	Economic impact Social impact Environmental impact Social impact Environmental impact
Proposition	Gezamenlijk programma voor beweging en voeding	Door middel van een afwisselend bewegings- en voedingsprogramma worden deelnemers onder professionele begeleiding fitter gemaakt .	Humanity	Environmental impact

	onder professionele begeleiding	Fittere samenleving leidt tot minder opnames zorg → lagere kosten maatschappij en minder medicijngebruik . Focus op achterstandswijken .	Contribution to public finances Soil Social capital	Economic impact Environmental impact Social impact
Design phase				
BM Architype	Community-based BM	Verschillende partijen komen samen om te werken aan het realiseren van een gezondere samenleving.	Network	Co-creation
Stakeholders	<i>BV (op te richten)</i> Zorgverzekeraars	<i>Nog op te richten BV</i> (Dhr. Mourad & Fitnezzplaza) Zorgverzekeraars Eventueel overheden, ziekenhuizen, particulieren		
Strategy	Community-building; gemeenschappelijk doel creëren	Creëren van een groep waarbinnen een gezonde levensstijl centraal staat.	Creation of communities Humanity	Social impact Environmental impact
Core activities	Ontwikkelen, stimuleren en ondersteunen	Ontwikkelen programma's Ondersteuning en begeleiding bij bewegen en voeding Stimuleren bewoners achterstandswijken	Social capital / inclusiveness	Social impact (2)

External test	Voorwaardelijk: voldaan	Voorwaarden voor resultaatfinanciering Ondersteunende data		
Result phase				
Impact	Minder eerste- en tweedelijns zorg, lagere kosten zorgverzekeraars en maatschappij, gezonde en betrokken samenleving	Minder ziektekosten door minder opnames eerste- en tweedelijnszorg. Lagere kosten voor zorgverzekeraars en maatschappij. Gezondere samenleving en grotere verbondenheid.	Contribution to public finances (2) Humanity Inclusiveness	Economic impact (2) Environmen- tal impact Social impact
Value created	Abonnementsgelden, financieringen, positieve bijdrage maatschappij	Abonnementen Financiering. Samenwerkingen met zorgverzekeraars. Bijdrage aan de maatschappij. Gezonde maatschappij leidt tot: Lagere ziektekosten Minder ziekteverzuim → minder arbeidskosten en betere arbeidsparticipatie	Profit Collaboration Contribution to public finances (3)	Economic impact Co-creation Economic impact (3)

KipCaravan

Definition phase	Building block	Explanation	Indicator	Dimension
Motive and Context	Toekomstgericht produceren	Externe vraag verbinding stad – land . Ondernemerswens om toekomstgericht te produceren (meerwaarde strategie ipv kostprijs- aanbod gedreven). Maatschappelijk vraagstuk tegengaan van (voedsel)verspilling en verlaging CO2 footprint . “An egg a day is ok”	Inclusiveness Animals/landscape Air	Social impact Environmental impact Environmental impact
Dream	Met echte scharrelkippen voedselverspilling tegengaan	Weer kippen gaan houden, zoals daar sprake van was op het ouderlijke gemengde bedrijf (fruitteelt – kippen), waar kippen vrij rondscharrelen onder (fruit)bomen. De kippen maken eieren en vlees, van voeding uit de natuur en restproducten (verloren fruit) en ‘ schoffelen ’ de grond (geen bestrijdingsmiddelen nodig). De agrarische sector positief op de kaart zetten .	Animals Landscape Soil Social capital	Environmental impact Environmental impact (2) Social impact
Proposition	Bouwen van Kip Caravans en verkoop van eieren in Eggdrive	Kleinschalige pluimveehouderij, korte keten , zichtbaar in natuurlijke omgeving .	Network Landscape	Co-creation

