20 YEARS

Green SMEs and their Success Factors for Scale-up and Replication

A Case Study Snapshot

SEED
promoting entrepreneurship for sustainable development

In Collaboration with
GO 4 SDGs
ACCELERATING REGIONAL SOLUTIONS

Imprint

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About SEED

SEED was founded in 2002 at the World Summit on Sustainable Development in Johannesburg by UNEP, UNDP, and IUCN. It is a global partnership for action on sustainable development and the green economy. Today, we seek to unlock the full potential of social and environmentally focused (‘eco-inclusive’) market-based enterprises. We help to tackle climate change effects and solve the world’s social problems, as captured in the Sustainable Development Goals (SDGs).

About GO4SDGs

Global Opportunities for SDGs (GO4SDGs) aims to accelerate the shift to more inclusive green economies and sustainable production and consumption patterns in order to strengthen public and private sector capacities to deliver on the Sustainable Development Goals and the Paris Agreement.

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ListenField, Thailand

1. INTRODUCTION

This report analyses small and medium-sized enterprises (hereby SMEs) with green business models and explores how selected enterprises scale and replicate their activities. Its main objective is to provide insights on the critical success factors for scaling and replication. It is intended for policy makers and intermediaries drawing direct insights from SMEs. It analyses the critical success factors for scale-up and replication of enterprise activities and highlights concrete recommendations to close existing gaps in order to maximise their contribution to the SDGs. Green SMEs can find inspiration through the case studies in the annex of this report.

The enterprises analysed in this report cover five sectors –agriculture, waste, textile, energy and construction with enterprise operations in Africa, Asia and Latin America. These five sectors are of critical importance in the context of a transition to a green, circular and inclusive economy. Across the enterprise analyses, a pattern of different critical success factors has emerged illustrating their scale and replication journeys. The evidence used in this report builds on in-depth interviews and support engagements that SEED had with the respective enterprises and the work and insights of SEED's Catalyser, Accelerator and Replicator programmes that has supported over 1,000 enterprises around the globe.

The report is divided into four sections. The first section explains why the scale-up and replication of green enterprises is a promising pathway to achieve the SDGs within key sectors. The second section provides an analysis of the critical factors for scale-up and replication. The third section offers an overview on the different pathways to scaling and replicating enterprise activities. The last section of the report provides recommendations on how to support scaling and replication of green enterprises. These sections are complemented with spotlights from the case studies that are all included in the annex to this report.

Nelplast, Ghana

2. GREEN SMEs

SMEs account for 95% of registered businesses and over 50% of jobs worldwide, and contribute to well over 35% of GDP across emerging economies (Alibhai et al. 2017), making them a fundamental economic actor in the global economy.

SMEs play a particularly important role among socio-economically marginalised communities in low- and middle-income economies. These enterprises alleviate poverty, creating four out of five new formal jobs in emerging markets and absorb the lion's share of the informal workforce in low-income countries (UNDESA 2020). The employment opportunities offered by SMEs particularly empower disadvantaged or vulnerable groups, such as women or youth (Alibhai et al. 2017; IIED 2016). SMEs' local embeddedness – responding to local demand and needs – in rural and urban communities is pivotal to enabling socially inclusive, equitable development.

As a smaller sub-segment of SMEs, green SMEs differ from conventional ones as environmental impacts are embedded in their business models and strategies. By producing, distributing, applying and promoting green products and services often using eco-innovation approaches, green SMEs create additional social benefits including low-income and vulnerable groups in their value chain as employees, suppliers, distributors and consumers enabling deeper and wider social and environmental – or green – impacts (Figure 1 below).

Figure 1: Green SMEs and their impact potential

Green SMEs not only spur development and market growth through the provision of innovative goods and services, but also ensure the preservation of the foundation of national economies – environmental and social resources, contributing to the delivery of most SDGs, in particular SDGs 1, 5, 8, 11, 12 and 13. Against the backdrop of the impact that green SMEs can deliver, their scale-up and replication potential is of particular importance. The green enterprises[1] analysed in this report represent models that have already reached a certain scale or have been replicated in different geographical contexts.

The green enterprises analysed show how enterprises have found market-based solutions to tackle social, economic and environmental challenges sustainably in different sectors (Table 1). They provide, in an innovative way, green goods and services that would otherwise not be accessible or affordable to low-income groups.[2]

1 This report will use the more commonly used term green SMEs or green enterprises interchangeably. This term includes the scope of similar terminologies used around circular, green and social as well as eco-inclusive enterprises. All those terminologies unite a "triple bottom-line" approach towards creating social, environmental and economic impacts driven by SMEs that innovate on business models, products and processes.
2 The SMEs analysed in this report are different from SMEs that green their operations applying eco-innovation technologies in their operations. The focus of this report rather lies on green innovators which are innovating on their business model or a new product or service at the core of their operations.

Table 1: Positive Impact Potential of Green SMEs Across Key Sectors – Case Study Examples[3]

AGRICULTURE	**Challenge:** Agriculture is one of the key sectors for a sustainable future. With a growing population, the demand for sustainable food production has increased. However, agricultural practices frequently fails to meet the necessary levels of sustainability to ensure the protection of local ecosystems and the environment. **Solution:** Enterprises such as Gorilla Conservation Coffee, Last Forest and ListenField operate at the local level providing unique products and services to make the agricultural sector more sustainable. They cooperate directly with underserved local, and often indigenous, communities to protect biodiversity and generate economic, social and green benefits.
TEXTILES	**Challenge:** The textile industry is a major contributor to local pollution. Particularly, the impact of chemicals on water sources has caused environmental stress and increased the health risk for workers and people in surrounding communities. **Solution:** Enterprises such as Moreloop and Mycotech Lab tackle the most pressing challenges of the textile industry using circular technologies and approaches to transform the fashion industry. By so doing, they reduce the amount of water that is used and, going further, limit the remaining negative impacts.
WASTE	**Challenge:** Global waste generation is increasing rapidly. The majority of the waste is not recycled and re-introduced into the economy. Instead, it ends up in landfills or in nature, damaging the ecosystem and threatening biodiversity. **Solution:** Enterprises such as All Woman Recycling and Ecolana use innovative methods to stop waste from ending up in landfills or in the ecosystem. By re- or up-cycling the waste, they create positive effects on the environment, promote green jobs and sustainable economic growth.
ENERGY	**Challenge:** With countries continuing on their path of development, the global demand for energy is growing. At the same time, the energy system is dominated by fossil-fuel based, large-scale energy producers, which slows down the renewable energy transition. **Solution:** Enterprises such as ONergy provide decentralised renewable energy solutions at the water energy food nexus. This speeds up the increase of off-grid renewable energy access and supports agricultural communities in making productive use of renewables.
CONSTRUCTION	**Challenge:** Housing and building infrastructure require large amounts of material that are often CO_2 intensive in their production. With little material recycled, the construction sector heavily contributes to waste production and a high demand for energy, thus further increasing the stress on the environment. **Solution:** Enterprises such as Nelplast and Proplanet upcycle waste providing green alternatives to conventional construction materials at a low cost. This makes it possible for consumers to access affordable sustainable materials reducing the resource footprint in housing and construction projects.

