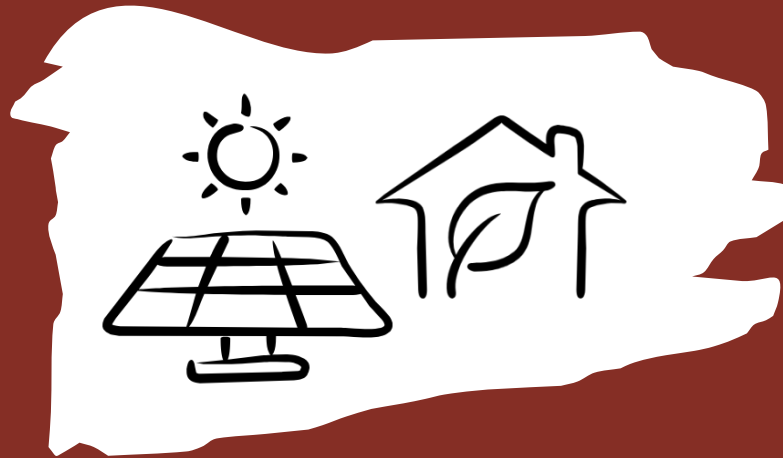


Innovative Solar Energy Solutions for Marginalised Customers Replicator Workbook Preview



This workbook is supported by Hogan Lovells, the Government of Flanders and the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety

What's it all about?




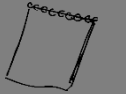


Do you want to learn from proven business models from eco-inclusive enterprises around the world to tackle some of the key challenges your country is facing?

Various entrepreneurs have already developed innovative business models that turned out to be successful and create relevant social, economic and environmental impacts. Replicating solutions that work can offer a fast and effective way to contribute to sustainable development and improve people's livelihoods.

The Replicator Workbook guides the process

We developed our SEED Replicator Workbooks to guide you through the process of transferring a business model to another geographic location. Our workbooks identify best practices and shed light on conditions under which eco-inclusive enterprises in your sector operate. They include exercises that will guide you to explore your market and adapt business models to your context.

Steps	 Detect Challenges & Opportunities	 Determine Customer Needs & Segments	 Discover Inspiring Success Stories	 Develop Innovative Business Models
Tools	Business Idea Tool	Customer Segmenting Empathy Map	Business Model Adaptation	Visual Prototyping Lean Enterprise Blueprint

How to use the Replicator Workbook?



In this workbook preview, click on **INSIGHTS** or **TOOLS** to discover more
Or simply scroll to the next page



Insights

into success stories & challenges of established eco-inclusive enterprises

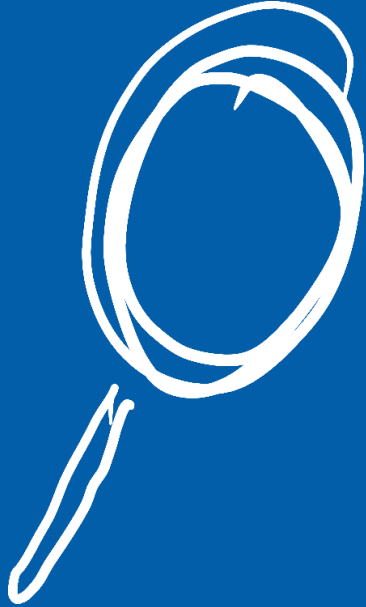
In our workbook, we include various **READINGS** on **proven models of eco-inclusive enterprises** around the globe, complemented by sets of best practices and explanations of conditions under which eco-inclusive enterprises operate. These readings are based on experiences of entrepreneurs active in the field of **Innovative Solar Energy Solutions for Marginalised Customers**.



Tools

to guide you step-by-step as you develop your own eco-inclusive enterprise

Each **TOOL** provides step-by-step guidance to arrive at key outcomes. The first page of each tool offers a short overview of **when** to use the tool, **what** you do in the tool, **how** the tool is best used and which **key outcomes** are expected. The workbooks explains in detail what to do and which questions to ask yourself at each step while using worksheets for you to document your outputs.



Detect sustainability challenges in your country and brainstorm solutions to tackle them. Learn about the potential of innovative solar energy solutions for marginalised customers and the social, environmental and economic impacts you could achieve.

Innovative off-grid solutions for BoP Customers



Converting lack of access to energy for poor people

The poorest populations in most developing countries not only suffer from financial poverty but also energy poverty. Both financial and energy poverty go hand-in-hand and often create a poverty trap which is difficult to escape. Due to insufficient funds, poor households can often not afford reliable energy access or lack the liquidity to acquire low maintenance renewable energy equipment (such as solar panels) which require high upfront investment but deliver significant savings over time. Additionally, reliable grid-connection is often lacking in the poorest and rural regions of developing countries. This lack of energy access significantly limits people's ability to engage in economic activities and generate income through self-employment or entrepreneurship and prevents children from studying at night. Consequently, targeted approaches tailored to the needs and financial capabilities of the Bottom-of-the-Pyramid population are needed which do not rely on grid access but fortify off-grid solutions.