		Eieren met goede smaak (vers, natuurlijke voeding) en goede nasmaak (lagere CO2 footprint, 5-sterren welzijn en impuls voor mensen met een bijzondere arbeidskans). Verkoop van mannenvlees (benutten van de ‘leghaantjes’, mannelijke dieren)	Animals/landscape Air Animals Job creation and skill improvement	Environmental impact (5) Economic impact
Design phase				
BM Architype	Circulair	Type BM: Circulair businessmodel (verwaarden van reststromen). Secundair platform (benutten van locaties en talent).	Circularity Job creation and skill improvement Contribution to public finances	Environmental impact Economic impact (2)
Stakeholders	(Natuur)organisaties met locaties	Partijen met locaties (gemeenten, Defensie, Brabants landschap, hotels, bedrijven). Partijen met toeleiding ‘hulpboeren’ zorgcliënten (gemeenten, GGz, Prisma).	Collaboration Job creation and skill improvement	Co-creation Economic impact

Strategy	Rechtstreekse verkoop van eieren	Strategie: rechtstreekse verkoop via Eggdrive. KAAS: kip as a service . Abonnementsmodel voor partijen met locaties die eieren afnemen (verzorging dieren en voedselveiligheid).	Animals Economic growth	Environmental impact Economic impact
Core activities	Kippen naar het voerbrennen	Realisatie off grid mobiele kippenstal. Organisatie locaties en 'hulpboeren' . Ontwikkeling ' abonnementsmodel '. Exploitatie concept.	Network Economic growth	Co-creation Economic impact
External test	Concept voldoet aan wet- en regelgeving	Mobiele stallen bestaan al in Oostenrijk en Duitsland: concept Eggstra is een +variant. Concept voldoet aan wet – en regelgeving (beperkt door < 250 dieren).		
Result phase				
Impact	Beter dierenwelzijn, lagere CO2 footprint, tegengaan verspilling	Beter dierenwelzijn (natuurlijk gedrag, dieren leven langer), lagere CO2 footprint (minder import soja en palmolie nodig), meer biodiversiteit , persoonlijke groei zorgcliënten (zinnvolle dagbesteding en op termijn minder zorgvraag , minder € zorgkosten), integriteit voedsel/maatschappelijke waardering .	Animals Air Landscape Job creation and skill improvement	Environmental impact (3) Economic impact

		Mogelijke negatieve impact: diergezondheid en veiligheid. Mitigerend door enten van dieren, innovatief ophokstelsel en controles salmonella/dioxine conform reguliere sector.	Contribution to public finances Social change	Economic impact Social impact
Value created	Geld voor verkoop eieren, locaties in ruil voor onderhoud/biodiversiteit en arbeid in ruil voor dagbesteding	<p>Geld (in ruil voor verkoop van eieren en vlees).</p> <p>Locaties (standplaatsen en scharrelgebieden in ruil voor onderhoud omgeving – biologische onkruidbestrijding).</p> <p>Arbeid (coaching zorgcliënten en vorm van dagbesteding in ruil voor rapen, sorteren en verpakken van eieren).</p> <p>Geld (op termijn, na bewezen trackrecord, in ruil voor persoonlijke groei zorgcliënten met als resultaat doorstroming naar functie of opleiding).</p>	<p>Profit</p> <p>Collaboration</p> <p>Economic growth</p> <p>Job creation and skill improvement</p> <p>Profit</p> <p>Citizenship</p>	<p>Economic impact</p> <p>Co-creation</p> <p>Economic impact</p> <p>Economic impact</p> <p>Economic impact</p> <p>Social impact</p>

Kusters Metaalbewerking

Definition phase	Building block	Explanation	Indicator	Dimension
Motive and Context	Nauwe en precieze temperatuurregeling Hoog energieverbruik	Temperatuur binnen pand lastig te regelen, maar van groot belang. Hoog energieverbruik.		
Dream	Duurzame oplossing voor temperatuurregeling in pand	Zuinig en duurzaam energiesysteem waarbinnen de temperatuur met grote precisie geregeld kan worden. Mogelijkheid om overbodig opgewekte energie te verkopen, of elders (zelf) te gebruiken.	Investments Collaboration	Economic impact Co-creation
Proposition	Door zonnepanelen aangedreven systeem waarmee temperatuur nauwkeurig wordt bepaald	Door zonnepanelen gedreven zuinig energiesysteem waarmee de temperatuur in het pand op tienden nauwkeurig geregeld wordt. Verkoop van overbodige energie.	Air Profit	Environmental impact Economic impact
Design phase				
BM Architype	Duurzaam BM	Duurzaam BM: tamelijk conventioneel BM (verbetering prestaties), maar gericht op duurzamer energieverbruik .	Air	Environmental impact
Stakeholders	Vooralsnog geen partners	Kusters Bij overwaarde ligt er een mogelijkheid partners te betrekken	Collaboration	Co-creation

