RSM Erasmus | Rotterdam School of Management Erasmus University

# BMMTGBS Master Thesis

***How can multi-stakeholder partnerships for landscape restoration leverage the business model elements of their projects to scale environmental, social, and financial impacts?***

*A case study of the Bioregional Weaving lab collective*


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# Preface

*"And just as the value of the 'Sunflowers' - Vincent van Gogh's famous painting - is not determined by the sum of the paint and canvas, neither can we determine the value of a forest merely by calculating the value of the amount of wood in the forest" (Interview #44).*

I dedicate this work to my grandfather Aurel. Although I knew him far too little, he shaped the wonderful environment in which I grew up and which is the source of my imagination and inspiration.

## Acknowledgement

The creation and completion of this thesis deserve sincere thanks to all involved in and around the process. A special thanks go to my coach Daan, who was a brilliant supervisor and a great source of inspiration; my Co-reader Pietro, who provided fresh thoughts and sharp recommendations; and Karin Müller, who dedicated a lot of time and effort to facilitate my research and co-read the thesis. This includes the BWL team, who assisted the research project, provided information, and always had an open ear and all interviewees with whom I had very open and inspiring conversations. I also want to sincerely thank my cohort of fellow students, who motivated me to keep going, offered an open ear whenever needed, and inspired me throughout the process. This, of course, includes all students that are part of the thesis research team. I also want to thank all people involved in the GBS Master program - directors, coordinators, professors, teaching assistants, and tutors – for facilitating this excellent master's and shaping a time I will never forget. Ultimately, the warmest thank goes to my parents for their love and efforts that made possible my whole journey up to this point and my siblings for challenging and inspiring me.

## Copyright

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## List of abbreviations

| | | |
|---|---|---|
| **BM** | - | Business Model |
| **BMfS** | - | Business model for sustainability |
| **BMI** | - | Business model innovation |
| **BWL** | - | Bioregional weaving lab |
| **e.g.** | - | latin ‘exempli gratia’, for example |
| **ES** | - | Ecosystem services |
| **EU** | - | European Union |
| **FLR** | - | Forest and landscape restoration |
| **GC** | - | Grand challenges |
| **i.e.** | - | latin ‘id est’, that is |
| **IUCN** | - | The International Union for Conservation of Nature |
| **NBS** | - | Nature-based solution |
| **RQ** | - | Research question |
| **SBM** | - | Sustainable business model |
| **SBMI** | - | Sustainable business model innovation |
| **SE** | - | Social enterprise |
| **SES** | - | Socio-ecological system |
| **SQ** | - | Sub-question |
| **TA** | - | Thematic analysis |
| **USP** | - | Unique selling point |

# Glossary

| Term | Definition |
|---|---|
| Bioregional weaving lab (BWL) | A geographically grounded multi-stakeholder partnership process that weaves together people and solutions, equipping and helping them to organise for transformative change (Ashoka, 2022, p. 11). |
| Bioregion | A bioregion is "a specific geographic area that is distinct from others by the characteristics of its natural environment" (Müller et al. 2022, 94).<br><br>A bioregion offers a relevant business case for communities, farmers, investors, and corporations. It has the potential to leverage specific liabilities in the region - like drought, fire, and flooding risk - with NBS that can be managed and monitored by local communities and financed through risk mitigation, on a bioregional landscape scale (Ashoka, n.d.). |
| Business model | A business model articulates the logic and provides data and other evidence that demonstrates how a business creates and delivers value to customers. It also outlines the architecture of revenues, costs, and profits associated with the business enterprise delivering that value. In essence, a business model is a conceptual, rather than financial, model of a business (Teece, 2010, p. 173). |
| Business model innovation | Business model innovation (BMI) reflects an organisation's ability to promote innovation while simultaneously leveraging internal capabilities. In this way, BMI serves to achieve organisational sustainability and resilience (Carayannis et al., 2014). |
| Dynamic capabilities | Dynamic capabilities refer to a firm's ability to integrate, create, and reconfigure internal competences to address changes in the business environment (Teece, 2007). For instance, dynamic capabilities constitute elements such as clear and regular communication, long-term strategic planning, partnerships and stakeholder engagement, leadership behaviour, and shared culture (Teece et al., 1997). |
| Holistic management | Holistic Management is a value-based, adaptive management, decision-making framework that integrates all aspects of planning for social, economic, and environmental considerations (Holistic Management International, n.d.). |
| Landscape restoration | A process that aims to regain ecological integrity and enhance human wellbeing in a deforested or degraded forest landscape (Maginnis & Jackson, 2012, as cited in Seddon et al., 2021, p. 1520) |
| Nature-based solution | Actions to protect, sustainably manage, and restore natural or modified ecosystems, that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits (Cohen-Shacham et al., 2016, p. 4). |
| Scaling | Increasing the impact [...] [of an approach] to better match the magnitude of the social need or problem it seeks to address (Dees et al., 2008, as cited in Heinecke & Mayer, 2012, p. 192). |
| Scaling Up | Scaling up is a process through which social entrepreneurs maximize their social impact by giving access to their products and services to a wider base of beneficiaries (Dees et al. 2004, p. 660). |
| Social enterprise | Social enterprises (SEs) are organisations that primarily aim to solve pressing social/environmental problems (e.g., homelessness, youth unemployment, and carbon emissions) while engaging in commercial activities (either partially or fully) to support their operations (Doherty et al., 2014, as cited in Islam, 2022, p. 299) |

| | |
|---|---|
| Social entrepreneurship | Social entrepreneurship is the action of a social entrepreneur with a social mission that recognizes a social problem and addresses it by means of social innovation and in terms of creating social impact and social value by benefiting both the business (sustainability) and society (scalability) (Hadad & Găucă, 2014). |
| Social impact | Any of the great variety of changes in physiological states and subjective feelings, motives and emotions, cognitions and beliefs, values, and behaviour, that occur in an individual, human or animal, as a result of the real, implied, or imagined presence or actions of other individuals (Latané, 1981). |
| Social innovation | Social innovation describes the process through which answers are given to social needs that will lead to better results for the entire society (Carayannis et al., 2019, p.236) |
| Socio-ecological system | A combined system formed by complex interaction between the biosphere and the society nested within it (Robèrt et al. 2019, 193, as cited in Hussain et al., 2022, p. 14). |
| Sustainable business model | Business models that incorporate proactive multi-stakeholder management, the creation of monetary and non-monetary value for a broad range of stakeholders and hold a long-term perspective (Geissdoerfer et al., 2018, p. 409). |
| Systemic innovation | A set of interconnected innovations, where each is dependent on the other, with innovation both in the parts of the system and in the ways that they interact (Davies et al., 2012, p. 4). |
| Theory U | A change management model focussed on social innovation and inner leadership capacities. It uses a U-shape process of co- initiating, co-sensing, co-evolving, co-creating and presencing to create awareness-based systems change (Scharmer, 2009). |
| Weaving | The practice of interconnecting people, projects, and places to each other and to a shared purpose, fostering collaborations for systemic impact, facilitating collective learning, and embodying the change we wish to see (Müller et al., 2022, p. 6). |

# Executive Summary

**Introduction**

The global community is increasingly facing grand challenges (GCs) caused by climate change, such as biodiversity loss and soil degradation. As a result, developing innovative solutions to address these issues has become a priority on national and international agendas. At the same time, the scientific discourse has stressed the urgency of shifting the global economy towards a sustainable and regenerative economy aligned with terrestrial capacities. This includes calls for a new economic paradigm that shifts away from short-term profit maximisation toward a long-term perspective on value creation that incorporates all three dimensions of sustainability. In this regard, new business models (BMs) must be developed to deliver ecological, social, and economic value effectively.

Because of their ability to simultaneously address GCs and generate social and environmental benefits, scholars and practitioners increasingly acknowledge the potential of nature-based solutions (NBS). The concept of NBS defines "actions to protect, sustainably manage, and restore natural or modified ecosystems, that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits" (Cohen-Shacham et al., 2016, p. 4). NBS aim to provide solutions that help people and the planet thrive together, draw on the strength of local ecosystems, and place community engagement at their heart.

However, due to multifaceted barriers, NBS are yet to exploit their full potential. For instance, the literature on NBS lacks knowledge of barriers, enablers, and mechanisms and conditions for scaling NBS. In addition, researchers have typically investigated single facets of the scaling process in isolation instead of exploring the interconnectedness and interrelations of elements across different stages. As a consequence, there is a lack of comprehensive strategies for overcoming barriers and scaling the impacts of NBS. This also applies to an operational framework for NBS that can be implemented in different landscapes. From an organisational perspective, developing business models for NBS must consider varying local contexts, diverse stakeholder groups, and corresponding heterogeneous demands. This development is further complicated because the traditional BM literature has typically focused on models for commercial value creation. Corresponding models are limited because they do not entirely grasp the complexity of environmental and social value creation and multivocal relationships between the organisation and its external environment. Although this has given rise to the literature on sustainable business models (SBMs), this domain is yet to mature as a scientific discipline. Consequently, SBM archetypes are yet to be developed for widespread application across sectors and industries. This is particularly difficult for niche segments and relatively young domains such as NBS for landscape restoration.

**Methodology and results**

To address these knowledge gaps, the present study conducts a case study of NBS for landscape restoration. This thesis is part of a research project between the Rotterdam School of Management (RSM) and the Bioregional Weaving Lab collective (BWL) for scaling systemic innovations. The BWL consists of an NBS practitioner team that trains and equips key local stakeholders in ten selected regions with regenerative and collaborative leadership skills for integrated land- and seascape management. Drawing on a systemic approach, BWL practitioners strive to create holistic solutions to pressing challenges.

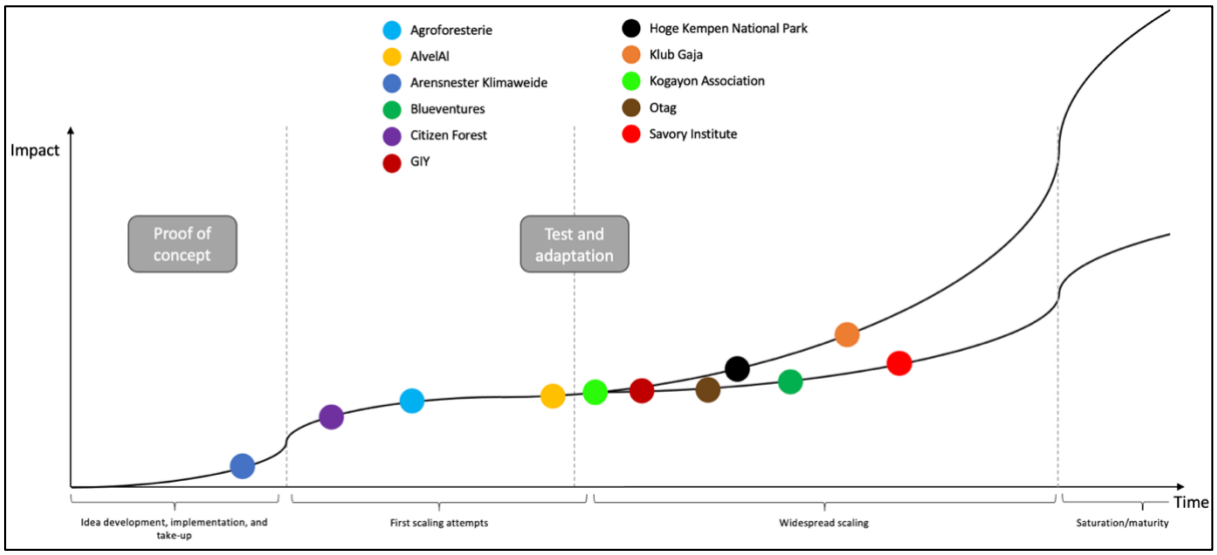
This thesis aims to identify elements in the underlying BMs of BWL organisations for landscape restoration that are conducive to scaling. Identifying these elements, as well as interconnections and interrelationships among them, reveals processes and mechanisms that facilitate the scaling process. From these processes and mechanisms, strategies can then be derived to leverage BM elements for scaling impacts. To this end, the following research question (RQ) and sub-questions (SQ) have been formulated:

> **RQ:** *How can multi-stakeholder partnerships for landscape restoration leverage the business model elements of their projects to scale environmental, social, and financial impacts?*
>
> - SQ1: *What business model elements are presented in the literature?*
> - SQ2: *Which elements in the underlying business models of the NBS are perceived as beneficial to scaling environmental, social, and financial impacts?*
> - SQ3: *Which specific processes and strategies are pursued to scale the impacts of BWL landscape restoration projects?*

To obtain data to answer these questions, the case study examines eleven organisations implementing NBS for landscape restoration within the BWL collective. These organisations vary, amongst others, in their focus, organisational structures, distinct features, the scale of outreach, and scaling progress. Comparing these organisations reveals elements and processes that are conducive to scaling, which can be sought for and leveraged to scale impacts.


*The methodological approach*

The methodological approach is structured as follows. Through semi-structured interviews, crucial BM elements, as well as needs, processes, and strategies for scaling are identified. This qualitative data is derived through thematic analysis. The BM elements are then used to model the organisations by applying the sustainable business model canvas (section 3.2.3.). In addition, the sample organisations are mapped on the social lifecycle model (section 4.2.), which establishes a link between conducive elements and the different stages of the scaling process. A corresponding list of conducive elements concerning the different lifecycle stages is summarised in a table (section 4.2.1.).

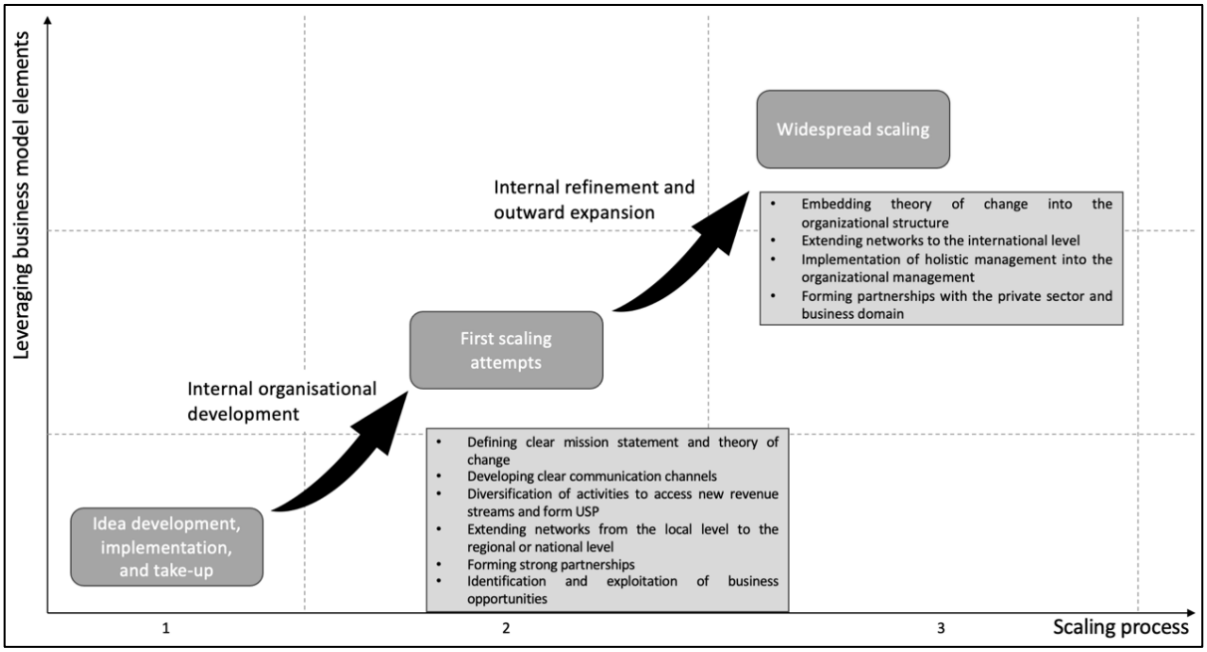



*Sample organisations in the social enterprise lifecycle model*

| Stages in the social enterprise lifecycle model | Stage 1: *Idea development, implementation, and take up* | Stage 2: *First scaling attempts* | Stage 3: *Widespread scaling* |
|---|---|---|---|
| Conducive business model elements | Communication channels and links to external stakeholders | Distribution channels | Competitive strategy |
| | Financial pillar and revenue streams | Financial pillar and revenue streams | Dynamic capabilities |
| | Network | Key activities and value proposition | Financial pillar and revenue streams |
| | | Networks | Links to external stakeholders |
| | | Partnerships | Management of exchange and interaction |
| | | Resources and capabilities | Networks |
| | | | Partnerships |

*Table with conducive business model elements concerning the different stages of the scaling process*

The interrelations between the conducive elements across stages reveal processes that lead from one stage to another (section 4.2.2.). From these processes, two scaling mechanisms are derived that facilitate the transition from the first to the second and subsequently from the second to the third stage. Both the scaling mechanisms and the subordinate processes are consolidated into the stage model for scaling NBS, which expresses the interconnectedness between the organisational model and the scaling process. Considering the study sample, ten concrete strategies are suggested (section 4.3.).




*The stage model for scaling NBS*

**Discussion and conclusion**

The findings contribute to both literature and practice in various ways. First, considering theoretical contributions, linking concrete BM elements to the scaling process sheds light on the role of the BM in scaling social impacts. This link represents a novel contribution both to the field of NBS and the sub-domain of landscape restoration. The presented set of conducive elements (section 4.2.) supports the development of new SBMs that tackle GCs while delivering sustainable impacts, particularly models for NBS that are conducive to scaling. Second, the findings reveal mechanisms that facilitate the scaling process. The resulting stage model (section 4.2.2.) represents another novel contribution to the field of NBS for landscape restoration but also for the wider domains of NBS and social entrepreneurship. Third, applying the social enterprise lifecycle model creates a holistic picture of the scaling process and unfolds interrelations between elements and processes of the scaling process. From a practitioner's perspective, the contribution is four-fold. First, the identified set of conducive elements provides a toolbox for entrepreneurs interested in business model innovation or scaling impacts. Second, the two identified scaling mechanisms serve entrepreneurs as a blueprint to evaluate the consistency between the organisational layers of their enterprises. In addition, entrepreneurs who want to communicate their organisation to external stakeholders (e.g., to attract investors) can use the lifecycle model and the stage model for scaling NBS to map their organisations. Funders can also use these models to compare potential investments or evaluate their investment portfolio. Third, the ten proposed strategies provide guidance to landscape restoration practitioners seeking to scale their impacts and to multi-stakeholder collaborations (e.g., cross-sector partnerships) aiming at strengthening their networks and facilitating innovation. Finally, the identified BM elements and strategies support the development of an NBS framework that can be applied across landscapes.

# 1. Introduction

Over the last decade, the global community has experienced a rise in global temperatures and increasing environmental catastrophes due to climate change. Poor management of land- and seascapes are causing land degradation, leading to unhealthy soils, loss of habitats for species, over-fishing, and polluted waters (Ashoka, 2022). Given these threats, governments, NGOs, businesses, and citizens around the globe are increasingly calling for action. Because of their complexity, uncertainty, and evaluability, scholars have labelled climate change's underlying root causes and threats as grand challenges (GC) (Ferraro et al., 2015; Lazarus, 2008; Rittel & Webber, 1973). The articulation of goals and the development of resolutions to this GC require coordinated action from multiple and diverse actors, locally and globally (George et al., 2016).

Moreover, possible resolutions to climate change call for novel and unconventional approaches with significant implications and unknown outcomes (Eisenhardt et al., 2016). To date, the calls for climate action have been partly translated into international policies such as the Paris Agreement to limit global warming (United Nations, 2015) or the Green Deal of the European Union (EU) to transition the European economy (European Commission, 2019). To pursue this track, international organisations and national governments are introducing comprehensive programs and measures to translate those policies into action. The already significant consequences of climate change (e.g., increasing floods and forest fires) indicate that sensitive thresholds in the global ecosystems have been surpassed (Steffen et al., 2015). Considering these developments and the short timespans of climate targets, the global community can only diminish the negative consequences of human-induced behaviour on the environment, society, and the economy (Herring & Lindsay, 2022). To this end, the scientific discourse has stressed the urgency of shifting the global economy away from its current dependency on fossil fuels and corresponding carbon emissions towards a sustainable and regenerative economy that is based on renewable energy sources and aligned with the terrestrial capacities (Ioan et al., 2021; Leventon et al., 2021; Rockström et al., 2009). Furthermore, researchers and practitioners are calling for a new economic paradigm that shifts away from short-term oriented profit maximisation toward a long-term perspective on value creation that incorporates all three dimensions of sustainability (Ashoka, 2022; Commonland, 2020; Gladwin et al., 1995; Hofstetter, 2020; Lewandowski, 2016). According to Bocken et al. (2016), this transition from a linear toward a more sustainable economy sparks multiple challenges to business. To succeed in this economic transition, not only financial investments need to be guided toward sustainability-oriented sectors and industries (Broom, 2022; Hofstetter, 2020), but also need new business models (BM) to be developed that can concurrently address challenges and deliver ecological, social, and economic value (Evans et al., 2017; Geissdoerfer et al., 2018; Lemus-Aguilar et al., 2019; Shakeel et al., 2020). In this context, scholars have outlined the role of sustainable business models (SBM) (Dentoni et al., 2021).

Because of their potential to simultaneously strengthen local and global ecosystems and deliver sustainable returns, nature-based solutions (NBS) are increasingly acknowledged as novel approaches to address societal challenges (International Union for Conservation of Nature, 2020; Seddon et al., 2020). The International Union for Conservation of Nature (IUCN) defines NBS as "actions to protect, sustainably manage, and restore natural or modified ecosystems, that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits" (Cohen-Shacham et al., 2016, p. 4). The concept of NBS denotes actions shaped by nature and providing solutions to help people and the planet thrive together (Müller et al., 2022; Seddon et al., 2021). In this way, NBS strengthen the local community, local networks, partnerships, and collaborations while simultaneously benefitting a wide range of stakeholders (Ashoka, 2022; Commonland, 2020; Ferreira et al., 2020; Gutierrez et al., 2023; Ioan et al., 2021; IUCN, 2020). Through locally adapted, resource-efficient, and systemic interventions, implementing NBS fosters biodiversity and natural processes in landscapes, seascapes, and cities (Lafortezza et al., 2018). Because of their social and environmental impacts, NBS can be categorised into the domain of social entrepreneurship and have brought forward the term "nature-based enterprise" (McQuaid et al., 2021, p. 1).

However, scholars and scientists have pointed out that NBS are yet to exploit their full potential due to multifaceted barriers (Ershad Sarabi et al., 2019; Håkanson, 2021; Kabisch et al., 2016; Kooijman et al., 2021). The literature on NBS lacks knowledge of barriers and enablers (Hussain et al., 2022) as well as "mechanisms and conditions" (Fastenrath et al., 2020, p. 63) for scaling NBS. Moreover, current knowledge on NBS remains fragmented (McQuaid et al., 2021) as researchers have typically investigated single facets of the scaling process in isolation instead of exploring the interconnectedness of elements that are conducive to scaling (O'Reilly et al., 2023). In addition, comprehensive strategies for overcoming barriers (Håkanson, 2021) and scaling impacts (Islam, 2022) are currently missing. Considering the increasing emergence of organisations that pursue environmental and social goals alongside commercial value creation, new organisational models need to be developed that incorporate all three dimensions of sustainable value creation (Bocken et al., 2018; Dentoni et al., 2021; Geissdoerfer et al., 2018; Schaltegger et al., 2016a). This development is complicated because the traditional BM literature typically focuses on organisational models for commercial value creation (Bocken et al., 2018; Talonen & Hakkarainen, 2014). Unlike traditional business models, implementing sustainable business models is yet to reach mainstream adoption (Evans et al., 2017). As a result, sustainable business model archetypes for widespread adoption across sectors and industries are currently lacking (Bocken et al., 2014). This is particularly true for niche segments and young disciplines such as NBS for landscape restoration (Schaltegger et al., 2016b). Thus, developing SBMs is part of scaling NBS (Lewandowski, 2016; Lüdeke-Freund et al., 2019).

To address these gaps, this thesis conducts a case study of NBS for landscape restoration. The thesis itself is part of a research project between the Rotterdam School of Management (RSM) and the Bioregional Weaving Lab collective (BWL) (from now on BWL; detailed description in section 3.2.1.). The BWL consists of several NBS practitioner teams that train and equip key local stakeholders in ten selected regions with regenerative and collaborative leadership skills for integrated land- and seascape management. To seize challenges and opportunities, the BWL maps the local system and identifies root causes and feedback loops. Building on a systemic approach, BWL practitioners aim to create holistic solutions to pressing challenges (Holling, 2001; Kim, 1999) and leverage the effects of systemic innovations (Leventon et al., 2021).

Drawing on the scientific literature on business models (BM), NBS, and scaling social impact, the present study aims to identify elements in the underlying business models (BM) of BWL organisations for landscape restoration that are conducive to scaling. The interrelationships between these elements reveal mechanisms that can be derived into processes and strategies to scale impacts. To address this concern and to address the current gaps in the literature, the following research question (RQ) has been formulated:

> **RQ:** *How can multi-stakeholder partnerships for landscape restoration leverage the business model elements of their projects to scale environmental, social, and financial impacts?*

In addition, the following sub-questions (SQs) were defined to collect data for answering the main RQ:

- SQ1: *What business model elements are presented in the literature?*
- SQ2: *Which elements in the underlying business models of the NBS are perceived as beneficial to scaling environmental, social, and financial impacts?*
- SQ3: *Which specific processes and strategies are pursued to scale the impacts of BWL landscape restoration projects?*

To approach the RQ, the study explores eleven cases of BWL landscape restoration projects. Concretely speaking, seven scalable projects are compared to three pre-mature NBS solutions (partially or not yet scalable) and one project that was not added to the portfolio. The selection of cases is based on the BWL selection criteria for NBS (section 3.3.). Comparing the different cases allows concluding of the underlying BMs of the organisations. Moreover, through identifying elements that are conducive to scaling, those elements can be sought for and leveraged in the BMs of the pre-mature innovations to scale their impacts. Thereby, studying deviant cases offers a more holistic perspective on the BMs of NBS, particularly drawing on the experience resulting from best-practice examples (Etikan et al., 2016).

The so-obtained findings contribute to both literature and practice in various ways. First, considering theoretical contributions, linking concrete BM elements to the scaling process sheds light on the role of the BM in scaling social impacts (Bocken et al., 2018; Ciulli et al., 2022; Schaltegger et al., 2016a). This link represents a novel contribution to the NBS field and landscape restoration sub-domain. Additionally, the presented set of conducive elements (section 4.2.) supports the development of SBMs for tackling GCs while delivering sustainable values (Bocken et al., 2018; Dentoni et al., 2021; Geissdoerfer et al., 2018; Schaltegger et al., 2016a), particularly models that facilitate the scaling of NBS (Lüdeke-Freund et al., 2019; Schaltegger et al., 2016b). Second, the findings reveal mechanisms facilitating the scaling process (Fastenrath et al., 2020). The resulting stage model for scaling NBS represents another novel contribution to the field of NBS for landscape restoration and the broader domains of NBS and social entrepreneurship. Third, applying the social enterprise lifecycle model creates a holistic picture of the scaling process and unfolds interconnections between corresponding processes and elements (O'Reilly et al., 2023). From a practitioner's perspective, the contribution is four-fold. First, the identified set of conducive elements provides a toolbox for entrepreneurs interested in business model innovation or scaling impacts. Second, the two identified scaling mechanisms serve entrepreneurs as a blueprint to evaluate the consistency between the organisational layers of their enterprises. In addition, Entrepreneurs who want to communicate their organisation to external stakeholders (e.g., to attract investors) can use the lifecycle and stage models for scaling NBS to map their organisations. Funders can also use these models to compare potential investments or evaluate their portfolios. Third, the ten proposed strategies guide landscape restoration practitioners interested in scaling their impacts and multi-stakeholder collaborations (e.g., cross-sector partnerships) seeking to facilitate innovation. Finally, the identified elements and strategies support the development of an NBS framework that can be applied across landscapes (Commonland, 2020; Seddon et al., 2021).

The paper is structured as follows: The second section presents a literature review and links the literature on NBS and BM. The third section outlines the methodological approach, including the research design, case selection and sampling, data collection, and data analysis. The results are presented in the fourth section. The fifth section discusses the findings, reflects on the methodological approach, and provides implications for future research and practitioners. The last section concludes.

