

Business Innovation for Sustainable Scale-up (BISS)

Scaling Up Business Impacts on Sustainable Living: Baseline Assessment Report

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Executive Summary

Sustainable living can be described as having patterns of consumption and production that enable present generations to achieve healthy and happy lives, while respecting environmental limits, and thus enabling future generations to do the same. Current living and consumption patterns are clearly unsustainable around the world. There is a need for businesses to move from a production focus (e.g. controlling and optimising their existing production processes) to include a more sustainable consumption focus (e.g. influencing and encouraging sustainable consumption patterns) to address the product and service needs of a sustainable society.

The objective of this report is to provide a baseline assessment on the scaling up the impacts of innovative sustainable living business practices. This report represents the baseline assessment report of the BISS project, and includes the underpinning concepts, a categorisation of business models, a Scaling Up Innovations Framework, scaling up strategies and success factors.

Scaling up sustainable living business impacts requires a multi-disciplinary and multi-stakeholder approach. The Scaling Up Innovations Framework presented in this report (Figure A) is therefore relevant and can be applied to a range of stakeholders, including entrepreneurs, financial institutions, policy makers, multi-national corporations, civil society organisations, and supporting organisations. The Scaling Up Innovations Framework is not meant to be yet another method for measuring social/environmental impacts and triple bottom line performance. It was developed as a decision-making aid to develop a scaling up plan, rather than an analytical method.

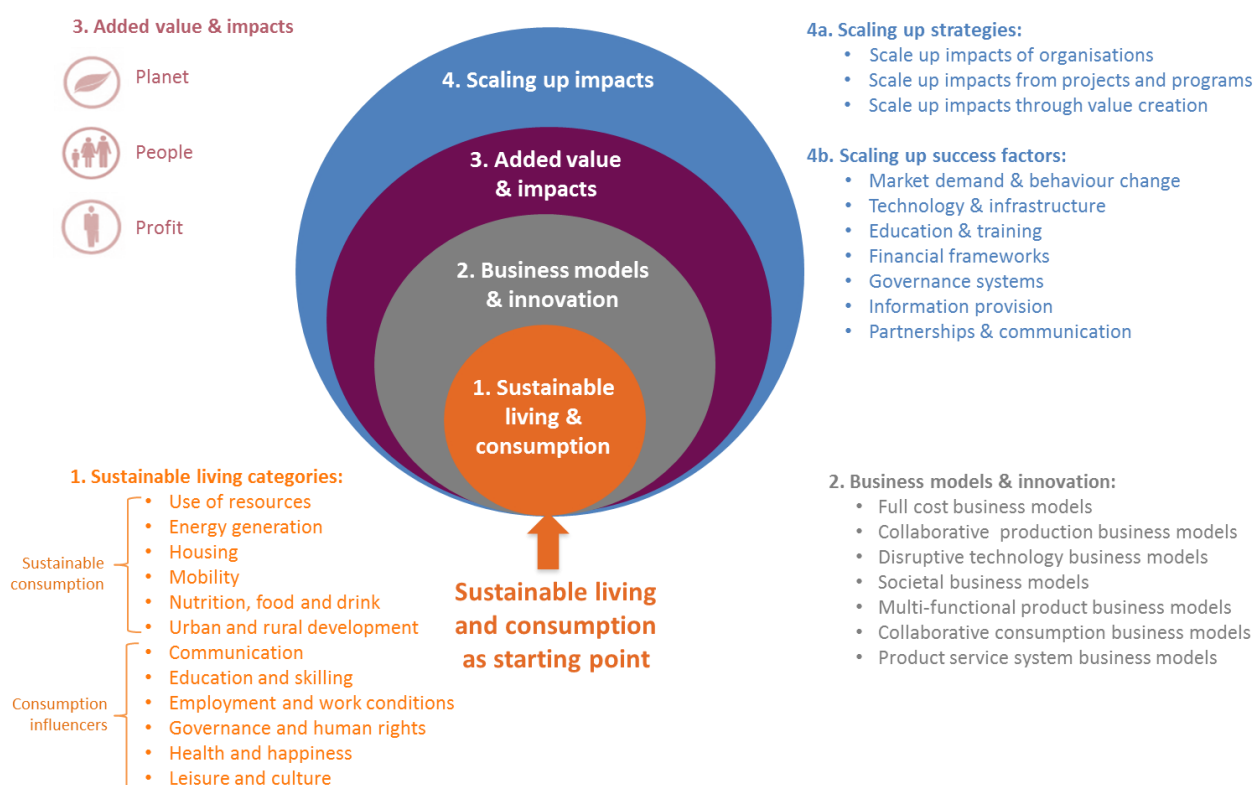


Figure A Scaling Up Innovations Framework

Key conclusions from this report are:

- **Business models:** A business model describes the rationale of how an organisation creates, delivers, and captures economic, social, environmental, or other forms of value. The business model can present a range of production and/or consumption oriented solutions for sustainable living. This report presents a categorisation of business models based on their value position (consumption versus production) and focus (production, products and services, and systems). It is not claimed that the business model types presented here are all-inclusive. Sustainable living business models are an emerging field of application and knowledge, and therefore are subject to further research and development.
- **Scaling up impacts:** Scaling up sustainable living business impacts can be achieved by increasing their positive impacts in one (primary) hotspot or by expanding their positive impacts on other (secondary) hotspots, while also considering and minimising potential negative impacts which may be created. In the context of this report, a hotspot is defined as a sustainable living issue that has potential to be improved or strengthened. These hotspots can be local (e.g. lack of local community services), national (e.g. unemployment) or international (e.g. climate change) issues.
- **Scaling up strategies:** Scaling up strategies describe how sustainable living business impacts could be scaled up. Depending on the focus of the efforts scaling up strategies can be grouped as:
 - Strategies to scale up impacts of organisations: scaling impacts by growing the organisation (organic growth and acquisitive growth), scaling impacts beyond organisational boundaries (dissemination, joint ventures, partnerships, franchising and smart networks), and scaling impacts by reducing organisational boundaries (licensing and mergers/sale);
 - Strategies to scale up impacts from projects and programs: quantitative, functional, political and capacity building scaling up strategies.
 - Strategies to scale up impacts through value creation: value creation through product substitution, efficient use, shared use, longer use, and efficient end-of-life strategies.
- **Scaling up success factors:** Success factors are the conditions required to achieve a scaling up of sustainable living business impacts. The success factors have been classified into seven categories, including; market demand & behaviour change; technology & infrastructure; education & training; financial frameworks; governance systems; information provision; partnerships & communications. This classification provides a basis for assessing detailed success factors for specific stakeholders and scenarios in subsequent reports of the BISS project.
- **Case studies:** The international case studies presented in this report showcase the multiple means in which innovative business practices and different stakeholder groups can contribute to sustainable living. Furthermore, the case studies illustrate how the four steps of the Scaling Up Innovations Framework (see Figure A) translate into real-life situations and business focused initiatives.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	2
1. INTRODUCTION	6
1.1 Background Information	6
1.2 This Report	6
1.3 BISS project	7
2. INTRODUCTION TO CONCEPTS	8
2.1 Sustainable Living	8
2.2 Expanding the Role of Business	9
2.3 Business Models	10
2.4 Scaling Up	11
3. SCALING UP INNOVATIONS FRAMEWORK	14
3.1 Overview	14
3.2 Levels of Application for the Innovation Scale Up Framework	15
3.3 The Innovation Scale Up Framework in Detail	16
4. CATEGORISATION OF SUSTAINABLE LIVING BUSINESS MODELS	23
4.1 Overview	23
4.2 Full Cost Business Models	24
4.3 Collaborative Production Business Models	24
4.4 Disruptive Business Models	25
4.5 Societal Business Models	26
4.6 Multi-Functional Product & Service Business Models	27
4.7 Collaborative Consumption Business Models	28
4.8 Product Service System Business Models	28
5. SCALING UP STRATEGIES	30
5.1 Overview	30
5.2 Strategies to Scale up Impacts of Organisations	31
5.3 Strategies to Scale up Impacts from Projects and Programs	34
5.4 Strategies to Scale Up Impacts through Value Creation	37
6. SCALING UP SUCCESS FACTORS	40
6.1 Overview	40

6.2	Market Demand & Behaviour Change	40
6.3	Technology & Infrastructure	43
6.4	Education & Training	44
6.5	Financial Frameworks	46
6.6	Governance Systems	48
6.7	Information Provision	49
6.8	Partnerships & Communication	52
7.	CASE STUDIES	54
7.1	Overview	54
7.2	Asia	56
7.3	Africa	59
7.4	Europe	62
7.5	North America	65
7.6	South and Latin America	67
7.7	Oceania	69
7.8	Global and Multiple Countries	71
8.	CONCLUSIONS	73
	ACRONYMS	75
	ACKNOWLEDGEMENTS AND DISCLAIMER	76
	REFERENCES	77

1. Introduction

1.1 Background Information

Recent years have seen an increasing interest in sustainable entrepreneurship and associated business models that support and enable sustainable living. However, their uptake at global, national and local levels still occurs at a relatively small-scale¹.

In order to channel efforts toward more sustainable lifestyles and to enable a green economy, it is important to identify business and social innovations that evolve from across the world as they are the product of creativity, motivation and opportunities seized in a given time and place. Sometimes these innovations happen as a short-term solution to satisfy a basic need (a lamp made out of an empty bottle of soda), sometimes they revolutionize the way societies transform themselves (e.g. internet). Identifying sustainable innovations and their key success factors and the factors that make them accessible with maximum value represents a significant opportunity to create functional, sound and profitable business models. Moreover, these success factors could be translated into a series of policy recommendations, initiatives and partnerships that could not only support the development of nations currently struggling to meet the Millennium Development Goals, but also strengthen and re-shape the way business operates in economically developed nations.

Knowledge-sharing and networking can act as enablers that activate entrepreneurial practices that shift economies toward a more integrative and sustainable direction. Development organisations (such as the German Federal Ministry for Economic Cooperation and Development) play an important role in identifying and supporting the activation of new and innovative business models. Successful innovative business models may be built on similar success factors that can be scaled up, adapted and improved to go beyond merely providing income streams to offering potential for long-term impact and to help enable sustainable lifestyles.

1.2 This Report

1.2.1 Objective

The objective of this report is to provide a baseline assessment on the scaling up the impacts of innovative sustainable living business practices. This report represents the baseline assessment report of the BISS project (see Section 1.3), and includes the underpinning concepts, a categorisation of business models, a Scaling Up Innovations Framework, scaling up strategies and success factors.

1.2.2 Report Structure

This report is structured as follows:

- **Chapter 1 'Introduction'** provides an introduction to this report and the Business Innovation for Sustainable Scale-Up (BISS) project;
- **Chapter 2 'Introduction to Concepts'** presents an introduction to concepts relevant for scaling up sustainable living business impacts;

- **Chapter 3 ‘Scaling Up Innovations Framework’** presents the overall analytical framework to strengthen the link between business and sustainable living, and scaling up sustainable living business impacts;
- **Chapter 4 ‘Categorisation of Sustainable Living Business Models’** introduces a categorisation of business models that enable sustainable living;
- **Chapter 5 ‘Scaling Up Strategies’** discusses the overarching strategies to facilitate the scaling up of sustainable living business impacts;
- **Chapter 6 ‘Scaling Up Success Factors’** presents key success factor categories for scaling up sustainable living business impacts;
- **Chapter 7 ‘Case Studies’** presents practical examples of innovative business practices which are contributing to sustainable living;
- **Chapter 8 ‘Conclusions’** discusses the conclusions from this report.

1.3 BISS project

This report has been produced as part of the Business Innovations for Sustainable Scale-Up (BISS) project. The BISS project is undertaken by the Collaborating Centre on Sustainable Consumption and Production (CSCP) with the support of the German Federal Ministry for Economic Cooperation and Development (BMZ).

The overall objective of the BISS project is to identify and assess innovative sustainable business practices, associated strategies, and success factors for scaling up sustainable living impacts. Furthermore, the project provides the foundation research and building blocks for the Global Network of Sustainable Innovation and Entrepreneurship (www.scaling-up.net).

The BISS project approach is presented in the diagram below. More information about the BISS project is available on: <http://scaling-up.net/page/biss-project>.

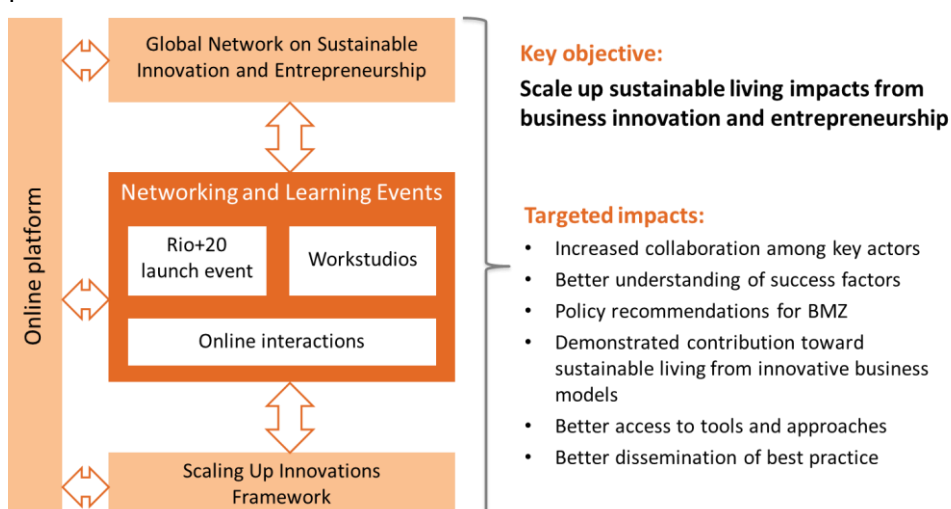


Figure 1-1 BISS Project Approach

2. Introduction to Concepts

2.1 Sustainable Living

Sustainable living (also referred to as “One Planet Living” and “Sustainable Well-Being”) can be described as patterns of consumption and production that enable present generations to achieve healthy and happy lives, while respecting environmental limits, and thus enable future generations to do the same (modified from ^{2,3}).

Our current living patterns are unsustainable. The Global Footprint Network notes that today the quantity of resources that we consume globally and the waste that we generate require the equivalent of 1.5 planets⁴. This means that it takes the Earth one year and six months to regenerate what we use in a year. In other words, we are facing an “ecological overshoot situation”⁵. Our ecological footprint has been consistently increasing. Figure 2-1 shows that the consumption patterns are not equal across the globe. The highly industrialised and developed countries (e.g. Europe, North America, and Australia) consume significantly more than transition and developing countries in South America, Africa and large parts of Asia. Consumption patterns are increasing rapidly in transition economies due to their growing middle class consumers and associated demands for supporting services and infrastructure (e.g. China, India).

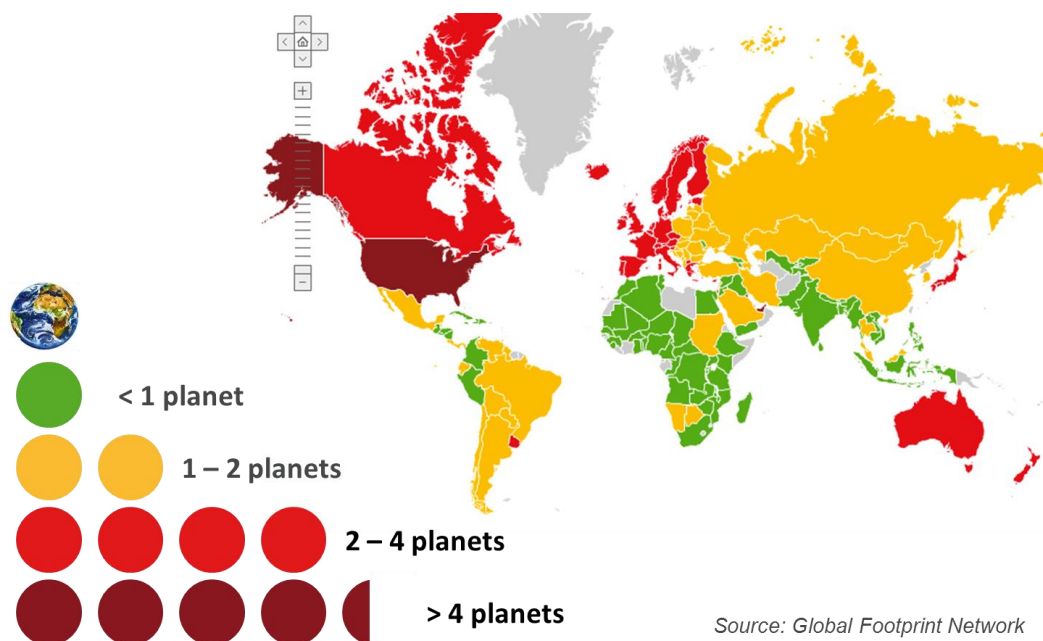


Figure 2-1 Consumption Trends: Does a Better Life Require More Than One Planet?⁶

One of the consequences of the ecological overshoot we are experiencing is the excess greenhouse gas emissions that cannot be absorbed by the current level of vegetation on Earth, thus causing increased global temperatures and climate change that places additional stresses on ecosystems. While everyone depends on ecosystem services and natural assets, the world’s poorest people are the most exposed to consequences of environmental degradation. Without access to clean water, adequate food, fuel and materials, they are trapped in a vicious cycle of poverty. At the same time the ecological footprint of high-income nations as calculated by WWF⁷ has been increasing at an annual rate of 7 per cent between 1970 and 2008. By contrast,

the Happy Planet Index⁸ demonstrates that the countries with the highest levels of well-being are not always the ones with the largest environmental impact.

The challenge is therefore to find a way in which all people could have happy and prosperous lives while respecting the natural limits of our one planet. To achieve this goal, WWF developed the following 10 principles of sustainable living⁹.

1. **Zero carbon:** Using more energy efficient technologies and renewable energy sources;
2. **Zero waste:** Reducing waste, reusing where possible, and ultimately sending zero waste to landfill;
3. **Sustainable transport:** Using low carbon modes of transportation to reduce emissions; reducing the need to travel;
4. **Local and sustainable materials:** Using local and sustainable materials, with low energy consumption, and where possible made from renewable or waste resources;
5. **Local and sustainable food:** Encouraging low impact, local, seasonal and organic diets and reducing food waste;
6. **Sustainable water:** Using water resources more efficiently;
7. **Natural habitats and wildlife:** Protecting and restoring biodiversity and natural habitats through appropriate land use;
8. **Culture and heritage:** Reviving local identity and cultural heritage of local communities;
9. **Equity and fair trade:** Supporting fair employment (including employment for people from marginalised and disadvantaged communities) and international fair trade;
10. **Health and happiness:** Encouraging healthy consumption patterns and active, sociable, meaningful lives to promote well-being and happiness.

2.2 Expanding the Role of Business

Businesses traditionally focus on production activities and processes within their operations to deliver products and services to clients. Most traditional business models employed by enterprises (including small and large corporations) from around the world are based on the principle on producing more goods and products to sell to their direct clients to generate greater profits. Traditional business models that link profit to the volume of product sales are being continuously perfected to reduce expenses for inputs (especially labour), improve production efficiency and stimulate growth in the level of demand and consumption. The emphasis on efficient process technologies has led to an enormous increase in labour productivity – on average a factor of 20 over the past 150 years¹⁰. During the same period the levels of resource use have not reduced as drastically. Traditional incremental technological innovation has proven to be insufficient to the task of keeping up with the pace of growth in population, consumption and living standards¹¹.

There is a need for businesses to move from a production focus (e.g. controlling and optimizing their existing production processes) to a more sustainable consumption focus (e.g. influencing and encouraging sustainable consumption patterns) to address the product and service needs of a sustainable society (sphere of concern). The expanding role of business is illustrated in the figure below.

The case studies presented in Chapter 7 of this report provide some practical and real life examples of how businesses can contribute to sustainable living and gain a competitive advantage by expanding their role in local, national, or international communities and societies.

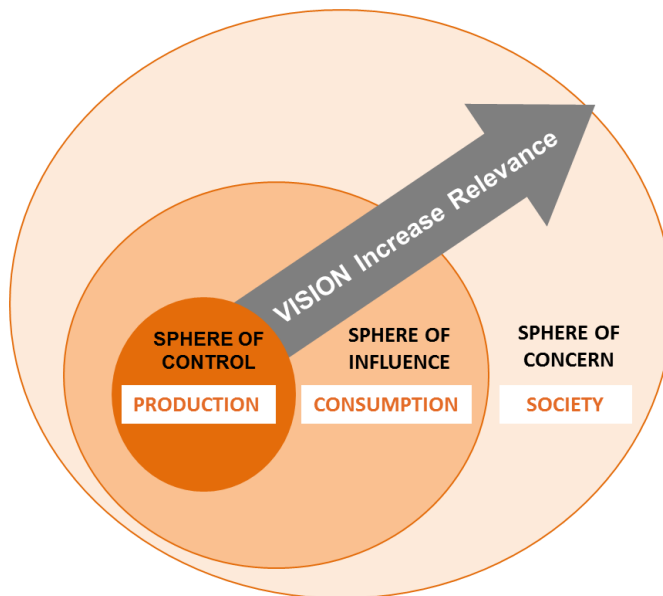


Figure 2-2 Expanding the Role of Business

2.3 Business Models

A business model describes the rationale of how an organisation creates, delivers, and captures economic, social, environmental, or other forms of value. The essence of a business model is that it defines the manner in which the business enterprise delivers value to customers, entices customers to pay for the value on offer and converts those payments into profit. It reflects what customers want, how they want it, and how an enterprise can organise to best meet those needs, and get paid for doing so.

An enterprise creates value by producing and delivering goods/services at a cost that is lower (or equal in case of non-profit organisation) than what the consumer is willing to pay for that good/service, that value flows to consumers in the form of "consumer surplus". The value created by a business changes over time, mostly due to technical and managerial innovation. Value creation increases when these innovations increase the willingness of consumers to pay more (e.g. due to improved product quality or durability), or when the innovations reduce the production and/or delivery costs (e.g. as a result of adoption of more efficient technologies or distribution channels).

A business model can be described through nine building blocks (Figure 2-3) that demonstrate the logic of how an organisation intends to develop a new business strategy or improve an existing strategy to better meet market needs and consequently increase value creation through better (and more sustainable) products and services.

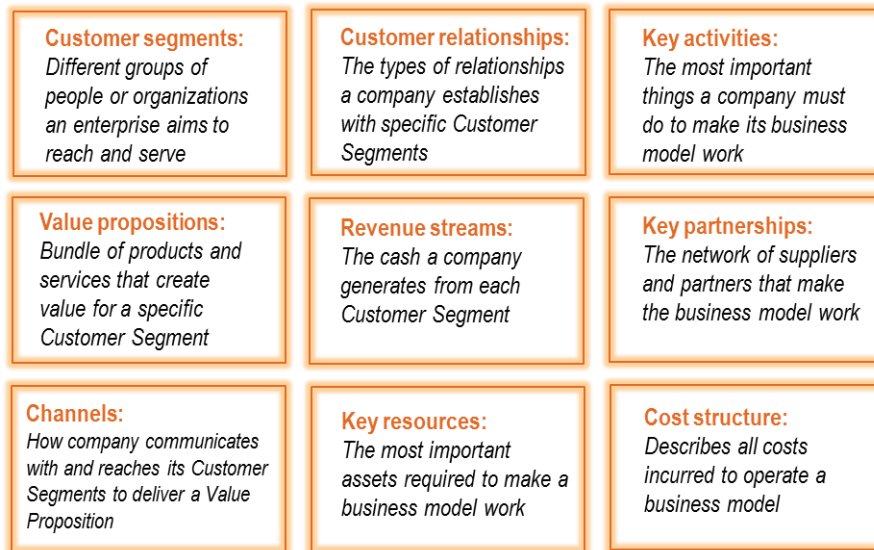


Figure 2-3 Nine Business Model Building Blocks¹²

While the phenomenon and practice of environmentally- and socially oriented business models is no longer new, the idea of business models that enable sustainable lifestyles is quite novel. Truly sustainable business models must go beyond mere improvement of resource efficiency and support individuals in making more sustainable lifestyle choices¹³. To facilitate more sustainable ways of living, the business models address unsustainable trends affecting lifestyles, including¹⁴: ever shortening fashion cycles supported by advertising and marketing; the resulting throwaway mentality of producers and consumers that is based on economies of scale of both production and consumption; and the accumulation of “stuff” at the individual level.

2.4 Scaling Up

2.4.1 Definitional Discussion

There has been an increasing interest in the subject of “scaling up”. The term “scaling up” and many related terms (e.g. multiplication, replication) are widely used in different sectors and contexts (e.g. health, environmental, commercial, and social studies) at micro (e.g. business case studies), meso (e.g. development strategies), and macro level (e.g. policy formulations). Although literature on the subject is relatively extensive, there is not yet an internationally accepted definition of scaling up and the term is often not well defined or understood.