Strategy	Duurzaam opgewekte zonne-energie	Eco-efficiëntie: gebruik van duurzaam opgewekte zonne-energie .	Air	Environmental impact
Core activities	Opwekken en opslaan energie Systeemontwikkeling	Opwekken en opslaan zonne-energie. Verbeteren temperatuur regelingssysteem. Mogelijkheid tot soort platform.	Network	Co-creation
External test	Mogelijkheid om binnen netwerk te opereren	Mogelijkheid om binnen een netwerk samen te werken.	Collaboration	Co-creation
Result phase				
Impact	Duurzame energie	Duurzaam opgewekte zonne-energie.	Air	Environmental impact
Value created	Kostenbesparing, bijdrage duurzaamheid	Economisch voordeel → kostenbesparing. Bijdrage duurzaamheid → zonne-energie.	<i>Cost reduction</i> Air	Economic impact Environmental impact

Peppel

Definition phase	Building block	Explanation	Indicator	Dimension
Motive and Context	Genegeerde bruikbaarheid en potentieel van de populier	Populierenhout wordt in de laatste decennia heel weinig gebruik en wordt mede daardoor (bijna) niet meer geplant. Populierenhout heeft een groot potentieel voor wat betreft design, duurzaamheid en cultuurlandschap.		
Dream	Terugbrengen van de populariteit van populierenhout	De populariteit van populierenhout weer terugbrengen, zodat het hout meer en beter gebruikt kan worden en er veel nieuwe bomen worden terug geplant. Populierenhout gebruiken in plaats van andere (geïmporteerde) houtsoorten.	Social change Landscape Air/soil/land-scape	Social impact Environmental impact Environmental impact (3)
Proposition	Verkoop producten gemaakt van populierenhout	Inkoop populierenhout en verkopen als gevels, shingles, wanden, plafonds en vloeren. Nauwe, vele en duurzame samenwerkingen. Voor elke gekapte populier en nieuwe jonge boom terug planten.	Collaboration Landscape	Co-creation Environmental impact
Design phase				
BM Architype	Community & Platform BM	Community: door middel van samenwerkingen het potentieel van de populier benutten.	Network	Co-creation

		Platform: volledig benutten van de capaciteit	Economic growth	Economic impact
Stakeholders	Peppel Kwekers Transporteurs Houtzagerijen Houtbewerkers	Peppel Kwekers (particulieren, natuurbeheerder, overheden) Transport Houtzagerijen Duurzaamheidsinitiatieven (bewerking hout)	Collaboration	Co-creation
Strategy	Optimaal benutten krachten ketenpartners	Cascadering: meerdere partijen in de keten betrekken in het BM. Peppel bundelt de krachten van alle partners in de uiteindelijk verkoop van het product.	Network	Co-creation
Core activities	Faciliteren inkoop, transport en bewerking Verkoop producten	Faciliteren van de inkoop, het transport en de bewerking van het populierenhout. Verkoop van de producten	Network Profit	Co-creation Economic impact
External test	Sterke, maar afhankelijke positie	Grote afhankelijkheid partners → risico's		
Result phase				
Impact	Behoud cultuurlandschap, biodiversiteit, minder transport, lagere CO2	Verbeterde biodiversiteit → populier terug in het straatbeeld. Populier als vervanging van geïmporteerde houtsoorten → minder transport, lagere CO2 uitstoot. Behoud van cultuurlandschap.	Landscape Air	Environmental impact (2)

	uitstoot, stimuleren lokale economie	Verbetering en ondersteuning lokale economie.	<i>Cultural history Economic growth</i>	Social impact Economic impact
Value created	Verkoop producten, meervoudige duurzame waarde creatie gehele keten, verbeterde lokale economie, maatschappelijke impact	Verkoop van producten van populierenhout. Nauwe samenwerking binnen de gehele keten → meervoudige waarde creatie met op duurzaamheid georiënteerde partners. Peppel draagt bij aan de lokale economie door haar samenwerkingen. Cultuurlandschap wordt behouden.	Profit Network Economic growth <i>Cultural history</i>	Economic impact Co-creation Economic impact Social impact