## 2. Literature Review

This section presents a review of the bodies of literature on BMs, business model innovation (BMI), and NBS. In particular, a comprehensive list of business model elements (Appendix 1) has been derived from the traditional BM literature and the more specific literature on SBM and sustainable business

model innovation (SBMI). In this way, a bridge is created between the concepts of BM and NBS (Bocken et al., 2014; Lüdeke-Freund et al., 2019; Schaltegger et al., 2016b).

## 2.1. Important properties of nature-based solutions

Many researchers have explored the concept of NBS (Davies & Lafortezza, 2019; Lafortezza et al., 2018; Nesshöver et al., 2017; IUCN, 2020). NBS have been particularly acknowledged for their potential to address societal challenges (Cohen-Shacham et al., 2016) and to mitigate climate change (Kabisch et al., 2016; Seddon et al., 2021; Müller et al., 2022). Consequently, scholars have illustrated the multiple benefits of NBS (Commonland, 2020; Dudley et al., 2021; Ion et al., 2021; Müller et al., 2022; Seddon et al., 2020). This particularly includes the ability of NBS to innovate with nature (Kooijman et al., 2021) and their contribution to resilient landscapes (Lafortezza et al., 2018; Gutierrez et al., 2023). In addition, benefits to the local community have been emphasised (Ashoka, 2022; Ferreira et al., 2020). Moreover, scholars have identified barriers and enablers to the implementation and upscaling of NBS (Cohen-Shacham et al., 2019; Ershad Sarabi et al., 2019; Håkanson, 2021; McQuaid et al., 2021; Seddon et al., 2021). Considering the RQ at hand, strategies for overcoming barriers to NBS implementation (Wamsler et al., 2020; Islam, 2022) and upscaling NBS (Cohen-Shacham et al., 2019; Cook, 2021; Fastenrath et al., 2020; Hussain et al., 2022; Chatterjee et al., 2022; United Nations Environment Programme, 2022) are essential. To this concern, the need for new sustainable business models (SBMs) (Evans et al., 2017; Schaltegger et al., 2016b; Lewandowski, 2016) and the benefits of BMI (Carayannis et al., 2014; Carayannis et al., 2015; Chesbrough, 2010; Chesbrough et al., 2013; Leih et al., 2015; Massa & Tucci, 2013; Teece, 2010) have been emphasised.

To facilitate and implement NBS, scholars have presented four guiding principles (Müller et al., 2022; Seddon et al., 2021). First, NBS do not substitute the necessity to shift away from fossil fuels. Second, NBS involve a wide range of ecosystems, including both land and sea. Third, NBS must be aligned with the interests of indigenous people and the local community to respect their cultural and ecological rights. Finally, NBS should be designed to foster biodiversity measurably. Effective scaling of NBS requires that all four aspects are met. In addition to the four principles, Kooijman et al. (2021) distinguish between three types of NBS: nature-based enterprises, nature-based organisations, and nature-based products and services. According to the authors, these three NBS types engage in eleven categories of economic activities, including ecosystem restoration, ecological tourism, smart technologies, and community engagement. Additionally, NBS offer services for forest and landscape restoration (FLR), which denotes actions to strengthen ecological integrity and promote human well-being in deforested or degraded landscapes (Maginnis et al., 2012). NBS also provide ecosystem services (ES) which describe the benefits to human well-being generated through the natural processes in ecosystems (Millennium Ecosystem Assessment, 2005). Engaging in NBS explicitly requires collaborating with local communities and indigenous people and respecting their needs and demands

(Ferreira et al., 2020). By following this bottom-up approach on the regional level, NBS are drivers of systemic change (Ashoka, 2022). The bottom-up approach also indicates that NBS must balance and embrace the conflicting demands of stakeholders (Dudley et al., 2021; Hahn et al., 2015).

To ensure the sustainability of NBS, corresponding BMs must embed the four principles and capture the characteristics of the respective context.

## 2.2. Sustainable business models

In general, a BM embodies the architecture of a firm's mechanisms for creating, delivering, and capturing value (Teece, 2010). It defines how "the enterprise delivers value to customers, entices customers to pay for value, and converts those payments to profit" (Teece, 2010, p. 172). The BM represents a set of coordinated elements that allows an enterprise to identify unmet needs (Teece, 2018). Chesbrough (2007) highlights two core functions of BMs (Figure 1). These core functions require a balance to sustain in the long term (Teece, 2018). In addition to the core functions, a BM fulfils the following propositions (Chesbrough, 2010): it 1. articulates the value proposition, 2. identifies a market segment, 3. defines the value chain, 4. specifies the revenue generation mechanisms, 5. evaluates the cost structure and profit potential, 6. describes the firms' position within the value network, and 7. formulates a competitive strategy. By applying a stakeholder perspective on BMs, Freudenreich et al. (2020) argue that the BM encompasses the rationale of organisational value creation towards building and maintaining relationships. Moreover, by drawing on its BM, an enterprise supports societal

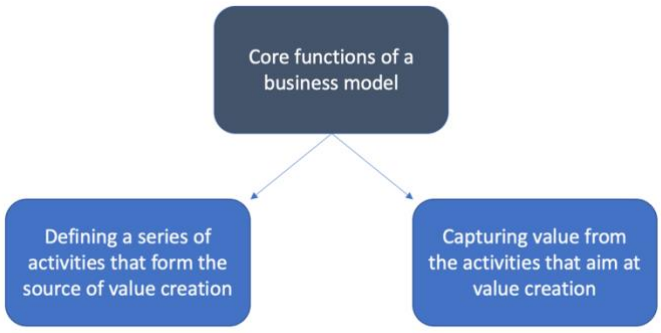



*Figure 1: Core functions of a business model (Derived from Chesbrough, 2007)*

stakeholders to fulfil their roles, e.g., by making its actions transparent or paying taxes. Considering BMs through a stakeholder lens thus shifts the focus from generating customer value to creating multiple outcomes and stakeholder benefits (Freudenreich et al., 2020). In sum, a BM expresses the core values of an enterprise, the processes for value creation and capture, and relationships with stakeholders and the external environment (Lemus-Aguilar et al., 2019).

The global economy's transition towards sustainable business practices requires a new economic paradigm that takes a long-term perspective on value creation and incorporates all three dimensions of sustainability (Ashoka, 2022; Commonland, 2020; Gladwin et al., 1995). Equally, new BMs are needed that simultaneously address future challenges and generate ecological, social, and

economic value (Evans et al., 2017; Lemus-Aguilar et al., 2019; Shakeel et al., 2020). In the literature, such BMs are referred to as SBMs which define "business models that incorporate proactive multi-stakeholder management, the creation of monetary and non-monetary value for a broad range of stakeholders and hold a long-term perspective" (Geissdoerfer et al., 2018, p. 409). SBMs help to describe, analyse, manage, and communicate "a company's sustainable value proposition to its customers and all other stakeholders, […] how it creates and delivers this value, and […] how it captures economic value while maintaining or regenerating natural, social, and economic capital beyond its organisational boundaries" (Schaltegger et al., 2016a, p. 6). In contrast to conventional business that focuses on economic success, SBMs embrace business cases for sustainability, meaning that economic value creation is tied to social and environmental performance (Schaltegger et al., 2011). Moreover, SBMs embed economic, environmental, and social returns into a value chain (Evans et al., 2017). This implies business models for sustainability (BMfS), which describes supporting voluntary activities to solve or moderate social and environmental challenges (Schaltegger et al., 2012). Accordingly, a BMfS is actively managed to create customer and social value by integrating social, environmental, and economic activities. The BM literature utilises a variety of terms that seek to describe what is often referred to as SBM (Bocken et al., 2014; Evans et al., 2017; Geissdoerfer et al., 2018; Lewandowski, 2016) or BMfS (Freudenreich et al., 2020, p. 11; Schaltegger et al., 2011). To overcome conceptual unclarity, this paper uses SBM as an umbrella term (Ciulli et al., 2022).

## 2.3. Business model elements

This passage presents a non-exhaustive collection of BM elements (Appendix 1), thereby providing an answer to SQ1 and a toolbox for identifying those elements in the underlying BMs of the BWL landscape restoration projects conducive to scaling.

In the words of Teece (2010), a BM represents "a conceptual […] model of a business" (Teece, 2010, p. 173). This implies the existence of "[…] a set of elements and their relationships" that allows enterprises to communicate the logic of their businesses (Osterwalder & Pigneur, 2002, p. 1). Fielt (2013) argues that compositional BM elements must address a firm's value proposition, organisational architecture (both at the firm and network level), and economic dimensions. This resonates with Demil and Lecocq (2010), who suggest that core BM elements should cover the resources, competencies, and value proposition. In addition to this economic dimension, Morris et al. (2005) categorise BM

elements into factors related to the offering, market, internal capabilities, and strategy. Central to the identified list of BM elements, the traditional business model canvas by Osterwalder and Pigneur (2010) consists of nine elements (Figure 2). In addition, the list of traditional BM elements is complemented by business infrastructure (Schaltegger et al., 2012), competitive strategy (Chesbrough & Rosenbloom, 2002; Chesbrough, 2007), financial pillar (Schaltegger et al., 2012), profit formula (Chesbrough & Rosenbloom, 2002; Johnson et al., 2008), value appropriation (Teece, 2010), value chain (Chesbrough & Rosenbloom, 2002; Chesbrough, 2007; Teece, 2010), and value network (Chesbrough, 2007). By extending the internal firm's organisational perspective and value creation toward the external environment, Zott and Amit (2007) argue that an organisation's BM also includes elements from actors that engage in the BM (e.g., partners, suppliers, and customers). Thus, the following BM elements can be added: Content of exchange and interaction (Zott & Amit, 2008), content of transactions (Amit & Zott, 2001; Zott & Amit, 2007), governance of transactions (Amit & Zott, 2001; Zott & Amit, 2007), link to external stakeholders (Zott & Amit, 2007), management of exchange and interaction (Zott & Amit, 2008), process of exchange and interaction (Zott & Amit, 2008), structure of transactions (Amit & Zott, 2001; Zott & Amit, 2007), and value creation design (Amit & Zott, 2001; Zott & Amit, 2007). The so-obtained collection of BM elements is summarised in Table 1.

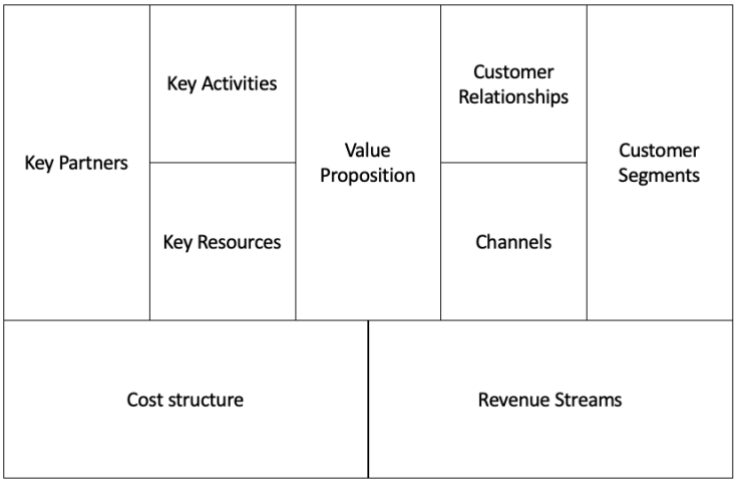



*Figure 2: The traditional Business Model Canvas (Derived from Osterwalder & Pigneur, 2010)*

Empirically, single or multiple elements from this collection may comprise a BM. The exact composition of elements thereby depends on an organisation's purpose, environment, or industry (Fielt, 2013). When analysing the elements of a specific BM, it is, therefore, essential to consider these aspects. To develop SBMs, scholars emphasise the application of existing BM frameworks (Bocken et al., 2018; Chesbrough et al., 2013; Lewandowski, 2016). For instance, Lewandowski (2016) applies the traditional BM canvas to the circular economy principles. However, BMs for the circular economy have "limited transferability and there is no comprehensive framework supporting every kind of company

| Business model element | Literature |
|---|---|
| Business infrastructure | Schaltegger et al., 2012 |
| Channels | Osterwalder & Pigneur, 2010 |
| Competitive strategy | Chesbrough & Rosenbloom, 2002; Chesbrough, 2007 |
| Content of exchange and interaction | Zott & Amit, 2008 |
| Content of transactions | Amit & Zott, 2001; Zott & Amit, 2007 |
| Cost structure | Osterwalder & Pigneur, 2010 |
| Costumer relationships | Osterwalder & Pigneur, 2010; Schaltegger et al., 2012 |
| Customer segments | Osterwalder & Pigneur, 2010 |
| Financial pillar | Schaltegger et al., 2012 |
| Governance of transactions | Amit & Zott, 2001; Zott & Amit, 2007 |
| Key partners | Osterwalder & Pigneur, 2010 |
| Key processes | Johnson et al., 2008 |
| Key resources | Demil & Lecocq, 2010; Johnson et al., 2008; Osterwalder & Pigneur, 2010 |
| Links to external stakeholders | Zott & Amit, 2007 |
| Management of exchange and interaction | Zott & Amit, 2008 |
| Market segments / Targets markets | Chesbrough, 2007; Chesbrough & Rosenbloom, 2002; Teece, 2010 |
| Process of exchange and interaction | Zott & Amit, 2008 |
| Profit formula | Chesbrough & Rosenbloom, 2002; Johnson et al., 2008 |
| Revenue streams | Chesbrough, 2007; Osterwalder & Pigneur, 2010 |
| Structure of transactions | Amit & Zott, 2001; Zott & Amit, 2007 |
| Value appropriation | Teece, 2010 |
| Value creation design | Amit & Zott, 2001; Zott & Amit, 2007 |
| Value network or ecosystem | Chesbrough, 2007 |
| Value proposition | Chesbrough, 2007; Chesbrough & Rosenbloom, 2002; Demil & Lecocq, 2010; Johnson et al., 2008; Osterwalder & Pigneur, 2010; Schaltegger et al., 2012; Teece, 2010 |
| Value-chain | Chesbrough & Rosenbloom, 2002; Chesbrough, 2007; Demil & Lecocq, 2010; Teece, 2010 |

*Table 2: Business model elements (Derived from Nenonen & Storbacka, 2010, p. 46 – 47; Amit & Zott, 2001; Chesbrough, 2007, Chesbrough & Rosenbloom, 2002; Osterwalder & Pigneur, 2010; Johnson et al., 2008; Schaltegger et al., 2012; Teece, 2010; Zott & Amit, 2007*

in designing a […] business model" (Lewandowski, 2016, p. 1). Relatedly, Bocken et al. (2014) argue that sustainability must be embedded into an organisation's core instead of being considered an additional BM element. This takes a systemic perspective on the creation, proposition, capture, and delivery of value (Bakker et al., 2014). In this regard, Bocken et al. (2018) introduce the adapted sustainable business model canvas (Figure 3). The resulting canvas incorporates the core elements of Osterwalder and Pigneur (2010) with two significant differences. First, the element of value creation extends the range from key partners to key stakeholders. This reflects the need for SBMs to integrate stakeholder collaboration throughout the value-creation process (Bocken et al., 2018; Kraaijenhagen et al., 2016). Second, the value proposition is more specified toward the benefits to the planet, people,

and profit. This resonates with Bocken and colleagues (2014), who argue that a SBM provides "measurable ecological and social value in concert with economic value" (p. 82).

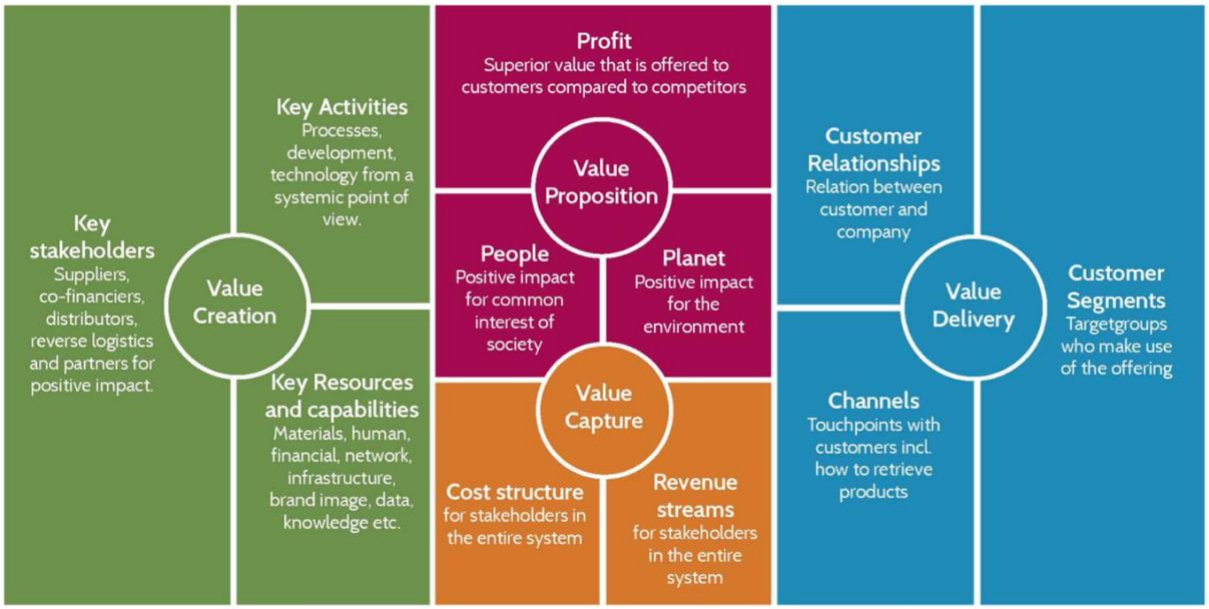



*Figure 4: The adapted sustainable business model canvas (Bocken et al., 2018, p. 82. Developed from Osterwalder & Pigneur, 2010)*

## 2.4. Elements of sustainable business models

Although serving as a blueprint for the composition of a BM, Joyce and Paquin (2016) criticise that the traditional business model canvas by Osterwalder and Pigneur (2010) represents a conceptualisation that is somewhat dominated by an economic perspective (Joyce & Paquin, 2016). Additional components and elements need to be integrated to arrive at a more holistic design of value creation (e.g., social and environmental benefits). Considering the increasingly dynamic business environment, Talonen and Hakkarainen (2014) argue that more than taking an inside-out approach regarding the BM is required to sustain in the long run. Instead, SBMs need capacities that support organisational resilience, adaptive capacity, and exploratory learning in the core business activities (McGrath, 2010). In other words, an SBM should enable an organisation to renew itself and adapt to changing ecosystems. Relatedly, a greater emphasis on the external environment shifts the perspective toward outside-in (McGrath, 2010). To this concern, Joyce and Paquin (2016) introduce the triple-layered business canvas, which complements the traditional economic dimension by Osterwalder & Pigneur (2010) with the two dimensions of environmental lifetime and social stakeholder (Table 2). Adding these two layers creates a more holistic picture of the value chain and helps to overcome the economic bias in the traditional business model canvas (Joyce & Paquin, 2016).

| Triple-layered business model canvas | | |
|---|---|---|
| **Economic layer (Osterwalder & Pigneur, 2010)** | **Environmental lifetime layer (Joyce & Paquin, 2016)** | **Social stakeholder layer (Joyce & Paquin, 2016)** |
| Activities | Distribution | Employees |
| Channels | End-of-life | End-User |
| Costs | Environmental benefits | Governance |
| Customer relationship | Environmental impacts | Local communities |
| Customer segments | Functional value | Scale of outreach |
| Partners | Materials | Social benefits |
| Resources | Production | Social impacts |
| Revenues | Supplies and out-sourcing | Social value |
| Value proposition | Use Phase | Societal culture |

*Table 3: Elements of the triple-layered business model canvas (Derived from Joyce & Paquin, 2016, p. 1476, p. 1479, and p. 1480)*

To be sustainable, a BM generally requires consistency between its elements (Morris et al., 2005). To this concern, the effectiveness of a BM's value creation can be determined by the internal configurational fit between all elements (Morris et al., 2005) on the one hand and the external configurational fit between the BM at stake and the BMs of partners (e.g., suppliers and customers) (Nenonen & Storbacka, 2010) on the other. Alternatively, external fit can be measured as the "appropriateness of the configuration given external environmental conditions" (Morris et al., 2005, p. 732). Accordingly, a strong internal fit can strengthen an organisation's adaptability, given poor external fit during an economic recession or uncertainty. The variation of BMs and corresponding elements is subject to the specific context (Bloom & Chatterji, 2009). This includes core values and purpose (Morris et al., 2015), the local environment (Chesbrough, 2010; IUCN, 2020), stakeholders (Ferreira et al., 2020; Seddon et al., 2021), organisational type, and industry (Bocken et al., 2018).

Considering changing environments and stakeholders, scholars are giving great importance to dynamic capabilities (Carayannis et al., 2014; Carayannis et al., 2015; Leih et al., 2015; Teece, 2007; Teece, 2018). Dynamic capabilities refer to a firm's ability to integrate, create, and reconfigure internal competencies to address changes in the business environment (Teece, 2007). For instance, dynamic capabilities constitute clear and regular communication, long-term strategic planning, partnerships and stakeholder engagement, leadership behaviour, and shared culture (Teece et al., 1997). Dynamic capabilities are, therefore, beneficial to organisational change and resilience (McGrath, 2010) and support the creation of a more holistic and long-term perspective. Finally, dynamic capabilities represent a crucial factor in the context of BMI, which will be outlined in the following section.

## 2.5. Business model innovation

> ***"A better business model often will beat a better idea or technology"*** *(Chesbrough, 2007, p. 12)*

Embodying the entire value chain of an enterprise, BMs represent both important vehicles for innovation and a source of innovation themselves (Massa & Tucci, 2013). When describing changes or transformations of BMs, scholars often refer to business model innovation (BMI) (Bocken et al., 2019; Carayannis et al., 2014; Carayannis et al., 2015; Carayannis et al., 2019; Wirtz & Daiser, 2018). Expanding on the thoughts of Chesbrough (2007), Evans et al. (2017) argue that changes to an organisation's BM represent fundamental approaches for realising sustainability-oriented innovations.

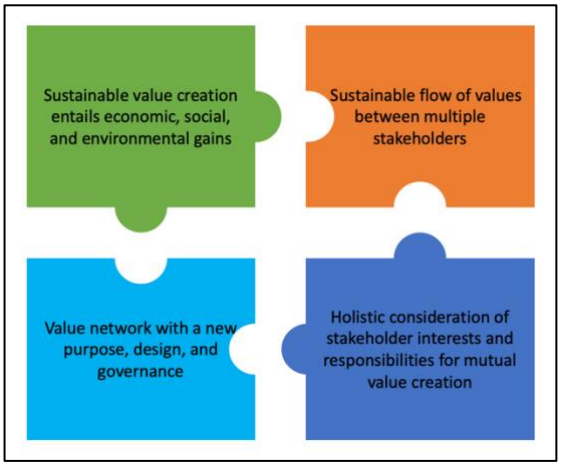



*Figure 6: Four propositions that support the creation of SBMs (Derived from Evans et al., 2017)*

In addition, the authors introduce four propositions that support the creation of SBMs (Figure 4). Based on these properties, BMI reflects the firm's ability to promote innovation while leveraging internal capabilities and strengthening organisational sustainability and resilience (Carayannis et al., 2014). When striving for BMI in the context of social entrepreneurship, the social mission, the value proposition, and the best practices of the business are essential (Carayannis et al., 2019). In this context, BMI can be considered a driver of social innovation (Ioan et al., 2021; Moore et al., 2015).

Teece (2018) considers an organisation's BM, dynamic capabilities, and strategy as interdependent and suggests that dynamic capabilities positively influence the strength of a BM. The BM, in turn, influences the firm´s dynamic capabilities through the effects of organisational design and thus defines the feasibility of following specific strategies (Teece, 2018). Finally, profound dynamic capabilities "enable the creation and implementation of effective business models" (Teece, 2018, p. 48). The strength of dynamic capabilities is indicated by the ability to translate changes to the BM into organisational transformation (Teece, 2018). From an internal perspective, Leih and colleagues (2015) decompose dynamic capabilities into three activities: 1. Sensing opportunities, 2. seizing opportunities, and 3. transforming the organisation. Accordingly, a BM's innovation, implementation, and renewal reflect both outputs and inputs to these three sets of activities. Moreover, the successful intertemporal management of value creation, delivery, and capture can be classified as a key dynamic capability (Leih et al., 2015). At the same time, specific components of the organisational design (e.g., pro-entrepreneurial incentives) are considered supporting factors for dynamic capabilities (Carayannis et al., 2014). Thus, BMI may require fundamental changes within the firm, such as modifying the internal

organisational structure or culture (Leih et al., 2015). The nature of the specific BMI determines how radical and encompassing these changes will be.

When changing or transforming an organisation toward increased sustainability, the business model represents an important vehicle for innovation (Massa & Tucci, 2013). Drawing on the concept of BMI, researchers have opened new avenues to describe and explore innovations to SBMs that aim at creating or scaling positive environmental, social, and economic impacts (Ciulli et al., 2022; Geissdoerfer et al., 2018; Shakeel et al., 2020; Yang et al., 2017). In this regard, the concept of SBMI defines actions that aim at adjusting or modifying an SBM "to create significant positive impacts, and significantly reduced negative impacts for the environment and society, through changes in the way the organisation and its value-network create, deliver and capture value or change their value propositions" (Bocken & Geradts, 2020, p. 2).

## 2.6. Scaling strategies and the complexity of scaling impacts

Scaling describes processes or strategies that increase an entrepreneurial action's social, environmental, and financial impacts (Dees et al., 2004). From a business perspective, the term scaling describes the capacity of an enterprise's BM to reach additional customers or markets and to increase overall sales (Täuscher & Abdelkafi, 2018). About NBS and social entrepreneurship, this definition of scaling can be modified toward the capacity of a BM to increase the overall amount of generated impact or the number of stakeholders that benefit from the generated impacts (Freudenreich et al., 2020). Specifically, four common strategies for scaling social impact can be identified in the literature (Figure 5). The first strategy, dissemination, describes the original innovator's active provision of information and technical assistance (Dees et al., 2004) while permitting others to scale the social

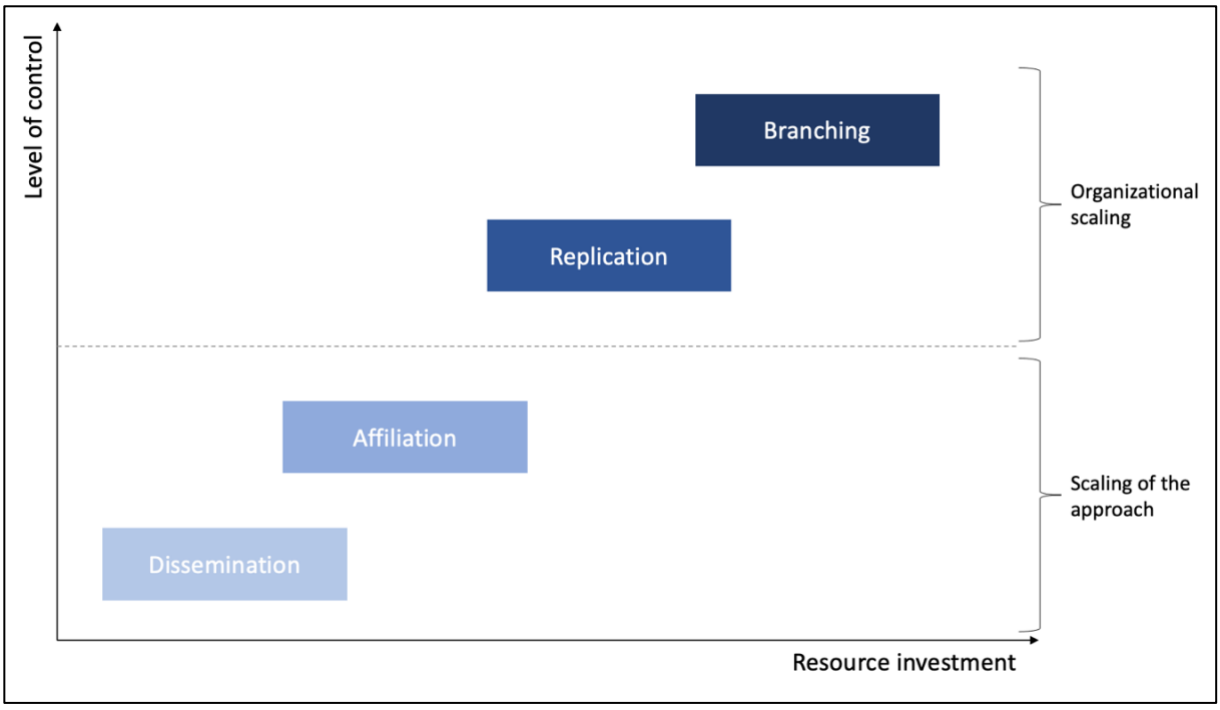



*Figure 7: Strategies for scaling social impact (Derived from Heinecke & Mayer, 2012, p. 198)*

benefit (Corner & Kearins, 2021). This includes open-source methods like training, education, and networks for collaborative sharing and learning (Lyon & Fernandez, 2012). Dissemination strategies typically represent open-source approaches to innovation that shift away from tight control over the knowledge and technology created to address a broad group of adopters (Dees et al., 2004). Second, affiliation strategies build around a formal relationship between two or more partner organisations to form an identifiable network (Dees et al., 2004). This entails scaling through formal relationships, memberships, social franchising, and quality standards (Lyon & Fernandez, 2012). Compared to dissemination, affiliation allows for tight control over internal knowledge (Bloom & Chatterji, 2009). Third, replication strategies describe the standardisation of key activities, identification of a standard context, and a standardised mechanism to implement an innovation in a different context (Bradach, 2003). Similar to affiliation strategies, the original innovator controls the knowledge and know-how created through the innovation. Replication strategies for scaling social impact are similar to franchising in the commercial sector. Finally, branching strategies include creating local sites through the parent organisation (Dees et al., 2004). In this way, branching represents an approach that allows for tight control by the original innovator.

