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GREEN BUSINESS MODEL NAVIGATOR

An Interactive Knowledge Sharing Product

EXPLAINING THE CONCEPT AND OPPORTUNITIES OF GREEN BUSINESS MODELS!

HELPING PRACTITIONERS TO FIND THE RIGHT TOOL FOR THE RIGHT JOB

GET STARTED

Executive summary

Rationale and introduction

The private sector as a job creator and innovation bearer plays an important role to implement market-based approaches of the Green Economy by supporting sustainable business activities and green business start-up promotion. The promotion of 'Green and Inclusive Business Models' is an effective way to combine entrepreneurship and market development objectives with environmental concerns and with social issues.

Green business models build upon conventional business models. 'Green' refers to the improved quality of business activities which deliver products and services with a better economic, environmental, and social value proposition. Like other entrepreneurs green entrepreneurs look for business opportunities emerging from drivers such as changing customer behaviours, new or changing regulations, societal and environmental issues.

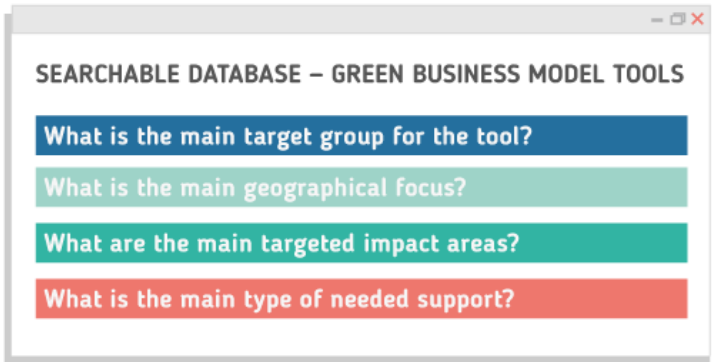
Many examples demonstrate the value and viability of green business models in developing and emerging countries. However, the development, implementation and scaling up of green business models are still facing technical, market, economic and regulatory barriers.

There are an increasing number of tools and concepts to assist practitioners with solving their challenges and to tap into new market opportunities. It can be difficult to get a quick overview of existing concepts and to identify the right tools serving one's interests and needs.

The Navigator

This Navigator is an all new innovative knowledge sharing product in the form of an interactive 'Navigator'. It gives a practical introduction to green business models, outlines the benefits, challenges, and scaling up strategies of green business models, and the role of different stakeholders in this process. The Navigator includes a database with existing tools to assist in the development and implementation on green business models.

The key target groups of this Navigator are entrepreneurs, development organisations, consultants and service providers. However, large businesses, innovation centres and financial institutions are also expected to benefit from the use of the Navigator.



Start menu

Executive summary

1. BUSINESS MODELS EXPLAINED

Introduction to (green) business models

Rationale and positive impacts of green business models

2. SCALING UP IMPACTS & YOUR ROLE

Scaling up the positive impacts of green business models

Your role in advancing green business models:

Entrepreneurs – Development Organisations – Consultants
Large Business – Innovation Centres

3. DATABASE OF TOOLS

DATABASE OF EXISTING TOOLS

Search existing tools and approaches on green business models

LOAD DATABASE

opens in a seperate excel file

CLICK ON ANY ITEM IN THE START MENU TO NAVIGATE DIRECTLY TO THE TOPIC OF YOUR INTEREST

CLICK HERE TO GET INSTRUCTIONS ON HOW TO USE THIS NAVIGATOR

Instructions on how to use this Navigator

This Navigator is set up as an interactive publication which enables you to browse and select topics of your interest, including a searchable database with existing green business model tools.

You can get to each of the chapters and sections in this Navigator in various ways:

- You can use the top menu to easily get to each chapter in this Navigator
- The sections in each chapter are presented in the submenu
- Interactive links in the text in the Navigator look like this '**click here to go to start menu**', and lead you to relevant chapters and sections
- Linkages to more or related information are marked with

This Navigator is not modular nor sequential so you can view the specific topics of your interest through links provided.

In this Navigator these personas show up where content is relevant to specific stakeholders

ENTREPRENEUR

DEVELOPMENT ORGANISATION

CONSULTANT

LARGE BUSINESS

INNOVATION CENTRE

WHEREVER YOU ARE IN THIS NAVIGATOR, YOU CAN ALWAYS GO BACK TO START MENU OR THESE INSTRUCTIONS BY CLICKING HERE.

DO NOT FORGET TO CHECK OUT THE FURTHER INFORMATION SECTION INCLUDING THE WORKING PAPER

About this Navigator

This Navigator is an all new innovative knowledge sharing product in the form of an interactive 'Navigator'. It outlines the concept and benefits of green business models, and guides practitioners to existing tools to solve their challenges and to tap into new market opportunities.

The focus of this Navigator is on innovative and green business models, nevertheless taking into account inclusiveness and poverty reduction as a core principle of international development.

The concept underpinning green business models is not something totally new, but it builds upon existing entrepreneurship activities and conventional business models. It is about an improved quality of business activities which deliver products and services with a better economic, environmental, and social value proposition.

Objectives of the Navigator

- Provide **a database** with existing tools to assist with the development, implementation, and scaling up of green business models
- Offer a **clear introduction** to green business models, related concepts and practical examples
- Present the **rationale, benefits and drivers** for green business models
- Outline the challenges, success factors and pathways to **scale up the positive impacts** of green business models
- Summarise the **role of key stakeholder groups** in scaling up green business models.

Target groups

The key target groups of this Navigator are entrepreneurs, development organisations, consultants and service providers. However, large businesses, innovation centres and financial institutions are also expected to benefit from the use of the Navigator. You check out in the table below what the Navigator can offer you. Click here to find out more about your role in scaling up green business models.

		WHY USE THIS NAVIGATOR?
Key target groups of Navigator	• Entrepreneurs • Development organisations • Consultants and service providers	• Get clear(er) understanding of green business models and their benefits. • Find the right tools to assist with the development, implementation and scaling up of green business models. • Get inspiration and ideas for business development opportunities.
Target groups which also benefit from this Navigator	• Large businesses • Innovation centres • Investors and financial institutions	• Learn about practical tools available to assist entrepreneurs and businesses with scaling up green business models. • Gain a better understanding of concepts underpinning green business models, including practical examples, drivers, and barriers. • Better understand your role to scale up green business models and support entrepreneurial activities and innovation.

THE FINANCIAL SECTOR IS VERY SPECIALISED AND NEEDS CUSTOMISED TOOLS. THEREFORE, THIS SECTOR IS NOT INCLUDED IN DETAIL IN THIS NAVIGATOR.

Background information – Green economy and private sector development

The concept of Green Economy (and Green Growth) and its implementation have been emphasised as one of the main goals of international development since the early 21st century. Though a number of definitions exist**, at heart of a green development path is economic growth** that is environmentally sustainable. While economic growth is necessary for increased employment and poverty reduction, further environmental goals include the mitigation of climate change, adaptation to climate change, the reduction of other pollutants, and a reversal of biodiversity loss and growing fresh water scarcity, alongside social issues.

The **private sector as a job creator and innovation bearer** plays an important role in this context to implement market-based approaches of the **Green Economy** by supporting sustainable business activities and green business start-up promotion.

The **promotion of 'Green and Inclusive Business Models'** is an effective way to combine entrepreneurship and market development objectives with environmental concerns (such as pollution, waste, resource efficiency, biodiversity, climate change etc.) and with social issues referring to the 'base of the pyramid approach' (i.e. integrating the poor and disadvantaged groups of society as producers and consumers).

Private sector development has an important role in assisting practitioners (e.g. entrepreneurs, government agencies, service providers) with the development, implementation and scaling up of feasible green business models. This role includes promoting and synergising learnings of successful green business models, facilitation of multi-stakeholder processes, and fostering a marketplace for services necessary for developing green businesses.

Sources: BMZ (2011). Green Economy, DCED (2015). Green Growth.

The UN Agenda 2030 for Sustainable Development and the 17 Sustainable Development Goals

In September 2015, all 193 Member States of the United Nations adopted an ambitious plan for achieving a better future for all, to end extreme poverty, fight inequality and injustice, and protect our planet: the **Agenda 2030 for Sustainable Development, entitled "Transforming the World"**.

At the heart of the Agenda are the **Sustainable Development Goals (SDGs)**, 17 global goals which clearly define the world we want, applicable to all and leaving no one behind.

It is clear that governments alone cannot achieve this ambitious plan. We need all hands on deck: a new global partnership bringing together business, civil society, citizens and governments must work together to realize sustainable development for all. The private sector in particular has a central role to play in designing solutions to address global challenges through innovative business models.

The promotion of green, inclusive and social business models provides an important contribution to the Sustainable Development Goals. It is especially relevant to SDGs 8, 9, and 12, while green private sector development as a cross-cutting theme in fact refers to all SDGs.

Sources:
https://sustainabledevelopment.un.org/post2015/transformingourworld
http://www.un.org/sustainabledevelopment/sustainable-development-goals

Helping you to find the right tool for the job...

Database of existing green business model tools

LOAD DATABASE

An introduction

- The database is a an interactive Excel file with a compilation of **existing tools** promoting the **green economy** through business models and associated business opportunities.
- A large proportion of tools in the database include **conventional business knowledge** and practices (e.g. business plans, market research, management systems).
- Based on **multiple choice questions, the user is guided** to available green business model tools.
    a) What is the main **target group** for the tool use?
    b) What is the main **geographical focus**?
    c) What is the main **targeted impact area**?
    d) For which **activity** do you need support and insights?
- All tools included in the database are aligned with the criteria of the **green business model definition** applied in this Navigator and concept of **green economy**.