Very broadly, scaling up means “doing more” of something, but this “something” varies considerably between different fields. To be more precise, the objective of scaling up can be defined as: “Scaling up leads to more quality benefits to more people over a wider geographic area more quickly, more equitably, and more lastingly”. Scaling up according to this definition reflects both a concern for the extent of the impact, and for the quality of the impact in terms of sustainability and equity¹⁵.

Part of the confusion with the scaling up terminology comes from the fact that the term is often used as a catch all general term to refer to a combination of different processes, which themselves have a variety of different definitions¹⁶. Therefore, a tentative typology of scaling up is provided in Table 2-1.

Table 2-1 Typology of Scaling Up^{17,18}

Typology	Description	Alternative terms
Quantitative scaling up	“Growth” or “expansion” in their basic meaning; increase the number of people involved through replications of activities, interventions, and experiences.	Dissemination, replication Scaling out or horizontal scaling up
Functional scaling up	Projects and programs expand the types of activities (e.g., from environmental intervention to health, credit, training, etc.)	Vertical scaling up
Political scaling up	Projects/programs move beyond service delivery, and towards change in structural/institutional changes	Vertical scaling up Institutionalization
Capacity scaling up	Projects/programs improve their efficiency and effectiveness to allow for growth and sustainability of interventions, achieved through increased financial resources, staff training, networking, etc.	Vertical scaling up Institutional development

The terms replication, streamlining, and expansion, and innovation are often used in the context of scaling up sustainable industrial development. The table below provides a brief description of these terms, including their underpinning principles, application areas, and thrust¹⁹.

Table 2-2 Scaling Up Disentangled²⁰

	Terminology	Description	Principle	Application Areas	Thrust
Scaling up	Replicating	Large scale application of known solutions and best practices ('widening')	Applying	Within the same target group, sector or cluster	Using best practices – business development
	Streamlining	Eliminating steps that may not be necessary to achieve similar result	Learning	Within the same target group, sector or cluster	Doing it effectively and efficiently
	Expanding	Seeking new applications and markets for practices proven elsewhere	Adapting	New sectors, countries, clusters, etc.	Making it applicable in different areas
	Innovating	Finding new solutions that have more substantive benefits ('deepening')	Research and development	All areas	Continuous development and improvement

2.4.2 Scaling Up Business Impacts on Sustainable Living

In the context of this study, a hotspot can be described as a sustainable living issue that has potential to be improved or strengthened. These hotspots can be local (e.g. lack of local community services), national (e.g. unemployment) or international (e.g. climate change) in scope.

The core focus of the BISS project is on scaling up sustainable living business impacts. Overall, business can achieve this by increasing positive impacts in one (primary) hotspot (point “a” in Figure 2-4) or by expanding positive impacts in other (secondary) living hotspots (point “b” in Figure 2-4).

It should also be considered whether scaling impacts in some of the hotspots might have a negative impact on other hotspots (point “c” in Figure 2-4) (rebound-effects). For instance, by scaling up positive impacts on health by producing and selling more of a certain product that improves health, one should ensure that the increased production does not result in, for instance, increased carbon emissions and waste.

Overall sustainable living impact categories and specific hotspots can be categorised in many different ways. Their categorisation is often subject to their application levels (macro, meso, and micro), geographic region (e.g. developed, transition, and developing countries), and preferences of stakeholders involved (e.g. entrepreneurs, policy makers, multinational corporations, financial institutions). . As shown in the figure below, the impact categories can be grouped and linked to core sustainable consumption aspects and hotspots which influence consumption patterns.

The assessment of the business related opportunities for scaling up sustainable living hotspot impacts is discussed further in the Scaling Up Innovations Framework (Chapter 3).

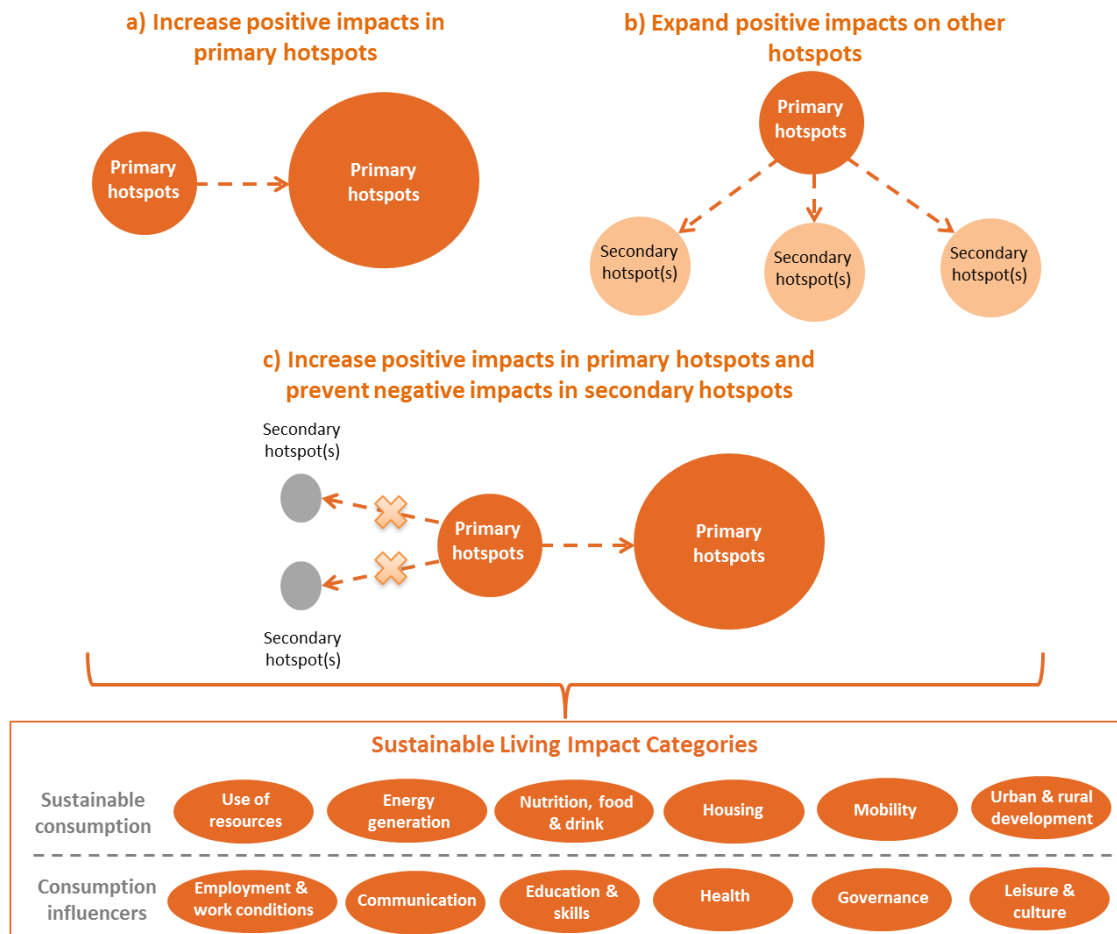


Figure 2-4 Scaling Up Sustainable Living Business Impacts

3. Scaling Up Innovations Framework

3.1 Overview

This chapter presents the Scaling Up Innovations Framework developed as part of the BISS project. The framework is meant to be a practical and innovative tool to strengthen the link between business and sustainable living, and enhance communication and interaction between stakeholders in the private and public sector, support organisations, and consumers.

The overall aim of the framework is to assist relevant stakeholder groups (e.g. entrepreneurs, multinational corporations, financial institutions, policy makers, intergovernmental organisations (IGOs) with the identification and review of opportunities for scaling up sustainable living business impacts at the micro, meso, and macro levels. Specific objectives of the framework include:

1. Identify and select sustainable living impacts and hotspots in specific communities or regions;
2. Identify innovative business approaches and associated business models to address sustainable living hotspots in specific community/region;
3. Evaluate the added value and impacts of relevant business approaches on planet, people, and profits;
4. Define and categorize strategies and success factors for scaling up the innovative and sustainable business practices;
5. Provide practical examples of innovative and sustainable business practices from around the world, including practical case studies and their contribution to sustainable living.

The framework consists of a 4-step process and is presented in Figure 3-1,:

- Step 1: Identify sustainable living hotspots;
- Step 2: Identify innovative business approaches;
- Step 3: Review impacts and added value;
- Step 4: Scale up sustainable living impacts.

Each step of the framework is discussed in the following sections. As shown in the figure below, the starting point of the framework is sustainable living. This way it is assured that the interests and priorities of people, communities and civil society at large are used as the basis to identify opportunities to scale up sustainable living business impacts.

The Scaling Up Innovations Framework is not meant to be yet another method for measuring social/environmental impacts and triple bottom line performance. It was developed as a decision-making aid to develop a plan for scaling up, rather than a method. The framework is therefore made adaptable to the needs of individual organisations and flexible so it can be applied at different levels (micro, meso, and macro).

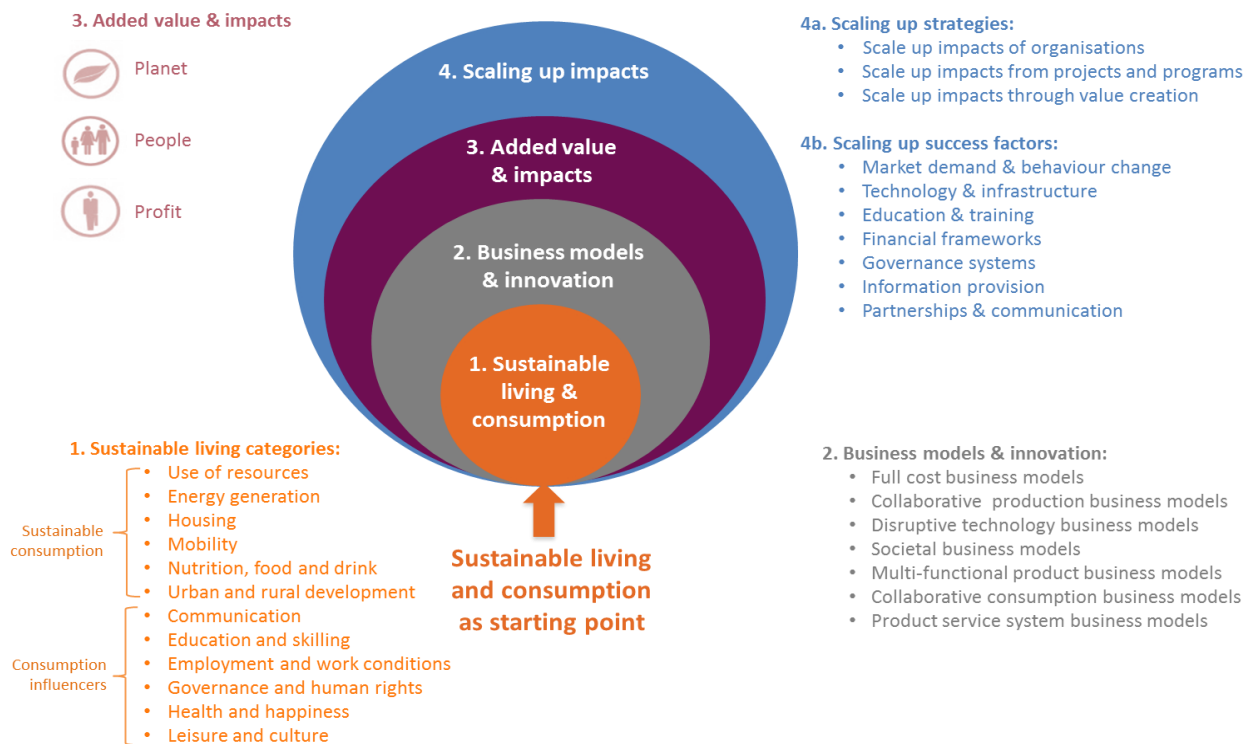


Figure 3-1 Scaling Up Innovations Framework

3.2 Levels of Application for the Innovation Scale Up Framework

As illustrated in Figure 3-2, the Scaling Up Innovations Framework is designed to be applied in the context of multiple stakeholder groups at macro (global and national), meso (regional) and micro (Organisational) levels. Applying the framework at the Organisational level by entrepreneurs will deliver specific opportunities for business development. It is envisaged that applying the framework application at regional level will assist with the identification and review of strategic partnerships between multi-national corporations, their supply chain partners (including small and medium sized enterprises (SMEs) and community based organisations to scale up business impacts in a specific region (e.g. production area, industrial estate). The objective of applying the framework at the country level is to deliver policy priorities and associated instruments to drive and encourage the scaling up of sustainable living business impacts. At the global level, the framework could be applied by IGOs and multinational corporations to formulate comparative global and inter-country priorities and mechanisms relevant to scaling up business sustainable living impacts.

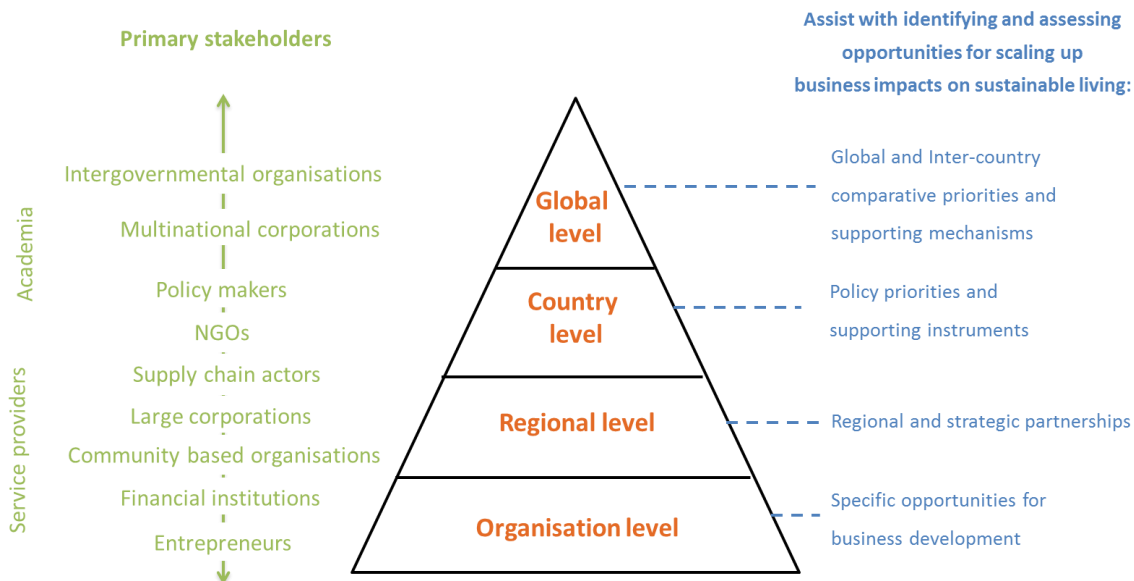


Figure 3-2 Application Levels of the Scaling Up Innovations Framework

3.3 The Innovation Scale Up Framework in Detail

3.3.1 Step 1: Identify Sustainable Living Hotspots

The first step is about identifying sustainable living hotspots that are relevant to an area under investigation (e.g. local community, city, region, country). In the context of this study a hotspot can be described as a sustainable living issue or challenge that has potential to be improved or strengthened. These hotspots can be local (e.g. lack of local community services), national (e.g. unemployment) or international (e.g. climate change) in scale.

As illustrated in Figure 3-3, Step 1a includes the selection of applicable sustainable living impact categories. Step 1b involves the selection of specific hotspots within the impact categories applicable to the region or stakeholder (group) under investigation.

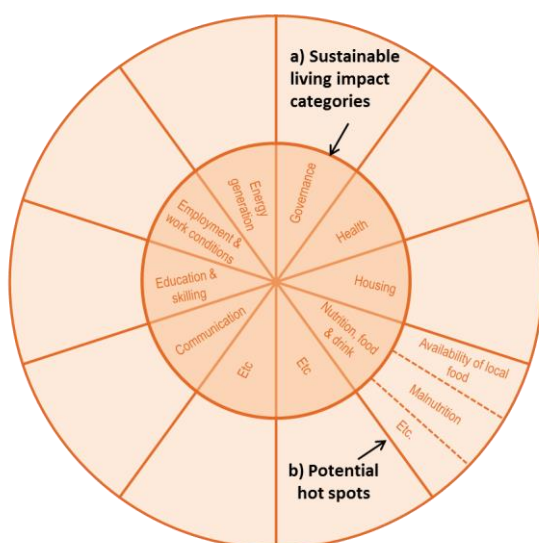


Figure 3-3 Step 1: Identify Sustainable Living Hotspots

Sustainable living hotspots can be categorised in many different ways. Their categorisation is often subject to the level to which the framework is applied (macro, meso, and micro), the geographic region (e.g. developed, transition, and developing countries), and the preferences of the stakeholders that are involved in the process (e.g. entrepreneurs, policy makers, multinational corporations, financial institutions). The 10 principles of sustainable living developed by the WWF²¹ (Section 2.1) and CSCP (e.g. within the SPREAD Sustainable Lifestyles Project²²) are used as a basis in the Scaling Up Innovation Framework to categorise sustainable living hotspots (Table 3-1). It is noted that the categorisation should be regarded as indicative and flexible to be adapted to specific situations.

Table 3-1 Sustainable Living Impact Categories and Specific Examples
(Modified from ^{23, 24})

Sustainable Living Impact Categories	Examples of Specific Sustainable Living Hotspots (Not All-Inclusive)
Sustainable consumption	
Use of resources	<ul style="list-style-type: none"> • Availability of locally produced materials (e.g. construction) • Lack of choice and demand in sustainable materials (e.g. eco-labelled products)
Energy generation	<ul style="list-style-type: none"> • Low energy efficiency of existing buildings • Use of energy from renewable sources • Lack of access to energy sources
Nutrition, food & drink	<ul style="list-style-type: none"> • Childhood malnutrition • Availability of local products • Obesity
Housing	<ul style="list-style-type: none"> • Prices of land in urban areas • Housing affordability • Insufficient housing insulation
Mobility	<ul style="list-style-type: none"> • Lack of public transportation • Lack of transport infrastructure (e.g. bike path networks) • Traffic congestion in cities
Urban & rural development	<ul style="list-style-type: none"> • Lack of re-use and recycling facilities • Access to clean water • Growth of urban sprawl • Lack of appropriate effluent disposal systems
Consumption influencers	
Employment & work conditions	<ul style="list-style-type: none"> • Unemployment • Child labour • Stress
Communication	<ul style="list-style-type: none"> • Lack of information and communication technology (ICT) infrastructure • Lack of internet access • Costs of ICT services
Education & skilling	<ul style="list-style-type: none"> • Lack of educational facilities • Cost of education • Quality of education
Health	<ul style="list-style-type: none"> • Access to affordable health services • Access to affordable medicaments
Governance	<ul style="list-style-type: none"> • Gender inequality • Security in urban and rural areas
Leisure & culture	<ul style="list-style-type: none"> • Lack of recreational facilities • Acceptance of local culture and traditions

3.3.2 Step 2: Identify Innovative Business Approaches

The second step in the Scaling Up Innovations Framework is the identification of innovative business approaches that address relevant sustainable living hotspots that have been identified. A business model

describes the rationale of how an organisation creates, delivers, and captures value (see Section 2.3). Business models are applicable to any type of private and public organisation, so not only entrepreneurs or multi-nationals, but also IGOs, government agencies, and financial institutions.

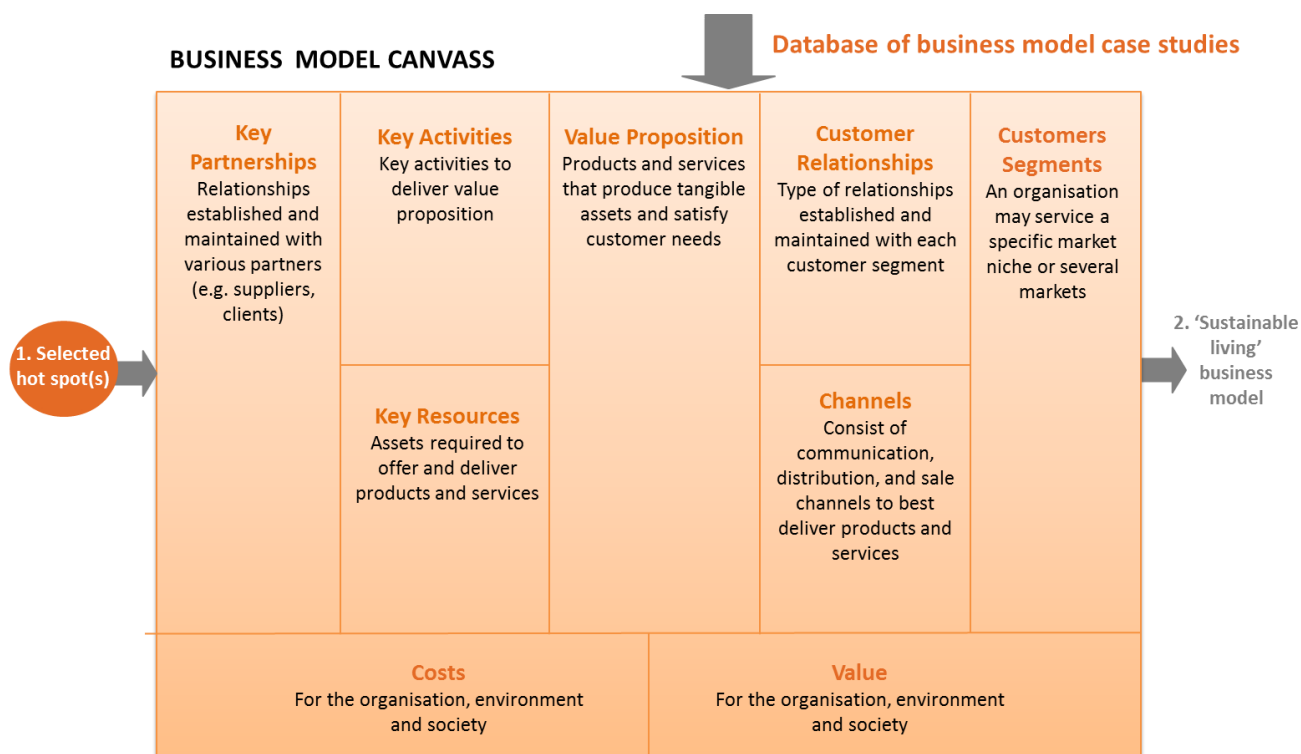
The framework applies the business model canvas²⁵ to identify these innovative approaches in combination with a library of business model case studies (some of these case studies are presented in Chapter 7 of this report). This process is presented in Figure 3-4.

The Business Model Canvas was created by Osterwalder and Pigneur²⁶ as a user-friendly framework to assist with revising existing business models and developing new models. The tool resembles a painter's canvas – pre-formatted with the nine blocks to enable users to paint pictures of new or existing business models. The canvas is a hands-on tool that fosters understanding, discussion, creativity, and analysis.

The business model consists of several building blocks:

- **Customer segments:** Different groups of people or organisations an enterprise aims to reach and serve;
- **Value proposition:** Bundle of products and services that create value for a specific customer segment;
- **Customer relationships:** The types of relationships an enterprise establishes with specific customer segments;
- **Channels:** How an enterprise communicates with and reaches its customer segments to deliver a value proposition;
- **Key activities:** The most important things an enterprise must do to make its business model work;
- **Key resources:** The most important assets required to make the business model work;
- **Key partnerships:** The network of suppliers and partners that make the business model work.

The original Business Model Canvas includes two additional building blocks - revenue streams and cost structure - which were slightly modified to integrate the triple bottom line logic. Thus revenue streams are re-labelled as created value (for the organisation, environment and society) and cost structure is re-labelled as costs incurred by the organisation, environment and society.



Source: Modified from Osterwalder and Pigneur (2010) and CSCP (2012)

Figure 3-4 Step 2: Identify and Review Innovative Business Approaches

3.3.3 Step 3: Review Impacts and Added Value

After defining and describing the desired business model, the third step of the Scaling Up Innovation Framework is to review associated impacts and added value to people, planet and profit.

There are a number of ways to review impacts. For instance, Geoff Mulgan²⁷ identified the 10 most common methods of measuring impacts: cost-benefit analysis, stated preferences, revealed preferences, social return on investment, life satisfaction assessment and others. There are also numerous guidelines such as SROI, or Social Return on Investment (by the SROI Network), and Social Reporting Standard (a joint project by a consortium including Ashoka Germany, BonVenture, Schwab Foundation and others). Both guidelines outline a process that can help identify the most important impacts by engaging stakeholders and distinguishing between outputs, outcomes and impacts. While the Social Reporting Standard is a qualitative tool, the SROI framework goes one step further and suggests a methodology to monetise social and environmental impacts. There are also impact and performance evaluation frameworks, guidelines and standards that have become popular among large corporations, including the Global Reporting Initiative (GRI), SA 8000, AA 1000, ISO 26000 and several others. Each of these guidelines, frameworks and certification schemes has advantages and disadvantages, but all require significant time investment – which is one of the key resources for a small entrepreneurial firm.

The approach to review the impacts within the Scaling Up Innovations Framework (step 3) is to define a number of impact categories for each of the bottom lines (people, profit, planet) and evaluate the organisation's performance using a qualitative scale from 1 to 5, with 1 reflecting a significant negative impact and 5 signalling a significant positive impact.