3 Additional examples and solutions of enterprises using eco-innovation approaches can be found here: http://unep.ecoinnovation.org/wp-content/uploads/2021/02/UNEP-Business-Case-for-Eco-innovation.pdf

3. CRITICAL SUCCESS FACTORS FOR SCALE-UP AND REPLICATION

The terms "replication" and "scale" are often used interchangeably but are in fact distinct concepts.

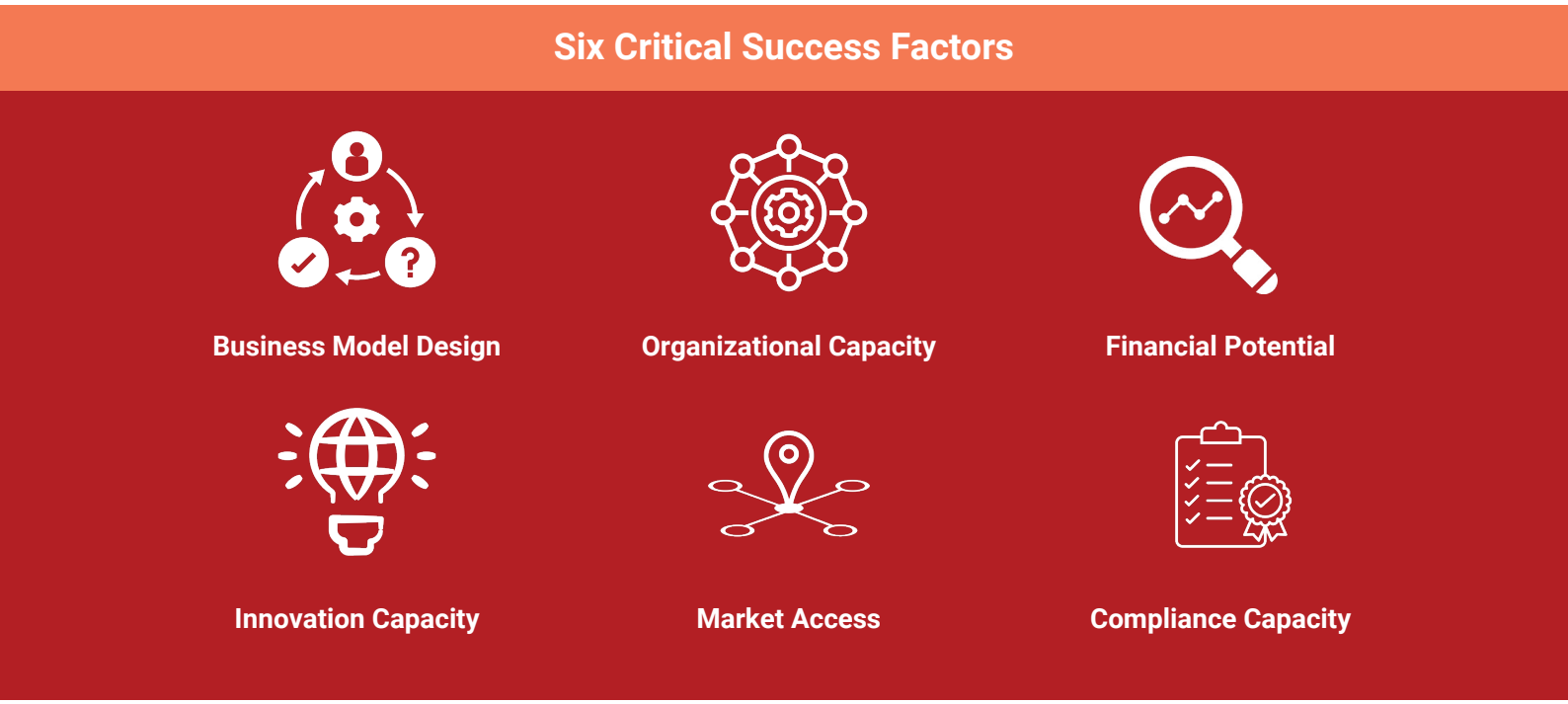
Scaling up refers to an increase in team size, number of customers, number and diversity of product portfolio, or the expansion of key targets related to the enterprise model's social and environmental impact.

The approach of replication refers to the action of reproducing all or portions of an enterprise's business model. Replication does not mean creating an exact copy of the enterprise. Rather, the aim is to replicate the business model or key components of it while adapting to the new target market and environment. This process can be driven by the original organisation (originator), alone or with partners, or can be managed by a completely separate entity.

This report acknowledges that both terms are overlapping, but still distinct when it comes to different scale-up and replication pathways (focus of chapter 4). However, when analysing the critical success factors of green SMEs in this report the terms are largely used interchangeably.

Building on the past work of SEED in supporting over 1000 enterprises in their scale-up and replication, the SEED team identified six critical success factors: business model design, organisational capacity, financial potential, innovation capacity, market access and compliance capacity. By leveraging their assets, capabilities, long-standing networks, and local knowledge and relationships differently, green SMEs are able to deliver success along these critical factors. Drawing on these success factors, this report will use them as an analytical lens to profile the scale-up and replication journeys of green SMEs.

Figure 2: Critical Success Factors for Scale-up and Replication



Business Model Design

The business model of green SMEs is critical in the scale-up and replication of enterprise operations. In particular are characteristics of adaptability, simplicity and standardisation. Scaling-up and replicating enterprise activities are more likely to succeed when the business model is easily adaptable. Business models are more adaptable when they are able to respond effectively and quickly to fit new markets and conditions.

Correspondingly, the simpler the enterprise business model, the easier it is to bring new people and partners on board. The easier it is to bring new people and partners on board, the higher the chance of successful scale-up and replication. Simple business models require knowledge that is easy to attain and not too specialised; they rely on skills that are widespread and/or easy to transfer. Simple business models often use technologies that are easy to understand and widely available.

Green enterprises that standardise their operations via a "business in a box" model can often use this standardisation as a key lever for their expansion into other geographies. They can provide their knowledge to other entrepreneurs (e.g. ONergy) or partner companies (e.g. All Women Recycling). Standardising processes requires a clear enterprise strategy with interventions that result in a categorisation and formalisation of company procedures to pass them on to other partners. It requires the enterprises to invest in human resource development processes such as the training of staff members.

