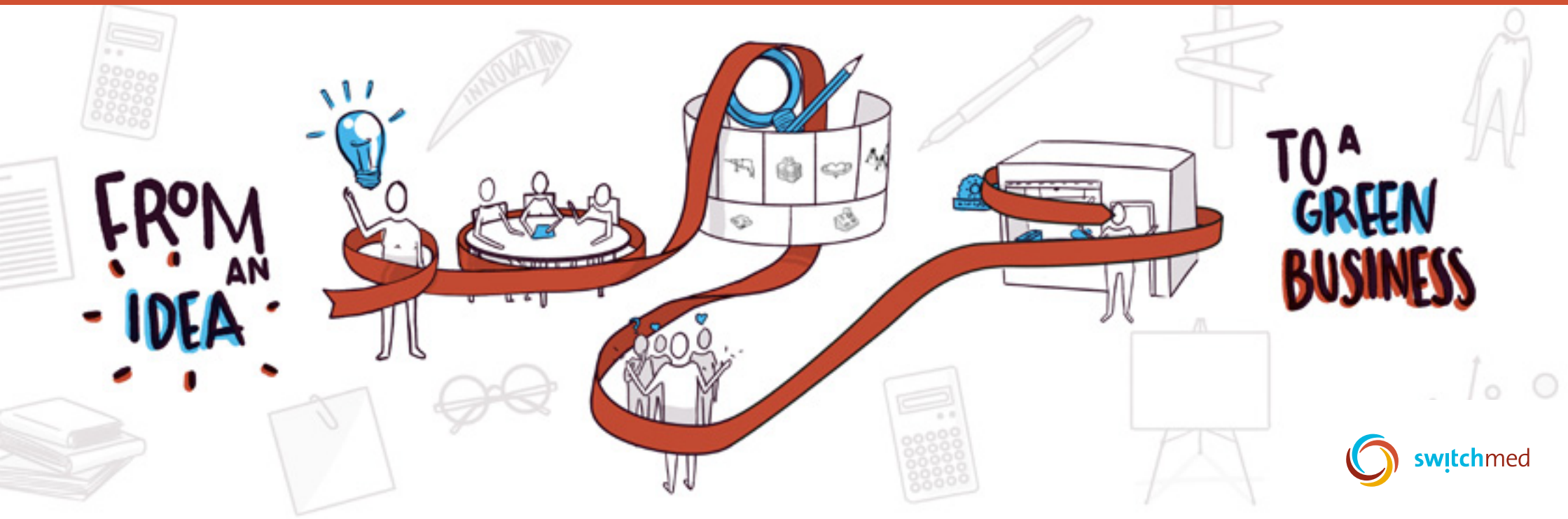


# Create your Green Business!

*The Workbook for Green  
Entrepreneurs in the Mediterranean*





# Introduction



# The Workbook

This workbook is a practical tool that will guide you through the business creation journey, from a business idea to a green business model. It is conceived from the perspective of a Green Entrepreneur that wants to take an initial business idea and turn it into a feasible green business, following a series of exercises.

The workbook is accompanied by a Handbook, which describes the methodology, the main concepts and the tools included here, and presents different examples of entrepreneurs and their businesses. [The Handbook can be accessed online in the following webpage: https://goo.gl/ChEpRh](https://goo.gl/ChEpRh) Along the workbook, you will find indications regarding the pages of the Handbook that are related to each exercise.

The exercises follow a series of steps, starting from Step 1 –‘Sketch your idea’ to Step 2–‘Build’– and Step 3–‘Test’’. After this last step, you will have developed and tested a green business prototype. The workbook does not include Steps 4 and 5 in detail, as there are already many tools and literature to develop them.

As a result of the workbook, you will define and validate a green business model, which will sum up the main outcomes of the process and could be used to draw up your green business plan.



# The case studies

To make it helpful, each step of the journey is made out of a set of questions and tools that are defined in the white pages. The whole process is illustrated in detail with one or more illustrative business cases (full coloured pages). These case studies have been selected taking into account the opportunities identified in the Middle East and North Africa (MENA) region and the diversity they offer in the coverage of different stages of the business development.

We hope they inspire you!

The energy services company in rural areas in Algeria (ESCO) business case is used as the main case study. It is explained in detail throughout the whole methodology, proceeding step by step, and trying to capture the evolution and construction of the business idea. The Textile Products and Waste Management case studies illustrate specific parts of the methodology as a means to reinforce and clarify relevant aspects of it. At the end of the document you will find a completed green business model canvas for each of the three business cases. These canvases summarize the information and results of the intensive analysis process. They illustrate the final result that you should get from this journey.



## 1. Energy services company in rural Areas in Algeria

In Algeria, more than 25% of the population live in rural areas. Although the Algerian government and Sonelgaz, the main energy supply company in the country, are showing quite some efforts to supply rural areas with urban-quality services, their electricity accessibility is still insufficient.

Hassan, a young Green Entrepreneurs (GE) living in Oran, was reading a newspaper article about solar photovoltaic new technologies.

'Maybe solar energy is a solution to supply light to my family, and their neighbors!! and they won't depend on fuel generators and kerosene anymore!'

He was so excited about the idea that he could not wait to share it with Amina and Karim...

'Guys! I have been reading about solar energy and it occurred to me that I could provide solar energy in rural areas. You know that my family lives in Ghardaïa district, and they have lots of problems with electricity supply. I have relatives there, I would have no problems going...! What do you think? Would you buy the idea for a business? Do you want to be my team mates?'

He needed a collaborating and enthusiastic team to accompany him in this arduous journey...



## 2. Electronic waste management company in urban areas

Omar had the feeling that there is some business to do on e-waste management and strongly wished to seize the opportunity but he did not know exactly where to start from. With a limited amount of economic resources and limited knowledge on environmental issues, he decided to create his own sustainable job. Omar decided to start by what appeared the simplest and the least 'risky idea': collecting e-waste, which is an activity that does not require technical abilities.

Discover how Omar tested this business idea... and succeeded!



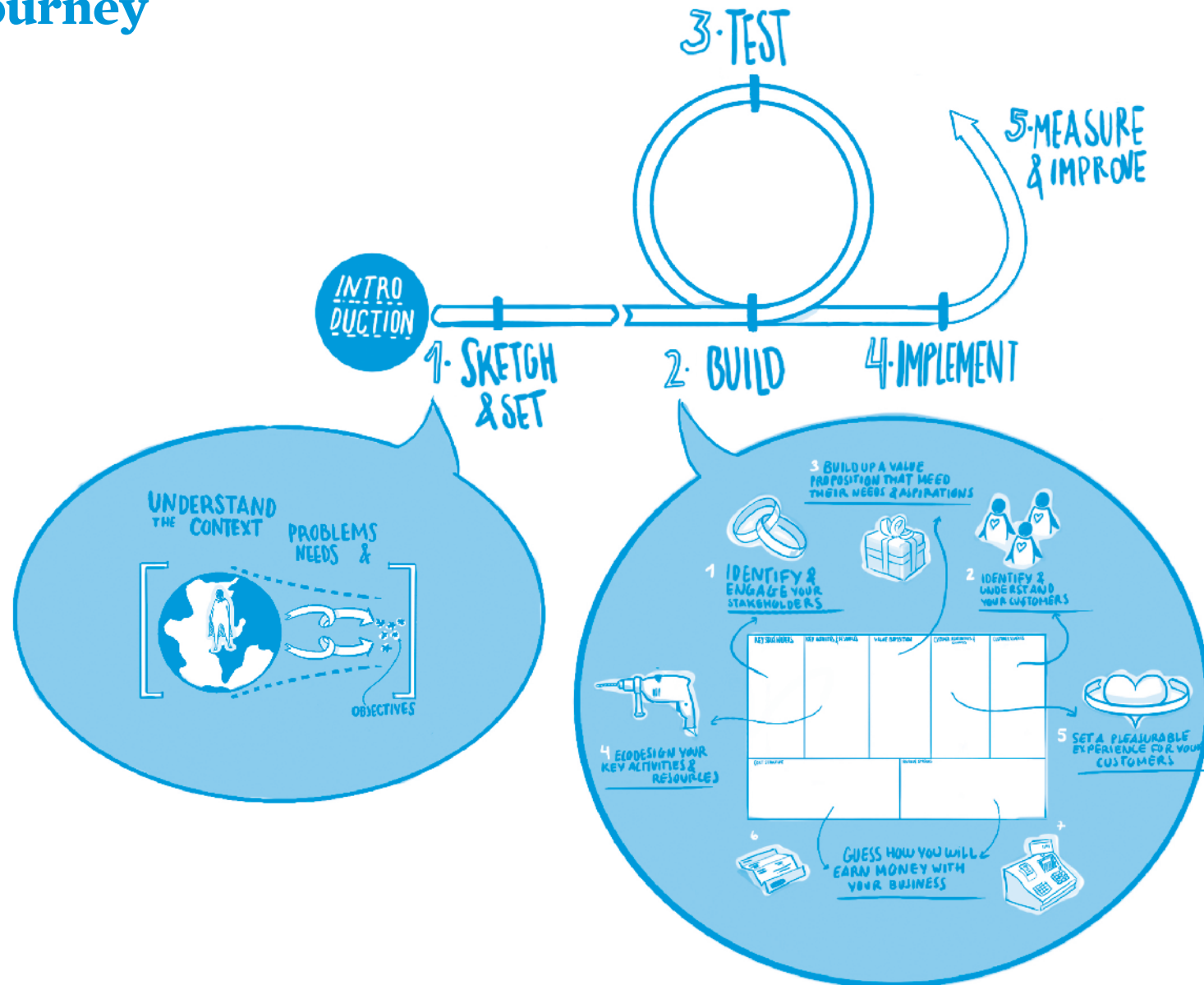
## 3. Organic cotton garments for babies made in Egypt

Khajib Alal met his wife Sofiah in 2006. After spending some years in Turkey and Spain they decided to get back to Tanta (Egypt) and setup a business together. When they met, in Istanbul, they were working in the production of cotton in organic farms in the Turkish region of Hatay (Turkey). Then they moved to Tarragona (Spain), where they worked in a small textile company, specialized in clothes for babies. There they discovered what lays behind fashion industry in terms of chemicals and other critical issues so with the birth of their first child in 2011 they got back to Tanta. In 2013, they set up Sensii with the objective of creating the first brand of Egyptian organic cotton products for babies (from 0 to 3 yo). Now they work with 5 collaborators in the textile workshop, the sales are growing up so they will be hiring more people soon. They opened their first shop in Tanta in 2014, and now they are selling online too (mostly in Cairo and Alexandria).





# The Journey





## Tips for Green Entrepreneurs

### Be ready to changing your initial idea!

Entrepreneurs normally start the entrepreneurship journey with an idea, and try to develop it as soon as possible. However, we recommend you to stop for a while and ask yourself: Why do you want to set up that business? What are the drivers behind it? Is there a different way to achieve your goals? During this questioning process, you may come up with other ideas different from the initial one. Be open-minded and think of these other ideas. Don't stick too much to your initial idea!

### Know yourself... and your limits!

Prior to embarking on the ambitious project of a business creation, you must know yourselves well: skills possessed and needed, abilities, desired work-life balance, the way we work, our relationships with others, etc. Those elements are extremely important when elaborating any business project, since they will help us anticipate the risks, failure or difficulties. According to that diagnosis, we may find relevant to partner with complementary people.

### Can I launch and run my business alone?

Depending on your aspirations, you may prefer to run the business on your own. Although this may be advantageous for some activities (hand craft, consultant ...), other more complex ones will require more resources, including human talent. In any case, it is always advisable to be surrounded by people that can take an objective look at the project. Also, working in teams and distributing work according to capacities, allows members to focus on their specialties, dramatically improving results as a consequence.

### Be a Green Entrepreneur

Whatever our deepest motivations for being a green entrepreneur are (create your own job, address a social issue, generate a new community dynamics ...), your primary goal is to create economic value by addressing an environmental issue.

### Think big!

Setting ambitious goals for ourselves can push us to reach for greater heights and do better. All of course, while enjoying each small step towards success.

### Set up a good team

Don't try to manage all the business alone. Concentrate on your speciality, in the domain you shine, and let others do what you cannot do (or do poorly). Similarly, no matter how innovative the idea may be, it is worthless if you do not sell it. And you need a good team for that, one that can deal with the core business and manage the fundamental tasks... Look around you and identify who will help you in this task and engage them! Source the best resource you need and built up partnerships.

### Identify the stakeholders

Amongst the stakeholders, you may find easier to identify your customers first. Customers, as well as other stakeholders, will have a critical role for building your value proposition, and define the structure of your business model. Do as you can to involve at early phase the stakeholders and keep in mind that some of them may be discovered later.

### Involve customers and stakeholders

Whereas involving your customers in a co-creation process is a prerequisite for the rapid success of your project, it may be tricky to get your others stakeholders into the same level or engagement. On the basis of your interviews with your stakeholders, think carefully about whom you can expect a full implication from, and rank the level of engagement, from the weakest (for example via regular feedback on the project) to the highest (co-creation).

### Think big!

We must carefully consider the needs and behaviours of the stakeholders. Also, we can find innovative solutions by involving them in the co-creation of our solution. Building up partnerships to complement our team and outsourcing less critical tasks outside the company (private companies, public research centres, clients, suppliers, universities...), are smart strategies in pursuit of effectiveness.

### Look at international market opportunities!

When identifying potential customers, don't forget to look at international market opportunities! Although marketing products internationally may require adaptations and be costly, it is an option

we should consider at a very early stage of our green business project. The potential is great in some sectors such as ecotourism!

#### **'Think economic sustainability!'**

We have to bear in mind that a green business is a business, meaning that, besides the green aspects we want to highlight, we must not forget that our client may consider other criteria to justify his/her purchasing decision, including design, cost, technical specifications, convenience, health, etc.

#### **Have a unique value proposition!**

This is the essential point of our business project. The value proposition should bring customers something new that will prompt them to turn aside from competitors.

#### **Consider the Web 2.0 revolution!**

The internet revolution has emerged as the new reality affecting social and economic life, as well as the way we do business. Most of the communication and marketing channels have a web 2.0 component. Each internet user is potentially a customer. Social networks, organised by topic, interest or affinity, are the sounding-board of marketing trends in real-time. Customers go on the internet and look for consumer reviews before purchasing. Do not underestimate the power of web 2.0 technologies in your green business model, especially when you target a market that goes beyond the local level.

#### **Partner with your supply chain**

You can also try to promote sustainability through your supply chain, pushing your suppliers to be more aware about eco-design and asking them to incorporate eco-design strategies. You can involve them in co-creation processes to align eco-design strategies towards a common purpose.

#### **Communicate wisely**

If you are interested in certifying your product you can learn more about available eco-labels, their technical and legal requirements and their costs. However, we recommend you to start easily with a self-declaration environmental claim. It is a faster and cheaper way to communicate the environmental benefits of your product or service!

#### **Alleviating startup capital**

You do not necessarily need high investments to launch a product/service. Development cost can be alleviated in different ways, as you will see later. Moreover, don't think you need to develop every part of your project: finding the right partner to outsource your activities can help you save a lot of time and money.

#### **Be aware of new business models!**

Over the last decades, a trend for a more well-reasoned consumption pattern has been regularly growing: buying local, choosing a better quality at the expense of a higher price, fostering short-circuit consumption... We are observing new patterns of consumption, that are led by environmental and health concerns. More particularly, the circular and collaborative economy tend to bring communities and actors together, around common objectives that aim at limiting the impact of and re-use resources in a more efficient way. New business models can emerge from the new paradigm of the sharing economy. This consists of moving from an economy of ownership to one of service functionality. You may be paid in proportion to the real water savings you are able to achieve thanks to your services (instead of selling water-saving devices).

#### **Don't be frightened of failure!**

Failure is a necessary step to success, so learning and improving from it is an integral part of the entrepreneurial process.

#### **Must I be rich to set up a green business?**

We do not necessarily need high investments to launch a product/service. Development cost can be alleviated in different ways. Moreover, we do not have to develop every part of the project by ourselves: finding the right partner to outsource activities can save a lot of time and money.

#### **Try hard to convince financing institutions!**

Because green markets and green business models are not stabilized yet, the finance sector may be reluctant to finance emerging green ventures. It's up to you to convince them about the economic relevancy of our project.

Whoever the financier or investor you approach may be, the meeting has to be thoroughly prepared. In 5 minutes, you should be able to explain clearly what the value proposition offered is, the clients, how the business will be profitable, and why you are the right team to do the job. If you meet potential investors, know that most often they will base their decision on personality and motivation first, on the credibility of the management team, and lastly the performance of the product/service.

Ideally, you may start mobilizing 'love money' first (from family or friends) for building up startup capital. That would ease the way towards financial institutions.

#### **Stay connected!**

The uncertain environment of our green business activity demands for constant access to up-to-date information about legal and political frameworks, competitive solutions, customers needs, costs, etc. Web-based solutions, but also direct contact with experts or clients, will help alleviate risks and formulate effective strategies. You can always do better towards continuous improvement.



# Step 1.

*Sketch and Set*

# Exercise 1

## *Sketch your business idea*

Do you have a business idea in your mind? Let's describe it!  
Sketch it by briefly answering the following questions.

### WHAT IS YOUR INITIAL BUSINESS IDEA?

1. What is your initial business idea?
2. What are you going to offer (product, service)?
3. Who may be your customers? And your partners?



## Case Study

### *Sketch your business idea*

## WHAT IS YOUR INITIAL BUSINESS IDEA?

### **What is your initial business idea?**

Provision of solar energy to rural areas, which will help to reduce poverty in these areas.

### **What are you going to offer (product, service)?**

I will offer the delivery, installation and maintenance of solar PV Systems.

### **Who may be your customers? And your partners?**

My customers may be the households with some income and small businesses. My partners could be the government, the local communities and the suppliers and technicians.

## Exercise 2.

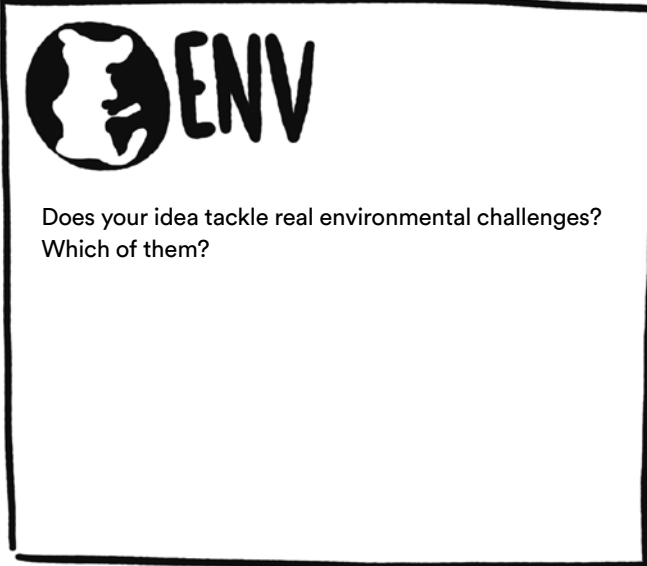
### *Identify problems and needs*


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After describing your initial business idea, it is the time to ask yourself: Why would I like to develop it? What are the problems or challenges that I want to address? What are the needs from potential customers that I would like to satisfy?

Next you will find four boxes that ask you to reflect on the environmental and social factors, the customers needs and the team motivations that push your idea to exist. Answer these questions to understand the WHY behind your initial business idea.

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 ENV

Does your idea tackle real environmental challenges?  
Which of them?



 NEEDS

What are the biggest needs faced by your potential customers?





Does your idea tackle real social challenges?  
Which of them?



What are the personal or professional drivers behind  
the business idea?



#### Note

It is extremely important that you check that these problems are real. We should avoid wasting time to develop a solution nobody needs or paying attention to an unexistent problem. We recommend you to ask and inquire about these problems and needs, in order to get a deeper understanding of them.



## Case study

### *Identify problems and needs*



- Noise from generators.
- Gas emissions from burning fuel and kerosene.
- Oil leakages.



They need a stable electricity supply because the availability of fuel to run household electricity generators is unreliable and difficult, and fuel prices are very unstable. Furthermore, energy deficiency is often seen as one of the obstacles for rural development. Without local opportunities youth tend to migrate to urban areas.



- Poor electricity access.
- Poor living conditions of rural people.
- Health problems related to environmental damage.
- Low job opportunities as a result of the situation.



- To improve the relatives living conditions.

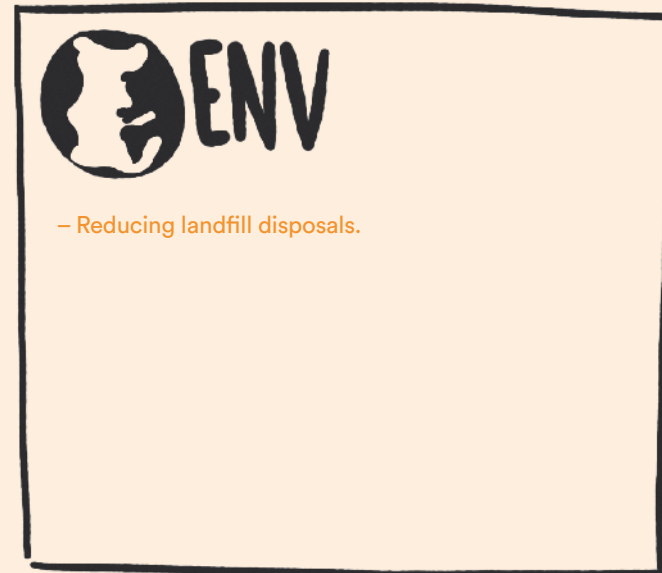


## Case study

### *Identify problems and needs*

Omar strongly wishes to seize the opportunity to do some business on e-waste management but does not know exactly the starting point. Even if he has heard about some environmental issues related to the landfills around his city, his aim is to create his own sustainable job first.

Omar decided to start by collecting e-waste, which is an activity that does not require technical abilities. Now his objective is to ensure that he can provide a collecting service of electric and electronic used appliances. And he wants to be paid for that.





The idea may help disadvantaged population to access to leisure or essential electric & electronic appliances for cheap.



– Need of a job to survive.

## Exercise 3

### *Understand the context*

After having identified the problems and needs, it is the time to zoom out and look at the local, regional and global context around your business idea. Pay special attention to those aspects that may either boost or constrain the development of your idea.

**Brainstorm:** think about the conditions, changes and trends in the local, regional and global context that can affect your business in the future. These aspects can be grouped into the following categories: Political (P), Economic (E), Social (S), Technological (T), Environmental (E) and Legal (L).

**Prioritise:** select the most relevant aspects for your business (maximum five) and write them down in the following box.

**Confront:** it would be great if you could bring some insights on how would you confront these aspects!

## WHAT?

P E S T E L

What are the aspects (political, economic, social, technological, environmental and legal) of the context that can affect your business?

## HOW IT WILL AFFECT MY PROJECT?

Can you bring some insights to confront the most relevant forces?



## Case study

### Understand the context

## WHAT?



- A. Environmental aspects: Decreased availability of metals and accumulation of toxic waste.
- B. Political aspects: Rural electrification policies and planning.
- C. Technological aspects: Improvement in the efficiency of solar panels and lack of prepared technicians for PV servicing.
- D. Economic aspects: limitations on access to credit.

## HOW IT WILL AFFECT MY PROJECT?

- A. The lack of cadmium telluride, gallium selenide and other precious metals can limit the production of solar panels, mounting systems and batteries, increasing their costs. On the other side, it will be necessary to manage solar panels at their end of life.
- B. It is necessary to involve the government in the project from the very beginning, and be aware of any new regulations coming in place.
- C. The improvement of efficiency will make the business more profitable, whereas the lack of technicians will need that we will have to train them.
- D. The lack of access to credit may compromise the start of the business. It will be necessary to work closely with Banks.

# Exercise 4

## *Set your goals*

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**Recap:** Revise exercises 2 and 3. Capture in the column ‘Problems and needs’ the most relevant problems and needs that your project is seeking to tackle. Be aware that you can also add personal or team objectives.

**Set objectives:** Reframe the problems and needs into specific objectives to solve or confront them (remember when defining the objectives the context in which you operate in).

**Measure progress:** Optionally, you can set indicators that will help you measure the progress towards the set objectives. However, this is something complementary at this stage.

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### Notes

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 **PROBLEMS  
NEEDS &**

 **OBJECTIVES**

**SOCIAL  
CHALLENGES**

What social challenges is your business idea addressing?

**REFRAME** →

Can you set specific objective(s) to tackle it (them)?

**CUSTOMER  
NEEDS**

What customer needs is your business idea addressing?

**REFRAME** →

Can you set specific objective(s) to tackle it (them)?

**ENVIRONMENTAL  
CHALLENGES**

What environmental challenges is your business idea addressing?

**REFRAME** →

Can you set specific objective(s) to tackle it (them)?