THE TOOLS INCLUDED IN THE DATABASE ARE RELEVANT TO MULTIPLE STAKEHOLDER GROUPS


ENTREPRENEUR


DEVELOPMENT ORGANISATION


CONSULTANT


LARGE BUSINESS


INNOVATION CENTRE

CLICK HERE TO DOWNLOAD THE TOOL DATABASE

Overview of tools included in the database

By searching the interactive Excel file, you can get access to further information on the tools summarised below and the next two pages.

IF YOU DO NOT FEEL LIKE SEARCHING THE DATABASE, YOU CAN DIRECTLY OPEN THE WEBLINK FOR EACH TOOL HERE

Ref no	Tool name	Publisher and year
1	Becoming a Climate Expert	GIZ (2013)
2	Bethnal Green Ventures	Social Innovation Camp (2008)
3	Brokering Inclusive Business Models	UNDP (2010)
4	Business Case for Eco-Innovation	UNEP (2014)
5	Business Innovation for Sustainable Scale-up - Online Scaling up Tool	CSCP (2013)
6	Business Planning Guide for Social Enterprises	Social Ventures Australia (2010)
7	Canadian Social Enterprise Guide	Social Enterprise Canada (2010)
8	Cooperation Platform for Northern Latin America (COPLAN)	BMZ (2012)
9	Ecodesign Pilot and Assistant	Ecodesign (2000)
10	Entrepreneur's Toolkit	IISD (2012)
11	Green Business Model Innovation and Corporate Social Responsibility	GIZ, EMM Network (2012)
12	Green Business Plan Guide	Greenforall (2015)
13	Greening Business Development Services	BMU, UNEP, UNDP, IUCN (2002)
14	Greening the Entrepreneurial Spirit of the Mediterraneans Guide	SCP-RAC (2012)
15	Growing Business with Smallholders - A Guide to Inclusive Agribusiness	GIZ (2012)

continues on next page

Overview of tools included in the database

IF YOU DO NOT FEEL LIKE SEARCHING THE DATABASE, YOU CAN DIRECTLY OPEN THE WEBLINK FOR EACH TOOL HERE

Ref no	Tool name	Publisher and year
16	iceguide	Icehubs Network
17	Inclusive Business Accelerator	BoPinc, SNV, VC4Africa (2010)
18	Inclusive Business Challenge	WBCSD (2009)
19	Inclusive Business Finance Field Guide	UNDP (2012)
20	Inclusive Business: Mapping of Tools & Resources	WBCSD (2012)
21	Inclusive Markets Development Handbook	Private Sector Division, UNDP (2010)
22	Innovation Promotion in Micro, Small and Medium-sized Enterprises	BMZ (2014)
23	Limas Web Suite	LiMaS Eco-innovation
24	LINK methodology: A Participatory Guide to Business Models that Link Smallholders to Markets	Centro Internacional de Agricultura Tropical (2012)
25	Market Creation Toolbox	DIBD International Business Development (2011)
26	OECD Sustainable Manufacturing Toolkit	OECD (2011)
27	PATRI Framework for Scaling Social Impact	Tayabali and Ashoka Globalizer Program (2012)
28	Poverty-oriented Planning & Reporting for Development Partnerships	GIZ (2012)
29	Practitioner Hub for inclusive business	DFID (2010)
30	Responsible and Inclusive Business Hub South East Asia	BMZ (2013)

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Overview of tools included in the database

IF YOU DO NOT FEEL LIKE SEARCHING THE DATABASE, YOU CAN DIRECTLY OPEN THE WEBLINK FOR EACH TOOL HERE

Ref no	Tool name	Publisher and year
31	Short Guide to Green Business Model Innovation	Nordic Innovation (2012)
32	Start and Improve Your Business (SIYB) Programme	International Labour Organisation (2014)
33	SMART Sustainable Entrepreneurship Start-up training	CSCP (2012)
34	Social Entrepreneurship Toolkit	UnLdt (2012)
35	Start up 4 Climate	Borderstep, ADT, Universitat Oldenburg, BMUB, Nationale Klimaschutz Initiative (2015)
36	StartupWave	Intellecap, DFID (UKaid), GIZ (2014)
37	Supply Chain Sustainability - A practical guide to continuous improvement	UN Global Compact, BSR (2010)
38	Sustainable Innovation and Employment	BMZ (2013)
39	Sustainable management in SMEs - Guidance notes for sustainable management	Verein Deutscher Ingenieure (2006)
40	Tips and Tricks for Advisors – Corporate Social Responsibility in Small and Medium-Sized Enterprises	EC DG Enterprise and Industry (2013)
41	Toolbox for Promoting Innovation Systems	BMZ (2012)
42	UN Business Partnership Handbook	UN Global Compact (2013)
43	UNEP Eco-Innovation Project	UNEP, EC (2014)
44	ValueLinks 2.0	GIZ (2015)

Introduction to (green) business models

Green business models build upon conventional business models. 'Green' refers to the improved quality of business activities that deliver products and services with a better economic, environmental, and social value proposition, often to more people over a wider geographic area, more equitably, and more sustainably.

While the concept and practice of green business models is no longer new, it can be difficult and confusing sometimes to see the 'big picture' and to link green business models with other practices such as green entrepreneurship and inclusive business development.

THE STORY LINE FOR THIS CHAPTER

Business models

- What is a business model?
- From conventional to green business models

Green business models explained

- Definition of green business models
- Green entrepreneurship and green business models
- Inclusive and green business models
- Challenges of green business models
- A categorisation of green business models

Implementation

- Implementation pathways to operationalise green business models
- Practical examples

What is a business model?

A business model is the rationale of how an organisation such as an enterprise creates, delivers, and captures value for itself, its clients, and society. Value can be defined as the collection of products and services a business offers to meet the needs of its customers, the environment and society. Each organisation has its own business model and creates value through it.

A business model can be described through 9 building blocks. They 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 (e.g. greener) products and services. These building blocks are further explained on the next page.

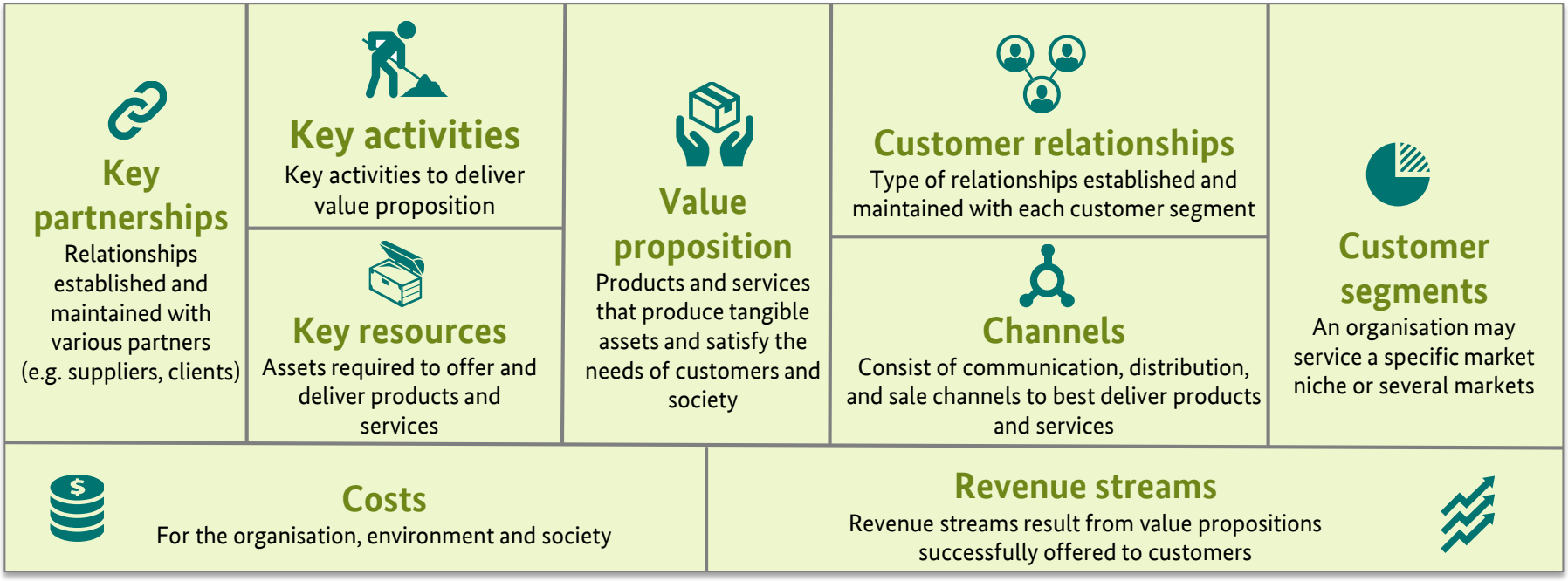
- Key activities
- Key resources
- Customer segments
- Costs
- Value proposition
- Revenue streams
- Key partnerships
- Customer relationships
- Channels

Source: Osterwalder and Pigneur (2010). Business model generation.

HERE YOU CAN SEE A DETAILED DESCRIPTION OF THE BUSINESS MODEL CANVAS AND ITS BUILDING BLOCKS

Business model canvas and its building blocks

The 9 building blocks are incorporated into a Business Model Canvas which is a strategic management and entrepreneurial tool to describe, design, challenge, invent, and pivot your business model. These building blocks are applicable to both conventional and green business models as shown on the next slide.



Source: Osterwalder and Pigneur (2010). Business model generation.

HERE YOU CAN SEE A DETAILED DESCRIPTION OF THE BUSINESS MODEL CANVAS AND ITS BUILDING BLOCKS

From conventional to green business models (2 pages)

Building upon the business model building blocks, the table below outlines some illustrative differences between conventional and green business models. This is a generalised and not all-inclusive list as each business model is unique.