In the specific context of NBS, different from the traditional paradigm of organisational growth, scaling impacts decouples the increase and spread of impact from purely economic organisational growth (Ciulli et al., 2022) and takes a holistic and long-term perspective on systemic innovation (Chesbrough, 2010). The hybridity of social enterprises (SEs) - meaning that economic and social interests are pursued - poses unique challenges to scaling social impacts (Dees et al., 2004). Compared to profit-driven enterprises, scaling social impact is more complex (O'Reilly et al., 2023). For instance, commercial enterprises try to access markets similar to those they are already operating in, as scaling into different contexts is perceived as risky and costly (Ghemawat, 2001). To this concern, organisational complications to scaling stem from different requirements for innovation between BMs that are adjusted to different contexts (Chesbrough, 2010). In contrast to their commercial counterparts, SEs may address service gaps or seek opportunities where the financial viability of markets is insufficient to attract commercial enterprises. Additionally, Schaltegger et al. (2016b) argue that scaling the impacts of sustainability pioneers such as NBS organisations is complicated because such actors often operate and remain in niches. Consequently, the barriers to scaling for SEs may be higher than those for commercial businesses (Weber et al., 2012).

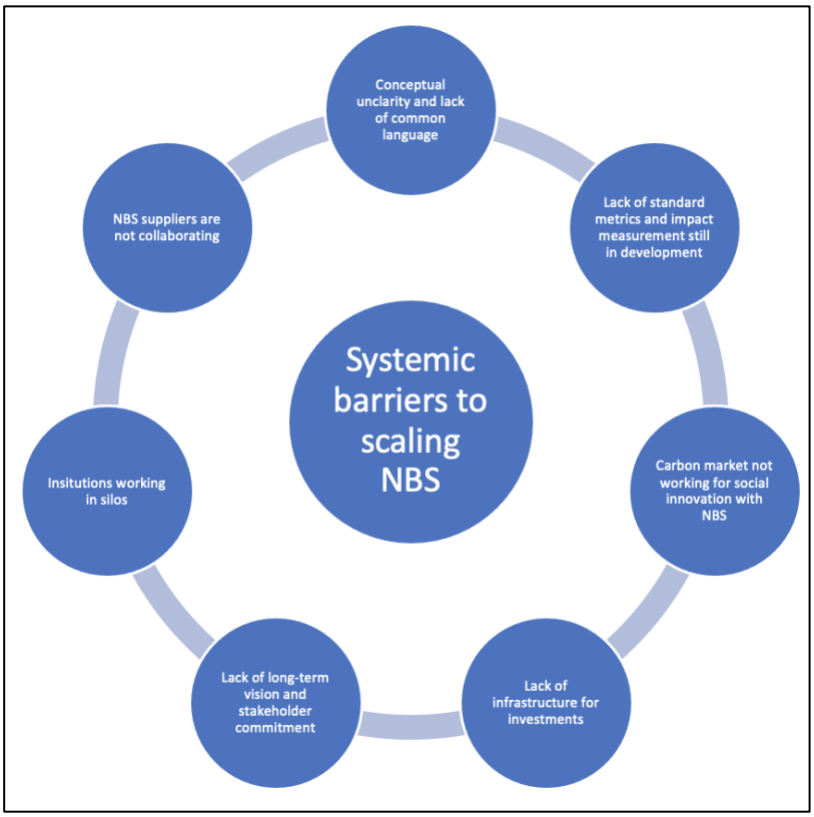



*Figure 8: Systemic barriers to the scaling of NBS (Derived from Müller et al., 2022)*

Although scholars have given considerable attention to the barriers to NBS (Cohen-Shacham et al., 2019; Ershad Sarabi et al., 2019; Kabisch et al., 2016; McQuaid et al., 2021; Seddon et al., 2021), little knowledge exists on how this plays out in practice (Hussain et al., 2022). Understanding these barriers, therefore, represents a crucial step in scaling NBS, particularly for the development of concrete strategies to overcome these barriers (Håkanson, 2021; Islam, 2022). This knowledge gap can be addressed by considering more practitioner-oriented literature. In general, barriers to NBS can be divided into political, economic, socio-economic, technical, environmental, and legal factors (McQuaid et al., 2021). More specifically, Müller et al. (2022) identify seven systemic barriers to scaling NBS (Figure 6). First, the concept of NBS lacks conceptual clarity and a "common language" (p. 4) within the NBS community. Second, as concepts of natural capital and climate accounting are still developing, no uniform approach for measuring the impacts of NBS exists that could qualify the full range of NBS benefits. Third, resulting from incomplete information and conceptual unclarity, an appropriate infrastructure for large-scale investment for scaling the social impacts of NBS is currently missing (Hofstetter, 2020; Seddon et al., 2021). Given that many NBS are relatively small, such enterprises lack the scale to attract investors and cannot unlock large investment volumes (Kooijman et al., 2021; McQuaid et al., 2021). Fourth, institutional and corporate stakeholders still stick to short-term profit maximisation, whereas implementing and scaling NBS presume a long-term perspective (Hofstetter, 2022; McKinsey & Company, 2020). Fifth, many actors and institutions that engage in ecological and social sustainability work in isolation or are constrained by linear and short-sighted thinking (Bocken

et al., 2019; Wirtz & Daiser, 2018). Like many investors, those actors lack a long-term vision and a more holistic approach to support the outspread of NBS. Relatedly, pre-dominant linear approaches to innovation regarding future challenges and opportunities generate incremental innovations instead of systemic innovation (Hansen et al., 2009; Hansen & Grosse-Dunker, 2012). Sixth, NBS suppliers are yet to fully exploit the potential of cross-sector collaboration. Finally, the carbon market is currently not working for social innovation in the domain of NBS.

To date, the focus within social entrepreneurship has been on implementing and operating enterprises for NBS. However, as the sector is still developing, a key area of growing interest relates to how these enterprises scale (O'Reilly et al., 2023). To this concern, the benefits of cross-sector collaboration, networks, and partnerships have been emphasised (Bloom & Chatterji, 2009; Ferreira et al., 2020). The following section will further elaborate in this direction.

## 2.7. The role of partnerships and facilitators

In the words of George et al. (2016), GCs can be approached through "coordinated and sustained effort from multiple and diverse stakeholders" (George et al., 2016, p.1881). This resonates with Dentoni et al. (2018), who highlight the benefits of accumulating multiple perspectives, expertise, disciplines, and resources through multi-stakeholder partnerships. Generally, multi-stakeholder collaborations are recognised as effective in governing collaborative value creation (DiVito et al., 2021).

On a micro level, the literature presents so-called "interstitial spaces" (Furnari, 2014, p. 440). Accordingly, these relatively small-scale settings describe situations where individuals from different disciplines interact occasionally and informally around shared activities. Relatedly, scholars have observed the emergence of settings (labs) that promote innovation and studied their benefits of facilitating collaborative and systemic changes (Schmidt & Brinks, 2017). Principally, labs can be understood as "spatial manifestations of the relationship between knowledge creation and space" that represent local institutions for knowledge-sharing (Schmidt & Brinks, 2017, p. 27). Ferreira et al. (2020) argue that labs facilitate collaborative learning across different scales, enabling partnerships and bottom-up innovation. In the context of NBS, it has been found that bottom-up and citizen-led approaches are the most common types of community and stakeholder engagement (Ashoka, 2022; Ferreira et al., 2020).

Schmidt & Brinks (2017) distinguish labs, amongst others, into working labs and open innovation labs. Accordingly, working labs create social and spatial structures to stimulate strong social relationships and strengthen communities. Such labs are oriented towards business and work practices (e.g., project-based activities) and often place social values like sharing knowledge and resources at their core. Open innovation labs focus more on the mutual benefits of different knowledge resources from various parties (Schmidt & Brinks, 2017). Moreover, open innovation labs provide organisations with tools to pursue open research and development processes by allowing them to access external

competencies and knowledge. In this way, open innovation labs overcome the limitations of an individual organisation in terms of resources and processes (Schmidt & Brinks, 2017), facilitate boundary learning (Wenger, 2000), and stimulate "cross-pollination" (Hagel et al., 2010; Törnqvist, 2011). As a result, they attract diverse users. For instance, users differ in professional backgrounds (e.g., hobbyists, freelancers, entrepreneurs, and employees) or regarding reference points and collaboration goals (Schmidt & Brinks, 2017). In addition, open creative labs offer permanent platforms to a wide range of users (Schmidt & Brinks, 2017).). Ultimately, open innovation labs are accessible to everybody, evolve permanently, and focus on general problems or solution-oriented innovations (Schmidt & Brinks, 2017).

To describe the alignment of systemic design, solution ecosystem, and systemic innovation approaches for addressing wicked problems, Zivkovic (2018) refers to the term systemic innovation lab. This concept is closely related to the BWL collective at hand. Representing a specialised type of lab, a BWL can be defined as a "geographically grounded multi-stakeholder partnership process that weaves together people and solutions, equipping and helping them to organise for transformative change" (Ashoka, 2022, p. 11). Hereby, weaving describes the interconnection of people, projects, and places to pursue a shared purpose (Müller et al., 2022). Hussain et al. (2022) identify five fundamental weaving practices (Figure 7).

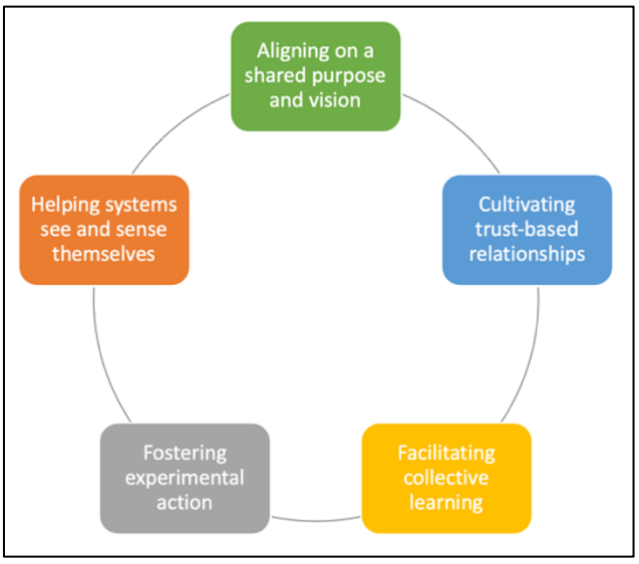



*Figure 9: Five key weaving practices (Derived from Hussein et al., 2022)*

The relationships resulting from those activities are cultivated between and across socio-ecological systems (SES) to create synergies (Hussain et al., 2022). In this sense, the BWL collective represents an example of a community of practice that holistically approaches sustainability challenges by combining weaving and NBS. The collective is led by an international consortium of partners and a local team of practitioners that trains key stakeholders in different bioregions. The bioregions refer to specific areas defined by common ecological features (Ashoka, 2022). The size of those regions allows for encompassing biological and ecological processes that ensure the ecosystem's viability and biological integrity. Moreover, the bioregions offer relevant business cases for communities, farmers, investors, and

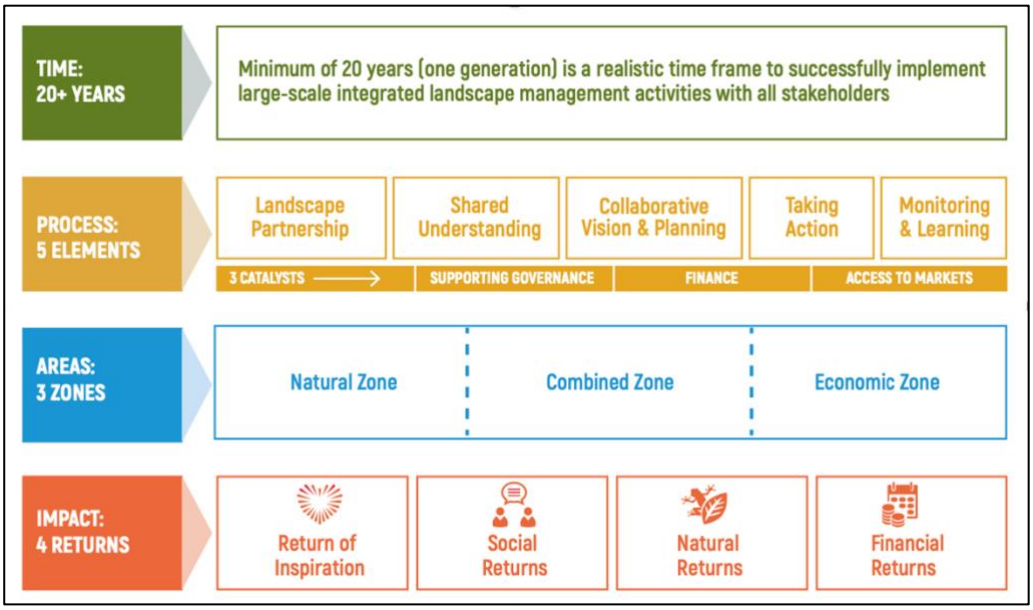



*Figure 10: The 4-Returns framework (Commonland, 2020, p. 7)*

corporations (Ashoka, 2022). By engaging in the bioregions, the BWL collective protects, restores, and regenerates entire ecosystems while reconnecting people with their natural environment (Müller et al., 2022). These aspects are put together and captured by the 4-Returns framework (Figure 8), representing an empirical example of holistic landscape management developed by Commonland (Commonland, 2020; Dudley et al., 2021). In general, holistic management describes a value-based,


*Figure 11: The core functions of the Bioregional Weaving Lab (Derived from Ashoka, 2022)*

adaptive management and decision-making framework that incorporates all aspects of planning for social, economic, and environmental considerations (Holistic Management International, n.d.). From an economic perspective, the bioregions of the BWL deliver regenerative products and prototype new financing models for integrated land and seascape management. As an overarching organisation, the BWL performs seven functions (Figure 9).

## 2.8. Literature and research gaps

One of the main goals of NBS is to provide solutions that can be scaled to the global economy (Cohen-Shacham et al., 2016). This mainstream adoption and scaling of NBS require new BMs (Bocken et al., 2018; Lewandowksi et al., 2016) and concrete strategies to overcome barriers (Håkanson, 2021; Islam, 2022). To this concern, several literature gaps need to be addressed.

First, Cohen-Shacham et al. (2016) call for a practical operational framework for NBS. This resonates with practitioners' calls for developing a holistic approach to NBS that can be applied to any landscape (Commonland, 2020; Seddon et al., 2021). Particularly, concrete strategies for scaling NBS and corresponding social impacts must be developed (Fastenrath et al., 2020; Hussain et al., 2022; Islam, 2022). Second, regarding social entrepreneurship and scaling social impact, more knowledge is needed on the stages and processes from implementation to scaling (McQuaid et al., 2021). To this concern, O'Reilly et al. (2023) criticise that scholars have typically explored single facets of the scaling process in isolation instead of investigating the interconnectedness of the elements associated with scaling or examining the scaling process entirely. Relatedly, Håkanson (2021) argues that further studies are needed to investigate elements conducive to the scaling of NBS. Moreover, few studies have addressed the conditions and mechanisms for scaling NBS and how this plays out in practice (Fastenrath et al., 2020). Finally, more research is needed to explore scaling strategies for SEs regarding different contexts (Islam, 2022). Third, from a BM perspective, more research is needed to study the functions and role of BMs in scaling the impacts of SEs (Bocken et al., 2018; Ciulli et al., 2022; Schaltegger et al., 2016a). Considering organisations for NBS that pursue environmental and social goals alongside commercial value creation, new organisational models are needed that incorporate all three dimensions of sustainable value creation (Dentoni et al., 2021; Geissdoerfer et al., 2018; Schaltegger et al., 2016a). As the traditional BM literature has focused on organisational models for commercial value creation (Bocken et al., 2018; Talonen & Hakkarainen, 2014), developing sustainable business models has yet to mature as a mainstream discipline (Evans et al., 2017). As a result, sustainable business model archetypes for widespread adoption across sectors and industries are currently lacking (Bocken et al., 2014). This is particularly true for niche segments and young disciplines such as NBS for landscape restoration (Schaltegger et al., 2016b).

The thesis at hand approaches these literature gaps by analysing the BMs of NBS landscape restoration projects and establishing a link between the BM elements and scaling strategies and

processes. In addition, by addressing this lack of knowledge, practitioners receive additional guidance for scaling up the social impacts of their SEs. To this end, the following section outlines the chosen methodological approach.

# 3. Methodology

A review of the current bodies of literature on NBS, BM, and BMI has been presented in the previous section. Building on this literature, the following section outlines the strategies for research design, sampling, data collection, and data analysis. Figure 10 illustrates the entire methodological approach.


*Figure 12: Illustration of the methodological approach*

## 3.1. Research design

Numerous studies on NBS have focused on the conceptualisation of NBS, corresponding organisational forms, barriers and enablers to NBS implementation, and stakeholder engagement. In contrast, the process of scaling NBS, particularly regarding the underlying business models, is yet to be explored (Schaltegger et al., 2016b). As a result, there is a lack of specific knowledge on concrete BM elements of NBS that promote innovation and scale social impacts. Because NBS highly depend on the socio-economic context that they are embedded in, the underlying business models need to embody a multitude of factors, such as varying stakeholder demands, needs of local communities, and indigenous knowledge (Ferreira et al., 2020; IUCN, 2020; Seddon et al., 2021). Although no uniform approach to NBS exists, examples of successful NBS represent efficient and effective combinations of different elements adapted to a specific landscape and the needs of various stakeholders (Kooijman et al., 2021). Thus, both NBS practitioners and scholars would benefit from best-practice examples and guidance on compositional elements of NBS organisations that are conducive to scaling impacts within a specific socioecological environment. To this concern, a qualitative and exploratory research strategy seems most promising (Makri & Neely, 2021). This approach allows inductively transferring data into theory (Guest et al., 2011). Because most SEs for NBS are of small size and operate in one or few markets, studying multiple cases and different BMs allows for identifying similarities, differences, and patterns (Gustafsson, 2017). In addition, comparing cases across several stages regarding their lifecycles reveals patterns in the relationship between the business model elements and the scaling process.

## 3.2. Sampling and case selection

NBS for landscape restoration can be categorised as a sub-domain of NBS (Figure 11). All sample organisations represent NBS for landscape restoration. Except for Blueventures, the sample stems

from the BWL portfolio for systemic innovation. Interviewing the Blueventures organisations was facilitated by the BWL (snowball sampling). Convenience and snowball sampling has been applied to grasp crucial elements of the BMs underlying these organisations (Saunders et al., 2009; Suri, 2011).

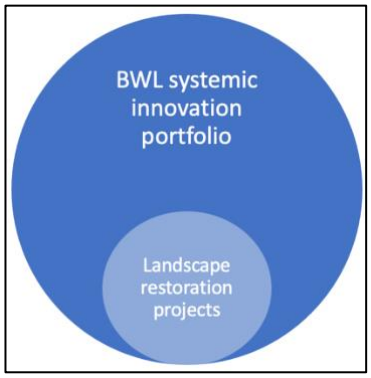


*Figure 13: Sample*

Based on the BWL selection criteria for NBS and systemic innovation (section 3.2.1.), seven organisations have been selected for primary data collection (detailed description in section 3.2.2.). This entails four scalable solutions (Blueventures, Klub Gaja, Kogayon Association, Savory Institute), two pre-mature (partially or not yet scalable) projects (Agroforesterie, AlVelAl), and one non-scalable project (Arensnester Klimaweide). The four scalable projects serve as best-practice examples for further investigation (theoretical sampling) (Corley & Gioia, 2011). Comparing the non- or partially scalable projects to the best-practice examples allows concluding on elements of the BMs of the pre-mature projects. The sample is completed by four organisations from secondary data collection (section 3.2.2.), meaning that these have been investigated by other research project students (Appendices 5 & 6). Of these four organisations, one refers to a partially scalable solution (Citizen Forests), with the remaining organisations (GIY, Hoge Kempen National Park, OTAG) representing scalable solutions. In addition, one BM expert within the AlVelAl Association has been interviewed, thereby reaping the benefits of snowball sampling (Parker et al., 2019; Noy, 2008).

### 3.2.1. Bioregional Weaving Labs collective

The BWL collective is formed by an international consortium of three supporting organisations (Ashoka, Commonland, The Presencing Institute) and local teams of professional practitioners (weavers) in ten different regions (bioregions) (Ashoka, 2022). In this context, the term “weaving” describes actions to interconnect people, projects, and places to form relationships within, between, and across socio-ecological systems (SES) for shared and synergistic purposes (Hussain et al., 2022, p. 8; Müller et al., 2022, p. 6). Weaving practices aim to support collaborations for systemic impact, facilitate collective learning, and embody the desirable change (Müller et al., 2022). A Bioregional Weaving Lab describes a geographically grounded multi-stakeholder partnership that brings together people and solutions, equipping and helping the actors involved to stimulate systemic change (Müller et al., 2022). Thus, the BWL Collective holistically embodies the actors and networks of the single labs in the bioregions. The BWL trains key stakeholders (e.g., farmers, fishermen, landowners, investors, corporate leaders, shareholders, policymakers, community members, etc.) of its partner organisations with leadership skills for integrated land- and seascape management. To understand the complexity of SES and identify leverage points for systemic change, NBS practitioners within the BWL rely on systemic approaches (Holling, 2001; Kim, 1999; Leventon et al., 2021; Müller et al., 2022). For seizing

challenges and opportunities, the BWL maps the local system and identifies root causes and feedback loops. It delivers a landscape plan with an aligned vision and joint actions for each bioregion (Commonland, 2020). This landscape plan is reflected by the 4-Returns framework, which embodies the gains of social capital, natural capital, financial capital, and inspiration (Dudley et al., 2021). The 4-Returns framework is inspired by Theory U and was developed at the Massachusetts Institute of Technology (Commonland, 2020). Theory U describes a process that reveals how the actors of a system can work together to identify the root causes of a challenge and collaborate on solutions (Scharmer, 2009; Scharmer & Kaufer, 2013). Moreover, Theory U seeks to identify the necessary capabilities for enabling a transformative shift away from an "ego-centric society to an eco-centric society" (Dudley et al., 2021, p. 17). As it describes the processes that ultimately lead to the realisation of desired changes to the landscape, Theory U can be classified as a theory of change (Grieco et al., 2015). Ultimately, the BWL seeks to identify and co-create SBMs and innovations for transformative and systemic change. From a holistic perspective, the BWL stimulates systemic innovation by triggering six major leverage points: policies, practices, resource flows, relationships, power dynamics, and mental models (Leventon et al., 2021; Meadows, 1999).

The main partners within the research project between BWL and RSM are Ashoka and Commonland. With over 3,700 SEs in over 90 countries, Ashoka represents the world's leading network of SEs striving for systemic change (Ioan et al., 2021). Drawing on more than 40 years of experience in social entrepreneurship, Ashoka identifies and supports social entrepreneurs, learns from their innovation patterns, and aims to mobilise a global community of 50 million change-makers by 2030. The second partner, Commonland, is an international scale-up company for landscape restoration headquartered in Amsterdam (Dudley et al., 2021). It was founded in 2013 and comprises an international team of ambassadors, conservationists, facilitators, farmers, scientists, and thinkers who collaborate with a growing group of partners engaging in worldwide landscape projects (Commonland, 2020). Commonland is committed to transforming 100 million hectares of degraded land into thriving ecosystems and communities. It has developed the 4-Returns framework for holistic management to facilitate this process.

The following passages outline the applied criteria for sampling and the organisations selected from the BWL innovation portfolio.

### 3.2.2. BWL criteria for sampling

As mentioned, the BWL criteria for NBS and systemic innovations have been applied to identify cases. The case selection process for the research follows the BWL selection process for systemic innovation (Appendix 2). In general, applying external criteria helps overcome a potential selection bias (Collier & Mahoney, 1996). As the BWL consists of three leading partner organisations, the criteria and selection process are more complex. Nevertheless, the mix of criteria reflects the partner organisations and

represents a combination of scientific literature and practical experience. Considering NBS, the IUCN criteria (Cohen-Shacham et al., 2016) provide the basis for identifying potential BWL partner organisations. In the first step of the selection process, the BWL identifies social entrepreneurs within a specific bioregion by applying the Ashoka Venture Criteria (Appendix 2). These individuals typically have vast networks and might also be engaged in the NBS projects, but engagement does not represent an exclusion criterion. The social entrepreneurs identify and recognise solutions that have the potential to strengthen the SES within the respective bioregion and thereby already define potential systemic innovations. Figure 12 illustrates the case selection process (see Appendix 3 for detailed descriptions).


*Figure 14: Case selection process*

The BWL portfolio of systemic innovations has been compiled through a five-step approach. In the first phase of the BWL selection process, the entrepreneurs nominate specific innovations from the available solutions in their respective bioregion. In the second phase, these nominations are checked for the IUCN criteria (question 1 of phase 2) and specific Ashoka criteria (questions 2-7 of phase 2). Only those nominations which at least partly meet the criteria are subsequently listed in a preliminary list. In the third phase, NBS projects perceived as feasible are selected from the preliminary list. In the fourth phase, interviews are conducted among the specific organisations behind the single NBS to collect additional information and address the BM and governance structure. The interviews are then summarised and collected in a report. Finally, when an innovation is added to the BWL portfolio, the respective organisation is contacted to discuss mutual expectations and conditions for collaboration. When these conditions are agreed upon, the innovation is communicated officially.

### 3.2.3. Sample organisations

The study sample consists of ten organisations from the BWL innovation portfolio and one external organisation. While primary data were obtained from seven of these organisations, the data from the

remaining four organisations stems from other students of the thesis project. Figure 13 illustrates the various locations of the sample organisations. A summary of essential properties is shown in Table 3.


*Figure 15: Location of the sample organisations*

## Primary data

### Agroforesterie

The French Agroforesterie Association was found to restore forest areas and enhance their ecosystems. While simultaneously creating opportunities for land recovery, the ecological, economic, and social resilience of damaged forest ecosystems is increased. This is pursued through collaborations and partnerships with local partners and stakeholders. Moreover, stakeholder engagement is integrated in the form of a bottom-up approach. Agroforesterie supports the development of sustainable agroforestry systems and sustainable products and services by providing tools for sustainable agroforestry management to farmers and communities. From a citizen perspective, Agroforesterie contributes to developing sustainable market channels and promotes fertile agriculture and secure food systems.