Case

All Women Recycling

South Africa

All Women Recycling is an enterprise in the waste-plastic upcycling sector. The enterprise targets the issue of plastic waste through its recycling activities. The recycled plastic is then turned into ecological and economic gifting products that are sold locally and globally. In addition to its ecological impact, All Women Recycling creates socio-economic impact, by providing jobs for local women, as well as skills trainings, contributing to women empowerment.

All Women Recycling is a highly mission-driven enterprise willing to share its business model with other enterprise partners to become a role model in the field of women empowerment and plastic upcycling. They took several steps to replicate their model in India standardising their business model and making it available through dedicated case studies and workbooks for other enterprises interested to follow as second-movers.

Organisational Capacity

The organisational capacity of green SMEs appears to influence their likelihood of success when scaling-up and replicating their enterprise activities. This capacity builds on aspects such as diverse expertise, digital readiness and agile workstyles. Most green enterprises bring together different partners and expertise (e.g. Last Forest, Mycotech Lab, Listenfield, Proplanet). Operating these kinds of models requires them to collaborate with value chain partners, research bodies and technical institutes allowing them to acquire knowledge on innovative processes, building up internal capabilities. The collaboration with partners allows them to bring different expertise and perspectives into the company, which increases the enterprise's capacity to provide innovative solutions. Enterprises as such are often following eco-innovation pathways as also outlined by other authors and experts.[4]

Most of those enterprises are with their products part of global and regional value chains with digital infrastructures in place to effectively collaborate with partners, allowing for rapid and easy transfer of information and knowledge. This allows them to be resilient towards shocks like COVID-19 and to keep adjusting their business operations to the specific circumstances.

During COVID-19, green enterprises demonstrated how critical agile workstyles are. Where possible, they quickly moved online, working digitally, using new technologies where possible as a positive enabler. By understanding the digital aspects of key activities, they moved services such as sales and marketing, logistics and operations management online using both open source and customised tools.

Case

Ecolana

Mexico

Ecolana is an enterprise in the waste management sector The enterprise targets the issue of waste by offering an online locator tool to connect consumers and brands with the nearest recycling facilities. Additionally, the enterprise creates socio-economic incentives to engage in recycling activities by providing jobs across its activities and by offering payment for recyclable materials at the recycle centres.

Ecolana does not run the centres that collect the material or takes part in the recycling activities. Instead, the enterprise offers a platform connecting supply and demand through an easy-to-use mobile phone application. This has enabled Ecolana to scale its activities and replicate them across Mexico.

4 The UNEP Eco-Innovation Manual covers success stories and pathways of 40 enterprises around the world. Additional training resources provide guidance on how to build up organisational capacity.

Financial Potential

The financial potential of an enterprise is critical to keep it running. It builds on the enterprise financial viability, the ability to attract external capital and the effective use of capital. The financial viability and the availability of own capital can boost scale but is not a must for achieving scale. Most green enterprises that SEED has supported reach break-even after 4 –7 years. The analysed green enterprises often keep their overhead costs low and don't rely on scale to become financially viable.

Beyond their financial viability, many enterprises are valued by governments, donors or investors given their significant social and environmental impact potential. In many instances, those entities prefer to pay enterprises to offer their cost-effective services rather than rely on standard non-profit programs providing access to clean energy, waste management services or agricultural inputs.

Green enterprises that use their capital cost-effectively are more likely to attract external capital and herewith boost their scale-up and replication trajectories. If an enterprise can use economies of scale, can quickly deliver revenues and profits with less investment needed, it gives more resources to scale and more room to manoeuvre. The cost-effective use of capital is of particular importance in the early stages of financing and when moving into markets with uncertain growth potential.

Case

Mycotech Lab

Indonesia

Mycotech Lab is an enterprise in the sustainable textile sector. The enterprise provides alternative materials for the textile industry, especially focusing on alternatives to leather products. The leather-alternatives are made from mushrooms and require substantially less water and chemicals in the production process, thus having a positive effect on the environment, while also improving health and working conditions of the employees.

The creation of the product required extensive collaboration with international universities, Indonesian research institutions, and corporations. Additionally, the R&D effort secured multiple rounds of grants in the initial years, which then followed large scale purchase commitments from large-scale buyers.

Innovation Capacity

An important factor for success is the innovation capacity of green SMEs. It can be described by different approaches, diverse strategies and various innovation trajectories. All green enterprises are innovators. They use innovative approaches in product development, operations or business model design using incremental, disruptive or radical approaches. Within the specific innovation processes many enterprises bring different company units together in collaboration with their customers, external business partners and research institutes also when scaling and replicating their business operations.

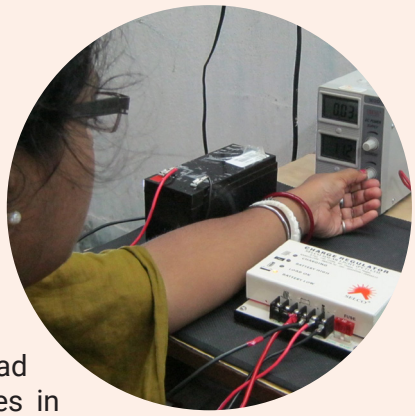
Green SMEs use different innovation strategies in their product and service development and spend significant resources on feedback loops with customers and partners using rapid innovation processes (Listen Field, ONergy, Mycotech Lab) to improve their products, services and business models. This results in competitive advantages within the specific markets. Enterprises with a lower in-house innovation capacity seek for partners in replicating their model in other markets (All Women Recycling). Engaging with adopters in other markets allows enterprises to integrate external key competencies and a broader overall skills base allowing them to establish the model in other geographies.

The pace of innovation and the trajectory is in most enterprise cases very critical for scale and replication. Many enterprises run quick and focused product innovations with a focus on continuous refinement to existent products (ONergy). Others apply a multi-year product development with multiple actors involved (Mycotech Lab).

Case

ONergy

India



ONergy is an enterprise in the energy sector. The enterprise provides end-to-end solar energy solutions to its customers. By so doing, the enterprise improves energy access to rural and remote households and makes this energy access sustainable. Moreover, ONergy improves infrastructure sustainability through its solar water irrigation pumps and solar streetlights.

To establish itself in the highly competitive energy market, ONergy had to develop various customer support and maintenance programmes in addition to the primary products offered. This included for example a mobile phone application, with which customers can monitor and control their water usage remotely in order to save resources.