Business model building blocks	Conventional business models	→	Green business models
Key activities	Focus more on short-term management	→	Long-term strategic decision making
Key resources	Use of non-renewable and non-recyclable materials and fossil fuels	→	Use of recycled, renewable and sustainable materials
Customer segments	Focus on traditional and mass consumer markets	→	Servicing existing consumer markets and developing new markets through innovative products and services and thereby increase competitiveness
Costs	Missed cost saving opportunities through resource efficiency measures	→	Cost saving opportunities through energy and resource efficiency in the production and all stages of the value chain

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From conventional to green business models (continued from previous page)

Business model building blocks	Conventional business models	→	Green business models
Value proposition	Focus on maximising product outputs and economic returns	→	Focus on value creation through delivery of innovative and green products and services
Revenue streams	Key focus on delivering economic value to business and clients	→	Deliver economic, environmental, and social value to customers, the companies and society
Key partnerships	Partnership focus on stakeholders directly linked to manufacturing sales of products ('first tier partnerships')	→	Strategic partnerships along the value chain, including private and public sectors and communities
Customer relationships	Relationships with core and traditional customers based on economic values	→	Long-term customer relationships based on environmental and societal values
Channels	Build on 'open-loop systems' (extract, produce, use, and discard) with significant waste along the supply chain	→	Build on circular models facilitating the reuse of resources throughout the value chain

Defining green business models

There are many terms and definitions in the public and academic debate about how companies apply green business models by operationalising their entrepreneurial activity with environmental goals. There is not yet an internationally accepted definition. Therefore, common definitions were reviewed in order to arrive at an operational definition for the Green Business Model Navigator focusing on the concepts of sustainable development, base of the pyramid and inclusiveness, and sustainable supply chains.

Source	Green business model definitions
Nordic Innovation Report (2012)	"Green business model innovation is when a business changes part(s) of its business model and thereby both captures economic value and reduces the ecological footprint in a lifecycle perspective"
FORA (2010)	"Green business models are business models which support the development of products and services (systems) with environmental benefits, reduce resource use/ waste and which are economical viable. These business models have a lower environmental impact than traditional business models"
OECD (2010)	"New (green) business models involve a radically different business model from the conventional ways of providing products and services, with the potential to significantly improve environmental sustainability"
EEA-ETC/SCP (2014)	"A sustainable business model goes beyond mere improvements in resource efficiency. It supports individuals in adapting to more sustainable lifestyles that influence their choice of products and services and the volumes of products they consume"

Practical and simple definition used in this Navigator:

Green business models deliver products and services with economic, environmental and social benefits to society and businesses along the supply chain, and thereby increased competitiveness, inclusiveness, and innovation."

Green entrepreneurship and green business models

FURTHER INFORMATION ON THIS TOPIC IS INCLUDED IN THE WORKING PAPER

MOTIVATION

Like other entrepreneurs green entrepreneurs look for **business opportunities** emerging from drivers such as changing customer behaviours, new or changing regulations, societal and environmental issues (e.g. climate change). In a market-based economy, green entrepreneurs play an important and leading role in the promotion and eventual adoption of green business practices by other businesses. Green entrepreneurs often benefit from competitive advantages as they offer products and services with a better economic, environmental and social value proposition to their clients and society.

What differentiates a green entrepreneur are the motives and strategic objectives behind his/her decision to start a business, as well as the value-based leadership that guides both the entrepreneur and the organisations that he or she runs (Linnanen, 2002). This does not necessarily imply that green entrepreneurs do not intend to have financial return or commercial viability as a motivation, though not without environmental sustainability.

Source: Linnanen, 2002, OECD, 2013, FORA, 2010.

2 KEY GREENING APPROACHES

Green entrepreneurs can be grouped in terms of how they serve the market through their business model. These two approaches are also reflected in the categories of green business models.

- **OUTPUTS: Providing green and environmentally friendly products and services** (e.g. waste management, renewable energy, green technology, green business development services, etc.).
- **PROCESSES: Delivering products or services through environmentally friendly processes** (e.g. eco-tourism, resource-efficient production).

Inclusive and green business models

FURTHER INFORMATION ON THIS TOPIC IS INCLUDED IN THE WORKING PAPER

Are poverty alleviation and environmental sustainability conflictive objectives? Or do these goals support each other? Strategies to alleviate poverty and achieve environmental sustainability are often highly interlinked and definitions by both policy and businesses of one strategy often cross-reference each other. Many examples demonstrate the value and viability of green business models in developing and emerging countries. However, the challenge is to scale up and multiply these green business models in these countries. Scaling up is necessary to enable populations, especially the poor, to benefit from innovative ways to produce and consume green products and services.

TRADE OFF

While there are examples of viable and scalable business models that satisfy both social and environmental criteria, in practice the two objectives often collide. Like all economic activity, the consumption and production activities in developing and transition countries, which inclusive business models facilitate, require natural resources, and tend to create emissions and environmental pollution. It may be argued that inclusive business – essential to lifting people out of poverty – can only be realised at the cost of the environment.

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Inclusive business models without greening can lead to environmental pollution, degradation of ecosystems, and depletion of natural resources. A focus only on green business models without considering developing and transition countries can create political difficulties and negative impacts on the living conditions of the poor.

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Source: Extracted from Endeva (2012). Policy Measures to Support Inclusive and Green Business Models.

Inclusive and green business models (continued from previous page)

FURTHER INFORMATION ON THIS TOPIC IS INCLUDED IN THE WORKING PAPER

SYNERGIES

Including the poor in green business models can support the implementation of environmental projects. Avoiding exclusion can also reduce political resistance and avoid reputational damage once the social implications of some green business models surface. Making inclusiveness an integral part of green business models can also expand the consumer base beyond the upper and middle class, thus increasing the market size and expanding opportunities for businesses. The poor can and should be included both as 'green' consumers and producers .

Realising synergies between inclusiveness and greening requires innovation on multiple levels (e.g. local, regional, national, and international), and cooperation among a variety of stakeholder groups (e.g. policy makers, businesses, NGOs). The private sector has significant potential to contribute to and synergise inclusive and green development through innovating technologies, products and services, and supporting business models.

FURTHER INFORMATION

Recognising the importance of the topic of inclusive and green business models, further information can be found in the supporting working paper, Endeva reference below, GIZ (2013) and GIZ (2014).

Source: Extracted from Endeva (2012). Policy Measures to Support Inclusive and Green Business Models.

Challenges for scaling up green business models

Although there are increasing benefits and drivers for green business models, practitioners still face challenges in the development, implementation and scaling up of green business models. The challenges are described from an internal (referring to enterprises) and external perspective (referring to the ecosystem in which the company is operating in). The combination and extent of challenges will vary on a case by case basis. Success factors for scaling up impacts and overcoming challenges are provided in a subsequent chapter of this Navigator. We encourage you to explore the tool database included in this Navigator to find the right tool to assist with solving your challenges.

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Category	Internal / external	Short description of challenge
Technology and R&D	**Internal** challenges	• Lack of technological understanding and competency to develop sustainable products and services.
	External challenges	• Difficulty of green business models may not fit with existing infrastructure systems. • Limited availability or access to R&D infrastructure and supporting innovation systems.
Knowledge, communi-cations and mindsets	**Internal** challenges	• Traditional and short-term mind-set among businesses in the supply chain and supporting stakeholders. • Lack of knowledge on green business opportunities and associated economic benefits. • Lack of skills to properly communicate and market the full range of economic, environmental and social benefits of green business models.
	External challenges	• Lack of awareness and connections between relevant actors in the supply chain to implement collaborative green solutions • Lack of robust methodologies and case studies on green business models.

Challenges for scaling up green business models

Category	Internal / external	Short description of challenge
Finance and markets	**Internal** challenges	• Limited access to finance due to the relative immaturity of the market and associated challenges in accurately pricing the risk of investments in green business models.
	External challenges	• Low awareness of business and end-consumers on green products/services and difficulty to change purchasing behaviour. • Limited knowledge among stakeholders on economic benefits of investing in green businesses.
Regulations and policies	**Internal** challenges	• Lack of awareness on available government schemes that support green business development.
	External challenges	• Product market regulations which limit competition or reinforce position of incumbent firms to act. • Environmental regulations which protect or favour incumbent firms and impose more stringent requirements on entrants • Lack of governmental action and commitment for reforms towards green business models

Source: Based on OECD (2011), OECD (2013), Nordic Innovation (2012), and interviews with selected stakeholders.

A categorisation of green business models

There are multiple ways of presenting and categorising business models. The categorisation will depend on the focus and context in which business models are discussed. In this Navigator, we focus on innovative and green business models.

The next page illustrates a categorisation of innovative green business models along the value chain. The business models are grouped in this Navigator according to their value chain focus (i.e. production, use, end-of-life) and their core focus in creating value (products/services versus processes). Furthermore, the categorisation recognises that business models apply to both **outputs** (products and services) and **processes** (e.g. production and economic activities).

