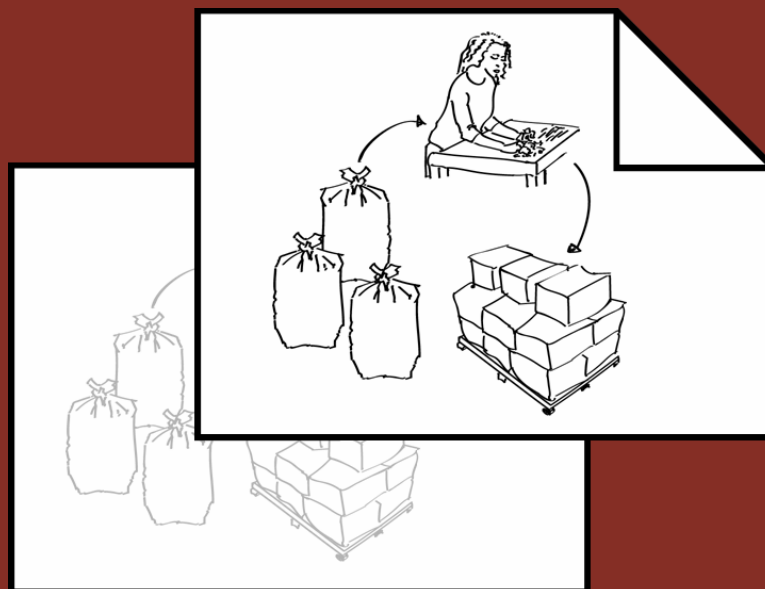


Waste to Industrial Resources

Replicator Workbook Preview



What's it all about?




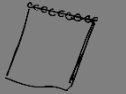


Do you want to learn from proven business models from eco-inclusive enterprises around the world to tackle some of the key challenges your country is facing?

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

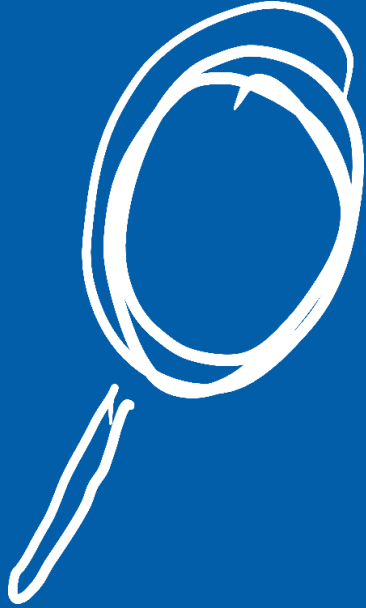
In our workbook, we include various **READINGS** on **proven models of eco-inclusive enterprises** around the globe, complemented by sets of best practices and explanations of conditions under which eco-inclusive enterprises operate. These readings are based on experiences of entrepreneurs active in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



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 waste to industrial resources and the social, environmental and economic impacts you could achieve.

From Solid Waste to Industrial Resources



Converting solid waste...

As the volume of solid waste produced has continuously increased in the past decades, there is a huge potential to process waste material into industrial resources, which can then be used as input material for subsequent production processes. There are a variety of waste materials that can be recycled and recovered into value-adding industry resources that replace, at least partially, conventional raw materials. It is crucial to identify the types of waste material that have the necessary and suitable properties to be processed into useful and demanded industrial resources. The largest groups of materials suitable for recycling are:

- Plastics, e.g. HDPE plastic, LDPE plastic, PP plastic and PET plastics
- Metals, e.g. aluminium, steel, tin, brass and bronze, cast iron or copper
- Paper, cardboard and glass

Metals are the most precious recyclables with the highest profit margins, but many of the other materials occur at larger volumes.

These waste materials can be sourced by a variety of suppliers like informal waste collectors, private households, restaurants, wholesalers, stores and markets, public institutions, collection points, industries, companies and businesses.

...into industrial resources

Processing and adding value to waste materials offers the business potential to produce a variety of industrial resources, which can then be used for production within different product categories and with different requirements in view of capital, human resource and research & development, for example:

Products from recovered glass

From glass waste, new products such as bottles, jars, countertops, flooring, tiles, landscaping stones and bricks can be manufactured.