Market Access

Market access is a crucial factor for green SMEs when scaling-up and replicating their operations. It is influenced by the market demand, their position with existing markets and their ability to access new ones. Most green enterprises that have established themselves within their existing markets can build on the growing momentum within. In most markets around the world the demand for sustainable products is increasing. Even though some SMEs face challenges in setting up online shopping, particularly in developing countries that may not have as robust internet infrastructure, e-commerce overall provides for many successful green SMEs an opportunity. They benefit from the fact that sustainable products in general are increasingly bought online and that the awareness for sustainable products is increasing across various generations and customer groups.

Through their existing market access capabilities these enterprises manage to reach new market segments, both among low-income consumers and high-end consumers, as well as access the supply chains of large companies (Listen Field, OnErgy, Mycotech Lab, Proplanet). They often also use specialised distribution channels and partnerships with fair, ethical or green traders to reach their customers. Having placed their products and services within the existing markets, these enterprises are strategically placed for future product and service development.

Most enterprises develop tailored solutions to meet growing market demand ahead of their competitors to access new consumer segments and new markets. They do this by working in partnerships with specialised importers facilitating market penetration and increased brand visibility. Especially in new markets, dedicated communication activities and social media campaigns are critical to create the much-needed brand visibility. By working with specialised importers, they are able to receive advice on product design, local market standards, sales trends and logistical support.

Case

Moreloop

Thailand

Moreloop is an enterprise in the textile-waste sector. Moreloop promotes the circular economy model in the fashion and textile industry in order to minimise the need for new resources and improve sustainable consumption and production. It does so by purchasing surplus fabric from larger factories, upcycling it and then re-selling it to local designers and SMEs in the fashion industry.

Moreloop has established an online platform where large factories can offer their surplus fabrics and SMEs can claim them. The enterprise has benefitted from the increased drive towards sustainability in the fashion industry, particularly among the leading brands.

Compliance Capacity

The compliance capacity of green SMEs emerged as another critical factor when scaling-up and replicating enterprise activities. It is influenced by the existing regulatory landscape, the regulatory experience and key partnerships within the regulatory ecosystem. The regulatory landscape in which green enterprises operate refers to the level of guidelines, legal frameworks and the operating procedures of key government and policy actors. Green enterprises with scale-up and replication trajectories prefer to tap into markets with regulatory certainty in place. Regulation and standards are becoming increasingly stringent worldwide. If a green SME operates in several different markets, eco-innovation enables them to comply with the toughest requirements, even when they are not aligned across markets or conflict. In addition, companies considered as innovative sustainability leaders set the performance bar in the market, inform regulation and influence standards (UNEP 2021).

Green enterprises with a high level of regulatory experience anticipate upcoming regulation as a result of existing relationships with government stakeholders (OnErgy, Mycotech, Last Forest). These enterprises identify potential risk areas in their value chain and improve on product and business operations holistically before new policy requirements turn into a liability and additional cost. Through their compliance capacity, they anticipate possible policy changes and propose solutions to meet future requirements giving them a competitive advantage.

Successful enterprises that reach scale have a broad network of partners and supporters that help them to navigate regulatory requirements. Through their partners they understand certifications and gain exposure to upcoming regulatory trends. By working with partners, they benefit from existing linkages with government bodies and ecosystem players.

Case

Last Forest

India

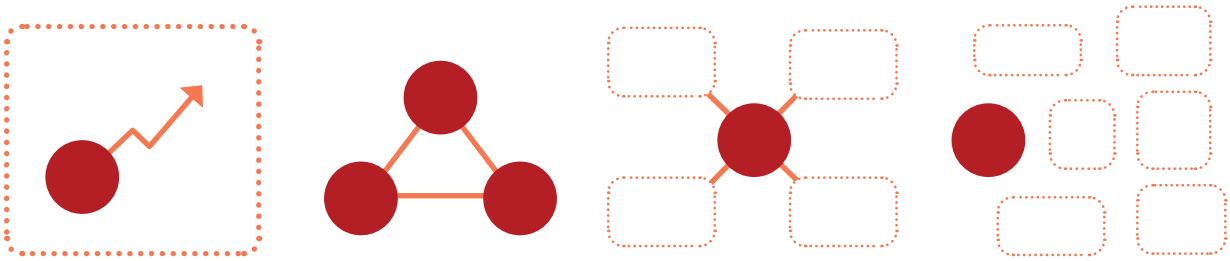
Last Forest is an enterprise in the agri-food sector. The enterprise provides a marketing platform for organic, fair trade, and forest-based products and offers locally produced premium organic products and services. Last Forest works in collaboration with indigenous communities, a sustainable source of income for them.

Last Forest is in frequent contact with local, regional and national administrators when it comes to food and hygiene standards, but especially when it comes to the laws and regulations that protect biodiversity and indigenous communities. To anticipate these regulations, Last Forest has established good relations with local government stakeholders and coordinates their activities with them.

4. SCALE-UP AND REPLICATION PATHWAYS

Building on the findings around critical success factors, SEED identified six different pathways that enterprises use to replicate and scale. These can be placed on a continuum that moves from the most closed approaches that offer an originator model with a high degree of control to the most open which offer little to no control in exchange for greater speed of replication (Figure 3 below).

Figure 3: Scale-up and Replication Pathways



Internal growth	Wholly or partly owned replication	Replication through affiliation	Replication through dissemination
Branch	Franchise	License	Open dissemination
	Joint Venture	Partnership	

CLOSED STRATEGY — OPEN STRATEGY

Scale-up & Expansion

Dissemination & Reproduction

Enterprises expand by replicating the model on their own business (through a branch strategy) - or by collaborating with others (through a franchise, license, joint venture or partnership strategy). They tend to choose a replication strategy that fits the mission and vision of their enterprise. Enterprises primarily aiming to keep a high level of control to protect their intellectual property and brand tend to favour a more closed approach to replication. Other enterprises set out to disseminate their model widely, enabling other enterprises to adopt it. They often do so knowing that they can reach only a fraction of the market through their own business activities.

Opening a business model to others for replication can be accomplished in different ways and with differing degrees of involvement by the originator. Being part of the SEED Replicator programme, enterprises agree to document their model, best practices and lessons learned, and make this information available to others. In some instances, originators provide hands-on learning opportunities allowing interested organisations to visit their business sites to share more about their business model with other enterprises.

However, expanding and disseminating are not mutually exclusive pathways to scale and replication. Actually, enterprises often do both. Enterprises often choose to expand within their own geographies, where they already understand the needs of consumers and can best ensure the maintenance of quality, while opting for replication in other markets providing information on their model to adaptor enterprises that are experts in those.

Adopters often also reproduce an existing model without the active involvement of the originator. They adapt and apply the key elements of the original model to their own local context and circumstances.