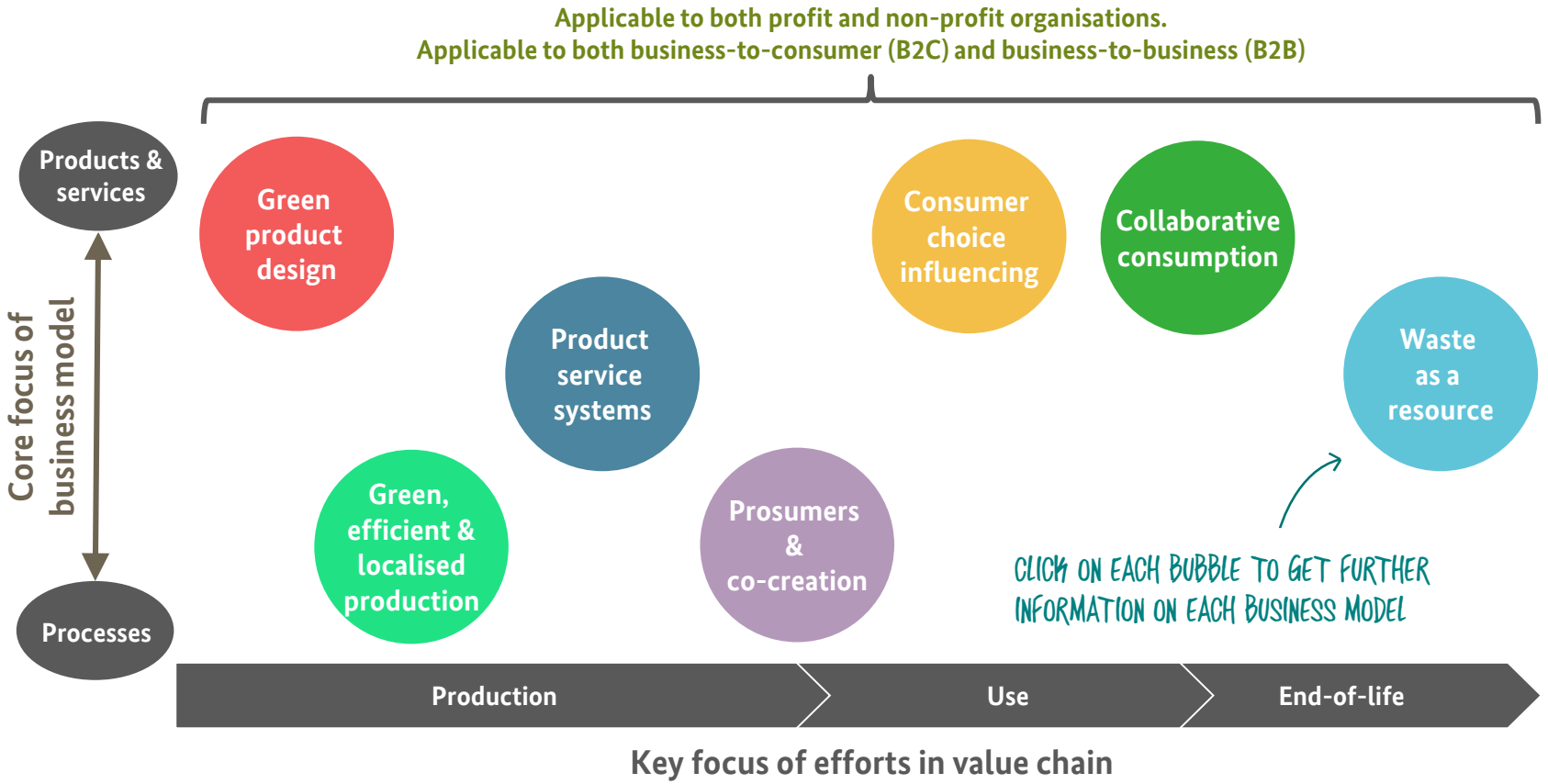
Many case studies demonstrate how business can support the transition to a green economy. However, the challenge is to scale up the impacts from these good practices. Click here to get an overview of scaling up pathways.

It is important to recognise the range of positive impacts on the society that green business models can generate. These societal impacts can also be viewed as indirect benefits.

Each business model category is detailed in the practical examples, scaling up pathway, innovation aspects, and positive societal impacts.

A categorisation of green business models

Based on the explanation on previous page, the diagram below illustrates a categorisation of innovative green business models along the value chain.

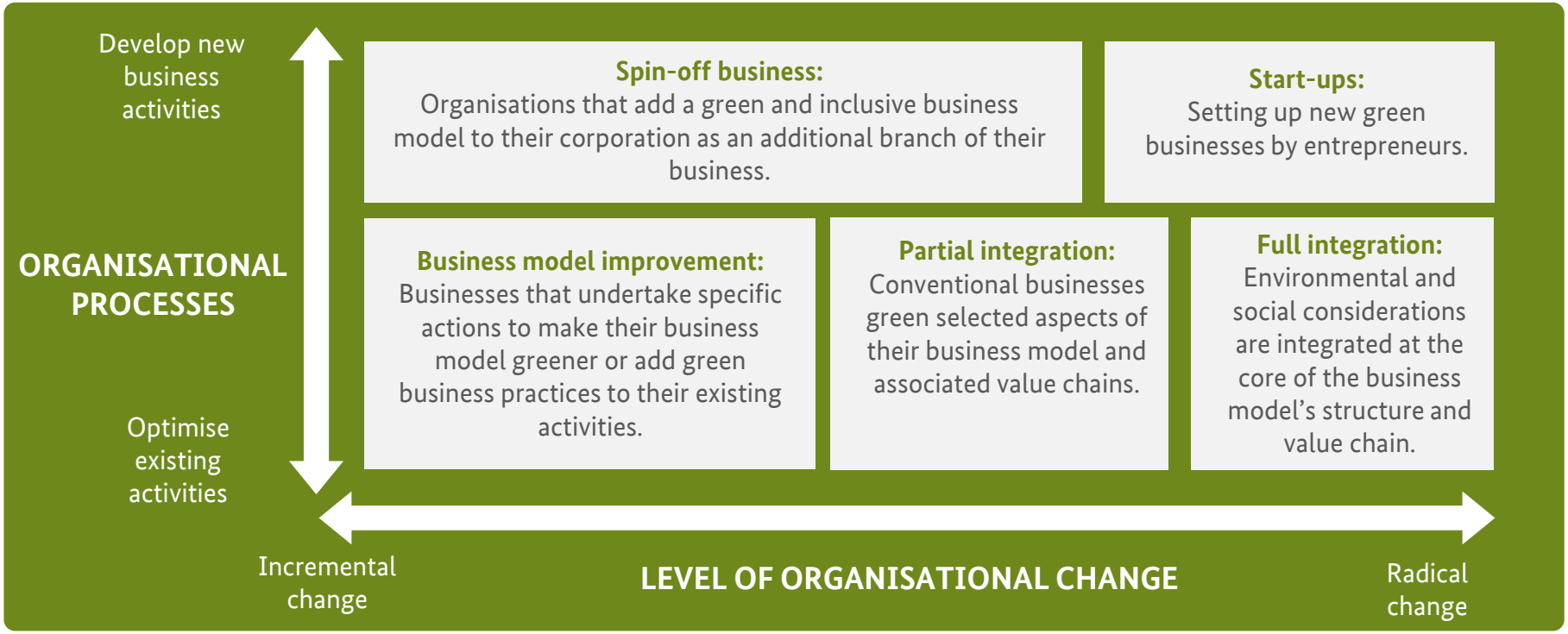


Source: Based on EEA, CSCP, CRI (2014) and interviews with selected stakeholders.

Implementation pathways to operationalise green business models

5 implementation pathways to operationalise green business models can be differentiated by looking at their organisation processes, and level of organisational change. These pathways are illustrated in the graph below.

Each implementation pathway can occur through various categories of green business models, resulting in positive impacts to the environment and society, as illustrated in the practical examples included in this Navigator.



Source: Adapted and expanded from GIZ (2014). Toolbox for Promoting Innovation Systems.

BUSINESS MODEL CATEGORY

Green product design

Designing and delivering products made with fewer resources (e.g. raw materials, water, and energy), that are more resource-efficient during the use phase, and allow effective recovery and recycling at their end-of-life phase. A key feature of this business model is that the entire life-cycle of a product is taken into account, from extraction of raw materials to production, distribution and utilisation, all the way to recycling and disposal.

INNOVATION IN BUSINESS MODEL

Value proposition

Reduced environmental impacts of product during production and use

Key resources

Increased durability and efficient use of product

POSITIVE SOCIETAL IMPACTS

- USE OF RESOURCES
- EDUCATION & SKILLS
- COMMUNICATION
- HEALTH

PRACTICAL EXAMPLE

Florex (Costa Rica): Production and marketing eco-friendly cleaning products and services for homes and industries in the Central American region, using the Design-for-Sustainability (D4S) methodology.

OPERATIONALISATION IN PRACTICAL EXAMPLE

Full integration: Environmental and social considerations are integrated at the core of the business model structure and value chain.

SCALING UP PATHWAY IN PRACTICAL EXAMPLE

- Product substitution
- Efficient use of products and services
- Efficient end-of-life strategies

florex

BUSINESS MODEL CATEGORY

Green, efficient and localised production

The continuous improvement of production processes to deliver 'conventional' products and services from an economic, environmental, and social perspective is truly embedded into the business model of the company. This means that products are produced in the most resource efficient manner with lowest negative environmental and social impacts possible, preferably from locally sourced resources.

INNOVATION IN BUSINESS MODEL

Value proposition

Reduced environmental impacts of product during production

Key activities

More efficient production processes

Costs

Reduced production costs as a result of more efficient use of resources (e.g. energy, water, materials)

POSITIVE SOCIETAL IMPACTS

- USE OF RESOURCES
- ENERGY GENERATION
- URBAN & RURAL DEVELOPMENT
- NUTRITION, FOOD & DRINK

PRACTICAL EXAMPLE

Andhikhola Hydel Rural Electrification Scheme (Nepal): This scheme is operated by Butwal Power Company Ltd. Innovative design features in the energy generation / distribution system and tariff structure ensure efficient production of electricity and enable very low income subsistence farmers to access electricity. The scheme also provides water for gravity irrigation of 280 hectares of land.

OPERATIONALISATION IN PRACTICAL EXAMPLE

Partial integration: Conventional businesses green selected aspects of their business model and associated value chains.

SCALING UP PATHWAY IN PRACTICAL EXAMPLE

- Resource efficient and cleaner production
- Efficient end-of-life strategies

BUSINESS MODEL CATEGORY

Product service systems

This model is also known as the function-oriented business model. The focus is on providing the function and benefits of a product instead of physical product itself. Product service systems take into account the physical use of a product and its services necessary to satisfy the customers' needs.