For example, in Malawi more than half of the population lives below the UN-defined poverty line, especially in rural areas where grid connections are nearly non-existent. Similarly, remote and poor areas of the DRC are especially limited in their access to energy solutions. Communities in poorer and more remote regions often possess limited knowledge and awareness of available off-grid renewable energy solutions.

... into tailored off-grid solutions for Bottom-of-the-Pyramid customers

By tailoring energy solutions to the needs and capacities of poorer populations, new markets can be tapped into and significant social economic, and environmental development can be achieved. The adaptation of off-grid solutions to the needs of bottom-of-the-pyramid customers is one way to deliver on these development targets.

Offer tailored affordable and accessible solutions

- Establish solar-powered centralised charging stations for mobile phones
- Rent rather than sell equipment such as solar lamps and batteries for limited term use
- Distribute solar-powered radios for cheap and effective knowledge and information dissemination
- Deliver simplified, durable products with low maintenance costs

Raise awareness of clean energy solutions

- Disseminate knowledge and information through radio shows
- Partner with local community representatives, NGOs, government offices, etc. to reach poorest groups
- Increase decentralised outreach activities to reach target groups and reduce barriers associated with travel costs
- Use peer-to-peer and community networks in addition to informal word-of-mouth communication to reach BoP customers

Capitalise on scalable market opportunity

- Capitalise on the scalability potential of low-cost off-grid solar solutions and increase the attractiveness of poorer consumers as a key target market despite lower margins on single product/service sales
- Meet market demand for rising energy consumption in light of limited electricity supply
- Replicate methodologies and make use of technology spillover costs
- Expand via existing local networks and identify synergies with existing operations

Innovative off-grid solutions for BoP Customers

A light gray world map is overlaid with a network of thin white lines connecting various points. At each connection point, there is a small icon of a solar panel. A large, semi-transparent green banner is placed diagonally across the center of the map, containing the following text:

**Participate in an upcoming Replicator Workshop
to discover more about innovative solar energy
solutions for marginalised customers !**



Discover proven business models and adapt them to your local market. Identify key business model features.

The Originators: Kumudzi Kuwale

Successful examples of eco-inclusive enterprises



Kumudzi Kuwale supplies charging stations in villages where consumers can rent solar lamps and batteries and charge mobile phones. Charging stations and solar-powered equipment are built into selected homes. These households generate valuable income from the commission earned on the rental of solar lamps and batteries. Kumudzi Kuwale utilises only solar power for the equipment charging. The use of durable materials and large capacity batteries enables the solar stations to charge several solar lanterns simultaneously.

Value proposition: Kumudzi Kuwale offers a service that people living in poverty can afford and access. Solar power is easily generated and the use of decentralised charging stations enables customers to access the technology directly in their communities. Compared with kerosene or battery-charged torches, the solar-powered solutions reduce household energy costs and enable users to work, study and more after sunset to the benefit of educational and economic development. In the long-run, the switch from kerosene or firewood for indoor cooking or lighting to clean energy delivers major health benefits and combats environmental degradation caused by deforestation and carbon-intensive energy alternatives.

Key facts

Founded in: 2013

Country of headquarters: Malawi

Operates in: Nkhotakota Region

Employees: 15 (2017)

Website: www.kumudzikuwale.com

The Originators: SAMWAKI

Successful examples of eco-inclusive enterprises



Sauti ya Mwanamke Kijijini (SAMWAKI) runs the radio station Bubusa FM. The radio offers announcers the opportunity to broadcast their social messages in exchange for payment. The radio station uses only renewable energy sources. Moreover, the project provides solar kits that local women can use to set up phone charging services and generate income. Finally, SAMWAKI runs an agro-ecological cooperative called COOPAEMI focused on coffee production. The SAMWAKI project is connected with multiple local organizations.

Value proposition: SAMWAKI was established by rural women and strengthens the role of women in rural areas. This gender focus facilitates investment in building people's capacity to address local problems and participate in decision-making processes. The renewable energy focus helps the local community to discover solar and wind alternatives to their usual fossil fuel consumption, thereby supporting the expansion of renewable energy generation in South Kivu. Finally, the COOPAEMI project increases the community members' consciousness of the link between environment protection and agriculture and strengthens their sustainable economic success.

Key facts

Founded in: 2002

Country of headquarters: Democratic Republic of Congo

Operates in: South Kivu

Employees: 7 (2017)

Website: www.samwaki.org

Insights

The Originators

Successful examples of eco-inclusive enterprises



Participate in an upcoming Replicator Workshop
to discover **more exemplary eco-inclusive enterprises!**



Determine your target customer and the benefits you want to create for your stakeholders. Map out why your solution is unique and why your customers will love it!