Most enterprises have replicated through expansion, either replicating on their own (e.g. by creating branches/subsidiaries) or by collaborating with others (through franchises, joint venture or partnership strategy). Partnerships and the creation of branches or subsidiaries are the most popular approaches to replicating. Enterprises use often existing international platforms and accelerator programmes to build these partnerships (e.g. platforms like GO4SDGs, WEF Uplink and SEED can act here as partnership facilitators). Franchising is becoming increasingly popular; as this model often encourages entrepreneurship, ownership and job creation. Some enterprises actively disseminate their model, encouraging second movers to pick it up.

ListenField, Thailand

5. RECOMMENDATIONS FOR ACTION

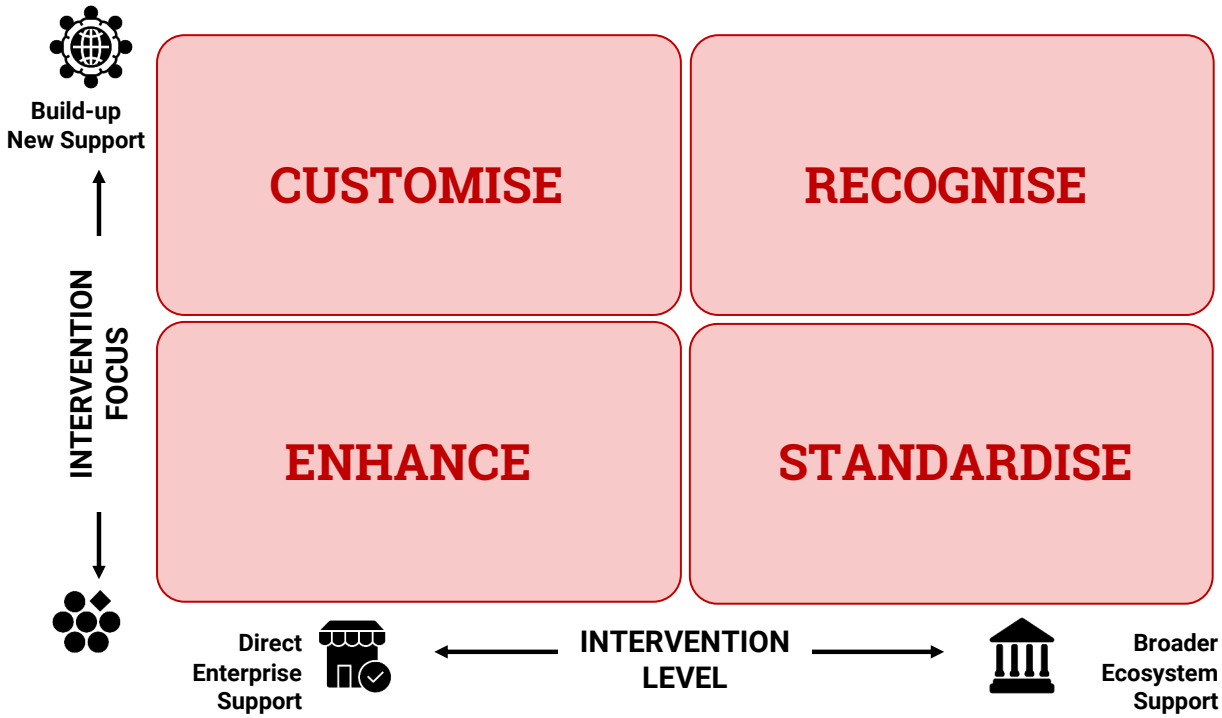
This report demonstrates the critical role of green enterprises and their scale-up and replication pathways. In light of the demonstrated positive contributions of green SMEs, this chapter provides concrete recommendations for action by different stakeholders to bring about positive change. Governments, finance institutions and donors each play a distinct role in enabling these enterprises to scale their efforts, further maximising their impact. These recommendations may serve as hands-on guidance on how to better support the scale-up and replication of enterprises.

In order to structure the recommendations, SEED has identified four action pathways that ecosystem actors could follow to support green SMEs in their scale-up and replication. The four action pathways differ in their focus and intervention level (Figure 4).

Intervention focus: Do organisations focus on advancing existing support or creating new support programmes?

Intervention level: Are organisations focused on providing direct SME support, or on broader ecosystem interventions?

Figure 4: Recommendations for Pathways to Scale-up and Replicate



ENHANCE: Ecosystem actors building on a holistic programme portfolio should include a scale-up and replication focus in their existing programmes. These ecosystem actors should adapt their approaches to specific scale-up and replication questions, making them more flexible and accommodating the scale-up and replication needs of SMEs. These actors should build on their existing "off-the-shelf" and tailor support programmes to the specific needs of enterprises in the process of scaling and replication. Combining their existing support programmes with additional scale-up and replication support services would be critical.

Gaps targeted: Pioneering new approaches to serve green SMEs that scale-up and replicate, and blending existing programmes with scale-up and replication specific modules

Key recommendation: Provide capacity building and financial support to support the scale-up and replication efforts of SMEs

CUSTOMISE: Broader, holistic replication-specific support for green is practically non-existent despite the fact that green enterprises are achieving socio-economic and environment impact. Existing findings on scaling and replication need to be disseminated amongst enterprises and other stakeholders more broadly. It could provide enterprises with ideas on how to improve their model or offer second movers inspiration and lessons on designing new models. Too often existing valuable research is not translated into action. The existing SEED Replicator is a good starting point.

Gaps targeted: Provide broader assistance to green SMEs around the topic of scale-up and replication

Key recommendation: Actively engage with existing research on enterprises and business models and share it proactively with green SMEs creating systems that allow for cross-collaboration & bridging knowledge between markets

STANDARDISE: Ecosystem actors focusing on broader ecosystem support should build on existing research results and best practices. They should standardise and make them available to entrepreneurship centres, incubators, accelerators and members of industry associations. They should use their existing tools and orchestrate the findings of different ecosystem actors position the topic of scale-up and replication in the ecosystem:

Gaps targeted: Developing standardised narratives, tools and frameworks that demonstrate the potential of scale-up and replication pathways

Key recommendation: Support the standardisation of existing best practices and findings integrating the scale-up and replication pathways of green SMEs in existing policy frameworks

RECOGNISE: Intermediaries can play a crucial role in engineering and brokering relationships between originators and potential adopters or expansion partners. Recognising the key role of scale-up and replication will be critical.

Gaps targeted: Working with intermediaries, business associations and research institutions showcasing the scale-up and replication potential of green SMEs towards governments using national, regional and international platforms

Key recommendation: Engage in the collection and dissemination of scale-up and replication cases demonstrating the value of green enterprises to the ecosystem

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ANNEX

The Enterprises

Gorilla Conservation Coffee

Uganda

- **Founded in:** 2017
- **Sector:** Agriculture-Food
- **Product/Service:** Sustainable coffee farming and processing
- **Country:** Uganda
- **Employee size:** 80
- **Website:** gorillaconservationcoffee.org

Overview

- Mountain gorillas are critically endangered and under increasing pressure from people and their economic activity around their natural habitats.
- Gorilla Conservation Coffee is a green enterprise that supports coffee farmers living around the gorillas' habitats and offers training in sustainable farming and processing to increase conservation efforts.