INNOVATION IN BUSINESS MODEL

Customer segments

Increase number of consumers are prepared to opt access over ownership of products

Value proposition

Address potential rebound effects associated with efficiency measures

POSITIVE SOCIETAL IMPACTS

- USE OF RESOURCES
- EMPLOYMENT AND WORK CONDITIONS
- COMMUNICATION
- EDUCATION & SKILLS

PRACTICAL EXAMPLE

Chemical leasing (e.g. Egypt, Mexico, Russia, Sri Lanka, Serbia, Brazil, Croatia): Customer pays for benefits obtained from the chemical, not for the substance itself. The economic success of the supplier is no longer linked with product turnover.

OPERATIONALISATION IN PRACTICAL EXAMPLE

Business model improvement: Businesses that undertake specific actions to make their business model greener or add green business practices to their existing activities.

SCALING UP PATHWAY IN PRACTICAL EXAMPLE

- Efficient use of products and services
- Longer use of products and services

Chemical Leasing

BUSINESS MODEL CATEGORY

Prosumers and co-creation

Consumers are not just consumers but producers as well. Value is created through localised production and delivery of services and products. This can help eliminate or reduce costs of associated utility infrastructures. Prosumerism is not a new concept in itself. Societal changes (e.g. increasing consumer awareness, demand for locally produced goods) have contributed to the expansion of prosumerism and associated business models.

INNOVATION IN BUSINESS MODEL

Customer segments

Individuals, in addition to being customers, start playing an active role in co-production of products they consume

Key activities

Localised production and use of products and services

Costs

Reduced costs for large scale infrastructure to support traditional supply chains

POSITIVE SOCIETAL IMPACTS

- USE OF RESOURCES
- URBAN & RURAL DEVELOPMENT
- NUTRITION, FOOD & DRINK
- HEALTH

PRACTICAL EXAMPLE

V-Roof (China): Creating rooftop gardens and foster enhanced community ties and knowledge of urban farming.

OPERATIONALISATION IN PRACTICAL EXAMPLE

Start-up: Setting up new green businesses by entrepreneurs.

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SCALING UP PATHWAY IN PRACTICAL EXAMPLE

- Resource efficient and cleaner production
- Product substitution
- Shared use of products and services

BUSINESS MODEL CATEGORY

Consumer choice influencing

Companies engage with consumers to increase their environmental and social awareness and influence their purchasing behaviours. For consumer choice influencing to be a business model, this engagement should be fully integrated in the company's communication and decision making processes. This business model is particularly relevant to retailers which are uniquely positioned to influence sustainable consumption choices and connect the producer with the end consumer.

INNOVATION IN BUSINESS MODEL

Value proposition

Offering better and more choices of eco- and socio-efficient products and services

Customer segments

Advise consumers during consumption phases, thus improving the efficiency of product use and end-of-life stage and reducing overconsumption

POSITIVE SOCIETAL IMPACTS

- USE OF RESOURCES
- COMMUNICATION
- NUTRITION, FOOD & DRINK
- HEALTH

PRACTICAL EXAMPLE

REWE Group (Germany): The company promotes sustainable products through a 'Hallo Erde' campaign. As part of its Pro-Planet label, environmental and social aspects of the entire value chain of selected products are assessed including international supply chains.

OPERATIONALISATION IN PRACTICAL EXAMPLE

Partial integration: Conventional businesses green selected aspects of their business model and associated value chains.

SCALING UP PATHWAY IN PRACTICAL EXAMPLE

- Product substitution
- Efficient use of products and services

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BUSINESS MODEL CATEGORY

Collaborative consumption

A business model based on sharing, swapping, bartering, trading or renting access to products (or other commodities such as land or time) as opposed to ownership. Technologies (in particular ICT) and peer-to-peer communities have enabled older market behaviours of sharing of products to be reinvented. A number of innovative models supporting collaborative consumption are emerging, including collaborative workspaces, book swapping, carpool/ride sharing, bike sharing, garden sharing, clothes swapping, peer-to-peer renting, or swapping of accommodation.

INNOVATION IN BUSINESS MODEL

Key partnerships

Shared use of products among consumers

Value proposition

Business opportunities to facilitate sharing of products and services

POSITIVE SOCIETAL IMPACTS

- USE OF RESOURCES
- MOBILITY
- URBAN & RURAL DEVELOPMENT
- NUTRITION, FOOD & DRINK
- HOUSING

PRACTICAL EXAMPLE

Easyway (Colombia): Promoting and facilitating car sharing through through a virtual platform. The company started in Bogota and is already planning to expand throughout the country.

OPERATIONALISATION IN PRACTICAL EXAMPLE

Start-up: Setting up new green businesses by entrepreneurs.

SCALING UP PATHWAY IN PRACTICAL EXAMPLE

- Efficient use of products and services
- Shared use of products and services
- Longer use of products and services

BUSINESS MODEL CATEGORY

Waste as a resource

Conventional business models are often built on 'open loop systems' (extract, produce, use, and discard) resulting in significant waste generated throughout supply chains. The focus of this business model is to create 'circular and closed loop systems' by reducing waste in production and consumption systems where technically and economically feasible. Where waste does arise, it is either re-used or recycled. This business model is closely linked to the circular economy concept.

INNOVATION IN BUSINESS MODEL

Value proposition

Business opportunities associated with the re-use and recycle the increasing amounts of waste generated by society (e.g. WEEE, textiles, C&D waste, plastics)

Key resources

Displace virgin resources with secondary materials in production of new products

POSITIVE SOCIETAL IMPACTS

- USE OF RESOURCES
- EMPLOYMENT AND WORK CONDITIONS
- URBAN & RURAL DEVELOPMENT

PRACTICAL EXAMPLE

EcoPost (Kenya): Use of waste plastic as a resource to manufacture eco-friendly plastic lumber and create jobs.

OPERATIONALISATION IN PRACTICAL EXAMPLE

Start-up: Setting up new green businesses by entrepreneurs.

SCALING UP PATHWAY IN PRACTICAL EXAMPLE

- Efficient end-of-life strategies
- Resource efficient and cleaner production

Rationale, drivers and benefits

Value creation by businesses is often associated with the generation of economic benefits (e.g. return on investment, increasing revenues, and cost savings). In addition to economic benefits, green business models can provide a range of further values such as environmental and social benefits, strengthened competitiveness, and new market and business development opportunities (OECD, 2013).

As noted in the previous chapter, the implementation and scaling up of green business models are subject to a number of challenges and therefore there is no guarantee for all green business models to be successful. These challenges need to be taken into account when assessing the rationale, drivers, and benefits of green business models provided in this section.

THE STORY LINE FOR THIS CHAPTER

Rationale....Why bother with green business models?

We only have one planet

Increasing market and business opportunities

Drivers for green business models

Benefits and positive impacts

Direct benefits to business and its immediate stakeholders

Positive impacts on society

"We are inventing too much and too many things for nothing. Sustainable innovation is to think if what we are developing adds value and is really fulfilling the needs of the society. We need to shift the way we think, meaning a radical change of mindset, and accept the consequences this change brings about."

Mr. Luis Neves. Group Climate Change and Sustainability Officer. Deutsche Telekom.

RATIONALE FOR GREEN BUSINESS MODELS:

We only have one planet

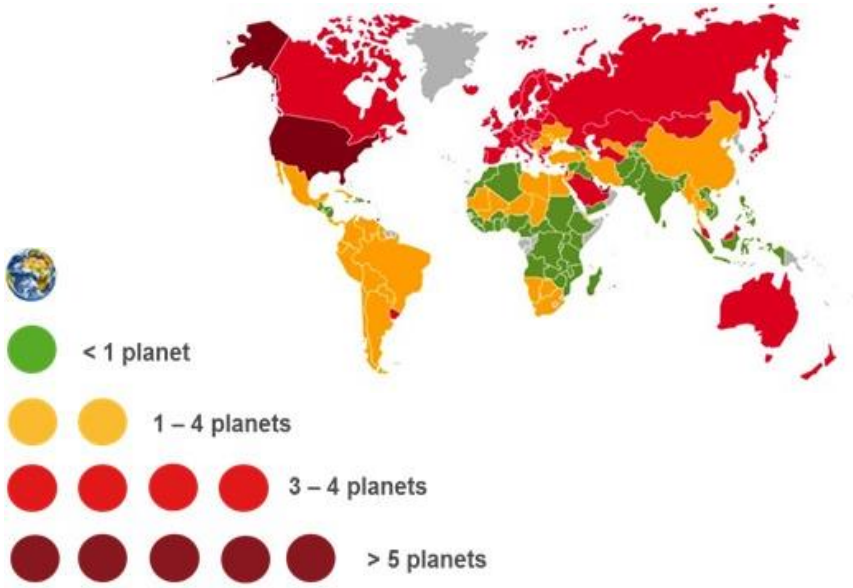
Today the quantity of resources that we consume globally and the waste we generate require the equivalent of 1.5 planets. This means that it takes the Earth one year and six months to regenerate what we use in a year.

Consumption patterns are not equal across the globe. The highly industrialised and developed countries (e.g. in Europe, North America, and Australia) consume significantly more than transition and developing countries in South America, Africa and large parts of Asia.

Our ecological footprint has been consistently on a rise. Consumption patterns are increasing rapidly in transition economies due to the growing middle class consumers and associated demands for supporting services and infrastructures (e.g. China, India).

Green business models provide a means to address these unsustainable consumption and production patterns and make positive impacts in society.

Source: Global Footprint Network (2014). Footprint Basics.