**TEAM  
MOTIVATORS**

Is there any other personal/ professional driver...?

**REFRAME** →

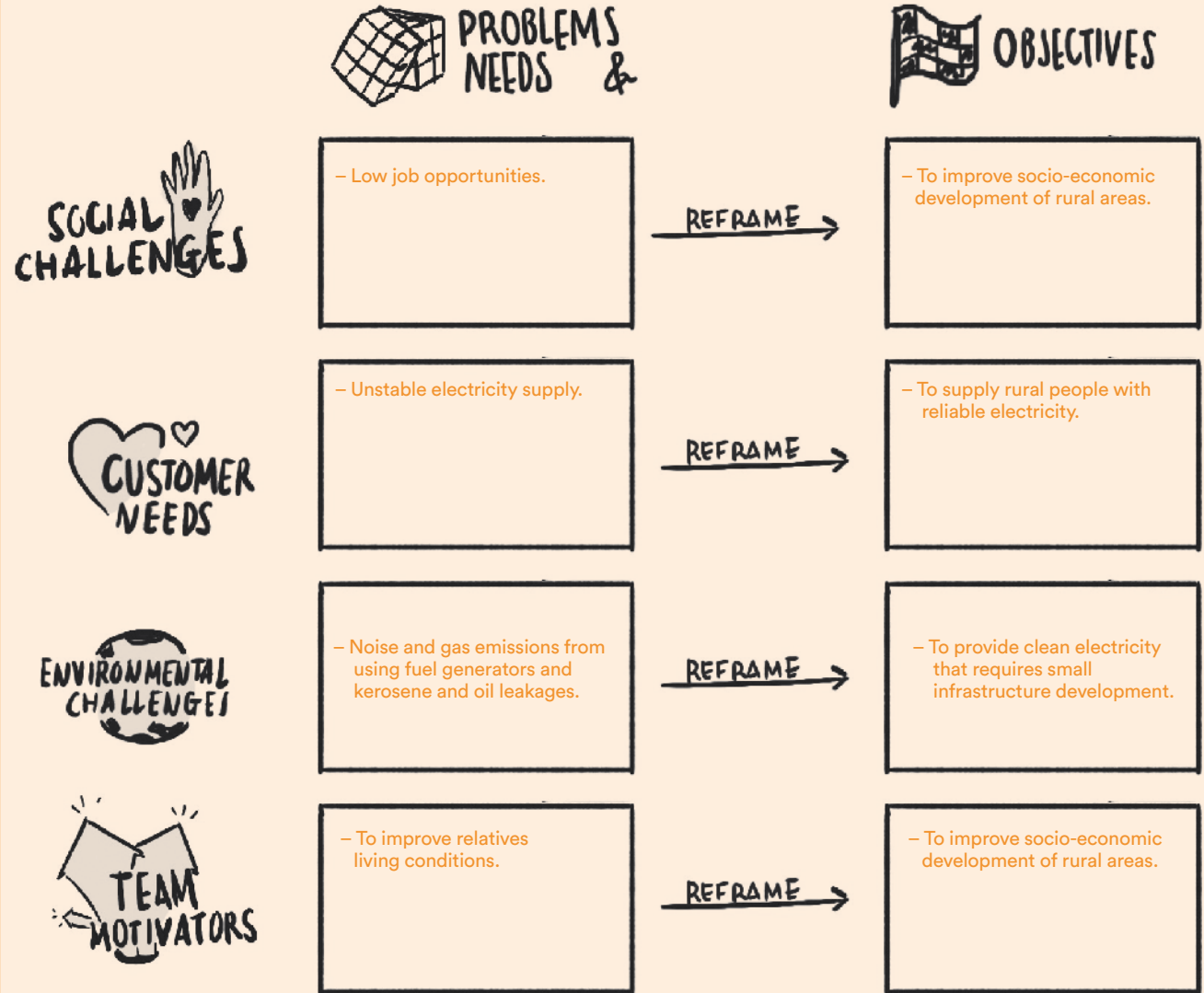
Can you set specific objective(s) to tackle it (them)?



# Case study

## Set your goals

24



## Exercise 5

### *Synthesise a mission & vision*



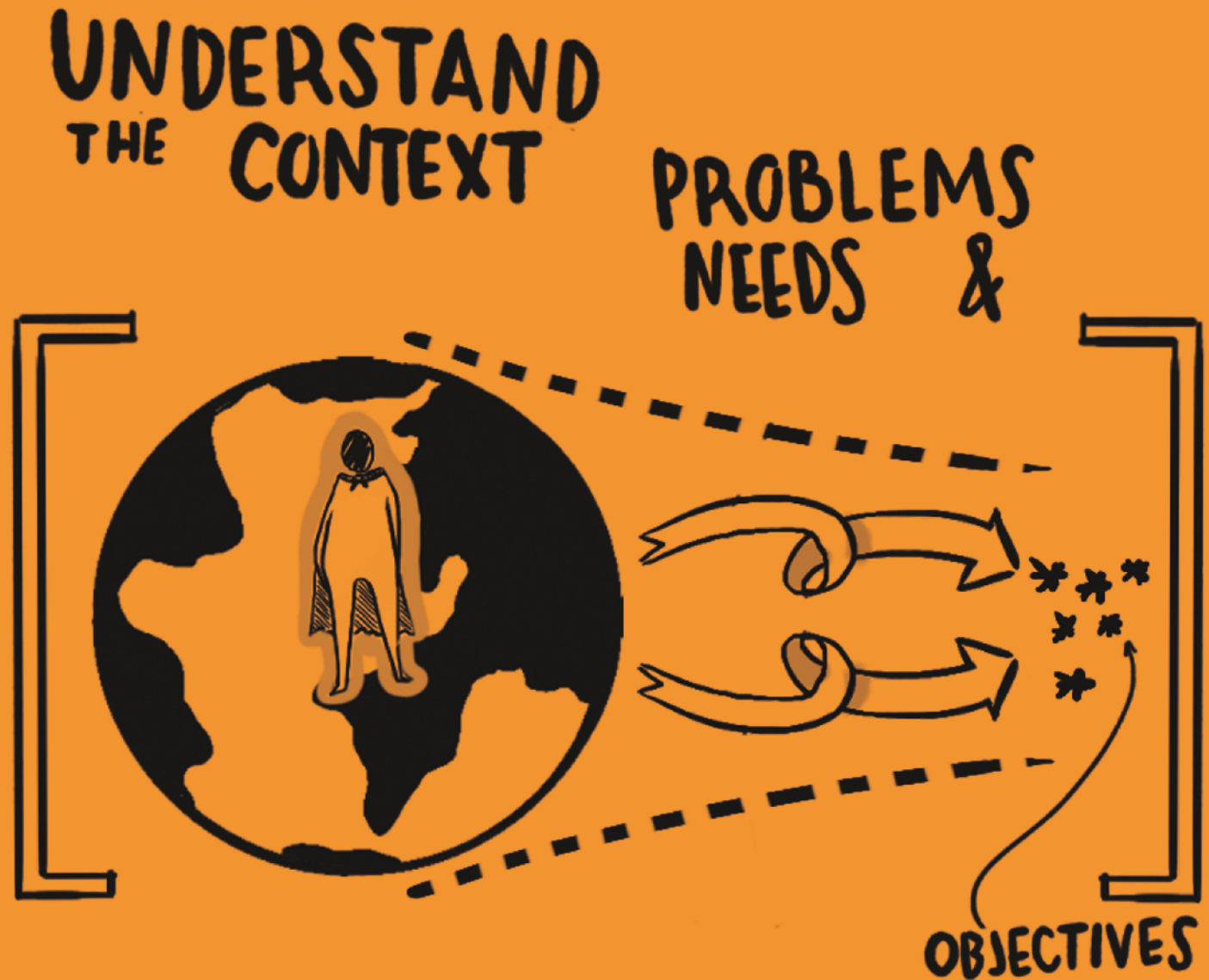
Synthesize the objectives into an all-encompassing yet simple and elegant sentence.



Envision your accomplishments in the medium-long term.  
What would you like to reach?

## Exercise 6

*Summary of context  
and objectives*



**Problems and needs**

The most relevant problems and needs tackled by the business.

**Project objectives****Understand the context**

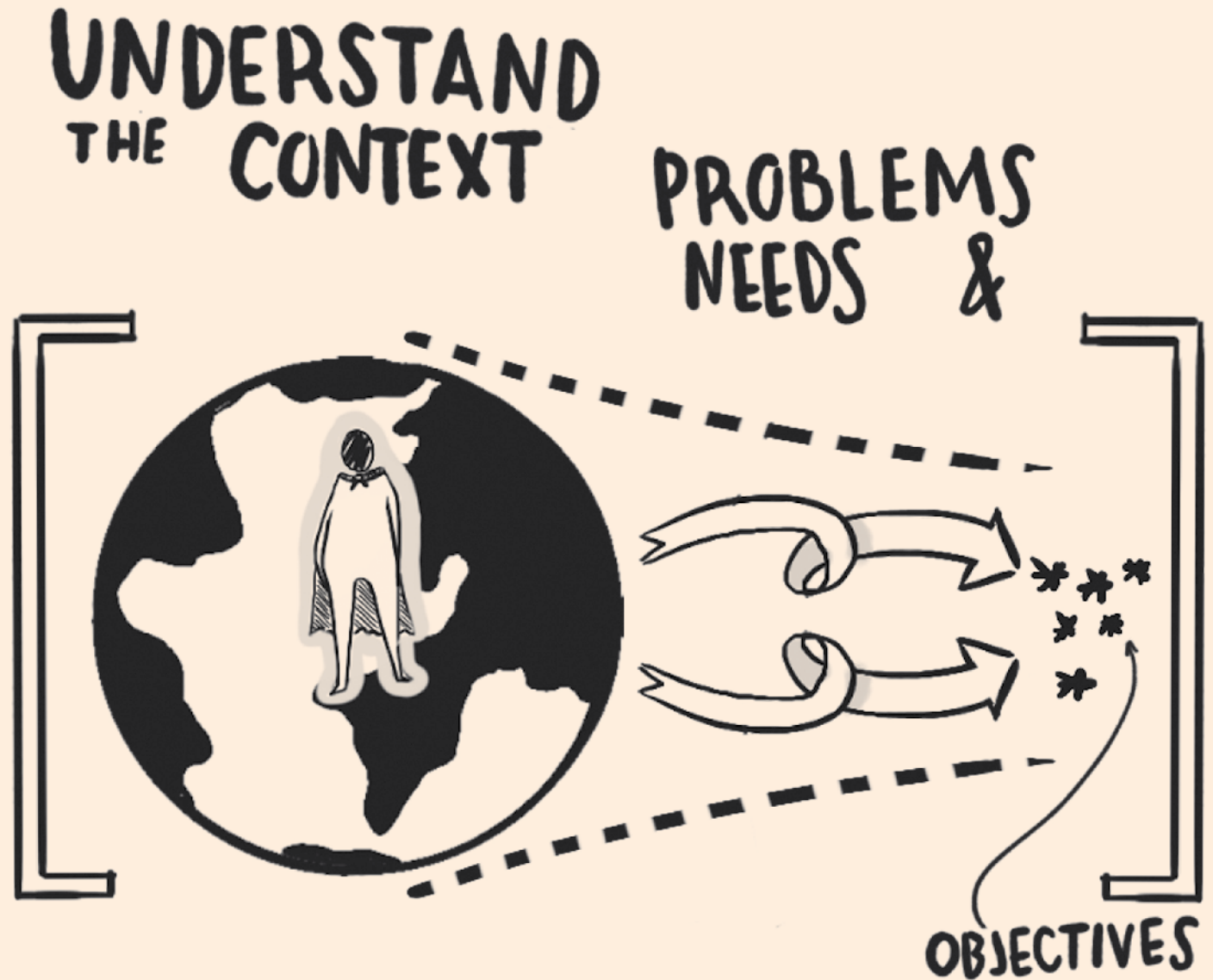
The most relevant aspects that can affect the business.

**Vision statement****Mission statement**



## Case study

*Summary of context  
and objectives*



### Problems and needs

- Environmental: Noise from generators; Gas emissions; oil leakages.
- Social: poor electricity access and living conditions because electricity is produced far away from the consumer; and job opportunities in rural areas are low.
- Customer's needs: Unstable electricity supply.

### Project objectives

1. To provide clean electricity that requires small infrastructure development.
2. To supply rural people with reliable electricity.
3. To improve socio-economic development of rural areas.

### Understand the context

1. Environmental aspects: Decreased availability of metals and accumulation of toxic waste.
2. Political aspects: Rural electrification policies and planning.
3. Technological aspects: Improvement in the efficiency of solar panels and lack of prepared technicians for PV servicing.
4. Economic aspects: limitations on access to credit.

### Vision statement

- A rural Algeria with light and better living conditions!

### Mission statement

- To supply rural people with reliable solar PV electricity in an affordable and sustainable way.





# Step 2.

*Build*

# Build your business model

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It is time to design step-by-step your business by using the Green Business Canvas:

1. Identify the customers and key stakeholders related to your business objectives (exercises 7 and 8)
  2. Create the value proposition with them (exercises 9 to 11).
  3. Identify the channels and relationships with your customer segments and eco-design the activities and resources to develop your business (exercises 12 to 15),
  4. Estimate the expected costs and revenues (exercises 16 to 18).
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## Notes

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**Note**

There is an individual Green Business Canvas sheet apart from this Workbook. You can print it in A3 size and use it to write down your outcomes as you go through the exercises!

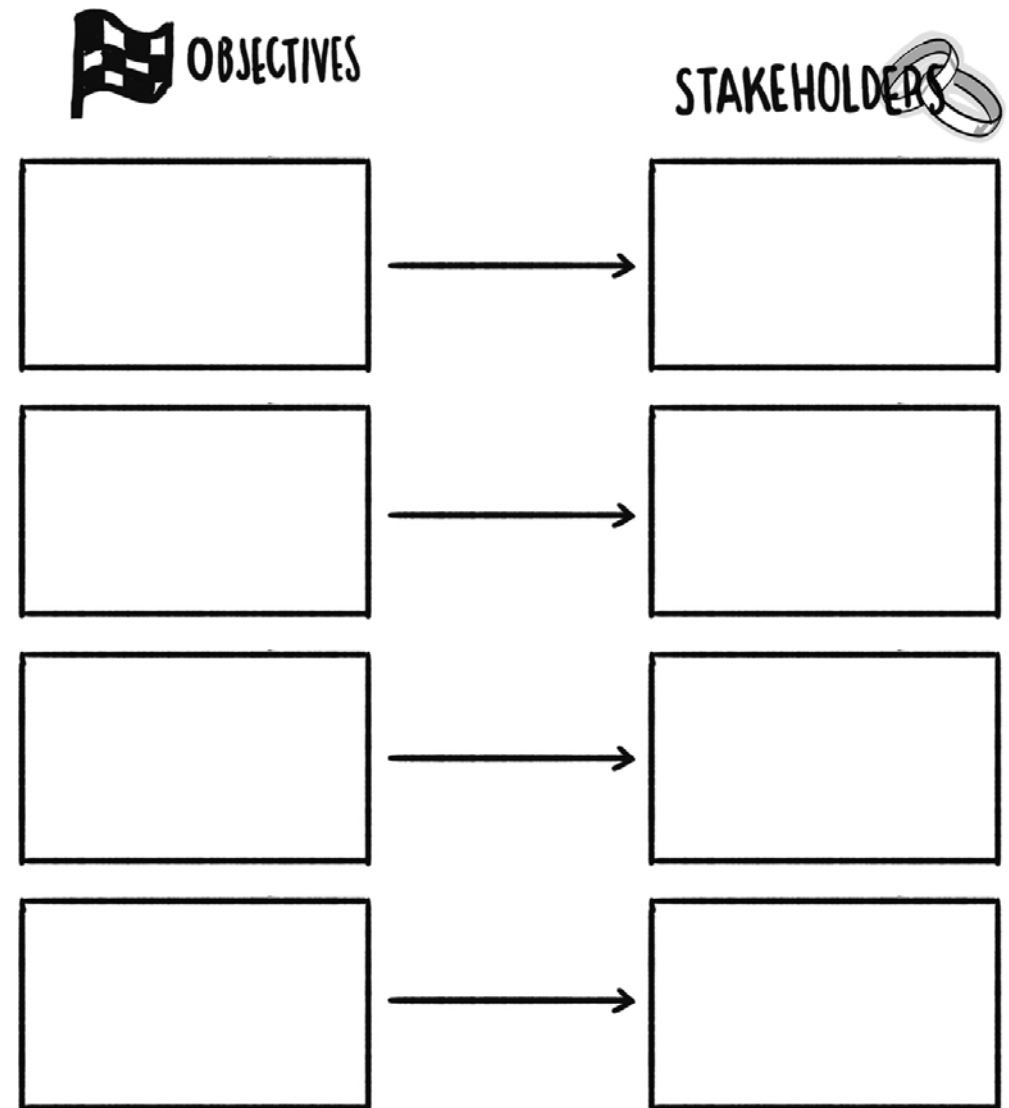
<p><b>KEY STAKEHOLDERS</b></p>  <p>Who are the main actors that are going to affect the project or can be affected by it?</p> <p>For example, team (founders and employees), partners, providers, media, local community, etc.</p>	<p><b>KEY ACTIVITIES &amp; RESOURCES</b></p>  <p>What activities will you put in place to materialize the value proposition (products or services)?</p> <p>What resources (physical, human, financial ...) will those require?</p> <p>Are there new ways to perform these activities that are less impacting to the environment?</p>	<p><b>VALUE PROPOSITION</b></p>  <p>What value does the project offer to customers and stakeholders?</p> <p>How does it contribute to the protection and/or improvement of the natural environment?</p> <p>How does your project contribute to the society?</p> <p>What is the innovation in your value proposition? Is it unique?</p>	<p><b>CUSTOMER RELATIONSHIPS &amp; CHANNELS</b></p>  <p>How will you attract and engage your potential customers, seeking to achieve sales, but also to get feedback, spread the word, etc.?</p> <p>Which channels will be most suitable for so doing?</p>	<p><b>CUSTOMER SEGMENTS</b></p>  <p>Who are your potential customers (pay a certain price for the value they receive)?</p> <p>Segment them in separate categories if they differ substantially.</p> <p>Can you innovate in the way you approach and engage customers?</p>
<p><b>COST STRUCTURE</b></p>  <p>What are the costs the project will incur into by implementing the activities using the resources needed?</p> <p>List, and if possible estimate roughly</p>		<p><b>REVENUE STREAMS</b></p>  <p>How much are your customers willing to pay?</p> <p>By comparing with similar products/services in the market, try to set approximate prices or rates for each product-customer segment pair.</p>		

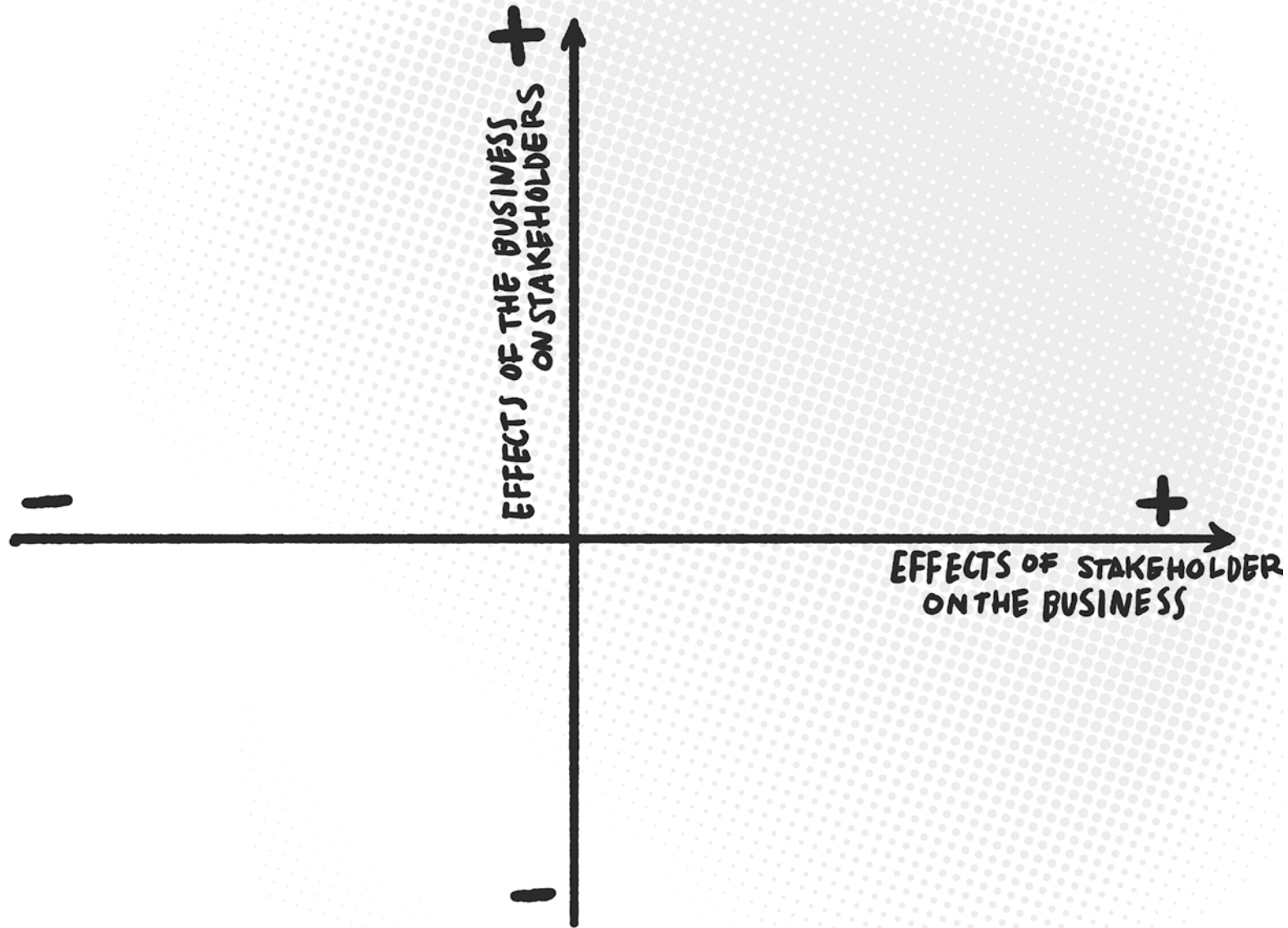
## Exercise 7a

### Identify and map the stakeholders

**Identify:** First of all, list the stakeholders that may influence your project's objectives or may be affected by them. Can you give the names of real actors and organizations?

**Map:** Place the stakeholders on the matrix according to the level of influence they have on your project and the extent in which they are affected by it. Concentrate first on the right-top quadrant. Then, choose which stakeholders placed in the left-top and right-bottom quadrants are worth paying attention to. Probably the relationships that you will establish with them will be different. Ignore the rest of stakeholders.





## Exercise 7b

### Assess the 'gives & gets'

Gather information and guess: prepare a stakeholder card for each of the relevant stakeholders that you have identified before, from the most relevant to the least.

-Assess the gives and gets and set the balance between them.

-Identify who will be willing to pay for your value, and

-Think about how you will engage with each of the stakeholders.

#### Test

Do you need to test the information that you have about your stakeholders?

If SO, you can use 'Discovery Cards' to perform research (available online). Use them to test your hypotheses and correct them if necessary. In case you validate the information included in the stakeholder card, you can tick (✓) the 'Did you validate this info?' box in the card.

STK CARD #

**WHO?**  Give the names of real actors and organizations if possible

**IMPORTANCE:** ○ — ○ — ○

What will your stakeholder gain from the project (effect)? **GET**

What will the stakeholder bring into the project (influence)? **GIVE**

GIVE (100%) | GET (100%)

WILL HE/SHE BE WILLING TO PAY FOR THE VALUE YOU ARE CREATING? YES  NO



HOW WILL YOU IGNITE IT?

**DID YOU VALIDATE THIS INFO?**

STK CARD #

WHO?

IMPORTANCE:

GIVE (100%) | GET (100%)

WILL HE/SHE BE WILLING TO PAY FOR THE VALUE YOU ARE CREATING? YES   NO



HOW WILL YOU IGNITE IT?

DID YOU VALIDATE THIS INFO?

STK CARD #

WHO?

IMPORTANCE:

GIVE (100%) | GET (100%)

WILL HE/SHE BE WILLING TO PAY FOR THE VALUE YOU ARE CREATING? YES  NO

HOW WILL YOU IGNITE IT?

**DID YOU VALIDATE THIS INFO?**

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STK CARD #

WHO?

IMPORTANCE:

GET  GIVE

GIVE (100%) | GET (100%)

WILL HE/SHE BE WILLING TO PAY FOR THE VALUE YOU ARE CREATING? YES   NO

HOW WILL YOU IGNITE IT?

DID YOU VALIDATE THIS INFO?