It is acknowledged that each organisation may develop its own impact categories that are relevant for its business model and local context. An indicative and illustrative example of the impact assessment is presented in Figure 3-5. The ten sustainable living impact categories are mapped on a radar chart; several financial performance indicators could be added to complete the picture and provide an assessment of impacts and added value on all three bottom lines – environmental, social and financial. When defining these impact categories it is important to think about a business comprehensively, including the overall value chain, production contractors, end consumers and beneficiaries (if they differ from end consumers), all the logistics involved, and so forth.

It should be emphasized that decision-makers should identify their relevant key sustainable living hotspots and conduct this quick exercise for their organisation as it might be very helpful to raise awareness of potential inefficiencies in their business model (from social, environmental or financial point of view). It is also recommended to validate key hot spots as well as the qualitative scale with key stakeholders to ensure accuracy and credibility.

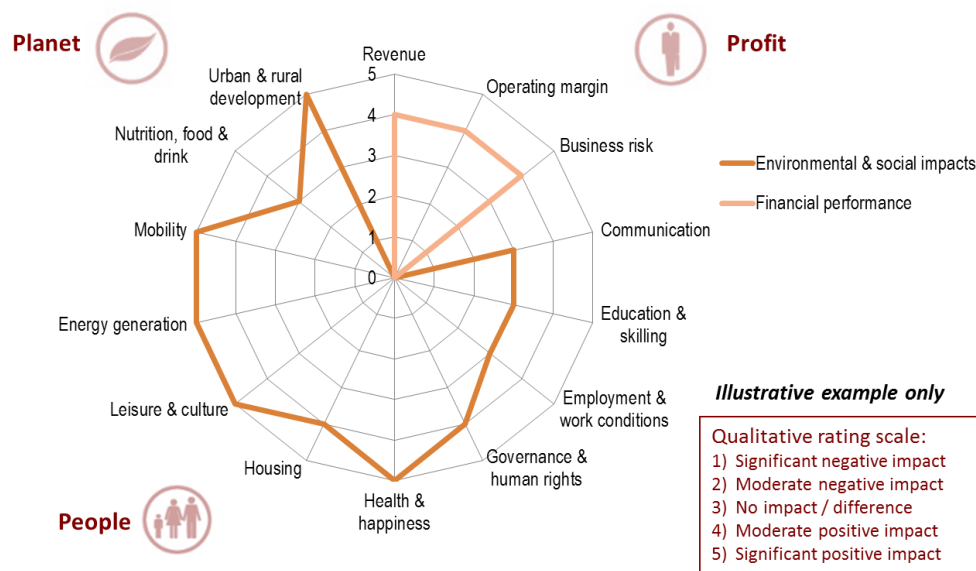


Figure 3-5 Step 3: Review Impacts and Added Value

3.3.4 Step 4: Scale Up Impacts

The fourth step is to identify effective strategies and success factors to scale up the sustainable living impacts within the selected innovative business approach.

Scaling up strategies describe how business impacts on sustainable living could be scaled up. Scaling up success factors are *the conditions required* to achieve a scaling up of sustainable living business impacts (e.g. partnerships and communications, supporting governance systems, behaviour change, technology and infrastructure, financial frameworks and information). This is illustrated in Figure 3-6.

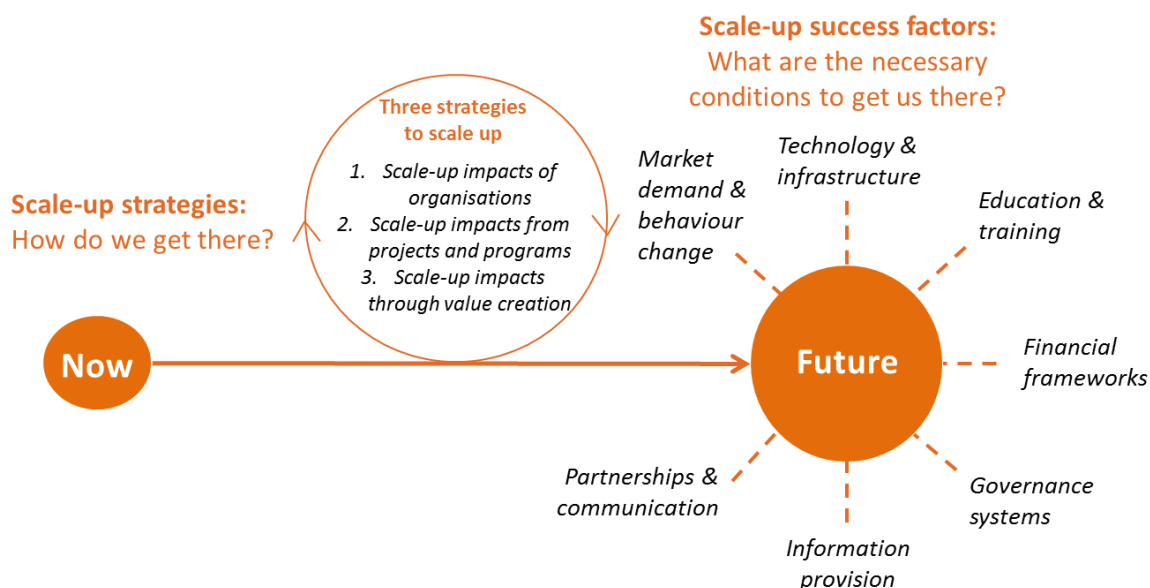


Figure 3-6 Scaling Up Strategies and Success Factors

Depending on the focus of the scaling up efforts – scaling impacts of organisations or programmes/projects – the following distinctions can be made between scaling up strategies (Figure 3-7):

- **Strategies to scale up impacts of organisations:** scaling impacts by growing the organisation (organic growth and acquisitive growth), scaling impacts beyond organisational boundaries (dissemination, joint ventures, partnerships, franchising and smart networks), and scaling impacts by reducing organisational boundaries (licensing and mergers/sale)²⁸;
- **Strategies to scale up impacts from projects and programs:** quantitative, functional, political and organisational/institutional scaling up strategies^{29,30};
- **Strategies to scale up impacts through value creation:** value creation through product substitution, efficient use, shared use, longer use, and efficient end-of-life strategies³¹.

In the context of this report, the success factors are categorised as follows :

- **Market demand & behaviour change:** To switch to more sustainable lifestyles and living conditions, it is necessary to change stakeholder behaviours (e.g. encourage, discourage, enforce) and increase awareness among consumers, business, policy makers, financial institutions, and others.
- **Technology & infrastructure:** Fit-for-purpose, practical and feasible technologies and supporting infrastructure enables the implementation of the innovative business solutions.
- **Education & training:** Empower entrepreneurs with techniques and skills to understand consumers' needs and develop sustainable products and services that respond to such needs.
- **Financial frameworks:** The economic and financial means by which entrepreneurs and businesses can leverage the development of sustainable products, services and business models.

- **Governance systems:** Governance systems support the creation of enabling environments for sustainable entrepreneurship and business innovation through reliable rules, information stability and trust among stakeholders.
- **Information provision:** During a scaling-up process it is not necessary to know everything but to connect with the right people and to have access to relevant and reliable data to support decision making.
- **Partnerships & communications:** Partnerships and alliances are an important precondition to develop any strategy to scale up sustainable living business impacts. Partnerships are the means by which different actors interact and enable the replication of impacts.

These success factors describe various forces in the external environment that influence the ability of businesses to scale up their sustainable living impacts and are aligned with previous research on scaling up impacts. However, this is not a comprehensive classification and there may be other scaling up success factors relevant for different sectors and types of organisations.

Given the importance of this topic in the context of the BISS project and the Scaling Up Innovations Framework, the scaling up strategies and success factors are discussed in further detail in Chapters 5 and 6 respectively.



Figure 3-7 Step 4: Scale Up Sustainable Living Impacts

4. Categorisation of Sustainable Living Business Models

4.1 Overview

Based on their value position (consumption and/or production) and focus (production process, product & services, systems), business models can present a range of production and/or consumption oriented sustainable living solutions. Figure 4-1 present the business model types identified and documented to date through the BISS project. It is not claimed that the business model types presented here are an exhaustive list; other relevant business models encouraging sustainable living clearly do exist. Sustainable living business models are an emerging field of application and knowledge, and therefore subject to further research and development.

Each business model type is described in the following section, including their potential contribution to sustainable living, and references to practical case studies discussed in Chapter 7.

As demonstrated in the case studies presented in this report, inclusive business model examples can be found in each of the business model categories presented in the figure below. Sustainable living driven business models do not exclude inclusive business models or visa versa.

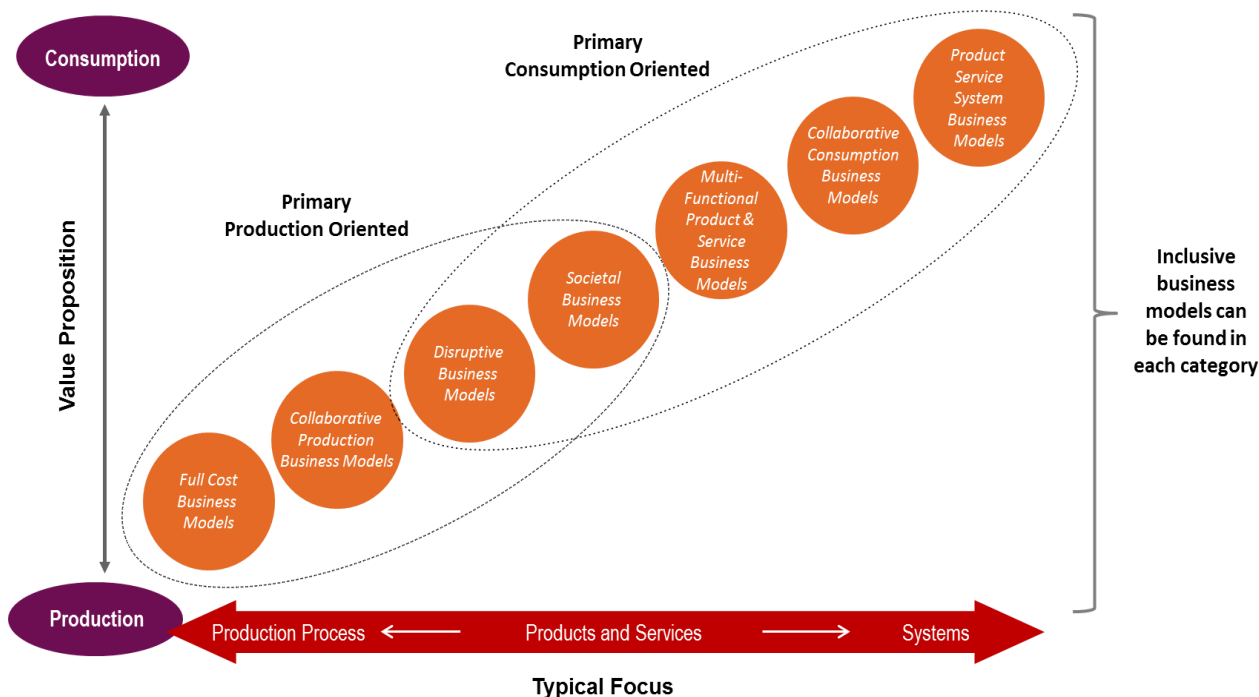


Figure 4-1 Categorisation of Business Model Types (Adapted and further developed from CSCP, 2012³²)

4.2 Full Cost Business Models³³

The true environmental and social costs of products and services (e.g. water, depletion of natural resources, greenhouse gas emissions) are traditionally not embedded in company decision-making processes or in the price of products or services. The aim of full cost oriented business models is to integrate the environmental and social costs into company evaluation and decision-making process and/or prices.

Traditional information systems typically do not enable companies or consumers to understand the true costs of products and services. However there is an increased recognition and understanding of these costs among businesses and consumers (e.g. through improved management and accounting approaches). The inclusion of the true environmental and social costs into product/service pricing often reveals cost-effective opportunities to reduce costs, prevent pollution, eliminate waste, and support business models that are both economically profitable and beneficial for the environment.

This full cost oriented business model may appear to be counterproductive due to the resulting price increases of goods and services. However, the integration of such costs still represents a potentially unexploited advantageous business path. For example, consumers and business stakeholders (e.g. government, NGOs) increasingly require clarity on the real environmental and social footprint of companies with which they do business.

The full cost business model can assist enterprises to realise the economic potential behind environmental and social ventures, and simultaneously ensure the inclusion of resource efficiency concerns – in terms of environmental costs - into the development, management and delivery of products or services³⁴.

Illustrative Examples

Principles of the full cost business model and their contribution to sustainable living are demonstrated in the following case studies (Chapter 7):

- Cadbury - Promoting Sustainable Livelihoods and Cocoa Production (Ghana): To secure a steady supply of cocoa, Cadbury is helping farmers improve cocoa production and maintain decent livelihoods to support families and villages (see Section 7.3.1);
- Advynlize (USA): Developing sustainable promotional products from discarded advertising materials (see Section 7.5.1);
- Chemical Leasing (e.g. Egypt, Mexico, Russia): Selling benefits of chemicals rather than the chemical substance itself. Consequently the economic success of the supplier is no longer linked with increasing product turnover but rather through better and more efficient applications for the product (see Section 7.8.1).
- Unilever – helping small hold farmers (e.g. Ghana, Tanzania, Nigeria): Multi-stakeholder partnership approach to cultivate a new sustainable and profitable tree crop for African mining communities (see Section 7.8.2).

4.3 Collaborative Production Business Models³⁵

Companies (in particular SMEs) often lack the necessary resources, capabilities, and experience (e.g. human, financial, technical) to improve their production processes, products, services and systems in absence of external support. This is especially the case with businesses in developing and transition economies.

However, significant knowledge and experience typically exists in other parts of supply and value chains. Many large international corporations have dedicated departments and facilities that work to explore collaborative opportunities within their value and supply chains.

The collaborative production business model encourages organisations (e.g. in the supply/value chain) to work together to develop production processes, products, services and systems with a smaller ecological footprint.

This type of supply chain collaboration can occur at different levels, including:

- Between various company departments in medium sized enterprises (e.g. sales, production, purchasing);
- Between different SMEs (e.g. through sharing of resources and experiences);
- Between SMEs and larger/international organisations (e.g. supply chain initiatives driven by customer demand or the larger industries).

Illustrative Examples

Principles of the collaborative production business model and their contribution to sustainable living are demonstrated in the following case studies (Chapter 7):

- Cadbury - Promoting Sustainable Livelihoods and Cocoa Production (Ghana): To secure a steady supply of cocoa, Cadbury is helping farmers improve cocoa production and maintain decent livelihoods to support families and villages (see Section 7.3.1);
- Association of Private Water Operators (Uganda): A private public partnership to enhance access to water in townships with poor water supplies(see Section 7.3.2);
- Ouro Verde Amazonia (Brazil): Production and sale of Brazil nut products while promoting sustainable land use (see Section 7.6.1);
- Chemical Leasing (e.g. Egypt, Mexico, Russia): Selling benefits of chemicals rather than the chemical substance itself. Consequently the economic success of the supplier is no longer linked with increasing product turnover but rather through better and more efficient applications for the product (see Section 7.8.1). This is the concept of “Product Service System”;
- Unilever – helping small hold farmers (e.g. Ghana, Tanzania, Nigeria): Multi-stakeholder partnership approach to cultivate a new sustainable and profitable tree crop for African mining communities (see Section 7.8.2).

4.4 Disruptive Business Models³⁶

The poorest segments of the population in developing and transition countries represent a vast market niche. These people cannot afford the products and services offered at the lower-end of the traditional consumer market. Nonetheless, there is a business opportunity to identify and develop economically appropriate products and services to better meet the needs of these potential consumers. Economically appropriate products and services would represent genuine value to these consumers rather than simply the development and delivery of additional low-end products or services.

Many companies (including those in developing and transition countries) have been tempted by the promise of profits of selling “low-end” products and services in high volume to the poorest market segments.

Experience has shown that this business approach is not successful, neither in the short or medium term. To better reach these consumer segments and gain strong competitive market advantage, there is an opportunity for SMEs to reshape their existing business model to include technologically disruptive innovation processes.

A disruptive technology or innovation helps create a new market and value network, and eventually goes on to disrupt an existing market and value network (over a period of a few years to decades), eventually completely displacing an earlier technology or business model.

Disruptive business models represent a business strategy that combines the process of de-materialisation – a process, which is crucial to meet consumer needs in developing and transition economies – with innovative disruptive products and services. However, disruptive technology models have not been extensively implemented to date. One possible reason behind this fact is that they do not yet appeal to entrenched market leaders because of perceptions that disruptive technologies under-perform existing technologies and serve a less-profitable consumer demographic. Also, many existing (resource inefficient) technologies are “locked in” because of significant sunk capital investments.

Illustrative Examples

Principles of the disruptive business model and their contribution to sustainable living are demonstrated in the following case studies (Chapter 7):

- Cosmos Ignite Innovations (India): First global company to bring Solar Light LED lighting and micro-energy to market for domestic uses that are focused on the poor (see Section 7.2.3);
- Sustainable Feedstocks for Aviation Fuels (Australia): A collaborative programme between Boeing and CSIRO to identify and trial new fuel sources that are compatible with existing land uses with the ultimate goal of developing commercially-viable aviation fuel feedstock (see Section 7.7.2).

4.5 Societal Business Models³⁷

The societal business model employs social criteria as key components in determining stakeholder relationships and engaging with and influencing consumer habits.

This business model can be described as an “affecting model”. Forming partnerships is an essential part of this process and a critical success factor. To effectively develop a social business model a company should seek to move beyond the optimisation of products and services in resource efficiency terms and include the concept of societal values (e.g. local business development, improved living conditions for local communities, employment creation, poverty reduction, education).

The societal business model may demand a fundamental restructuring of a company’s existing business model as well as the establishment of relevant collaborative models with partners from business, politics and civil society.

A societal business model that benefits low-income consumers and reduces poverty can be regarded as an inclusive business model. An inclusive business is all about including the poor in the business process as producers or consumers.³⁸ However, a societal business model can also relate and benefit medium and higher income consumers and society at large.

Illustrative Examples

Principles of the societal business model and their contribution to sustainable living are demonstrated in the following case studies (Chapter 7):

- BASIX Financial and Business Development Services (India): Promotion of sustainable livelihoods, including rural poor and women, through provision of financial and technical assistance (see Section 7.2.1);
- Association of Private Water Operators (Uganda): A public-private partnership to enhance access to water in townships with poor water supplies (see Section 7.3.2);
- Peepoople (Kenya): Single use, self-sanitising and fully biodegradable toilets for people without access to conventional sanitation facilities. The toilets can be later used as fertiliser in agricultural production (see Section 7.3.3);
- Green-Works/London Re-use Commercial (United Kingdom): Diversion of waste from landfill by collecting old office furniture and selling it at low cost to small businesses, charities, and social enterprises (see Section 7.4.1);
- CEMEX Patrimonio Hoy (Mexico): A building materials company that tailored a business model to the specific needs of low-income customers (see Section 7.6.2);
- Unilever – helping small hold farmers (e.g. Ghana, Tanzania, Nigeria): Multi-stakeholder partnership approach to cultivate a new sustainable and profitable tree crop for African mining communities (see Section 7.8.2).

4.6 Multi-Functional Product & Service Business Models³⁹

The multi-functional product/service business model facilitates the multi-functional and simultaneous use of products and services to better meet consumer demand and creates additional business value.

The economic potential of this business model lies with reduced capital and operational costs to meet multiple consumer needs (e.g. through increased material, energy, water efficiencies). This model simultaneously impacts behaviour in the consumption phase and minimises negative social impacts by reshaping customer behaviour in sustainability terms.

This business model can help entrepreneurs reach larger market segments and reduce environmental footprints as the model often requires a reduced consumption of raw materials and embeds resource efficiency gains along product life-cycles.

Illustrative Examples

Principles of the multi-functional product and service business model and their contribution to sustainable living are demonstrated in the following case studies (Chapter 7):

- Andhikhola Hydrel Rural Electrification Scheme (Nepal): Innovative design features in the energy distribution system and tariff structure, enabling very low income subsistence farmers to access electricity. In addition to hydropower benefits, the scheme also provides water for gravity irrigation of 280 hectares of land (see Section 7.2.2);

- Peepoople (Kenya): Single use, self-sanitising and fully biodegradable toilets for people without access to conventional sanitation facilities. The toilets can be later used as fertiliser in agricultural production (see Section 7.3.3);

4.7 Collaborative Consumption Business Models

The term collaborative consumption is used to describe an economic model based on sharing, swapping, bartering, trading or renting access to products as opposed to ownership⁴⁰. Technology and peer communities are enabling these old market behaviours to be reinvented⁴¹.

Key characteristics and foundations of collaborative consumption can be summarised as follows⁴²:

- **Redistribution markets:** A system of collaborative consumption is based on used or pre-owned goods being passed on from someone who does not want them to someone who does want them. This is another alternative to the more common 'reduce, reuse, recycle, repair' methods of dealing with waste. In some markets, the goods may be free and in others, the goods are swapped.
- **Collaborative lifestyles:** This system is based on people with similar needs or interests coming together to share and exchange less-tangible assets such as time, space, skills, and money.
- **Product service systems:** This system is based on users paying for the benefit of using a product without actually owning the product outright. Product service systems are disrupting traditional industries that are based on traditional models of individual private ownership. Goods that are privately owned can be shared or rented peer-to-peer.

The benefits of collaborative consumption include: reducing carbon footprints by sharing transportation and assets, saving costs by borrowing and recycling items, and increasing happiness and contentment due to positive social interactions⁴³.

Collaborative consumption is a relatively new concept. A number of innovative business ventures and business models to support collaborative consumption are emerging, including collaborative workspaces, book swapping, carpool/ride sharing, bike sharing, garden sharing, clothes swapping, peer-to-peer renting.

Illustrative Examples

Principles of the collaborative consumption business model and their contribution to sustainable living are demonstrated in the following case studies (Chapter 7):

- Association of Private Water Operators (Uganda): A private public partnership to enhance access to water in townships with poor water supplies (see Section 7.3.2);
- ECF Efficiency City Farming (Germany): A company that designs urban farms to produce healthy vegetables and fish within the city environment (see Section 7.4.3).

4.8 Product Service System Business Models⁴⁴

Product service systems are characterised by the integration of technical products and services along the value life cycle. Such approaches consider both the use of physical products and the relative services necessary to satisfy evolving market trends and customer needs.

Product service systems introduce resource efficiency business strategies without fundamentally restructuring entire business models. For instance, the majority of product-oriented service business models do not imply any change in the technological system of an enterprise. The service provider enterprise advises consumers during the consumption and renewal phases of different products and thereby improves usage and end-of-life stages of the product life cycle in resource efficiency terms.

The wider application of the product service system concept is restrained by a number of avoidable factors. These factors relate primarily to a lack of knowledge, inertia in ways of working, and difficulties in communicating new and complex business models. Providers of product service systems sometimes need to invest in change while at the same time they face uncertain future conditions respecting policies and regulations that might - or might not - encourage resource efficiency.

Illustrative Examples

Principles of the product service system business model and their contribution to sustainable living are demonstrated in the following case studies (Chapter 7):

- Opower (USA): Privately held company partnering with utility providers to promote energy efficiency through Home Energy Reports for utility customers. The company analyses energy consumption and makes recommendations on energy saving opportunities (see Section 7.5.2);
- CarboNZero programme (New Zealand): A business that offers a low-cost carbon certification scheme to SMEs and global corporations (see Section 7.7.1).
- Chemical Leasing (e.g. Egypt, Mexico, Russia): Selling benefits of chemicals rather than the chemical substance itself. Consequently the economic success of the supplier is no longer linked with increasing product turnover but rather through better and more efficient applications for the product (see Section 7.8.1).

5. Scaling Up Strategies

5.1 Overview

As discussed in Chapter 3 (Section 3.3.4 specifically), the fourth step of the Scaling Up Innovation Framework focuses on scaling up strategies and success factors. The aim of this chapter is to provide further detail on strategies for scaling up sustainable living business impacts.

Scaling up strategies can be defined as mechanisms that describe how business impacts on sustainable living could be scaled up. Depending on the focus of the scaling up efforts, practitioners and academics tend to distinguish between the following strategies (Table 5-1):

- **Strategies to scale up impacts of organisations:** scaling impacts by growing the organisation (organic growth and acquisitive growth), scaling impacts beyond organisational boundaries (dissemination, joint ventures, partnerships, franchising and smart networks), and scaling impacts by reducing organisational boundaries (licensing and mergers/sale)⁴⁵;
- **Strategies to scale up impacts from projects and programs:** quantitative, functional, political scaling up strategies and capacity building^{46, 47}.
- **Strategies to scale up impacts through value creation:** value creation through product substitution, efficient use, shared use, longer use, and efficient end-of-life strategies⁴⁸.