### AlVelAl

The AlVelAl Association is based in the Altiplano Estepario in the Southeast of Spain. The non-profit organisation (NPO) transforms former monocultures into sustainable and resilient ecosystems and

supports farmers to transition to regenerative agriculture. Practically, AlVelAl offers training to farmers (e.g., regenerative farming practices, implementing holistic management), certifies regenerative agriculture, and develops business models for regenerative farming. Moreover, it founded the Habitat cooperative, which embodies a network of regenerative farmers. The agricultural products produced by the cooperative are directly distributed to national and international markets through its in-house market platform (AlVelAl Foods). To disseminate knowledge on regenerative farming and inspire other initiatives through open-source collaboration, it has set up the Aland Foundation. Moreover, AlVelAl has developed a holistic management framework that draws on the 4-Returns framework and Theory U. Finally, to spread scientific knowledge on regenerative farming, AlVelAl collects data and cooperates with research institutes. From an environmental perspective, the organisation protects soil, biodiversity, and water and creates natural habitats, which leads to increased climate and drought resilience. The social dimension contains the connection of consumers with sustainable production, conservation of traditional knowledge and values, and development of rural areas through creating economic opportunities (e.g., jobs and increased incomes for farmers).


*Figure 16: Business model of AlVelAl*

### Arensnester Klimaweide

Initially set up as a small-scale project for soil protection and regenerative agriculture in the German federal state of Brandenburg, the initiative links agriculture and educational work. It offers action days, campaigns, and a weblog to educate about soil protection and regenerative agriculture. The key stakeholders are local people and communities, agricultural networks and partnerships, local farmers and agriculture, schools, and research institutes. Mainly relying on the work of the founders and friends, the activities of Arensnester Klimaweide create natural habitats, leave space for regeneration

and biodiversity, increase climate and drought resilience, and raise awareness among participants. As indicated by the absence of clearly defined organisational structures, ambitious goals, and scaling ambitions, Arensnester Klimaweide rather represents a temporary project.

### Blueventures

The UK-based Blueventures organisation supports low-income coastal areas characterised by poverty, food insecurity, and reliance on the ocean. It collaborates with tropical small-scale and inshore fisheries of coastal communities in Africa, Asia, and Central America to improve their livelihoods, conserve cultural heritage, and develop secure food systems. Together with a global network of partner organisations, the NPO rebuilds tropical fisheries, supports ecosystem management to deliver benefits, provides financial and technical assistance to the beneficiaries and other organisations, engages in advocacy work, and pursues scaling through local partner organisations. Through promoting sustainable fishery, Blueventures contributes to the conservation and resilience of marine ecosystems.

### Klub Gaja

Poland-based Klub Gaja was initially founded to protect animal rights during the reign of the communist regime in Eastern Europe. Meanwhile, the organisation has expanded its activities to protect forest and river ecosystems. By working with a wide range of stakeholders, it aims to restore landscapes by reconnecting people with nature. Klub Gaja organises action days (e.g., tree planting) for corporations and schools and raises awareness through workshops and events. In this regard, Klub Gaja enjoys a wide reputation due to its involvement in introducing the Polish national tree day. Furthermore, the organisation uniquely promotes nature conservation through creative cultural channels (e.g., theatre). Thanks to its international network of partner organisations, Klub Gaja has successfully inspired other initiatives in Poland and abroad.

### Kogayon Association

Like Klub Gaja, the Romanian Kogayon Association was initially founded to protect animal rights. It has likewise extended its operations toward conserving and restoring ecosystems, biodiversity, and natural habitats. The organisation administers national parks, offers ecological education, provides know-how and advisory for ecotourism, develops infrastructure for ecotourism, engages in lobbying and advocating, and supplies ecosystem services. Next to engaging local communities, actors, legal authorities, schools, and national universities, the organisation has a vast network of international partners (e.g., Geopark and the IUCN) supporting its ideas' outspread. In addition to the environmental benefits, the organisation's activities help to connect urban and rural areas, conserve cultural heritage, and improve the livelihoods of local communities.

### Savory Institute

The Savory Institute has established a global network of locally owned implementation hubs that seek to establish holistic management practices and sustainable practices in the agricultural sector. To this end, the organisation and its network embed regenerative practices into communities, build trust between actors, improve the livelihood of rural areas, and ultimately facilitate the large-scale regeneration of grasslands. Moreover, Savory Institute provides training and tools to farmers and agricultural producers, restores soil health, and measures outcomes. The organisation's success builds on the strength and expertise of its network and the benefits of collaborating with local stakeholders. This approach is captured by the framework for holistic landscape management developed by its founder Alan Savory. The organisation's unique approach focuses on efforts on the local ground while operating around the globe.


*Figure 17: Business model of the Savory Institute*

## Secondary data

### Citizen Forest

The German Citizen Forest organisation works with corporations, foundations, individuals, and groups to plant trees and restore forests. It seeks to establish a Germany-wide network of local reforestation projects and to bundle similar projects into an international movement. Citizen Forests advises and supports its network of partner organisations free of charge so that local citizens can engage in reforestation independently. In this way, active afforestation increases environmental awareness, reconnects people with nature, and, ideally, becomes a regular part of societal life. Central to the organisation is the Miyawaki method, which aims at creating a diverse ecosystem consisting of native trees and plants by drawing on the principle of abundance.

### Grow It Yourself

Ireland-based Grow It Yourself (GIY) inspires, educates, enables, and connects people to grow their food by themselves. In this way, the organisation supports the development of a deep understanding of where and how food is produced. Through various channels that target the general public, such as online courses, podcasts, and TV shows, GIY seeks to stimulate behavioural change toward sustainable food consumption and production. Thanks to this unique approach, GIY enjoys a wide reputation. On the ground, the organisation engages in sustainable agriculture while supporting the local community and strengthening ecosystems. To promote systemic change beyond the organisational boundaries, GIY acts as a host organisation of the BWL.

### Hoge Kempen National Park

Located in the North-East of Belgium, the Hoge Kempen National Park builds on the premise that a thriving ecosystem is also connected. To this end, one of its primary goals is the reconnection of nature and society. To pursue this mission, the organisation has developed the so-called reconnection model for holistic landscape management, which is central to management and captures the value of natural ecosystem services. Hoge Kempen provides ecotourism and ecosystem services and offers guidelines for landscape restoration. In addition, to inspire others and spread its ideas, the Belgium initiative consults the development and implementation of landscape restoration with external parties. In this way, it protects wildlife in the area and conserves biodiversity and ecosystems while simultaneously creating social value for society. As one of the first innovations in the BWL portfolio, Hoge Kempen engages in advocacy work beyond the organisational boundaries of the National Park to promote nature conservation.

### OTAG

Based in Jämtland, central Sweden, OTAG seeks to create and enable ecosystems of regenerative entrepreneurs. Its founder has also set up an NBS in Turkey and acts as an ambassador for the BWL. The organisation promotes regenerative agriculture to let nature and society thrive together. To stimulate systemic change and spread the benefits of holistic management, OTAG has established a program that provides training and mentorship to entrepreneurs and facilitates the implementation of regenerative entrepreneurship. The organisation is part of a broad network beyond the local community and includes the agricultural sector, multi-stakeholder partnerships for systemic innovation, and an international community of regenerative practitioners.

| Organisation | Country | Founded | Focus | Outreach | Different features | Important BM elements | Scaling strategy |
|---|---|---|---|---|---|---|---|
| **Agroforesterie** | France | 2007 | Acceleration of the agroecological transition | France, Burkina Faso (Africa) | | Links to external stakeholders (Network, partnerships, strong tie with public sector) | Affiliation (Partnerships)<br><br>Dissemination (Networks, training) |
| **AlVelAl** | Spain | 2015 | Regenerative agriculture | Altiplano Estepario region, (South-East Spain) | Holistic management approach that can be applied to different landscapes/by different stakeholders<br><br>Strong emphasis on stakeholder independence | Business infrastructure (e.g., Aland foundation, Habitat cooperative)<br><br>Distribution channels (AlVelAl foods)<br><br>Dynamic capabilities (Stakeholder engagement, governance, long-term strategic planning, long-term perspective, business model transformation)<br><br>Management of exchange and interaction<br><br>Resources (4-Returns framework, Theory of Change, certification<br><br>Value proposition (Training, provision of holistic management tools, distribution of regenerative products, 4-Returns certification, landscape regeneration) | Affiliation (Certification, memberships, partnerships)<br><br>Dissemination (Open sourcing, networks, training, consulting) |
| **Arensnester Klimaweide** | Germany | 2019 | Regenerative agriculture | Local projects | Education and experimentation on regenerative agriculture | Channels (Campaigns, workshops)<br><br>Value proposition | / |
| **Blueventures** | United Kingdom | 2003 | Marine ecosystem conservation, supporting coastal communities | 14 countries globally (Africa, Asia, Central America) | Working in niches on a global scale | Dynamic capabilities (Stakeholder engagement and governance, long-term perspective)<br><br>Links to external stakeholders (Strong network and partnerships)<br><br>Management of exchange and interaction | Affiliation (Local partnerships) |
| **Citizen Forests** | Germany | 2019 | Reforestation | Nation-wide campaigns and projects | Strong emphasis on stakeholder independence | Dynamic capabilities (stakeholder engagement and governance)<br><br>Links to external stakeholders (Strong network and partnerships)<br><br>Management of exchange and interaction<br><br>Resources (Miyawaki reforestation method) | Affiliation (Partnerships) |
| **GIY** | Ireland | 2008 | Regenerative agriculture, Sustainable nutrition | Regional agriculture<br><br>UK-wide campaigns and TV shows | Education on healthy nutrition<br><br>High reputation and public awareness<br><br>BWL host organisation | Channels (Campaigns, podcasts, TV show)<br><br>Links to external stakeholders (Strong network)<br><br>Resources (Theory of change, holistic management) | Dissemination (Open sourcing, campaigns, networks) |
| **Hoge Kempen National Park** | Belgium | 2006 | Ecotourism<br><br>Nature conservation | Regional projects | Reconnecting people with nature<br><br>BWL host organisation<br><br>Strong ties within the region<br><br>Focus on rural development | Dynamic capabilities (Stakeholder engagement and governance, long-term perspective, long-term strategic planning)<br><br>Links to external stakeholders (Strong network and partnerships)<br><br>Management of exchange and interaction<br><br>Resources (Reconnection model, TEEB methodology, theory of change) | Dissemination (Open-sourcing, networks, consulting)<br><br>Growth (Ecosystem) |
| **Klub Gaja** | Poland | 1988 | Ecotourism<br><br>Nature conservation | Nation-wide campaigns and projects | High reputation and public awareness (nation-wide tree day)<br><br>Strong emphasis on collaboration and cooperation (Particularly with the business sector; different form typical Polish orgs.) | Channels (Action days, campaigns, workshops)<br><br>Dynamic capabilities (Stakeholder engagement and governance)<br><br>Links to external stakeholders (Strong network and partnerships)<br><br>Management of exchange and interaction | Affiliation (Partnerships)<br><br>Dissemination (Campaigns, networks) |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Kogayon Association** | Romania | 2003 | Ecotourism<br><br>Nature conservation | Regional projects | Emphasis on collaboration and cooperation with international partners (Different from typical Romanian organisations as these don't want to cooperate) | Links to external stakeholders (Strong network and partnerships)<br><br>Value proposition (Administration services, ecotourism services, ranger training program) | Affiliation (Partnerships)<br><br>Dissemination (Networks, training)<br><br>Growth (Ecosystem) |
| **OTAG** | Sweden | 2021 | Regenerative agriculture | Regional projects and online programs | BWL host organisation<br><br>Collaboration with forestry<br><br>Scale of outreach | Channels (Online courses)<br><br>Links to external stakeholders (Strong network and partnerships)<br><br>Resources (Theory of change, holistic management framework) | Dissemination (Networks, training) |
| **Savory Institute** | United States | 1984 | Regenerative agriculture | 54 global hubs (Africa, Asia, Europe, South America) | Holistic landscape management on a global scale<br><br>Emphasis on stakeholder independence | Business infrastructure (54 global hubs)<br><br>Dynamic capabilities (Stakeholder engagement and governance, long-term perspective, long-term strategic management)<br><br>Resources (Ecological outcome verification methodology, holistic management framework, 200 accredited professionals)<br><br>Links to external stakeholders (Strong network and partnerships) | Affiliation (Memberships, partnerships, licensing)<br><br>Dissemination (Open sourcing, networks, training, consulting) |

*Table 4: Essential properties of the sample organisations*

## 3.3. Data collection

The data to answer the RQ is collected in a three-fold way. First, reports and background information on the BWL's NBS projects and the respective partners provide a solid database. These data sources provide the most relevant information for understanding the context and characteristics of the landscape restoration projects, the most important actors and relationships, and essential properties and elements of the underlying BMs. Second, the primary data stems from interviews with entrepreneurs that engage in the selected landscape restoration projects. Interviewing those experts provides an in-depth understanding of the relevant processes, elements, and dynamic relationships (Bogner et al., 2009). Finally, the research partners provided previously collected archival data from interviews with entrepreneurs from the selected projects. Most of the archival data was collected for the BWL insight report 2021/2022 and provides context-specific insights that complement the primarily acquired data.

### 3.3.1. Primary data: semi-structured interviews

Compared to structured interviews, semi-structured interviews offer a more nuanced perspective on the interviewee's expertise (Kallio et al., 2016). Building on the current bodies of literature and given the existing research gaps, semi-structured interviews facilitate abductive reasoning to link BMI to NBS and explain why particular conditions or elements are important (Kallio et al., 2016; Saunders et al., 2009). The group of interviewees consists of social entrepreneurs, weavers, and employees of the sample organisations. This group is characterised by practical experience in NBS and landscape restoration, specific knowledge of the local environment, and a vast network in the respective region. In addition, the practical background facilitates the interview process as the interviewees are already

familiar with the essential concepts and theoretical constructs (Suri, 2011). To conduct the interviews, a standardised interview manual (see Appendix 4).

Considering the work of the BWL collective, the interview process can be situated in the transition phase between the successful implementation of the landscape restoration projects and scaling the projects and their impacts. At the same time, this reflects the problem complication at hand as the social entrepreneurs of the sample organisations seek assistance for scaling their solutions.

### 3.3.2. Secondary data

#### Secondary interview data

The insights gained from the primary interviews are complemented by the data from four interviews conducted by two other students of the research project. These interviews correspond to four BWL partner organisations that engage in NBS for landscape restoration. An overview of all interviews conducted by the research team is shown in Appendix 5. Appendix 6 summarises the related research approaches and the RQs. The secondary interview data represents context-specific sources that additionally stem from an identical spatial setting, thereby ensuring the comparability of data. In this way, the resulting data triangulation helps to complement the outcomes obtained through primary data collection and produces more robust results (Thurmond, 2001).

#### Archival data

Stemming from previous research for setting up the portfolio of systemic innovations, the BWL team has provided archival data to the research team. It consists of sub-data from two research backgrounds. The first background refers to the BWL insights report (Müller et al., 2022). The report's appendix outlines the single restoration projects, including general information and the generated returns. The second background refers to internal research to identify systemic innovations and embodies raw interview data from the initial collaboration stage between the BWL and the restoration projects.

## 3.4. Data analysis

Corley and Gioia (2011) argue that including the relevance for practice in the research supports the scientific contribution to reach a greater scope. Regarding the diversity of NBS and the respective contexts, combining multiple perspectives is beneficial for creating robust empirical data (Okhuysen & Bonardi, 2011). Given the diversity of the nature and contexts of the landscape restoration projects as well as the perspectives and experiences of the corresponding stakeholders, thematic analysis (TA) is likely to generate robust findings (Guest et al., 2011). TA allows for systematically identifying similarities, differences, and patterns (themes) across the data (Braun & Clarke, 2012). By focusing on

overarching themes, TA allows the researcher to exploit the knowledge and experiences of the SEs and stakeholders (Terry et al., 2017).

### Thematic analysis

With the BM elements identified in the literature review serving as an orientation, TA has been applied to identify patterns in the obtained data. Concretely speaking, the Atlas.ti software for qualitative data analysis was used. The coding was carried out in two rounds: In the first round, the crucial BM elements were grasped to compile a rough and non-exhaustive illustration of the underlying BMs. In addition, barriers and enablers to scaling were identified, as well as overarching scaling strategies. Finally, the BWL's role in facilitating innovation has been investigated. In the second round, the specific scaling processes of the sample organisations were investigated by applying the social enterprise lifecycle model (see next section). This includes the identification of scaling needs and concrete elements within the overarching scaling strategies. Lastly, strategies and processes were derived to leverage the business model elements to scale impacts.

The two steps of the coding process resulted in a total of 154 first-order codes, which were condensed to 20 second-order themes and aggregated into two selective codes (Appendix 7). Further, some first-order codes were adjusted, while others without relevance regarding the RQ were deleted. The two selective codes, elements conducive to scaling, strategies, and processes to leverage business model elements, represent sections 4.1. and 4.3. of the result chapter. Figure 16 illustrates the TA.

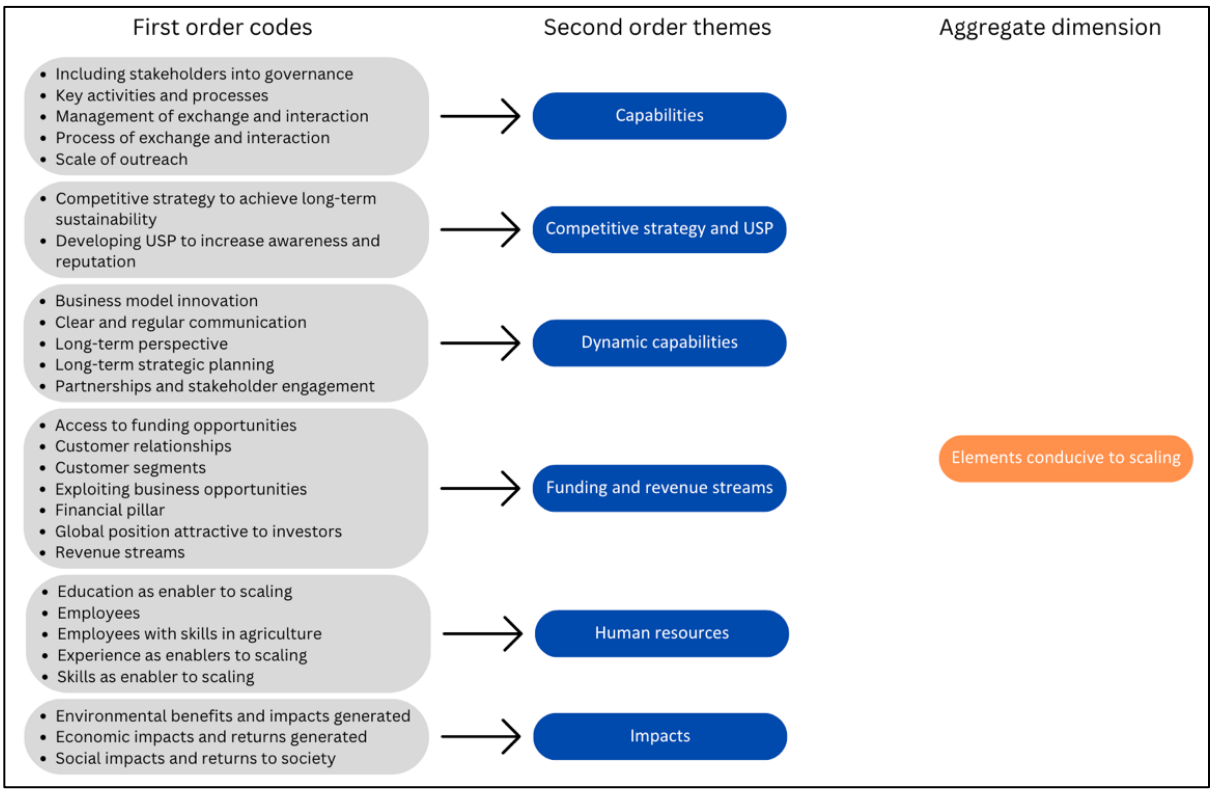



*Figure 18: Illustration of the thematic analysis*

## Social enterprise lifecycle model

To map and illustrate the scaling progress of the sample organisations, the social enterprise lifecycle model by Heinecke & Mayer (2012) has been applied (Figure 17). The curve is divided into two sections in the third phase of the lifecycle. The lower line represents an organisational scaling approach (e.g., replication or branching by the same organisation). In contrast, the upper line reflects scaling strategies pursued by organisations other than the original innovator (e.g., dissemination or open-source strategies to innovation). Finally, the intermediate area illustrates strategies that contain elements from both spectrums, such as affiliation strategies. The four phases allow for a clear distinction between projects as scaling attempts be empirically observed and determined.

From a BM perspective, analysing the underlying BM structure of multiple projects at different stages helps to develop a more detailed and nuanced understanding of the evolution of an enterprise over time. This helps to establish a link between the generation of impact and specific elements, which in turn can be contextualised to the lifecycle and scaling process of a SE. Although the model does not explicitly show which mechanisms facilitate the transition of a SE from one phase to another, mirroring the data on the model refines thinking about the model in that the lifecycle is connected to specific elements of the organisational structure. The comparison of BM elements of different organisations across lifecycle stages allows inductively deriving the mechanisms that lead from one phase to another. Thus, assigning specific elements to the different stages sheds light on how these elements can be leveraged to transition an enterprise to the next scaling phase.

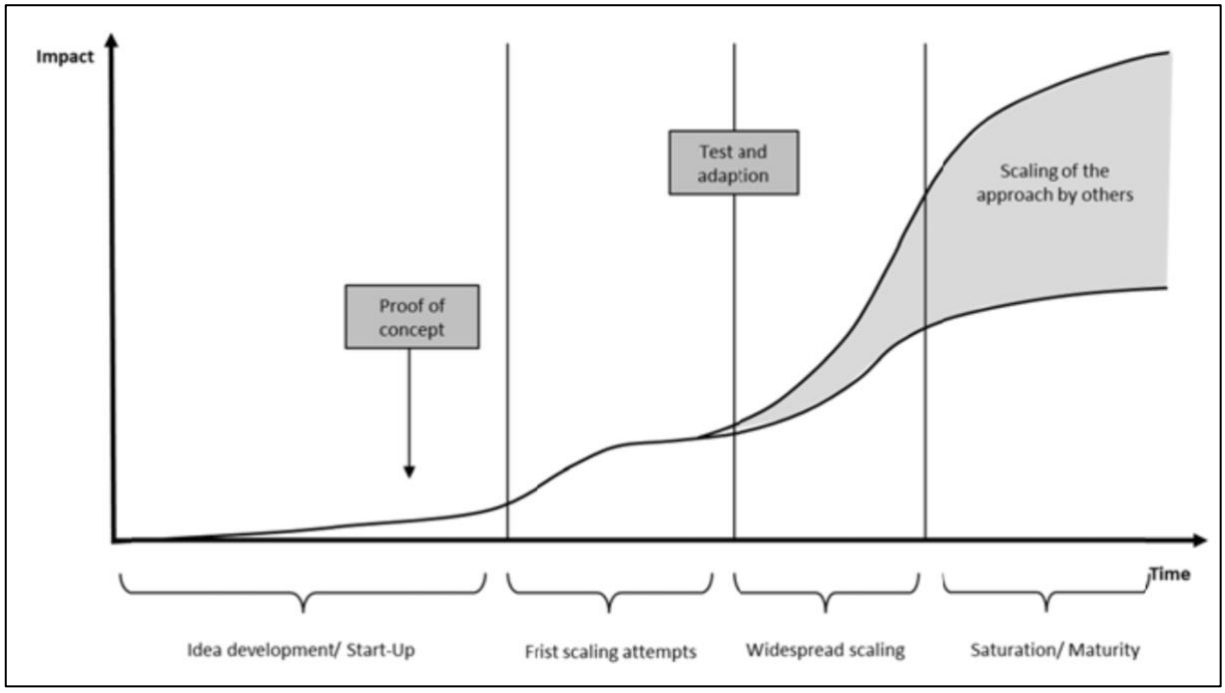



*Figure 19: The social enterprise lifecycle model (Heinecke & Mayer, 2012, p. 193)*

# 4. Results

This chapter presents the findings of the qualitative data analysis resulting from the eight interviews conducted, the four additional secondary interviews, and the archival data of the BWL insights report. These findings help to answer the SQs 2 and 3 and, subsequently, the main RQ 'How can multi-stakeholder partnerships for landscape restoration leverage the business model elements of their projects to scale environmental, social, and financial impacts?'.

The chapter is divided into three sections, corresponding to the aggregate dimensions resulting from the coding process. One additional section highlights concrete strategies to answer the main RQ. Section 4.1. presents those BM elements that are perceived as conducive to scaling. Section 4.2. links those elements to the different stages of the social enterprise lifecycle model, thereby revealing the processes and mechanisms that lead from one stage to another. Section 4.3. proposes strategies to leverage the BM elements of the sample organisations to scale impacts. For anonymity, some quotes have been adjusted. A table of all supportive quotes is included in Appendix 8.

## 4.1. Business model elements conducive to scaling

The first selective code to answer the RQ refers to those BM elements that are perceived as beneficial to scaling the innovations and their impacts. This section provides data to answer SQ2. As mentioned previously, the single elements correspond to the second-order themes of the TA.

### Capabilities

Critical capabilities that have been highlighted in the interviews are the key activities and corresponding processes. Given the high importance of the external environment and the respective context, both the management of internal and external exchange and interaction and processes of exchange and interaction are important properties of the BM to facilitate the scaling process. Regarding the value proposition, production capacity and the scale of outreach have been emphasised. While, in the context of NBS, production capacities are closely tied to environmental and social impacts, the scale of outreach was also considered an essential element in attracting partners and funding. For instance, the Savory Institute has reported that investors have positively received the global scale of its activities. Finally, mechanisms for governance (e.g., project management) and the governance of transactions were ranked among crucial capabilities.

*"That's not the easiest things but we try to integrate farmers and local stakeholder into the governance of our project. It's really not easy because they are all different. […] I think working with different persons and different stories helps to build a project that is mainly dedicated to all the issues instead of applying a project that is not updated but technically good for the territory" (Interview #36).*

### Competitive strategy and unique selling point

*"I feel that we've really gone down a path that not most of the organizations could do. So, I don't see many other organizations having 50, upwards of 50 hubs based around the world. To recommend to another organization do what we do, I don't see many other organizations having that that desire or that capacity" (Interview #30).*

Although SEs differ from commercial businesses in that competition is not necessarily perceived as a threat to the own organisation, developing a competitive strategy and unique selling points (USP) have been emphasised for various reasons. For instance, formulating a competitive strategy helps organisations take a long-term perspective and clearly outline the intended path to achieve their goals. Moreover, ambitious goals and the formulation of concrete scaling ambitions support employees, partners, and external stakeholders to identify with the organisational goals, thus strengthening internal and external alignment. Organisations can identify and access financial resources, business opportunities, and partners by distinguishing themselves from other actors in the fields. Relatedly, the development of USP sets the organisation apart and increases awareness among customers, partners, and funders. Both competitive strategy and USP increased awareness and reputation, helping organisations develop a storyline for communicating their goals.

*"There were many stakeholders working with the grasslands […] and also quite some with the cropping, but there was no one working or even thinking of working with the forests" (Interview #40)*.

### Dynamic capabilities

*"Geopark is not a protected area. It's based on the partnership and stakeholder involvement. And in the end, we obtain nature conservation by involving the local communities and visitors in our project" (Interview #34)*.

In contrast to the capabilities mentioned above, which serve as a more general set of organisational capabilities, dynamic capabilities are particularly relevant to scaling due to their benefits considering innovation. In the sample, several elements have been identified that can be classified as dynamic capabilities. First, great importance was assigned to clear and regular communication with key partners and stakeholders. This is important to communicate the story of the organisation, ensure internal and external alignment, address stakeholder demands, and reach out to potential customers. Second, a long-term perspective and corresponding long-term strategic planning are crucial to building trustful relationships with partners and stakeholders, incorporating the desired changes to the landscape, and sustaining impacts. Third, building and maintaining partnerships opens access to knowledge and resources, fostering innovation and spreading impacts. Finally, bolstering stakeholder engagement is crucial to place the organisation in its external environment and ensure that external demands align

with the organisational mission. This was reflected by the involvement of key stakeholders in the project governance.