## Case study

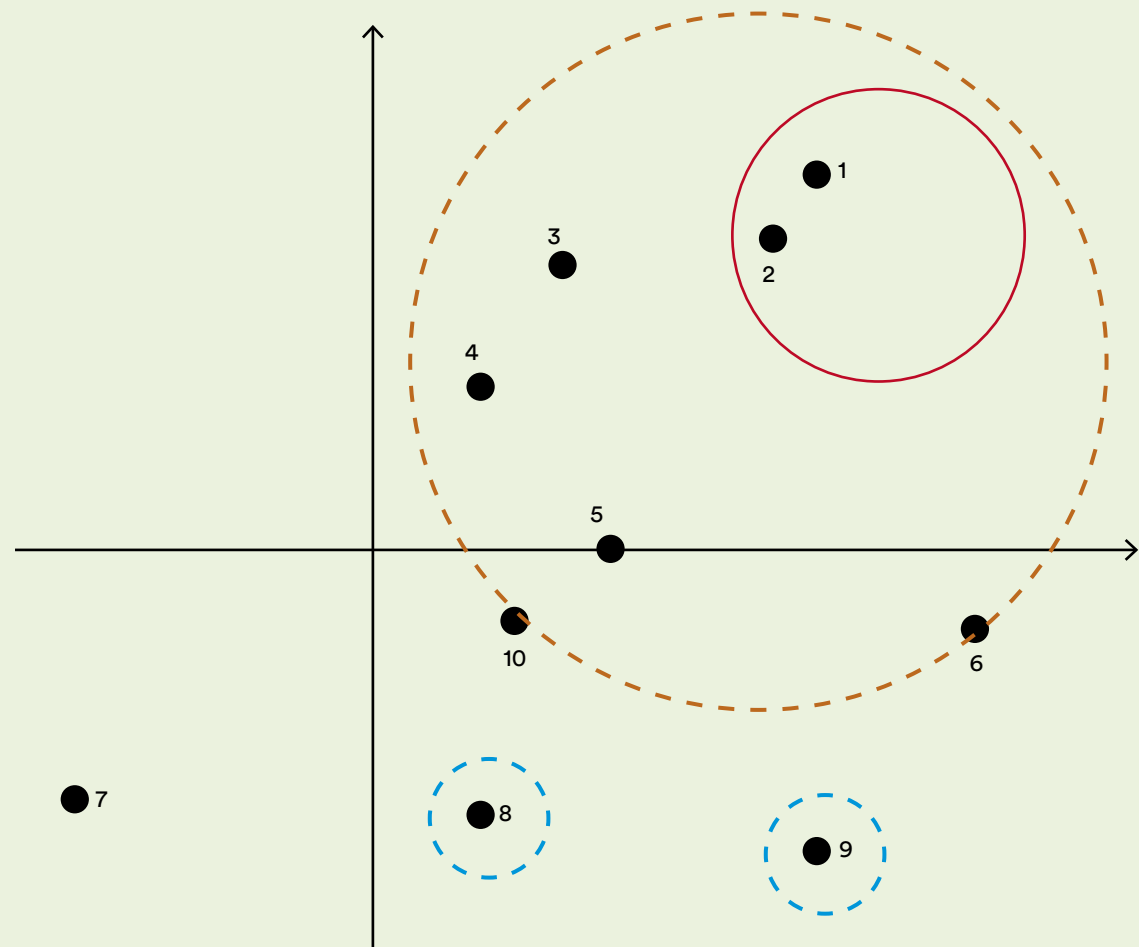
### Stakeholders

Hassan, Amina and Karim map their potential stakeholders. Before doing so they gather information from different sources (internet, friends and business people). It helps them understand better the role of different actors.

Stakeholders are classified in three groups: orange, red and blue circles, because their influence on the business varies significantly.

The orange circle includes the most relevant stakeholders, although those in the upper quadrant are more important than those in the lower quadrant. From all of them, Clients and Technicians inside the red drop, are the most important.

The blue circles highlight those stakeholders that can influence the project but that do not get much from it. Are those relevant for Rural Solar Algeria? To what extent?



### 1. Customers

STK GARD #

WHO?

IMPORTANCE: ○ ○ ○

GET  GIVE  GET

GIVE (100%) \* GET (100%)

WILL ME/SHE BE WILLING TO PAY FOR THE VALUE YOU ARE CREATING? YES  NO

HOW WILL YOU IGAIN IT?

DID YOU VALIDATE THIS INFO?

### 2. Technicians

STK GARD #

WHO?

IMPORTANCE: ○ ○ ○

GET \* GIVE  GET

GIVE (100%) \* GET (100%)

WILL ME/SHE BE WILLING TO PAY FOR THE VALUE YOU ARE CREATING? YES  NO

HOW WILL YOU IGAIN IT?

DID YOU VALIDATE THIS INFO?



# Case study

## Assess the 'gives & gets'

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### 3. Community leaders

STK GARD #

WHO?

DID YOU VALIDATE THIS INFO?

IMPORTANCE:

Direct and indirect beneficiaries of the project.

GET  GIVE

Permission or agreement. They could ban the project. In some areas CL have an important role in decision making.

WILL WE/SHE BE WILLING TO PAY FOR THE VALUE YOU ARE CREATING? YES  NO

HOW WILL YOU IGNITE IT?

Meeting them directly.

### 4. Local government

STK GARD #

WHO?

DID YOU VALIDATE THIS INFO?

IMPORTANCE:

Villagers' acceptance as they have contributed to the wellbeing of the village.

GET  GIVE

Villagers interaction. The authority to affect the project with regulatory frameworks, taxes, permits, etc.

WILL WE/SHE BE WILLING TO PAY FOR THE VALUE YOU ARE CREATING? YES  NO

HOW WILL YOU IGNITE IT?

We will meet with them to explain the project.

### 5. Renewable energy companies

STK GARD #

WHO?

DID YOU VALIDATE THIS INFO?

IMPORTANCE: ○ ●  ○

GET
GIVE

GIVE (100%) | GET (100%)

WILL HE/SHE BE WILLING TO PAY FOR THE VALUE YOU ARE CREATING? YES  NO

HOW WILL YOU IGAIN IT?

### 6. Suppliers

STK GARD #

WHO?

DID YOU VALIDATE THIS INFO?

IMPORTANCE: ○ ○ ●

GET
GIVE

GIVE (100%) | GET (100%)

WILL HE/SHE BE WILLING TO PAY FOR THE VALUE YOU ARE CREATING? YES  NO

HOW WILL YOU IGAIN IT?



# Case study

## Assess the 'gives & gets'

### 7. Community

STK GARD #

WHO?

IMPORTANCE:

GET  | GET (100%)

GIVE  | GIVE (100%)

Reliable electricity in the village.

Positive or negative attitude towards the project.

DID YOU VALIDATE THIS INFO?

WILL WE/SHE BE WILLING TO PAY FOR THE VALUE YOU ARE CREATING? YES  NO

HOW WILL YOU IGNITE IT?

### 8. Government

STK GARD #

WHO?

IMPORTANCE:

GET  | GET (100%)

GIVE  | GIVE (100%)

A Pilot project: that could be expanded into a national programme.

Financing, influence banks for initial credit, or give support. It could also act totally contrary to the project.

DID YOU VALIDATE THIS INFO?

WILL WE/SHE BE WILLING TO PAY FOR THE VALUE YOU ARE CREATING? YES  NO

HOW WILL YOU IGNITE IT?

44

### 9. Bank

STK GARD #

WHO?

DID YOU VALIDATE THIS INFO?

IMPORTANCE: ○ ●  ○

GET  GIVE

GIVE (100%) |  | GET (100%)

WILL HE/SHE BE WILLING TO PAY FOR THE VALUE YOU ARE CREATING? YES  NO

HOW WILL YOU IGAIN IT?

### 10. Electricity company: Sonelgaz

STK GARD #

WHO?

DID YOU VALIDATE THIS INFO?

IMPORTANCE: ○ ●  ○

GET  GIVE

GIVE (100%) |  | GET (100%)

WILL HE/SHE BE WILLING TO PAY FOR THE VALUE YOU ARE CREATING? YES  NO

HOW WILL YOU IGAIN IT?

## Exercise 8

### Customer segments

Go back to the stakeholders' map (exercise 7a) and identify those that will pay for your service/product. These will be your customers. Think if they are homogeneous or if you can divide them into groups depending on their characteristics. Each of these groups is called a customer segment. For each of them, you can fill up a customer card.

Customer cards include a generic description of the segment, an overview of pains and gains and a list of functions or jobs that the customer would like to have covered.

Guess! and prepare a customers' card for each of them.

#### Test:

*Do you have enough information about your customers? Do you need to test the information that you have about them? If SO, you can use 'Discovery Cards' to perform research (available online). Use them to test your hypotheses and correct them if necessary. In case you validate the information included in the customer card, you can tick the 'Did you validate this info?' box in the card.*

CUSTOMER CARD

DID YOU  
VALIDATE  
THIS  
INFO?


**SEGMENT:**

**GENERIC DESCRIPTION**

How would you describe your potential customers (users) in terms of demographics, lifestyle, and values?

**PAINS & GAINS**


---



What does your customer fear?

What does he find too costly, or what makes him feel bad? – time, money, effort, frustrations, annoyances, performance, loss of status, power, risks, mistakes, barriers, etc?

What else does your customer expect?—things that make them happy, satisfied, delighted; eg. saving time or money, quality, specific solutions, live improvement, services, self-actualisation, social status, achieving dreams or desires.

**FUNCTIONS THEY WOULD LIKE TO HAVE COVERED?** 

What does your customer need to have satisfied at a functional, social and emotional levels?


\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_




**CUSTOMER CARD**

SEGMENT:

GENERIC DESCRIPTION

PAINS & GAINS 

**FUNCTIONS THEY WOULD LIKE TO HAVE COVERED?** 


- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_


**DID YOU VALIDATE THIS INFO?**

**CUSTOMER CARD**

SEGMENT:

GENERIC DESCRIPTION

PAINS & GAINS 

**FUNCTIONS THEY WOULD LIKE TO HAVE COVERED?** 

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_


**DID YOU VALIDATE THIS INFO?**


48

**CUSTOMER CARD**

SEGMENT:

GENERIC DESCRIPTION

PAINS & GAINS 

**FUNCTIONS THEY WOULD LIKE TO HAVE COVERED?** 

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_


\_\_\_\_\_


**DID YOU VALIDATE THIS INFO?**

**CUSTOMER CARD**

SEGMENT:

GENERIC DESCRIPTION

PAINS & GAINS 

**FUNCTIONS THEY WOULD LIKE TO HAVE COVERED?** 

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

**DID YOU VALIDATE THIS INFO?**

50



## Case study

### Customer segments

The entrepreneur team has conducted some research about the area. They gathered information from the Internet that combined with their personal experience and perception from having lived in rural areas during childhood. Hassan talked with his relatives.

CUSTOMER CARD

**SEGMENT:** Rural households and Small Businesses

**GENERIC DESCRIPTION**

The demographics in Ghardaïa district are low (population of 93.423). Our potential customers live from agriculture or small and medium size business. Most of them are aged, since youth tends to migrate to bigger cities. Therefore they are traditional people, with few expectations and sometimes with the feeling that they are not fully connected with the rest of the world.

**PAINS & GAINS**

**Pains:**  
To be different from others in the village.  
Having to deal with technical problems related to the maintenance or supply of solar PV systems, complex protocols, legal issues, etc.

To lose money or to be unable to cover upfront investment costs. Theft.

**Gains:**  
To save money; to improve businesses and livelihood; connection with the modern world.

**FUNCTIONS THEY WOULD LIKE TO HAVE COVERED?**

- To have a stable electricity supply.
- Light their households or run their business.
- Security.
- Raise the profile of their children.
- Improve their well being.

**DID YOU VALIDATE THIS INFO?**



## Case study

### Customer segments & test

52

Do you remember Omar? He had a rough idea about doing a business in e-waste management. In order to develop his idea, he opted for a prudent approach, since he does not have much money to invest today.

Reading the newspaper he picks up an element that draws his attention: 'public administrations need to upgrade their computer equipment'.

—Oops, could they be my customers? Normally, they may dispose the computers in landfills located in the inner suburbs of the city. By which means are they going to dump them? How do they plan to renew their outdated equipment? How long will it take? Is there any department in charge of that? How many computers are concerned? Why would they need me?

For his peace of mind, Omar decides to arrange an appointment with a person in charge of hardware within the Tax Office of the region. When he arrives, he expects to meet the head of the hardware and general affairs department, but he quickly realises that he is talking to an employee named Djamel. Finally, he finds this situation very pleasant, and the discussion with Djamel becomes friendly. Leaving the Tax office, he is very happy! he has got all the elements he wanted know better who can be his customers, especially, what are the functions they want to have covered.

### DISCOVERY CARD

INTERVIEW /  OBSERVATION

#### PARTICIPANT'S DATA:

Djamel, from the Tax Office

#### WHICH THINGS DID PARTICIPANTS SAY/DO THAT SURPRISED YOU?

The Tax office has 500 outdated computers, one third to be renewed in 2 months, and the rest by the end of the year. Djamel is the person in charge of taking the computers to the landfill. He will dedicate 3 days to this task: he is given a very small car, and the landfill is at the opposite side of the city.

#### WHICH THINGS MATTER MOST TO THE PARTICIPANT?

Djamel admitted that he is not comfortable with the idea of dumping equipment, but he has to follow instructions. Also he considers that it is wasted time, because he simultaneously needs to install the new machines, moreover very urgently.

#### WHICH MAIN THEMES OR LEARNINGS STOOD OUT FROM THIS INTERVENTION?

#### WHICH NEW TOPICS OR QUESTIONS TO EXPLORE IN FUTURE INTERVENTIONS?

#### NOTES:

What will Omar offer to his *customers*? He will collect the computing equipment instead of Djamel. He will go himself to each office to carry away each computer station, previously unplugged by Djamel. He will then bring them to landfill, using his own car equipped with a trailer. He guesses that he would need one full day for that. He expects to be paid the average amount of 3 days Djamel' work.

#### OTHER

#### WHAT DID I LEARN ABOUT...

The typical needs of an institution similar to the Tax Office?

Not only it is a real need, it is an urgency! I could satisfy the needs of the tax office very efficiently and I get money in return. There is no reason for which I could not provide similar services to other organisations.

Djamel needs to find a solution to get rid of outdated computers used at the Tax Office. There is no much space available to store them, so he needs to put them into landfill as soon as he takes delivery of new ones.

Omar rings Djamel to explain the service he wants to offer, according to their last discussion. Djamel suggests Omar sends him a quotation of the first third of the computers to be collected. Two weeks later, Djamel calls Omar back: his manager accepts the proposal!

After the meeting, Omar must reconsider the problems and needs behind his business idea:



### Note

Initially Omar met Djamel with the objective to understand better the typical needs of an institution similar to the Tax Office. However, he's got more than that: he's just been co-creating a service proposal together with his first customer! The step 'Test' has been therefore very short in time, and, most importantly, has been in real size. The prototyping phase has been extremely short.

## NEEDS

Finding solutions to dispose outdated computer equipment.



Through that operation, Omar is not going to tackle real environmental challenges.



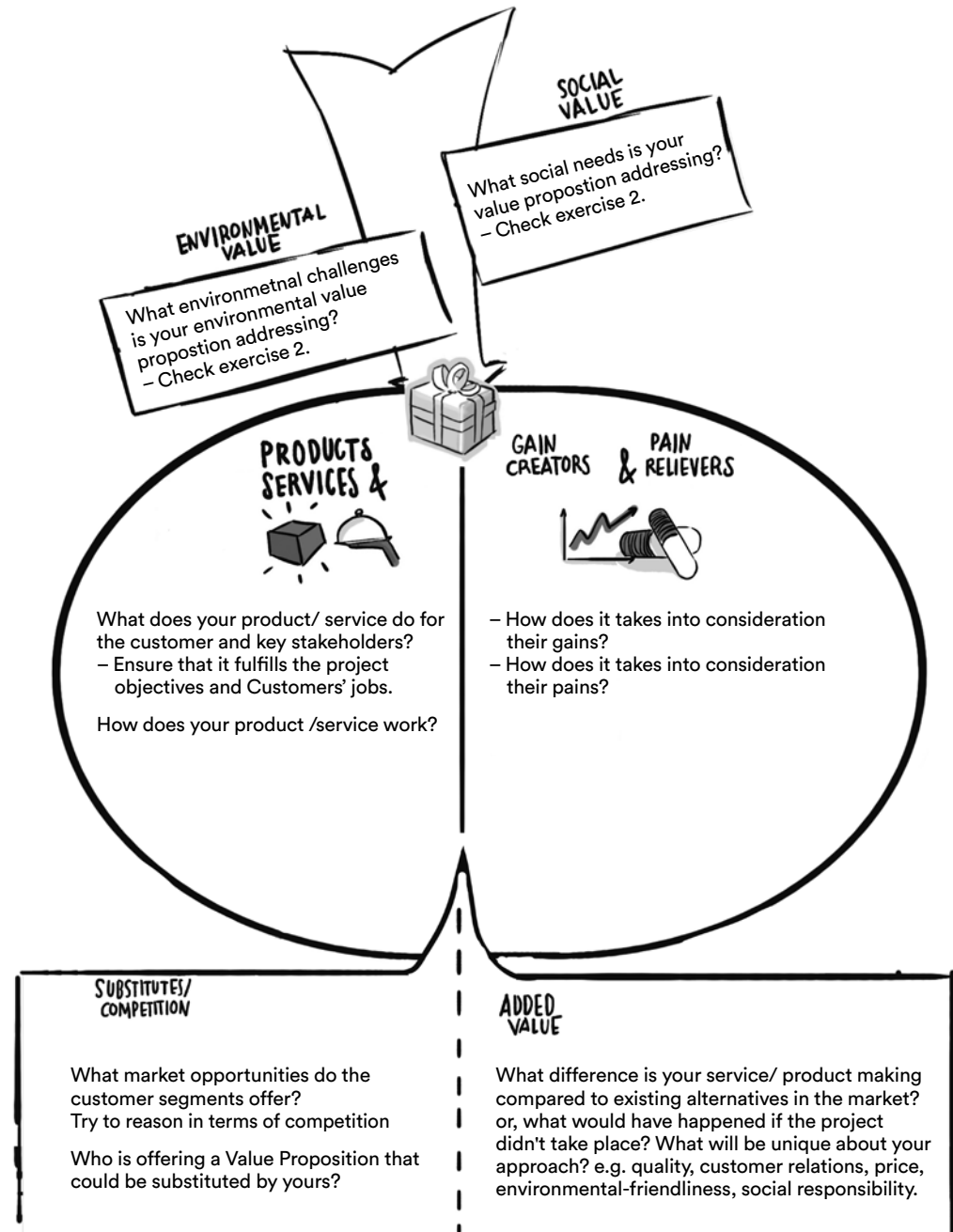
The idea may help disadvantaged population to access to leisure or essential electric & electronic appliances for cheap.

## Exercise 9

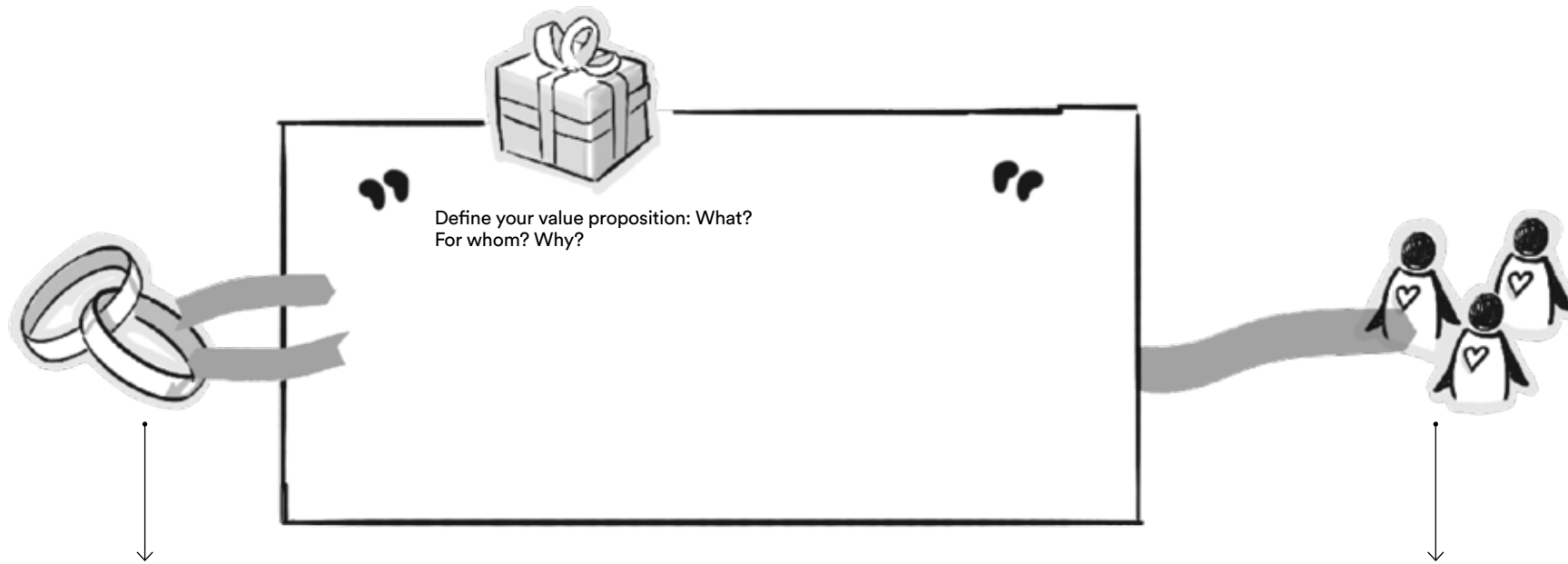
### Value proposition

Start defining your value proposition.

At this stage you have gathered enough information. You've got the project objectives, a vision and a mission for your business, the customers' segments, their gains, pains and jobs and the stakeholders. Use it!







Sythesize the main findings about your key stakeholders.

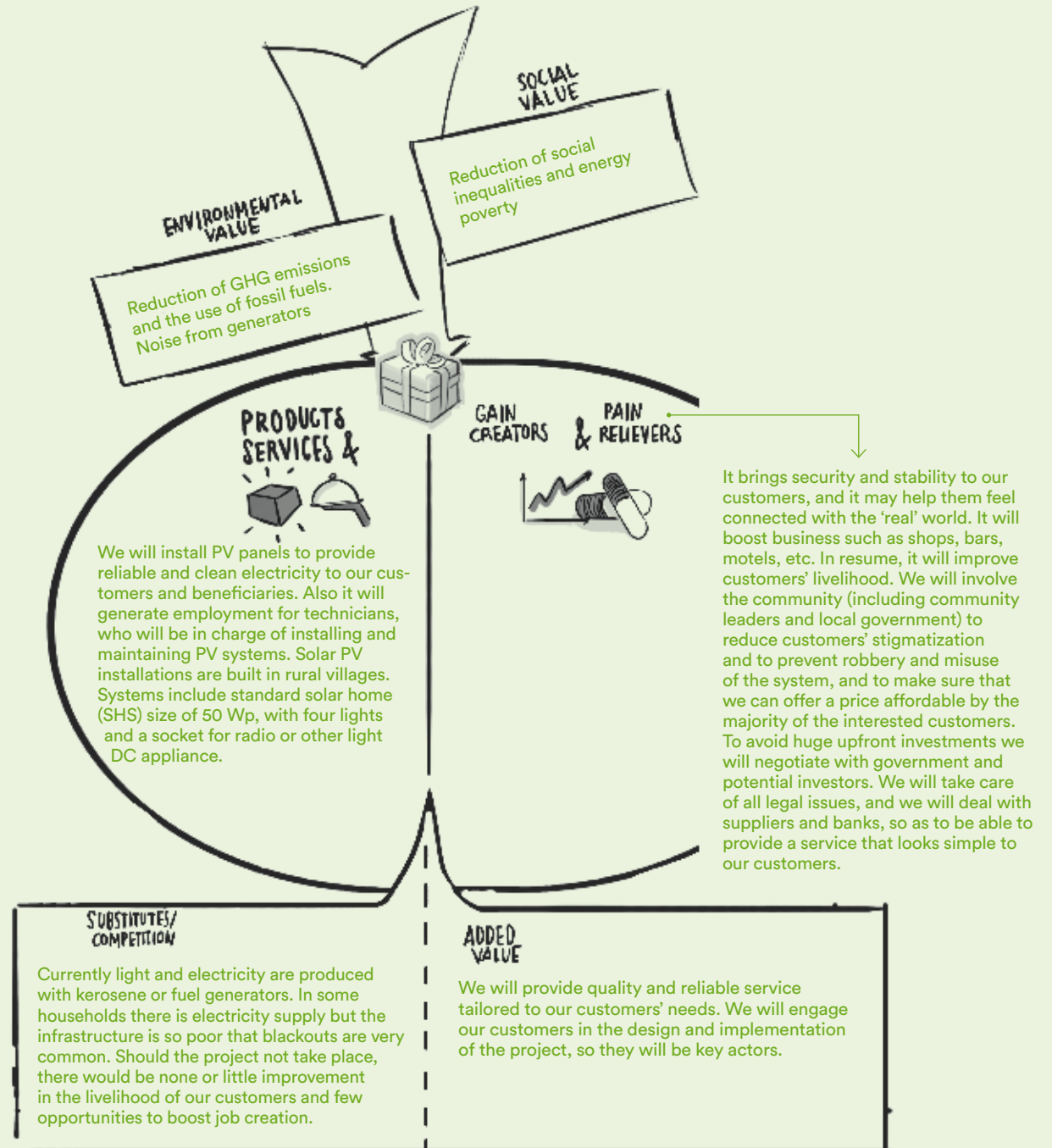
Sythesize the main findings about your customer segments.