Table 5-1 Scaling Up Strategies and Descriptions^{49, 50, 51}

Scaling Up Strategy	Categories		Description	
Impacts of organisations	Scaling impacts by growing the organisation	Organic growth	Scaling up by increasing the range and distribution of products and services and by opening new subsidiaries	
		Acquisitive growth	Scaling up by acquiring other firms	
	Scaling impacts beyond organisational boundaries	Dissemination		Sharing ideas with others using advocacy, open-source change-making and creating social or political movements
		Collaboration	Joint Ventures	Collaborating by establishing a new legal entity (equity-based)
			Partnerships	Collaborating on a contract basis rather than an equity basis
			Franchising	Collaborating by establishing a contract between a trademark owner (franchisor) and a local user (franchisee) to produce/sell products or services
	Smart networks		Collaborating by creating well-coordinated networks centred around a mission, rather than an organisation	
Scaling impacts by reducing organisational boundaries	Licensing		Scaling up impacts by establishing a legal contract between a product / technology owner (licensor) and a local user (licensee) to produce the products / technologies that were initially developed by a licensor	
	Merger/sale		Scaling up impacts by selling equity to another firm	
Impacts of projects & programs	Quantitative scaling up	Increase in the membership base through project / programme spread, replication, nurturing by external organisations, horizontal aggregation between several projects/programs or integration into another project/programme		
	Functional scaling up	Projects and programs expand the types of activities (e.g., from environmental intervention to health, credit, training, etc.)		

Scaling Up Strategy	Categories		Description
	Political scaling up		Projects/programs move beyond service delivery and towards institutional change
	Capacity scaling up		Project/programs improve efficiency and effectiveness through increased financial self-sufficiency, diversification of funding sources, staff training, etc.
Impacts through value creation ⁵²	Product substitution		Development of products or services that help to reduce the consumer's environmental impact by substituting more resource and energy intensive products with lower-impact products or services that serve the same or similar purpose.
	Efficient use of products and services		The company actively aims to prevent problems such as overconsumption, or provides advice to consumers regarding product use during the consumption phase and/or at end-of-life stage to improve the efficiency of product use and disposal.
	Shared use of products and services		Consumers get access to products through entrepreneurs (or through other consumers) who provide access to products .
	Longer use of products and services		Value creation by extending the lifespan of a product and avoiding strategies such as planned obsolescence.
	Efficient end-of-life strategies		Efficient product re-use and recycling strategies (or so-called up-cycling strategies) can scale up the impacts of existing/new businesses and generate additional economic and consumer value.

5.2 Strategies to Scale up Impacts of Organisations

5.2.1 Scaling Impacts by Growing the Organisation

This strategy involves scaling up impacts by growing an organisation. This can be achieved either by growing the organisation organically or by acquiring other firms:

- **Growing organically** means increasing the range and distribution of products and services (including expanding geographically and opening new subsidiary firms) by relying on internal resources and capital⁵³. Organic growth is the least risky scaling up strategy as it allows the highest degree of control over the firm. However, there are limitations to how long a firm can grow organically, particularly in saturated markets.
- **Acquisitive growth** involves acquiring other firms, rather than relying on internal resources and capital. Acquisitive growth allows acquisition of new skills or technologies more quickly or at lower cost than they could be built in-house, creating market access for existing products, removing excess capacity from an industry and improving the performance of the target company⁵⁴. Very importantly, acquisitions allow for elimination of important sources of competition, especially in saturated markets. However acquisitive growth entails many challenges that often lead to poor post-acquisition performance of both the acquiring and the acquired firm.

Illustrative Example

An example of a business that scaled up its impacts by growing organically is Freitag (<http://www.freitag.ch/>) – a Switzerland-based company that produces bags and accessories made of old truck tarpaulins and used car seat belts, thus giving a second life to materials that would otherwise have ended up in a landfill. Freitag bags have always been placed in a high price segment (CHF 200-400) as luxury goods. Such a pricing strategy meant that the business has been financially successful most of the time and has not borrowed a single Swiss franc to finance its development. All growth came from reinvesting profits. And the growth has been considerable: since 1993, Freitag expanded internationally and as of 2010 had operations in two online shops and five flagship stores (in Zurich, Davos, Hamburg, Cologne and Berlin). Such growth also meant considerable increase in the use of recycled materials, thus scaling Freitag's impacts on sustainable living⁵⁵.

5.2.2 Scaling Impacts beyond the Organisation

Scaling impacts beyond the organisation includes dissemination and a range of collaborative strategies (joint ventures, partnerships, franchising and smart networks):

- **Dissemination** is achieved by sharing ideas with others using advocacy, open-source change making and movement creation. Dissemination is both easy and difficult to implement: it does not require any contracts or other formal arrangements but it requires re-thinking organisational attitudes toward the ownership of ideas and exclusivity⁵⁶.
- **Collaboration** involves formal and informal arrangements between several organisations that can take a form of joint ventures, partnerships, franchising and smart networks.
 - Joint ventures: The most formalised form of collaboration. Joint ventures involve creation of a separate legal entity. Forming a joint venture benefits both sides in a variety of ways, including shared capital expenses, human resources, faster access to new technologies or new markets, and reduced financial risks that can be associated with independent project implementation. However, as in all types of collaborative relationships, joint ventures open the door to opportunistic behaviours among the partners (free-riding, leakage of proprietary knowledge, etc.)⁵⁷.
 - Partnerships: Also a formalised form of collaboration but on a contract- rather than equity basis. In a partnership, all parties remain legally independent and no new entity is created. In terms of challenges, partnerships are very similar to joint ventures and have the same risks of opportunistic behaviours among the partners.
 - Franchising: Another form of contract-based collaboration that involves creating a contract between a trademark owner (franchisor) and a local user (franchisee). The main advantage of franchising is that it can lead to economies of scale and facilitate acquisition of new capabilities and the knowledge in local markets. However, similar to joint ventures and partnerships, franchising has relatively high levels of business risk related to potential opportunistic behaviours of franchisees (e.g. reduced product quality for the sake of increased profitability)^{58, 59}.
 - Smart networks: Involve creation of well-coordinated networks that are centred around a mission, rather than an organisation. Focusing on the mission requires forsaking interests of individual organisations that compose the network; and coordination involves a common

agenda, shared measurement systems, mutually reinforcing activities, continuous communication and a backbone support organisation⁶⁰.

Illustrative Example

An example of scaling sustainable living business impacts beyond organisational boundaries is the chain of CAP-Märkte in Germany (<http://www.cap-markt.de/>). The CAP-Markt concept was invented and implemented by GDW SÜD (Genossenschaft der Werkstätten für behinderte Menschen eG), a charitable co-operative that provides employment for disabled people (handiCAPed). A CAP-Markt shop is typically a medium-sized neighbourhood supermarket that is operated by a local integration enterprise. In addition to employing handicapped people, CAP-Märkte also benefit local communities. CAP-Märkte shops are opened in premises that were left empty by the flight of traditional supermarket chains to out-of-town locations, thus creating neighbourhood shops that are both accessible on foot and provide a friendly service. Since being founded in 1999, the number of CAP-Märkte shops has steadily grown to reach 90 shops in 2011. These 90 shops provide employment to some 1,200 people, of which 700 are disabled employees. Such scaling up was achieved by using the social franchising scheme. Each franchisee pays GDW SÜD a fee for the franchise, as well as 0.6% of turnover. No specific financial package is offered to franchisees; however, the fact that CAP-Märkte is now an established brand with a proven concept increases investor confidence⁶¹.

5.2.3 Scaling Impacts by Reducing Organisational Boundaries

The aim of this strategy is to scale up impacts by licensing products, services or technology to another organisation or by fully merging with/selling to another organisation:

- **Licensing** involves establishing a legal contract between a product/technology owner (licensor) and a local user (licensee) to produce the products/technologies that were initially developed by a licensor. The main advantage of licensing, particularly for small entrepreneurial firms, is an opportunity to commercialise their innovations, even if they do not have resources to launch manufacturing independently. Also, compared to collaborative scaling up strategies (such as joint ventures where both parties become responsible for finances and management), licensing is much cheaper and it avoids potential disputes that can arise in joint decision-making. However, similar to franchising, licensing has relatively high levels of risk related to opportunistic behaviour of licensees (e.g. leaking proprietary information)⁶².
- **Merger/sale** involves selling the ownership of the firm to an acquirer. This is not only a strategy for founders to exit the firm but it may also be a proactive approach to overcoming strategic difficulties, getting access to valuable resources, scaling impacts and influencing the performance of the acquiring firm. Despite these benefits, there are also considerable organisational and reputational risks associated with mergers/sales. One could argue that selling a firm borders upon “selling out”, particularly if the sale deal is arranged between a socially-innovative entrepreneurial firm and a multinational corporation with contestable sustainability reputation. This may further lead to “mission drift” of the acquired firm rather than positively influence sustainability of the acquirer^{63, 64}.

Illustrative Example

Socially innovative entrepreneurial firms are increasingly choosing to scale their impacts by reducing organisational boundaries, and specifically by selling the ownership of the firm to larger corporations with more extensive distribution and marketing capabilities. Ben & Jerry's, The Body Shop, Tom's of Maine, Stonyfield Farm Yogurt, Green & Black's, Burt's Bees, Innocent Drinks, and Honest Tea are only some of the examples of entrepreneurial firms that have been sold to large corporations – Unilever, L'Oréal, Colgate, Danone, Cadbury Schweppes, Clorox, and Coca-Cola, respectively⁶⁵.

As suggested by Innocent Drinks (<http://www.innocentdrinks.co.uk/>), a UK-based company offering healthy, natural smoothies, “having Coke as an investor brings big advantages: we can leverage Coke's route to markets in countries we wouldn't otherwise be able to operate in, and they help us access better rates on everything from media to oranges... This deal will help us get our little bottles of healthiness to many more people”⁶⁶.

However, not all stakeholders perceive mergers with large corporations as an appropriate strategy for socially innovative entrepreneurial firms who are often accused of “selling out”. In addition to reputational challenges, some acquired companies struggle to survive at all. On the other hand, some mergers do help scale impacts. For instance, since receiving its first investment from Coca-Cola in 2008, Honest Tea (www.honesttea.com) has increased distribution of its healthy and organic beverages from about 15,000 outlets in 2008 to more than 75,000 in 2011. Furthermore, Honest Tea has introduced a ground-breaking plastic bottle that uses 22% less material – something that would not have been possible without financial help and organisational support from Coca-Cola⁶⁷.

5.3 Strategies to Scale up Impacts from Projects and Programs

5.3.1 Quantitative Scaling Up of Projects and Programs

Quantitative scaling up means expanding the size of project/programme by increasing the membership base. This can be achieved using the following mechanisms⁶⁸:

- **Spread:** Increasing the number of people who support/participate in the project/programme;
- **Replication:** A successful project/programme is repeated elsewhere;
- **Nurture:** A third party (well-staffed and well-funded) “nurtures” the project/programme and helps it reach a larger scale;
- **Horizontal aggregation:** Several projects/programmes combine their resources or merge into a larger project/programme;
- **Integration:** A project/programme is integrated into larger project/programme structures after it has demonstrated its potential.

This strategy is very similar to scaling impacts by growing or reducing organisational boundaries (discussed above in Sections 5.2 and 5.2.3); spread and replication are similar to organic growth; horizontal aggregation is similar to acquisitive growth; integration is analogous of merger/sale; and nurture is somewhat similar to licensing (see Table 5-1).

Illustrative Example

The Grameen Bank Replication Programme (<http://www.grameentrust.org/replication.html>) was launched in 1989 by Grameen Trust with the objective to contribute to the eradication of poverty worldwide and to bring the knowledge about Grameen Bank operations to as many people as possible. Under this programme, the Grameen Trust supports Grameen Bank replication projects all over the world. Promising individuals and institutions are invited to Grameen Bank to get hands-on experience with what Grameen Bank does and how it does it. In addition, various types of financial, technical and informational support is provided to the selected promising projects. The Grameen Trust closely monitors these projects and provides assistance through subsequent expansion stages with the goal of eventually assuring financial viability of the project⁶⁹.

5.3.2 Functional Scaling Up of Projects and Programs

Functional scaling up involves diversification of projects/programmes and expansion into new types of activities (e.g., from environmental intervention to health, credit, training). Again comparing this strategy to scaling up strategies at the organisational level, it is similar to organic growth via diversification of products and services. In terms of specific mechanisms, functional scaling up can be achieved in one of the following ways⁷⁰:

- **Horizontal (sectoral) integration:** Unrelated new activities are added to existing projects/programmes;
- **Vertical (factoral) integration:** New activities (related to the same project/programme activities) are added to existing projects/programmes.

Illustrative Example

An example of functional scaling up through vertical integration is Essilor International's project to provide glasses to the bottom of the pyramid (BOP) market. Visual impairment is not only a health (or discomfort issue) but it also has economic, educational and public safety implications. A pair of glasses could dramatically improve the lives of poor people by increasing their employment and educational chances and therefore improving their well-being. Essilor International (<http://www.essilor.com>) is a global market leader in the ophthalmic lens industry that designs, manufactures, and sells plastic optical lenses in more than 100 countries. Essilor entered the BOP market in India in 1998. Initially its glasses were sold only through optical shops in urban centres, which meant that 70 per cent of India's rural population did not have access to Essilor's products or services. Reaching India's rural poor could not only contribute to Essilor's growth but also allow it to achieve a wide-scale sustainability impact. Being confronted with poor roads and a lack of other essential infrastructure in rural areas, in 2005 Essilor teamed up with two Indian eye hospitals (Aravind and Sankara Nethralaya) to launch a new project – a tele-ophthalmology van and a refraction van that both visited rural communities to provide eye care and distribute glasses. This project expansion turned out to be a commercial success with considerable beneficial impact^{71, 72}.

5.3.3 Political Scaling Up of Projects and Programs

Political scaling up refers to the extent that a project/programme moves “beyond service delivery towards empowerment and change in the structural causes of underdevelopment – its contextual factors and its socio-political-economic environment. This will usually involve active political involvement and the development of relations with the state”⁷³. Political scaling up of projects/programmes is therefore reminiscent of scaling impacts beyond organisational boundaries (Section 5.2.2) and specifically dissemination and smart

networking. Political scaling up of projects/programmes can be achieved with the following mechanisms (based on ⁷⁴):

- **Information and mobilisation:** Project members are encouraged to participate in public campaigns designed to create general awareness and increase sympathy of particular problems and thus put pressure on politicians (e.g. through letter writing, organisation of meetings, conferences and workshops, distribution of documents and brochures);
- **Networking:** Non-permanent collaboration (with varying degrees of structure) on political issues of joint interest.

Illustrative Example

An example of political scaling up is Social Enterprise UK (<http://www.socialenterprise.org.uk>), a national body, whose members are social enterprises, private businesses, charities and public sector organisations that support the vision of a world where social enterprises are the usual way of doing business. One of the key activities of Social Enterprise UK is to promote the benefits of social enterprises to decision-makers. By influencing political decision-making Social Enterprise UK aims to remove barriers faced by social enterprises and to create a business environment that encourages their growth and success. Through political engagement, over the past 10 years Social Enterprise UK contributed to the establishment of the Big Society Capital – the first social wholesale investment bank in the UK with more than £600million; creation of more than 20 different support programmes; as well as the establishment of the Community Interest Company (CIC) legal form for social enterprises, among other achievements^{75, 76}.

5.3.4 Capacity Scaling Up of Projects and Programs

Scaling up via capacity building¹ occurs when projects/programmes improve their effectiveness and efficiency. Capacity building scaling up can be done by diversifying funding sources or by creating activities that generate income; by improving the capacity of staff through training; by developing links with other projects/programmes in both in public and private sectors, among other mechanisms. Capacity building, thus, can be seen as a basic requirement for all other scaling up strategies⁷⁷.

Illustrative Example

An example of scaling up by building capacity is Water Health International project on providing access to safe, clean and affordable water for people in developing countries. WaterHealth International (<http://www.waterhealth.com>) is a US-based for-profit, social-purpose venture. Water Health International installs UV Waterworks (UVW) technology for disinfecting water with the help of ultraviolet light in the so-called Water Health Centres (WHCs) in rural villages in developing countries. To scale the number of WHCs, Water Health International actively reached out to potential investors and succeeded in raising capital from multiple sources, including banks, venture capital firms, local governments and the International Finance Corporation (IFC). With this funding, Water Health International installed over 600 WHCs in many countries around the world, including India, the Philippines, and Ghana, thus providing safe water to more than one million people (as of mid-2009)⁷⁸. As commented by Dr. Tralance Addy, Chairman and CEO of WaterHealth International: “We are pleased by the confidence exhibited in WaterHealth by our current investors. As we move to rapidly expand the number of communities we serve and achieve unprecedented scale, access to capital is critical to our continuing success”⁷⁹.

¹ In the original text this type of scaling up is referred to as “organisational/institutional scaling up”. However, it was relabelled here to avoid confusion with scaling up strategies on the organisational level discussed in sections 5.2, 5.2.2, and 5.2.3.

5.4 Strategies to Scale Up Impacts through Value Creation²

5.4.1 Product Substitution

A company can scale up its value for consumers by supporting sustainable lifestyles through offering better choices and increasing the availability of more eco- and socio-efficient products, or by substituting products directly with services (smart metering of individual consumption, green car washes, ecological hairdressers)⁸⁰.

Consumers are also looking increasingly for the added value of services and experiences rather than simply purchasing goods. The emergence of the experience economy is confirmed by the growing interest in services such as spa sessions or massage treatments, cinema tickets or cooking courses as opposed to products⁸¹. This shift in spending in favour of areas with a low environmental impact, such as education, communication, or recreation and culture (barring activities that involve intensive use of transport) has the potential to reduce the current environmental pressures of consumption⁸².

Business models and their scaling up strategies in this area focus on the development of products or services, that help reduce the consumer's environmental impact by substituting more resource and energy intensive products with lower impact products or services that serve the same or similar purpose. This does not refer to the production of the product or service but emphasises the use phase, thus, helping the consumer to change toward a more sustainable lifestyle without having to abandon certain habits completely.

Illustrative Example

WeGreen enables a dialogue between consumers and corporations. Its users can rate the sustainability of companies themselves and the companies can reply to those evaluations. WeGreen collects all substantial, factual and credible ratings about the Corporate Social Responsibility (CSR) of companies in Germany. Thereby, producers are enabled to make more sustainable choices and to substitute one product against another⁸³.

5.4.2 Efficient Use of Products and Services

For many products, particularly products that use consumable materials (e.g. water or electricity), some 80% of environmental impacts are associated with the "use phase". For example, 75% of the energy consumption linked to a pair of trousers arises from washing, drying and ironing⁸⁴. Improving the efficiency of the use phase therefore is vital.

An organisation's strategy to scale up its value creation is to support more efficient use of products and services by providing additional services to the customer, such as procurement, maintenance, upgrading, and reuse/recycling of products. The value of this scaling up strategy for consumers is that the organisation provides advice during the consumption phase and thereby improving the efficiency of product use and end-of-life management and reducing other impacts such as overconsumption.

² This section has been extracted and adapted from: ETC/CSP (2012). The Role of New Business Models for Sustainable Living. Background paper for the WBCSD/EEA Workshop "Visions to Actions – Fostering New Business Models to Shape More Sustainable Ways of Living", 2-3 May 2012, Copenhagen, Denmark. Authors: Oksana Mont (Lund University), Francesca Grossi (CSCP), Nora Brüggemann (CSCP), Justus von Geibler (Wuppertal Institute), Julia Nordmann (Wuppertal Institute) with support of Cheryl Hicks (CSCP), Alexandra Palzkill (Wuppertal Institute) and Nadine Pratt (CSCP).

Illustrative Example

Demand side management and least cost planning: Driven by market deregulation, many electricity suppliers have in recent years reformulated their business strategies and now sell packages of efficient use of energy and lighting and their product offers often include information and education. This is an example of a win-win solution for both producers/providers and consumers – as well as for the environment and future generations since efficient use and decreased consumption results, in the long run, in fewer power plants built and fewer resources extracted⁸⁵.

5.4.3 Shared use of Products and Services

An organisation can scale up its value creation by enabling their consumers to gain access to, engage with or use products and services through shared use. The common denominator here is that consumers do not necessarily own products, but rather the products are shared among users in different ways. This can contribute to shift the habit of owning many rarely used goods - such as repair tools and garden equipment – toward a shared access model.

The strategy of service providers – retaining the ownership of the tangible product – can be to sell the functions of the product, via modified distribution and payment systems. These can include sharing, pooling, leasing and renting, allowing several individuals to use the product consecutively or in parallel. This strategy or business model often creates a spill-over effect on other lifestyle areas as people realize that they do not necessarily need to buy and own private products in order to gain access to them.

Illustrative Example

Electrolux, a producer of washing equipment in Sweden, offers communal washing centres in collaboration with local service providers, tenant associations and housing companies. Tenants pay a monthly fee to use the washing centres, but do not have to take care of the machines. Servicing, upgrading and replacement of the machines is undertaken by local service providers. Electrolux assists with equipment installation, training, suggests layout of equipment location, supports with environmental permits, market surveys, contracts for maintenance and repair, guarantees, and financial schemes. In addition to cooperating with local service providers, producers also closely cooperate with housing companies. The collaboration begins at the design stage of the washing centre when equipment producers, the housing companies and tenant associations together develop guidelines for building companies and requirements for households regarding the use of machines.

5.4.4 Longer use of Products and Services

Experts who challenge the “throwaway idea” make the case that many products are designed with unjustifiably short life spans, which requires consumers to repurchase too frequently and that this leads to increasing volumes of waste and a corresponding increase in resource consumption and pollution from production facilities⁸⁶. Value can therefore be generated by an organisation by pursuing strategies and supporting activities that extend the lifespan of their products rather than pursuing a strategy of planned obsolescence.

Extending the useful life of products can also be supported through the exchange of goods that are no longer needed by the first owner. The underlying idea is that a single individual can monetise the value of owned products or assets that are not used through micro-transactions in peer-to-peer non-profit networks. The growth of such schemes is facilitated by the emergence of new technologies that connect haves with have-nots⁸⁷. High value items like apartments, rooms and cars, but even clothes, are finding their way into online

peer-to-peer networks (that can often also be facilitated by entrepreneurs). This is an example of how swapping enables individuals to gain access to goods and satisfy their needs without resigning to purchasing new products.

Illustrative Example

Repair Network Vienna - Companies offering mobile maintenance and repair stations for consumer goods collaborate with a network in Vienna. Different repair and service companies collaborate to make repair services more attractive. The aim is to improve the competitiveness of repaired goods relative to the cost of a new purchase. As a result, higher resource efficiency and waste reduction can be achieved^{88, 89}.

5.4.5 Efficient End-of-Life Strategies

End-of-life, the final phase of a product's life cycle, offers a vast array of opportunities for reducing product related environmental impacts if disposed of responsibly. Either efficient re-use or recycling strategies or so-called up-cycling strategies can form the baseline for innovative business models that generate economic and consumer value.

Up-cycling is a new, still rather small, circular business model and strategy that contributes to a more efficient product end-of-life. Up-cycling represents a process of recycling waste materials or other discarded products into new products that are of a better or higher quality and thereby reduces the volume of resources extracted in the process of creating new products and also reduces waste that would otherwise require disposal.

Up-cycling can also take place on a not-for-profit basis. Some entrepreneurs capitalise on the emotional attachment of consumers to certain products and invent new ways to extend the products life or to turn old products into new.

Illustrative Example

Many companies are now moving into the up-cycling market, led by early pioneers like Patagonia and Royal Robbins. Up-cycling has even become trendy with luxury brands such as Hermes that use recycled material in their Birkin bags. Up-cycling has a major presence online where entrepreneurs are inventing new ways to turn waste into usable and marketable products.

The UK-based company Worn Again up-cycles corporate wastes into new, design-led products. For example, the company transformed raincoats, jackets and train seat antimacassars that originated from the high-speed train service company Eurostar into bespoke train managers' bags for Eurostar staff.^{90,91}

6. Scaling Up Success Factors

6.1 Overview

Scaling up success factors are *the conditions required* to achieve success in the scaling up of sustainable living business impacts. In the context of this report, success factors are categorised as follows (presented in alphabetical order):

- **Market demand & behaviour change:** To switch to more sustainable lifestyles and living conditions, it is necessary to change stakeholder behaviours (e.g. encourage, discourage, enforce) and increase awareness among consumers, business, policy makers, financial institutions, and others.
- **Technology & infrastructure:** Fit-for-purpose, practical and feasible technologies and supporting infrastructure enables the implementation of the innovative business solutions.
- **Education & training:** Empower entrepreneurs with techniques and skills to understand consumers' needs and develop sustainable products and services that respond to such needs.
- **Financial frameworks:** The economic and financial means by which entrepreneurs and businesses can leverage the development of sustainable products, services and business models.
- **Governance systems:** Governance systems support the creation of enabling environments for sustainable entrepreneurship and business innovation through reliable rules, information stability and trust among stakeholders.
- **Information provision:** During a scaling-up process it is not necessary to know everything but to connect with the right people and to have access to relevant and reliable data to support decision making.
- **Partnerships & communication:** Partnerships and alliances are an important precondition to develop any strategy to scale up sustainable living business impacts. Partnerships are the means by which different actors interact and enable the replication of impacts.

