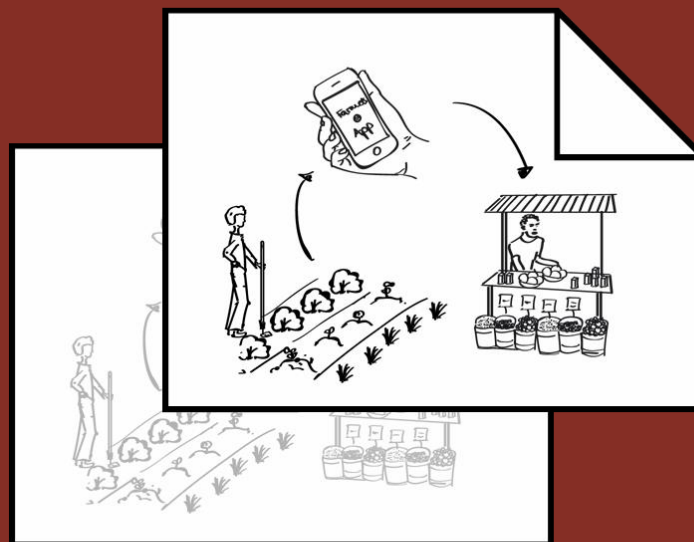


ICT Solutions for Agriculture Replicator Workbook Preview



What's it all about?




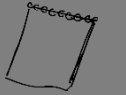


Do you want to learn from proven business models from eco-inclusive enterprises around the world to tackle some of the key challenges your country is facing?

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

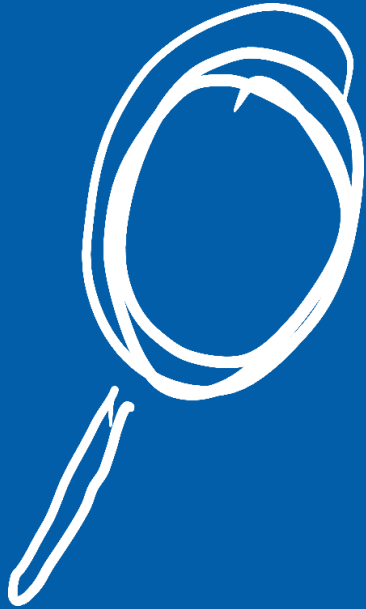
In our workbook, we include various **READINGS** on **proven models of eco-inclusive enterprises** around the globe, complemented by sets of best practices and explanations of conditions under which eco-inclusive enterprises operate. These readings are based on experiences of entrepreneurs active in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



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 ICT solutions for agriculture and the social, environmental and economic impacts you could achieve.

The Market for ICT in Agriculture



The Global Market

- 475 million small farms (of up to 2 hectares) account for more than 80% of all farms worldwide and support livelihoods of up to 2.5 billion people. In sub-Saharan Africa, agriculture is the main industry, employing 65% of the labour force and contributing to one-third of the continent's GDP.
- In 2015, 200 million individuals across sub-Saharan Africa were connected to the internet via mobile devices. This figure will almost double by 2020. Despite such progress, over 60% of the population will still lack access the internet and/or ICT devices by the end of the decade.
- The ICT-enabled precision agriculture market is growing 13% per year and is projected to reach US\$3.7 billion by 2018. According to a study by Accenture, data-driven decisions about irrigation, fertilisation and harvesting can increase maize farm profitability by US\$2 to US\$40 per hectare and have the potential to increase overall crop productivity by up to 30%.
- ICT innovations for agriculture have a great potential to attract finance, and there is a growing number of resources available worldwide for start-ups and early stage funding. In 2016, global seed-stage investments in agricultural technology (AgTech) companies increased by 16% from 2015, when the total investment in AgTech companies amounted to US\$4.6 billion.

What is ICT?

Information and communications technology (ICT) includes the use of existing technology: hardware (computers, mobile phones, point-of-sale devices), software (computer programmes, mobile applications) and telecommunication options, including the internet and telephone (mobile and landline) systems.

ICT solutions offer many eco-friendly opportunities along inclusive agriculture value chains:

Improved access to finance

Increasing access and affordability of financial services tailored to agricultural purposes with mobile payment systems, and ICT-enabled micro-insurance and micro-credit platforms.