*"The payback time is not the commercial economic payback times […] we see of a loan, like 15, 20, 30, or sometimes 50 years. But we do the payback on 500 years" (Interview #44).*

### Funding and revenue streams

*"The growth is based on these revenues" (Interview #35).*

Financial resources have been stressed in the study sample as crucial enablers of scaling. Considering funding and revenue streams, three aspects have been highlighted. First is the need to exploit business opportunities and develop diversified revenue streams to generate growth and scale resources. This presumes an organisational model that contains commercial activities. To this concern, additional elements supporting novel revenue streams are diversified activities and access to distribution channels. Considering concrete business opportunities in the sample, the development of price mechanisms for ecosystem services has been highlighted. Second and alternatively for the first aspect, a more balanced financial pillar facilitates the scaling process. In contrast to revenue, this refers to grants and donations, presuming an organisational model that relies on external funding. In particular, the cases under study have expressed a need for private donors or impact investors. This implies a balance between public and private contributions and diverse sources. To attract external funding, the scale of outreach and the organisation's reputation represent two crucial factors. Finally, both sources of income are linked to effective communication channels to communicate an organisation's mission to its suppliers, partners, customers, and funders.

*"We can't continue to operate as an organization if we don't have a financial return in the programs that we're operating" (Interview #43).*

### Human resources

*"We only have one employee and volunteers have some limits. It's impossible to scale, without resources. […] And it's also a requirement from geopark" (Interview #34)*.

Belonging to the core capacities of an organization, human resources represent both a crucial element and a requirement for scaling. This is due to the ability to carry out operations and activities. For instance, public grants are partially linked to the creation of a full-time position. Moreover, the limitations of volunteers outline that skills and experience are considered crucial aspects of human resources. In landscape restoration particularly includes skills and experience in the agriculture sector. To this concern, profound education and peer-to-peer learning are considered crucial aspects.

*"Having people who do not have a background in agriculture, and training them over a couple of months, usually is not enough. So there really needs to be a deep, consistent engagement process to build this capacity at the many different country levels that were working" (Interview #30).*

### Impacts

*"We are happy that we saved some 1000 of hectares of forest, including some primary forest of 103 hectares from our National Park, our primary forest" (Interview #34).*

Considering the scaling process of SEs, the impacts generated through pursuing the organisational mission represent essential elements. This mainly refers to social and environmental impacts and benefits in the study sample. Additionally, economic impacts are essential to generate the financial resources required to deliver social value and contribute to the economic development in the respective region. Thereby, the interconnection of economic and social impacts has been highlighted as these represent benefits to local communities.

*"Based on a number of international studies and research, we can conclude that 1 Euro invested in nature benefits 10 Euros for the local community. No banking company in the world has a better success ratio and provides better returns as big as the nature bank" (Interview #44).*

### Key resources

*"I think you could see it [holistic management framework] as a business plan, but also as a kind of a guiding model, that can be used as a business model themselves" (Interview #44).*

The organisational model, business infrastructure, communication channels, and holistic management frameworks represent key resources. The organisational model entails a sound combination of elements being adjusted to the respective context, stakeholder demands, and specific requirements to approach the mission. The business infrastructure entails departments and entities within the same organisation. To this concern, a diversified business infrastructure supports achieving the mission. For instance, the AlVelAl organisation has set up a separate entity to pursue its scaling ambitions and to coordinate corresponding efforts and collaborations with external actors. Relatedly, channels entail effective communication to make organisational activities visible, meet stakeholders' demands, and address potential customers or partners. The last aspect, holistic management, represents a vital element in the study sample. The development and implementation of holistic management frameworks have been highlighted throughout all interviews. Although the extent to which holistic management was incorporated into the organisations varied from loose principles to entirely adapted frameworks, the usefulness of managing stakeholder engagement, generating, and sustaining impacts were mentioned universally. Concrete examples are represented by the 4-Returns framework, the reconnection model of Hoge Kempen, and the holistic approach by the Savory Institute. Essential

aspects of holistic management included a spatial sub-division of the area of organisational influence. The resulting spheres facilitate the generation and measurement of impacts and separate stakeholders spatially, allowing for effective tension management. In addition, holistic management embeds the competitive strategy, social mission, and the theory of change into the organisational structure.

*"AlVelAl decided to use the 4-Returns framework (3 zones, 20 years) developed by Commonland. This framework is for holistic landscape restoration. It's to create a systemic change on the territory by using landscape restoration and the 4-Returns framework" (Interview #32).*

### Networks and partnerships

*"We are not just alone but together with very big important organizations, companies, and people. This is the power of the network" (Interview #36).*

NBS are, by definition, embedded into local communities and aim to collaborate with diverse stakeholders (Cohen-Shacham et al., 2016). As a result, all sample organisations were characterised by networks with external stakeholders and partners that varied across local, regional, national, and international levels. These ties between the internal and the external environment reflect an extension of the organisational value network and provide multiple benefits. With the BWL consisting of diverse actors from different fields, its partner organisations enjoy the benefits of interdisciplinary collaboration and multiple perspectives. In particular, exchanging experience and knowledge is an enabler of scaling. As a result, the portfolio of systemic innovations is vital as it offers the members best-practice examples and concrete solutions that can be implemented in different contexts. The multi-stakeholder partnership benefits from the mutual experience and provides many business cases and models. Open-source approaches ensure the outspread of knowledge and take a systemic lens on innovation. Moreover, the multitude of actors involved increases the awareness and reputation of the single organisations and the BWL. This opens avenues for further collaborations and grants access to various potential partners. Finally, the holistic approach to partnerships and networks presumes an openness to collaboration and an appreciative attitude toward collaboration.

*"It [multi-stakeholder partnership] provides multiple […] benefits, perceived benefits for a largest as possible number of stakeholders" (Interview #40).*

### Vision and theory of change

*"The head of the company has to have some vision and has to have some energy to push the company forward" (Interview #5).*

Exceeding the organisational mission, the presence of a vision and theory of change positively influence the scaling process. Concretely speaking, this includes ambitious goals and scaling ambitions. Firstly, ambitious goals, equivalent to a vision, represent sources for identifying actors within and

outside an organisation. This creates a common sense for the mission and a source of inspiration. Ambitious goals do not necessarily have to be achievable by the organisation itself but rather serve as a tool that places the organisational activities into a bigger picture. Secondly, the formulation of scaling ambitions fosters the development of a pathway for approaching the formulated goals. Scaling ambitions also represent a concretisation of the overall vision and offer a vehicle to communicate the mission to external stakeholders.

*"Creating the first regenerative country in the world […] is our dream (Interview #32).*

## 4.2. Crucial business model elements in the social enterprise lifecycle

Based on the findings presented in the previous section, this section links the conducive elements to the different stages of the social enterprise lifecycle model (section 4.2.1.) (Figure 18). This sheds light on the functions of BMs and corresponding elements for scaling the impacts of SEs. Additionally, linking BM elements to the lifecycle of SEs helps to identify the relevant processes and mechanisms associated with scaling. The specification of the mechanisms that facilitate the transition in the scaling process, in turn, helps to answer SQ3 and, subsequently, the main research question. Finally, the stage model for scaling NBS is introduced to grasp and illustrate these mechanisms (section 4.2.2.).

### 4.2.1. Placing crucial business model elements into the single stages

This section maps the sample organisations on the social enterprise lifecycle model (Figure 18) and connects the conducive elements presented in section 4.1. to the different stages of the scaling process. A summary of the conducive elements concerning the different stages of the lifecycle is shown in Table 4.

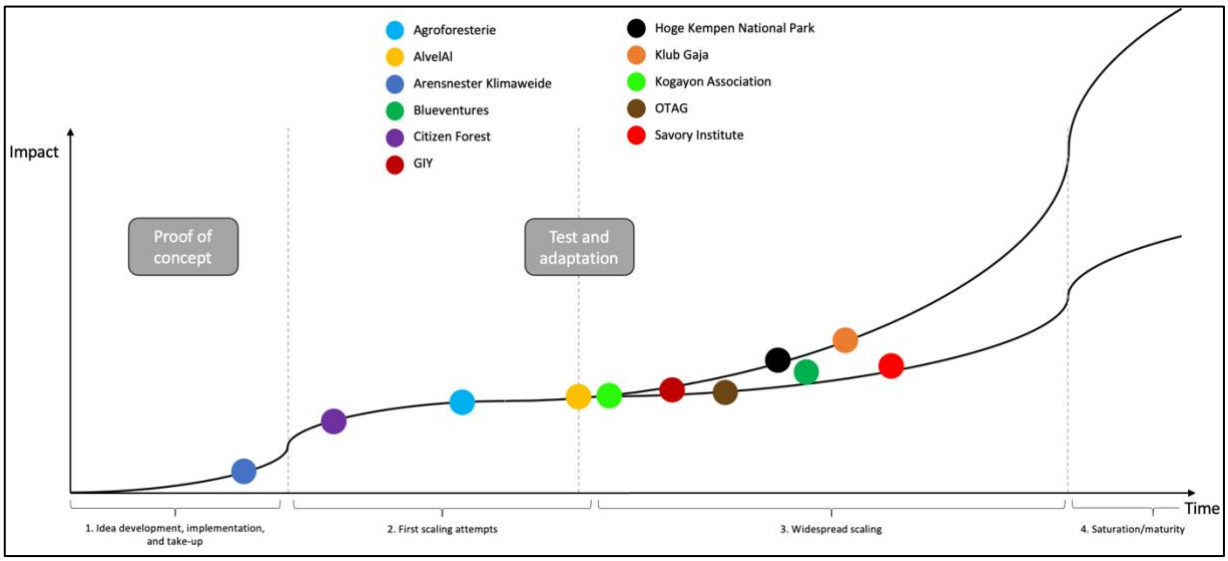



*Figure 20: Sample organisations in the social enterprise lifecycle model (Derived from Heinecke & Mayer, 2012, p. 198)*

### Prerequisites and assumptions

NBS draw on community engagement to achieve their goals. In the study sample, this condition is reflected by the fact that all initiatives had networks and partnerships with external stakeholders. The nature of the interconnections and composition of these networks and partnerships, however, vary along the different lifecycle stages.

According to Rittel and Webber (1973), GCs like climate change, biodiversity loss, or land degradation are characterised by their uniqueness, interrelatedness with other problems, absence of an ultimate test of a solution, and a lack of an enumerable set of potential solutions. Hence, there is no "stopping rule" (Rittel & Webber, 1973, p. 162) for attempts to address GCs. In addition, given the complexity and persistence of GCs, it is nearly impossible to determine when such a related issue is solved (Lazarus, 2008). For companies seeking solutions to GCs, it is difficult to determine when these companies reach their maturity phase (Heinecke & Mayer, 2012). Considering the study sample, this complication is reflected by the fact that no organisation has been placed into the saturation/maturity stage of the lifecycle model. Next to the persistence of the issues these organisations seek to tackle, the absence of any NBS in the maturity stage can be justified by the fact that all organisations are still developing regarding the scaling process. More specifically, even the most advanced sample organisations are currently developing and implementing concrete scaling strategies and are thus going through phases of organisational development rather than maturity.

### Stage 1: Idea development, implementation, and take-up

One study sample project is located in the first stage of the lifecycle model (Figure 18). Although Arensnester Klimaweide has a diversified portfolio of activities, a loose organisational structure characterises the organisation, few revenue streams (grants), network relationships on the local ground, simple communication channels, and sporadic exchange with stakeholders. Although the initiative draws on holistic management principles for regenerative agriculture, no explicit theory of change has been formulated, nor has a holistic management framework been implemented or developed. As a result, there are no ambitions and efforts to scale the initiative, and the current lifecycle of the projects corresponds to proof of concept.

### Stage 2: First scaling attempts

Compared to Arensnester Klimaweide, the two projects in the second stage (Figure 18), Agroforesterie and Citizen Forest, are characterised by more profound organisational resources and capabilities, networks that reach beyond the regional level, including international partners and more diversified revenue streams. Considering the latter, the financial pillars of these two projects majorly rely on public grants but also entail partnerships with a wider network of donors and ties with the business sector. Moreover, both organisations developed aspects that can be attributed to a theory of change and formulated scaling ambitions. However, both reputation and awareness about the projects are

currently limited. Because of this lack of reputation and limited financial resources, both organisations have pursued first scaling attempts by forming partnerships with regional organisations and implementing additional projects on a local level.

Interestingly, despite being placed between the second and third lifecycle (Figure 18), the AlVelAl organisation shows one of the most developed organisational structures. This includes a diversified value proposition, various revenue streams, and unique resources and capabilities compared to other organisations. In addition, AlVelAl has a wide network of international partners and strong ties to businesses and organisations on an interregional level. Its position in the lifecycle model can be explained by its strong focus on the Iberian Peninsula, primarily on Spain and secondarily on Portugal. Consequently, AlVelAl is scaling by disseminating knowledge and forming partnerships with regional farmers and organisations in the Southeast of Spain.

### Stage 3: Widespread scaling

Starting with AlVelAl, all organisations situated in the third stage (Figure 18) are characterised by clearly developed organisational structures, strong links to external stakeholders, and regular communication through several channels, vast networks, and influential partner organisations on an international level, as well as competitive strategies and USP. In addition, these organisations have diversified their revenue streams depending on the financing model. On the one side, organisations relying on external funding (Klub Gaja, Kogayon, Hoge Kempen, Blueventures) showed a mix of public and private grants. Conversely, organisations focusing on commercial earnings (GIY, Savory Institute, OTAG) showed a broad portfolio of activities and linked their revenue streams to distribution channels. The differences in funding also explain why these organisations chose different scaling strategies. Moreover, all organisations in the third stage have formulated concrete scaling ambitions and developed explicit theories of change. In addition, the most advanced organisations on the far-right side have implemented holistic management into their organisations.

As mentioned earlier, the division of the curve into two separate lines corresponds to different scaling approaches, namely dissemination and organisational scaling. Good examples of dissemination approaches are Hoge Kempen National Park and Klub Gaja. These organisations have managed to attract grants from both public and private sources to balance their financial pillar. Although to a lesser extent, the two organisations generate revenue through tourism services (Hoge Kempen) and business cooperation (Klub Gaja). Nevertheless, the reliance on external funding results in open-source approaches to scaling. On the other side of the spectrum, the Savory Institute and GIY represent examples of organisational-driven scaling strategies. This can be explained by more profound financial resources from commercial activities. A mix of both sides of the spectrum can be identified at Blueventures, Kogayon Association, and OTAG. While the chosen strategy of Blueventures can be

explained by the niches it operates in, the remaining two organisations have income sources from both external sources and commercial activities.

| Lifecycle stage | Business model element | Processes and strategies |
|---|---|---|
| **Stage 1**: Idea development, implementation, and take up | Communication channels and links to external stakeholders | Developing communication channels and establishing links to external stakeholders to reach the target group, communicate the social mission, and increase awareness. |
| | Financial pillar and revenue streams | Developing a financial pillar, respectively, revenue streams. Depending on the funding model, this entails access to grants or developing commercial revenue streams. |
| | Network | Establishing a network with stakeholders on the local level. This helps to embed the organisation into its external environment, opens access to resources and knowledge, and increases awareness about the mission. |
| **Stage 2**: First scaling attempts | Distribution channels | Accessing distribution channels to offer the products or services to the target group. |
| | Financial pillar and revenue streams | Diversifying the financial pillar and revenue streams. Given a reliance on public grants, this entails reaching out to a broader network of donors and establishing ties with the business sector. Considering commercial revenues, this entails the generation of additional earnings through offering additional products or services. |
| | Key activities and value proposition | Diversifying the portfolio of activities, the value proposition, and the portfolio of products and services. This broadens the scope of operations, generates additional income, and builds reputation. |
| | Networks | Extending networks from the immediate environment toward the regional and national domain to obtain support and guidance, disseminate knowledge, spread innovation, and increase awareness and reputation. This should entail an openness to collaboration. Concretely, this could be sector-wide or industry-specific networks. |
| | Partnerships | Setting up partnerships that exceed the local level toward the regional and national level, particularly with the business domain. |
| | Resources and capabilities | Diversifying the business infrastructure by establishing different departments with clear responsibilities and a clear task division. Development of own methodology that addresses the context and stakeholder demands. Adopting or developing key capabilities and technologies to provide products and services and embedding the theory of change into the organisation. |
| **Stage 3:** Widespread scaling | Competitive strategy | Developing a competitive strategy including ambitious goals, ambitions to scaling and USPs to set the organisation apart. |
| | Dynamic capabilities | Implementing clear and regular communication channels with clients, partners, and stakeholders. Integrating long-term strategic planning |

| | | |
|---|---|---|
| | | and strong stakeholder engagement (e.g., integration of stakeholders into the management of projects) into the management. |
| | Financial pillar and revenue streams | Balancing the financial pillar by diversifying the revenue streams. In the case of reliance on external funding, this entails the creation of a balance between public and private funding. Reliance on commercial revenue means exploiting business opportunities to diversify revenue streams and create financial stability and resources for organisational or ecosystem growth. This should be complemented by accessing additional channels. |
| | Links to external stakeholders | Ensuring strong links to external stakeholders through stakeholder engagement (e.g., integration into the management of projects). This is crucial to develop a storyline and communicate the change theory. |
| | Management of exchange and interaction | Effectively managing communication channels and establishing a regular frequency of interaction with clients, partners, and stakeholders. |
| | Networks | Extending networks from the regional or national level to build strong international networks with multiple stakeholders and influential partners. |
| | Partnerships | Collaborating with public authorities and engaging in multi-stakeholder partnerships. Depending on the funding model, establishing strong ties with the private sector, respectively business sector. |
| | Resources and capabilities | Creating organisational resources and capabilities that support the achievement of goals and scaling. This entails developing and embedding frameworks for holistic management into the organisation. |

*Table 5: Categorisation of crucial business model elements into the stages of the lifecycle model*

### 4.2.2. Transition processes from one lifecycle stage to another

Assigning the sample organisations to the stages of the lifecycle model creates a link between the conducive elements and the different stages of the scaling process. Moreover, this provides the basis for identifying connections and interrelations between these elements. From these connections and interrelations, processes and mechanisms can be derived that lead from one stage to another. In this way, this section addresses the literature gap regarding concrete elements and mechanisms for scaling (Fastenrath et al., 2020; Håkanson, 2021).

#### Stage 1: Idea development, implementation, and take-up

***Crucial elements**: communication channels and links to external stakeholders, financial pillar and revenue streams, network*

In the first stage of the social enterprise lifecycle, three crucial processes can be identified that facilitate the transition to the second stage. First, building networks grounded in the organisation's immediate environment and the regional level is important for communicating the mission, increasing awareness, and gaining access to resources and knowledge. Second, developing effective communication channels and establishing links to external stakeholders further connect the

organisation with its external environment and ensure that stakeholder demands are met. Third, defining core activities forms the basis for developing revenue streams, respectively, the organisation's financial pillar. Depending on the funding model, this entails applying for grants, approaching investors, or developing commercial revenue streams.

### Stage 1 to stage 2: From idea development, implementation, and take-up to first scaling attempts

***Crucial elements**: Distribution channels, financial pillar and revenue streams, key activities and value proposition, networks, partnerships, resources and capabilities*

Six supportive processes have been identified in the transition from the first to the second stage. It is important to note that none of these should be regarded in isolation but rather as processes that support and complement each other.

To proceed in the scaling process, formulating a mission statement and theory of change represent crucial steps as these result in a story that can be communicated to external stakeholders. In addition, a storyline sets the organisation apart and increases awareness. To this concern, channels and instruments for effective communication need to be developed and implemented. The networks formed in the first stage should be extended from the immediate environment toward the regional or national level. Relatedly, entering and forming new partnerships provides access to additional knowledge and resources and further increases organisational outreach. In the previous step, the diversification of activities has already set the ground for diversifying revenue streams. In the second stage, business opportunities must be identified and exploited to generate financial resources and form a USP. While the financial resources allow for growth and scaling strategies, a USP increases the reputation and awareness of the organisation. Given a grant-based funding model, a USP is conducive to attracting additional funding.

### Stage 2 to stage 3: From first scaling attempts to widespread scaling

***Crucial elements**: Competitive strategy, dynamic capabilities, financial pillar and revenue streams, links to external stakeholders, management of exchange and interaction, networks, partnerships, resources and capabilities*

To proceed from the second to the third stage, extending networks to the international domain represents a crucial first step. This increases the outreach and reputation. Having influential allies also helps overcome barriers to scaling (e.g., institutional or political barriers) and provides orientation and best-practice examples through exchange and interaction. In addition, forming partnerships with private and business actors provides access to resources and knowledge. From an organisational lens, the theory of change should be embedded into the organisational structure. This ensures internal and external alignment by helping employees, partners, and actors within the network to identify with the mission. Ultimately, developing a framework for holistic management and integrating it into the

management effectively facilitates the scaling process. For instance, as illustrated by the 4-returns framework, dividing the area of influence into different zones allows for focusing on strong impact generation in the respective zones. Additionally, this defines the scope of action and provides a spatial basis for impact measurement. As mentioned earlier, distinguishing between different zones also separates stakeholders spatially, allowing for effective tension management.

### 4.2.3. The stage model for scaling NBS

The processes identified in the previous section have been consolidated into two overarching scaling mechanisms to address the knowledge gap on scaling mechanisms further. In the resulting stage model for scaling NBS (Figure 19), these two mechanisms facilitate the transition in the scaling process. The

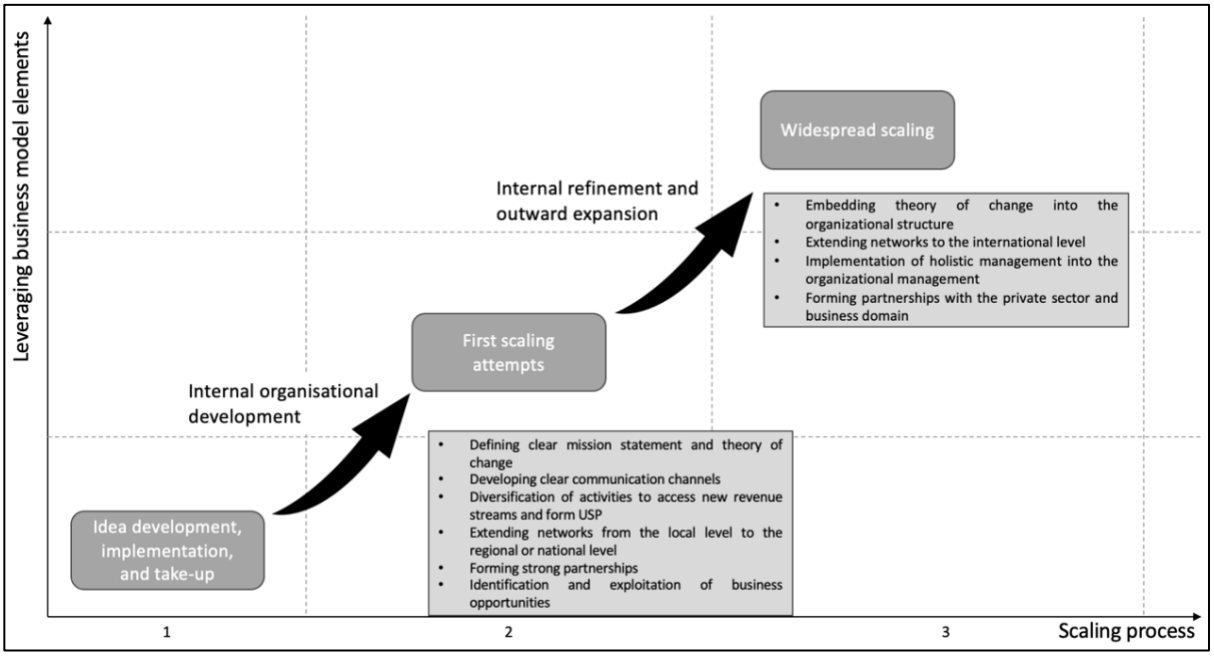



*Figure 21: The stage model for scaling NBS*

two scaling mechanisms and the subordinate processes should not be considered in isolation but complementary for successful scaling. The decision about integrating these processes into an organisation should be made after a thorough analysis of the respective organisational structure and based on existing processes. Relatedly, the order in which these processes are implemented may vary due to differing objectives and priorities. The following sections explain the two main scaling mechanisms and outline complementarities and potential priorities between the subordinate processes.

#### Mechanism 1: Internal organisational development

The first scaling mechanism of internal organisational development contains six subordinate processes (Figure 19). In the social enterprise lifecycle model, the first mechanism facilitates the transition from the first to the second stage. An important underlying assumption is that an idea has already been

developed and embedded into an organisational form, providing the starting point for further development.

Between the take-up and the first scaling attempts, it is essential to focus on the internal development of an organisation. This entails optimising existing processes, using resources more efficiently, and sharpening the organisational profile. This can be realised by defining a clear mission statement and integrating the mission and the operational aspects into a theory of change. This first process should be complemented by the second process of developing effective communication channels, for internal communication and communicating the mission and theory of change to external stakeholders. From an operational perspective, the third process of identifying and exploiting additional business opportunities contributes to the diversification of the organisational activities and the generation of financial resources. Following amplifying revenue streams, the third process ideally promotes the development of a USP. Subsequently, existing networks should be extended from the local level to the regional or national level and complemented by strong partnerships. In this regard, the second-mentioned process of developing effective communication is essential and should be implemented beforehand.

### Mechanism 2: Internal refinement and outward expansion

The second scaling mechanism of internal refinement and outward expansion facilitates the transition from the second to the third stage of the lifecycle model. It entails four subordinate processes. Depending on the organisational capabilities, resources, and structure developed until this point, the main objective of this mechanism is to refine these aspects and further turn the perspective towards the external environment by extending networks and partnerships.

A theory of change has already been developed throughout the first scaling mechanism. In the transition from the second to the first stage of the scaling process, this theory of change should be embedded into the organisational structure. A well-developed theory of change provides a sound basis for implementing holistic management into the organisation and should therefore be prioritised. To this end, holistic management describes a specific framework for performing operational tasks and guiding decision-making tailored to the organisation and its external environment. Holistic management facilitates efficient management of multi-layered complexities that stem from the need to align an organisation with its environment and stakeholder demands. Finally, existing networks should be extended to the international level. Depending on the financial pillar and revenue streams, this process is complementary to forming partnerships particularly with the private sector and business domain.

Regarding the first scaling mechanism, the four processes and their interrelations embodied by the second mechanism further tailor an organisation to achieving its social mission and meeting

stakeholder demands. In this way, the second mechanism sharpens the organisational profile and extends the scale of outreach, further advancing the scaling process.

## 4.3. Strategies and processes to leverage business model elements

As highlighted in the previous section, defining a mission and developing a theory of change are crucial processes to proceed from the first to the second stage of the social enterprise lifecycle. Ideally, this is complemented by developing communication channels and formulating a storyline that can be signalled to external stakeholders. In addition, organisations should seek the extension of their networks and partnerships beyond the immediate environment toward the wider region. This increases outreach and awareness and strengthens the link between the organisation and external stakeholders. To arrive at the third phase of the lifecycle, networks and partnerships should be subsequently extended to the national and international levels. In addition, a theory of change should be embedded into the organisation, helping employees and partners align with the vision. Finally, implementing holistic management brings multiple benefits and is, therefore, highly conducive to scaling.

The subsequent transition from the first to the third stage of the scaling process is facilitated by the two mechanisms of internal organisational development and internal refinement and outward expansion. In addition, and complementary to these mechanisms, the following sections present several processes and strategies for organisations that develop NBS for landscape restoration, particularly considering the BWL and its partner organisations, to leverage their business model elements to scale impacts.

### 4.3.1. Adopting weaving practices

*"And another point that is very important is […] when you bring that landscape, you connect the dots" (Interview #30).*

The concept of weaving is a central aspect of the work of the BWL and its partner organisations. Incorporating weaving practices into the key organisational processes is valuable for two reasons. First, weaving is conducive to internal alignment. This means that the alignment of internal actors of an organisation potentially overcomes internal barriers to scaling (e.g., divergent mindsets) by developing a shared mindset and creating a sense of community. Second, weaving helps to align the diverse actors within a landscape, placing an organisation into its external environment and establishing links to key stakeholders. In this way, the practice of weaving builds trust between diverse actors, which in turn fosters collaboration and long-term-oriented relationships.