This chapter provides a detailed rationale behind each success factor. The rationales are based on our research and practical work experience to date. Each factor is discussed separately below and illustrative examples are provided to illustrate the factor in practice.

6.2 Market Demand & Behaviour Change

6.2.1 Justification for the Success Factor

Economic, environmental and social impacts can be created by entrepreneurs when: 1) sustainable products and services are successfully placed on the market due to a genuine market demand, and 2) those products and services influence sustainability related consumer habits.

Sustainable living practices in fields like mobility, food & drink, housing and leisure, are the result of changing behaviours of consumption. However, mainstreaming sustainable living behaviours is a complex task and

cannot be analysed in a linear way. Sustainable living depends on two factors: on the one hand, the **commitment to adopt a specific behaviour** (e.g. to avoid long distance trips) and on the other, the **real demand for products and services** that enable individuals to practice a given sustainable behaviour (e.g. leisure alternatives at a local level).

Changing behaviours are a driver for scaling up business innovations. For instance, consumer demands provide a signal to business to rethink business models and products that are on offer and, as a consequence, to design and implement strategies that result in sustainable living impacts.

6.2.2 Description

Adopting sustainable lifestyles has become a challenge and a common goal in our societies. However changing behaviours and adopting patterns of sustainable consumption does not happen without the availability and willingness to buy sustainable products and services.

Market demand: To succeed in the market and be able to influence consumption behaviours changes, business and entrepreneurs need to ensure their products and services are:

- Attractive to consumers;
- Functional and satisfying an individual or group need;
- Convenient and consistent with established infrastructure and social values;
- Affordable and accessible to the mass market.

Hence, entrepreneurs should dedicate efforts to elaborate on the market feasibility of their products and services. It means, to understand consumers' habits, needs and desires to design and develop the products on the one hand, but also to test if consumers are ready and willing to pay for these.

Behaviour change: To determine the most relevant lifestyle aspects to change, it is necessary to encourage, discourage and enforce consumer decision-making. To provide insights in this regard, the European Commission developed the SPREAD Sustainable Lifestyles 2050 Project⁹². This project comprises a research effort to understand consumption behaviours and also the promising entrepreneurship practices that have already begun to beneficially impact lifestyles.

Today, changing consumer behaviours is unavoidable. It is not a new phenomenon that the consumption habits of a single person can have a direct impact on climate change and that individual behaviours can put pressure on the way natural resources or raw materials are used. But in order to motivate consumers to change, it is important to understand the drivers of unsustainable consumption patterns and to provide tools to reach a quality of life without having a negative impact on the planet.

A sustainable attitude can be motivated by a delayed or an immediate gratification or it can be influenced by a high or low sense of personal agency⁹³. Human perceptions, values, education and motivations represent key elements that define a specific behaviour. Businesspeople, policy-makers, research institutions and civil society: all stakeholders be engaged to achieve successful outcomes in the long-term.

Some key factors to encourage behaviour change and enforcing it in the long term have a relation to:

- The way the proposed changes meet needs of individuals;
- Strategies to “unlearn” old behaviours;
- Feedback and positive reinforcement.

Some types of behaviour changes that support sustainable living are related to the daily consumption patterns of an average citizen. These are mainly related to:

- **Awareness when purchasing decisions are made:** Buying organic vegetables, a low energy refrigerator or locally produced clothing are choices that are associated with more sustainable decisions by being environmentally friendly. Reducing unnecessary purchases is also a key element of sustainable behaviour change.
- **Consciousness in the use of natural resources** (e.g. water or energy): Lowering water consumption in a household by replacing baths with showers or using energy saving light bulbs are some examples of reducing resources use. The reduced use resources are intrinsically related to reducing waste production, lower carbon and water footprints, and the conservation of water resources and ecosystems.
- **Reduction of waste production in households and companies:** One of the pillars of sustainable behaviour change is related to the notion of the 3 R's: reduce, reuse and recycle. This is also related to "frugalism" and the philosophy of using "the little as possible" taking into consideration the scarcity of raw materials and excessive consumption habits.
- **More efficient mobility choices (transportation):** Using a bicycle instead of a car or traveling by means of public transportation are examples of personal choices for more sustainable transportation. Choices connected to more sustainable transportation also includes reducing airline flights in companies or the use of a corporate bus for employee transportation.

Illustrative Example

Unilever has started a communication campaign called the "**Five Levers for Change**" that encourages their customers to adopt sustainable patterns of consumption⁹⁴:

Initially, the company identified the **barriers** that impede sustainable behaviour among consumers and the **triggers** and **motivators** with potential to motivate consumers start and stick with a new behaviour. Those insights were processed into the Five Levers for Change that are designed to inspire consumers to leapfrog toward sustainable consumption. The first lever is to "**make it understood**" which aims to raise awareness and encourage acceptance of the importance of adopting new patterns of consumption (e.g. Health benefits of having clean hands); the second lever is to "**make it easy**" which provides tips to establish convenience and confidence around new behaviours; "**make it desirable**" is the third lever which provides suggestions on how individual sustainable behaviours are really accepted in society; The fourth lever is to "**make it rewarding**" by demonstrating how adopting new consumption patterns really pays off; The final level is to "**make it a habit**" by providing strategies to help consumers stick with their sustainable behaviours.

Unilever was inspired to develop the sustainable consumption strategy on the basis of future trends in consumption behaviours. Furthermore, the company perceives future consumption trends as a key driver for business model and product level innovation.

6.3 Technology & Infrastructure

6.3.1 Justification for the Success Factor

Technology and infrastructure development is a substantial precondition for fostering innovation and, accordingly, is necessary for the development of sustainable products, services and processes that change current patterns of consumption and production.

Experts agree that it is necessary to achieve research-based eco-innovations, technologies and infrastructure for sustainable development and that it is necessary to reinforce the development of national and local policies that:^{95, 96:}

- Strengthen the relationships between universities, research institutions and industry to enable an effective knowledge transfer system. This could happen via a) orienting the development of research activities towards industrial needs and b) by increasing the participation of industries into commercially-oriented research activities (e.g. more investment).
- Fostering development of university spin-offs by enabling institutional support policies and research infrastructure such as laboratories, etc.
- Increase the management and entrepreneurial capacities of academics and researchers.
- Take advantage of current innovation platforms and growing market sectors such as information and telecommunication technologies (ITC), biotechnology and other life sciences research areas.

6.3.2 Description

It is widely accepted that technology and infrastructure are essential drivers for innovation. Every actor in the entrepreneurial ecosystem plays a role to promote technology and infrastructure innovation. Enterprises for instance, should be open to embrace partnerships with research centres and universities to co-develop breakthroughs that reflect positive environmental and social benefits in the market. Furthermore, as the technology development process is a long term effort, financial institutions are necessary partners to provide risk-oriented financial instruments (e.g. equity capital) to enable developers to invent, test and commercialize innovations. Likewise, policy makers need to design the necessary structural conditions to increase capacity among technology developers and provide the necessary incentives to channel physical, financial and human resources from international actors (e.g. investors, institutional cooperation systems) to promote technology development and transfer.

Universities and research organisation play an important role in providing structures that support innovation, technologies and infrastructure for sustainable entrepreneurship. These structures are not only needed to train graduates with sustainability-oriented mindsets, but also to enable the transfer of research-funded knowledge and technology to the economic system, particularly to industry. However, as innovation cannot be easily transferred to the society via patent and licensing systems alone, one alternative mechanism is to convey knowledge and technology via academic entrepreneurship.

Currently, there remains a gap between industrialised and emerging/developing countries when it comes to developing strategies capitalise on research and development (R&D) activities as a driver for sustainable entrepreneurship and business innovation. Therefore, it is important at early stages to understand the potential opportunities behind these types of ventures and to empower local universities and research centres to promote high-impact entrepreneurship and innovations. The benefits of research-based enterprises can be summarised as^{97, 98, 99:}

- Being sources of technology transfer and therefore a pivot to leverage a knowledge-based economy;
- Driving regional economic development by supporting the development of local industrial clusters;
- Enabling a strategic change in the university because, on the one hand, skilled professionals advanced degrees get enter the labour market in enterprises and, on the other hand, research outcomes are diffused to industry;
- Acting as a source of income for the universities which could be reinvested to enlarge R&D capabilities.

Illustrative Example

EXIST is a support program delivered by the Federal Ministry of Economics and Technology (BMWi) in Germany. The aim of the program is to improve the entrepreneurial environment at universities and research institutions and to increase the number of technology and knowledge based business start-ups. The EXIST program is part of the German government's "High-Tech Strategy for Germany" and is co-financed by funding from the European Social Fund (ESF). The support component aims to address three questions:

1. How can a culture of entrepreneurship be increased at universities and research institutions to develop commercially-oriented research outputs?
2. How can business start-up grants be developed? The grants aim to help scientists, university graduates and students develop their business ideas into business plans and to advance their ideas for products and services.
3. How can structures for the transfer of research be promoted? Research teams at universities or research institutes are encouraged and supported to demonstrate the technological feasibility of their product idea and to prepare the business start-up¹⁰⁰.

The program responds to the vision of enabling sustainable living for people in Germany and abroad. The program recognises that as long as technology and new science-based outputs are being generated, consumers will be able to take advantage of innovative and sustainable processes, products and services developed by enterprises. Special focus is given to areas like life sciences, renewable energy, and innovative environmental technologies.

6.4 Education & Training

6.4.1 Justification for the Success Factor

Knowledge is necessary to design business strategies to scale up positive impacts on sustainable living. Entrepreneurs should be empowered with techniques and skills to understand consumers' needs and develop sustainable products and services that respond to such needs. Knowledge is also needed to build alliances with other entrepreneurs and organisations, to access successfully to financial resources, to recognize the best technologies in the market for the business and also, for understanding the institutional framework in which the enterprise operates. Thus, in order to acquire the above-mentioned knowledge, education and training systems are needed.

6.4.2 Description

Education and training can be formal (at universities) or non-formal (seminars, conferences, in-the-job etc.) in nature. Education and training comprise a set of instruments: theories, analysis of best practices and

benchmarks, conferences, reports, indicators, methodologies, frameworks and guidelines, and also very important, the learning from the experience. These instruments help to increase the entrepreneur's capacities to design and manage different business strategies, promote innovation within the company and establish good relations with other stakeholders.

Education and training is not only about acquiring knowledge by individuals (e.g. team members of the company), but rather about ensuring that the knowledge penetrates the activities, processes and supports the vision and mission of the company. In many cases, when entrepreneurs send their team members to courses or trainings, the knowledge stays with the person and is not shared with the organisation. Therefore, a holistic strategy on capacity building should be constructed under the basis of spreading the knowledge through the organisation. In other words, the challenge of the entrepreneur is to ensure that the organisation as a whole profits from the knowledge that some of its team members have acquired.

Building capacities through education and training should be considered as an investment rather than a cost. Knowledge on sustainable business, sustainable consumption and sustainable living is an intangible asset that can enable the achievement of the company's sustainability goals. Education and training can provide multiple benefits in terms of efficiency, productivity, development of smart networks, reduction of costs or avoidance of resource waste. Very importantly, it also enables a better understanding of consumers' needs and behaviours required to develop successful products and services for them.

In order build capacities on sustainable entrepreneurship for sustainable living, different stakeholders should commit to the development of practical and customised educational instruments and structures. Hence, to achieve this goal it is necessary to raise the following questions^{101, 102}:

- How to increase partnerships between academia and industry for developing sustainable innovations?
- How to educate the new generation of sustainable entrepreneurs? What are the most appropriate methods and messages?
- How to innovate curricula at schools and universities and adapt contents that respond to consumers' needs and influence a change towards more sustainable consumption patterns?
- How to ensure that knowledge on sustainable entrepreneurship, innovation and sustainable living targets also poor communities in rural areas?
- How to increase investments to further develop and deliver training programs on sustainable entrepreneurship and sustainable consumption?

Illustrative Example

The Partnership for Education and Research about Responsible Living (PERL) is a global project that aims to generate, share and disseminate knowledge on sustainable consumption and sustainable lifestyles in the world. It comprises a network of over 140 universities, research institutions and other organisations like NGOs or consultancy companies in circa 50 countries. PERL has developed several learning materials for diverse target groups like teachers, students, university professors, consumers in general and companies. PERL was funded by different organisations like UNESCO, UNEP, The Erasmus Academic Network of the European Union, The Norwegian Ministry of Children, Equality and Social Inclusion and the Ministry of the Environment of Sweden. More info: www.perlprojects.org.

6.5 Financial Frameworks

6.5.1 Justification for the Success Factor

One of the key challenges faced by investors, entrepreneurs, experts and academics is the identification of strategies to close the financial gap between entrepreneurs and investors. A consistent financial framework should not only address financial resources as such, but also that focus on other relevant conditions such as quality information, innovative financial services and a closer interaction between entrepreneurs and investors. Such a framework will enable money to be made accessible and affordable to finance market transformations for sustainable living.

6.5.2 Description

Financial resources, communication instruments and supporting mechanisms are often needed to begin and scale up sustainable enterprises and business innovations. Financial frameworks are the means by which entrepreneurs can leverage the development of sustainable products, services and business models. The conceptualization and creation of an appropriate financial framework is a process that involves financial institutions and investors as well as a broad range of stakeholders.

Three aspects comprise a successful financial framework¹⁰³:

1. **Developing the business case:** The goal of sustainable finance and investment is to support sustainable growth for entrepreneurs, while also enabling a revenue or return on investment that could be redirected to other entrepreneurs alike. To accomplish this, more information on best practice in sustainable entrepreneurship is needed to demonstrate business opportunities and, consequently, to decrease the perception of risk connected to sustainable enterprises, which currently limits the flow of financial resources from investors to entrepreneurs.
2. **Financial products and services:** Tailor-made financial products and services are critical to enable access to resources for entrepreneurs and business innovators to start-up, strengthen and expand sustainable business practices (e.g. debt and equity financing, public grants and other mechanisms such as leasing). Effective financial products require consideration of the following:
 - a. Higher understanding of short-, middle-, and long-term financial needs of entrepreneurs regarding challenges related to scaling up sustainable living business impacts (e.g. capacity building, technology upgrade, sustainable raw materials procurement, etc.).
 - b. The return on investment and expected pay-back period for a sustainable business should be projected over the long term. This is already happening and can be seen in the new movement among investors known as “Patient Capital”.¹⁰⁴ The premise of the movement is that investors should re-think their way of doing business with entrepreneurs by avoiding short-term business relationships that neglect longer-term opportunities.
3. **Non-direct financial support:** Financial institutions and investors are most interested in doing business with entrepreneurs and sustainable businesses that demonstrate operational and market consistency and of course present a lower risk of default/return on investment. Basically, to succeed in securing financial resources, businesses need to communicate the business case to financial institutions by demonstrating that they are able to implement sustainable business measures and consequently meet the pay-back conditions of the agreed financial instrument. Accordingly, entrepreneurs and businesses require support to increase capacity to design SCP strategies and more effectively approach financial institutions.

In the short-term, entrepreneurs need working capital to:

- Develop capacity building activities for key staff (director of the production department and product design department, and staff responsible for waste management)
- Acquire and maintain an adequate stock of sustainable inventory (particularly unprocessed raw materials)
- Purchase efficient office appliances (lamps, computers, etc.)

In the middle-term, entrepreneurs need financial resources to acquire appropriate equipment and machinery to support SCP business models. Even though the purchase, maintenance or reparation of industrial equipment and machinery can at times be very expensive, substantial cost savings can be achieved through such investments in terms of reduced energy, water and other process inputs.

Finally, long-term finance is important when the enterprise aims to expand its facilities to increase production volumes or aims to open new operations in other regions. Typically, the magnitude of such investments is substantial and the returns on these investments are –in most of the cases- realised in the long-term and risky.

The following figure illustrates types of financial instruments that addresses specific financial needs of entrepreneurs.

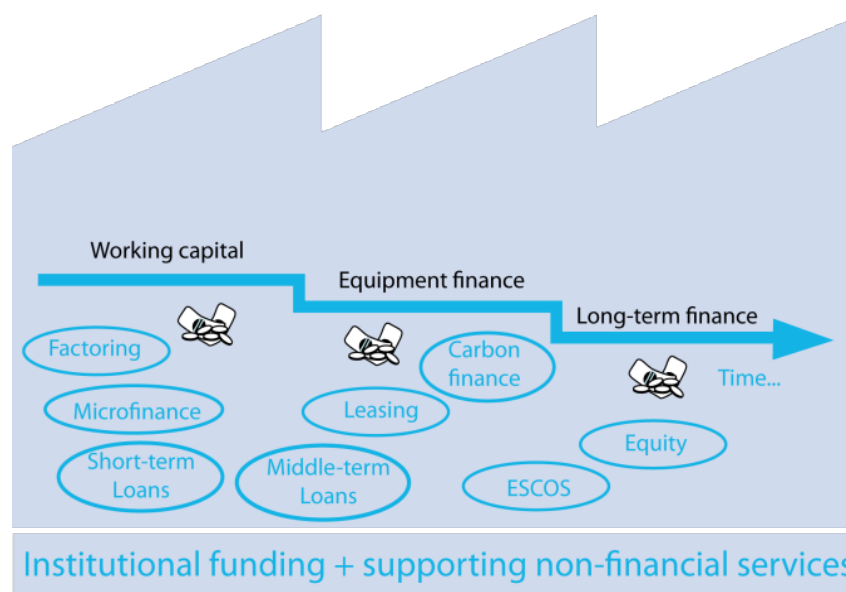


Figure 5-2 Financial Instruments and Needs of Entrepreneurs¹⁰⁵

Table 6-1 Potential Stakeholder Contributions¹⁰⁶

Stakeholder	The Business Case	Financial Products and Services	Non-direct Financial Support
Financial institutions & investors	Cooperate with service providers to develop and disseminate benchmarks.	Develop tailor-made products with regard to each entrepreneur's operational needs.	Develop units within the organisation to reach out and interact with entrepreneurs
Universities & academia	Analyse and disseminate best practice on entrepreneurship to	Conduct research with entrepreneurs to identify customer satisfaction and	a) Increase financial literacy among entrepreneurs

Stakeholder	The Business Case	Financial Products and Services	Non-direct Financial Support
	decrease the perception of risk among investors	the impact of existing financial products and services	b) Capacity building to design and implement SCP strategies (e.g. design for sustainability, sustainable marketing, cleaner production, etc.)
Business Member Associations		Assist financial institutions & investors to develop tailor-made financial products and services	
Civil Society Organisations		Assist the public sector to ensure customer protection	
Policy makers	Enable the institutional environment for the correct flow of information to create best practices	Create economic and policy incentives that support further development of financial instruments	

Illustrative Example

Asobancaria is the largest member organisation of commercial banks in Colombia. Under its coordination, the banking sector in the country is developing a strategy called the Green Protocol that aims to promote SCP within the industrial and business sector. The Protocol is a process where the Colombian financial sector is working to develop strategies to create a successful financial framework that includes: 1) Environment and social risk instruments; 2) Specific financial products and services to address SCP needs of entrepreneurs; 3) Increasing internal eco-efficiency in financial institutions; and finally, 4) Improvement of communication channels and instruments¹⁰⁷.

With this strategy, Asobancaria aims to create a successful financial framework. To achieve real impacts among entrepreneurs and consumers, partnerships with other institutional actors are needed. For instance, just having a green credit instrument will not bring about energy efficiency within an enterprise. If the capacities or manpower are not enhanced to operate new machinery efficiently, the loan as such is not a guarantee that the desired result will be achieved. Accordingly, capacity-building programs developed, for instance, in cooperation with universities or service providers are required.

6.6 Governance Systems

6.6.1 Justification for the Success Factor

Strong governance systems contribute to an enabling environment for actors to cooperate and commit themselves toward individual sustainability actions. With economic incentives, clear rules and strategic programmes, the public sector provides the set of conditions that permit the market players innovate and replicate impact. Naturally, laws are only effective when there is a culture of compliance in the respective country, region or city. Accordingly, an effective governance system that supports scaling up sustainability impacts will need to be supported by cultural mindsets that value justice, honesty and respect for rules.

6.6.2 Description

The United Nations Conference on Trade and Development (UNCTAD) developed the Entrepreneurship Policy Framework and Implementation Guidance.¹⁰⁸ The aim of the framework is to support policy makers in the design of initiatives, measures and institutions that promote entrepreneurship. According this guiding framework, policies that foster entrepreneurship need to be designed in a holistic manner from the perspective of a macro- to an initiative-specific dimension. Initially, the need to set out an overarching framework of

general economic policies to improve the business climate is fundamental. This permits the generation of an enabling environment for sustainable entrepreneurship in terms of reliable rules, information stability and trust among economic and social players that influence the success of entrepreneurs.

Within the scope of a sustainable entrepreneurship enabling environment that supports sustainable business innovations, policies that reinforce industrial and business development need to be developed in the context of present and future market trends (e.g. consumer demand, sustainable supply chains, international trade agreements, etc.). To be more specific, the policy framework identified six priority areas for policy focus that have a direct impact on entrepreneurial activity. According to UNCTAD, these are:

1. **Formulating national entrepreneurship strategy:** Enabling market integration and collaboration along supply chains; developing real market demand for sustainable products (e.g. sustainable public procurement policies and economic incentives for green market development); development of national support programs like competitions or sector-oriented programs; defining indicators and monitoring systems to measure results.
2. **Optimizing the regulatory environment:** Minimizing regulatory hurdles to start-up (e.g. procedures, administrative fees, licenses, etc.); enhancing the benefits for formalization; improving information channels and systems; property rights protection policies.
3. **Enhancing entrepreneurship education and skills:** Development of a platform of service providers with a SCP mindset (e.g. legal, accounting, marketing, mentoring and technical advisors, etc.); integrating SCP in formal and informal education systems; engaging with the private sector to sponsor sustainable entrepreneurship education.
4. **Enabling environment:** Promoting awareness and partnerships, improving access to finance and facilitating technology exchange and innovation (see Sections 6.1 to 6.3).

Illustrative Example

The SWITCH-Asia Network Facility developed the SCP Policy Toolbox. The toolbox aims to enhance knowledge on SCP policies and provides concrete input to SCP policy-making to ensure long lasting impacts. For the sake of sustainable entrepreneurship, the tool provides policy suggestions for developing sustainable markets to ensure that entrepreneurs can prosper (e.g. increase demand for sustainable products, create economic incentives for specific market sectors like food and drink, housing, mobility, tourism, clothing, as well as promoting sustainable business practices)¹⁰⁹.

From 2010 onwards the toolkit has been widely disseminated among Asian policy makers and aspects of the toolkit are under consideration by local policy makers in Malaysia, Thailand, Philippines and Indonesia. These policy makers are aiming to promote policy that supports alternatives to mainstream SCP collaboration and as a consequence to strengthen the governance and institutional systems in their respective countries¹¹⁰.

6.7 Information Provision

6.7.1 Justification for the Success Factor

Information facilitates interaction between different stakeholders. A coherent communication flow not only strengthens trust among partners, but also enables the development and achievement of a common agenda among different actors. Table 6-2 presents and ranks four types of information that different stakeholders require to prioritize engagement with other actors.

- Legal information provides the components that actors need to take into consideration when interacting with and complying with institutional rules;
- Financial information accelerates the identification of resources to leverage and undertake SCP strategies;
- Technical information helps entrepreneurs identify the best instrumental options to make innovation happen at a work place;
- Product/service information is the channel by which entrepreneurs can identify promising partners, raw materials and market demands to run their business.

Table 6-2 Information for Stakeholder Groups

Type of Information	Stakeholder Group																				
	Entrepreneurs			Consumers			Civil Society Organisations			Policy-Makers			Investors			Financial Institutions			Universities / Academia		
	High Relevance	Moderate Relevance	Low relevance	High Relevance	Moderate Relevance	Low relevance	High Relevance	Moderate Relevance	Low relevance	High Relevance	Moderate Relevance	Low relevance	High Relevance	Moderate Relevance	Low relevance	High Relevance	Moderate Relevance	Low relevance			
Legal Information	✓				✓		✓			✓			✓			✓			✓		
Financial Information	✓				✓			✓					✓			✓			✓		
Technical Information	✓					✓	✓			✓				✓			✓		✓		
Product /Service Information	✓			✓			✓			✓			✓			✓			✓		

6.7.2 Description

According to the Sustainable Entrepreneurship Manifesto published under the “Create Impact!” framework handbook for sustainable entrepreneurship, “information is power!... you got it all, for free, use it, share it, filter it, mix it, reflect on it”.¹¹¹ Nevertheless, it is necessary to identify good quality information and put it to the best use it at the right time for information to be considered a success factor. The ability to categorize information and identify causal links, to see relationships and patterns, understand how processes work, and to evaluate assumptions and information accurately, is all a part of the entrepreneurial discovery process¹¹². Whether technical, financial or legislative information, it all needs to be recognised and used effectively to become a driving force and success factor. During a scaling –up process it is not necessary to know everything but to connect with the right people and access **reliable data** from the market, institutions or the relevant business sector.

Connectivity and **networking** are two important aspects that can empower a sustainable business innovation. Recognizing that expertise and knowledge from others can benefit the core business and avoiding failure when working to achieve stability. A good flow of information is one of the key factors that enable an environment for sustainable business innovation.