Example: Mobile payment systems eliminate the need for travel to and from the bank, reducing CO2e emissions.

Provision of agricultural information

Delivering information relevant to farmers, such as agricultural techniques, commodity prices and weather forecasts, through mobile platforms and farmer helplines, particularly in areas where traditional methods of communication are limited.

Example: Mobile apps provide precise data to farmers to conserve valuable resources, such as water, and reduce emissions from fertilisers.

Improved supply chain visibility and efficiency

Optimising supply chain management across the sector, and delivering efficiency improvements for transportation logistics with end-to-end traceability, smart logistics and mobile management of supplier and distribution networks.

Example: End-to-end traceability allows distributors and retailers to track the exact sources of foods and halt widespread disease.

Enhanced access to markets

Enhancing the links among commodity exchanges, traders, buyers and sellers of agricultural produce through online platforms for trading, tendering and bartering.

Example: Mobile apps and e-commerce platforms connect farmers directly to buyers, cutting down on additional energy use via middlemen.

The Market for ICT in Agriculture

A grey silhouette of a world map with a network of white lines connecting various points across the continents, representing global connectivity.

**Participate in an upcoming Replicator Workshop
to discover more about ICT solutions for
agriculture!**



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

The Originators: eKutir Social Business

Successful examples of eco-inclusive enterprises



eKutir is a for-profit eco-inclusive enterprise that is designed as a one-stop-shop solution to extend agricultural services to smallholder farmers living in remote areas. They work with over 600 micro-entrepreneurs, who are the direct link to the farmers. Each micro-entrepreneur serves one region to provide a network of smallholder farmers with high-quality technical support, farming inputs and links to new markets. eKutir also secures market access and offers to buy produce from farmers.

Value Proposition: The innovation of eKutir is in designing a decentralised, risk-mitigating and transparent infrastructure for entrepreneurs and farmers and utilising ICT as a tool for scale and replication.

Key facts

Founded in: 2009

Country of headquarters: India (eKutir Global has HQ in USA)

Operates in: India (eKutir Global is replicating in Haiti and other South American countries in 2017)

Employee size (2016): 150

Reach: 600 micro-entrepreneurs; 139,000 farmers

Revenue (2016): USD \$1.5 million

Website: www.ekutirsb.com

The Originators: Farmable World Group of Companies

Successful examples of eco-inclusive enterprises



Farmable is a crowdfunding platform and business that supports small cattle farmers in gaining access to finance, markets and capacity building. Through an online platform, individuals and organisations from around the world can invest small amounts of money (US \$25-2500) in farmers to improve their cattle management and harvests. Farmable reaches over 600 small cattle farmers in Ghana, with an average of 5 cows per farmer, providing them with an upfront investment of US \$500 per cow to ensure better agricultural practices and increase the value of their cows at harvest. As of May 2017, 250 farmers had received funds used for vaccinations, cattle feed and safe animal housing and Farmable's model had enabled over 150 farmers to sell their cattle directly from their farms for a fair price, eliminating the need for costly middlemen.

Value Proposition: Farmable's simple yet innovative business model increases harvest revenues for livestock farmers in Ghana by moving away from family-learned agricultural practices toward standardised modern agricultural practices. By providing farmers with upfront investments via its crowdfunding platform, as well as access to capacity building and better markets, Farmable is able to guarantee return for investors and continue the cycle of improving livestock farming in Ghana.

Key facts

Founded in: 2013

Country of headquarters: Ghana

Operates in: Ghana

Employee size: 7

Reach: 600 small cattle farmers, with a total of over 7500 cows

Revenue: US \$125,000 (2016)

Website: www.farmable.me

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	Women groups	Cattle Farmers	Micro-entrepreneurs	
Description	Potential talent pool to train & empower	Own small-scale family farms	Local aspiring business people	

Your Customer



WORKSHEET Empathy Map

Step 2

What does she/he think?

Do I need a business plan?

How can I improve my farming outputs?

What does she/he say?

I don't know where to go for reliable information

What does she/he see?

Climate change affecting crops and cattle

What does she/he hear?

Other farmers also facing same issues

Concerns about crops & cattle dying

Who is he/she?

Cattle & crop farmers

What does she/he do?

Runs a small farm

Main breadwinner of family

What does she/he feel?

In the dark about the market

Uncertainty

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 across the center of 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:

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