Pitlatrine

Definition phase	Building block	Explanation	Indicator	Dimension
Motive and Context	Watersverspilling Gebrek aan sanitaire voorzieningen	Op veel plekken in de wereld is er een tekort aan sanitaire voorzieningen en schoon (drink)water.		
Dream	Wereldwijd aanbieden van schoon (drink)water en sanitaire voorzieningen	Op wereldwijze schaal uitzetten van projecten waarin de producten van Pitlatrine zorgen voor goede sanitaire voorzieningen en schoon (drink)water. Samenwerkingen met NGO's Integreren van de ideeën en technologieën in een veelvoud aan plekken; derdewereldlanden, festivals, hotels etc.	Humanity Water Collaboration Social change	Environmental impact (2) Co-creation Social impact
Proposition	Volledig circulair bouwpakket voor douche, toilet en urinoir	Een volledig circulair bouwpakket dat bestaat uit flexibele sanitairpanelen. Hier kan een douche, toilet en urinoir van worden samengesteld. Hergebruik van al het water dat wordt gebruikt in de sanitaire voorziening.	Circularity Water	Environmental impact Environmental impact
Design phase				
BM Architype	Circulair BM	Circulair BM: al het water dat wordt gebruikt wordt hergebruikt.	Water	Environmental impact
Stakeholders	Pitlatrine	Circular-E	Collaboration	Co-creation

	NGO's	Pitlatrine NGO's		
Strategy	Hergebruik water Verbeterde wereld	Eco-efficiëntie: al het water dat wordt gebruikt, wordt hergebruikt. Bijdrage aan het verbeteren van leefomstandigheden in derdewereldlanden.	Water Humanity	Environmental impact Environmental impact
Core activities	Verbetering, ontwikkeling en opschalen producten	Ontwikkeling/verbetering producten Opschalen verkoop producten	Profit	Economic impact
External test	Wereldwijd uniek product	Uniek product		
Result phase				
Impact	Minder waterverspilling, verbeterde leefomstandigheden	Minder waterverspilling. Verbeterde leefomstandigheden in derdewereldlanden	Water Humanity	Environmental impact (2)
Value created	Toegang tot schoon (drink)water, betaalbare en duurzame ontwikkelingen	Gebruikt water komt via verschillende wegen terecht bij partijen die het nodig hebben. Betaalbare en duurzame oplossing voor sanitaire problemen en waterverspilling.	Water Social change	Environmental impact Social impact

SCAB Accountants

Definition phase	Building block	Explanation	Indicator	Dimension
Motive and Context	Tekort aan circulaire initiatieven	Tekort aan door circulariteit gedreven initiatieven in de bouwsector.		
Dream	Meer circulaire business modellen en initiatieven in de bouwsector	Bouwondernemers adviseren en ondersteunen in het opzetten van circulaire business modellen. Het realiseren van het een platform waar bouwondernemers onderling materialen kunnen uitlenen ter compensatie.	Circularity Network Economic growth	Environmental impact Co-creation Economic impact
Proposition	Dienstverlening op het gebied van advies en ondersteuning circulaire initiatieven	Als dienstverlener en met gebruikmaking van het Business Model Template adviseren en ondersteunen in het opstellen van circulaire business modellen in de bouwsector. Platform uitwisseling materialen te stimuleren en faciliteren	Circularity Network	Environmental impact Co-creation
Design phase				
BM Architype	Community & Platform BM	Platform BM: SCAB zal gaan fungeren als dienstverlener. Community: stimuleren van circulariteit bij bouwondernemers		
Stakeholders	SCAB Accountants Bouwondernemers	SCAB Accountants Lokale bouwondernemers	Collaboration	Co-creation