*"So, I think that the most barrier is to make sure that we all understand our different worlds and a different way to work. […] They also have to understand our way to sell the project. And we have to*

*understand how they sell the projects and what kind of relation they have with the investors and other production funds themselves" (Interview #36).*

### 4.3.2. Developing a vision and theory of change

*"Because one of the problems we have here is that people, even from the territory, don't know us. I mean, they maybe know our partner companies, but they don't know the story behind it" (Interview #35).*

Considering the advanced stages of the lifecycle model, the presence of a vision and theory of change has shown to be conducive to scaling. Not only do these define a horizon overarching the organisational activities and shape a pathway to realise the intended change, but they also provide a source of identification to the internal people of an organisation as well as external stakeholders and partners. As found empirically, those organisations that had clearly defined a vision and scaling ambitions could align their organisations internally and externally and efficiently tailor their key processes to achieve their goals. A theory of change (Figure 20) typically builds upon five aspects: inputs, activities, outputs, outcomes, and impact (Grieco et al., 2015). These aspects reflect the essential organisational layers and place them into the broader ecosystem.

*"The first step is really […] to be out there […] in that […] bioregion and observe it with as much as possible neutrality. Putting your assumptions, ideas, ideals, political views, whatever aside and trying to understand what's happening here. And after that you add your, let's say vision, about the bioregion". (Interview #40)*

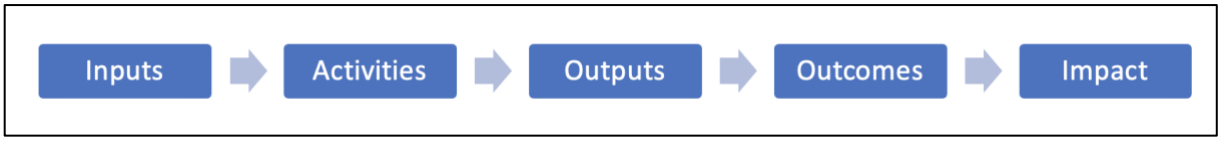



*Figure 22: Typical elements of a theory of change (Derived from Grieco et al., 2015)*

### 4.3.3. Developing a competitive strategy and USP

*"We have to make sure that when they receive our projects, they know who we are, how we work, what kind of partnership we are able to build, what kind of scale we are able to reach" (Interview #36).*

The development of competitive strategy and USPs represent crucial scaling processes for several reasons. For instance, formulating a competitive strategy is closely tied to dynamic capabilities as it contributes to long-term strategic planning. A long-term orientation embedded into a concrete strategy is crucial for achieving long-term sustainability. USPs help to build a reputation and increase awareness about an organisation. Moreover, a USP sets an organisation apart from other actors in the field, helping attract potential allies, partners, customers, and funders. In this regard, the BWL portfolio of systemic innovations provides best-practice examples for inspiration and orientation.

*"20 years ago, there was just one NGOs set up by students with crazy idea and science fiction desires. But now a lot of supporters from the community stay together with us" (Interview #34).*

### 4.3.4. Developing concrete scaling strategies

*"We were typically more of an open innovation company. So, we operate from the kind of the concept of abundance. There's lots of land out there, there's lots of land that needs to be regenerated. There's lots of business opportunities out there. And we feel that the more we grow, and we share, the more opportunities will come to us at the same time" (Interview #30).*

Drawing on the capacities and ambitions of an organisation, the development of concrete scaling strategies represents a crucial step in the scaling process. Thereby, potential scaling strategies should incorporate the main organisational characteristics and strengths. Two factors influencing the development of scaling strategies are the organisational funding model and the external context, which includes political, legal, economic, and cultural aspects. While the funding model influences the availability of financial resources for scaling, the external context determines the outspread of information and the reception by other actors. A mix of the traditional scaling strategies presented in the literature review (2.6.) has been identified in the study sample. On the one hand, organisations with a commercial revenue approach tended to pursue an organisational scaling approach by adopting affiliation and branching strategies that build on the financial viability of the business model. Concrete examples are membership models and transforming the organisation toward a cooperative. On the other hand, organisations that relied on external funding were more likely to scale through open-source approaches to disseminate innovation or lose forms of affiliation to stimulate the growth of the broader organisational ecosystem. In developing concrete scaling strategies, the BWL portfolio of systemic innovations provides best-practice examples that serve as orientation.

*"I always say that our strategy is to adapt to different contexts to scale the innovation and to fit exactly to the needs of the context and of the farmers" (Interview #36).*

### 4.3.5. Diversifying activities and revenue streams

*"The main challenge now is to find the resources to develop a diversity of activities because we started as a conservation organisation. […] We are at a moment where we want to put the price for some services to sell them. And with this money we want to develop our ideas […]" (Interview #34).*

To develop a portfolio of products and services that helps to approach the social mission and simultaneously generate the financial resources for scaling, the diversification of activities and revenue streams represents a critical process. To this concern, identifying and exploiting business opportunities is vital. In the study sample, the growing carbon market and cooperation with businesses that seek to tackle environmental issues were mentioned as future opportunities. In this context, organisations

must be aware of potential threats from misleading business practices. For instance, it has been stated that uncertainty around the carbon market leads to destabilisation in the domain of NBS. Relatedly, corporate actions aiming at greenwashing should be avoided. On the contrary, promising business opportunities were represented by corporations that seek sustainable supply chains, pricing schemes for ecosystem services, or providing training and consultation. Diversifying activities and revenue streams ultimately sparks the potential to overcome barriers of scaling (e.g., financial constraints due to limited resources). Furthermore, it has been stated that a more diversified product and revenue portfolio is more attractive to investors. Finally, potential revenue streams should be connected to distribution channels that can be accessed organically or through partnerships.

*"About the private sector, I think we have to strengthen our ability to mobilize the private sector because for the moment we've got the opportunity to get money from these companies" (Interview #36).*

### 4.3.6. Reaping the benefits of multi-stakeholder partnerships

"I like this way of working very much, to take the wheel invented by another guy in another place of the world and trying to do better in my region" (Interview #34).

Related to exploiting business opportunities, organisations of multi-stakeholder partnerships such as the BWL should seek to reap the benefits of collaboration. In the context of the BWL, this entails two aspects. First, the BWL portfolio of systemic innovations provides a selection of concrete business cases that serve as best-practice examples in different contexts. The partner organisations can use this portfolio to acquire knowledge and orientation for new activities. Concretely speaking, the BWL could moderate opportunities to engage in the carbon market. Given the current uncertainty around the carbon market, the BWL could provide information to build trust and ensure transparency. Within their landscapes, partner organisations can then explore potential carbon market opportunities and identify key stakeholders. In addition, BWL partner organisations (e.g., Hoge Kempen National Park and Kogayon Association) have already gained knowledge and experience considering ecosystem services. Considering NBS for landscape restoration, this represents precious knowledge as ecosystem service providers could capitalise on the financial gains in addition to the environmental benefits. Second, the BWL takes a holistic perspective on systemic innovation and offers tools for holistic management (e.g., the 4-Returns framework). As shown in 4.1., the implementation of holistic management embodies a powerful mechanism for the scaling process. Individual organisations can thus learn from best-practice examples of their partner organisations and acquire knowledge to develop a framework adapted to the respective landscape.

*"The good thing is of course that every model or project that is included in the Bioregional Weaving Labs is tested and successful at least in one country, but often in more countries" (Interview #44).*

### 4.3.7. Improving BWL benefits

*"They [BWL] are able to give me a strategy and tools. But still the situation in my country can be different in some places. And this is not easy" (Interview #31).*

To improve the support for its partner organisations, the following processes would help the BWL to improve its services. First, building a network on the local level is a crucial mechanism for the scaling process. It has been stated that the primary focus of the BWL lies on the landscape level (see Appendix 6, 4.3.7.). To this concern, the BWL could strengthen its ties on the local ground within the bioregions to help early-stage enterprises gain a foothold and integrate into the landscape. For instance, this could entail access to distribution channels or supply chains. Second, language and communication barriers represent an obstacle to the effectiveness of BWL collaboration. This was particularly true in countries where English is yet to become an integral part of the work culture. Additional complexity arises when only a few partner organisation members speak English, act as contact persons, and must translate for the rest of their organisation. Therefore, offering tools in different languages and overcoming these language barriers should be prioritised.

*"A very important one [barrier] is the language. […] I am the only person who speaks English. So sometimes it's difficult because everything is in English" (Interview #32).*

### 4.3.8. Strengthening the business model

*"I think it'd [the scaling strategy] be […] looking for a strong business model" (Interview #30)*.

From a BM perspective, concrete scaling needs mentioned in the interview process are HR capacity, specific knowledge and experience requirements to HR, adapting methodologies and tools, experimentation, and developing a clear value proposition. Two concrete processes to strengthen the BM mentioned by the interviewees are developing frameworks and tools for holistic management and providing education and training (e.g., regenerative practices) to employees. As stated by the Savory Institute, a global scale of activities was highly attractive to funders, while a clear communication of the value proposition represented a conducive element to scaling.

*"So, we need the business to support this, to make this profitable because it's necessarily to really restore the landscape" (Interview #32).*

### 4.3.9. Strengthening networks

*"Because if we want to change something on this level, the environment, and the future of the planet, and our life, I need contacts with people and try to explain them, why we do it and why it is important for us" (Interview #31).*

In the sample, networks were efficient factors in overcoming barriers to scaling, such as predominant mindsets, heterogeneity of stakeholder demands, legal barriers, institutional barriers to holistic management, or industry-specificity. Thereby, the political context was of particular importance. For example, networks have effectively overcome institutional barriers (lack of a culture of cooperation) in ancient communist regimes. This is because the combined efforts of multiple partners helped to overcome the lack of support on the local ground. Networks can also provide access to resources where there is a lack of public support in terms of funding. Typical scaling strategies closely related to networks are dissemination and open sourcing. These approaches helped to increase awareness and build a reputation. Hence, organisations can advance in the scaling process and spread innovation by strengthening their networks.

*"Built the network […], it's hard work, I must say. It's not a nine to five job. It's an everyday 24/7" (Interview #44).*

### 4.3.10. Strengthening partnerships

*"In my opinion, it is impossible to develop some areas without working together with all kinds of stakeholders, academics, civil society, politicians, businesses" (Interview #34).*

Diverse actors characterised the partnerships identified in the sample. These partnerships have been considered effective in overcoming the increased complexity that stems from scaling due to sharing a common pool of expertise and experience. Considering potential approaches to partnerships, the importance of bottom-up communication, the external environment, and working with agriculture have been highlighted. Sample organisations with strong partnerships typically pursued affiliation strategies. Thereby, particular importance was given to partnerships with research institutes to collect data and spread knowledge to stimulate a mindset shift. As stated by Blueventures, partnerships also positively influence the scaling process of organisations that operate in small niches, which are bound to operate locally and thus express needs for collaboration due to limited resource availability. Thus, strengthening partnerships not only facilitates the scaling process of the own organisation but also spreads benefits across the network of partner organisations. This is further illustrated by actions that aim to increase stakeholder independence by providing training and management tools.

*"Scaling through local partner organizations is our approach rather than through direct delivery". (Interview #33)*

# 5. Discussion

This chapter discusses the findings presented in the previous section considering the current scientific literature, critically reflects on limitations and offers implications for future research and practitioners. Section 5.1. outlines the theoretical contribution. Section 5.2. links the findings to the current literature and past contributions. Section 5.3. addresses the limitations of the present study and discusses their impacts on the findings. Section 5.4. then discusses avenues for further research, while section 5.5. outlines implications for practitioners and the BWL particularly.

## 5.1. Theoretical contribution

The results of the study contribute to theory in several ways. First, linking BM elements to the scaling process generally provides insights into the functions and role of BMs for upscaling SEs (Bocken et al., 2018; Ciulli et al., 2022; Schaltegger et al., 2016a). Although scholars have investigated the scaling process of NBS in general, linking concrete BM elements to the scaling process represents, to the author's knowledge, a novel contribution to the field of NBS and the sub-domain of landscape restoration. In this way, the present study connects the two previously distinct works of literature on BMs and scaling NBS. This connection addresses the lack of research on elements conducive to scaling NBS (Håkanson, 2021), particularly regarding the compositional elements of organisational models. Moreover, the set of conducive elements (section 4.2.) contributes to the development of SBMs for tackling GCs and delivering sustainable impacts (Bocken et al., 2018; Dentoni et al., 2021; Geissdoerfer et al., 2018; Schaltegger et al., 2016a), particularly models that facilitate the scaling of NBS (Lüdeke-Freund et al., 2019; Schaltegger et al., 2016b). Second, studying organisations across different stages of the scaling process reveals mechanisms that facilitate the transition from one stage to another (Fastenrath et al., 2020). The empirical evidence provides concrete examples of how this plays out in practice. Although specific to landscape restoration, these findings can be generalized to the broader domain of NBS and, subsequently, to the broader field of social entrepreneurship. The introduced stage model for scaling NBS represents another novel contribution and offers a starting point for future research. Finally, mapping the sample organisations on the social enterprise lifecycle model draws a holistic picture of the scaling process and more adequately unfolds the interconnectedness of processes and elements associated with scaling (McQuaid et al., 2021; O'Reilly et al., 2023).

## 5.2. Linking the results to the current literature

Regarding SQ2 of the study, the nine identified BM elements conducive to scaling are capabilities, competitive strategy and USP, dynamic capabilities, funding and revenue streams, human resources, impacts, networks and partnerships, resources, and vision and theory of change. These elements stem from organisational layers, including compositional, operational, strategic, and external factors. In this way, the elements represent a multi-faceted reflection of an organisation. Linking these elements to

the stages of the SE lifecycle and deriving concrete scaling strategies has yet to be pursued to the author's knowledge and thus represents a novel contribution. In addition to the nine conducive elements, ten processes and strategies to leverage these elements have been presented. These recommendations are discussed in the following.

In their theses on NBS, Håkanson (2021) and Hussain et al. (2023) have highlighted the conduciveness of adopting weaving processes to scaling. The findings of the present study further qualify this potential. Moreover, the benefits of implementing weaving resonate with the work of Müller et al. (2022), who argue that weaving contributes to an organization's internal and external alignment and thereby embeds the organisation into its broader ecosystem. This further resonates with robust action, which describes an evolutionary learning process that leads to developing new understandings and novel approaches (Ferraro et al., 2015). Rather than arriving at a final solution, the weaving process fosters continuous participation and sustains long-term oriented engagement.

The need for concrete and context-specific methodologies for landscape restoration has been outlined by Holl et al. (2013). As vision and theory of change are conducive to scaling, developing these elements represents a crucial strategy. This is particularly useful in landscape restoration, as changes to the landscape are typically realised in the long term. Representing a prominent example of a theory of change, Scharmer (2009) introduced Theory U to capture processes aiming to trigger systemic change. Theory U represents a framework that holistically describes the process of change and implies a mindset that builds on a deep awareness of considering systems in their entirety. Because of the presumed holistic perspective, Theory U has been adopted in numerous initiatives around the globe that strive for systemic change. As a result, the BWL has adopted Theory U as one of its guiding principles and promotes its incorporation into frameworks for landscape management. To this concern, the theory of change can be used to develop a framework for holistic management (Dudley et al., 2021). As illustrated by the 4-Returns framework, holistic management frameworks often incorporate several dimensions combined with a long-term timeframe for realising the desired change. Ideally, these layers reflect the organisational capacities while placing them into the wider environment. In this way, holistic management connects the organisational processes of the present with its long-term goals (Savory & Butterfield, 1999).

The importance of developing a competitive strategy and USP is not unique to NBS and landscape restoration. Instead, this strategy represents a fundamental approach for organisations that want to sustain or expand their operations (Hynes, 2009). Considering the barriers of scaling in the study sample, this strategy is particularly relevant to help the organisation set itself apart to attract additional partners or funders. Both competitive strategy and USP can be integrated into a storyline that allows an organisation to communicate its mission (Morris et al., 2005; Zott & Amit, 2007).

The identified scaling strategies resonate with the traditional strategies for scaling social impact introduced by Dees et al. (2004) and Bradach (2003). This also includes more concrete approaches, such as membership and organisational transformation. Bloom and Chatterji (2009) describe the capability of replication as the effectiveness with which an organization can reproduce its means to generate impacts. Accordingly, the complexity of activities and the characteristics of beneficiaries are core determinants of defining a scaling strategy. Therefore, a sound scaling strategy must fit both the organisational design and the external context. As no standardised approach to scaling exists, organisations should dedicate sufficient resources developing a concrete scaling strategy (Islam, 2022).

In the scaling processes within the study sample, diversifying activities and revenue streams is crucial to developing a product and service portfolio and generating financial resources. This resonates with Bloom and Chatterji (2009), who argue that the ability to generate earnings and stimulate market forces (e.g., creating demand for regenerative products) is essential for the success of the scaling strategy. Accordingly, these factors are particularly crucial in organisations where value is somewhat contingent, meaning that the benefits are not automatically perceived as adding value (e.g., ecosystem services) (Bloom & Chatterji, 2009). In such circumstances, diversifying activities and revenue streams is essential to achieve financial sustainability, increase reputation, and spread outreach.

Various scholars have stressed the importance of collaboration and interdisciplinary approaches to tackling GCs (Dentoni et al., 2018; DiVito et al., 2021; Ferraro et al., 2015; George et al., 2016). Not only does interdisciplinary collaboration provide multiple perspectives toward a particular issue, but the diverse backgrounds of actors also bring in knowledge and experience. Regarding landscape restoration, Gutierrez et al. (2023) argue that alliances, such as networks and partnerships, can increase social impacts due to, amongst others, the diversity of backgrounds and perspectives combined. From an organisational perspective, this diversity can be incorporated through integrating stakeholder engagement into the organisational structure and governance (Ferreira et al., 2020). Integrating stakeholders in governance enables an organisation to consider their perspectives and thus better address their demands (Santos et al., 2015). Organisations that seek to scale should thus strengthen their networks and partnerships to gain access to knowledge and resources and increase the outspread of their activities. This resonates with Bloom & Chatterji (2009), who highlight alliance building and effective communication considering the need to strengthen networks and partnerships to scale.

As a multi-stakeholder partnership, the BWL should ensure its members can exploit the benefits to their full potential. As the BWL approach to stimulating change focuses on bioregions, it must balance the regional and local levels to support organisations with differing outreaches across different stages of the scaling process equally. In the study sample, it has been stated that cross-

cultural differences and overall complexity increase when operating at systemic layers. Therefore, effective management of these issues is crucial to successful multi-stakeholder collaboration (Dentoni et al., 2018). Multi-stakeholder partnership organisations, in turn, should seek to exploit the benefits of these networks to strengthen their organisations while simultaneously contributing to the joint mission. Thereby, Sloan and Oliver (2013) emphasise building trust between actors.

From an organisational perspective, stimulating systemic change may entail changing the business model. To this end, business model innovation represents a powerful tool (Evans et al., 2017). Along their scaling process, organisations should consistently ensure the compositional fit between the single elements of their business models and adjust their models if necessary (Ciulli et al., 2022). In this regard, dynamic capabilities are crucial as they presume a long-term and holistic perspective towards the organisation model (Teece, 2018).

## 5.3. Limitations

### Biases, data saturation, and sample size

The present study contributes to literature and practice. However, several limitations must be considered.

As qualitative data represents nonreducible text, thematic analysis of such data is vulnerable to interpretation bias because of the necessity of interpreting the data to discern patterns and insights (Bansal et al., 2018). To this concern, data analysis was carried out in two stages, creating differentiated understanding and multiple perspectives toward the data. Considering in-depth interviews, although fewer participants are needed to provide valuable insights, Collier and Mahoney (1996) suggest that participants should be carefully chosen to avoid biases limiting the findings' generalisability. It has been noted that qualitative research, particularly multiple case studies, is vulnerable to selection bias (Queirós et al., 2017). To this concern, the present study adopts external criteria for case selection, namely the IUCN criteria for NBS and the BWL criteria for systemic innovation. In addition, besides the diverse backgrounds (cultural differences, differing contexts, varying lifecycle stages), all organisations can be categorised into landscape restoration. In sum, using external criteria helps to overcome selection bias (Collier & Mahoney, 1996), while the diversity of cases leads to robust patterns (Gustafsson, 2017).

To determine the boundaries of data analysis, Saunders et al. (2018) suggest that data saturation be used as a criterion. Accordingly, data saturation describes the state where additional data does not lead to developing new propositions. Moreover, uncertainty about whether data saturation has been reached can lead to inconsistencies and contradictions (Fusch & Ness, 2015). To forego these threats, the present research considers data saturation as a degree instead of a finite state (Saunders et al., 2018). In general, the triangulation of data sources decreases the dependency on single strategies and increases the interpretability of findings (Thurmond, 2001). In

complementation to the primary cases and data sources, the use of secondary interview data and archival sources leads to increased robustness of the findings.

Compared to more extensive case studies, the sample size of eleven organisations is relatively small. Notably, there is only one project in the first stage of the lifecycle model, three in the second stage, and most projects are situated in the third stage. Therefore, a larger sample that is more equally divided into the different stages would increase the comparability and reliability of data. Relatedly, it is difficult to generalise the findings from this relatively small number of case studies within landscape restoration to the broader concept of NBS (Queirós et al., 2017). Considering the transferability of findings, the chosen context of landscape restoration represents a sub-category of NBS. Future research should consider a more extensive sample and explore other domains within the broad concept of NBS to increase the reliability of findings.

### Social enterprise lifecycle model

From a BM perspective, analysing the underlying BMs of multiple projects at different stages helps to develop a nuanced understanding of the evolution of an enterprise over time. This helps establish a link between the generation of impact and specific elements, which can be contextualised to the SE lifecycle and scaling process (Fastenrath et al., 2020; O'Reilly et al., 2023). One limitation of the social enterprise lifecycle model is that it does not explicitly show the mechanisms that lead from one lifecycle stage to another. Nevertheless, the lifecycle model furthers the current understanding of the scaling process because no other framework that relates the scaling process's different stages to specific BM elements contributes to establishing this link. In addition, the limitation is addressed by introducing the stage model for scaling NBS (section 4.2.). Second, the lifecycle model does not adequately express the impacts of the different organisations in quantifiable terms. It is, therefore, difficult to measure and compare the empirical impacts against each other and draw conclusions on the respective scaling strategies. In this regard, the model provides an impression instead of reflecting the actual state of the projects and their impacts. Relatedly, it is difficult to precisely map a project that pursues a strategy with elements from both spectrums, as the two lines do not adequately express the actual impact connected to a specific strategy. Although the model does not explicitly show which mechanisms facilitate the transition of a social enterprise from one phase to another, mirroring the data on the model refines thinking about the model in that the lifecycle is connected to specific elements of the organisational structure. Thus, identifying specific elements within the different stages sheds light on how these elements can be leveraged to facilitate an enterprise's transition to the next scaling phase.

## 5.4. Implications for future research

Synthesising the different types of BM canvas presented in the literature and identifying these elements in the underlying BMs of NBS projects for landscape restoration creates a link between the concept of SE and SBM (Bocken et al., 2018; Ciulli et al., 2022; Schaltegger, 2016a). Mapping projects along the different stages of the lifecycle model provides insights into the process of scaling SEs and explores the interconnections of elements associated with scaling (O'Reilly et al., 2023). Moreover, the interconnections of elements conducive to scaling reveal conditions and mechanisms for scaling NBS (Fastenrath et al., 2020). To this concern, the proposed stage model for scaling NBS addresses the current literature gap regarding scaling mechanisms. In addition, concrete scaling strategies for scaling landscape restoration projects have been highlighted, thereby connecting scaling strategies for SEs within the domain of NBS and landscape restoration (Islam, 2022).

Next to the limitations of the present study, these contributions open several avenues for future research. First, shedding light on barriers and enablers in the context of scaling NBS for landscape restoration allows for generalisation to the broader concept of NBS. Given the complexity and context-specificity of these barriers, further research should investigate other types of NBS. This allows for complementing the present findings and generalising to a broader target group. Relatedly, to increase the reliability and generalizability of the findings, future research should explore the scaling process of NBS in domains other than landscape restoration. Second, to shed further light on the effects of multi-stakeholder collaboration on tackling grand challenges and facilitating innovation, more studies should investigate NBS in other spatial settings than the BWL. Third, following the call by O'Reilly et al. (2023), scholars could monitor single SEs throughout their whole lifecycle and specify the scaling mechanisms more profoundly. Fourth, considering the social enterprise lifecycle model and the proposed model for scaling mechanisms, scholars should seek to develop a more nuanced way of illustrating the impacts of organisations with different scaling strategies. As the present study does not consider the fourth stage of the lifecycle, future research should address this gap to grasp how SEs can achieve maturity and saturation. Moreover, further studies are needed to refine the identified scaling mechanisms and check whether they apply to different contexts. To this concern, the stage model for scaling NBS (section 4.2.3.) provides a starting point, and scholars are invited to refine the model. Finally, scholars could explore mechanisms and strategies for scaling SEs regarding the three types of scaling (Moore et al., 2015). This would further specify the interrelations between the scaling strategy, the systemic layer, and the desired change. Ultimately, linking scaling mechanisms to the different types of scaling sheds light on large-scale systems change, as this typically requires a combination of all three types (Moore et al., 2015).

## 5.5. Implications for practice

The results of the present study also offer implications for practitioners and actors involved in and around landscape restoration as well as in the broader fields of NBS and social entrepreneurship.

First, the business model elements presented in the fourth chapter (Table 4) provide a toolbox for entrepreneurs, particularly NBS landscape restoration practitioners, seeking to innovate with their business models. By looking for these elements in their organisational models, these entrepreneurs can compare their organisations to the case examples and adjust their models. Second, through establishing a link between conducive elements and the stages of the social enterprise lifecycle, all types of entrepreneurs interested in scaling their enterprises can evaluate the relationship and consistency between the organisational meso (business model) and micro (internal processes and structures) levels of their enterprises. In this regard, the two scaling mechanisms (section 4.2.3.) can serve as a blueprint to be compared to internal processes. In addition, entrepreneurs looking for funding can use the lifecycle and stage models for scaling NBS to illustrate and map their organisations regarding impacts and the scaling process. Funders, in turn, can apply the models to compare potential investments and choose between alternatives or evaluate investments in their portfolios. This is particularly interesting for impact investors looking for environmental and social returns. In this context, the model helps external actors understand the dynamics and interrelationships between an organisation's lifecycles, impacts, and scaling strategies. Third, the suggested strategies for leveraging BM elements provide landscape restoration practitioners assistance that can be implemented into their organisations. Overall, by comparing projects from different spatial settings, the present study contributes to developing a framework for NBS that can be applied to different landscapes (Commonland, 2020; Seddon et al., 2021). Finally, multi-stakeholder collaborations (e.g., cross-sector partnerships) can implement the proposed strategies to strengthen their networks and ultimately facilitate innovation for their members.

Related to all strategies for scaling, the development of a theory of change and a framework for holistic management deserves particular attention. The present study shows the conduciveness of implementing holistic management to the scaling process of landscape restoration projects. This is due to the ability of such frameworks to capture multi-faceted factors (e.g., economic barriers and enablers) within a particular region, varying stakeholder demands, and the complexity of grand challenges. The subdivision of the immediate environment into different zones (e.g., the natural, economic, and combined zones of the 4-Returns framework) allows for differentiating the generated impacts and setting boundaries for impact measurement. Moreover, such boundaries help to identify and distinguish stakeholder groups and to separate these groups spatially to manage potential tensions (Hahn et al., 2015).

### BWL implications

The focus on landscapes makes the BWL an expert in establishing strong networks and ties to external stakeholders that start on the regional level and subsequently expand to national, international, and global communities. To help emerging and developing organisations reach this scale, the BWL should improve its local support to help these organisations gain a foothold in the local environment. For established organisations, strengthening support on the local level consolidates and widens the business ecosystem and fosters organisational resilience concerning regional partners. For organisations working in small niches, such as marine ecosystem conservation in tropical coastal communities, access to sector-specific networks and contacts with potential allies could effectively expand the limited scope for action that scarce resource availability provides. Given the uniqueness and complexity of niches, the importance of sector-specific assistance is even higher.

From an organisational perspective, the development of a BM provides an overview of an organisation's compositional elements, embodies the key capabilities, activities, and resources, and creates an illustration that can be communicated to external stakeholders. In this context, the BWL could support its portfolio organisations to identify the critical elements within their organisations and capture them in an appropriate framework. For instance, the SBM canvas (Figure 3) applied for the present study represents a valuable tool that grasps all three dimensions of sustainable value creation. The description of the sample organisations (section 3.2.2.) already represents a starting point for further complementation and adjustment. Further refinement of these descriptions and feedback with the respective innovators help to complete these models. This can be valuable for the scaling process, as a BM illustration helps potential partners and investors understand the organisational composition of an innovation.