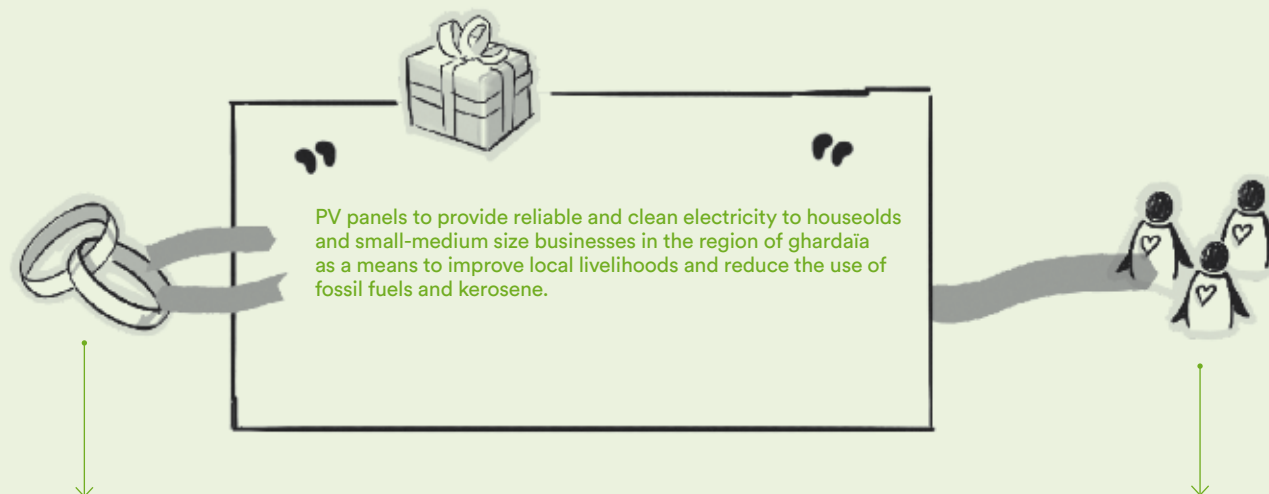


## Business case

### Value proposition

So far Hassan, Amina and Karim have not engaged with customers and stakeholders, neither they have visited the villages where they are planning to start the project. They've guessed about their needs, gains and pains to define their value proposition. At some point they will have to verify that their assumptions are correct.





**Technicians:** Co-creation; employment, supervise PV systems.

**Community Leader:** Co-creation & Feedback; Beneficiaries, decision making.

**Local Government:** Feed-back; villagers satisfaction, regulatory frameworks.

**Suppliers:** Partnership & customer provider; provision of solar PV systems.

**Renewable energy companies:** competitors.

**Government:** Partnership; pilot project-influence other stakeholders, legislation.

**Bank:** Partnership; clients-credit and fee collection.

**Sonelgaz:** competitors, improve electricity infrastructure.

**Community:** Feedback; beneficiaries, attitudes towards projects.

**Segments:** Rural households and small businesses- co-creation.

**Profile:** Low population, low income, willing to improve opportunities of their children and businesses. They don't want to deal with legal and technical issues. Should they feel the project is complex to develop they won't go for it.

# Test

## *Key stakeholders Customer segments & Value proposition*

It is time for a TEST!

As a means to improve the value proposition and to bring it closer to real needs and expectations, you want to co-create your value proposition with your customers and maybe some stakeholders, and at the same time look for information on similar projects.

Maybe you have already done one or more tests. If so, just complement them!

Go to the field to observe, talk and enquire! Get as much information as possible about the area where you will base your business, your customers and your stakeholders. The test is divided into two exercises:

10a—Design the test

10b—Carry out the test and get results

## Exercise 10a

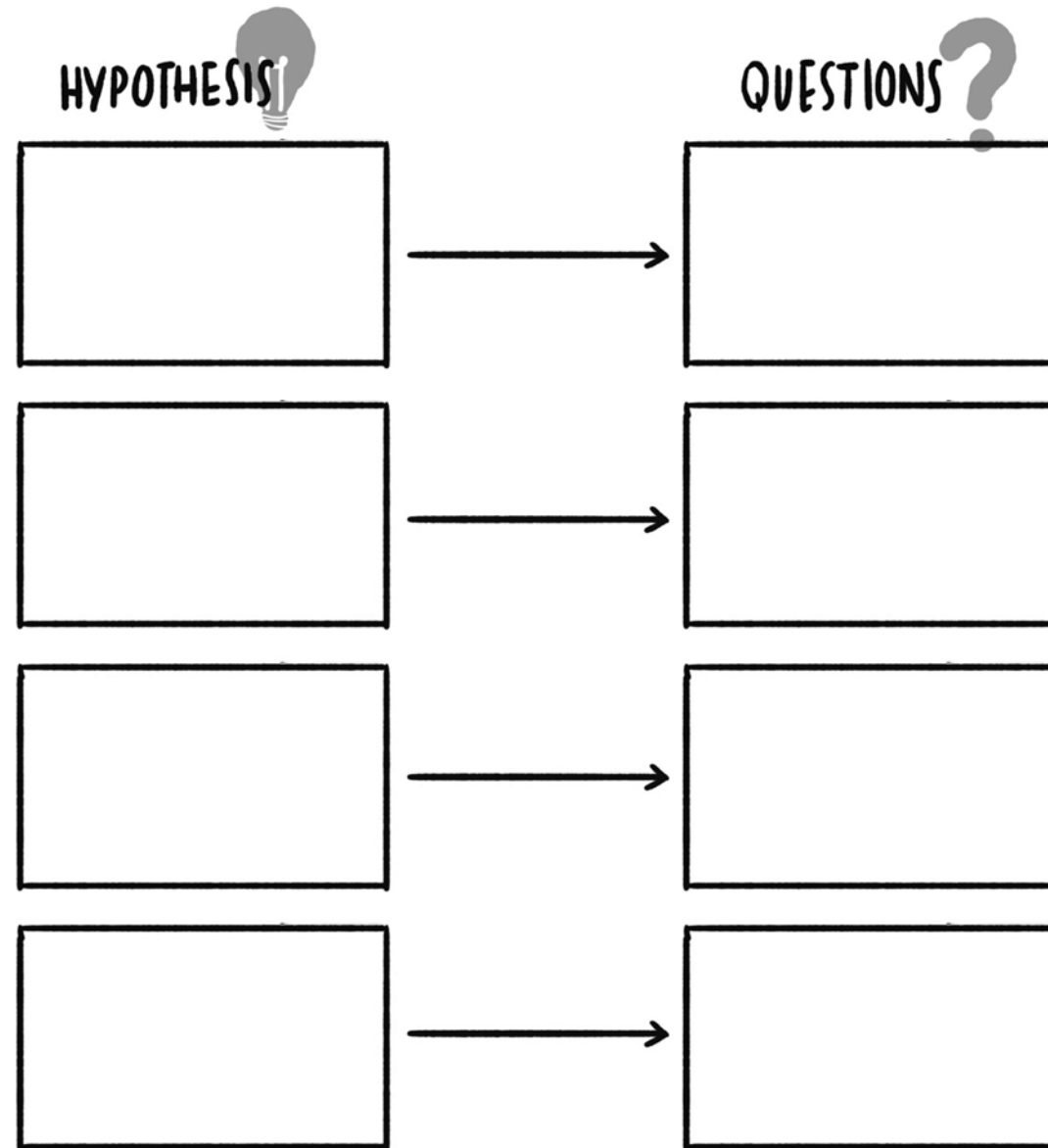
### *Design the test*

Recover the Customers' and Stakeholders' cards that you prepared and select those still needing validation. Review your project objectives and the Value proposition. Identify those hypotheses (assumptions) that need to be validated and formulate questions that will help you to contrast them.

Some issues that you may want to validate are the following:

- **Objectives:** are those based on real needs?
- **Customers:** segmentation, needs, pains, profile, sensations, involvement.
- **Stakeholders:** identification (no one is missing?), Involvement, gives and gets.
- **Value proposition:** customers' satisfaction and willingness to pay, market and competitors.

Select the most appropriate channels to reach and interact with your customers and stakeholders – interviews, debates, meetings, consultation, etc. as a means to validate your assumptions.



## Exercise 10b

### Carry out the test and get results

Go out and talk to your customers and stakeholders and ask them about your questions.

Use the *Discovery* card to capture the information that you collect from interviews or observations. You may indicate data about the participant, take notes and sum up your learnings.

Remember to use the *Validation* check boxes. The customer and stakeholder cards have a validation box on the upper right corner. After the test, you may need to correct some information in these cards. Go back to the cards, correct them and then you will be able to check the validation check box. Similarly, if you validate the hypotheses in the cards, you can also check the corresponding validation check box.

In the next exercise (11) you will be able to reframe the whole value proposition.

**DISCOVERY CARD**

INTERVIEW /  OBSERVATION

### PARTICIPANT'S DATA:

**WHICH THINGS DID PARTICIPANTS SAY/DO THAT SURPRISED YOU?**

**WHICH THINGS MATTER MOST TO THE PARTICIPANT?**

**WHICH MAIN THEMES OR LEARNINGS STOOD OUT FROM THIS INTERVENTION?**

**WHICH NEW TOPICS OR QUESTIONS TO EXPLORE IN FUTURE INTERVENTIONS?**

**NOTES:**

OTHER

**WHAT DID I LEARN ABOUT... ?**

**DISCOVERY CARD**

INTERVIEW /  OBSERVATION

**PARTICIPANT'S DATA:**

WHICH THINGS DID PARTICIPANTS SAY/DO THAT SURPRISED YOU?

WHICH THINGS MATTER MOST TO THE PARTICIPANT?

WHICH MAIN THEMES OR LEARNINGS STOOD OUT FROM THIS INTERVENTION?

WHICH NEW TOPICS OR QUESTIONS TO EXPLORE IN FUTURE INTERVENTIONS?

**NOTES:**

OTHER

WHAT DID I LEARN ABOUT... ?

**Notes**

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## Case study

### Test

Hassan, Amina and Karim are aware that the information they have about customers, stakeholders and value proposition is founded on mere assumptions based mainly on some internet research and Hassan's personal and family background.

But, are these assumptions correct? Hassan asks Amina and Karim.

Solar Rural Algeria team decides to go out to the villages where the project was to be implemented to perform a first survey. Before leaving they prepare the visit thoroughly.

We must capture everything!! And we must be efficient as it costs us money...

The team sits down to decided what to assess.  
First and most important:

**Is it real that the electricity access in these areas is poor and people rely upon kerosene and oil generators?**  
(it is the assumption underpinning the whole project).

Should this assumption be confirmed, they would go a step forward in discovering the pains and gains behind customers' decision and the real demand for better electricity supply. They also consider important to approach some of the key stakeholders. Specifically local government, bank and government. They will meet with each of them to explain their

idea and to gather information on possible infrastructure plans in the area, and their willingness to participate and/or support the project.

At arrival in the first village Solar Rural Algeria team looks for the community leader. They want to introduce him the project, as he is one of the most respectful persons in the village. This first contact is key to get an impression on the acceptance of the project.

Mr. Salim seems very excited about the idea. He owns a small bar in the village and once and again he lacks sufficient electricity to cool the beverages. And most days he has to close at sunset... because there is no electricity supply and he can't find any petrol for the generator... He can see in the project a solution to his daily struggles!!!

Mr Salim encourages the team to explain their project to the village and he organizes a public meeting for the next day. He invites all men to listen about the project. – Would they become as excited as he is?

At the meeting Rural Solar Algeria uses the discovery cards to gather information. They prepare some questions to launch and guide the debate. They aim to learn about villagers' interest on PV systems, but they are also interested in people's body language, particular experiences, and new learnings.



## DISCOVERY CARD

**INTERVIEW / OBSERVATION**

### PARTICIPANT'S DATA:

Village meeting – Observations from conversation with small business owners and men.

#### WHICH THINGS DID PARTICIPANTS SAY/DO THAT SURPRISED YOU?

Some people are not clear about PV systems, as they are not familiar with this jargon.

They don't want to own the solar home systems!

#### WHICH MAIN THEMES OR LEARNINGS STOOD OUT FROM THIS INTERVENTION?

We needed to engage some local companies, ideally from the villages where we will work or their surroundings, in order to ensure proper service and maintenance locally. We have been told that without this explicit conditions, urban-based companies tend to pluck the grapes as long as there is fresh subsidy to be harvested, then to disappear after the project.

#### NOTES:

There are several local companies in the village that we must approach while here.

**OTHER** General observations

#### WHAT DID I LEARN ABOUT...

Reduction of fuel and kerosene use is not seen as a big advantage in terms of money. At sunset most households are dark! also the streets are poorly illuminated. Small businesses rely on fuel generators to deliver services after dark although it is not always available.

#### WHICH THINGS MATTER MOST TO THE PARTICIPANT?

Some families envision this project as a great opportunity for their children to study after dark. Clients want to enjoy the benefits of electricity without actually owning the system; they don't want to become experts on solar PV technicalities. Subsidies are not reliable and won't ensure the economical sustainability of the project, neither the participation of clients. Money is an issue, and costs are to be kept as low as possible.

#### WHICH NEW TOPICS OR QUESTIONS TO EXPLORE IN FUTURE INTERVENTIONS?

The technicians that we anticipated as being part of the project may not be able to participate, because we need technicians based in the local villages or surroundings and working for our partner companies. Are we going to find them? Probably a need for training arises.

Based on the findings, the solution creates high value for family households, and small and medium business owners (shops, restaurants...) in Ghardaïa district from Algeria because it provides stable electricity and reduces the dependence on kerosene and fuel. After the village meeting, those potential customers that seem more enthusiastic with the project were shops, bars, restaurants and motels owners in the otherwise dark rural surroundings. Also, some families envision this project as an opportunity for their children.

# Exercise 11

## *Pivoting the value proposition*

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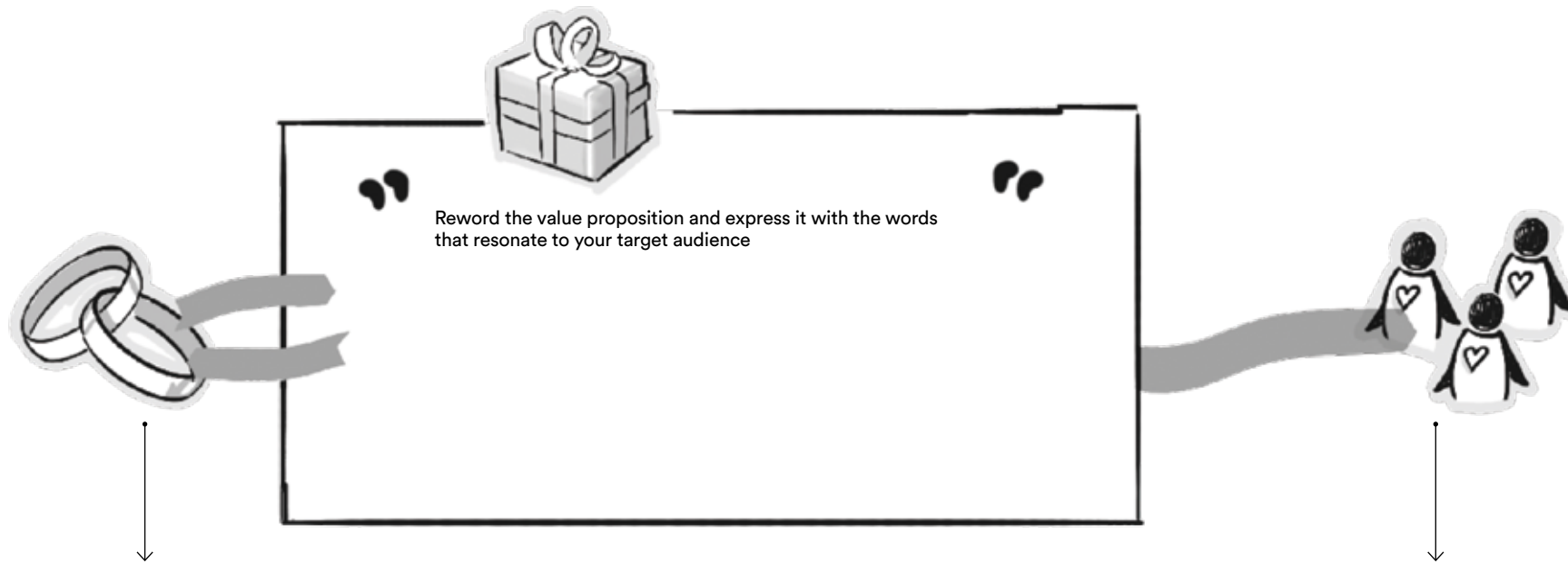
At this stage you have contrasted your assumptions and you have gathered information from your customers and key stakeholders. Probably you have discovered something or you have learned some lessons. You must integrate all these into your value proposition.

What will you modify from your value proposition in order to incorporate the input gathered?

---

### Notes

---



Have you missed any key stakeholder that could be necessary to fulfill you customers' needs? What about the gives and gets balance?

Who are indeed your first customers? Do they match the profile you were expecting? Is there any relevant need, expectation, gain or pain to be taken into account?



## Case study

### *Pivoting the value proposition*

Rural Solar Algeria discovered, as one of the most relevant pains to take into account, that customers did not want to buy PV solar systems. Also, the price their clients were able to pay for the service was low. Subsidies were not reliable to ensure the economical sustainability of the project nor the participation of clients in it.

To overcome these downsides they had to find a way to provide electricity without the need to buy PV systems and to increase the revenues in order to reduce prices. Hassan, Amina and Karim were looking for a solution... what could they do?!

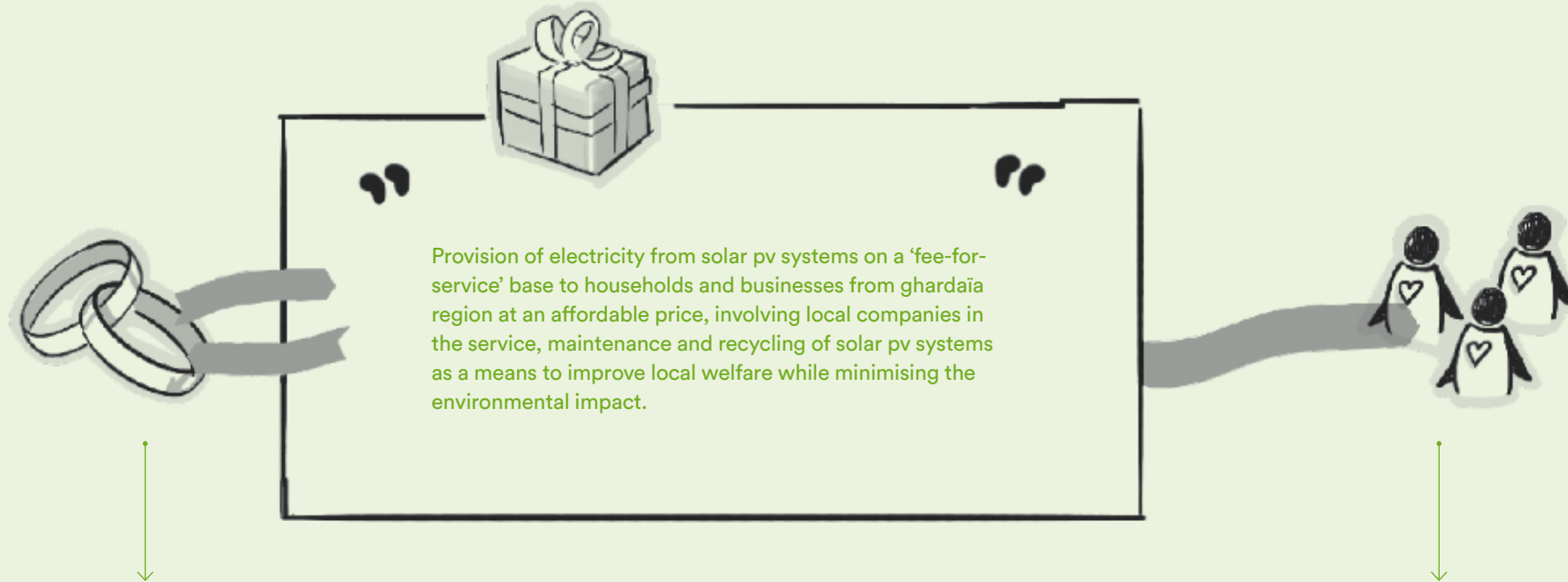
'Maybe if we recycle PV systems we open another revenue stream that contributes to reduce the price of our service and our dependence on external subsidies'... said Amina. But, what are we going to do to provide energy if they don't want to buy PV panels?

Simultaneously, PV recycling will help bypass one of the systemic boundaries of the project that on the long term could bounce with a negative effect, the accumulation of toxic and non-toxic waste in the villages after the life-span of the PV systems.



#### Note

Up to know the value proposition was a product (selling of PV solar panels). After this first test, the fact that customers state that they won't purchase solar PV systems, obliges Solar Rural Algeria to look for an alternative solution. They resolve it offering a service instead: they will provide electricity on a Fee-for-service basis.



#### New stakeholders—local companies

We realised that we needed to involve local companies, ideally from the villages where we will work. They would be our partners to overcome one of the main problems for rural clients, which is the dearth of access to service and maintenance locally. We have been told that urban-based companies tend to disappear after the project.

While in the area we had the chance to talk and involve two companies: one is a women farmer's cooperative, and one is devoted to waste management.

Clients want to enjoy the benefits of electricity without actually owning the system; they don't want to become experts on solar PV technicalities. One of the main problems for rural clients is the dearth of access to service and maintenance locally. Money is an issue, and costs should be kept as low as possible.



## Case study

### *Pivoting the value proposition 1/2*

Let's go back to Omar!

He performed his obligations very efficiently and got money in return from the Tax office. To him, there was no reason for which he could not provide similar services to other organisations. Omar remembers that the Tax office has still more than three hundred computers to be collected by the end of the year. And some thoughts disturb Omar:

The problem of e-waste disposal has been transferred to his hands... He his making money but nothing has changed from the environmental side. I want to do something else with that waste, instead of throwing it away! Omar calls Djamel in order to have a feedback of his services delivery. Djamel informs him that his manager, Walid, would like to meet him to plan the coming collecting operations. –Uau, this is great!

Omar informs the Tax office that he intends to refurbish old computers, in addition to the collecting services. Djamel will give him some indications on each computer health and status. The Tax Office is willing to pay an extra for the service of collecting, since it gives an added environmental value to that activity: all in all, it is the price to build a better image of the administration with the citizens. Omar quite easily finds in his relationship two persons passionate about computing and IT technologies. Another friend of him has made available a large room that is currently unused, so that Omar can store and repair computers.

## DISCOVERY CARD

INTERVIEW /  OBSERVATION

**PARTICIPANT'S DATA:** Djamel and Walid (Tax Office)

**WHICH THINGS DID PARTICIPANTS SAY/DO THAT SURPRISED YOU?**

**WHICH THINGS MATTER MOST TO THE PARTICIPANT?**

Public administration should be exemplary:  
'Our activity is not well-perceived by the citizens. If we can improve our image by showing citizens that we care about social issues, it would be nice.'

**WHICH MAIN THEMES OR LEARNINGS STOOD OUT FROM THIS INTERVENTION?**

**WHICH NEW TOPICS OR QUESTIONS TO EXPLORE IN FUTURE INTERVENTIONS?**

The public administration is concerned about e-waste disposal issues.