Strategy	Bewustwording circulariteit bouwsector	Community building : stimuleren, adviseren en ondersteunen van circulaire business modellen. Cascadering: benutten van stilstaande machines en gereedschap	Creation of community Circularity	Social impact Environmental impact
Core activities	Stimuleren, adviseren en ondersteunen	Advies en ondersteuning bouwondernemers Bij elkaar brengen van verschillende initiatieven via het netwerk.	Network	Co-creation
External test	Controle onvoorziene omstandigheden	Reeds voldoende kennis van het BM(T)? Goede controle op eventueel onvoorziene impact → kan in de bouwsector groot zijn		
Result phase				
Impact	Meer circulariteit, minder gebruik grondstoffen	Meer circulariteit → minder grondstoffen, beter hergebruik, meer recyclen etc. Benutten van overwaarde → levensduurverlening	Circularity Circularity	Environmental impact Environmental impact
Value created	Vergoeding, betere benutting grondstoffen, bewustwording bij ondernemers	Vergoeding voor advies Betere benutting grondstoffen in de bouwsector → minder kosten, hogere duurzaamheidsimpact Uitwisseling van waarde machines en gereedschap Vergoedingen voor uitwisseling	Profit <i>Cost reduction</i> Circularity Economic growth	Economic impact (2) Environmental impact Economic impact

Spectro (Recycle Factory)

Definition phase	Building block	Explanation	Indicator	Dimension
Motive and Context	Gebrek aan hergebruiken en recyclen schoonmaakmiddelen en -verpakkingen	In de schoonmaakindustrie wordt op grote schaal gebruik gemaakt van kunststof flessen. De kunststof flessen worden te weinig hergebruikt en/of gerecycled, terwijl het een enorm mooi en belangrijk materiaal is, mits goed gebruikt.		
Dream	Op grote schaal hergebruiken en recyclen kunststof schoonmaakmaterialen	Gebruikte kunststof flessen van schoonmaakproducten inzamelen om waar mogelijk te hergebruiken en anders te recyclen.	Circularity	Environmental impact
Proposition	Klanten leveren kunststof flessen in en deze worden hergebruikt waar mogelijk, anders gerecycled	Kunststof flessen worden ingeleverd, gesorteerd en vervolgens worden de labels verwijderd. Flessen die nog bruikbaar zijn, worden hergebruikt. Overige flessen gaan door speciale shredders en worden tot korrel vermalen. Hier worden nieuwe flessen van gemaakt.	Circularity	Environmental impact
Design phase				
BM Architype	Circulair BM	Circulair BM: focus ligt op het hergebruiken en recyclen van kunststof schoonmaakflessen.	Circularity	Environmental impact

Stakeholders	Spectro Klanten Samenwerkingen	Spectro: Recycle Factory Klanten (distributeurs en professionele gebruikers) Overige partners in de keten (voornamelijk leveranciers)	Collaboration	Co-creation
Strategy	Levensduurverlenging kunststof	Levensduurverlenging: de gebruiksdur van kunststof wordt verlengd.	Circularity	Environmental impact
Core activities	Inzamelen, schoonmaken, hergebruiken en recyclen kunststof flessen	Het verzamelen van de kunststofflessen. Het schoonmaken van de flessen. Hergebruiken van bruikbare flessen. Recyclen van overige flessen.	Circularity	Environmental impact
External test	Concurrentie Gevolgen Coronacrisis	Koploperspositie. Unilever koopt ook grootschalig recyclebaar plastic in. Coronacrisis leidt tot te-kort materialen/verpakkingen → meer vraag.		
Result phase				
Impact	Minder zwerfafval, lager gebruik ruwe grondstoffen, lagere CO2 uitstoot	Positief: Minder gebruik van kunststof → minder ruwe grondstoffen, minder zwerfafval op land en in zee. Minder transport → lagere kosten en minder CO2 uitstoot. (Mogelijk) negatief: Hoge kosten (arbeid, andere wijze transport, schoonmaak)	Soil/water Air	Environmental impact (2) Environmental impact