Next to the BM modelling, the BWL could provide a toolbox for developing a holistic management framework that draws on the best-practice examples within its portfolio. Concretely speaking, the approaches of AlVelAl, Hoge Kempen National Park, OTAG, and the Savory Institute can serve as inspiration. Such a toolbox should be adaptable to different contexts and leave enough room to consider specific conditions and elements.

The lifecycle model can be applied to map the current portfolio and establish a relationship between impacts and concrete scaling strategies. This reveals crucial aspects of the strategies, which can be improved or applied to other organisations and contexts. The link between single aspects of the organisational model and the organisational development process established by the stage model for scaling NBS supports the refinement of potential strategies. Finally, both models can be utilised to attract investors or potential partners interested in understanding the interrelatedness between organisational development, impacts, and scaling strategies.

Another concern identified in the study sample that needs to be addressed stems from communication and language barriers. In this regard, communication barriers relate to the complication of having one or few contact persons within a member organisation. Depending on the context, these contact persons moderate the exchange between their organisations and the BWL to address needs and receive guidance while eventually facing language difficulties. This issue can be overcome through creative communication management. For instance, a potential resolution could be to implement channels or regular occasions for interaction with a designated contact person and another alternating person. This takes account of responsibilities and simultaneously familiarises the members of the respective organisation with the BWL culture. Careful attention should also be given to the internal and external alignment of the partner organisations. Referring to the provision of a toolbox for BM modelling and developing holistic management frameworks, a first step to improve communication could be providing already existing and new tools in the native languages of the member organisations to avoid translation or interpretation issues.

Finally, considering the proposed processes and strategies for scaling, the BWL can support its partner organisations in diversifying their activities and revenue streams. In this respect, the innovation portfolio already provides best-practice examples for business cases and corresponding models. Information sessions and workshops could communicate this expertise to the member organisations. Considering emerging business opportunities (e.g., the carbon market), the BWL could moderate concrete opportunities and provide clarity and knowledge to reduce uncertainty. This also applies to arranging financing options for organisations that rely on external funding. In this context, impact investors could play a crucial role as their typical focus on environmental and social returns matches the context of NBS. Its networks and relationships in the various bioregions underscore the strong position of the BWL as a mediator.

# 6. Conclusion

NBS for landscape restoration are increasingly acknowledged for their potential to tackle GCs while generating social, environmental, and economic value. To increase the positive impacts of these SEs, scholars and practitioners are attach importance to scaling NBS. However, this process lacks knowledge of conducive elements, scaling mechanisms, and concrete strategies. To this concern, the present study investigates eleven organisations for NBS landscape restoration projects within the BWL multi-stakeholder partnership. A literature review has been conducted to connect the distinct bodies of literature on BM, BMI, and NBS, identify essential properties of NBS, grasp the scaling process of NBS and SEs, and explore the role of facilitators. The data to answer the research question has been obtained through semi-structured interviews with entrepreneurs of the eleven organisations and analysing of archival data from previous research on the BWL collective.

The results of the study are three-fold. First, drawing on the BM literature, nine conducive business model elements have been identified in the study sample: capabilities, competitive strategy and USP, dynamic capabilities, funding and revenue streams, human resources, impacts, key resources, networks and partnerships, and vision and theory of change. Second, connecting these elements with the lifecycle stage of the respective enterprises reveals the mechanisms facilitating the scaling process. These mechanisms are illustrated by the stage model for scaling NBS, which addresses the literature gap regarding concrete scaling mechanisms for NBS and provides guidance to practitioners. Third, ten concrete processes and strategies have been derived from the conducive elements and scaling mechanisms to leverage the BM elements of landscape restoration projects and increase their impacts.

The findings contribute to both literature and practice. The theoretical contribution is three-fold. First, linking concrete BM elements to the scaling process sheds light on the role of the BM in scaling social impacts. Moreover, connecting the two pieces of literature on BMs and scaling social impact addresses the need for more research on compositional elements conducive to scaling NBS. The presented set of conducive elements contributes to developing SBMs that facilitate the scaling of NBS. Second, the findings reveal mechanisms that facilitate the scaling process of NBS for landscape restoration. The resulting stage model for scaling NBS represents another novel contribution, offering a starting point for future research. Third, mapping the sample organisations on the social enterprise lifecycle model draws a holistic picture of the scaling process and unfolds interconnections between conducive elements and scaling mechanisms. From a practitioner's perspective, the findings provide four main implications. First, the identified set of conducive elements offers a toolbox for entrepreneurs who seek to innovate with their business models or scale their impacts. Second, the findings serve entrepreneurs to evaluate the relationship and consistency between the business model and intra-organizational structures of their enterprises. Moreover, the lifecycle model and the stage model for scaling NBS can be used to map organisations regarding their impacts and scaling progress. This is particularly relevant for entrepreneurs who want to attract potential investors and funders seeking to evaluate potential acquisitions or portfolio investments. Third, the ten proposed strategies for leveraging BM elements assist landscape restoration practitioners in scaling their impacts. These implications are also relevant for multi-stakeholder collaborations (e.g., cross-sector partnerships) that seek to strengthen their networks and facilitate innovation. Finally, the identified elements and proposed strategies contribute to developing an operational framework for NBS.

In addition to the contributions, the study's results open avenues for future research. The stage model for scaling NBS provides a starting point for grasping the mechanisms that lead from one scaling stage to another. To complement these findings, scholars should explore additional NBS sub-categories other than landscape restoration and spatial settings that facilitate innovation. In this way, NBS

practitioners receive support in developing effective strategies that leverage the elements of their organisations to scale impacts.

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# 8. Appendices

## Appendix 1: Extensive list of business model elements from the literature

| Business model element | Literature | Layer |
|---|---|---|
| Business infrastructure | Schaltegger et al., 2012 | Economic layer |
| Channels | Bocken et al., 2018; Osterwalder & Pigneur, 2010; | Economic layer |
| Competitive strategy | Chesbrough & Rosenbloom, 2002; Chesbrough, 2007 | Economic layer |
| Content of exchange and interaction | Zott & Amit, 2008 | Economic layer |
| Content of transactions | Amit & Zott, 2001; Zott & Amit, 2007 | Economic layer |
| Cost structure | Bocken et al., 2018; Osterwalder & Pigneur, 2010 | Economic layer |
| Customer relationship | Bocken et al., 2018; Osterwalder & Pigneur, 2010; Schaltegger et al., 2012 | Economic layer |
| Customer/market segments | Bocken et al., 2018; Osterwalder & Pigneur, 2010; | Economic layer |
| Financial pillar | Schaltegger et al., 2012 | Economic layer |
| Governance of transactions | Amit & Zott, 2001; Zott & Amit, 2007 | Economic layer |
| Key activities and processes | Bocken et al., 2018; Johnson et al., 2008; Osterwalder & Pigneur, 2010; | Economic layer |
| Key partners | Osterwalder & Pigneur, 2010 | Economic layer |
| Key resources and capabilities | Bocken et al., 2018; Demil & Lecocq, 2010; Johnson et al., 2008; Osterwalder & Pigneur, 2010 | Economic layer |

| | | |
|---|---|---|
| Key stakeholders | Bocken et al., 2018; Zott & Amit, 2007 | Economic layer |
| Management of exchange and interaction | Zott & Amit, 2008 | Economic layer |
| Market segments / Targets markets | Chesbrough, 2007; Chesbrough & Rosenbloom, 2002; Teece, 2010 | Economic layer |
| Process of exchange and interaction | Zott & Amit, 2008 | Economic layer |
| Profit | Bocken et al., 2018; Chesbrough & Rosenbloom, 2002; Johnson et al., 2008; Osterwalder & Pigneur, 2010; | Economic layer |
| Revenue streams | Bocken et al., 2018; Chesbrough, 2007; Osterwalder & Pigneur, 2010; | Economic layer |
| Structure of transactions | Amit & Zott, 2001; Zott & Amit, 2007 | Economic layer |
| Value appropriation | Teece, 2010 | Economic layer |
| Value creation design | Amit & Zott, 2001; Zott & Amit, 2007 | Economic layer |
| Value network or ecosystem | Chesbrough, 2007 | Economic layer |
| Value proposition | Bocken et al., 2018; Chesbrough, 2007; Chesbrough & Rosenbloom, 2002; Demil & Lecocq, 2010; Johnson et al., 2008; Osterwalder & Pigneur, 2010; Schaltegger et al., 2012; Teece, 2010 | Economic layer |
| Value-chain | Chesbrough & Rosenbloom, 2002; Chesbrough, 2007; Demil & Lecocq, 2010; Teece, 2010 | Economic layer |
| Distribution | Bocken et al., 2018; Joyce & Paquin, 2016 | Environmental lifetime |
| End-of-life | Joyce & Paquin, 2016 | Environmental lifetime |
| Environmental benefits | Bocken et al., 2018; Joyce & Paquin, 2016 | Environmental lifetime |
| Environmental Impacts | Bocken et al., 2018; Joyce & Paquin, 2016 | Environmental lifetime |
| Functional value | Joyce & Paquin, 2016 | Environmental lifetime |
| Materials | Bocken et al., 2018; Joyce & Paquin, 2016 | Environmental lifetime |
| Planet | Bocken et al., 2018 | Environmental lifetime |
| Production | Joyce & Paquin, 2016 | Environmental lifetime |
| Supplies and out-sourcing | Joyce & Paquin, 2016 | Environmental lifetime |
| Use Phase | Joyce & Paquin, 2016 | Environmental lifetime |
| Employees | Joyce & Paquin, 2016 | Social stakeholder |

| | | |
|---|---|---|
| End-User | Joyce & Paquin, 2016 | Social stakeholder |
| Governance | Joyce & Paquin, 2016 | Social stakeholder |
| Local communities | Joyce & Paquin, 2016 | Social stakeholder |
| People | Bocken et al., 2018 | Social stakeholder |
| Scale of outreach | Joyce & Paquin, 2016 | Social stakeholder |
| Social benefits | Joyce & Paquin, 2016 | Social stakeholder |
| Social Impacts | Joyce & Paquin, 2016 | Social stakeholder |

## Appendix 2: Ashoka's Venture Criteria for systemic innovation

| | **Ashoka's Knock-Out Test: The New Idea** | **Creativity** | **Entrepreneurial Quality** | **Social impact of Idea** | **Ethical Fiber** |
|---|---|---|---|---|---|
| **1.** | Innovation is central to the Ashoka Fellowship. As a network of entrepreneurs Ashoka is working to promote the creation of new ideas to bring about dramatic system changes, not just incremental changes, around the world. | Like "Entrepreneurial Quality," creativity defines the way an entrepreneur approaches his or her life and the opportunities around them. Ashoka is only interested in entrepreneurs who can "think outside the box" and create genuinely unique and systems-changing solutions to social problems. | Ashoka is looking for first-class entrepreneurs – more specifically, individuals who have devised a realistic way of bringing about society-wide, systemic, structural change in their world. This is not a vague goal but a precise engineering plan – both of how the new idea will work and of how to get there. While there are thousands of creative people who can lead, administer, and "get things done," Ashoka seeks to elect only those with this unique entrepreneurial personality type who tear down barriers and obstacles by engaging a team of teams around a common goal. | Ashoka is only interested in ideas that it believes will change the field significantly and that will trigger national, continental, or even global impact. On average, Ashoka Fellows are those affecting system changes in one of the following five areas:<br>• Market Dynamics & Value Chains<br>• Business Social Congruence<br>• Culture of Changemaking & Social Entrepreneurs<br>• Public Policy & Institutional Norms<br>• Full Citizenship & Foster Empathetic Ethics<br>The best candidate for the Fellowship is one whose idea will not only allow them to create system changes but will enable and empower others to do the same. Aligned with Ashoka's *Everyone a Changemaker* vision, a Fellow Candidate should have an idea that will inspire and engage others to create change themselves.<br>At the time of election, all but Senior Fellows need to have national scale impact; | This is a fundamental criterion for three reasons:<br>• Social entrepreneurs introducing major structural changes in society, in effect, have to ask a great many people to change how they do things. If people do not trust the entrepreneur, the likelihood of success is significantly reduced.<br>• The world already has enough untrustworthy public leaders. Ashoka wants to change this by promoting ethical entrepreneurs.<br>• As leaders of the citizen sector, Ashoka Fellows must exemplify the essential qualities of the sector, in particular its commitment to ethics. |

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| | | | | sometimes regional scale impact might be sufficient (see also the section on Election Categories and the life cycle of a Social Entrepreneur). | |
| **2.** | How, exactly, is the idea different from what others do in the field? | Is the person creative – both in vision/goal setting and in problem solving? | Is the person the mastermind of the idea presented? Did the idea originate in their thinking, and have they been driving it forward and developing it further? | How is the idea likely to solve an important social problem at the national level or beyond? | Is the person totally honest and of incontrovertible morals? |
| **3.** | Is the idea a truly transformational innovation, or does it represent merely a tweak in the current way of doing things?<br><br>Is it the Fellow's own idea? | How creatively does the person approach opportunities – be they organisational, economic, political etc.? | What is the evidence that the person is so committed to his/her vision that it is impossible for him/her to rest until the vision becomes the new pattern across society? | How will the idea spread and be replicated by others in the field? What will motivate people and/or institutions to adopt the new idea or to participate in it? | Would one instinctively trust him or her?<br><br>Ask your gut: When you are standing at a cliff, do you feel ok next to this person, or would you rather take a step back? |
| **4.** | Does the idea have the potential to change a system (e.g., public education, child welfare) that has previously failed to address one or more root causes of the problem? | Does he/she have a creative response to failures, obstacles, and setbacks? | What is his/her strategy to create this new pattern change? Is he/she thinking about how the pieces will fit together? How will they deal with the challenges they will encounter? | How many people will benefit directly and indirectly? What is the depth of impact on each person who participates in the new idea? Is it a cursory or superficial change, or one that leaves lasting, transformational change? | Is his/her motivation deeply and firmly rooted in a commitment to others and to the new idea? How do the reference checks support this? |
| **5.** | Is the idea new in the context of the country and region of impact? | Does he/she have a history of creative problem-solving and innovation? | Does he/she have the realism of an entrepreneur? Does he or she listen well? Is he/she free of ideological fetters? Is the idea realistic – on all dimensions, ranging from the technical to the political? | What is the impact to date and what is the potential for it to grow? How is the impact evaluated? | To what extent does the person bear a sense of deep empathy with the target population? |
| **6.** | Does the idea serve the good of all? | Does he/she creatively engage and enable others to bring about change in the community? | Has the person demonstrated entrepreneurship in the past? | | |
| **7.** | | | Is he/she an entrepreneur or activist? Is the person committed to realizing the systems change him/herself, or more interested in influencing other actors and raising awareness? | | |
| **8.** | | | Does he/she effectively reach across traditional boundaries and walls to build value for diverse actors to motivate and engage others in forwarding his/her idea? Does he/she create an effective team of teams around the idea? | | |

## Appendix 3: The BWL selection process for Nature-based solutions

| Phase | Description | Guiding questions |
|---|---|---|
| **1.** Sourcing nominations | In this phase, nominations are sourced following two pathways.<br><br>1. In the pre-phase 2 of the BWL process (PP2), the mapping team and Weaving team examine which NBS already exist in the landscapes concerned. In the final PP2 report, these NBS with a potential for scaling are highlighted and will be nominated.<br>2. The examination of landscape losses in the PP2 report will also be a starting point for | |

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| | searching NBS examples in other regions, which address the underlying societal challenges. The PP2 report will also identify the systemic barriers preventing NBS from scaling and indicate what solutions are needed to enable NBS to scale in the bioregion. This will be the starting point for searching fitting solutions in Ashoka's network (fellow representatives and 16 country offices) and through online desk research. | |
| **2.** Criteria checking | The nominations from the previous phase are checked for the IUCN criteria for NBS (yes/no/partly/unknown) (Cohen-Shacham, 2016, p. 7) and specific Ashoka criteria.<br><br>Those nominations which at least partly meet the criteria are put on the preliminary list of Nature-based solutions. | 1. Is it a Nature-based solution? (IUCN criteria)<br>i. Adresses societal challenges<br>ii. Responds to interactions between economy, society, and ecosystems<br>iii. Benefits biodiversity and ecosystem integrity<br>iv. Is economically viable<br>v. Is based on inclusive, transparent, and empowering governance<br>vi. Recognizes potential costs and trade-offs<br>vii. Is managed adaptively<br>viii. Is sustainably and promotes mainstreaming in jurisdictional context<br>2. Does the organisation have a collaborative mindset?<br>3. Is it aiming at system change?<br>4. Is it empowering others to be changemakers?<br>5. Does it have a proven impact?<br>6. Is it ready to scale to other regions?<br>7. Are there any references available? |
| **3.** Selecting solutions | In this phase, the mapping team will select those solutions that they and the weaving teams consider applicable in the landscapes. To check this with the local weaving teams, new entries on the preliminary list of Nature-based solutions are presented in the Learning Network meetings.<br><br>When the NBS is considered applicable in at least one of the landscapes, it is selected for further investigation in the next phase. | • How does the NBS match the landscape needs?<br>• What are the potential returns (4R) of this NBS in the landscape?<br>• How does the NBS bring added value to the local partnerships?<br>• How does the NBS fit with the Weaving team? |
| **4.** Interviews | In this phase, an interview takes place with the organisation behind the NBS, to collect additional information and check assumptions. As a part of this interview, the business model and government structure will be addressed.<br><br>A report of this interview will be drafted and discussed in the BWL Backbone Team before the NBS is selected to become part of the BWL portfolio. | |
| **5.** Weaving | When a decision is made to proceed with taking up the NBS in the BWL portfolio, the organisation will be contacted to discuss mutual expectations. Only when these are agreed, communication materials | |

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| | can be produced and the NBS can be mentioned on a website. | |

## Appendix 4: Guideline for semi-structured interviews

| # | Category | Question |
|---|---|---|
| **1.** | Introduction | Why did you participate in the [project name] and what is your role?<br>*Follow-Up:*<br>○ *How is it going?*<br>○ *Why did your role change?*<br>○ *Where does the inspiration for your innovation come from? (Do you borrow from literature or other actors in the field?* |
| **2.** | General | What is going on in the region?<br>*Follow-Up:*<br>○ *What problems do you encounter in your work/business and why?*<br>○ *What frustrates you and what gives you hope?* |
| **3.** | Business model | Could you explain me the business model of your innovation?<br>Follow-Up:<br>○ *Do you feel confident about the current business model?*<br>○ *Why Yes/No?*<br>○ *Why?*<br>○ *Why do you target this?* |
| **4.** | Business model elements | What elements of the current business model do you consider important?<br>*Follow-Up:*<br>○ *What do you find personally important?*<br>○ *What from a business perspective?*<br>○ *What elements of your business drive the most value/impact?*<br>○ *What do your colleagues (in the field)/other SEs consider important?*<br>○ *Why do you consider these elements important?*<br>○ *Does it include shared ownership or a stewardship model?* |
| **5.** | Scaling | What do you think about scaling your innovation?<br>*Follow-Up:*<br>○ *What is your personal consideration?*<br>○ *What do your colleagues/other social entrepreneurs think?*<br>○ *What would you need to scale your enterprise?*<br>○ *What could BWL offer you?*<br>○ *Could you think of a possible resolution to the problem?* |
| **5.** | BM and scalability | Do you consider the current business model as beneficial to scaling your innovation (and its impacts)? |

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| | | *Follow-Up:*<br>○ *Why Yes/No?*<br>○ *How can the elements you mentioned in the first question be leveraged to scale the innovation?*<br>○ *What changes do you consider important for achieving your goal?* |
| **6.** | Scaling strategy | Are you pursuing a certain strategy to scale the innovation?<br>Follow-Up<br>○ *How strongly is your scaling strategy driven by your business model? (e.g., do you aim at getting fees from partners/external funding? Do you aim at "growing" your business by branching?)*<br>○ *Do you pursue one of the following scaling strategies (replication models)?*<br>▪ *Growth (Organisational, ecosystem, branching, mergers)*<br>▪ *Affiliation (Verification, membership, partnership, social franchising, licensing)*<br>▪ *Dissemination (Open sourcing, campaigns, networks, training, consulting)*<br>○ *Why is this strategy promising?*<br>○ *What alternative strategy could be promising?* |
| **7.** | Role of facilitator | How do you perceive the role of the BWL collective?<br>*Follow-Up:*<br>○ *Do you perceive the BWL collective as being effective in facilitating innovation?*<br>○ *What barriers/enablers to innovation do you see?*<br>○ *How can the BWL help you with your innovation?* |
| **8.** | Outro | Is there anything from your side that you feel we have missed and that deserves exploration?<br>○ Would you be available for any follow-up questions in the further process of the research project?<br>○ Would you like to be informed about the results of the project?<br>○ Could you tell me about a failed SE/NBS? Could you put me in contact with that person? |

## Appendix 5 – Interview overview

| Interview # | Organisation | Interviewer |
|---|---|---|
| **1** | Blue Parasol | Daniel Günther |
| **2** | Reframe Ventures | |
| **3** | Surmount Ventures | |
| **4** | Shaping Impact Group | |
| **5** | Citizen Forests | |

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| **6** | Fundacion Lonxanet | |
| **7** | Hooge Raedt Social Venture | |
| **8** | Horizon Nua | |
| **9** | not disclosed | |
| **10** | Permarchitecture | |
| **11** | SNV | |
| **12** | TreeStory | |
| **13** | Mustard Seed Trust | |
| **14** | The Pollinators | |
| **15** | Biotomy | |
| **16** | Griessler Bulc | |
| **17** | Circonnact | |
| **18** | IRIDRA | |
| **19** | Fair Capital Partners Impact Investing | |
| **20** | Farming for Nature | Johanna Gartner |
| **21** | Impact Capital | |
| **22** | Anatolian Grasslands | |
| **23** | Commonland | |
| **24** | Climate Farmers | |
| **25** | Beeodiversity | |
| **26** | DRK Foundation | |
| **27** | Incredible edible | |
| **28** | True Footprint | |
| **29** | DIIF | |
| **30** | Savory Institute | Johannes Graf zu Ortenburg |
| **31** | Klub Gaja | |
| **32** | AlVelAl Association | |
| **33** | Blueventures | |
| **34** | Kogayon Association | |
| **35** | AlVelAl Association | |
| **36** | Agroforesterie | |
| **37** | Regionalwert AG | Rowdy Klein |
| **38** | FoodNetworks | |
| **39** | not disclosed | |
| **40** | OTAG | Seppe Maes |

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|---|---|---|
| **41** | Grow It Yourself | |
| **42** | We Share Ventures | |
| **43** | Grow It Yourself | |
| **44** | Hoge Kempen National Park | |
| **45** | Landschaftspflegeverein (Weaver) | |
| **46** | Bosch Foundation | |
| **47** | Commonland | Thom Sabel |
| **48** | DGB | |
| **49** | Ecologi | |
| **50** | OysterHeaven | |
| **51** | Corekees | |
| **52** | Bamboologic | |
| **53** | Investancia | |
| **54** | NewEconomy | |
| **55** | North Sea Farmers | |
| **56** | reNature | |
| **57** | Sea Ranger Service | |
| **58** | We Share Foundation | Johanna Gartner |

## Appendix 6 – Research summaries

| Researcher | Research Question | Research Summary |
|---|---|---|
| Daniel Günther | How can institutional logics explain the lack of funding of and investment in nature-based solutions? | Daniel Günther's research aims to compare the institutional logics of financial institutions and Nature-based Enterprises in the NBS-sector to better understand the sector's investment gap. Institutional logics' basic premise is that individuals and organizations are embedded in one or multiple institutional logics which govern "both what is valued and how things are valued" and the subsequent behaviour. For example, how 'nature', 'social innovation' and 'systems change' is valued. Different institutional logics can interact with each other in multiple ways: they can co-exist, or rival or complement each other. Understanding institutional logics at play and how they relate to each other can help to deploy better-targeted strategies for effective collaboration among practitioners – be it Nature-based Enterprises, investors, or policy makers. |

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| Johanna Gartner | How can social entrepreneurs utilize impact measurement to reduce institutional complexity for assessing financial capital? | Johanna Gartner's research is investigating how impact measurement of NBS by socio-environmental entrepreneurs can reduce the institutional complexity to improve the access to financial capital. At the core, SEs focus on social and environmental return while investment companies prioritise financial returns. To overcome this challenge, scholars noted that SEs who perform impact measurements are more likely to secure capital investments. The challenge is that there is no professional standard for SEs and financial institutions to adhere to. |
| Rowdy Klein | How is Collective Social Entrepreneurship perceived to influence the scaling of nature-based solutions? | Rowdy Klein's research is investigating how Collective Social Entrepreneurship is perceived to influence the scaling of Nature-based enterprises. Collective social entrepreneurship is essentially concerned with shifting impact from the organization level to the systems level by leveraging the expertise and resources of multiple stakeholders, including end users. It can take many forms such as co-owned, community-based, involving a range of local actors, or networks of social entrepreneurs addressing a social cause. The research logic behind it suggests that purposefully pursuing collective forms enhances the achievement of organisational aims, improves access to resources and funding, strengthens legitimacy, builds identity capital, and provides a mechanism for knowledge exchange. Considering such a structure can result in greater impact by a social enterprise, yet conflicts with the traditional supply and demand logic. Within the NBS industry suppliers are scattered across individually while constrained by similar barriers. |
| Seppe Maes | How can businesses restore the disrupted levels of comprehensibility and comprehensiveness in BM meta-models stemming from the growing importance of BM's impact on socio-ecological systems? | Shifting back from the current financial profit-oriented paradigm to a sustainability-oriented society requires businesses to display how their business models (BMs) affect socio-ecological systems in formal conceptual business model (BM) frameworks or BM meta-models. This trend, however, has initiated the need to rethink how BM meta-models can display the BMs they aim to describe comprehensively and comprehensibly. Seppe Mae's research develops a three-step framework that sets the scene for businesses to develop BM meta-models with a level of simplicity processable by our cognitive minds while, at the same time, incorporating all relevant information. The framework relies on four processes that help businesses enhance comprehensiveness and comprehensibility, (1) determine your aim, (2) asses the meta-model's recipient, (3) use multiple BM meta-models, and (4) limit the content. |

| | | |
|---|---|---|
| Thom Sabel | How can Dutch Social Enterprises manage their financing strategies through various stages of their lifecycle to enhance access to financial resources? | Thom Sabel's research is analysing how Dutch social enterprises working on landscape restoration, protection and regeneration manage their financing strategies through the various stages of their lifecycle. The aim is to discover how their business models and external financing are linked, to enhance SE's understanding of different types of social financing and increase their access to financial resources. |

## Appendix 7 – First order codes, second order themes, and aggregate dimensions


First order codes
Second order themes
Aggregate dimension
Aligning different actors in landscapes
Aligning divergent mindsets among external stakeholders
Aligning divergent mindsets within the organisation
Adoption of weaving practices
Definition of a mission statement
Formulation of a theory of change
Formulation of scaling ambitions
Developing a vision and theory of change
Development of USP
Global scale of activities as USP
Increasing organisational reputation
Implementation of holistic management
Developing a competitive strategy and USP
Ecosystem growth strategy
Membership
Organisational growth strategy
Replication
Scaling through own business model
Transition to cooperative organisation
Developing concrete scaling strategies
Strategies and processes to leverage business model elements
Access to additional distribution channels
Attracting more private investors
Avoidance of misleading business (e.g., greenwashing)
Carbon market causes destabilization
Corporations seek sustainable supply chains
Developing additional business cases
Monetization of ecosystem services
Need for additional financial sources
Product portfolio diversification
Provision of training as business opportunity
Diversifying activities and revenue streams
Moderation of carbon market opportunities
Provision of additional business cases
Provision of ecosystem service expertise
Providing holistic management frameworks
Taking a holistic perspective
Reaping the benefits of multi-stakeholder partnerships
Focus on large scales neglects local environment
Limited scope with agriculture
Language and communication problems
Improving BWL benefits
Clear communication of value proposition
Developing holistic management frameworks and tools
Educating and training employees as enabler
HR capacity as barrier to scaling
Methodology must fit to the organisation
Need to develop a clear value proposition
Need for tools and methodology
Strengthening the business model
Current mindset as a barrier to scaling
Dissemination
Diversity of stakeholders demands as barrier
Exchange of knowledge and experience facilitates the scaling process
Increasing awareness about the organisation
Need for sector-specific networks
Open sourcing
Overcoming social barriers to scaling
Strengthening networks
Strategies and processes to leverage business model elements
Affiliation
Buttom-up approach to collaboration
Collaboration with agricultural sector
Data collection and research as enabler
Importance of external environment
Partnership
Scaling process increases complexity
Small scope as barrier to scaling
Spreading data to stimulate mindset shift
Working in niches limits scope
Strengthening partnerships