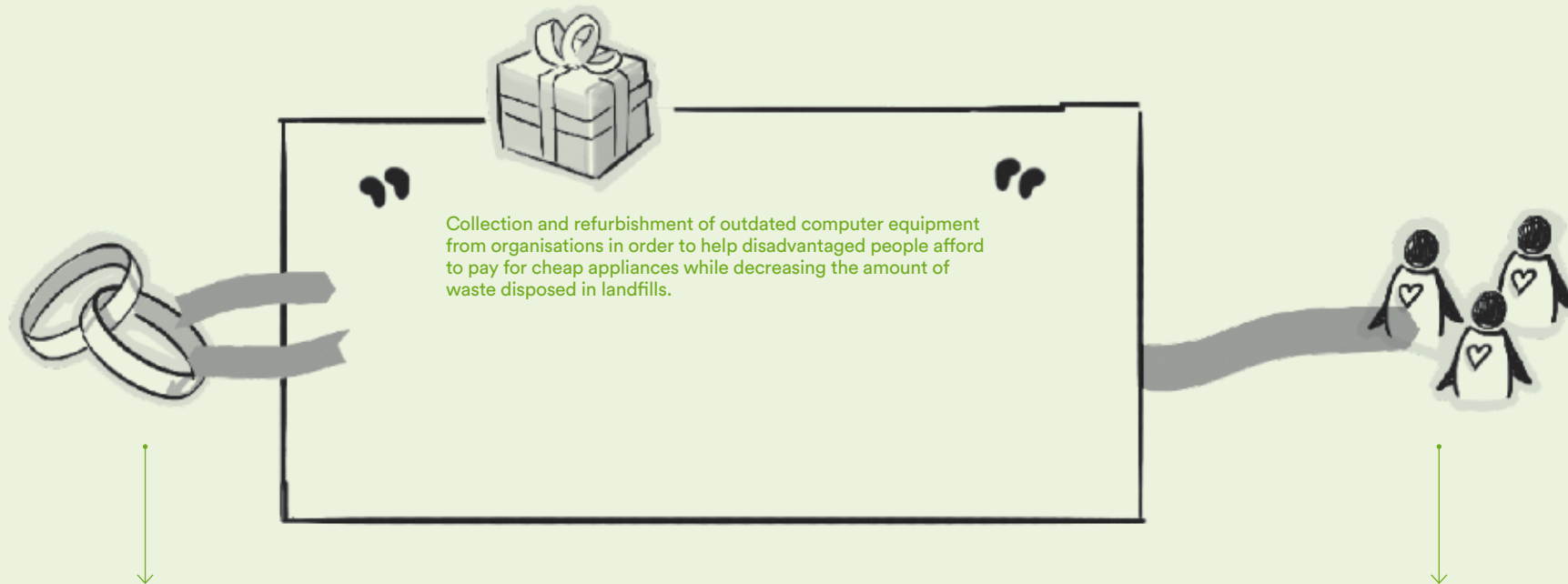
### NOTES:

Outsourcing that activity seem to be cost effective for the Tax Office.

OTHER Satisfaction of the service

**WHAT DID I LEARN ABOUT...**

Djamel is very happy, he thinks that thanks to Omar he could properly install the new computers for the staff. Walid, Djamel's manager, has become more curious about the collection of computers within the Tax office as well as the environmental issues related.



–Local authorities for landfill management.

**Potential customers:**

Any organisation or private business or person who has to get rid of computers.

Anyone who needs cheap computers.

**Gains:**

We would be reassured to know that our outdated computers may have a second life.

The tax office is willing to pay an extra for the same service, since it gives an added environmental value to that activity: all in all, it is the price to build a better image of the administration.



**Note**

Do not underestimate the impact your activity can have on your client's behaviour and perception. In that example, Omar has contributed to provoke a 'green attitude' of Walid.



## Case study

### Pivoting the value proposition 2/2

On the basis of the contract signed with the Tax Office, Omar's bank grants him a short term loan, so that he can pay his employees over a 3 months period, the time estimated to refurbish some of the computers.

Omar's idea at the moment is to sell second-hand refurbished computer, therefore he needs to communicate his service.  
–Who could be interested on second-hand computers or spare parts? Probably not companies... Private persons may be interested, maybe students?!

Omar communicates his offer through bulletin boards in colleges and universities to reach the students. 'New-Life Electronic: your computer for cheap! Refurbished computers tested and guaranteed 5 months!'

In the meanwhile, an article in the local newspaper titled 'Tax Office becomes green', makes Omar's activities known, and some SMEs call him to enquire about his services. As a wise manager, he decides to answer positively to that emerging demand: from now on, any people can go to his 'shop' to sell at a low price their old electric and electronic appliances, while they can also buy second-hand devices. The SMEs are happy to outsource collecting hardware, while building a new 'green image' to their clients. Besides the two employees specialized in computing hardware, Omar needs to hire a technician who knows how to repair domestic appliances.

## DISCOVERY CARD

INTERVIEW /  OBSERVATION

### PARTICIPANT'S DATA:

WHICH THINGS DID PARTICIPANTS SAY/DO THAT SURPRISED YOU?

Companies and administrations need updated hardware. They can't rely on second hand computers. Nobody knows about the services Omar provides yet, so he needs to communicate to find clients.

WHICH THINGS MATTER MOST TO THE PARTICIPANT?

WHICH MAIN THEMES OR LEARNINGS STOOD OUT FROM THIS INTERVENTION?

WHICH NEW TOPICS OR QUESTIONS TO EXPLORE IN FUTURE INTERVENTIONS?

### NOTES:

Outsourcing that activity seem to be cost effective for the Tax Office.

OTHER Individual needs, gains and pains

### WHAT DID I LEARN ABOUT...

#### Needs:

- Repairing of recent hardware
- Second-hand electric and electronic appliances: mobile phones, laptops, refrigerator, hair dryers.

#### Gains:

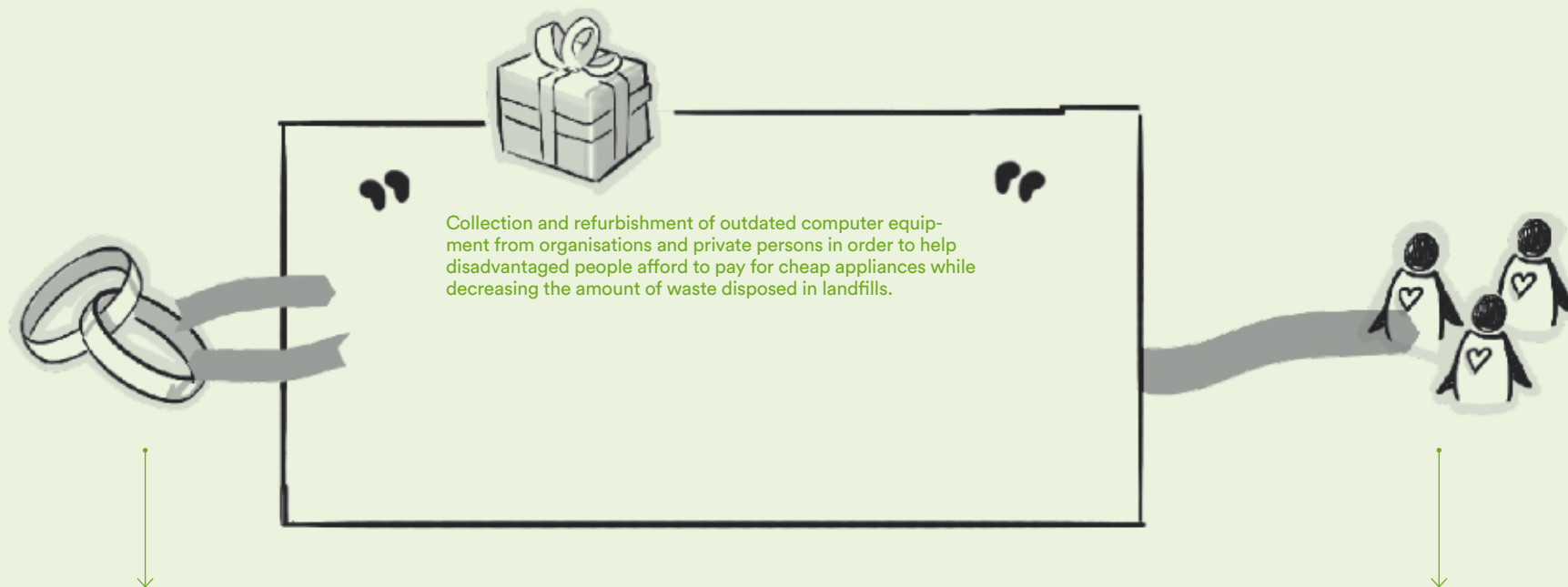
Saving time and money – can buy cheap

second-hand devices and at the same time, make profit from selling old electric and electronic appliances.  
–Green image (for companies)

#### Pain:

Having to go to landfill or to find other means to dispose the equipment.





–Local authorities for landfill management.

**Customers:**

- Public organisation
- SMEs
- Students
- Any private person

**Gains:**

- Awareness to act for the improvement of the environment and the development of new business activities.
- Greening a public image to citizens and customers.
- Saving time and money.

Then, Omar's green business becomes well known very quickly.

The government invites Omar to ministerial meetings to express his green business experience. He affirms his frustration to have to dump to landfill anyway whatever his team couldn't repair. The government decides to create a whole e-waste recycling chain in the city, including the extraction of precious materials from electronic components.

The supported public scheme will be coordinated by Omar's company.

# Exercise 12

## *Customer channels & relationships*

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Explore how you will reach your customers and what kind of relationship you will establish with them. Use the customer journey map, which describes the interaction journey of a customer with your service/product, from discovery to purchase, use and post-use.

**Emotions:** emotional stages of the customer during the journey.

**Touchpoints & channels:** points and means of contact between the service/product and the customers.

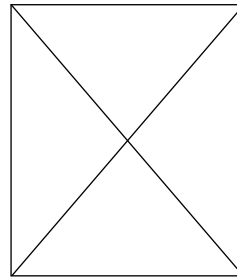
**Feelings & thoughts:** sensations and rational ideas of your customer in relation to each stage of the journey.

**Stages:** each of the steps in the customers' journey, from becoming aware of your service/product to use –discovery, assessment, purchase.

Once you have described the journey it is important to analyze the stages that need action in order to improve pain points and to maximize pleasure points. It's about providing calming element to alleviate the pain as well as adding value to reinforce pleasure points. Find out about the resources that you will need for it.

---

Photo



Who? \_\_\_\_\_

Segment? \_\_\_\_\_

  
**EMOTIONS**

What emotion does your customer feel in each stage of the journey?

  
**NEEDS & THOUGHTS**

Which are the needs in each stage?  
Which thoughts arise in the process?

  
**TOUCH POINTS & CHANNELS**

When do you interact with your customers?  
What channels do you use?

  
**STAGES**

What stages does your customer transit?

**HOW TO PROVIDE A UNIQUE EXPERIENCE?**

What actions could improve the customer's experience in each of the stages?

**WHAT DO WE NEED TO PROVIDE IT?**

What resources, knowledge and systems do you need to provide this experience?





# Case study

## EMOTIONS

What emotion does your customer feel in each stage of the journey?

## NEEDS & THOUGHTS

Which are the needs in each stage? Which thoughts arise in the process?

## TOUCH POINTS & CHANNELS

When do you interact with your customers? What channels do you use?

## STAGES

What stages does your customer transit?

## HOW TO PROVIDE A UNIQUE EXPERIENCE?

What actions could improve the customer's experience in each of the stages?

## WHAT DO WE NEED TO PROVIDE IT?

What resources, knowledge and systems do you need to provide this experience?

Who?

Customer 1

Segment?

Household



'I get really annoyed about the electricity supply. So many times we suffer from cuts and can't follow my daily routine.'



'I heard about a company that came to the village. They are selling stable electricity access.'



'I believe in what SRA is selling. Which are the tradebacks? What about the maintenance?'



'I needed some opinions and talked with some friends. We discussed about closing a contract with SRA. Not sure if I am in the right path. It will allow my children to study at night.'



'I signed the contract today. Some issues with understanding legal details.'



Need identification



Word of mouth.  
Community.

Finding alternatives



Personal assistance.  
Sales force.

Getting interested



Telephone +  
Internet.

Assessing the proposition



Personal assistance.  
Sales force + local technician.

Closing a contract

Clear Value Proposition communication. Promote easy word of mouth transferring. Promotional materials?

Well trained sales force. Need to empathize with real drivers for local people. Strong emphasis on life cycle activities.

Our webpage should clearly explain the gains of our Value Proposition. Telephonic assistants should be able to solve any doubts.

Reduce steps as much as possible. Easy to understand and simplified. Need to present channels for clients to communicate with us.

Strong communication strategy. Targetting easy understanding and transferability.

Internal training program. Communication skills. Strong feedback among sale force.

Training telephonic assistants. Webpage development.

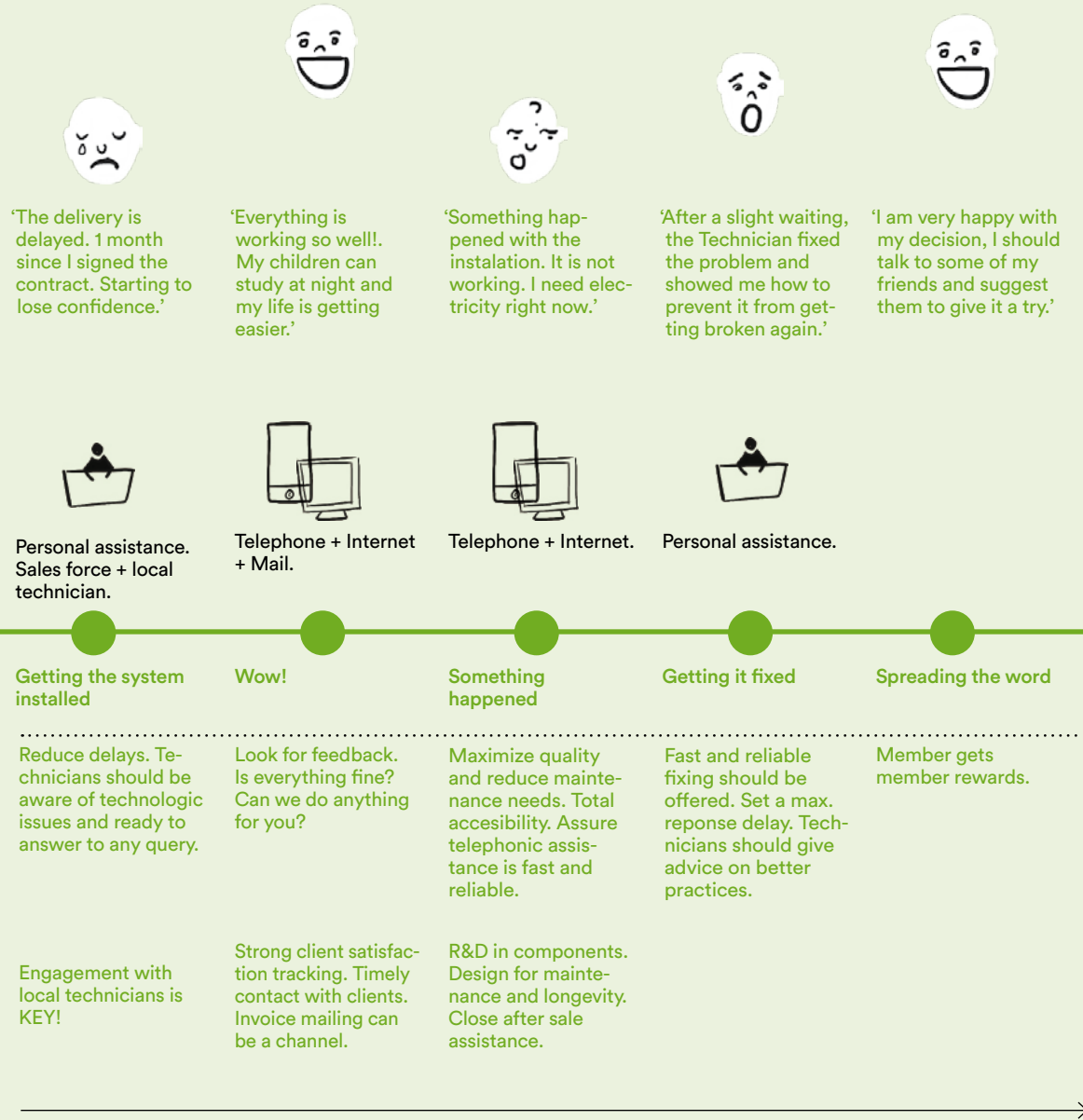
Hard work in the legal aspect. How to simplify the process without losing legal security?.



PRE



DURING



# Exercise 13

## *Key activities and resources*

---

**Think how you will develop your value proposition.**

Now, it is time to define the key activities and key resources that will be involved in the generation, management and delivery of your value proposition. Read the following questions and make the list your key activities and resources.

Notes

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## Key Activities 1

### Problem solving

What activities and tasks do you need to accomplish to create your VP, solve a specific challenge or maintain a high level of innovation in your business?



### Production

What activities and tasks do you need to accomplish to produce your products or supply your services?



### Platform/ network/ sales

What activities and tasks do you need to accomplish to create a efficient and valuable network or platform in order to promote sales, distribution, communication with stakeholders?



### Supply chain management

What activities and tasks do you need to accomplish to create a efficient and valuable supply chain management system?  
What do you need to deal with supplier?



## Key Resources 2

### Human capital

What human resources does your value proposition require?  
what about the people working for/ with you?



### Physical capital

What physical resources are important for you business?  
(Think about facilities, machinery, vehicles...)



### Intellectual & digital capital

Which intellectual and digital resources do you need?  
Do you need licences, patents, software?



### Financial capital

Which type of financial capital do you need? Have you investments, loans or other financial issues (e.g. machinery leasing...) related with your business?



Write a list of *Key activities*. Remember that some of them may be related with specific activities of your business niche market, other may be related to general management. Both are very important, don't forget it!

Write a list of *Key resources* considering everything you need to create, deliver and manage your products, services and perform business operations.

# Exercise 14

## *Ecodesign your business*

After defining the key activities and resources, you are invited to ecodesign the best solution to deliver your value. This voluntary exercise will help you to rethink the activities and resources identified in Exercise 13, in order to qualitatively assess and improve the way your products or services perform in environmental terms.

This exercise consists of a set of ecodesign cards, from 1 to 9. Before starting with the cards, you will need to identify if your business offers a product and its related services (e.g. textiles, food products), or if you are offering only a service without any related product (e.g. education).

In case you are offering a product-service, you will be working on cards 1 to 9. In case you are offering only a service, you will be working on cards 6 to 9.

Cards 1 to 8 are divided into 3 parts. Along each card, you need to go through the indications and questions in order to score and improve your propositions. Then, in Card 9 you will be able to sum up the score of each previous card and get your performance.





# Ecodesign card 1

## Card 1/3

1

### How to proceed?

Try to answer these questions. You can start from wherever you feel more comfortable.

Think about them, gather information around them. They are going to be scored in the next part of this CARD. If you don't have an answer now, well, we recommend you to try to find it out, in order to keep going to the next part. Let go and good luck!



### Amount (Weight)

Amount (weight) of all the elements and components?



Materials and resources



Follow the steps in the circles

2

Go to Card 1 Part 2



### Type and NR Materials

Type and number of different materials and resources used?



### Location of Sources

Where and how do you source the materials from (distances from your facilities)?



### Tech materials: Recycled content and recyclability

For Technical materials (such as plastics, metals...):  
What about recycled content and recyclability of these materials?



### Bio materials: Renewability and compostability

For Organic materials (such as cotton, wood, food):  
Renewability of the source and compostability of the materials?

# Ecodesign card 1

## Card 2/3

1

### How to proceed?

Answer these questions. For each: *yes* (y) you get 1 point, For each *no* (n) you get 0 points. If you don't know a question You choose *other* (o) and you get 0 points unless you provide an good explanation or other options.

2

### How to proceed?

Calculate for each box how many points you got and write the score above where indicated. Write the score And an emoticon that represent it.



0/3   1/3   2/3   3/3



### Amount (Weight)

Score

Yes, No, Or?

1. Do I choose the *lightest* materials to build my product?
2. Is my product much lighter than other alternatives in the market?
3. '*I cannot concentrate\** my product more than how it is now (\*an example? removing water from liquid soap)' Is this statement true?



2



3



4



5



6



7



8



9



Follow the steps in the circles

3

Go to Card 1 Part 3



### Type and NR Materials

Score

Yes, No, Or?

1. *Has my product only one or a few types of material but they are very easy to separate from each other?*
2. '*I cannot reduce in any way the number of different materials*'. Is this statement true?
3. Do I have enough information about environmental performances of the materials and components are used in my product lifecycle?



### Location of Sources

Score

Yes, No, Or?

1. Are *all* the materials I need *common & easy to find* in my region?
2. Are *all* the materials I need sourced in an environmental sustainable way?
3. Are *all* the suppliers within a distance of 150 km?



### Tech materials: Recycled content and recyclability

Score

Yes, No, Or?

If you don't have technical materials *skip* the 3 questions and get 3 points

1. Is my product completely made of *recycled* content?
2. Is my product made of fully *recyclable* materials?
3. *Have I avoided* composites, banned substances and combined (mixed together) materials?



### Bio materials: Renewability and compostability

Score

Yes, No, Or?

If you don't have organic materials *skip* the 3 questions and get 3 points

1. Does my product use compostable or biodegradable organic materials?
2. *Did I choose a renewable\** organic material? (\*the extraction speed of the material is much slower than nature needs for regenerating it)
3. Farming, harvesting and treatment is performed with no toxics, banned or unknown chemicals. Is this statement true?

# Ecodesign card 1


## Card 3/3

1

### How to proceed?

For each block you didn't get the smiley face (3/3 yes) you should be thinking about what you are going to do to improve these aspects.

In the green box you can find some good tips to improve your actual solution. Write down your strategies and ideas! *Green tips!* In the green box you can find helpful ecodesign strategies and ideas. Let's ecodesign! ;)



### Amount (Weight)

Initial  
Score

New  
Score

---


Ideas and strategies for improving the actual score?



Follow the steps in the circles

2

Go to Card 2




### Type and NR Materials

Initial  
Score

New  
Score

---

Ideas and strategies for improving the actual score?




### Location of Sources

Initial  
Score

New  
Score

---

Ideas and strategies for improving the actual score?




### Tech materials: Recycled content and recyclability

Initial  
Score

New  
Score

---

Ideas and strategies for improving the actual score?



### Bio materials: Renewability and compostability

Initial  
Score

New  
Score

---

Ideas and strategies for improving the actual score?

### Green box strategies

- Creating a more tighten and collaborative supply chain
- Local harvested or sourced materials complying labor conditions
- Choosing highly renewable sourced materials (e.g. harvested in less than 3-5 years...)
- Choosing lower energy & water embedded materials (avoid virgin metals and minerals...)

- Choosing recycled & highly recyclable materials (especially those with a well-known recycling circuit.)
- Choosing materials without hazardous substances-additives, toxic materials, Persistent Organic Pollutants. Avoid dangerous elements like: Lead (Pb), Mercury (Hg) Cadmium (Cd) Hexavalent chromium (Cr6+)
- Polybrominated biphenyls (PBB and PBDE).
- Monomateriality: reduce the diversity of materials used

- for a given product (monomaterial products are easier to recycle).
- Using ecolabelled resources
- Designing smaller and lighter product (least weight as possible)
- Choosing reused components
- Adopting Green procurement guidelines



Follow the steps in  
the circles

2

Go to  
Card 2 Part 2

# Ecodesign card 2

## Card 1/3

1

### How to proceed?

Try to answer these questions. You can start from wherever you feel more comfortable.

Think about them, gather information around them. They are going to be scored in the next part of this CARD. If you don't have an answer now, well, we recommend you to try to find it out, in order to keepgoing to the next part. Let go and good luck!



### Waste management

How much waste is generated? What do you do with it?  
How is the rate of discarded and lost material per unit?



### Energy management

How is the energy you need in the production sourced (renewable energy or not?) and managed?



### Water management

How is the water you need, in the production, managed?



### Chemicals In-out

Which types of chemicals do you need in the production processes?



### Processes & technology

How many step and processes do you need? are those technologies efficient (high performance new machinery?)

# Ecodesign card 2

## Card 2/3

1

### How to proceed?

Answer these questions. For each: yes (y) you get 1 point, For each no (n) you get 0 points. If you don't know a question You choose other (o) and you get 0 points unless you provide an good explanation or other options.

2

### How to proceed?

Calculate for each box how many points you got and write the score above where indicated. Write the score And an emoticon that represent it.



### Waste management

Score

Yes, No, Or?

1. 'My production is not generating waste and most of by product is reused and refurbished inside the workshop'. Is this statement true?
2. I *cannot* reduce further the waste generation, and waste is managed by an authorized organisation within regulations, is that true?
3. 'I promoted a quality management policy that has reduced at the minimum discarded products and unconformities'. Is this statement true?



Follow the steps in the circles

3

Go to Card 2 Part 3



### Energy management

Score

Yes, No, Or?

1. 'Most of energy (at least a 75%) needed come from renewable source' is this statement true?
2. Do I estimate the energy consumption per manufactured unit?
3. 'I *cannot* improve further the efficiency of my production system, i'm already using the latest technology'. Is this statement true?