Business Model

- Providing training and funding to local, smallholder coffee farmers around the gorillas' habitats to improve their yield.
- Paying a premium for the coffee that is donated to help save mountain gorillas.
- Supporting farmers in growing high-quality coffee that can be sold internationally.
- Working with local communities to improve education, healthcare and livelihoods, so that humans and mountain gorillas can coexist.

Impact

- **Environmental Impact:** Safeguarding the critically endangered mountain gorillas and protecting their natural habitats helps to stop the unprecedented loss of biodiversity that the world experiences.
- **Socio-Economic Impact:** Working closely with smallholder farmers to improve their yield and economic situation, empowers the local communities.

Enabling Local Conditions

- Local farmers live in close proximity to the mountain gorillas and have good access to the ecosystem.
- Improving their livelihoods improves the overall ecosystem health and benefits the mountain gorillas.

Success Factors

- Smallholder coffee farms still have a lot of potential to increase their yield.
- Local community engagement creates mutual ecosystem benefits.

Scale-up and Replication Elements

- **Context:** Coffee is dominantly grown by smallholder farmers who often lack access to sufficient economic opportunities in areas where biodiversity is endangered.
- **The Product:** Improving livelihoods to create environmental befits as a model can be adopted to different contexts and situations.
- **Challenge:** Smallholder farmers are often not yet integrated in networks that can facilitate to scale-up.

Last Forest

India

- **Founded in:** 2010
- **Sector:** Agriculture-Food
- **Product/Service:** Sustainably harvested honey
- **Country:** India
- **Employee size:** 28
- **Website:** lastforest.in

Overview

- Indigenous communities are the guardians of the world's biodiversity, yet they are under enormous pressure to change their traditional ways to be able to compete with industrial processes.
- Last Forest works directly with indigenous communities and ensures that their customs and activities continue to thrive, by involving them fairly into the value chain.

Business Model

- Working as an intermediary for wild forest and agricultural produce that is harvested by indigenous communities.
- Catering to the entire supply chain of procurement, quality check, brand, promotion, and selling of organic, fair trade and indigenous products.
- Strong focus on community involvement and local ownership.
- Selling the final products to customers internationally.

Impact

- **Environmental Impact:** Supporting indigenous communities to safeguard biodiversity and offering products with a positive environmental impact to the customers.
- **Socio-Economic Impact:** Supporting community development, improvements of health and education, and generating sustainable economic opportunities.

Enabling Local Conditions

- Indigenous communities have produced sustainable products for generations, their expertise in safeguarding biodiversity can be scaled and generate economic opportunities.
- Increasing demand for sustainably-sourced products.

Success Factors

- Local ownership and strong community engagement in the activities drives sustainable economic growth.
- Large diversity of possible products that can be gained from nature in a sustainable way.

Scale-up and Replication Elements

- **Context:** Many indigenous communities lack economic opportunities and access to economic growth, despite the potential of their eco-friendly expertise.
- **The Product:** Connecting indigenous communities through intermediaries with a larger customer base is widely applicable.
- **Challenge:** Administrative barriers prevent indigenous communities to gain the full benefits of their land.

ListenField

Thailand

- **Founded in:** 2017
- **Sector:** Agriculture-Food
- **Product/Service:** Precision Farming and Marketplace Solution
- **Country:** Thailand
- **Employee size:** 14
- **Website:** www.listenfield.com

Overview

- The agricultural sector is under enormous and increasing stress due to population growth and the environmental crisis, which requires the system to become more inclusive, sustainable, profitable, and nourishing.
- ListenField provides an easy-to-use platform that empowers farmers to produce and yield better products using climate data analysis and the Internet of Things.

Business Model

- Working as an intermediary for wild forest and agricultural produce that is harvested by indigenous communities.
- Catering to the entire supply chain of procurement, quality check, brand, promotion, and selling of organic, fair trade and indigenous products.
- Strong focus on community involvement and local ownership.
- Selling the final products to customers internationally.

Impact

- **Environmental Impact:** Improve organic farming technologies leading to higher soil quality and better yield and reduce CO_2 emissions by 48 – 66% compared to conventional farming.
- **Socio-Economic Impact:** Create an ecosystem for farmers to cooperate, coordinate and share knowledge and access better market opportunities.

Enabling Local Conditions

- Smallholder farmers lack access to the agricultural market and are the most affected by climate uncertainty.
- Lack of data and technology access in the agricultural sector.

Success Factors

- ListenField builds a transparent platform that empowers the different actors involved in the supply chain of food production.
- Farmers' involvement in the ecosystem-building.

Scale-up and Replication Elements

- **Context:** Most countries' agricultural production comes from smallholder farmers who need better access to ecosystem services and information.
- **The Product:** The developed software can be adapted to new areas and access can be up-scaled to new or larger communities of farmers.
- **Challenge:** Data analysis and recommendation development require high levels of scientific expertise in various fields.

Moreloop

Thailand

- **Founded in:** 2017
- **Sector:** Textile-Waste
- **Product/Service:** Recycled fabric for textile production
- **Country:** Thailand
- **Employee size:** 5
- **Website:** moreloop.ws

Overview

- The textile industry, a major global pollutant, creates a lot of material that is discarded as waste, thus creating unnecessary environmental harm beyond what is used in the production process.
- Moreloop applies the circular economy model to the fashion and textile industry, minimising the need for new resources and maximising the recycling and reusing of resources that exist in the production cycle.

Business Model

- Buying surplus fabrics from factories to reduce the waste from their production processes.
- Upcycling and reselling the surplus fabric to fashion designers and small and medium-sized enterprises.
- Repurposing the surplus fabric by creating their own products for consumers.
- Providing an online platform to bring together factories with surplus fabrics and customers who want to engage in circular economy practices.

Impact

- **Environmental Impact:** Preventing CO_2 emissions and reusing waste and pollution by reusing and repurposing fabric in new production processes.
- **Socio-Economic Impact:** Enabling smaller fashion enterprises to start their businesses and creating employment and equal opportunities for women-led companies.

Enabling Local Conditions

- Smaller fashion industries have a high demand for cheaper fabrics that can be met with sustainable alternatives.
- Missing links between companies allowing them to reuse waste products in a circular economy model.

Success Factors

- Local ownership and strong community engagement in the activities drives sustainable economic growth.
- Large diversity of possible products that can be gained from nature in a sustainable way.