## Appendix 8 – Supportive quotes

| Section | Sub-section (2nd order themes) | Quote | Interview # |
|---|---|---|---|
| **4.1.** | Capabilities | Uh, we have an annual meeting. We have this partner since one and a half year now, and we just have regular meetings. If we have new plantations and ask them, do you want from your tree budget some trees planted here? […] That's normal daily business and we had one annual meeting, one strategic meeting, which we want to keep up with every company which is our sponsor, which we work with, just to check if you're aligned on the same level. But that's from our side. | 5 |
| | | I'm working mainly in large, large projects. So, I'm not working at a hub level. So, my main focus is on very large project development implementation. | 30 |
| | | I feel that now this year is a good moment to scale up and use this new foundation to scale restoration landscape project in the Iberian Peninsula. | 32 |
| | | So, we work with about, we are a team of about 350. In those countries, and we work with about with coastal communities in almost about 800 communities, I think, around the world that we work with both ourselves and through local partner organizations that we fund. And we support about 50 organizations worldwide, in some way, either through technical or financial or both assistance. | 33 |
| | | But, but in time, we realize, because we are a part of community, and we discuss every day with the communities, and we get in contact with visitors of our National Park. It is impossible in our days, in Europe at least, to make conservation without taking in consideration the interest of the people. | 34 |
| | | The association has different departments, one of them is the business cases which is mine and we have principals of regenerative agriculture, natural zones, communication, different departments. So, from the regenerative agriculture department, what they do is that they promote regenerative practices, and we encourage farmers to switch from organic to regenerative agriculture. I mean, they of course know about all the environmental advantages. And we know that that transition has a cost. At the beginning they kind of lose a bit of the production with a transition. And also, because the machinery and the practices they need is a special machinery and they don't know how they cannot afford that cost. So, we offer them our prime, we call it regenerative prime for the regenerative product. And that's where the business case appears. | 35 |
| | | **That's not the easiest things but we try to integrate farmers and local stakeholder into the governance of our project. It's really not easy because they are all different. They sometimes all have different issues. I think working with different persons and different stories helps to build a project that is mainly dedicated to all the issues instead of applying a project that is not updated but technically good for the territory.** | 36 |
| | | Then it is also very important because in in our case, and I know that's the case in many bioregions as well, because it's a kind of quite common advantage, is about enabling and enabling means that in your team, in your process you design a structure and a journey, custom journey creation framework where people from different backgrounds with different experience and stuff, skills can get involved right. Which means in a bioregion core team you usually don't sit as five experienced project manager who have been working in wherever. You have very different experience levels and very different perspectives, very different life journeys. And there this kind of models become very useful again to communicate clearly complex and multidimensional processes, ideas, structures and so on in a, let's say, simplified version basically. | 40 |
| | | But for me, I'm always the thinker, because how can I attract new CEO's, corporates with new things. And of course, in a second and the third meeting you could say OK, but there is a model with a lot of parameters behind this, it's the scientifically research and things like that, but using it as a first moment. Well, I because this is about chemistry as well. You know it as well, if you come to a pub, you go into a pub and you see someone sitting and sometimes you have an immediately contact and sometimes it doesn't work. It's about chemistry. So, I firstly go on the hunt for chemistry. And once I have this chemistry, I say OK and now I would like to design something for you based on the same, let's say priorities, but how can it really fit into your company or your region? So, the approach is completely different, so I prefer to have a white, a white paper to start with a story and then go into detail. | 44 |
| | Competitive strategy and | We want to lower the hurdle for them. We make the talks to the authorities on the one side, we help them finding lots for planting. We help them in in financing things. We have all around | 5 |

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| | unique selling point | what the people in the region where they want to plant and don't know how… so to enable them that they can plant trees and small forests. So that's a little bit different strategy which we have in comparison to other reforestation organizations. | |
| | | For a corporation, you would be looking at three things: you would be looking at, 1. making your supply chain more resilient. So, these farmers can go through a drought, such as we're going now. Using Holistic Management, they can maintain their production levels, and you have a more resilient and dependable supply base. So that's one, 2. if you can get your hands on regenerative supply, keeping in mind that the quality should also be increased. But let's, let's imagine that the quality is of the same, the same standards, then just the fact you can say, well, this product, or the supplier is coming from a land base, which is regenerative, which is not hurting the Earth, but it's actually improving, you know, the water cycle, the water capture, carbon cycling, carbon capture, biodiversity, all these things, social elements, then it's definitely a strong selling point, as well for the corporations. | 30 |
| | | **I feel that we've really gone down a path that not most of the organizations could do. So, I don't see many other organizations having 50, upwards of 50 hubs based around the world.** We also have over 200 accredited professionals. They go through training; they have to go through certain amount of training. We also give them an exit interview at the end to ensure that they aren't equality, they understand that material is very lengthy and quite complex. **To recommend to another organization do what we do, I don't see many other organizations having that that desire or that capacity.** | 30 |
| | | A good example is one of our programs. In Polish it means holiday of tree or treeday in Poland. And in this moment, we had 1 million trees that we planted with the people. But around 800,000 people already cooperated with us. Not only organizations, but also schools, cities, towns, and businesses. This is a big program around Poland, we even sometimes cooperate with organizations from England. | 31 |
| | | So, each one of these businesses produces and processes the final products. And then AlVelAl foods is the platform for commercialization and marketing. To go into the national international market directly to the consumer. This it is very important because if we want to create added value, we need to go directly to the consumer. | 32 |
| | | And also, we are a best practice example for some activities, for example, for Ecological Education activities. We have a Junior Ranger program starting from 15 years already that is very well received in the communities and in the UN in the country. | 34 |
| | | So, what we do, what we did here in Jämtland, again, from an ecosystem point of view, it was very clear for me. **There were many stakeholders working with the grasslands, which is very little part of the region, and also quite some with the cropping, but there was no one working or even thinking of working with the forests.** | 40 |
| | Dynamic capabilities | Yes, this is a very important question because often, the businesses and the politicians, even media, if you talk to them, you need the time. They want something now, or maybe in one year or two years. If you tell that kind of people that the changes are a process. This is not something new, but it sometimes represents a big wall if you want to change something. | 31 |
| | | And for that we need online sales, so AlVelAl Food and online sales. AlVelAl is planning to work on this kind of subscriptions. So, trying to create a group of followers who feel that they are part of the project, that they are consuming this product, that they are restoring the landscape. To create a community of followers and subscriptions. That is the strategy that we have agreed that should be a success. | 32 |
| | | **Geopark is not a protected area. It's based on the partnership and stakeholder involvement. And in the end, we obtain nature conservation by involving the local communities and visitors in our project.** | 34 |
| | | That's not the easiest things but we try to integrate farmers and local stakeholder into the governance of our project. | 36 |
| | | **The Payback time is not the commercial economic payback times what we see of a loan, like 15, 20, 30, or sometimes 50 years. But we do the payback on 500 years. We are saving the planet**. So, for the next generations we have to find a way to do this. | 44 |
| | Funding and revenue streams | It's important to have people […] understand our vision, our goals and see how it matches with the funds from the company or the budget from the company they can get. | 5 |
| | | We are at a moment where we want to put the price for some services to sell them. And with this money we want to develop our ideas […]. | 34 |
| | | Well as a non-profit organization, we measure, we really care about the financial return. But our aim is in the extension. Like, how many actors of regenerative agriculture we achieve. How | 35 |

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| | | is that growth, like the percentage per year or every two, three years. That's what we really care about. But the companies, of course, they look for the financial return, because as I as I said, they pay this premium to the farmers. And they need to sell all the products to offer that premium to the farmer. So, for them is very important. **The growth is based on these revenues.** | |
| | | I don't think we are very attractive right now as a landscape because we offer very common stuff. I think we need more variety of different products. | 35 |
| | | We need to be more attractive for the market. | 35 |
| | | **We can't continue to operate as an organization if we don't have a financial return in the programs that we're operating.** | 43 |
| | Human resources | **Having people who do not have a background in agriculture, and training them over a couple of months, usually is not enough. So there really needs to be a deep, consistent engagement process to build this capacity at the many different country levels that were working.** | 30 |
| | | We just need to find develop the capacity in terms of human resources to be able to meet that. | 30 |
| | | **We only have one employee and volunteers have some limits. It's impossible to scale, without resources.** And for this reason, we are at the moment when we take the next step. **And it's also a requirement from geopark.** Because if you want to become a Geopark, a UNESCO Geopark, we need to have a full-time dedicated team | 34 |
| | Impacts | With big achievements, big success, with more and more farmers doing regenerative agriculture and with the capacity to inspire others, so that is the return of inspiration. | 32 |
| | | We want to use the natural and cultural heritage both to develop the products and services, and to increase the visibility of our area to develop as a tourist destination, and to receive back the income to support the local communities and the friendly eco-friendly activities. | 34 |
| | | **We are happy that we saved some 1000 of hectares of forest, including some primary forest of 103 hectares from our National Park, our primary forest.** | 34 |
| | | We invest in our projects in the last years around 300,000 euro, but the return of investment is already more than 30 million euros for local communities. | 34 |
| | | Because what the conventional farmers do is they just sell the raw products and forget about the whole process**.** And that's it. And wait until next year. In our way they [*farmers*] are gaining more money. And also, creating jobs and all the 4-returns, we want to establish this territory. | 35 |
| | | I want to sustain, not to make money and to be very profitable. | 44 |
| | | Investing in the natural quality bring huge benefits to the local community. The return of restoring and protecting nature and natural ecosystems is four times positive: on natural capital, on social capital, on human capital and on investment. | 44 |
| | | **Based on a number of international studies and research, we can conclude that 1 Euro invested in nature benefits 10 Euros for the local community. No banking company in the world has a better success ratio and provides better returns as big as the nature bank.** | 44 |
| | Key resources | So, from a farmer point of view, the fact that I can use management tools and rapidly see an increase in labor productivity, which will very quickly flow into my overall economic stability and productivity. That's a very quick turnaround. If a farmer can understand the concepts, within a few months, we already see important gains. So, from a farmer point of view, the business model is better financial planning, better grazing planning, better land planning, ecological monitoring, and use of the decision-making framework to model everything towards, kind of this, the future landscape resource base that you want to create, obviously brings in a lot of very quick benefits. And if we tie that to ecosystem services, if you can demonstrate your land is regenerative, then I think there's, there's even a stronger case, for the use of Holistic Management. For a corporation, you would be looking at three things: you would be looking at, 1. making your supply chain more resilient. So, these farmers can go through a drought, such as we're going now. Using Holistic Management, they can maintain their production levels, and you have a more resilient and dependable supply base**.** | 30 |
| | | **AlVelAl decided to use the 4-Returns framework (3 zones, 20 years) developed by Commonland. This framework is for holistic landscape restoration.** So, what AlVelAl is working in the natural areas, restoring ecosystems for biodiversity, working on farms, supporting farmers in a transition to regenerative farming, focus on soil, biodiversity, and water. In the economic area we are developing business to create added value for the products that come from regenerative farms. This means that the farmer can receive a higher price than with only organic production. So, the project target is really unrealistic. **It's to create a systemic change on the territory by using landscape restoration and the 4-Returns framework.** | 32 |

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| | | The new foundation Aland wants to scale landscape restoration. And we think the experience of AlVelAl as a lighthouse could be really helpful to inspire others with the learning and the exchange. | 32 |
| | | It's a holistic model. […] the whole is more than the parts and you see that […]. | 44 |
| | | **I think you could see it [*holistic management framework*] as a business plan, but also as a kind of a guiding model, that can be used as a business model themselves.** | 44 |
| | Networks and partnerships | We learn a lot from our partners from another countries about the multi-stakeholder way of working from the beginning to establish a strategy for developing the area. Particularly in a way to expect the return of investment not from only from the economical field, but also for social and environmental ones. | 34 |
| | | And we decided to take a step back and to look to some models which are not dependent on a national legislation or national authorities. | 34 |
| | | We are part of the global network of Geopark that has 177 geoparks in 46 countries. In my opinion the name of the place is not important because the bears and the forest they don't care about our borders and labels, they want to live there. We also want this. It's more important what we do with these places and what is the value given by the people to these areas. This is the way to scale this project. | 34 |
| | | We don't have too much culture to work together in Romania, we are an ex-communist country, and we need to work together. But the reality is totally different. We learn a lot from our partners from another countries about the multi-stakeholder way of working from the beginning to establish a strategy for developing the area. Particularly in a way to expect the return of investment not from only from the economical field, but also for social and environmental ones. | 34 |
| | | Firstly, it's the power of the network. We obtain a lot of benefits because it's good, including for the politicians to say we are part of big international projects, we are not alone here in Romania. **We are not just alone but together with very big important organizations, companies, and people. This is the power of the network.** And this is, in my opinion, the first way of scaling the project if we want to go abroad, outside of Romania, but also here in Romania. Because of the lab process and the workshops, we have some results. And with these results, we don't keep the results only for us. We communicate, we go to another organization and other partners and other stakeholders. And they are coming to us. After that, we maybe will extend our network. That is the power and the capacity of the network. | 36 |
| | | **It [*multi-stakeholder partnership*] provides multiple […] benefits, perceived benefits for a largest as possible number of stakeholders.** | 40 |
| | | The portfolio [*BWL systemic innovation portfolio*] is there to give like an overview of potential solutions that can be implemented in the region. | 40 |
| | | I created that knowledge that you say that I have or seems like I have by talking and listening and learning from others. | 40 |
| | | And the more I'm working on biodiversity, the less I come into nature, and this is not good. I think that we have to also give another lesson that modern nature learns something else to us that is to be deconnected, to be healthy again. So that's something different. So, will it help? Yes, it can help. But for me, I'm always the thinker, because how can I attract new CEO's, corporates with new things. And of course, in a second and the third meeting you could say OK, but there is a model with a lot of parameters behind this, it's the scientifically research and things like that, but using it as a first moment. Well, I because this is about chemistry as well. You know it as well, if you come to a pub, you go into a pub and you see someone sitting and sometimes you have an immediately contact and sometimes it doesn't work. It's about chemistry. | 44 |
| | Vision and theory of change | **The head of the company has to have some vision and has to have some energy to push the company forward.** | 5 |
| | | But I think, the most difficult thing for us is that we want to scale this model. **Creating the first regenerative country in the world in Spain and Portugal is our dream.** | 32 |
| **4.3.** | 4.3.1. | And what we found out during our first four years, it's important to talk with those people about their mindset and about their spirit. | **5** |
| | | **And another point that is very important is, and this is similar to what landcare was doing in Australia, when you bring that landscape, you connect the dots.** So, this town hall was within this valley, these are all the farmers that live within the valley, these are the industries that are working with this valley. "How can we come together to imagine a landscape that not only | 30 |

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| | | allows us to maintain our livelihoods but grows and increases biodiversity, increases its resilience under climate change? How do we get those actors together? How do we get them talking? How do we get a shared vision?". I think that's a very important step | |
| | | **So, I think that the most barrier is to make sure that we all understand our different worlds and a different way to work**. There are also different issues. **They also have to understand our way to sell the project. And we have to understand how they sell the projects and what kind of relation they have with the investors and other production funds themselves.** | 36 |
| | | Weavership to me is and needs to be an entrepreneurial posture. | 40 |
| | | But let's say, like amongst the current knowledge we have an imagination and creativity, what we look for or what the team looks for. Because it's me plus ambassador, right? Is that first of all, what is the biggest leverage in this region when I say leverage, it means the tank that has the highest marginal reaction and the thing that has marginal reaction usually is the thing where there is no competition or very inefficient competition around. The second is that it provides multiple dimensional benefits, perceived benefits for a largest as possible number of stakeholders, right and the third is that it is feasible, meaning that you as a team has the capacity to implement it, to create it and implement it. So those are the three things. | 40 |
| | | Well, I because this is about chemistry as well. You know it as well, if you come to a pub, you go into a pub and you see someone sitting and sometimes you have an immediately contact and sometimes it doesn't work. It's about chemistry. So, I firstly go on the hunt for chemistry. And once I have this chemistry, I say OK and now I would like to design something for you based on the same, let's say priorities, but how can it really fit into your company or your region? So, the approach is completely different, so I prefer to have a white, a white paper to start with a story and then go into detail. | 44 |
| | 4.3.2. | Its going, so I think we're up to 22 million hectares, very far from a billion, but it's definitely light years away from where our potential competitors, we don't call them competitors, but other players in the space have been able to do. So, if we stay on track, I think by the end of the decade, we'll be up around 100, maybe 200 million hectares at the best. So, I think our question is, are we happy with this trajectory? Or do we want to include elements that will create a delta. So instead of 100 million in 2030, reaching that 1 billion, and what would that look like? So, we are working on scaling pathways to get there. | 30 |
| | | AlVelAl is an association that has the mission to restore 1 million hectares. It's a huge territory in the southeast of Spain with big problems of desertification, loss of biodiversity, lack of opportunities for young people in rural areas. | 32 |
| | | **Because one of the problems we have here is that people, even from the territory, don't know us. I mean, they maybe know our partner companies, but they don't know the story behind it.** | 35 |
| | | **The first step is really, as you say, to be out there to be in that hole, that bioregion and observe it with as much as possible neutrality. Putting your assumptions, ideas, ideals, political views, whatever aside and trying to understand what's happening here. And after that you add your, let's say vision, about the bioregion.** And the reality as it is, plus your vision together with the knowledge and data gives you the leverages exactly. | 40 |
| | | I don't use the theory of change as a preferred model communicated, but what we do is the theory U without communicating about so also again designing the National Park. If you have to do this following the rules, and we do that he, but then you have to come into the European birds Directive, the European Habitats Directive, all these legislations and laws, you have. What we communicate was we want to make nature sexy. And of course, what we do behind the scenes is all this. So, the theory U for me is very important. But for all these people who saying, OK, let's go with this idea of change. Well, I know of course that within the design team, within the bioregional weaving team, there is a separate team that works on this theory U, can be done of course, happy to do so, but for me I always say let's go on a journey and we will make it happen and I don't say this is a theory U, because people want to go into the story so you know it's a theory U but it's not communicated as such. | 44 |
| | 4.3.3. | And now we are working with an external consultant to help the business to develop a business plan, a joint business plan. Because each business has their own this business plan, but they are not aligned. So now we are working with this consultant. They are helping these four big businesses to grow together to align. | 32 |
| | | **20 years ago, we were just a NGOs set up by students with crazy idea and science fiction desires. But now a lot of supporters from the community stay together with us**. And they | 34 |

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| | | come together with us to fight with politicians, the local administration, and authorities. And already passed a tipping point. We already have, let's say, a critical mass of local communities, and we are very confident that we are going in the right direction. | |
| | | I think they've got strong knowledge and strong skills about investments and things like this. We just have too different points of view. But I'm really sure that there is a strong potential. And I think that could help us to get values from our skills, because for the moment, we don't them and we don't sell them. | 36 |
| | | I think we have to strengthen our relationship with the public financials. Because in some region in some place in France, the organization that provide the subsidies don't really know our projects. They know us as a number or as a respondent to calls. So, I think we have to strengthen our relation with this kind of organization. **We have to make sure that when they receive our projects, they know who we are, how we work, what kind of partnership we are able to build, what kind of scale we are able to reach.** | 36 |
| | 4.3.4. | **We were typically more of an open innovation company. So, we operate from the kind of the concept of abundance. There's lots of land out there, there's lots of land that needs to be regenerated. There's lots of business opportunities out there. And we feel that the more we grow, and we share, the more opportunities will come to us at the same time.** | 30 |
| | | We recently created a foundation in Denmark, because that's where most of the other foundations who work in this in this type of work are based. | 30 |
| | | For us, it's important that the form of the business should be cooperative. So, the cooperative is really open. Any farmer can join in any moment if they want to be part of the cooperative. | 32 |
| | | Our approach is through local partnership, getting as much of our money and assistance to other organizations. | 34 |
| | | It is a membership, but it's very loose. They have to be members of AlVelAl. And if they are farmers, they pay a membership fee of 30 euros per year and for companies it's 100 euros per year. With the membership they can access and use all the services of AlVelAl. But there is nothing attached, there's no contract, it's like a supportive membership | 35 |
| | | We've got the strategy to scale up the innovation by supporting farmers to develop agroforestry and things like this. But it's more like a goal. And then we adapt the strategy to different projects, different kinds of farmers, and different territories. So, **I always say that our strategy is to adapt to different contexts to scale the innovation and to fit exactly to the needs of the context and of the farmers.** But we've got ideas about the action that could help for example young farmers to get the skills and the knowledge to develop agroforestry systems. To provide the knowledge to people who will support themselves as farmers. We created a school for that to really form people that will be able to support farmers in agroforestry systems. We also now know that people will need knowledge about what kind of agroforestry system you can provide in terms of incomes, what this kind of agroforestry system would cost. So, we've got a team working on that in the research and development team. We also know that sensitization is important to address citizens and also young students to help them to understand. What is important is to make sure that your consuming way is important to support farmers and to support this kind of farming system. So, we've got like different kinds of action. Our main goal that is to support agroforestry systems and develop them well. | 36 |
| | | Once you have one, it will be copied soon. It will be copied soon because the success is almost guaranteed and then it becomes interesting. | 44 |
| | 4.3.5. | **The main challenge now is to find the resources to develop a diversity of activities because we started as a conservation organization. We are at a moment where we want to put the price for some services to sell them. And with this money we want to develop our ideas.** | 34 |
| | | What is important is that more farmers or even companies that are already working in the territory go through the transition, become regenerative, and add different kinds of products. | 35 |
| | | The original idea was that AlVelAl foods will have an online web shop, an online shop. Now it doesn't. So now we are switching into this commercial agent thing. We are going to establish that for sure. We are still talking if everyone is okay with that. And a lot of people have to express their opinions and we have to hear everyone and see what's the very best for all of us.<br>Yeah, that's the main change. | 35 |

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| | | **About the private sector, I think we have to strengthen our ability to mobilize the private sector because for the moment we've got the opportunity to get money from these companies.** | 36 |
| | | We can't continue to operate as an organization if we don't have a financial return in the programs that we're operating. | 43 |
| | 4.3.6. | **I like this way of working very much, to take the wheel invented by another guy in another place of the world and trying to do better in my region.** | 34 |
| | | When I started to be Ashoka fellow five years ago, they opened a lot of doors. And with a lot of connections, they provided a possibility to have access to a large network of smart people with a lot of ideas and know-how. | 34 |
| | | We had the idea before the locality. | 40 |
| | | It [*multi-stakeholder partnership*] provides multiple […] benefits, perceived benefits for a largest as possible number of stakeholders. | 40 |
| | | **The good thing is of course that every model or project that is included in the Bioregional Weaving Labs is tested and successful at least in one country, but often in more countries.** | 44 |
| | 4.3.7. | **They [*the BWL]* are able to give me a strategy and tools. But still the situation in my country can be different in some places. And this is not easy. The platform is very good and very open. But at some places it's not easy.** | 31 |
| | | Maybe this is not very important, but still, the language problems are very important. For myself, sometimes the language and communication in a different language was not easy. It was a problem for me. | 31 |
| | | **A very important one is the language. Anyone speaks Spanish, so anyone in the BWL or in other landscapes.** One is in Ireland, one in Sweden, Germany, and France. And sometimes in our team, in the local team of AlVelAl, **I am the only person who speaks English. So sometimes it's difficult because everything is in English. Yes, that is the main barrier that I see.** | 32 |
| | | I think in subsequent phases of the project where we might be looking to export, you know, our innovation to other BWL territories, we'd obviously need them [*the BWL*] to understand, you know, some of the same sort of concepts like food empathy and so on and how that would be adapted to a local environment in Spain or Holland or elsewhere. | 43 |
| | 4.3.8. | **I think it'd be the later, a really clean looking for a strong business model.** | 30 |
| | | We cannot only work with farmers to promote sustainable farming, or we cannot only be making three planting in the forest. That's not enough. **So, we need the business to support this, to make this profitable because it's necessarily to really restore the landscape.** | 32 |
| | | We want to learn the way to develop a business plan and to help the investors in the area to obtain the resources to make a fundraising campaign to run some local events. | 34 |
| | | Now, in the project, we always add actions to the action plan, about how we can build a toolbox about the methodology we apply in the territory and in the project. Making sure that other territories or other associations or the stakeholders can use this toolbox and how we can help them to use this toolbox to scale our innovation. We always have to keep in mind that one methodology can be adapted to one innovation, but we are working on several innovations in the agroforestry world. So, we have to keep in mind that it has to be adapted to the innovation or to the group of innovation. | 36 |
| | 4.3.9. | **Because if we want to change something on this level, the environment, and the future of the planet, and our life, I need contacts with people and try to explain them, why we do it and why it is important for us.** | 31 |
| | | Next year, we want to have this network of other landscapes working with the 4Returns. Also, with the 4Returns business so with the same model as AlVelAl but in other parts of Spain and Portugal to make this network bigger. Now this is the time.<br><br>Now we are organizing exchange between farmers in one landscape with farmers in other landscape. This is super useful to visit other farms and see and talk with other farmers about challenges and lesson learnt. | 32 |
| | | They [*multi-stakeholder* partnerships] tend not to be relevant unless they are sector specific. So, you know, I work in quite specific niches, which is tropical, small-scale fisheries. I mean, it's | 33 |

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| | | a huge sector with you know, 100 million people. But there isn't one in the world that I work in. So, you have to come up to more generic frameworks. | |
| | | We want to work with all kinds of stakeholders. This is the place for innovation. | 34 |
| | | **Built the network before you need it, it's hard work, I must say. It's not a nine to five job. It's an everyday 24/7.** | 44 |
| | 4.3.10. | Supply is also really not possible because farms in Spain are typically very small. The supply chains are very fragmented, there's only four large groups who actually buy the supply coming through this area. They were not really willing to work at this kind of scales we were talking about initially. So, we lost your supply, so the only thing we had was impact. | 30 |
| | | But at the same time, we've always been within kind of a marginal percentage of the wider agricultural sector. And you see the same that happens with organic, or permaculture with biodynamics, these are groups that really never break out of maybe 1% or 2% of the total farmers are practitioners. They never get out and have impact on the wider 98% or 99% of farmers. | 30 |
| | | We need results, scientific results from research to really say 'Okay, if you are planting trees, you will have this benefit of if or if you plant green you will have more production'. It's necessary to have good data from monitoring and research to give this advice to the farmers. That is a very important element. | 32 |
| | | Depends on benefits of specific service providers. So, from a data system or, you know, a legal support, so specific legal services, pro bono accountancy, a technical advisory piece on a specific issue. But demand a demand lead, one that enables us to get better service than we could through our own modest financial resources. | 33 |
| | | **Scaling through local partner organizations is our approach rather than through direct delivery.** | 33 |
| | | **In my opinion, it is impossible to develop some areas without working together with all kinds of stakeholders, academics, civil society, politicians, businesses.** | 34 |
| | | About the private sector, I think we have to strengthen our ability to mobilize the private sector because for the moment we've got the opportunity to get money from these companies. So, we take the opportunity. But we are not really active, we receive the opportunity, but we are not looking for the opportunity. And I think we have to change that, and we are changing that. | 36 |
| | | And we start with the information projects and the educational projects. We start after that to develop some tourist infrastructure; we start to maintain this infrastructure. We also want to work with some local entrepreneurs because they want to develop some business in tourism, and we give to them know-how and we advices about the way to construct the buildings, the way to develop some standards, to welcome the tourists and other things. And the park now has administration, the government is the administrator of the National Park, we have a partnership, we actually administrate the parties together as a partner. They are administrating and we are the partners. But after that, we realized that it's impossible to make next steps because the national laws and legislation and authorities have some limits, and we obtain maximum possible from the partnership. | 36 |
| | | And then the second thing I did, besides my region, was to go find multi-stakeholders. | 40 |