Glass is 100% recyclable and can be recycled endlessly without losing quality or purity. Recycled glass can be substituted for up to 95% of raw materials.

Products from recovered metals

Once metal waste is recovered, it can be used e.g. for the production of beverage cans, cutlery, car parts, airplane parts, building facades, railways and bicycles.

Aluminium and steel are the most commonly recycled metals and can be infinitely often recycled without degradation.

Products from recovered paper and cardboards

Paper and cardboard waste can be recycled into new products such as cardboard boxes, tissue paper, and newspaper.

Paper production currently accounts for about 35% of felled trees.⁶ Increasing the share of recycled material will conserve trees.

Products from recovered plastic types

Plastic waste is first processed into plastic pellets and granules, which are then used for the production of plastic products like water tanks, buckets, bottles, plastic chairs, soles or plastic bags.

Plastic is one of the most common waste products.

From Solid Waste to Industrial Resources

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

**Participate in an upcoming Replicator Workshop
to discover more about turning solid waste to
industrial resources!**



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

The Originators: Aziiba Plastic Waste Recycling

Successful examples of eco-inclusive enterprises



Aziiba Plastic Waste Recycling Enterprise is an enterprise producing pellets from plastic waste. It employs independent external waste pickers as suppliers, who benefit from improved working conditions and a stable income. Aziiba Plastic Waste Recycling Enterprise processes the waste into pellets at their own facilities. They are a business-to-business enterprise that sells the pellets to enterprises who use them to produce new plastic products.

Value Proposition: The enterprise provides a steady income for waste pickers that allows them to afford keeping their children in school. Aziiba also helps to clean up the environment tackling adjacent problems like health issues, flooding and pollution. Producing pellets that are reintroduced into the market reduces the overall amount of virgin materials needed in the production process.

Key facts

Founded in: 2012

Country of headquarters: Ghana

Operates in: Tamale, Ghana

Employee size (2016): 10

Pellet Production (2016): 4 t/day at GHS 2,500/t (~USD 590/t)

The Originators: City Waste Recycling Limited

Successful examples of eco-inclusive enterprises



City Waste Recycling Limited (CWR) is a waste collection service provider and waste recycling company that takes a holistic approach to waste management. The enterprise collects mixed waste from institutions, factories and private households who pay a fee for the waste collection service. Additionally, informal waste collectors deliver plastic waste picked up from public areas. At the next level of the waste value chain, CWR offers responsible waste processing and recycling solutions for a wide range of waste types, from problematic e-waste and batteries to sawdust and plastic. City Waste Recycling Limited won a SAG-SEED Award in 2016.

Value Proposition: CWR offers outstanding waste management services, including holistic collection of all waste types, and the subsequent environmentally friendly and efficient processing of waste material. The final diverse products are of high quality and are largely products that can act as substitutes for raw materials.

Key facts

Founded in: 2008

Country of headquarters: Ghana

Operates in: Accra, Ghana

Employee size (2016): 62 employees

Revenue (2016): EUR 505,000

Website: <http://www.cwmcl0.wix.com/citywastegroup>

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	<p>Women groups</p>	<p>Private households</p>	<p>Industry</p>		
Description	<p>Potential talent pool to train & empower</p>	<p>Families, generating general household wastes</p>	<p>Local manufacturers</p>		

Your Customer



WORKSHEET Empathy Map

Step 2

<p>What does she/he think?</p> <p>Do I need to change my business model?</p> <p>I would like to improve profits</p>	<p>What does she/he say?</p> <p>Business is hard these days</p> <p>Raw materials are expensive</p>	<p>What does she/he see?</p> <p>Increasing demand for affordable products</p>
<p>What does she/he hear?</p> <p>Waste problems all over the towns</p> <p>Complains about increasing living costs</p>	<p>Who is he/she?</p> <p>Local manufacturer</p>	<p>What does she/he do?</p> <p>Runs a manufacture company</p> <p>Main breadwinner of family</p>
<p>What does she/he feel?</p> <p>Concerned</p> <p>Uncertainty</p>		
<p>How did you learn about your customer?</p> <p>Asking family members, friends, relatives and interviewing other locals.</p>		

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, semi-transparent green banner is overlaid diagonally 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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🌐 seed.uno

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🐦 [@seed_sustdev](https://twitter.com/seed_sustdev)