Information is also an important determining factor governing the products and services that are being offered and purchased in a particular market segment. An effective communication strategy should provide clear and

forthright information to customers to help them identify and analyse the best options in the market and help to inform improved consumption decisions and behaviours. The **availability** of reliable and effectively communicated information is critical to be persuasive and convince others to change a habit. It is necessary to know which audience is being addressed and their views and opinions respecting the consequences of their consumption choices.

However, it is essential to note that sustainable choices need to be easy and affordable to implement. A continuous information flow within the networks of stakeholders can help fulfil consumer needs and expectations more effectively. Even a good business idea can fail in the absence of effective stakeholder communication and interaction by the entrepreneur. In fact, entrepreneurs are very important agents to move their local communities towards sustainability. As they have a closer relationship with specific consumers, the interaction with consumers presents an opportunity to communicate information about the advantages of sustainable products or services. If entrepreneurs considered local communities as partners rather than merely customers, the opportunities to scale up their business to other communities would increase (for instance where the entrepreneur has lower capacity for outreach and influence). The power of “mouth to mouth” advertisement is enormous, not only because it works very well in communities that lack communication channels like internet or radio, but also because people tend to believe in new products and services that were already experienced by others in a positive way.

As previously explained, information can become a success factor under the following conditions:

- It has to be available, trusted and provided/disseminated in a timely manner;
- It should target the appropriate audience and be communicated smartly and innovatively;
- It has to be credible and of high quality;
- It can become a channel to link different stakeholder groups, share interests and generate synergies for sustainable initiatives.

Taking into consideration the final condition, information is the means to connect different stakeholders in the scaling-up process and the basis for long-lasting partnerships and cooperation.

Illustrative Example

Eco-labels are powerful communication instruments with potential to engage consumers and promote sustainable consumption patterns. However, they have to be developed and communicated correctly to achieve this goal. Today eco-labels are becoming trendy in the mass-market sector (e.g. food, retail, textiles) because companies consider them as a marketing tool to increase market share. This trend is creating confusion among consumers and has also in some cases led to examples of “green washing” by enterprises.

Acknowledging these facts, the REWE Group in Germany developed the “Pro-Planet” eco-label that is different in that it addresses environmental and social impacts of products along their lifecycle, while also communicating in a forthright and clear manner the type of impacts that were really addressed¹¹³.

For instance, when purchasing Pro-Planet labelled tomatoes at a REWE supermarket it is possible to understand the type of sustainability strategy adopted by the company to address unsustainable production patterns. This information is communicated through a label the type of impact addressed in production (e.g. “less water consumption”, “local products”, “fair salaries for local producers”). Further, a code on the label identifies additional details for the specific product. Consumers enter this code on the www.proplanet-label.com/ website to download key facts and production processes behind each product to assist in decision-making.

6.8 Partnerships & Communication

6.8.1 Justification for the Success Factor

Partnerships are a key success factor for scaling up sustainable living business impacts. There are three rationales behind this argument¹¹⁴:

- Partnerships serve to **pool competencies and experiences** of different actors. The nature of challenges for entrepreneurial initiatives during the development of sustainable living solutions requires diversity in expertise, experiences and resources;
- Partnerships **increase problem-solving capacity**. This is because working systems that represent different views on a perceived challenge are more likely to identify intelligent and feasible solutions;
- The **learning ability of the partners is enhanced** through partnerships. The involvement of different sectors helps to gain a better understanding of the 'whole picture' and respectively to learn how to act more effectively;

6.8.2 Description

Partnerships and the availability to generate alliances are a paramount precondition to develop any strategy to promote sustainable entrepreneurship and to scale up sustainable living business impacts. Partnerships should be built based on trust, common values and goals among the different actors.

How to create a partnership? The Seed Initiative and the Collective Leadership Institute (www.empowering-partnerships.org) point to a framework that comprises four main phases in the development of successful multi-stakeholder partnerships:

1. **Start-up, exploration and consultation:** Explore the circumstances of the planned project taking into consideration the people and context. It is about testing the idea, thinking together, learning to keep a process going without forming premature structures. Stakeholders start building trust by sharing their ideas, experiences and visions towards the proposed project.
2. **Building the partnership:** Establish the entrepreneurial partnership to give it a formal structure and agree on goals and planning. Initial structures can be developed, project teams defined and regular meetings planned. The different actors realize opportunities to cooperate based on the analysis of their individual capacities, and expertise to identify potential synergies.
3. **Implementing the partnership:** The key to a results-orientated implementation of an entrepreneurial partnership is to create joint measures of success and achievable milestones. Design the implementation strategy and monitoring systems. Good and transparent communication among stakeholders is essential to achieve success.
4. **Sustaining, replicating and scaling up:** Concentrate on building appropriate organisational and management structures without losing sight of the crucial role of people and processes. Creating the next level core team is also important to keep in mind by inviting and integrating new participants. This often requires building more formal structures and developing partnership governance systems. Partnerships need to be institutionalised at a certain point by developing governance structures and to engage new partners to expand outreach and impact.

In addition to these partnership creation phases it is widely recognised that there is a need to enable spaces and channels that promote interaction among different stakeholders (e.g. conferences, networking events, social and traditional media, etc.). The SEED Initiative provides some tips for building partnerships¹¹⁵:

- A clear and sustained mission statement;
- Building successful partnerships requires considerable patience;
- True partnership involves a shared definition of problems and joint design of solutions;
- Flexibility is vital - there is no single approach;
- Bring in new partners as necessary;
- Empower communities;
- As trust is established among the partners, the **likelihood of implementation of real sustainable living actions is also increased**. Partnerships create broader ownership of solutions and increase the readiness to implement agreed upon plans.

Illustrative Example

The SEED Initiative developed by UNEP in collaboration with the Collective Leadership Institute outlined a toolkit to assist organisations to develop multi-stakeholder partnerships. The toolkit provides practical recommendations to organisations to increase their capacities to identify their unique competences and share practical experiences with the goal being to identify and exploit potential synergies¹¹⁶.

An example of a successful partnership developed through the SEED initiative is the basic sustainability standard for green coffee production called the “Common Code for the Coffee Community (4C)”¹¹⁷. This initiative was developed through a partnership between a group of international stakeholders: coffee producers from all major coffee-producing countries, trade and industry groups in the coffee sector and international NGOs. These groups came together as a steering committee to develop the standard and to decide on the conditions for its application. The impact of this standard has been better working conditions for local coffee growers and, as a consequence, major benefits for the final consumer.

7. Case Studies

7.1 Overview

This chapter presents practical and real-life examples of innovative business practices and entrepreneurial ventures that are contributing to sustainable living. These examples (two to three illustrative case studies from each continent) are presented in the illustration below.

Each case study is discussed separately in the following sections, including a brief description, references for further reading, and a review in light of the four steps of the Scaling Up Innovations Framework (1. Sustainable living, 2. Business model, 3. Impacts on people, planet and profit, and 4. Scaling up success factors).

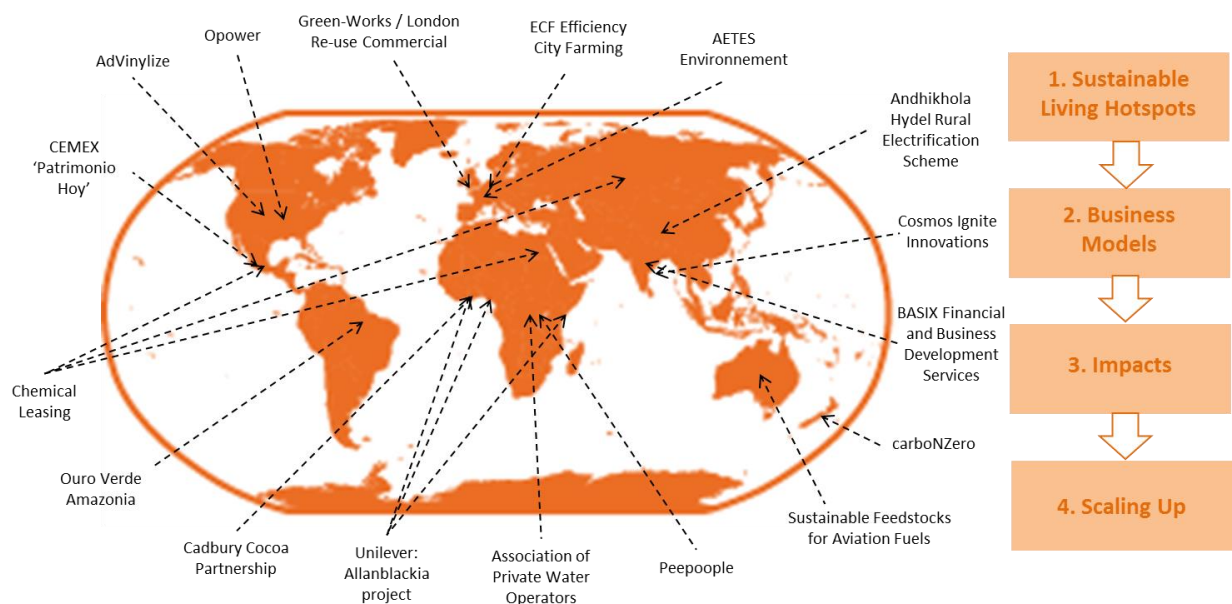


Figure 7-1 Overview of Case Studies

As discussed in Section 3.2 of this report, the Scaling Up Innovations Framework is applicable to a wide range of stakeholders at the micro, meso, and macro level. The case studies presented in this chapter have been selected based on their geographical area (as shown in the above illustration) and also based on their relevance to a range of different stakeholder groups (Table 7-1).

Table 7-1 Stakeholder Involvement in Case Studies

Case Study	Entrepreneurs & SMEs	Multinationals & large corporations	Supply chain actors	Policy-makers	Service providers	Financial institutions	Civil society organisations	Consumers & local community
Asia								
BASIX Financial and Business Development Services		X				X	X	X
Andhikhola Hydel Rural Electrification Scheme		X						X
Cosmos Ignite Innovations	X				X			X
Africa								
Cadbury Cocoa Partnership		X	X				X	X
Association of Private Water Operators		X		X				X
Peepoople	X						X	X
Europe								
Green-Works/London Re-use Commercial	X	X					X	X
AETES Environment	X	X						
ECF Efficiency City Farming	X							X
North America								
AdVynylize	X		X					X
Opower	X	X	X			X		X
South and Latin America								
Ouro Verde Amazonia	X	X	X	X				X
CEMEX 'Patrimonio Hoy'		X				X		X
Oceania								
carboNZero		X		X				
Sustainable Feedstocks for Aviation Fuels		X	X		X			
Global and multiple countries								
Global Chemical Leasing Project		X		X				X
Unilever: Allanblackia project		X	X	X			X	X

7.2 Asia

7.2.1 BASIX Financial and Business Development Services

Description

BASIX was established in India in 1996 as a livelihood promotion institution. It works with over a 3.5 million customers, 90% of which are rural poor households and 10% are urban slum dwellers.

Through the integrated provision of financial services and technical assistance BASIX's mission is to promote a large number of sustainable livelihoods, in particular for the rural poor and for women. BASIX strives to yield a competitive rate of return for its investors so as to be able to access mainstream capital and human resources on a continuous basis. BASIX's strategy is to provide a comprehensive set of livelihood promotion services that include livelihood financial services, agriculture/business development services, and institutional development services under a single umbrella.

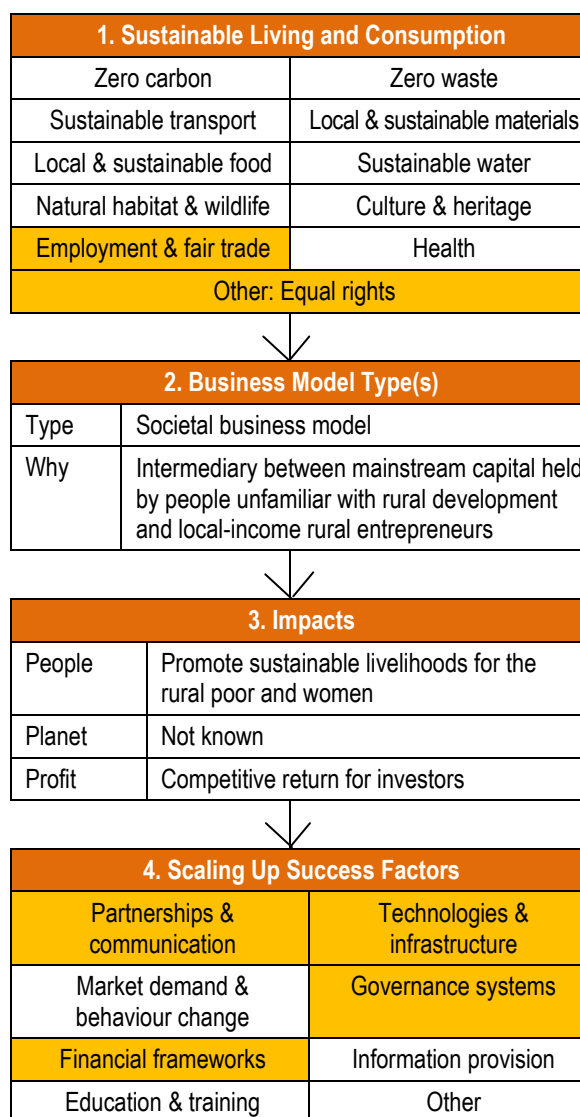
BASIX is widely known for its innovation and partnership approach. Specifically, BASIX works in partnership with mainstream insurance companies (e.g. AVIVA Life Insurance Company for the development of micro-insurance products for the poor), the World Bank (for the development of the weather insurance products for farmers), as well as with private companies (e.g. PepsiCo to provide credit and crop insurance to farmers supplying potatoes for Frito Lays products by PepsiCo). BASIX also works with other livelihood promotion organisations involved in the promoting advancement of disadvantaged and marginalised groups.

Another significant innovation implemented by BASIX is a IT-platform that supports financial inclusion of the poor. This involves opening savings bank accounts with biometric authentication based smart cards thus allowing an increasingly large number of clients to have access to savings and withdrawal services, as well as to insurance, credit, pensions and other financial services.

To scale its service provision, BASIX set up a fund worth Rs 99 million (US\$ 2.2 million) with the support of the Swiss Agency for Development and Cooperation. BASIX has also been actively engaged in policy advocacy and worked toward creating good behaviour standards for the microfinance industry, thus transforming some scaling up challenges into opportunities.

Reference

Joshi et al^{cxviii}.



7.2.2 Andhikhola Hydrel Rural Electrification Scheme

Description

The Andhikhola Hydroelectric and Rural Electrification Project (AHREP) boasts a number of innovative and unique design features in its energy distribution system and tariff structure that enable very low income subsistence farmers in rural Nepal to enjoy the benefits of electricity.

The AHREP is a 5.1MW run of river scheme situated in the mid-hills near Galyang Bazaar, 280 km south-west of Kathmandu. The AHREP provides water for gravity irrigation and supplies electricity to 17,000 consumers in 22 villages, and is increasing its reach by a rate of 10% annually.

The success of the project is largely a consequence of innovative technologies developed by AHREP and the influence on consumption behaviour of rural electricity consumers. Specifically, AHREP adopted a 1kV distribution voltage that resulted in significant cost savings largely because a single porter could carry transformers to areas that were not serviced by roads. AHREP also developed innovative power transmission poles comprising tapered telescopic sections that were lightweight and could be assembled by porters on site (instead of using more traditional and more expensive pre-cast concrete poles for suspending transmission lines along roads).

In addition, AHREP introduced an innovative tariff structure that allowed managing peak demands: instead of electricity meter reading, AHREP introduced a power-based tariff thus enabling customers to subscribe for 25-400W usage at a fixed tariff. The usage above the subscribed demand is charged at a significantly higher rate, thus influencing electricity consumption patterns and reducing peak demand.

Reference

Sustainable Hydropower¹¹⁹.

1. Sustainable Living and Consumption	
Zero carbon	Zero waste
Sustainable transport	Local & sustainable materials
Local & sustainable food	Sustainable water
Natural habitat & wildlife	Culture & heritage
Employment & fair trade	Health
Other	

2. Business Model Type(s)	
Type	<ul style="list-style-type: none"> Multi-functional product and service business model Societal business model
Why	The scheme provides electricity and also provides water for gravity irrigation Innovative design/tariff structure to service low-income rural communities and farmers

3. Impacts	
People	Electricity access and affordability for remote communities and low income farmers
Planet	Improved irrigation
Profit	Increased customer market for electricity provision

4. Scaling Up Success Factors	
Partnerships & communication	Technologies & infrastructure
Market demand & behaviour change	Governance systems
Financial frameworks	Information provision
Education & training	Other

7.2.3 Cosmos Ignite Innovations

Description

Cosmos Ignite Innovations is a social enterprise using a disruptive technology solution to resolve two key sustainability challenges at the same time: specifically access to lighting by the poor and responding to climate change. Cosmos Ignite products are based on the work of Stanford University. Cosmos Ignite offers solar-powered LED-based portable home lighting systems (MightyLight).

LED lamps are said to produce nearly 200 times more useful light than a kerosene lamp and almost 50 times the amount of useful light of a conventional bulb. The lighting device is water- and impact-resistant, low cost, requires virtually no maintenance and is environment-friendly. The light can be delivered at a high-volume price point of Rs 1,000 (US\$ 25) including the lamp and solar panel, thus opening up a previously un-served segment of the market.

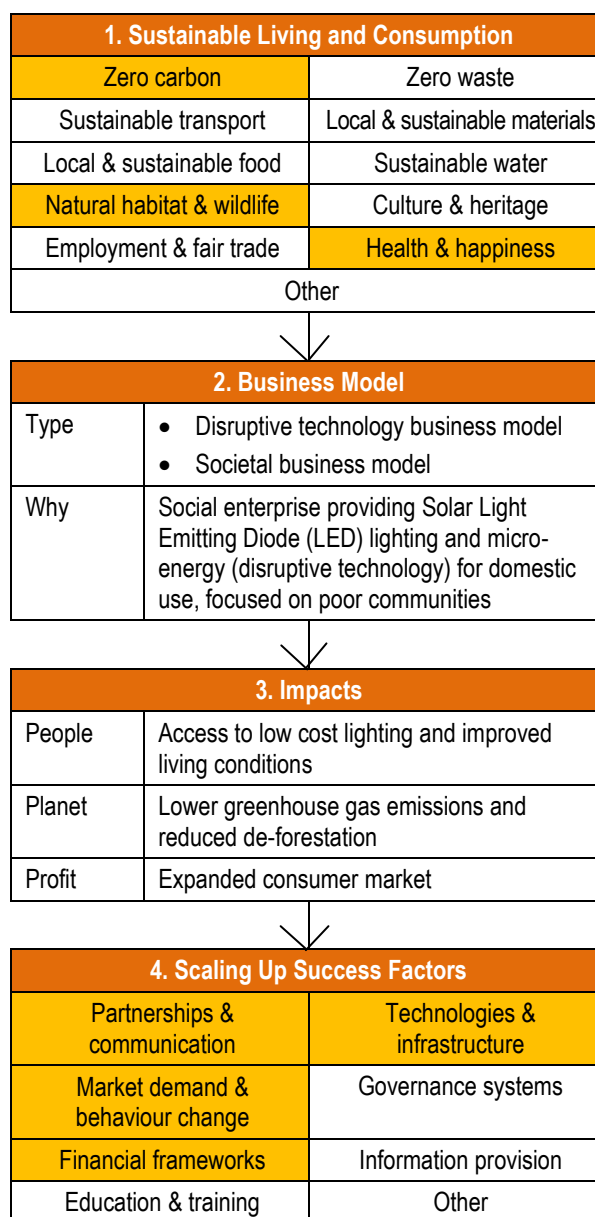
Cosmos Ignite provides the foundations for the developing world to “leap frog” to the next generation of lighting, which is even more efficient than incandescent lighting, while avoiding the pitfalls of dangerous mercury vapour in fluorescent bulbs. The MightyLight systems are used in India, Afghanistan, Pakistan, Kenya, Nigeria, Guatemala, Panama and many other regions with almost 100,000 people being beneficially impacted (as of 2008).

Such a success in scaling the delivery of lighting systems results from the fact that Cosmos Ignite offers a product that is not technology- or state-dependent, but driven by customer needs. However, even with significant cost reductions offered by innovative technologies, it was clear for Cosmos Ignite that the poorest could not afford the up-front acquisition costs and therefore it developed alternative financial mechanisms to achieve scaling up: micro financing and carbon credits. In addition, to

ensuring a wider distribution of its lighting systems, Cosmos Ignite has been proactively forming partnerships with multilateral institutions such as the United Nations, the World Bank and other donor institutions and not-for-profit projects, including MFIs (Micro-Finance Institutions) and rural co-operatives.

Reference

Joshi et al¹²⁰.



7.3 Africa

7.3.1 Cadbury: Promoting Sustainable Livelihoods and Cocoa Production

Description

Cocoa is grown and harvested under the tropical forest canopy near the equator, often long distances from existing infrastructure. Living and working in this environment poses a number of economic, social, environmental, and labour challenges for farmers, their families and communities. As a result, the production of cocoa in Ghana (where Cadbury, now owned by Kraft, sources most of its cocoa) has been gradually declining.

To secure a steady supply of cocoa, in January 2008 Cadbury launched the Cadbury Cocoa Partnership – a £45 million (\$73 million) decade long programme intended to support cocoa farmers in Ghana. This programme is carried out in partnership with the United Nations Development Programme, the Fairtrade Foundation, farmers, governments and NGOs. Its aim is to promote sustainable livelihoods for one million cocoa farmers; increase cocoa crop yields by 20% by 2012, and 100% by 2018; and create new sources of income in 100 cocoa farming communities.

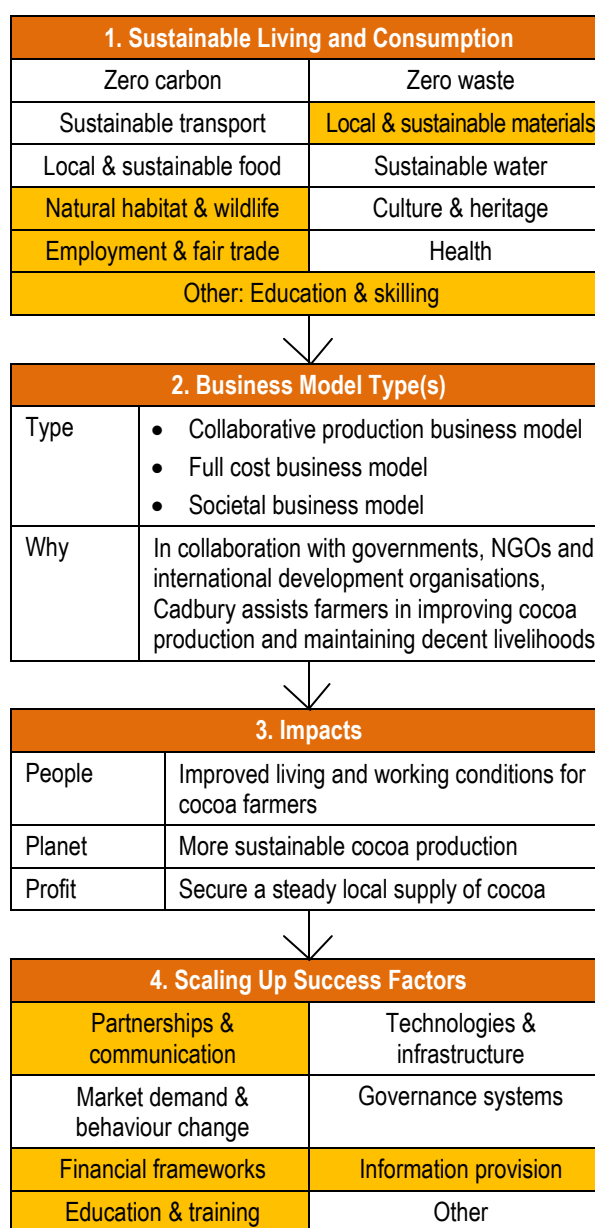
As of 2010 Cadbury/Kraft has invested over £3 million (\$4.6 million) in the partnership and has benefitted some ten thousand farmers and their families in 100 cocoa-farming communities as well as 55,000 members of the Kuapa Kokoo farmer's co-operative in Ghana. Apart from doubling cocoa production and improving incomes, Ghana farmers also benefit from education and empowerment programmes that aim to increase awareness of key issues such as child labour and gender equality.

Key success factors for the Cadbury Cocoa Partnership include multiple partnerships with government officials, donor organisations, NGOs and the farmers themselves, as well as local engagement with cocoa farmers and farmer organisations in the

identification of resources, training, and development initiatives that would be the most beneficial to the local communities.

References

UN Global Compact¹²¹, Cadbury¹²², Business Call to Action¹²³



7.3.2 Association of Private Water Operators

Description

Of Uganda's 21 million people, more than 2 million live in small towns with poor water supplies. Most people in these towns have low income and water shortages aggravate poverty and encourage the spread of disease.