Scale-up and Replication Elements

- **Context:** The textile industry is dominated by large brands, making competition for small enterprises difficult, especially with high prices for quality fabric.
- **The Product:** The online platform can be adapted to new regional contexts or up-scaled to give access to new customers and clients.
- **Challenge:** Surplus fabrics are often mixed materials, which are more difficult to upcycled.

MYCL (Mycotech Lab)

Indonesia

- **Founded in:** 2015
- **Sector:** Textile-Waste
- **Product/Service:** Eco-friendlier alternatives in the material industry
- **Country:** Indonesia
- **Employee size:** 31
- **Website:** mycl.bio

Overview

- The textile industry is one of the world's largest polluters of water resources, due to the use of toxic chemicals, high level of water consumption and waste production, creating severe local environmental damage.
- MYCL provides a high-performance and sustainable material created with biotechnology, reducing pollution from waste and chemicals and improving water management through the practice of circular economy.

Business Model

- Utilising agro-forestry waste, a by-product from agricultural processes, to create eco-friendly materials that are derived from mushrooms.
- Providing alternative materials with a better environmental impact directly to brands and designers.
- Communicating with end users to increase awareness about the environmental impacts of the textile industry.

Impact

- **Environmental Impact:** The technology reduces water consumption up to 99.9% compared to animal leather and does not require any harmful chemicals.
- **Socio-Economic Impact:** The technology provides economic opportunities to local farmers and improves the quality of life and health of workers in the textile industry.

Enabling Local Conditions

- Growing international awareness and interest to make the fashion industry more sustainable.
- Large amount of untapped potential in farmers' agro-forestry wastes.

Success Factors

- Unused potential of different types of waste that can be used to create eco-friendly alternative products.
- Collaboration with big brands and local farmers and manufacturing businesses.

Scale-up and Replication Elements

- **Context:** Increasingly, big fashion brands are interested in sustainable materials.
- **The Product:** The material can be grown from different types of agro-forestry wastes, which improves the economic situation of local farmers.
- **Challenge:** The development of new materials or using new sources of waste requires high-level research and development.

All Women Recycling

South Africa

- **Founded in:** 2008
- **Sector:** Waste-Plastic
- **Product/Service:** Gift boxes from recycled plastic bottles
- **Country:** South Africa
- **Employee size:** 13
- **Website:** www.allwomenrecycling.com

Overview

- Plastic creates environmental problems, causing pollution to the ecosystem and contributing to greenhouse gas emissions.
- All Women Recycling turns recycled plastic bottles into ecological and economic gifting products, preventing plastic bottles from ending up in landfills and the environment, while simultaneously providing economic opportunities to women and improving gender equality.

Business Model

- Buying plastic bottles from local schools, charities, street collectors and larger companies.
- Creating marketable products from the recycled plastic bottles that can be sold globally, while empowering women locally.
- Working with women and fair-trade companies around the world, as well as zoos, museums, charities, gift and design stores to create awareness and market the products internationally.

Impact

- **Environmental Impact:** In 2016 alone, the company upcycled half a million plastic bottles, which otherwise would have led to more environmental pollution.
- **Socio-Economic Impact:** The company creates local jobs for women and provides skills trainings to contribute to women empowerment.

Enabling Local Conditions

- Women often still lack access to equitable economic opportunities and skill trainings that empower them to build their own businesses.
- As a consequence of missing recycling programmes, large amounts of plastic waste end up in the environment and in landfills.

Success Factors

- Strong relations to local and international networks to ensure resource availability and an increased customer base.
- Empowerment of the workers by creating full time employment and skill training.

Scale-up and Replication Elements

- **Context:** Women often belong to economically disadvantaged groups and need better opportunities and access to training.
- **The Product:** The production from recycled plastic bottles is widely applicable, and the finished products can be sold internationally creating further economic opportunities.
- **Challenge:** To scale-up sales, a larger, international network is often necessary.

Ecolana

Mexico

- **Founded in:** 2018
- **Sector:** Waste-Plastic
- **Product/Service:** Online tool to find recycling facilities
- **Country:** Mexico
- **Employee size:** 20
- **Website:** ecolana.com.mx

Overview

- A continuously increasing amount of waste is adding enormous pressure on the ecosystem, even though much of it could be recycled. But many people and companies do not recycle their waste, because they do not know where to go.
- Ecolana offers an online locator tool to link consumers and brands with the nearest recycling facility and provides incentives to recycle.

Business Model

- Offering an online tool to link customers and companies with recycling centres and provide accurate and up-to-date information on where to bring what materials.
- Providing a mobile phone application through which the materials received at the recycling centres can be verified.
- Creating incentives to increase recycling activities by offering payment to the recyclers based on the material brought to the recycling centres.

Impact

- **Environmental Impact:** Increased recycling reduces the stress on the ecosystem and encourages circular economic processes. In 2020, Ecolana helped recycle 1,800 tons of solid waste.
- **Socio-Economic Impact:** Ecolana supports the inclusive recycling model and creates jobs for people and companies.

Enabling Local Conditions

- Despite an increasing amount of recycling offers and increased interest on the consumer side to recycle, lack of awareness regarding the available options often prevents recycling.
- Lack of incentives to engage in recycling activities discourages consumers to go the extra mile.

Success Factors

- Ecolana offers an easy-to-use tool to locate recycling facilities and provide the necessary link between consumers and recycling options.
- Strong community involvement and online presence increasing awareness about the platform.

Scale-up and Replication Elements

- **Context:** As the issue of waste impacts the ecosystem, more solutions are offered to reduce waste and recycle what remains, however, missing links between the solutions and the customers hinder the progress.
- **The Product:** The locator can be adapted to new regions and scaled up to include more recyclers.
- **Challenge:** To create actual impact, a large network involving multiple recyclers is required.

ONergy

India

- **Founded in:** 2008
- **Sector:** Energy
- **Product/Service:** Solar PV, Solar irrigation pumping, solar lighting and microgrids
- **Country:** India
- **Employee size:** 25
- **Website:** www.onergy.in

Overview

- The global energy system remains largely dominated by fossil fuels and highly centralized to few government-sanctioned actors, which slows down progress on renewable energy infrastructure in many parts of the world.
- ONergy Solar provides end-to-end solar energy solutions, including design, engineering, manufacturing, installation, operation and maintenance, and solar consultancy services directly to its customers.

Business Model

- Offering convenient and affordable setup of solar rooftop projects.
- Providing alternative financing options, such as Capex (asset ownership and upfront investment), Opex (zero investment and pay per use), bank financing and NBFCs.
- Connecting remote and rural areas to energy by setting up decentralised and solar powered microgrids.