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cc Jaro Larnos | flickr.com | 200880966

RATIONALE FOR GREEN BUSINESS MODELS:

Increasing opportunities for green businesses

The market opportunities for green business are clearly on the rise (UNEP, 2013):

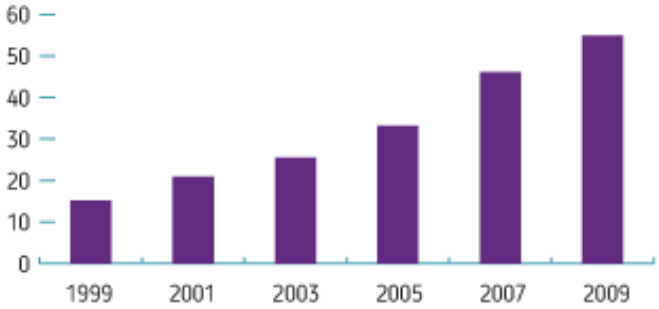
- The global market in low-carbon and energy efficient technologies, which include renewable energy supply products, is projected to nearly triple to US$ 2.2 trillion by 2020.
- Many suppliers are rendering their practices more sustainable in order to secure their positions within international supply chains. This is illustrated for example by the 1,500 per cent increase in global ISO 14001 certifications on environmental management awarded between 1999 and 2009.
- The global market for organic food and beverages grew to US$ 105 billion in 2015, from the total value of US$ 62.9 billion in 2011.

International trade in environmental goods and services totals nearly **US 1$ Trilion** per year or around **5%** of all trade globally.

Source: New Climate Economy Report

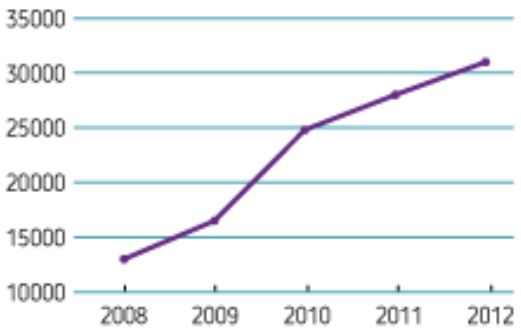
By **2025** the global volume of leading Greentech Market is expected to be at least twice the size than it is today.

Global trade in organic food and drinks (1999 - 2009)

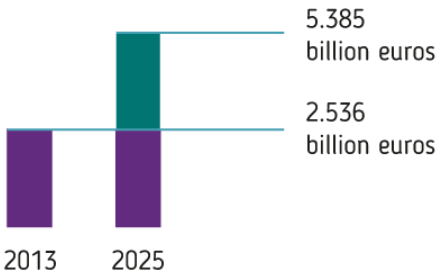


Source: Prepared by Asad Naqvi, Pratyancha Pardeshi based on the data from A. Sahota (2009). Cited in Green Economy Report (UNEP, 2011), p 49.

Cleantech Patent Filings



Source: IP Checkups CleanTech PatentEdge Database



Source: German Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB)

Drivers for green business models

Although green business models aim at promoting and advancing environmental sustainability in society, by operating in a highly competitive and changeable market, like any other form of businesses, they are also compelled to follow economic drivers. Key drivers to foster the uptake of green business models include:

1. **Compliance-based drivers:** Market and business development opportunities emerging in a response to changes to regulations and government policies (Horbach et al, 2010). For example, businesses to recycle construction and demolition waste as a result of ever stringent legislation to reduce waste to landfills.
2. **Market-based drivers:** Market opportunities emerging from the increasing environmental awareness and resulting consumer demand for green products and services (OECD, 2011). For example, retailers dedicated to selling organic and green consumer products.
3. **Technological drivers:** Green business model opportunities driven by technology developments. For example, the rise of collaborative consumption business models (e.g. car sharing, clothes swapping) as a result of developments and wide-range application of ICT products.

"It is necessary to drive changes in the society and engage as many people as possible through better communication and marketing to promote the economic, environmental, and social benefits of green business models."

Ms. Tara Chantal Hopkins, Founder Cop(m)adam), Turkey.

Direct benefits of green business models

Direct benefits of green business models refer to individual companies, surrounding communities, organisations, and stakeholders in the value chains of green products and services. An illustrative overview of direct and key economic, environmental, and social benefits that can be derived from green business models is provided below.

"For green business models to be successful, they should not build just on short term economic returns, but rather focus towards creating long-term value to consumers, the value chain and society as a whole. For this, it is important to think in the bigger picture."

Ms. Anne Roulin, Research and Development Sustainability Manager at Nestlé.

Positive impacts on society (indirect benefits)

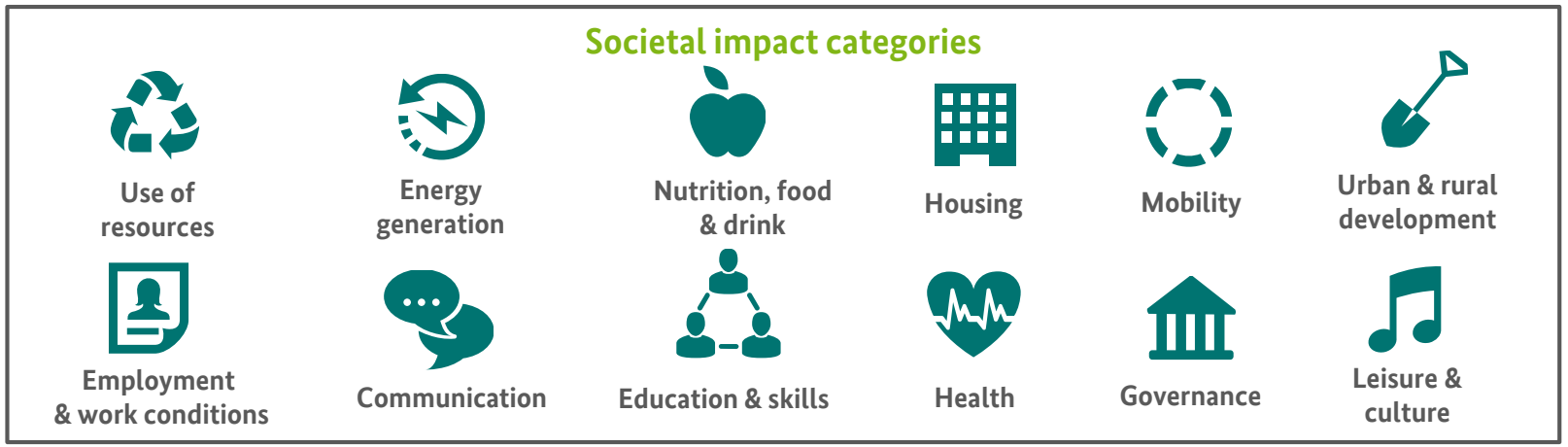
In addition to the direct economic, environmental and social benefits to its immediate stakeholders, green business models can produce a range of positive impacts on society. These societal impacts can also be viewed as indirect benefits.

A possible grouping of societal impacts is shown in the graph below. This grouping should be regarded as indicative and flexible to be adapted to specific situations.

The practical examples of green business models in this Navigator include references to the relevant impact categories and also the 9 building blocks of business models.

Careful consideration should be given whether scaling positive impacts in one or more of the impact categories may have a negative impact on other categories (rebound-effects). For instance, by scaling up positive impacts on communication through ICT products, one should ensure that that potential negative impacts (e.g. E-waste, use of conflict minerals) are managed responsively.

A DESCRIPTION OF THE IMPACT CATEGORIES IS PROVIDED IN THE WORKING PAPER



Source: Adapted from CSCP (2012). Scaling Up Business Impacts on Sustainable Living: Baseline Assessment.

Scaling up the positive impacts of green business models

There is an increasing interest in the topic of 'scaling up' of green businesses, including scaling up pathways and success factors. 'Scaling up' can mean many things to different people.

Many examples demonstrate how green business models foster sustainable and economic development in developing and emerging countries. A key challenge is to scale up the positive impacts of good viable examples. The success factors are the pre-requisites required to scale up impacts, and scaling up pathways describe how the business impacts could be scaled up.

To take advantage of the opportunities offered through green business models, it is important for entrepreneurs, businesses and supporting stakeholders to understand the scaling up process and associated success factors.

Let us try to clear the air a bit....

THE STORY LINE FOR THIS CHAPTER

Scaling up?

What do we mean by 'scaling up'?

Success factors

Success factors for scaling up impacts and overcoming challenges

Scaling up pathways

Scaling up pathways for businesses

- Organisation as key focus
- Value creation as key focus

Practical examples

"My dream is to alleviate poverty through sustainable entrepreneurship. Success factors for scaling up in Ghana are business training for entrepreneurs, working capital, and proper marketing strategies to facilitate exports of Ghanaian products. Support to entrepreneurs (e.g. monitoring, evaluating, mentoring) over a long period is very important."

Ms. Lucia Quachy, President, Ghana Association of Women Entrepreneurs.

What do we mean by 'scaling up'?

The term 'scaling up' is 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). **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 sustainably"** (Menter et al).

The terms **replication, streamlining, 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 thrust (Van Berkel, UNIDO, 2011).

Scaling up

Terminology	Description	Principle	Application areas
Replicating	Large scale application of known solutions and best practices ('widening')	Applying	Within the same target group, sector or cluster
Streamlining	Eliminating steps that may not be necessary to achieve similar result	Learning	Within the same target group, sector or cluster
Expanding	Seeking new applications and markets for practices proven elsewhere	Adapting	New sectors, countries, clusters, etc.
Innovating	Finding new solutions that have more substantive benefits ('deepening')	Research and development	All areas

Success factors for scaling up positive impacts and overcoming challenges

The success factors presented here are the pre-requisites required to scale up impacts and are relevant to multiple stakeholder groups. All entrepreneurs, businesses, and supporting stakeholders should be aware and assess the relevance of the seven success factors in their initiatives, projects, and programs to scale up the impacts of green business models. **If one of these success factors are not met, it is unlikely that these efforts will be successful.**

The seven success factors are introduced below.