### Water management

Score

Yes, No, Or?

1. Do I estimate the water consumption per manufactured unit?
2. 'I am sure that there are not uncontrolled flows or leaks along the processes'. Is this statement true?
3. 'My water supply and discharge is *not* damaging or changing the local environment'. Is this statement true?



### Chemicals In-out

Score

Yes, No, Or?

- If you don't use chemicals skip the 3 questions and get 3 points
1. 'I use *only* water-based chemistry or ecolabelled elements', is this statement true?
  2. 'I *cannot* further minimise chemicals use and their waste is properly managed' is this statement true?
  3. Do I guarantee that chemical storage is fully controlled and legally responsive?



### Processes & technology

Score

Yes, No, Or?

1. 'I *cannot* further minimise the number of steps in the production' is this statement true?
2. Have I *chosen* to use an easy to repair, maintain and use safe process technology?
3. 'I adapt the production to the market demand, avoiding large stocks of products' is this statement true?

# Ecodesign card 2

## Card 3/3

1

### How to proceed?

For each block you didn't get the smiley face (3/3 yes) you should be thinking about what you are going to do to improve these aspects.

In the green box you can find some good tips to improve your actual solution. Write down your strategies and ideas! *Green tips!* In the green box you can find helpful ecodesign strategies and ideas. Let's ecodesign! ;)



### Waste management

Initial Score New Score 

Ideas and strategies for improving the actual score?

1

2 Production

3

4

5

6

7

8

9

Follow the steps in the circles

2

Go to Card 3



### Energy management

Initial Score New Score 

Ideas and strategies for improving the actual score?



### Water management

Initial Score New Score 

Ideas and strategies for improving the actual score?



### Chemicals In-out

Initial Score New Score 

Ideas and strategies for improving the actual score?



### Processes & technology

Initial Score New Score 

Ideas and strategies for improving the actual score?

### Green box strategies

- Choosing newer & more efficient process technologies or Outsource activities when higher specialization and technological efficiency of products/infrastructures are available.
- Promoting artisan production, possibly, only on demand.
- Fewer processing steps, less movements of mass/volume.
- Choosing less energy/ water consumptive processes.
- Choosing processes that generate minimum amount or no amount of waste.
- Using less consumibles, less hazard, washable or easily repairable ones.
- Promoting local and safe work.

# Ecodesign card 3

## Card 1/3

1

### How to proceed?

Try to answer these questions. You can start from wherever you feel more comfortable.

Think about them, gather information around them. They are going to be scored in the next part of this CARD. If you don't have an answer now, well, we recommend you to try to find it out, in order to keepgoing to the next part. Let go and good luck!



### Stackability

Is it your designed product easy to stack, occupying the least volume?

1



2



3



Packaging &amp; distribution

4



5



6



7



8



9



Follow the steps in the circles

2

Go to Card 3 Part 2



### Package materials

Which type of material is used, list all of them (including labels, bags)? How much does it weight compared with the product you are delivering?



### Flat design

Is the product completely disassemble and be reduced in flat or cubic shape?



### Means of transport

Can you describe the main means of transportation? which vehicles are used, in which conditions are they?



### Routes & distances

How much is the distance between production facilities and final shops (customer location)?

# Ecodesign card 3

## Card 2/3

1

### How to proceed?

Answer these questions. For each: *yes* (y) you get 1 point, For each *no* (n) you get 0 points. If you don't know a question You choose *other* (o) and you get 0 points unless you provide an good explanation or other options.

2

### How to proceed?

Calculate for each box how many points you got and write the score above where indicated. Write the score And an emoticon that represent it.



0/3   1/3   2/3   3/3



### Stackability

Score

Yes, No, Or?

1. Is the product designed to be stackable as it is?
2. Is my product designed to be transported (in multiples units) without compromise its quality and functionality?
3. Are the dimensions of the pallet footprint considered when determining the dimensions of primary (from supplier) and secondary (to clients) packaging?



### Package materials

Score

Yes, No, Or?

If you don't have *any* packaging, the product is the packaging or there is no need for it, *skip* the 3 questions and get 3 points.

1. 'I choose a renewable material for *one-use* packaging applications' is this statement true or I choose a resistant, highly recyclable materials for *multiple* uses and returnable systems'. Is this statement true?
2. 'In any case, I *cannot* make the packaging simpler, with fewer elements, fewer materials types' is this statement true?
3. 'In any case, I *cannot* make the packaging lighter' is this statement true?

Follow the steps in the circles

3

Go to Card 3 Part 3



### Flat design

Score

Yes, No, Or?

1. 'My product and its packaging shape is a *flat* or cubic, with almost no air (fully optimised)' is this Statement true?
2. Is my product *sold* and *delivered* completely Disassembled?
3. There is *no* room for further reduction of the volume?



### Means of transport

Score

Yes, No, Or?

If you use *only* non-motorized means of transportation (foot, bikes, etc.) You skip the 3 questions and you get 3 points.

1. 'To receive the raw materials and distribute the product, i use *mostly* human power (foot & bikes), transoceanic ships or electric vehicles' is this statement true?
2. Do I choose mostly very new efficient vehicles, big trucks (40ton) or scooters to delivery my product?
3. Do I take advantage of the return-journeys to transport other things?



### Routes & distances

Score

Yes, No, Or?

1. Is there a very short distance all along the chain, less than 150km between production and customer?
2. Am I using the most optimised routes?
3. 'When we send by post for online purchase, we choose the greenest option available they offer us!'. Is this statement true?



# Ecodesign card 3

## Card 3/3

1

### How to proceed?

For each block you didn't get the smiley face (3/3 yes) you should be thinking about what you are going to do to improve these aspects.

In the green box you can find some good tips to improve your actual solution. Write down your strategies and ideas! *Green tips!* In the green box you can find helpful ecodesign strategies and ideas. Let's ecodesign! ;)



### Stackability

Initial Score

New Score

Ideas and strategies for improving the actual score?

1



2



3



Packaging &amp; distribution

4



5



6



7



8



9



Follow the steps in the circles

2

Go to Card 4



### Package materials

Initial Score

New Score

Ideas and strategies for improving the actual score?



### Flat design

Initial Score

New Score

Ideas and strategies for improving the actual score?



### Means of transport

Initial Score

New Score

Ideas and strategies for improving the actual score?



### Routes & distances

Initial Score

New Score

Ideas and strategies for improving the actual score?

### Green box strategies

- Avoid unnecessary packaging or reduce it at the minimum
- Pick up only ISO sizes and optimise mass and volume transported (air is the most expensive and unsustainable 'thing' to transport!)
- Reduce the amount of different materials and make them very easy to separate from each other to maximise recycling.

- Choosing biobased disposable packaging for long (one way) delivery (e.g. cardboard...)
- Choosing a returnable packaging for closer and frequent delivery (e.g. metal, plastic crates...)
- For returnable packaging, make them the lightest, resistant and easy to recycle and dismantle.
- Design a reusable (by the client), smaller, flat or cubic packaging.

- Choose more efficient means of transportation optimising routes and inverse logistics.
- Reduce distances between production and consumption, as much as possible.

1



2



3



4

Use &  
maintenance

5



6



7



8



9

Follow the steps in  
the circles

2

Go to  
Card 4 Part 2

# Ecodesign card 4

## Card 1/3

1

### How to proceed?

Try to answer these questions. You can start from wherever you feel more comfortable.

Think about them, gather information around them. They are going to be scored in the next part of this CARD. If you don't have an answer now, well, we recommend you to try to find it out, in order to keepgoing to the next part. Let go and good luck!



### Repairability

Is your product easily repairable? can user or technician access to its main parts quickly?



### Durability

How long do you expect it is going to work your product?



### Multi-Functionality & Modularity

How many functions could you integrate in your product?  
Can you build different configurations with the same pieces?

### Energy consumption

What is the energy consumption when using the product?



### Consumibles

Do your product need consumibles for working properly?  
How are they, one-use only, renewable?

# Ecodesign card 4

## Card 2/3

1

### How to proceed?

Answer these questions. For each: yes (y) you get 1 point, For each no (n) you get 0 points. If you don't know a question You choose other (o) and you get 0 points unless you provide an good explanation or other options.

2

### How to proceed?

Calculate for each box how many points you got and write the score above where indicated. Write the score And an emoticon that represent it.



0/3   1/3   2/3   3/3



### Repairability

Score

Yes, No, Or?

1. 'My product can be fully, easily and economically repaired by users/ technicians'. Is this statement true?
2. 'Any important part can be accessed quickly by repair operator'. Is this statement true?
3. Are repair components easy to obtain with the information about how to do it accessible?



Follow the steps in the circles

3

Go to Card 4 Part 3



### Energy consumption

Score

Yes, No, Or?

If there is *no* energy use you *skip* the 3 questions and get 3 points.

1. 'I *cannot* be more efficient that now'. Is this statement true?
2. Is it powered by *renewable* sources?
3. Is there any system to prevent energy waste when not in use?



### Consumibles

Score

Yes, No, Or?

If you product *doesn't* need maintenance or consumibles, you skip the 3 questions and you get 3 points.

1. 'Consumibles, composition and accessibility, makes easy the maintenance and the product durable'. Is this statement true?
2. 'Any resources needed (or consumible) are no toxic and easy to find'. Is this statement true?
3. Any resources needed can be easily recycled or managed in their end of life stage'. Is this statement true?



### Durability

Score

Yes, No, Or?

1. 'I have designed my product to avoid expiration date with no limit in lifespan duration'. Is this statement true?
2. 'I have designed my product to last and avoid aesthetical limitation (classic design)'. Is this statement true?
3. *Am* I sure that durability is *not* limited and compromised by some aspect (component, material)?



### Multi-Functionality & Modularity

Score

Yes, No, Or?

If you product *cannot be* multifunctional can *skip* the 1st question and you get 1 point.

1. Does my product integrate more than one function?
- If you product *cannot be* modular can *skip* the 2nd and 3rd questions and you get 2 points.
2. Does my product allow to be replicated with a basic elemental component (is it modular, like *lego*)?
  3. Can I guarantee that all the functions are usable by all the people (older, younger, etc)?

# Ecodesign card 4

## Card 3/3

1

### How to proceed?

For each block you didn't get the smiley face (3/3 yes) you should be thinking about what you are going to do to improve these aspects.

In the green box you can find some good tips to improve your actual solution. Write down your strategies and ideas! *Green tips!* In the green box you can find helpful ecodesign strategies and ideas. Let's ecodesign! ;)



### Repairability

Initial Score New Score 

Ideas and strategies for improving the actual score?



### Durability

Initial Score New Score 

Ideas and strategies for improving the actual score?



### Multi-Functionality & Modularity

Initial Score New Score 

Ideas and strategies for improving the actual score?

### Green box strategies

- Offer the access/availability to products/infrastructures through payment based on the unit of utility/satisfaction
- Modularity and design for maintenance.
- Using standard components to promote repairing (most vulnerable components should be easily removed and replaced).

- Reduce consumption of energy and materials per service unit offered by the product.
- Use of few (and clean) consumables (reduce support products for service functioning).
- Easy installation and/or assembly, with a rational use of resources.
- Product reliability and durability.

- Strong link between the product and its user (it favours user care for long lasting of physical supports products and infrastructures).

1

2

3

4 Use &amp; maintenance

5

6

7

8

9

Follow the steps in the circles

2

Go to Card 5



### Energy consumption

Initial Score New Score 

Ideas and strategies for improving the actual score?



### Consumibles

Initial Score New Score 

Ideas and strategies for improving the actual score?

# Ecodesign card 5

## Card 1/3

1

### How to proceed?

Try to answer these questions. You can start from wherever you feel more comfortable.

Think about them, gather information around them. They are going to be scored in the next part of this CARD. If you don't have an answer now, well, we recommend you to try to find it out, in order to keep going to the next part. Let go and good luck!



### Easy to be disassembled

Once your product become useless, can it be disassembled easily (by no expert personnel) and economically?

1



2



3



4



5

End of life management

6



7



8



9



Follow the steps in the circles

2

Go to Card 5 Part 2



### Easy to be reused

Once your product is useless for a user, can it be reused directly by other people or renewed?



### Easy to be refurbished

Once your product is discarded by the user, can it be refurbished easily and economically?



### Labelling & Identification

Different materials are clearly identified by labels or information signs to classify them properly, once dismantled?



### Chemicals In-out

What problems arise in the recovery and disposal of products? What about chemicals and hazardous substances?

# Ecodesign card 5

## Card 2/3

1

### How to proceed?

Answer these questions. For each: *yes* (y) you get 1 point, For each *no* (n) you get 0 points. If you don't know a question You choose *other* (o) and you get 0 points unless you provide an good explanation or other options.

2

### How to proceed?

Calculate for each box how many points you got and write the score above where indicated. Write the score And an emoticon that represent it.



0/3   1/3   2/3   3/3



### Easy to be disassembled

Score 

Yes, No, Or?

1. Could the different materials & components of my product be *easily* separated?
2. Could my product different materials & components be recycled or composted?
3. Could my product be fully disassembled?

1

2

3

4

5 End of life management

6

7

8

9

Follow the steps in the circles

3

Go to Card 5 Part 3



### Easy to be reused

Score 

Yes, No, Or?

If your answer to one of the following questions is *yes*, you can *skip* the other questions and get 3 points.

1. 'When a user gets rid of it, my product can be potentially reused directly by other as it is'. Is this statement true?
2. 'When a user gets rid of it my product can be re-sold in the market with an easy cleaning/ refurbishment process'. Is this statement true?
3. 'When a user gets rid of it, my product can be part of another set of components or upcycled for different applications. Is this statement true?



### Easy to be refurbished

Score 

Yes, No, Or?

1. In the end of its life (*eol*), can my product be refurbished (technically) easily by local entities?
2. In the end of its life (*eol*), can my product be easily collected for its refurbishment by local entities?
3. In the end of its life (*eol*), can my product be refurbished *economically* by local entities?



### Labelling & Identification

Score 

Yes, No, Or?

1. Is each different material, clearly, identified with labels or other signs?
2. Is there further information about composition and so on in the product itself or in some other location (like website)?
3. Are there some color code or other technique to speed up the process of recognizing different types of materials?



### Chemicals In-out

Score 

Yes, No, Or?

1. 'No need for chemical or hazardous substances processing in my product *eol*' is this statement true?
2. Is my product toxic free once it is broken or useless?
3. 'During waste treatment and disposal, there are *not* toxic emissions (e.g. Incineration)'. Is this statement true?

# Ecodesign card 5

## Card 3/3

1

### How to proceed?

For each block you didn't get the smiley face (3/3 yes) you should be thinking about what you are going to do to improve these aspects.

In the green box you can find some good tips to improve your actual solution. Write down your strategies and ideas! *Green tips!* In the green box you can find helpful ecodesign strategies and ideas. Let's ecodesign! ;)



### Easy to be disassembled

Initial Score

New Score

Ideas and strategies for improving the actual score?

### Green box strategies

- Simplification of product disassembly, to reduce the time and costs of separating its components for recycling or reuse.
- Identification of the type of materials used, in order to foster waste sorting.
- Reusability (e.g. reuse of product components).
- Biodegradability (making it easier to reincorporate parts of

1



2



3



4



5



6



7



8



9



Follow the steps in the circles

2

Go to Card 6



### Easy to be reused

Initial Score

New Score

Ideas and strategies for improving the actual score?



### Easy to be refurbished

Initial Score

New Score

Ideas and strategies for improving the actual score?



### Labelling & Identification

Initial Score

New Score

Ideas and strategies for improving the actual score?



### Chemicals In-out

Initial Score

New Score

Ideas and strategies for improving the actual score?

the product to their natural cycles/ecosystem), choosing when possible compostable organic materials that feed the ground when biodegrading.

- Recyclability.
- Energy recovery.
- Reduce the volume of waste by means of easy compaction of the product.
- Reducing toxicity of waste management, in order to avoid

unintentional emissions of compounds such as POPs (e.g. incorporating adequate flue gas, solid residue and effluent treatments).



Follow the steps in  
the circles

2

Go to  
Card 6 Part 2

# Ecodesign card 6

## Card 1/3

1

### How to proceed?

Try to answer these questions. You can start from wherever you feel more comfortable.

Think about them, gather information around them. They are going to be scored in the next part of this CARD. If you don't have an answer now, well, we recommend you to try to find it out, in order to keep going to the next part. Let go and good luck!



### Design for sharing & exchanging

Is your product/ service promoting a more collaborative use of some resource? Is it fostering cooperation and a sharing efficiency?



### Accessories & Gadgets

How many and which type of devices, accessories and objects are involved when your customer is using the service?



### Responsible usability

Have you included any strategy to improve environmental behaviour of your service user?



### Design for education

How does your product/ service promote environmental protection and education within users and society?



### Compensation policies

Have you established some compensation policy (like CO2 offset, NGO support) to offset your impacts or support green initiatives?



# Ecodesign card 6

## Card 2/3

1

### How to proceed?

Answer these questions. For each: yes (y) you get 1 point, For each no (n) you get 0 points. If you don't know a question You choose other (o) and you get 0 points unless you provide an good explanation or other options.

2

### How to proceed?

Calculate for each box how many points you got and write the score above where indicated. Write the score And an emoticon that represent it.

### Design for sharing & exchanging

Score  Yes, No, Or?

1. Is my service encouraging exchange of resources, unused products or second hand items, within collaborative consumption?
2. Is my business supporting responsible consumption?
3. Does my service foster collaboration, innovation and cocreation for good?

1 2 3 4 5 6 7 8 9

Follow the steps in the circles

3

Go to Card 6 Part 3



### Accessories & Gadgets

Score  Yes, No, Or?

If you answer yes to the 1st question, skip the the 2nd and 3rd and get 3 points

1. 'No physical devices or equipment involved in the service supply'. Is this statement true?
2. 'All devices, equipment are rented or accessible for the users, they don't buy them. Your company owns and maintains them'. Is this statement true?
3. Are most of the involved equipment or products quite new, very efficient and even ecodesigned?



### Responsible usability

Score  Yes, No, Or?

1. The user interaction within the service has been Designed to achieve the most efficient use of Resources and equipment, avoid energy loss and Promote sustainable behaviours?
  2. Any user can access and use, comfortably, the Service, even elder people, handicapped, kids, ill and Other special groups?
- If you don't have any interface (screen, web application...) Skip the 3rd and get 1 points.
3. Are all the interfaces (physical, web, mobile app...) Designed to minimise energy consumption and Usability affordance?



### Design for education

Score  Yes, No, Or?

1. Does my service embody sustainability & education, Gender equality, social integration of minorities? All of Them?
2. Does my service help others to make their activities More sustainable? Or spreading the word about Sustainability?
3. Does my project, inspire others to follow good practices And learn more about ecodesign and sustainability?



### Compensation policies

Score  Yes, No, Or?

1. Am I participating in some Offset programs in order to compensate my service emissions?
2. Am I collaborating with initiatives to help them or support them?
3. Does my service help local community, neighbour or other stakeholders?

# Ecodesign card 6

## Card 3/3

1

### How to proceed?

For each block you didn't get the smiley face (3/3 yes) you should be thinking about what you are going to do to improve these aspects.

In the green box you can find some good tips to improve your actual solution. Write down your strategies and ideas! *Green tips!* In the green box you can find helpful ecodesign strategies and ideas. Let's ecodesign! ;)



### Design for sharing & exchanging

Initial Score

New Score

Ideas and strategies for improving the actual score?

1



2



3



4



5



6



7



8



9



Follow the steps in the circles

2

Go to Card 7



### Accessories & Gadgets

Initial Score

New Score

Ideas and strategies for improving the actual score?



### Responsible usability

Initial Score

New Score

Ideas and strategies for improving the actual score?



### Design for education

Initial Score

New Score

Ideas and strategies for improving the actual score?



### Compensation policies

Initial Score

New Score

Ideas and strategies for improving the actual score?

### Green box strategies

- Offer a collective/shared use of infrastructures.
- Reducing number and types of different devices optimising their lifespan and performances.
- Design better interfaces to improve engagement and promote sustainable behaviours and habits.
- Choosing new ways of monetisation and servitizations for conventional products.
- Promote design for *all*.
- Be transparent and honest.
- Cocreate with users next version of your service.
- Connect people and green initiatives.
- Promote resource exchange and unexploited green opportunities.
- Offset service emissions through specific programs and No profit initiative.

# Ecodesign card 7

## Card 1/3

1

### How to proceed?

Try to answer these questions. You can start from wherever you feel more comfortable.

Think about them, gather information around them. They are going to be scored in the next part of this CARD. If you don't have an answer now, well, we recommend you to try to find it out, in order to keepgoing to the next part. Let go and good luck!



### Office material

Are you managing papers, brochures and sales materials only in a digital way? How much do you print (how many copies)? How are these publications (materials, quality, labels...)?

1



2



3



4



5



6



7



Sales &amp; communication

8



9



Follow the steps in the circles

2

Go to Card 7 Part 2



### Transparency & information

Is relevant information about environmental policy, materials, suppliers, product characteristics... easily accessible? How?



### Support to ecoproducts & Ecoservices

Are you selling or promoting other's green entrepreneurs, products or services? Is your Shop or Showroom energy, water and waste efficient?



### Conference calls

How do you organize work and meetings with mates, clients and other STKs in a different region or country?



### Travels & Fairs

How do you perform sales travels? Which means do you use? are you organising events or fairs? how are they?

# Ecodesign card 7

## Card 2/3

1

### How to proceed?

Answer these questions. For each: *yes* (y) you get 1 point, For each *no* (n) you get 0 points. If you don't know a question You choose *other* (o) and you get 0 points unless you provide an good explanation or other options.

2

### How to proceed?

Calculate for each box how many points you got and write the score above where indicated. Write the score And an emoticon that represent it.



0/3   1/3   2/3   3/3



### Office material

Score 

Yes, No, Or?

1. I don't print, almost, any document, just few for legal requirements, is that true?
2. When I use paper, or other office materials I choose certified one, with optimised resolution avoiding plastic coverings, is that true?
3. Do I apply green procurement criteria in the office material supply?

1

2

3

4

5

6

7   
Sales & communication

8

9

Follow the steps in the circles

3

Go to Card 7 Part 3



### Transparency & information

Score 

Yes, No, Or?

1. Have you got any green label or certification?
2. Is my environmental information free and easily accessible on the internet or my sale point (hotel...etc)?
3. Do I measure and report all the relevant aspects of my business for stakeholders review (environmental, social, labor conditions...)?



### Support to ecoproducts & Ecoservices

Score 

Yes, No, Or?

1. Am I selling ecoproducts or ecoservices?
  2. Am I being a necessary intermediary between producers and consumers?
- If you don't have a shop or showroom skip the 3rd question and get 1 point
3. Are my shops (or showroom) very efficient in energy, water and waste management?



### Conference calls

Score 

Yes, No, Or?

1. 'I foster the use of videoconference systems'. Is this statement true?
2. 'If there is need to travel, I use efficient means of transport when available (train, bus, bike...)'. Is this statement true?
3. 'I minimize paper and mail use, using e-mailing systems whenever it is possible.' Is this statement true?



### Travels & Fairs

Score 

Yes, No, Or?

1. 'For commercial purposes the workforce does not travel using the following means of transport: plane, car, van (or similar)'. Is this statement true?
  2. 'We take the planes *only* for longer flights or when other more efficient options are not available'. Is this statement true?
- If you don't organize events or fairs skip the 3rd question and get 1 point
3. Do I take care to reduce events and fairs environmental impact?

# Ecodesign card 7

## Card 3/3

1

### How to proceed?

For each block you didn't get the smiley face (3/3 yes) you should be thinking about what you are going to do to improve these aspects.

In the green box you can find some good tips to improve your actual solution. Write down your strategies and ideas! *Green tips!* In the green box you can find helpful ecodesign strategies and ideas. Let's ecodesign! ;)



### Office material

Initial Score

New Score

Ideas and strategies for improving the actual score?



### Conference calls

Initial Score

New Score

Ideas and strategies for improving the actual score?



### Travels & Fairs

Initial Score

New Score

Ideas and strategies for improving the actual score?

1



2



3



4



5



6



7

Sales &amp; communication

8



9



Follow the steps in the circles

2

Go to Card 8



### Transparency & information

Initial Score

New Score

Ideas and strategies for improving the actual score?



### Support to ecoproducts & Ecoservices

Initial Score

New Score

Ideas and strategies for improving the actual score?

### Green box strategies

- Efficient use of resources (avoid resources wasting).
- Avoid as much as you can short travels promoting online meetings.
- Take care about fairs and marketing events, they use to be very inefficient and costly (environmentally and economically). Explore new possibilities like online marketplaces and sustainable events.

- Decentralisation of workteam and collaborators could be managed effectively with online applications to avoid them to move.
- Avoid sending salesforces around with cars without a optimised plan, check for alternatives more safer, comfortable and ecofriendly.
- Choose ecolabelled suppliers or at least quality certified ones.