Impact

- **Environmental Impact:** Improving renewable energy infrastructure by setting up 10 MW of solar rooftop projects, 500 solar irrigation pumps, 5000+ solar streetlights, etc.
- **Socio-Economic Impact:** Providing energy access to remote and rural areas and offering training programmes in the area of employability skills.

Enabling Local Conditions

- Insufficient energy access in many rural communities, including in many areas of agricultural production.
- Lack of decentralised solutions for renewable energy.

Success Factors

- ONergy offers end-to-end solutions that require no specific technical knowledge on renewables on the side of the customers.
- Flexible financing options allow for widespread applicability.

Scale-up and Replication Elements

- **Context:** With nationally centralised power grids, rural communities often suffer from insufficient energy access, despite potential for solar power in agricultural processes.
- **The Product:** Decentralised end-to-end solar solutions can be applied to many rural contexts.
- **Challenge:** Offering end-to-end solutions requires a large and diverse set of expertise.

EcoPlastile

Uganda

- **Founded in:** 2018
- **Sector:** Construction-Waste
- **Product/Service:** Sustainable Housing materials
- **Country:** Uganda
- **Employee size:** 5
- **Website:** ecoplastile.com

Overview

- Many countries struggle with rapid urbanization. This adds pressure on the infrastructure for waste management. In Kampala, only half of the 3 million tons of waste is collected and only 8% are recycled.
- EcoPlastile targets three challenges: plastic waste pollution, the housing crisis, and the adverse effects of climate change. By upcycling plastic into sustainable housing material, the enterprise improves waste collection and recycling, offers better housing material, and creates employment.

Business Model

- Aiming to build an integrated waste management system to reduce urban plastic waste pollution
- Transforming plastic waste to manufacture building and housing materials. By using chemical-free and energy-conserving technology, EcoPlastile creates eco-friendly alternatives to building materials.
- Creating opportunities for marginalized groups through jobs and by enabling households to turn plastic and agricultural waste into financial resources.

Impact

- **Environmental Impact:** EcoPlastile helps reduce the amount of plastic by upcycling it. The enterprise has already removed more than 150 tons of plastic, preventing 150 tons of CO_2 from being emitted.
- **Socio-Economic Impact:** EcoPlastile creates economic opportunities for vulnerable and marginalized groups, focusing on women and youth.

Enabling Local Conditions

- Lack of innovative solutions in waste management and housing.
- Combining the issue of waste with the housing problem. Providing incentives by tackling the two problems as one.

Success Factors

- Strong local community engagement to raise awareness and promote the service.
- Empowering women and youth through employment and improving living conditions for the most vulnerable.

Scale-up and Replication Elements

- **Context:** Most plastic is not recycled, even though it can be upcycled and transformed into new materials within a circular economy.
- **The Product:** Upcycling is widely applicable and the final products can be sold locally and abroad.
- **Challenge:** Ensuring quality and durability in upcycled materials requires prior research and development.

Nelplast

Ghana

- **Founded in:** 2018
- **Sector:** Construction-Housing
- **Product/Service:** Recycling and manufacturing of plastic products
- **Country:** Ghana
- **Employee size:** 73
- **Website:** www.nelplastgh.com

Overview

- Plastic pollutes the environment and poses a threat to biodiversity within the ecosystem, still, less than 10% of plastic is recycled (2018 est.). The majority of plastic ends up in landfills, which increases the stress on the local environment.
- Nelplast buys locally-sourced plastic waste and recycles it to manufacture new products, thus reducing the amount of plastic that ends up in landfills, while producing eco-friendlier alternative products.

Business Model

- Collection and recycling of plastic waste in order to produce new materials.
- Production of cement pavement blocks using the recycled plastic, thus creating an environmentally friendly, cheaper, more durable and higher quality product for the customers.
- Providing consultancy in setting up recycling companies.

Impact

- **Environmental Impact:** The process reduces the harmful effects of plastic pollution and provides an alternative to high-emitting products such as cement.
- **Socio-Economic Impact:** The process creates jobs for the collectors of plastic waste and provides a cheaper, more sustainable product to its customers.

Enabling Local Conditions

- Plastic waste is largely available and demand for building materials remains high.
- Growing awareness of the plastic problem creates favourable ecosystem conditions.

Success Factors

- Active community engagement is key to the success of the business and the supply of raw materials.
- Thriving SME ecosystem assists in building the network for the business.

Scale-up and Replication Elements

- **Context:** There is a growing demand for plastic recycling as the negative effects of plastic pollution become more visible.
- **The Product:** Sustainable building materials are increasingly demanded; recycled plastic offers an eco-friendly and affordable alternative.
- **Challenge:** The process requires access to material and technically skilled staff.

Proplanet S.A.S.

Colombia

- **Founded in:** 2011
- **Sector:** Construction-Housing
- **Product/Service:** Furniture from recycled materials and recycling services
- **Country:** Colombia
- **Employee size:** 22
- **Website:** www.facebook.com/proplanetsas

Overview

- The environment is under immense stress from pollution caused by landfills that often serve as the final destination for many materials for decades. In Colombia, more than 6000 tonnes of long-life cartons end up in landfills every year.
- Proplanet S.A.S. offers an alternative to landfills by recycling Tetra Pak Long Life cartons into new products that create a benefit for society, such as furniture to low-income schools.

Business Model

- Producing environmentally-friendly packaging for food to replace packaging in harmful materials, such as plastic and polystyrene. This material degrades in a landfill very quickly (5 – 6 months) and is possible to recycle.
- Recycling materials that are difficult to recycle such as Tetra Pak and polyboard (used for takeaway coffee cups).
- Using the recycled material to produce different types of furniture for low-income schools.

Impact

- **Environmental Impact:** By reducing the amount of waste going to landfill and reusing materials, less CO_2 is emitted. In 2014, Proplanet collected 160 tonnes of Tetra Pak long-life cartons.
- **Socio-Economic Impact:** Proplanet creates jobs along its value chain and produces furniture for long income schools and offers sustainable and cheap furniture to vulnerable households.

Enabling Local Conditions

- There is a growing interest in Colombia's private sector to become more sustainable.
- With high levels of poverty, many schools struggle to provide a quality education and meet the necessary demands for equipment.

Success Factors

- A strong engagement with the private sector allowed Proplanet to establish a network.
- Active involvement of the community helped ensure the social and environmental benefits reached the community.

Scale-up and Replication Elements

- **Context:** Most waste ends up in landfills, with only a small share being reintroduced into the production cycle, which leads to an unnecessarily high demand for materials.
- **The Product:** Innovative circular economy techniques are needed to meet future growth.
- **Challenge:** The cost of finding the raw materials required and the resources to process the material makes it difficult to be competitive.

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