In 2003 eight founding companies formally established the Association of Private Water Operators (APWO) of Uganda with technical and financial assistance from the German Technical Corporation (GTZ). The mission of APWO is to promote the common interests of private water operators through representation, advocacy and lobbying for policy improvement; to coordinate the operations of private water operators; to realise economies of scale and efficiency gains in the management of water and sanitation services; and to build capacity of private water operators.

The essence of APWO is a private public partnership among government, development partners, local councils and private water operators. The government identifies sites, drills boreholes, facilitates community land purchase and subsidises water infrastructure. The private operators distribute the extracted water, check safety and capture a profit. The community water board owns assets and sets tariffs and policies.

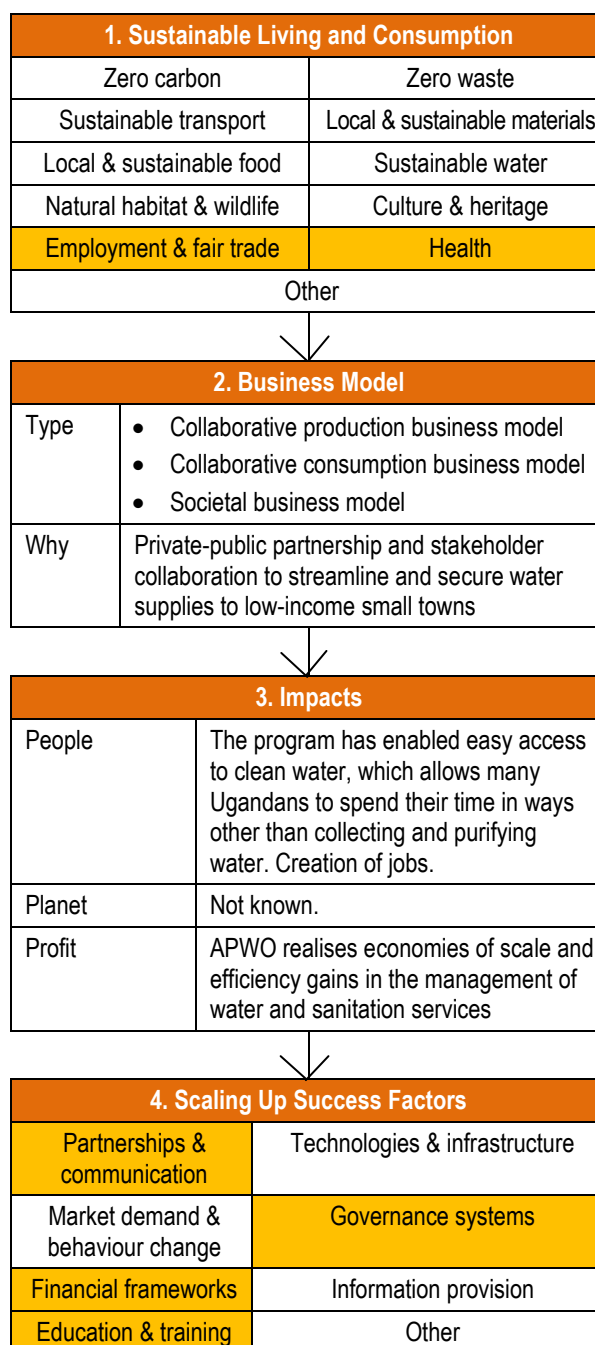
In 2010-2011 there were over 34,000 connections that helped deliver around 3.8 million m³ of safe water to APWO customers, which is a 7 times increase in the number of connections and the volume of provided water since 2003. This model has allowed many Ugandans to spend their time in ways other than collecting and purifying water and reduced the incidence of many infectious diseases. Moreover, it inspired the start-up and expansion of many small-scale businesses such as poultry farming, vegetable stalls, food sellers and car-wash businesses, thus creating the ripple effect in the local economy.

Despite these successful outcomes, some challenges remain, including the growth of the

population in urban areas and insufficient funding for the water sector to meet increasing water demand. APWO strives to identify solutions to these challenges and continue providing services to low-income customers.

Reference

Karugu & Kanyagia (2007)¹²⁴, Association of Private Water Operators¹²⁵



7.3.3 Peepoople

Description

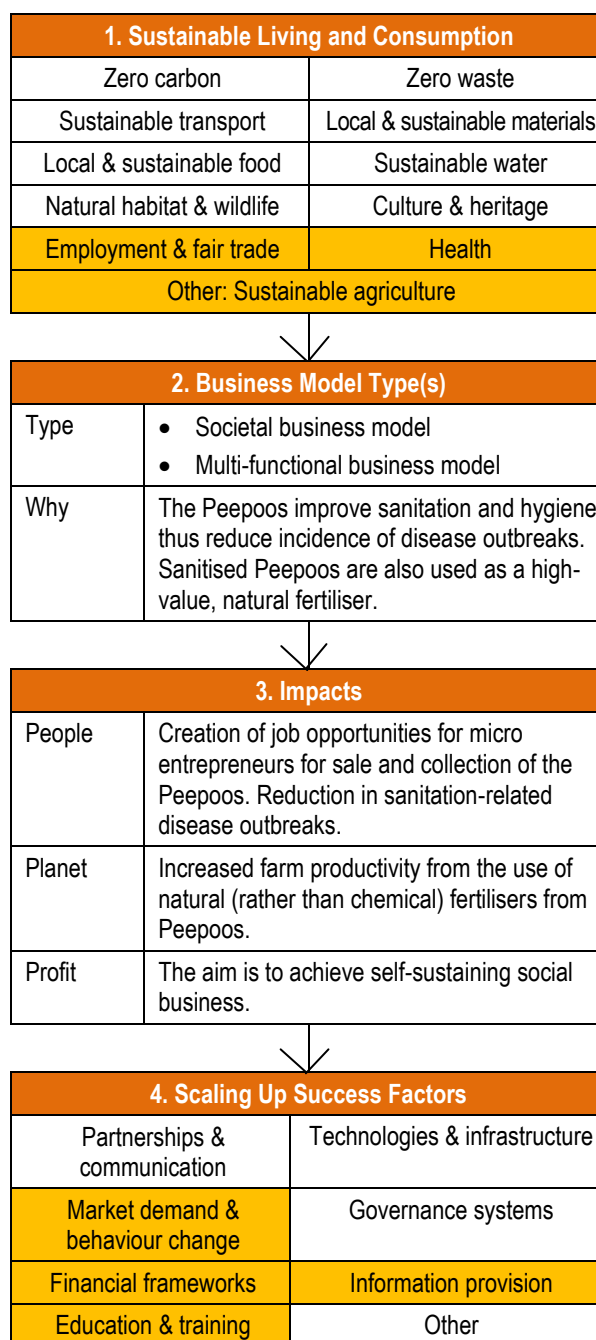
Roughly 2.5 billion people across the world do not have access to conventional sanitation facilities. Absence of basic sanitation leads to water contamination – a primary cause of typhoid, diarrhoea and other intestinal diseases. Moreover, much of agricultural production in the developing countries is dependent upon imported chemical fertilisers rather than natural local fertilisers.

Peepoople addresses both of these problems through single-use, self-sanitising and fully biodegradable toilets that are rendered harmless in two to four weeks and can be used as a natural fertiliser. The “Peepoos” are distributed through kiosks and local micro-entrepreneurs. A refund is given for each used Peepoo brought back to the collection points. In addition, Peepoos can be used as an emergency solution in humanitarian response missions and refugee camps.

Peepoo toilets are currently sold, used and collected in the Kibera slum in Nairobi (Kenya) where they serve 4,500 people and 2,500 school children. The goal is to increase the reach to two million people in urban slums over the next five years. According to Peepoople, key scaling up success factors include the provision of information when entering new slums, as well as new grants to support demand for the product and to reach the tipping point.

Reference

Siemens Stiftung (2007)¹²⁶, Peepoople¹²⁷



7.4 Europe

7.4.1 Green-Works/London Re-use Commercial

Description

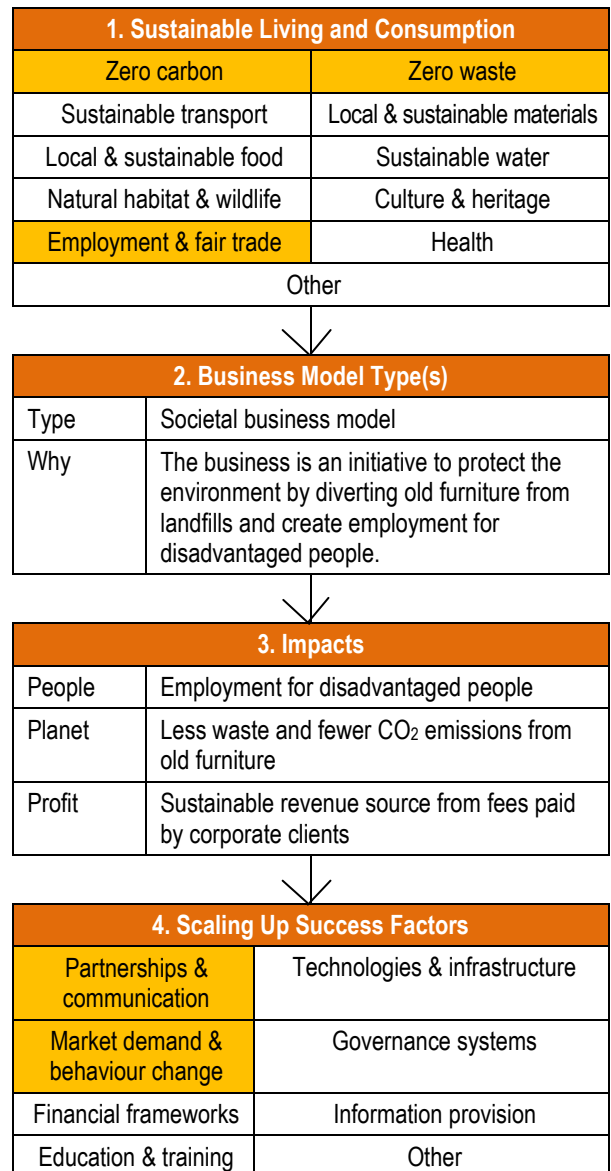
Green-Works (as of mid-2011 London Re-use Commercial) was founded in 2000 with the aim being to divert waste from landfill by collecting old office furniture and selling it at low cost to small businesses, charities and social enterprises. Specifically, Green-Works collaborates with big banks and large corporations that are interested in donating their old furniture as part of their corporate social responsibility activities. Green-Works charges its corporate clients for clearing the furniture and transporting it to the nearest Green-Works depot.

Green-Works operates as a limited company and holds the Social Enterprise Mark. In addition to its environmental mission, the social enterprise aspect of Green-Works is delivered through its employees, a large number of which had suffered long-term unemployment, as well as people from marginalised and disadvantaged communities. Green-Works also works with job centres and prisons to recruit people and give them basic skills and paid training/part-time employment. Moreover, Green-Works partner processing centres are located in deprived urban areas to facilitate the creation of real jobs and training opportunities for disadvantaged people.

Green-Works/London Re-use Commercial has a large geographical presence in the UK due to the large network of franchisees. It estimates that over its 10 years of existence, it redirected re-use office furniture from landfills to over 16,000 organisations and saved the UK government over £500,000 in social benefit through its social benefit programmes. As a result of these efforts, Green-Works/London Re-use Commercial has reduced some 60,000 tonnes of CO₂e from being emitted into the atmosphere and created over 800 training opportunities.

Reference

Mavra (2011)¹²⁸, London Re-use Commercial¹²⁹



7.4.2 AETES Environnement

Description

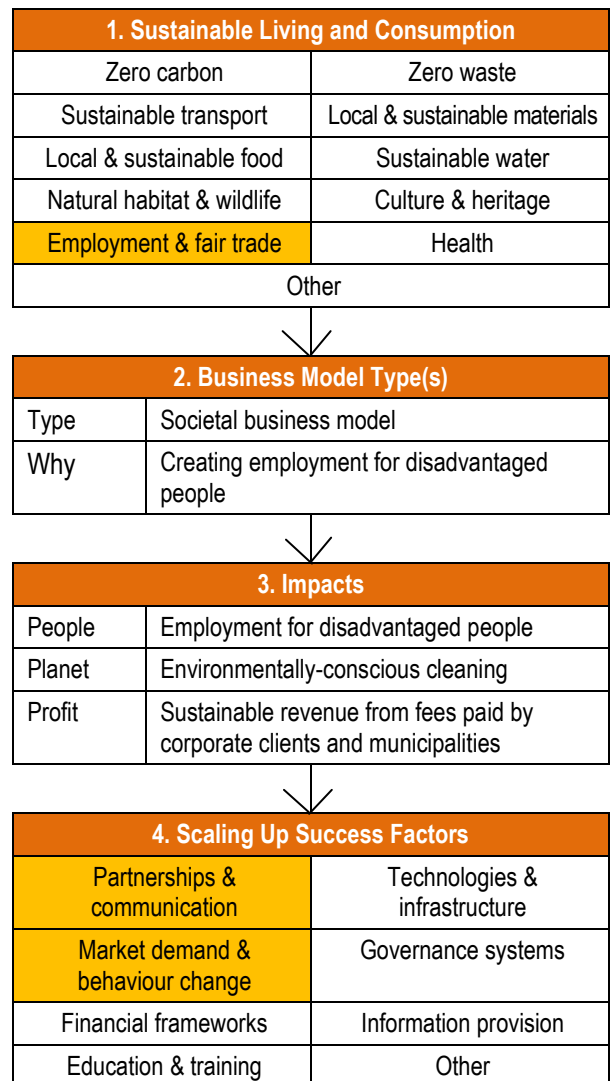
AETES Environnement was started in 2009 in France with the mission to provide high-quality and environmentally-friendly cleaning services to businesses and municipalities while employing disabled and long-term unemployed people, thus promoting social integration and environmental consciousness.

Since its start in 2009, AETES Environment has expanded geographically by establishing social franchises and partnerships with other cleaning companies in Limonge (with 5 employees) and in Strasbourg (with 18 employees). AETES plans to continue scaling up at a rapid pace with six new partners per year.

AETES defines the following as key success factors for scaling up: low-employee turnover (which is valued by clients who appreciate meeting the same cleaning personnel every day), as well as clear procedures that are taught to franchisees (including the “AETES Environment Quality Control” framework).

Reference

European Social Franchising Network Case Study 8¹³⁰.



7.4.3 ECF Efficiency City Farming

Description

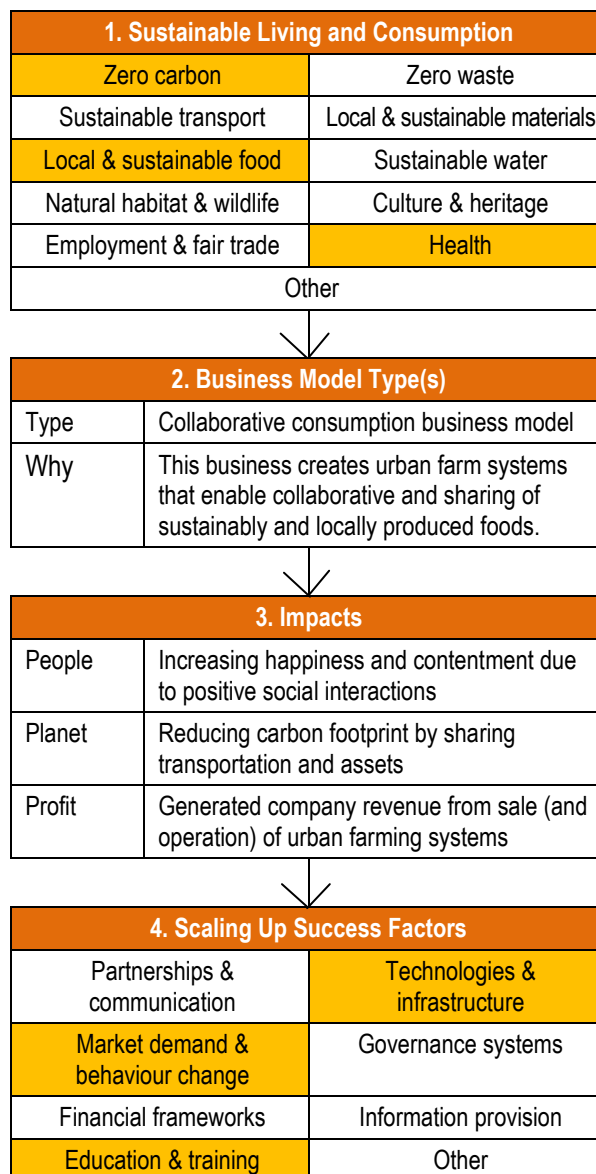
ECF is a German company that designs urban farms to produce healthy vegetables and fish within the city environment. This idea is for small and middle consumers that can become potential city farmers for clients such as supermarkets, restaurateurs, hoteliers, architects, schools and universities. One of the strengths of this model is the nearly CO₂-neutral production with no pesticides, zero transportation miles, and with a reduced water footprint. The ECF Farms seek to revolutionize food production in cities and provide a significant contribution to climate protection in urban environments.

This presents a sustainable solution for macro food consumers that want to adopt a more sustainable supply chain and want to promote a healthy, regional, and sustainable diet.

The company assists with the planning, development and construction of urban farms in specific locations. Services include developing feasibility studies and forecasting crop yields. An urban farm can be delivered in a period of three to four months. The urban farm operators can choose the desired operational model (e.g. owned and operated by EFC or by themselves).

Reference

ECF City Farms¹³¹.



7.5 North America

7.5.1 Advinylize

Description

AdVinylize was founded in 2007 with the aim being to create sustainable promotional products from discarded advertising materials. Billboard vinyl commonly used for outdoor advertisements is repurposed into durable, high-quality goods (e.g. totes, wallets, coolers, beach slings and messenger bags) that are both highly useful and provide an option to keep the material out of landfills.

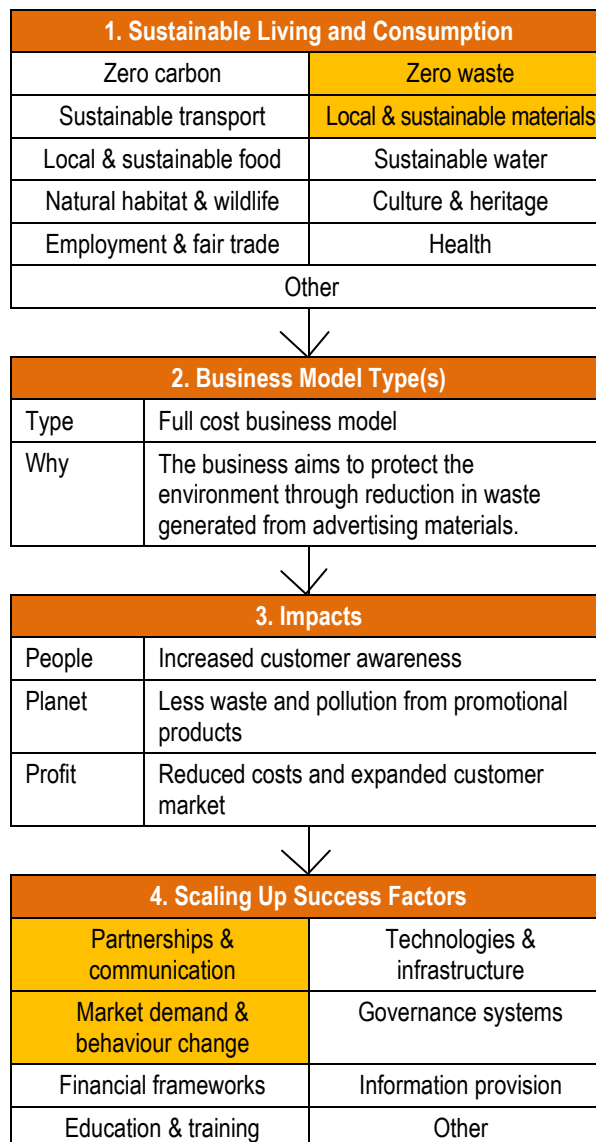
The AdVinylize business model is based on close collaboration with large corporations that use billboard vinyl for advertising. AdVinylize offers billboard removal and re-design into promotional products that can be used by the same corporations as luxury gifts or give-away conference/promotional materials (branded with the corporation's logo). In addition to close partnerships with corporations, in 2011 AdVinylize entered into a strategic partnership with MetroMedia Technologies (MMT) – the industry leader in large format printing, outdoor advertising graphics and billboard printing.

Advinylize work helps not only reduce waste from the outdoor advertisement industry but also helps change environmental practices in this industry, including refitting bulletin structures with LED lighting and using alternative energy sources to power billboards at night.

Despite this success, AdVinylize has to date remained a small company with just one employee. It plans to continue expanding geographically by targeting advertising agencies and their clients in Southern California and Arizona.

Reference

AdVinylize¹³², Smart Girls Way¹³³, Opportunity Green¹³⁴.



7.5.2 Opower

Description

Opower (Positive Energy until 2009) is a privately held company founded in 2007. It partners with utility providers to promote energy efficiency through Home Energy Reports for utility customers developed with Opower's software. This software analyses the energy consumption and offers recommendations on energy saving by making small changes in how energy is used. Through this service, Opower helps protect the environment, boosts energy security, saves money for utility customers and influences energy consumption behaviour.

Opower's software uses statistical algorithms to perform pattern recognition analysis from electricity consumption data without any devices installed in the home. This is achieved by using behavioural science techniques developed by Opower's chief scientist and the author of "Influence", a 1984 book on persuasion, Robert Cialdini. The company has recently (November 2012) launched a new offering – Opower4 which is a customer engagement platform to promote consumer participation in a variety of utility programmes that support energy efficiency, smart grids and customer satisfaction.

As of 2012, Opower managed energy data from over 15 million homes around the world serving more than 75 utilities, including 8 of the US's 10 largest. It delivered more than \$75 million in savings for utility customers, saved 750 gigawatt hours of energy and abated 1 billion pounds of CO₂. And it had 250 employees and two offices (in San-Francisco and Arlington County, Virginia).

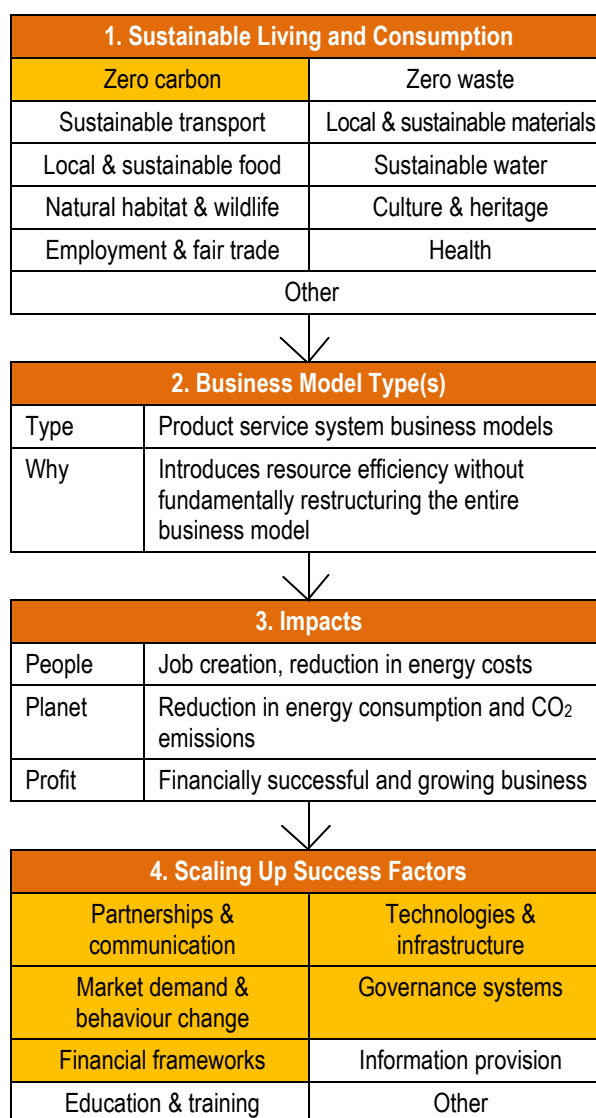
In June 2012 for the first time Opower made its services available for non-US customers by partnering with First Utility (UK) and launching a new service – my.energy. Opower has also been successful in raising venture capital finance from large VC firms.

The company received a number of high-profile awards and endorsements, including the Global Tech Pioneer by the World Economic Forum in

September 2010 and the Green Jobs Award at the end of 2010. Opower services were praised by US President Obama who said that the company's growth is "a model of what we want to be seeing all across the country."

Reference

Opower¹³⁵, First Utility¹³⁶, EarthTechling¹³⁷, The White House¹³⁸



7.6 South and Latin America

7.6.1 Ouro Verde Amazonia

Description

Ouro Verde Amazonia (founded in 2002) produces and sells products made from the Brazil nut while promoting sustainable land use. Ouro Verde provides an alternative to the common notion that high impact lumber exploitation and deforestation are the most economically viable use of the land.