Value created	Bijdrage duurzaamheid gehele keten, gezamenlijke waarde creatie, maatschappelijke bijdrage	<p>Spectro werkt samen binnen de hele keten om circulariteit van verpakkingen te vergroten (levensduurverlenging).</p> <p>Leveren van duurzame materialen binnen de keten.</p> <p>Duurzame bedrijfsvoering → unieke marktpositie</p> <p>Maatschappelijke impact → minder ruwe grondstoffen, lagere CO2 uitstoot.</p>	<p>Network Circularity</p> <p>Network Economic growth Social change</p>	<p>Co-creation Environmental impact</p> <p>Co-creation Economic impact Social impact</p>
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Van der Kaa (Podiatry)

Definition phase	Building block	Explanation	Indicator	Dimension
Motive and Context	Verspillend restafval schoenzolen	Bij het maken van hoogwaardige orthopedische zooltjes ontstaat bij Podotherapie van der Kaa veel snijafval, wat in het restafval terecht komt en dus verbrand wordt.		
Dream	Hergebruiken van schoenzolen	Een grotere positieve bijdrage leveren aan de maatschappij , door het snijafval van zolen te hergebruiken . Het snijafval wordt geen restafval, maar wordt gebruikt door producenten van ander schoeisel , bijvoorbeeld binnenzolen van sneakers.	Social change Circularity Collaboration	Social impact Environmental impact Co-creation
Proposition	Grootschalige inzameling snijafval	Grootschalige inzameling van snijafval (en oude therapeutische zolen) gemaakt van thermoplastics, welke kunnen dienen als grondstof voor de vervaardiging van zolen voor sneakers .	Circularity	Environmental impact
Design phase				
BM Architype	Circulair	Verwaarden van reststromen , snijafval krijg een nieuwe bestemming.	Circularity	Environmental impact
Stakeholders	Van der Kaa Puzzo	Van der Kaa Puzzo Podotherapeuten (franchise vd Kaa)	Collaboration	Co-creation

	Inzamelaar en verwerker	Inzamelaar en verwerker (start up)		
Strategy	Nauwe samenwerking met verschillende partijen	<p>Betrekken kennis Puzzo.</p> <p>Reststromen verwaarden tot grondstof voor nieuwe producten.</p> <p>Waarde gedreven alliantie aangaan met sneakerproducent.</p>	<p>Network</p> <p>Circularity</p> <p>Network</p>	<p>Co-creation</p> <p>Environmental impact</p> <p>Co-creation</p>
Core activities	Inzamelen snijafval Vermarkten grondstoffen	<p>Inzamelen snijafval, stof en afgedankte zolen.</p> <p>Vermarkten van grondstof en/of produceren van zolen.</p>	<p>Circularity</p> <p>Profit</p>	<p>Environmental impact</p> <p>Economic impact</p>
External test	Producteisen	<p>Check eigenschappen thermoplasten bij hergebruik versus gebruikseisen zolen</p> <p>Wettelijke normen inzameling, of eigenaar blijven?</p>		
Result phase				
Impact	Minder ruwe grondstoffen, minder afval, bewustwording	<p>Materialen die voorheen als afval verbrand werd, krijgt nu een verlengde levensduur.</p> <p>Vergroten van MVO-bewustzijn onder 400 aangesloten bedrijven in de Benelux.</p> <p>Negatief > hoog energiegebruik voor inzameling (logistiek) en verwerking product tot grondstof.</p>	<p>Circularity</p> <p>Creation of communities/ social change</p>	<p>Environmental impact</p> <p>Social impact (2)</p>

Value created	Kostenverlaging/- besparing, verkoop grondstoffen, duurzaamheidsbewuste ondernemers, maatschappelijke impact	Kostenverlaging voor afvoer en verwerking van het snij-/restafval Verkoop van de grondstof aan producenten Producent schoenen kan kwalitatief betere zooltjes leveren (upgrade product) Inzamelpunten voor schoenen waar deze ‘nieuwe’ grondstof gebruikt is, zodat het wederom gerecycled kan worden (3 ^e leven)	<i>Cost reduction</i> Profit Job creation and skill improvement	Economic impact (2) Economic impact
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