Market demand & behaviour change

It is necessary to consider whether there exists a market demand for sustainable products or services or, alternatively, whether it is possible to create demand by influencing consumption patterns among the target market.

Technology & infrastructure

Technology and infrastructure are important to achieve resource efficiencies and reduce environmental impacts throughout the life cycle of products and services. The development of sustainability enabling technologies and infrastructure (eg. efficient buildings, charging stations for electric vehicles) can encourage and enable consumers to change their behaviours.

Education & training

Formal and informal education instruments need to be in place to meet the specific knowledge and capability needs of key stakeholder groups (e.g. entrepreneurs, large business, development organisations, innovation centres, consultants and service providers). This should include the provision of skills for demonstrating and communicating the full economic, environmental, and social benefits of green business models.

EACH SUCCESS FACTOR IS DISCUSSED IN MORE DETAIL IN THIS PUBLICATION

"Professionalism in communication is a key factor for every business model. When it comes to green business models, it is even more important to be able to communicate the full range of economic, environmental and social benefits to key stakeholders such as customers and investors."

Mr. Joris Depouillon, Co-Founder Food Surplus Entrepreneurs Network.

Source: Adapted from CSCP (2014). Scaling Up Business Impacts on Sustainable Living.

➡ continues on next page

Success factors for scaling up impacts and overcoming challenges

Financial Frameworks

It is important to enable access to financial products and services for business and entrepreneurs. To do so, it is necessary to create support mechanisms such as customised 'green' financial products and services, fair lending and investment conditions. Entrepreneurs should be capable of approaching financial institutions and present a promising business case.

Governance Systems

The public sector can establish institutional conditions such as normative rules and boundaries as well as the economic and political incentives that support sustainable living. All these conditions embody a supportive governance system that enables interaction and cooperation among market actors. A supportive governance system helps promote the development of market, technological, educational and advisory factors that support entrepreneurs.

Information provision

Clear and accessible information enables entrepreneurs and businesses to access the necessary resources to operate their business and enables other collaboration and support of stakeholders and potential partner organisations. Information can help facilitate smart decision-making on strategies and innovative business models. This includes 'conventional' business knowledge and tools (marketing and professional communication, controlling, analysis tools, cost calculation, etc), and sources for inspiration (e.g. good practices).

Partnerships & Communication

Partnerships bring together the competencies and expertise of different stakeholders. Partnerships also increase problem-solving capabilities, help maximise the efficient use of resources (e.g. human, financial, infrastructure, technologies), and share experiences amongst entrepreneurs and key stakeholders. They are key for establishing, enriching and extending a functioning and supportive ecosystem for innovative business models and entrepreneurship.

EACH SUCCESS FACTOR IS DISCUSSED IN MORE DETAIL IN THIS PUBLICATION

Source: Adapted from CSCP (2014). Scaling Up Business Impacts on Sustainable Living.

"Collaboration at all levels of government, in the public and private sectors and with civil society is needed to scale up green business models and remove existing challenges and barriers. Platforms that enable access to information and share solutions, experiences, and good practices support these necessary collaborations."

Ms. Kate Berrisford, Founder & Managing Director of the Green Africa Directory.

Scaling up pathways for green businesses

In the context of green business models, scaling up pathways can be defined as business development strategies to increase positive business impacts on the environment and society.

Depending on the focus of the efforts, two pathways can distinguished, namely scaling up impacts with (1) organisation or (2) value creation as the key focus. The common focus of scaling up is on growing a 'green organisation', but it is important to recognise that positive business impacts can be scaled up by focusing on value creation.

Scaling up impacts with ORGANISATION as key focus

1) Scaling up impacts with ORGANISATION as key focus:

- Scaling up impacts by growing the organisation (organic growth and acquisitive growth)
- Scaling impacts beyond organisational boundaries (dissemination, joint ventures, partnerships, franchising and smart networks)
- Scaling impacts by reducing boundaries (licensing and mergers/sale).

Scaling up impacts with VALUE CREATION as key focus

2) Scaling up impacts with VALUE CREATION as key focus:

- Resource efficient and cleaner production
- Product substitution
- Efficient use, shared use, longer use,
- Better product design and manufacturing
- Efficient end-of-life strategies

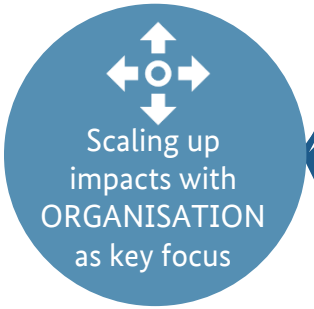
Source: Adapted from CSCP (2014). Scaling Up Business Impacts on Sustainable Living.

"We must consider that scaling a social or green venture is to consider other dimensions, such as scaling across and not only up. It is not only getting bigger but thinking about who could be positioned to replicate the idea: what businesses could become a scaling partner by leveraging its core infrastructure or what legal framework change could have a large impact. This is all about hybrid value systems: identifying best roles and complementary expertise to enable to create impact at scale and going beyond current silos across sectors and organisations."

Ms. Stephanie Schmidt, Director of Ashoka's Social & Business Co-Creation Program in Europe.

Scaling up impacts with ORGANISATION as key focus

Scaling up green business models and their positive impacts can include a range of strategies at the organisational level. A listing of such strategies are outlined in the graph below. Each of the strategies is detailed in the reference provided below. Click here to view some practical examples.



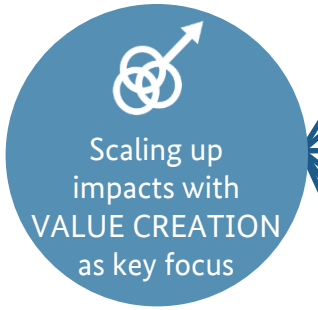
Scaling up strategies to scale up impacts of organisation	
Organic growth	Scaling up by increasing the range and distribution of products and services and by opening new subsidiaries
Acquisitive growth	Scaling up by acquiring other firms
Dissemination	Sharing ideas with others using advocacy, open-source change-making and creating social or political movements
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
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

A DESCRIPTION AND PRACTICAL EXAMPLE OF EACH STRATEGY LISTED ABOVE IS PROVIDED IN THIS REFERENCE

Source: Adapted from CSCP (2014). Scaling Up Business Impacts on Sustainable Living.

Scaling up impacts with VALUE CREATION as key focus

Another pathway for scaling up impacts is focusing on the 'green' value' created by businesses. Illustrative value creation strategies are presented in the graph below. These strategies can be implemented without focusing on organisational growth. Click here to view some practical examples.



Scaling up strategies to scale up impacts through value creation	
Resource efficient and cleaner production	Continuous application of an integrated and preventative strategies to processes, products and services. This increases efficiency and reduces risks to humans and the environment Specific focus areas include production efficiency, environmental management and human development (UNIDO/UNEP definition).
Product substitution	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.

Source: Adapted and expanded from CSCP (2014). Scaling Up Business Impacts on Sustainable Living.

A DESCRIPTION AND PRACTICAL EXAMPLE OF EACH STRATEGY LISTED ABOVE IS PROVIDED IN THIS REFERENCE

SCALING UP IMPACTS WITH ORGANISATION AS KEY FOCUS

Some practical examples

SEKEM Initiative (Egypt)

Smart networks and merger/sale

The company: The SEKEM Initiative has been founded by Dr. Ibrahim Abouleish in 1977 to strengthen sustainable development within a holistic concept of economic, societal and cultural life in Egypt. Part of the initiative is the SEKEM Group of companies which produces, processes and markets organic and bio-dynamic products, textiles, and phyto-pharmaceuticals in Egypt and international markets. SEKEM is known as the bio-pioneer of the region which has significantly contributed to food security through desert land reclamation.

Scaling up impacts: The SEKEM Initiative provides an example of a scaling up strategy in terms of smart networks as well as merger/sale. With part of their profits SEKEM co-finances the social and cultural activities of the SEKEM Development Foundation that runs several schools, a medical centre, an academy of applied sciences, and other institutions located in Egypt. By 2005, the organisation has established a network of more than 2,000 farmers and numerous partner organisations in Egypt and began increasingly to seek to extend its experience to other countries, including India, Palestine, Senegal, Turkey and South Africa.

Source: www.sekem.com

Photo: Sekem..n.d. Retrieved from http://www.sekem.com/slr.html

Nuru Energy (East Africa, India)

Franchising

The company: Nuru Energy is a for-profit corporation that encourages and provides renewable sources of energy in East Africa and India. Seed-funded by the World Bank in 2008, it was commercially financed by Bank of America Merrill Lynch and the Africa Enterprise Challenge Fund.

Scaling up impacts: It has developed an easy-to-use, off-grid re-charging platform called the Nuru POWERCycle pedal generator, which provides sustainable power anytime, anywhere and is more efficient than current solar-based solutions at a significantly lower cost. Nuru Energy is currently cooperating with over 800 local micro franchise entrepreneurs and thereby serves more than 20,000 families throughout East Africa.

Source: http://www.nuruenergy.com.

Photo: Tulane Publications / flickr.com (CC BY –NC- SA 2.0).

SCALING UP IMPACTS WITH VALUE CREATION AS KEY FOCUS

Some practical examples

Cosmos Ignite Innovations (India)

Product substitution

The company: Cosmos Ignite Innovations is a social enterprise using a disruptive technology solution to increase access to lighting by the poor and responding to climate change challenges.

Scaling up impacts: Cosmos Ignite offers solar-powered LED-based portable home lighting systems (MightyLight). The 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.

Source: www.cosmosignite.com

Photo: Cosmos Ignite Innovations , n.d., Retrieved from http://www.cosmosignite.com/picture-gallery%28India%29.htm.

Opower (USA)

PowerUp SMARTER TOGETHER

Efficient use of products & services

The company: Opower partners with utility providers to promote energy efficiency through Home Energy Reports for utility customers developed with Opower's software.