- Cocreate with your stakeholders the product/service offer.
- Inform all the stakeholders about your environmental policy and the improvement they able to achieve adopting them.



Follow the steps in  
the circles

2

Go to  
Card 8 Part 2

# Ecodesign card 8

## Card 1/3

1

### How to proceed?

Try to answer these questions. You can start from wherever you feel more comfortable.

Think about them, gather information around them. They are going to be scored in the next part of this CARD. If you don't have an answer now, well, we recommend you to try to find it out, in order to keepgoing to the next part. Let go and good luck!



### Business management

Are you managing your activities and priorities within policies that promote efficient management of resources?



### Energy management

Has your production facility, office, hotel... been designed and built to reduce energy consumption to the minimum?



### Water management

Has your production facility, office, hotel... been designed and built to reduce water consumption at the minimum?



### Green procurement

Are you buying certified products/ services? Which certification do they have?



### Labor Conditions & Policies

How are labor conditions of people working directly in your product/ service?

# Ecodesign card 8

## Card 2/3

1

### How to proceed?

Answer these questions. For each: yes (y) you get 1 point, For each no (n) you get 0 points. If you don't know a question You choose other (o) and you get 0 points unless you provide an good explanation or other options.

2

### How to proceed?

Calculate for each box how many points you got and write the score above where indicated. Write the score And an emoticon that represent it.



### Business management

Score

Yes, No, Or?

1. Do I have an environmental policy?
2. Do I have the objective of continuous improvement of the environmental performance of my products and service?
3. Are you managing your activities and priorities to promote sustainable innovation, co-creation?

1 2 3 4 5 6 7 8 Infrastructure 9

Follow the steps in the circles

3

Go to Card 8 Part 3



### Energy management

Score

Yes, No, Or?

1. 'I know how much water I need monthly in my infrastructure, and i've made everything possible to reduce it' is this statement true?
2. 'My facilities are thermically *completely* isolated or powered by renewable sources'. Is this statement true?
3. Did I choose a green certified energy provider or apply for some efficiency program?



### Water management

Score

Yes, No, Or?

1. I know how much water I need monthly in my infrastructure, and I've made everything possible to reduce it, is that true?
2. Do I use efficient water consuming devices?
3. Am I informing and preparing correctly all the personnel and customers to avoid water waste?



### Green procurement

Score

Yes, No, Or?

1. Am I buying most of products and service I need from green labelled suppliers?
2. Am I a ecolabelled or certified supplier?
3. Is the environmental information about my supply chain and labels accessible for my stakeholders?



### Labor Conditions & Policies

Score

Yes, No, Or?

1. Have I adopted a gender equality policy?
2. Are *all* my workers and suppliers fairly paid, safe and protected within the legal framework?
3. Have I adopted a social responsibility policy towards *all* the stakeholders connected with my project?

# Ecodesign card 8

## Card 3/3

1

### How to proceed?

For each block you didn't get the smiley face (3/3 yes) you should be thinking about what you are going to do to improve these aspects.

In the green box you can find some good tips to improve your actual solution. Write down your strategies and ideas! *Green tips!* In the green box you can find helpful ecodesign strategies and ideas. Let's ecodesign! ;)



### Business management

Initial Score

New Score

Ideas and strategies for improving the actual score?

1



2



3



4



5



6



7



8



Infrastructure

9



Follow the steps in the circles

2

Go to Card 9



### Energy management

Initial Score

New Score

Ideas and strategies for improving the actual score?



### Water management

Initial Score

New Score

Ideas and strategies for improving the actual score?



### Green procurement

Initial Score

New Score

Ideas and strategies for improving the actual score?



### Labor Conditions & Policies

Initial Score

New Score

Ideas and strategies for improving the actual score?

### Green box strategies

- Use of low-impact energy sources.
- Efficient use of resources (avoid resources wasting).
- Choosing cleaner processes (more efficient in water and energy consumption, using renewable energies without modifying the properties of materials that make them more difficult to recycle).
- Adequate process conditions during operations or service

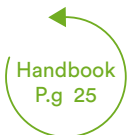
- to minimize environmental impacts (e.g. temperature control, presorting and cleaning of input materials, etc.)
- Choose ecolabelled suppliers or at least quality certified ones.
- Cocreate with your stakeholders the product/service offer.
- Inform all the stakeholders about your environmental policy and the improvement they able to achieve adopting them.

- Promote fairness, gender equality and minorities integration within your workforce and workspace.



**Notes**

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# Ecodesign card 9

1

## How to proceed?

Start from here! Gather all the score you had in the previous cards, and draw an emoticon with its number in each cell.

	1	2	3	4	5	6	7	8
	 MATERIALS & RESOURCES	 PRODUCTION	 PACKAGING & DISTRIBUTION	 USE & MAINTENANCE	 END OF LIFE MANAGEMENT	 SERVICE	 SALES & COMMUNICATION	 INFRASTRUCTURE
A	 TYPE & NR MATERIALS	 ENERGY MANAGEMENT	 PACKAGE MATERIALS	 ENERGY CONSUMPTION	 EASY TO BE REUSED	 ACCESSORIES & GADGETS	 TRANSPARENCY & INFORMATION	 ENERGY MANAGEMENT
B	 AMOUNT (WEIGHT)	 WATER MANAGEMENT	 FLAT DESIGN	 CONSUMIBLES	 EASY TO BE REFURBISHED	 RESPONSIBLE USABILITY	 SUPPORT TO ECOPRODUCTS & ECOSERVICES	 WATER MANAGEMENT
C	 TECH MATERIALS: RECYCLED CONTENT & RECYCLABILITY	 WASTE MANAGEMENT	 STACKABILITY	 REPAIRABILITY	 EASY TO BE DISASSEMBLED	 DESIGN FOR SHARING & EXCHANGING	 OFFICE MATERIAL	 BUSINESS MANAGEMENT
D	 BIO MATERIALS: RENEWABILITY & COMPOSTABILITY	 CHEMICALS IN-OUT	 MEANS OF TRANSPORT	 DURABILITY	 LABELLING & IDENTIFICATION	 DESIGN FOR EDUCATION	 CONFERENCE CALLS	 GREEN PROCUREMENT
E	 LOCATION OF SOURCES	 PROCESSES & TECHNOLOGY	 ROUTES & DISTANCES	 MULTI-FUNCTIONALITY & MODULARITY	 CHEMICALS IN-OUT	 COMPENSATION POLICIES	 TRAVELS & FAIRS	 LABOR CONDITIONS & POLICIES



Follow the steps in the circles

4

Keep going in the workbook

2

**How to proceed?**

Well done! now sum up any point you got and let's see what is your global score! To have an idea of the final result you can look at the table to see you result!

3

**How to proceed? (Optional)**

Before we let you go to the next step you can write here how do you think to improve this score, your feeling and everything you want to communicate about the process.

+	00-30	31-60	61-90
	00-12	13-24	25-34

Your total Score:



## Case study

### Key activities and resources, and ecodesign

#### Key Activities 1

##### Problem solving

What activities and tasks do you need to accomplish to create your VP, solve a specific challenge or maintain a high level of innovation in your business?



##### Production

What activities and tasks do you need to accomplish to produce your products or supply your services?



##### Platform/ network/ sales

What activities and tasks do you need to accomplish to create a efficient and valuable network or platform in order to promote sales, distribution, communication with stakeholders?



##### Supply chainmanagement

What activities and tasks do you need to accomplish to create a efficient and valuable supply chain management system?  
What do you need to deal with supplier?



- Training of technicians and sales force.
- Informing final users about advantages of domestic solar PV systems.
- Managing the servicing and maintenance of solar PV systems once installed.
- Installation of domestic solar PV systems.
- Legal and contractual management.
- Quality control and power testing.
- Financial management.
- Creating and coordinating sales network.
- Supporting technicians.
- Planning strategies to expand the network of customers.
- Lobby local government to incentivize the implementation of solar PV systems.
- Managing facilities, logistics and storage of materials.
- Strategy to reinforce the stability of supply.
- Negotiations with supplier to obtain interesting supply contracts.
- Managing the recycling of PV systems.

#### Key Resources 2

##### Human capital

What human resources does your value proposition require?  
what about the people working for/ with you?



##### Physical capital

What physical resources are important for you business?  
(Think about facilities, machinery, vehicles)



##### Intellectual & digital capital

Which intellectual and digital resources do you need?  
Do you need licences, patents, software?



##### Financial capital

Which type of financial capital do you need? Have you investments, loans or other financial issues (e.g. machinery leasing) related with your business?



- Founder team: Abdullah Rachin and Mohamad Aziz (Technical Dpt. & Sales Dpt.)
- 4 Technicians.
- Office employee.
- Warehouse
- Storage room for hazardous elements and empty/broken batteries.
- Office in the region.
- 2 vans used by technicians.
- 1 car used by manager and sales force.
- Web page with information.
- Software to control PV system.
- Software licenses.
- Open source software for office tasks.
- 15-year mortgage for expenses of facilities and vehicles.
- Microcredits to provide financial support to purchase PV systems.

# Ecodesign card 6

## Card 1/3

1

### How to proceed?

Try to answer these questions. You can start from wherever you feel more comfortable.

Think about them, gather information around them. They are going to be scored in the next part of this CARD. If you don't have an answer now, well, we recommend you to try to find it out, in order to keep going to the next part. Let go and good luck!



### Design for sharing & exchanging

Is your product/ service promoting a more collaborative use of some resource? Is it fostering cooperation and a sharing efficiency?

We want to provide as many people as we can with electricity. We know that many families cannot afford it, but we still try to promote collaboration with other families that bought our systems. Ultimately we are creating a positive mechanism that could help us increase sales in the future by solving urgent needs now.



Follow the steps in the circles

2

Go to Card 6 Part 2



### Accessories & Gadgets

How many and which type of devices, accessories and objects are involved when your customer is using the service?

- Solar PV systems.
- Batteries.
- Switches.
- Cables and tools.
- Supporting structural material for PV installation.



### Responsible usability

Have you included any strategy to improve environmental behaviour of your service user?

Yes, our technicians will give brief training to customers on how to use PV systems. That is very important since efficient use of the device is critical to provide a stable and secure supply to users. Cleaning the panel is something we also recommend to them.



### Design for education

How does your product/ service promote environmental protection and education within users and society?

Not yet. We are considering this possibility. Next year we will ask for help on carbon accounting in order to send a coherent message to our customers.



### Compensation policies

Have you established some compensation policy (like CO2 offset, NGO support...) to offset your impacts or support green initiatives?

It decreases noise and gas emissions in households. It also brings children the opportunity to study at night, thus helping them to finish school on time!

# Ecodesign card 6

## Card 2/3

1

### How to proceed?

Answer these questions. For each: yes (y) you get 1 point, For each no (n) you get 0 points. If you don't know a question You choose other (o) and you get 0 points unless you provide an good explanation or other options.

2

### How to proceed?

Calculate for each box how many points you got and write the score above where indicated. Write the score And an emoticon that represent it.



0/3   1/3   2/3   3/3

### Design for sharing & exchanging

Score **2** Yes, No, Or?

1. Is my service encouraging exchange of resources, unused products or second hand items, within collaborative consumption?  N
2. Is my business supporting responsible consumption?  Y
3. Does my service foster collaboration, innovation and cocreation for good?  Y



Follow the steps in the circles

3

Go to Card 6 Part 3



### Accessories & Gadgets

Score **2** Yes, No, Or?

If you answer yes to the 1st question, skip the the 2nd and 3rd and get 3 points

1. 'No physical devices or equipment involved in the service supply'. Is this statement true?  N
2. 'All devices, equipment are rented or accessible for the users, they don't buy them. Your company owns and maintains them'. Is this statement true?  Y
3. Are most of the involved equipment or products quite new, very efficient and even ecodesigned?  Y



### Responsible usability

Score **2** Yes, No, Or?

1. The user interaction within the service has been Designed to achieve the most efficient use of Resources and equipment, avoid energy loss and Promote sustainable behaviours?  O
2. Any user can access and use, comfortably, the Service, even elder people, handicapped, kids, ill and Other special groups?  Y

If you don't have any interface (screen, web application...) Skip the 3rd and get 1 points.

3. Are all the interfaces (physical, web, mobile app...) Designed to minimise energy consumption and Usability affordance?

6b1. We didn't design them but we have chosen the easiest interfaces to use, since our customer needs a simple control panel to see that everything is working fine. +1 point.



### Design for education

Score **1** Yes, No, Or?

1. Does my service embody sustainability & education, Gender equality, social integration of minorities? All of Them?  N
2. Does my service help others to make their activities More sustainable? Or spreading the word about Sustainability?  N
3. Does my project, inspire others to follow good practices And learn more about ecodesign and sustainability?  Y



### Compensation policies

Score **2** Yes, No, Or?

1. Am I participating in some Offset programs in order to compensate my service emissions?  Y
2. Am I collaborating with initiatives to help them or support them?  Y
3. Does my service help local community, neighbour or other stakeholders?  O

6e3. We are considering organizing some talks in local communities and schools to encourage parents to learn more about our PV systems. 0 points.

# Ecodesign card 6

## Card 3/3

1

### How to proceed?

For each block you didn't get the smiley face (3/3 yes) you should be thinking about what you are going to do to improve these aspects.

In the green box you can find some good tips to improve your actual solution. Write down your strategies and ideas! *Green tips!* In the green box you can find helpful ecodesign strategies and ideas. Let's ecodesign! ;)



**Design for sharing & exchanging**

Initial Score **2**

New Score **2**



Follow the steps in the circles

2

Go to Card 7



**Accessories & Gadgets**

Initial Score **2**

New Score **2**



**Responsible usability**

Initial Score **2**

New Score **3**



**Design for education**

Initial Score **1**

New Score **1**



**Compensation policies**

Initial Score **2**

New Score **3**

6e3 >> We have planned 5 talks in rural communities until December to spread the word about the importance of energy efficiency +1 point.

# Ecodesign card 7

## Card 1/3

1

### How to proceed?

Try to answer these questions. You can start from wherever you feel more comfortable.

Think about them, gather information around them. They are going to be scored in the next part of this CARD. If you don't have an answer now, well, we recommend you to try to find it out, in order to keep going to the next part. Let go and good luck!

### Office Material

Are you managing papers, brochures and sales materials only in a digital way? How much do you print (how many copies)? How are these publications (materials, quality, labels...)?

–Up to now we didn't print so much beyond some brochures... but we are starting to use a tablet to show a video to potential distributors and clients. It is fun and more attractive ;)

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### Transparency & information

Is relevant information about environmental policy, materials, suppliers, product characteristics... easily accessible? How?

- Information on environmental policy is accessible, for it is published in governmental documents and is also available online.
- Product characteristics are difficult to compare, for very often specifications do not match or are insufficient in terms of environmental performance.



### Conference calls

How do you organize work and meetings with mates, clients and other STKs in a different region or country?

- We use the telephone, email and Skype most of the time.
- We travel by air to Europe to deal with our PV system providers sometimes and we visit our clients in the villages by car.

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32



### Support to ecoproducts & Ecoservices

Are you selling or promoting other's green entrepreneurs, products or services? Is your Shop or Showroom energy, water and waste efficient?

- We chose conventional PV systems but we believe that they have not been ecodesigned. We will check if we can find certified PV panels or systems.
- We are offering an ecoservice to our customers.
- We don't have shops or a showroom.



### Travels & Fairs

How do you perform sales travels? Which means do you use? are you organising events or fairs? how are they?

- Well, we don't travel so much... our workforce does. They try to spread the word and gain new customers in the region. They mostly travel by van (our vans are not new or efficient).
- Sometimes they may use the train.
- We don't participate in fairs, maybe in the future we will.



# Ecodesign card 7

## Card 2/3

1

### How to proceed?

Answer these questions. For each: *yes* (y) you get 1 point, For each *no* (n) you get 0 points. If you don't know a question You choose *other* (o) and you get 0 points unless you provide an good explanation or other options.

2

### How to proceed?

Calculate for each box how many points you got and write the score above where indicated. Write the score And an emoticon that represent it.



0/3   1/3   2/3   3/3



### Office material

Score **1** Yes, No, Or?

1. I don't print, almost, any document, just few for legal requirements, is that true?  Y
2. When I use paper, or other office materials I choose certified one, with optimised resolution avoiding plastic coverings, is that true?  O
3. Do I apply green procurement criteria in the office material supply?  O

7C2- Most of the time we find it difficult to purchase certified or ecological paper in Ghardaïa (+0 point)

7C3- We will try to apply green procurement criteria to office assets, but till now we have not been able. (0 point)



### Transparency & information

Score **1** Yes, No, Or?

1. Have you got any green label or certification?  O
2. Is my environmental information free and easily accessible on the internet or my sale point(hotel...etc)?  Y
3. Do I measure and report all the relevant aspects of my business for stakeholders review (environmental, social, labor conditions...)?  N

7a1. No, we don't have it yet... we thought about achieving an ISO 14001 certification but we cannot afford it at the moment (0 points)



### Conference calls

Score **2** Yes, No, Or?

1. 'I foster the use of videoconference systems'. Is this statement true?  Y
2. 'If there is need to travel, I use efficient means of transport when available (train, bus, bike...)'. Is this statement true?  O
3. 'I minimize paper and mail use, using e-mailing systems whenever it is possible.' Is this statement true?  Y

7d2- Unfortunately our office is not easy to reach by public transport so when we have meetings everyone comes by car (often old and inefficient). (0 points)



### Support to ecoproducts & Ecoservices

Score **2** Yes, No, Or?

1. Am I selling ecoproducts or ecoservices?  Y
  2. Am I being a necessary intermediary between producers and consumers?  Y
- If you don't have a shop or showroom skip the 3rd question and get 1 point
3. Are my shops (or showroom) very efficient in energy, water and waste management?



### Travels & Fairs

Score **2** Yes, No, Or?

1. 'For commercial purposes the workforce does not travel using the following means of transport: plane, car, van (or similar)'. Is this statement true?  N
  2. 'We take the planes *only* for longer flights or when other more efficient options are not available'. Is this statement true?  Y
- If you don't organize events or fairs skip the 3rd question and get 1 point
3. Do I take care to reduce events and fairs environmental impact?

Follow the steps in the circles

3

Go to Card 7 Part 3

# Ecodesign card 7

## Card 3/3

1

### How to proceed?

For each block you didn't get the smiley face (3/3 yes) you should be thinking about what you are going to do to improve these aspects.

In the green box you can find some good tips to improve your actual solution. Write down your strategies and ideas! *Green tips!* In the green box you can find helpful ecodesign strategies and ideas. Let's ecodesign! ;)



### Office material

Initial Score

1

New Score

1

Ideas and strategies for improving the actual score?

7C2>> We decided to move towards a 0 paper policy, but at the moment we still can't introduce a 'digital' billing system. >> 0 points.

7C3>> We are going to looking for ecolabeled office material >> 0 points.

1



2



3



4



5



6



7



Sales &amp; communication

8



9



Follow the steps in the circles

2

Go to Card 8



### Transparency & information

Initial Score

1

New Score

1

Ideas and strategies for improving the actual score?



### Support to ecoproducts & Ecoservices

Initial Score

2

New Score

2

Ideas and strategies for improving the actual score?



### Conference calls

Initial Score

2

New Score

3

Ideas and strategies for improving the actual score?

7d2>> We have planned to reduce onsite meetings with distributor as much as possible and do them only by video conference. In this way we reduced costs and time! >> +1 points.



### Travels & Fairs

Initial Score

2

New Score

2

Ideas and strategies for improving the actual score?



Follow the steps in  
the circles

2

Go to  
Card 8 Part 2

# Ecodesign card 8

## Card 1/3

1

### How to proceed?

Try to answer these questions. You can start from wherever you feel more comfortable.

Think about them, gather information around them. They are going to be scored in the next part of this CARD. If you don't have an answer now, well, we recommend you to try to find it out, in order to keep going to the next part. Let go and good luck!



### Business management

Are you managing your activities and priorities within policies that promote efficient management of resources?

Well, for economic and environmental reasons we started 3 months ago a plan to optimize our resources in general. At the beginning it was hard but we have calculated a minimum of 5% savings if we control resources and purchases.



### Energy management

Has your production facility, office, hotel... been designed and built to reduce energy consumption to the minimum?

No, we rented an old facility to start operating. We are now looking for a better and more efficient building close to the center of the city, since we want to bring investors and public representatives to learn about our work and give our company more visibility. In the coming years we would like to expand our operation in suburban areas much closer to the cities.



### Water management

Has your production facility, office, hotel... been designed and built to reduce water consumption at the minimum?

As mentioned in the energy question, our facility is an old building. Water consumption is measured by the water company but we know that some improvements can be made. From time to time we find leaks and unnecessary water waste (mostly in the bathroom). We need to take care of this as soon as possible.



### Green procurement

Are you buying certified products/ services? Which certification do they have?

No, our PV systems are not certified (beyond quality and legal requirements) but we are looking for new suppliers.



### Labor Conditions & Policies

How are labor conditions of people working directly in your product/ service?

Yes, we always take care of our people, and in particular our technicians, as they represent a huge opportunity to keep expanding our network. If they are engaged and happy they work better and promote our brand within the communities. Women are another issue. We believe they are key to reach community leadership, so we started a program to empower them.

# Ecodesign card 8

## Card 2/3

1

### How to proceed?

Answer these questions. For each: *yes* (y) you get 1 point, For each *no* (n) you get 0 points. If you don't know a question You choose *other* (o) and you get 0 points unless you provide an good explanation or other options.

2

### How to proceed?

Calculate for each box how many points you got and write the score above where indicated. Write the score And an emoticon that represent it.



0/3   1/3   2/3   3/3



### Business management

Score

3

Yes, No, Or?

1. Do I have an environmental policy?
2. Do I have the objective of continuous improvement of the environmental performance of my products and service?
3. Are you managing your activities and priorities to promote sustainable innovation, co-creation?

8c1. Just a comment... as mentioned before we are studying how to achieve an ISO14001 certification to make our environmental policy stronger and recognized by our stakeholders.



Follow the steps in the circles

3

Go to Card 8 Part 3



### Energy management

Score

2

Yes, No, Or?

1. 'I know how much water I need monthly in my infrastructure, and i've made everything possible to reduce it' is this statement true?
2. 'My facilities are thermically *completely* isolated or powered by renewable sources'. Is this statement true?
3. Did I choose a green certified energy provider or apply for some efficiency program?

8a3. Our building is old. We are now looking for a new building where we can better demonstrate the importance of energy efficiency, and if necessary, install PV systems. And save money too! (1 points)



### Water management

Score

0

Yes, No, Or?

1. I know how much water I need monthly in my infrastructure, and I've made everything possible to reduce it, is that true?
2. Do I use efficient water consuming devices?
3. Am I informing and preparing correctly all the personnel and customers to avoid water waste?

8b1. We are asking the water company to provide us with real consumption data in order to design an efficiency strategy (0 points)

8a3. We are on it but there is still work to do (0 points)



### Green procurement

Score

1

Yes, No, Or?

1. Am I buying most of products and service I need from green labelled suppliers?
2. Am I a ecolabelled or certified supplier?
3. Is the environmental information about my supply chain and labels accessible for my stakeholders?



### Labor Conditions & Policies

Score

2

Yes, No, Or?

1. Have I adopted a gender equality policy?
2. Are *all* my workers and suppliers fairly paid, safe and protected within the legal framework?
3. Have I adopted a social responsibility policy towards *all* the stakeholders connected with my project?

8E1- At the moment it is difficult to have such policy since we are a small business and there are few women with technical skills on solar panel maintenance. We will keep it in mind for the future (0 points).

3E2- At the moment all the hired workers are paid as legally required but we would like to improve that. (0 points)

# Ecodesign card 8

## Card 3/3

1

### How to proceed?

For each block you didn't get the smiley face (3/3 yes) you should be thinking about what you are going to do to improve these aspects.

In the green box you can find some good tips to improve your actual solution. Write down your strategies and ideas! *Green tips!* In the green box you can find helpful ecodesign strategies and ideas. Let's ecodesign! ;)



### Business management

Initial Score **3**

New Score **3**

Ideas and strategies for improving the actual score?



Infrastructure

Follow the steps in the circles

2

Go to Card 9



### Energy management

Initial Score **2**

New Score **3**

Ideas and strategies for improving the actual score?



### Water management

Initial Score **0**

New Score **2**

Ideas and strategies for improving the actual score?

8b1.>> This month we will get the data and we will start a plan for water efficiency to avoid leaks and reduce up to 10% consumption (it is our objective) (1 points)

8b3.>> We plan to provide our workforce with a training program on water use twice a year (+1 points)



### Green procurement

Initial Score **1**

New Score **1**

Ideas and strategies for improving the actual score?



### Labor Conditions & Policies

Initial Score **2**

New Score **3**

Ideas and strategies for improving the actual score?