Your Customer Tool



When?

To refine your business idea, you need to identify your potential customers. Therefore, this tool is best applied in the elaboration process of your business idea.

What?

Customers stand in the centre of any business. Even the best idea is worthless if no one buys the product. Most enterprises serve different groups of customers (customer segments) that share certain characteristics. Identifying the different segments in the first step helps you to learn more about each of them. Once you have stepped into your customers' shoes, you can target your product and marketing activities better.

How?

Sit down to think about which customer groups you would like to serve. Once you have identified the customer segments, it's time to go out and speak with your potential customers to gain a better understanding of their needs.

Steps?

Step 1 → Identify Customer Segments

Step 2 → Understand Your Customers



Key outcomes

- Get to know potential customer segments for your product
- Set the basis to build a customer-centric business model

Your Customer Tool



Step 1

Identify Customer Segments

The first step is to divide the large pool of potential customers into customer segments. Customer segments are groups of customers who share certain characteristics or behave in a similar way.

- What will influence the preferences of potential customers towards your product or service?
- Will individual buyers have different expectations and needs from small stores? What about government institutions, NGOs or businesses?
- Will grandchildren have different expectations and needs than their grandparents for example? What about men and women, people with different religions, incomes, education levels or professions?
- Will people in rural areas have different expectations and needs from urban citizens? What about people in City X and City Y?
- Will people who have different knowledge about your product or service have different purchasing and usage patterns? Buy it more or less often, use it more or less often or use it in different ways?

Complete the information you gathered in the *Your Customer Segments* WORKSHEET on the following page. We have left space for up to five customer segments; you should identify at least two.

Step 2

Understand Your Customers

- Out of the customer segments you identified in Step 1, select the ones that appear most important for you, for example because of their size, because they are most likely to buy your product or because they are the easiest ones for you to reach.
- For each of your key customer segments complete the WORKSHEET *Your Empathy Map*.
- The *Empathy Maps* ask you to step into your customers' shoes: What does he/she think, say, see, do, feel, and hear? You can answer the questions in discussions with your team, through internet research, interviewing or observing potential customers etc.
- It's easier to answer the questions if you imagine one representative person of each segment, and add their name and age in the middle of the *Empathy Map*, in addition to the title of the customer segment.

You will find relevant key questions for your EMPATHY MAP on the next page!

Your Customer



→ **What does she/he think?**

- What matters most to her/him? What moves her/him? What are her/his dreams? Which may be her/his worries?

→ **What does she/he say?**

- What does she/he tell others? What is his/her attitude? Does she/he influence others?

→ **What does she/he see?**

- What kind of products/services does your customer see in the market? What attempt is being made to influence her/him?

→ **What does she/he do?**

- What is she/he constantly trying to improve? What activities does she/he cherish doing? How does she/he spend their time?

→ **How does she/he feel?**

- What does she/he experience in relation to your product or service domain? This experience can be negative or positive.

→ **What does she/he hear?**

- What do friends say? What do her/his influencers say? What media channels influence her/his opinions on products and services?

- Keeping the following questions in mind will prove useful during the refinement process of your business idea:
 - How can you fulfill the needs of your customers, and provide them with more benefits?
 - Should the product or service be targeted towards different market segments?
 - Is there anything else you still want to learn about your customers?

Your Customer



WORKSHEET Your Customer Segments

Step 1

Customer Segments					
Title	Private households	Local businesses	Villagers		
Description	Limited access to resources-electricity	Small, family-owned. Face power cuts and irregular supply.	Lack access to information to make good decisions		

Your Customer



WORKSHEET Empathy Map

Step 2

What does she/he think?

Is there a way to access better resources?

What does she/he say?

I need more electricity to run my business

Power generators are expensive and difficult to use

What does she/he see?

Low productivity

What does she/he hear?

We can not work after it gets dark

Need more consistent power generators

Who is he/she?

Father and business owner

What does she/he do?

Small family business

Has big family to care for

What does she/he feel?

Concerned about improving our livelihoods

How did you learn about your customer?

Asking family members, friends, relatives and interviewing other locals.

SEED Replicator Tools

A light gray world map with small flag icons placed on various continents. Thin white lines connect these flags, creating a global network pattern. A large, light green diagonal banner is overlaid on the map.

Participate in an upcoming Replicator Workshop
to discover **more business planning tools!**



Let's replicate the success of **eco-inclusive enterprises** together!

Learn more about the SEED Replicator and how to apply to an upcoming workshop near you:

- ✉ replicator@seed.uno
- 🌐 seed.uno
- 📘 facebook.com/seed.uno
- 🐦 [@seed_sustdev](https://twitter.com/seed_sustdev)