Scaling up impacts: This software analyses the energy consumption and offers recommendations on energy saving by making small changes in how energy is used (e.g. optimise electricity use during off-peak hours, turn off devices when not in use). Through this service, Opower helps protect the environment, boosts energy security, saves money for utility customers and influences energy consumption behaviour. As of 2012, Opower managed energy data from over 15 million homes around the world. It delivered more than $75 million in savings for utility customers, saved 750 gigawatt hours of energy and abated 1 billion pounds of CO_2.

Source: www.opower.com.

Your role in scaling up green business models

As evident from the previous chapters, different stakeholder groups have a role to play in scaling up green business models. The role for each stakeholder group below is presented on the following pages. You can click on each stakeholder below to get more detailed information.

Entrepreneurs can support the successful development and placing of green products and services on the market to remain competitive, innovative and thereby grow and become sustainable.

Entrepreneur

Providing innovative training, communication and engagement tools and approaches increase the uptake and dissemination of green innovative business models along the whole value chain from production processes, consumers behaviours to effective end-of-life solutions.

Innovation centre

Partnerships and support to suppliers along value chains are of key importance for the implementation of long term effective green business models.

Large business

Enhancing cooperation, improving and transforming education systems as well as engaging with relevant policy-makers are central actions to effectively develop and disseminate green business models by clearly showcasing their economic, environmental and social values

Development organisation

Training and knowledge-sharing services and approaches are key in starting, improving or expanding green activities in specific sectors and nurtures innovation in management, helping to turn existing environmental challenges into opportunities for business expansion or business innovation.

Consultant

SCALING UP GREEN BUSINESS MODELS

Role of entrepreneurs

THIS IS AN ILLUSTRATIVE AND NOT ALL-INCLUSIVE LIST. IT IS ACKNOWLEDGED THAT ADDITIONAL ROLES FOR THE STAKEHOLDER GROUP EXIST

Market demand & behaviour change

- **Explore and develop innovative business models** which deliver and promote green products and services.

Technology & infrastructure

- **Assist with the identification of green technology needs** and facilitate green technological transformations in the supply chain.

Education & training

- **Share personal experiences on green business models** (e.g. drivers, barriers, business and market opportunities) with key stakeholders (e.g. other entrepreneurs, large industries, development agencies) to create bottom-up and practical learning processes.

Financial Frameworks

- Clearly **communicate the economic, environmental, and social benefits** of green business model(s) to investors and **present a clear and feasible business plan** tapping into existing and emerging markets.

Governance Systems

- **Engage with policy-makers to communicate the policy needs** and encourage the development of governmental frameworks which support the implementation of innovative green business models

Information provision

- **Communicate economic, environmental and social benefits** of green business models to stakeholders, including consumers and large industries in their supply chains.

Partnerships & Communication

- **Engage and collaborate with suppliers and customers** to foster the uptake of green business models along the **value chain.**

SCALING UP GREEN BUSINESS MODELS

Role of development organisations

THIS IS AN ILLUSTRATIVE AND NOT ALL-INCLUSIVE LIST. IT IS ACKNOWLEDGED THAT ADDITIONAL ROLES FOR THE STAKEHOLDER GROUP EXIST

Market demand & behaviour change

Technology & infrastructure

Education & training

Financial Frameworks

Governance Systems

Information provision

Partnerships & Communication

- **Support consumer campaigns** on sustainable consumption behaviours, **pilot and demonstrate the business case of green business models** to various stakeholders.
- **Promote and facilitate collaboration between technology developers and companies** to foster the diffusion of green technologies.
- **Support capacity building and educational programs** on various levels (macro, meso, micro) to increase the uptake of innovative green business models.
- **Support companies in accessing (green) investors and financial products/services.**
- **Assist policy makers with the development of policy instruments** to advance green business models, including supporting strategies and implementation processes.
- **Support knowledge collection and dissemination** on good practices and tools to green business models.
- **Facilitate multi-stakeholder processes and public-private dialogues** towards the development, implementation, and scaling up of green business models.

"The role of development agencies in promoting green business models is to provide a marketplace for services necessary for developing green businesses. For that, they have to be able to deliver customised content for their clients."

Mr. Markus Donath, Programme Coordinator at Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, Egypt.

SCALING UP GREEN BUSINESS MODELS

Role of service providers & consultancies

THIS IS AN ILLUSTRATIVE AND NOT ALL-INCLUSIVE LIST. IT IS ACKNOWLEDGED THAT ADDITIONAL ROLES FOR THE STAKEHOLDER GROUP EXIST

- Market demand & behaviour change
- Technology & infrastructure
- Education & training
- Financial Frameworks
- Governance Systems
- Information provision
- Partnerships & Communication

- **Undertake research on market needs and consumption behaviours** for sustainable products and services.
- Assist companies with the **identification and implementation of green technologies**.
- Provide tailored **trainings to entrepreneurs** on existing and emerging **green technologies** and **business development**.
- **Raise awareness** among companies on **available green finance schemes** and **facilitate access-to-finance** processes.
- **Assist policy makers with the development of policy instruments** to advance green business models, including supporting strategies and implementation processes.
- **Foster knowledge collection and dissemination activities** (including seminars, conferences) to increase the knowledge-base and capacities of companies interested in green business models implementation.
- Develop **communication and knowledge sharing tools** and **facilitate multi-stakeholder partnerships**.

SCALING UP GREEN BUSINESS MODELS

Role of large businesses

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Market demand & behaviour change

- **Increase consumer awareness on environmental and social opportunities and challenges** in supply chains, and thereby increase demand for green products and services.

Technology & infrastructure

- **Assist with the identification of green technology needs** and facilitate green technological transformations in the supply chain.

Education & training

- **Provide training and practical support to clients and suppliers** to green and innovate the supply chain.

Financial Frameworks

- **Foster cooperation with financial actors** to support the development of green businesses, products and services (e.g. by increasing access to finance).

Governance Systems

- **Engage with policy-makers to communicate the policy needs of businesses** and encourage the development of governmental frameworks which support the implementation of innovative green business models.

Information provision

- **Share tools, good practices and information** available to large businesses **with relevant stakeholders** to support the greening of supply chain and green business models.

Partnerships & Communication

- **Collaborate with stakeholders** (clients, suppliers, service providers, innovation centres) to **innovate supply chains and their supporting business models**.

SCALING UP GREEN BUSINESS MODELS

Role of innovation centres

THIS IS AN ILLUSTRATIVE AND NOT ALL-INCLUSIVE LIST. IT IS ACKNOWLEDGED THAT ADDITIONAL ROLES FOR THE STAKEHOLDER GROUP EXIST

Market demand & behaviour change

Technology & infrastructure

Education & training

Financial Frameworks

Governance Systems

Information provision

Partnerships & Communication

- **Support market research** to better understand emerging green markets and consumption behaviours.
- **Support and coordinate innovative research on new and emerging green technologies**, including their practical implementation and scaling up activities.
- **Provide practical technical and business development support to entrepreneurs** to green and innovate their business model.
- **Support companies to better understand the business value** of green products and services, including the **development of tailored financial accounting instruments** to support companies' investment decisions.
- **Assist policy makers with the development of policy instruments** that encourage green business models, including supporting strategies and implementation processes.
- **Develop and disseminate** practical and tailored knowledge and tools to support and facilitate **business model innovation**.
- Develop **communication and knowledge sharing tools** and **facilitate multi-stakeholder partnerships**.

"If we want to promote green business models, we need to be able to understand and measure their positive impacts. Not only the financial ones, but especially the social and environmental impacts. Otherwise we will not be able to explain and convince key stakeholders."

Mr. Loic van Cutsem, General Manager, Oksigen Lab.

SUGGESTIONS FOR FURTHER READING ARE INCLUDED IN THE WORKING PAPER

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Working paper

A separate working paper containing the key topics outlined in this Navigator and further background reading has been produced. Click here to download and open the working paper.

Topics	Sections in the working paper	In Navigator
(Green) business models	Section 2 • Introduction to business models • Green business models • Challenges of green business models • Categorisation of green business models • Green entrepreneurship • Green business models and the notion of inclusiveness	(GREEN) BUSINESS MODELS
Rationale, benefits, drivers	Section 3 • Rationale • Drivers • Direct benefits • Societal impacts (indirect benefits)	RATIONALE BENEFITS DRIVERS
Scaling up impacts	Section 4 • What do we mean by 'scaling up'? • Success factors for scaling up impacts and overcoming challenges • Scaling up pathways for business	SCALING UP IMPACTS
Stakeholder roles in scaling up	Section 5 • Role of entrepreneurs • Role of development organisations • Role of service providers and consultancies • Role of large businesses • Role of innovation centres	YOUR ROLE
Greening value chains	Section 6 • Green business models and value chain promotion • Green value chains and inclusiveness • Evolution of green value chains and their business models	This topic is not included in the Navigator in order to keep it concise and focused.

GIZ Sector Project on Private Sector Development

Commissioned by the **German Federal Ministry for Economic Cooperation and Development (BMZ)**, the **GIZ Sector Project on Private Sector Development (SV PWF)** has been working since 2010 on 'Green Private Sector Development' to support the following:

- Environmentally sustainable business activities and entrepreneurship in the private sector through provision of conceptual work, especially on sustainable value chain promotion and value chain selection, cost-benefit-analysis, green business development services and eco-innovation.
- Pilot-tests and international dissemination of the newly developed concepts and instruments.
- Development of markets for green business development services (green BDS) in the fields of resource efficiency (e.g. UNIDO and National Cleaner Production Centres) and adaptation of the private sector to climate change (e.g. www.climate-expert.in).
- Donor Committee for Enterprise Development (DCED) for interagency development of guidance material, harmonisation of concepts and learning in the framework of the Green Growth Working Group.

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WE LOOK FORWARD TO HEARING FROM YOU!

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