Brazil nuts are collected from the forest floor – trees are not cut down to harvest the nuts. Only a small fraction of nuts are collected, leaving seeds for the Brazil tree to propagate. About 1.3 million hectares of rain forest are sustainably managed by Ouro Verde supplier partners. The Brazil nuts are sustainably harvested by local community members who sell directly to Ouro Verde and receive fair prices for the nuts since through the elimination of middle men.

The local community derives economic value from the preservation of the forest and also has an economic incentive to protect the forest. Ouro Verde processes raw Brazil nuts into different products and distributes these products through local shops and large retail chains with nation-wide coverage.

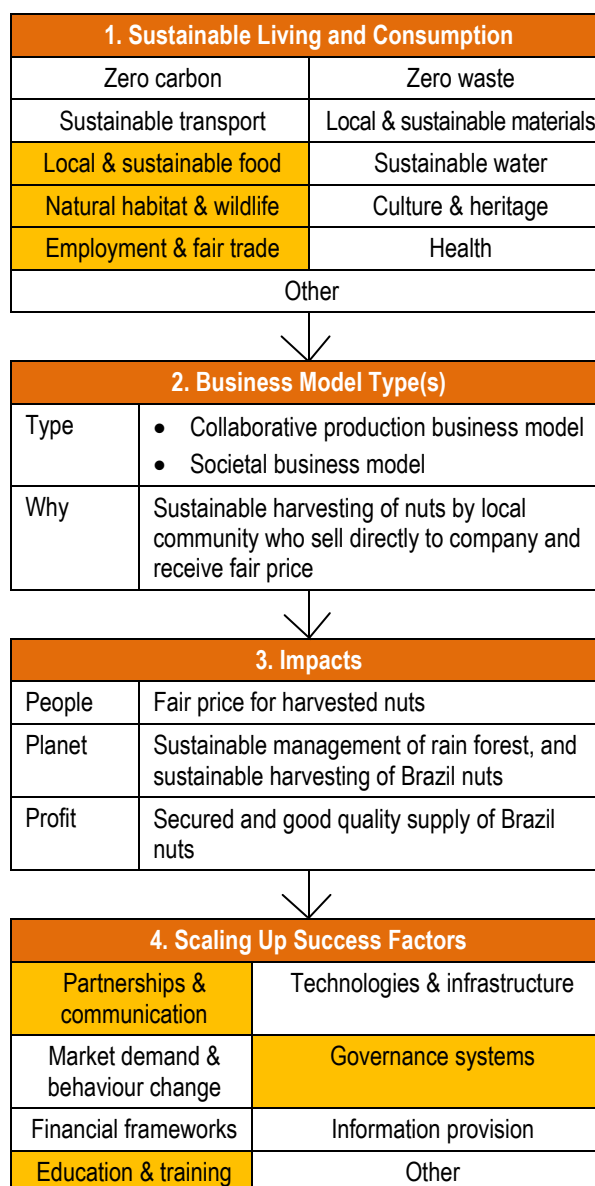
Ouro Verde has received numerous awards, including the 2007 Chico Mendes Award for Sustainable Business (awarded by the Ministry of Environment) and 2009 Local Entrepreneur Award (awarded by Núcleo de Desenvolvimento Empresarial - Incubadora de Empresas de Piracicaba).

To scale its operations Ouro Verde partnered with New Ventures – the World Resources Institute's centre for environmental entrepreneurship – which provides business development services to environment focused small and medium enterprises in emerging markets. Through New Ventures, Ouro Verde entered into strategic partnership with Grupo Orsa – one of the most prominent Brazilian organisations in the forestry, pulp, paper and

packaging sector. This has allowed Ouro Verde to significantly scale up with revenues increasing ten-fold from US\$ 230,000 in 2008 to US\$ 2.3 million in 2010. Further expansion plans include partnerships with a larger number of local communities (to increase geographical area for collecting nuts) and export through direct importers.

Reference

New Ventures¹³⁹, Business Call to Action¹⁴⁰



7.6.2 CEMEX 'Patrimonio Hoy'

Description

CEMEX is a Mexican global building materials company that produces cement, ready-mix concrete and related building materials in more than 50 countries. CEMEX "Patrimonio Hoy" programme (launched in 1998) seeks to make housing affordable for low-income Mexicans. The programme provides customers with access to credit as well as advice on building techniques (since most low-income customers in Mexico build or expand their homes themselves).

Would-be homebuilders pay about \$14 a week, for 70 weeks. For this price they get scheduled deliveries of materials divided into separate building phases, as well as consultations and inspections by Cemex staff architects during the 70 week building period. This helps reduce construction costs by 35 per cent and building time by 60 per cent. In addition to housing, Patrimonio Hoy contributes to the improvement of local public school infrastructure, including classrooms, bathrooms, and sports facilities.

The Patrimonio Hoy programme has been recognised with multiple awards, including the World Business Award from the International Chamber of Commerce, the Prince of Wales International Business Leader's Forum, and the Business in the Community Award.

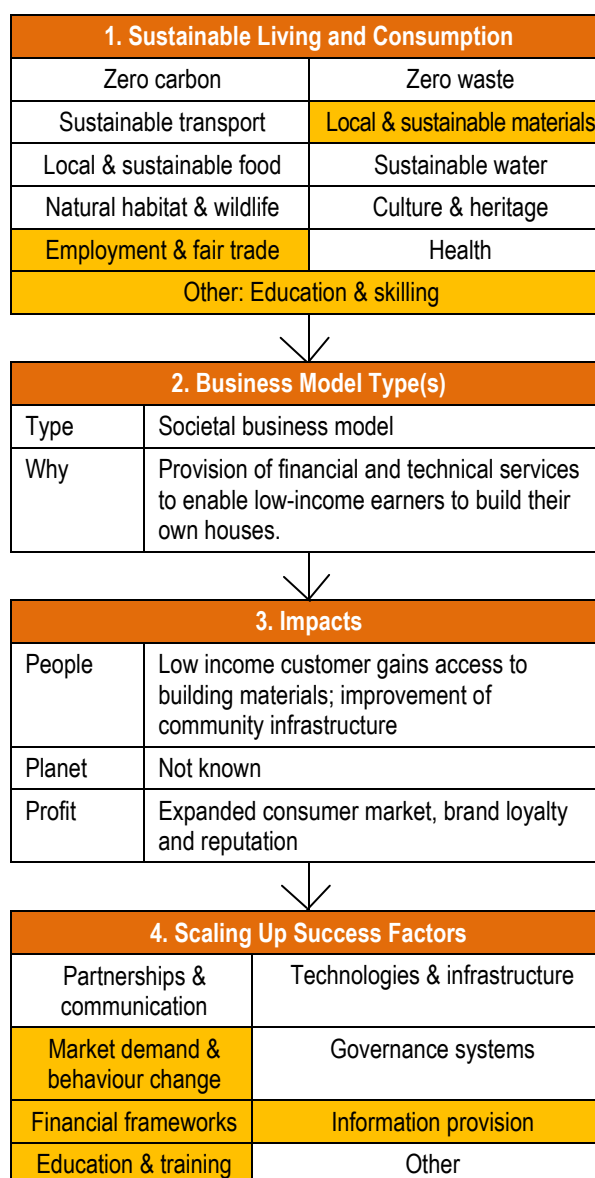
Since beginning the programme CEMEX has provided affordable housing solutions to more than 350,000 families in Mexico, Colombia, Costa Rica, Nicaragua and the Dominican Republic. The programme's international expansion was fuelled by a partial credit guarantee of up to \$10 million from the Inter-American Development Bank (IDB) in 2011. It is estimated that by 2016, more than 750,000 low-income families in Latin America will be beneficiaries of the Patrimonio Hoy programme.

One of the key challenges for the programme is customer retention, since some people drop out of the programme feeling tempted to spend the money on something other than building materials to

complete the project. To address this problem CEMEX encourages the establishment of support groups that help increase motivation of programme participants to remain in the program through to completion.

Reference

CEMEX¹⁴¹, Sandoval (2005)¹⁴², IDB¹⁴³, World Changing¹⁴⁴



7.7 Oceania

7.7.1 CarboNZero

Description

The carboNZero programme was established in 2001 by Landcare Research New Zealand, one of New Zealand's leading research institutes that is owned by the New Zealand government. As of 2011, it is a stand-alone business that is rapidly expanding to reach international markets. The company offers a low-cost carbon certification scheme to SMEs and global corporations.

CarboNZero certification provides assurance to customers, investors and other businesses that the certified company has been assessed to the most rigorous standards. As for certified companies, it provides an important tool in building their national and international reputation, and the opportunity to reduce carbon liabilities, reduce operating costs and demonstrate proactive leadership.

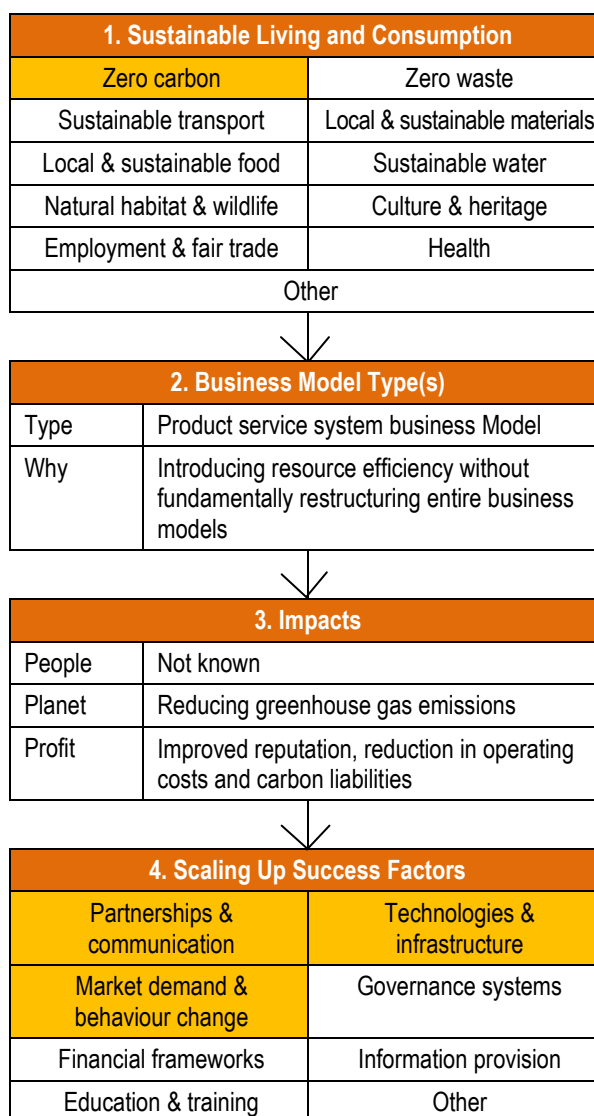
The carboNZero emissions calculation tool is based on a unique internet-based greenhouse gas inventory called E-Manage. Unlike other carbon calculators, E-Manage can operate across regions taking into consideration a variety of local and business-specific factors, thus offering an easy-to-customise, online solution for businesses. It was developed initially by Landcare Research and improved further in partnership with Intergen – one of the leading information technology companies in New Zealand and Australia. This partnership contributed to the exponential growth of carboNZero's client base, which includes international clients.

Specifically, international expansion is achieved by licensing the carbon emissions calculation tool to

other certification organisations, including Achilles Information in the UK and Bureau Veritas in Australia.

Reference

Landcare Research¹⁴⁵, Intergen¹⁴⁶, Sustainability Matters¹⁴⁷, Business to Business¹⁴⁸.



7.7.2 Sustainable Feedstocks for Aviation Fuels

Description

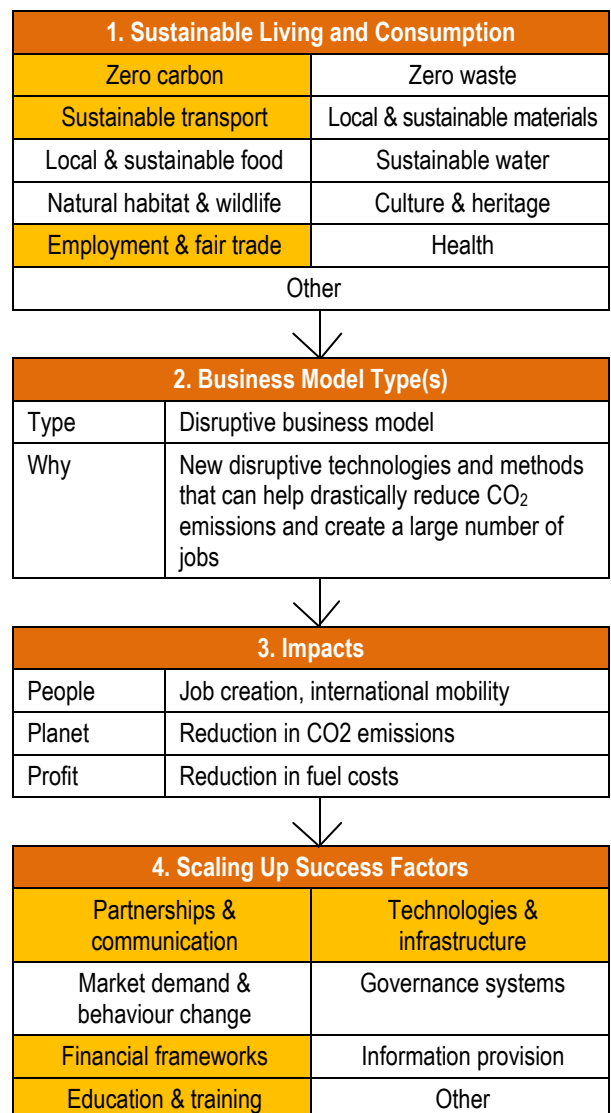
Boeing and CSIRO (the Commonwealth Scientific and Industrial Research Organisation, Australia's national science agency) partnered in 2012 to undertake a comprehensive study to evaluate the potential for growing new feedstocks in northern Australia as sustainable aviation biofuels.

The “Sustainable Feedstocks for Aviation Fuels” programme builds on the recommendations of the “Flight Path to Sustainable Aviation Roadmap” report by CSIRO, released in May 2011, and continues the strong research relationship developed between Boeing and CSIRO over more than 20 years. According to this report, a new Australian bio-based aviation fuel industry can generate some 12,000 clean energy jobs over the next 20 years, cut greenhouse emissions and reduce Australia's reliance on aviation fuel imports.

The “Sustainable Feedstocks for Aviation Fuels” programme will identify and trial new fuel sources that are compatible with existing land uses with the ultimate goal of developing commercially viable feedstock. Over the longer term, Boeing and CSIRO hope to attract further investment and partnerships to develop and commercialise the options with the greatest prospects.

Reference

CSIRO¹⁴⁹.



7.8 Global and Multiple Countries

7.8.1 Chemical Leasing

Description

In 2004, the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management (BMLFUW) and the United Nations Industrial Development Organization (UNIDO) launched the joint project “Promotion and implementation of Closing-the-Loops cooperation and business models in the chemical industry”, later renamed the Global Chemical Leasing Project.

Traditionally, chemicals are sold to customers who become owners of the substances and therefore are responsible for all aspects of use and disposal. Suppliers have a clear economic interest in increasing the quantity of chemicals sold. The concept of chemical leasing is much more service-oriented. The customer pays for the benefits obtained from the chemical, not for the substance itself. Consequently the economic success of the supplier is no longer directly linked with product turnover alone. The supplier tries to optimise the use of the chemical and improve conditions for recycling in order to reduce the quantity consumed, which in turn reduces environmental impacts.

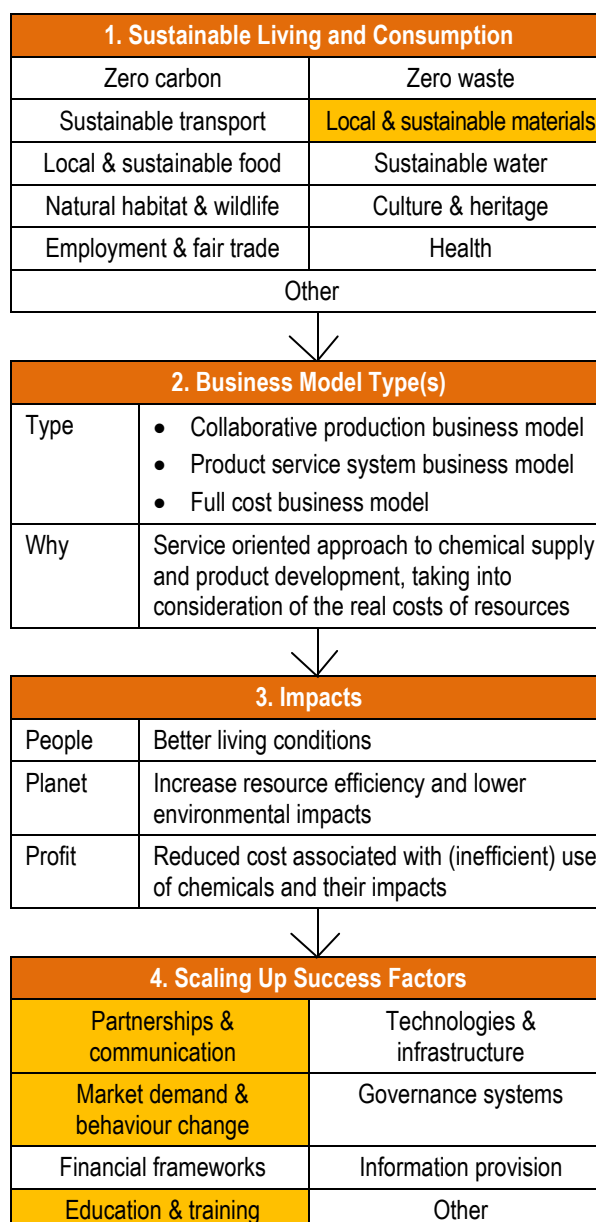
Chemical leasing forms part of UNIDO’s strategy to improve environmental performance of businesses globally. The programme has been implemented in a number of different sectors, including manufacturing of electronic equipment, automobile manufacturing, food processing, steel treatment, mineral water production, waste water treatment, the textile industry, brewing, petrochemicals, tourism and printing.

First demonstration projects were started and successfully implemented in close cooperation with the National Cleaner Production Centres (NCPs) in Egypt, Mexico and the Russian Federation in 2005, followed by Sri Lanka, Serbia and Colombia in 2008. In 2010 new initiatives were started in Brazil, Croatia and Nicaragua.

Key learnings during implementation of these pilot projects include the importance of intensive cooperation and exchange of know-how between chemical users. Trust within the business relationships was defined as one of the major success factors for implementing chemical leasing projects.

Reference

Chemical Leasing¹⁵⁰, Schwager (2011)¹⁵¹



7.8.2 Unilever: Helping Small Holder Farmers

Description

Unilever is working with the United Nations Development Programme (UNDP), the International Centre on Research in Agro-Forestry (ICRAF), the International Union for Conservation of Nature (IUCN), and international and local NGOs to help farmers in Africa cultivate a new tree crop “allanblackia”. Allanblackia fruit contains oil, which is ideal for margarine and dairy cream alternatives.

After discovering the potential of the plant in 2000, Unilever played a key role in setting up public/private partnerships to support producers in meeting the growing demand for the crop. This work has helped create a fully operational plant oil supply chain in Ghana, Tanzania and Nigeria. It is estimated that around 11,000 farmers have already benefited from the project through earning revenue from allanblackia crops during seasons when main crops cannot yet be harvested.

In January 2011 Unilever won a Biodiversity Innovation award from the Union for Ethical BioTrade, an organisation promoting supply chain sourcing with respect. Before the project, the value of the Allanblackia seeds was not fully recognised and many trees were cut down and used as timber. Unilever has invested heavily in awareness-raising programmes for farmers to prevent cutting down of the trees and to encourage replanting.

In addition, Unilever helps co-fund local companies in Africa and helps develop these partners into independent companies capable of operating within the supply chain and therefore having an additional impact on local economies.

Reference

Unilever^{152, 153}.

1. Sustainable Living and Consumption	
Zero carbon	Zero waste
Sustainable transport	Local & sustainable materials
Local & sustainable food	Sustainable water
Natural habitat & wildlife	Culture & heritage
Employment & fair trade	Health & happiness
Other	



2. Business Model Type(s)	
Type	<ul style="list-style-type: none"> • Collaborative production business model • Full cost business model • Societal business model
Why	<p>Inclusive business model that improves the earnings of local communities and poor farmers and ensures adequate supply of allanblackia oil for Unilever’s production.</p> <p>Collaboration between Unilever and other stakeholders to promote the cultivation and use of allanblackia crop.</p>



3. Impacts	
People	Income generation, multiplier effect on local economies
Planet	Biodiversity protection
Profit	Increased production “allanblackia” for the use in existing and new Unilever products



4. Scaling Up Success Factors	
Partnerships & communication	Technologies & infrastructure
Market demand & behaviour change	Governance systems
Financial frameworks	Information provision
Education & training	Other

8. Conclusions

The conclusions from this report are as follows:

- **Sustainable living:** Current living and consumption patterns are clearly unsustainable. Furthermore, our ecological footprint has been relentlessly increasing and this is particularly the case in transition economies due to their fast growing middle class consumer class and the associated demand for supporting services and infrastructure. The challenge is to identify a way for all people to enjoy happy and prosperous lives while respecting the natural limits of our one planet.
- **Role of business in sustainable living:** There is a need for businesses to move from a production focus (e.g. controlling and optimizing their existing production processes) to a more sustainable consumption focus (e.g. influencing and encouraging sustainable consumption patterns) to address the product and service needs of a sustainable society.
- **Scaling up:** The term “scaling up” is increasingly used in different sectors and contexts at the micro, meso, and macro level. Given that scaling up can mean many things to different people, it is important to clearly define scaling up in the context of its application. In the context of the BISS project the focus is on “scaling up sustainable living business impacts”.
- **Scaling up sustainable living business impacts:** Scaling up sustainable living business impacts can be achieved by increasing beneficial impacts in one (primary) sustainable living hotspot or by expanding beneficial impacts on other (secondary) hotspots. It is also important to consider whether scaling impacts on some of the hotspots may have a negative impact on other hotspots and which scaling up strategies may increase risk in this respect.
- **Scaling up framework:** The Scaling Up Innovations Framework has been developed to assist relevant stakeholders identify and review opportunities for scaling up sustainable living business impacts at the micro, meso, and macro levels. The framework is adaptable to the needs of a diverse range of stakeholder groups (e.g. entrepreneurs, policy makers, consumer groups, multinational corporations) and individual organisations.
- **Business models for sustainable living:** Based on their value position (consumption and/or production) and focus (production process, product & services, systems), business models can present a range of production and consumption oriented sustainable living solutions. Each business model type outlined in this report has the potential to contribute to the multiple dimensions and elements of sustainable living. Sustainable living business models are an emerging field of application and knowledge, and therefore subject to further research and development.
- **Scaling up strategies:** Scaling up strategies describe how sustainable living business impacts could be scaled up (e.g. actions to move from the current to desired situation). Depending on the focus of scaling up efforts scaling up strategies can be grouped as:
 - Strategies to scale up impacts of organisations: scaling impacts by growing the organisation (organic growth and acquisitive growth), scaling impacts beyond

- organisational boundaries (dissemination, joint ventures, partnerships, franchising and smart networks), and scaling impacts by reducing organisational boundaries (licensing and mergers/sale).
- Strategies to scale up impacts from projects and programs: quantitative, functional, political scaling up strategies and capacity building.
 - Strategies to scale up impacts through value creation: value creation through product substitution, efficient use, shared use, longer use, and efficient end-of-life strategies.
 - **Scaling up success factors**: Scaling up success factors are the conditions required to achieve scaling up of sustainable living business impacts. In this report success factors have been classified into seven categories, including market demand & behaviour change; technology & infrastructure; education & training; financial frameworks; governance systems; information provision; partnerships & communications. This classification provides a basis for assessing the detailed success factors for specific stakeholders and scenarios in subsequent reports and BISS events. It is acknowledged that the classification is indicative, and the relevance of success factors is subject to specific local conditions and stakeholder groups.
 - **Case studies**: The international case studies presented in this report showcase the multiple means through which innovative business practices and different stakeholder groups can contribute toward sustainable living. Furthermore, the case studies illustrate how the four steps outlined in the Scaling Up Innovations Framework (1. Scaling living hotspots, 2. Business model, 3. Impacts on people, planet and profit, and 4. Scaling up) relate to real-life situations and innovative business practices.

Acronyms

BMZ	German Federal Ministry for Economic Cooperation and Development
CSCP	Collaborating Centre on Sustainable Consumption and Production
CBO	Community Based Organisation
CSO	Civil Society Organisation
IFC	International Finance Corporation
IGO	Inter-governmental Organisation
NGO	Non-Governmental Organisation
SC	Sustainable Consumption
SCP	Sustainable Consumption and Production
SP	Sustainable Production
UNEP	United Nations Environment Programme
UNIDO	United Nations Industrial Development Programme
WBCSD	World Business Council for Sustainable Development

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