8E1- We are still learning how to do it. At the moment we are promoting programs in rural communities to train women in the installation and maintenance of PV systems. To do so we drew inspiration from the Indian project 'Barefoot college' that helped women become strategic in connecting technology and sustainability. We are quite impressed by it, we think it is the right way forward! (1 point)



## Case study








### Codesign card 9

Solar Rural Algeria team has not yet allocated time to think about what they will need to deliver their service. They start now, together with their company partners.

	1	2	3	4	5	6	7	8
	MATERIALS & RESOURCES	PRODUCTION	PACKAGING & DISTRIBUTION	USE & MAINTENANCE	END OF LIFE MANAGEMENT	SERVICE	SALES & COMMUNICATION	INFRASTRUCTURE
A	TYPE & NR MATERIALS	ENERGY MANAGEMENT	PACKAGE MATERIALS	ENERGY CONSUMPTION	EASY TO BE REUSED	3 ACCESSES & SERVICES	1 TRANSPORT & INFRASTRUCTURE	2 ENERGY MANAGEMENT
B	AMOUNT (WEIGHT)	WATER MANAGEMENT	FLAT DESIGN	CONSUMIBLES	EASY TO BE REFURBISHED	3 RESUME USABILITY	2 SERVICES ECONOMY & ECO-FRIENDLY	2 MANAGEMENT
C	TECH MATERIALS: RECYCLED CONTENT & RECYCLABILITY	WASTE MANAGEMENT	STACKABILITY	REPAIRABILITY	EASY TO BE DISASSEMBLED	2 DISASSEMBLING EXCHANGING	2 MATERIAL	3 MAINTENANCE
D	BIO MATERIALS: RENEWABILITY & COMPOSTABILITY	CHEMICALS IN-OUT	MEANS OF TRANSPORT	DURABILITY	LABELLING & IDENTIFICATION	2 DISASSEMBLING EDUCATION	3 COLLECTIVE	1 PROCUREMENT
E	LOCATION OF SOURCES	PROCESSES & TECHNOLOGY	ROUTES & DISTANCES	MULTI-FUNCTIONALITY & MODULARITY	CHEMICALS IN-OUT	1 COMPLETION POSSIBILITIES	2 TRAVEL & FARES	3 CLIMATE & PEOPLE

32 

YOUR TOTAL  
SCORE

				
 + 	00-30	31-60	61-90	91-120
	00-12	13-24	25-34	35-45

However the team is aware that they scored relatively low:

- We are sure there is road for further improvements. In particular issues like water and energy management got low points and need further attention.
- It is strategic for us to send a coherent message to our communities and stakeholders, if we can be sustainable with economic feasibility we can attract investors and people that trust us!

**Recap: How to proceed?**

At the moment we will focus on the following:

- Deliver 5 talks in rural communities to spread the word about the importance of energy efficiency.
- This month we will get our water consumption data and we will start a plan for water efficiency to avoid leaks and reduce up to 10% consumption.
- Provide our workforce with a training program on water use can be sustainable with economic feasibility we can attract investors and people that trust us.



## Case study

### Key activities and resources, and ecodesign

Do you remember Khajib Alal?! He wants to start Sensii, the first brand of Egyptian organic cotton products for babies (from 0 to 3 yo). Sensii's value proposition is to provide healthy (toxic free) garments for babies'

Khajib Alal is now doing the Key Activities and Key Resources analysis with his wife Sofiah (also his Sensii's team mate). It turns to be complicate, as they are simultaneously offering a product (garments) and a service (selling). Therefore, in Card 0 they indicate that they will need to fill out all the cards. They go on.

#### Key activities 1

##### Problem solving

What activities and tasks do you need to accomplish to create your VP, solve a specific challenge or maintain a high level of innovation in your business?

##### Production

What activities and tasks do you need to accomplish to produce your products or supply your services?

##### Platform / network / sales

What activities and tasks do you need to accomplish to create a efficient and valuable network or platform in order to promote sales, distribution, communication with stakeholders?

##### Supply chainmanagement

What activities and tasks do you need to accomplish to create a efficient and valuable supply chain management system? What do you need to deal with supplier?



Write a list of *Key activities*. Remember that some of them may be related with specific activities of your business niche market, other may be related to general management. Both are very important, don't forget it!

#### Key resources 2

##### Human capital

What human resources does your value proposition require? what about the people working for / with you?

##### Physical capital

What physical resources are important for your business? (Think about facilities, machinery, vehicles..)

##### Intellectual & digital capital

Which intellectual and digital resources do you need? Do you need licences, patents, software?

##### Financial capital

Which type of financial capital do you need? Have you investments, loans or other financial issues (e.g. machinery leasing..) related with your business?



Write a list of *Key resources* considering everything you need to create, deliver and manage your products, services and perform business operations.

- Research to reduce handmade cutting time/costs
- Marketing campaign to reach sensitive mothers
- Managing our own organic certification
- Managing workshop activities and storage of materials
- Garments manufacturing processes (dying, cutting sewing, ironing)
- Workforce management
- Online shop management
- Social networks management
- Control of supplier certifications
- Looking for local natural dyers

Founder team: Khajib Alal and Sofiah Kamal

- 5 workers
- Workshop and warehouse outside Tanta (15km).
- Machinery and equipment for dying, cutting sewing, ironing.
- Shop/ office in Tanta (center).
- 1 van used for carrying threads and other necessary materials
- Dyers.
- Water and energy.
- Web page with information and ecommerce.
- Open source software for office tasks.
- 5 years mortgage for expenses of machinery
- We got the Shop/ Office as heritage from Sofiah parents (NO renting!)



Khajib Alal and Sophie have listed all the activities and resources they need to deliver their value proposition.

Can they find an efficient and environmental and social friendly way to do it? They answer all the questions in cards 1 to 8 and start thinking of better approaches and possible solutions to improve their final score!.



### Note

You will find the full KA & KR analysis online. It is long but rather interesting to have a look for those of you developing a product or a product & service green business. Go to <https://goo.gl/ChEpRh>



# Case study

## Ecodesign card 9

- |                       |            |                          |                   |                        |          |                       |                |
|-----------------------|------------|--------------------------|-------------------|------------------------|----------|-----------------------|----------------|
| <b>1</b>              | <b>2</b>   | <b>3</b>                 | <b>4</b>          | <b>5</b>               | <b>6</b> | <b>7</b>              | <b>8</b>       |
|                       |            |                          |                   |                        |          |                       |                |
| MATERIALS & RESOURCES | PRODUCTION | PACKAGING & DISTRIBUTION | USE & MAINTENANCE | END OF LIFE MANAGEMENT | SERVICE  | SALES & COMMUNICATION | INFRASTRUCTURE |

<b>A</b>								
<b>B</b>								
<b>C</b>								
<b>D</b>								
<b>E</b>								

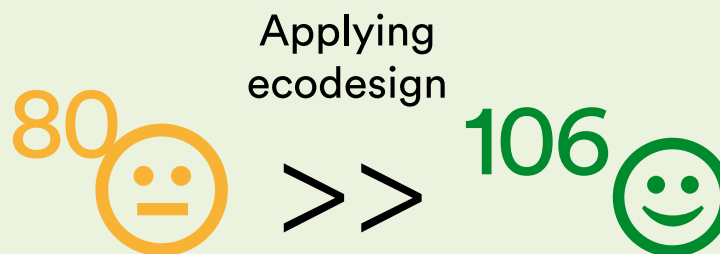
106

YOUR TOTAL SCORE

During the Ecodesign process from card 1 to 9 Khajib Alal defined many strategies. Their favourites, thus those with which they will start dealing are:

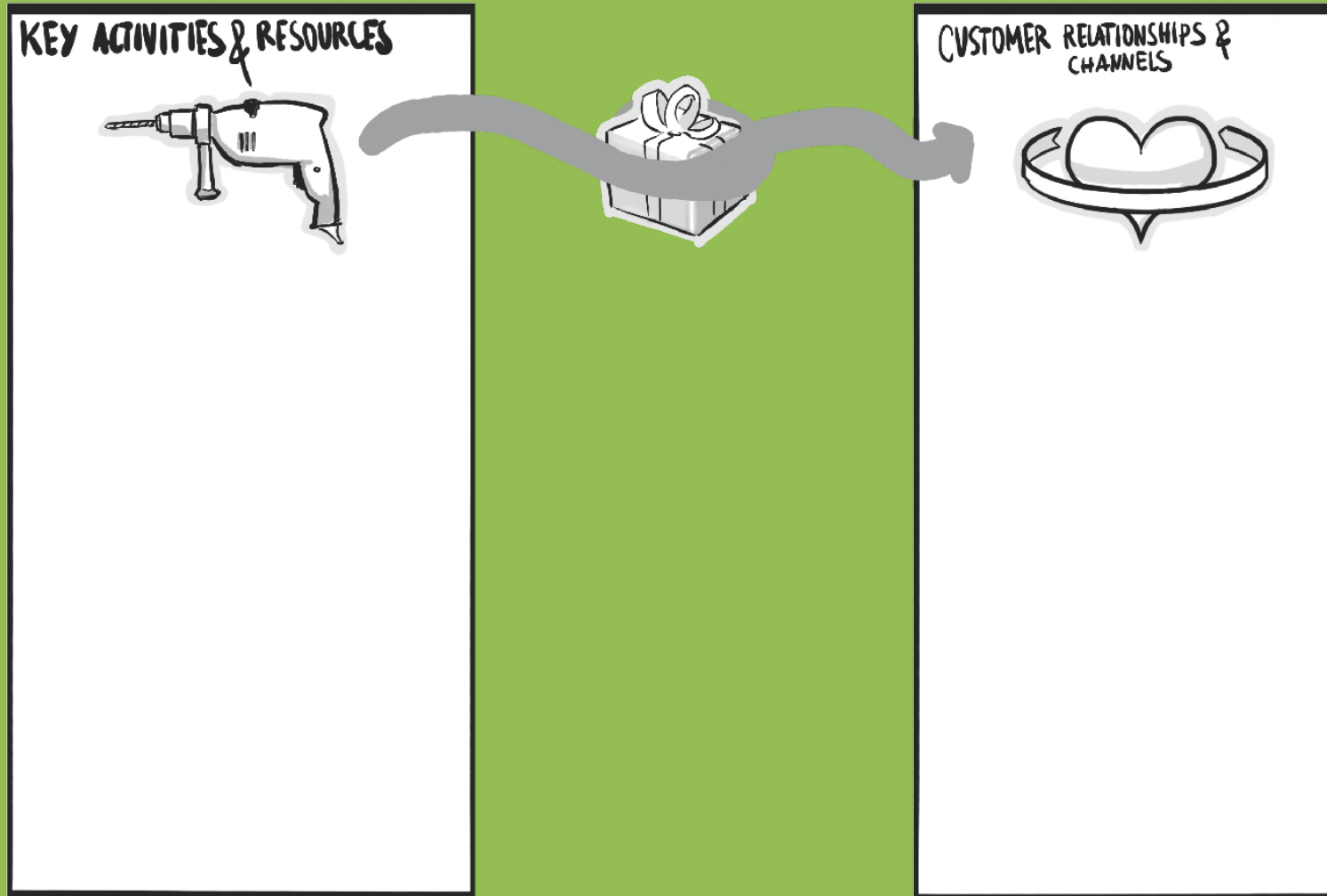
- Asking for recycled PS or local organic alternative like wood.
- Informing our customers in the label how to choose a 'ecological soap' and maintain properly the product.
- Launching a campaign for collecting used garments and give them to charity organisations in slums of Manshiet Naser (Cairo).
- Exchanging polystyrene (PS) components for wood. (buttons) and cotton (label and thread).
- starting a cocreation sessions with mothers and grandmothers to teach them how to design new baby items that we will manufactures later.

They are proud of it, since applying ecodesign they have increased their score. They are proud of it!



# Exercise 15

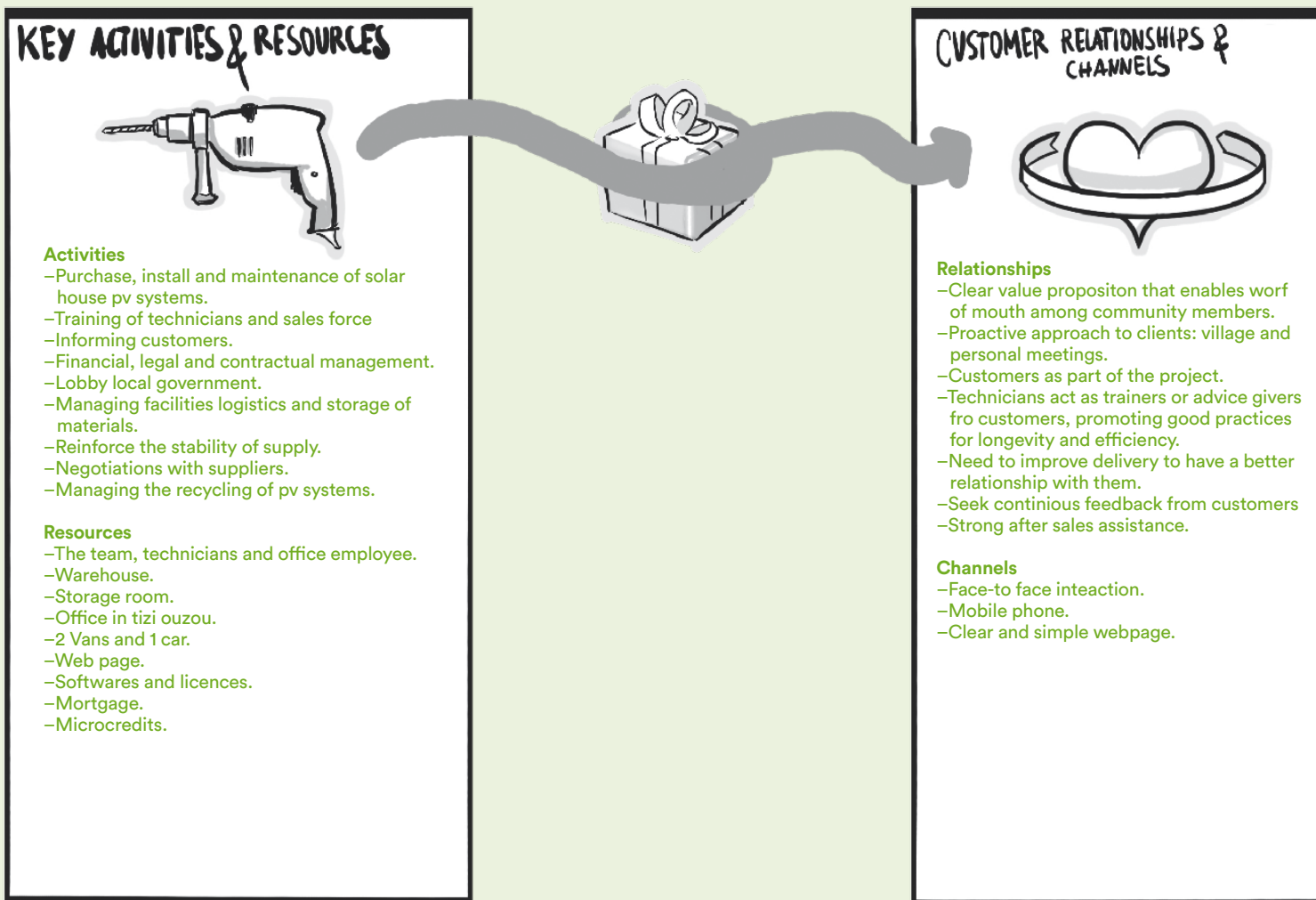
*Summary of Key activities and resources and customer relationships and channels.*





## Case study

*Summary of Key activities and resources and customer relationships and channels.*



## Exercise 16

### Cost structure

**Brainstorm:** go to exercise 13 to review the activities and resources. Then, list the investment costs that you need to start your business (eg. purchase of products, offices or factories, training and education, etc.) and list the most important costs inherent to your business model (differentiate between fixed and variable costs).

**Price:** try to give an estimate cost for each of the items.

**Transform:** it is important to reduce the fixed costs as much as possible. Think about a possible strategy to do it.

**Sum up:** give the total fixed and variable costs.

**Recap:** spot if something needs special or further attention.



### INVESTMENTS

What are the investment costs to start your business?

### FIXED COSTS (£)

Which are your most important fixed costs? Can you give and estimate cost to them?

### VARIABLE COSTS (£/UNIT)

Which are your most important variable costs? Can you give and estimate cost to them?

TOTAL :

TOTAL :

HOW COULD YOU TRANSFORM IT INTO A VARIABLE COST?

## Notes

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### Note

This exercise provides you with a rough estimation of costs that you will have to polish in the detailed financial plan (Step 4 of the HB). However it helps you capture those aspects to focus on.





## Case study

### Cost structure

Hassan, Amina and Karim are working on numbers... Heads are fuming! It seems as the upfront investments are very high.

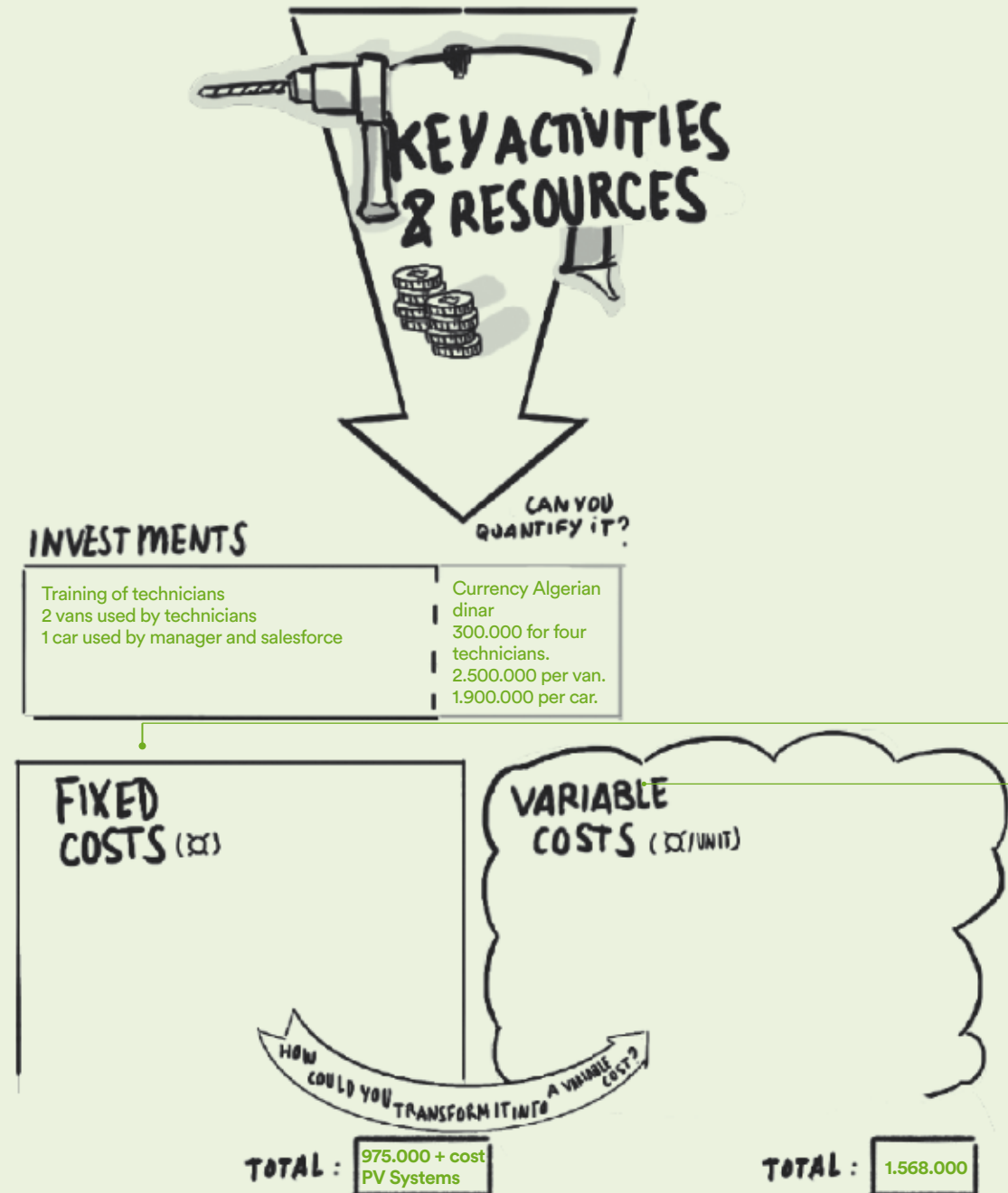
-We wont be able to afford them!

Amina suggests:

'Maybe we can start by renting or leasing our vehicles so as to decrease the upfront investments. What do you think?'

'Yes, it is a good idea but we must find out whether it is feasible. Let's leave the investment numbers as they are, for the moment'... answers Karim as he is the financing brain of the group.

We will talk with our partners to see whether they have other ideas to reduce costs.





### Fixed costs

The purchase of solar PV home systems: 50 Wp SHS, including battery, four lamps, transport and installation.	91.592 per unit (don't know the total units yet).
Marketing	—
Insurance rates 3%	2.747 per PV system (don't know the total units yet).
Payment collection in rural areas.	At the moment we don't know.
Labour costs.	
–Rural Algeria Team—2 persons.	450.000 per person/year.
–Techniciens —4 personnes.	250.000—per person/year.
–Office employee.	190.000—per person/year.
Office in Tizi Ouzou, including rent, telephone, electricity.	We need to look for it.
Internet connexion.	34.488 per year.
Software licences.	50.000 per annum.
Open source software for office tasks.	No cost.

### Variable costs

Maintenance.	No cost, included in technicians labour costs.
Spare parts.	No idea, very variable. We will know it after the first pilot test.
Training of personnel.	150.000 per annum.
Marketing.	700.000 first year and expectedly lower over time.
Van use and maintenance.	150.000 per year and unit.
Car use and maintenance.	100.000 per year and unit.
Office costs (telephone, electricity, etc)	At least 3.900 per month.
Web page.	At the moment is not a priority.
Inflation and interest rates.	Depend on bank conditions.

# Exercise 17

## Revenue streams

**Brainstorm:** go back to exercises 9 and 11 (Value Proposition) and make a list here of the Products and/ or Services that you will deliver.

**Select a revenue model and assign a price.** Mark the revenue streams that you would generate related to the list of products and services, and assign them a price. Then, try to think about other possible ways to increase your revenues and make any necessary changes.

**Description:** describe, for each revenue stream, the most important characteristics. Try to rank the importance of each revenue stream and link it with a particular customer segment and channel.

---

### 1. LIST THE PRODUCTS & SERVICES YOU ARE OFFERING...



- 1 \_\_\_\_\_
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_
- 4 \_\_\_\_\_
- 5 \_\_\_\_\_

### 2. SELECT AN ADEQUATE REVENUE MODEL FOR EACH AND PRICE THEM...

ASSET SALE	PRICE?	LENDING/RENTING/ LEASING	PRICE?	ADVERTISING	PRICE?
USAGE FEE		LICENSING		SUBSIDIES	
SUBSCRIPTION FEE		BROKERAGE FEES			

### 3. DESCRIBE HERE THE CHARACTERISTICS OF YOUR REVENUE MODEL...



#### Note

This exercise provides you with a rough estimation of revenues that you will have to polish in the detailed financial plan (Step 4 of the HB). However it gives ideas for further research and helps you capture those aspects to focus on.



## Case study

### Revenue streams

Solar Rural Algeria is providing electricity to its customers on a fee-for-service delivery mode. So the main revenue are the monthly fees that each consumer will pay.

Karim says:

‘But we still need to purchase the solar house PV systems. How are we going to pay them?’

‘What about looking for governmental or international subsidies and funding?—suggests Hassan, or maybe exploring microcredits.’

Probably subsidies and financial credit will be a means to afford upfront capital costs.

### 1. LIST THE PRODUCTS & SERVICES YOU ARE OFFERING...



- 1 Reliable and clean electricity from SOLAR PV installations.
- 2 Recycling of PV Systems.
- 3 Solar home PV Systems.
- 4 \_\_\_\_\_
- 5 \_\_\_\_\_

### 2. SELECT AN ADEQUATE REVENUE MODEL FOR EACH AND PRICE THEM...

ASSET SALE	PRICE? (2) To be studied	LENDING/RENTING/ LEASING	PRICE? _____	ADVERTISING	PRICE? _____
USAGE FEE	(1) 14.172/year	LICENSING	_____	SUBSIDIES	(3) 50.000 per unit
SUBSCRIPTION FEE	_____	BROKERAGE FEES	_____		

### 3. DESCRIBE HERE THE CHARACTERISTICS OF YOUR REVENUE MODEL...

Usage Fees: customers will pay a fee for the use of the system (fee-for-service delivery mode). A survey was carried out determine the cost for present energy sources. Based on this assessment, and on the estimated operation costs, the service fee is determined at 71.181 dinars per month.

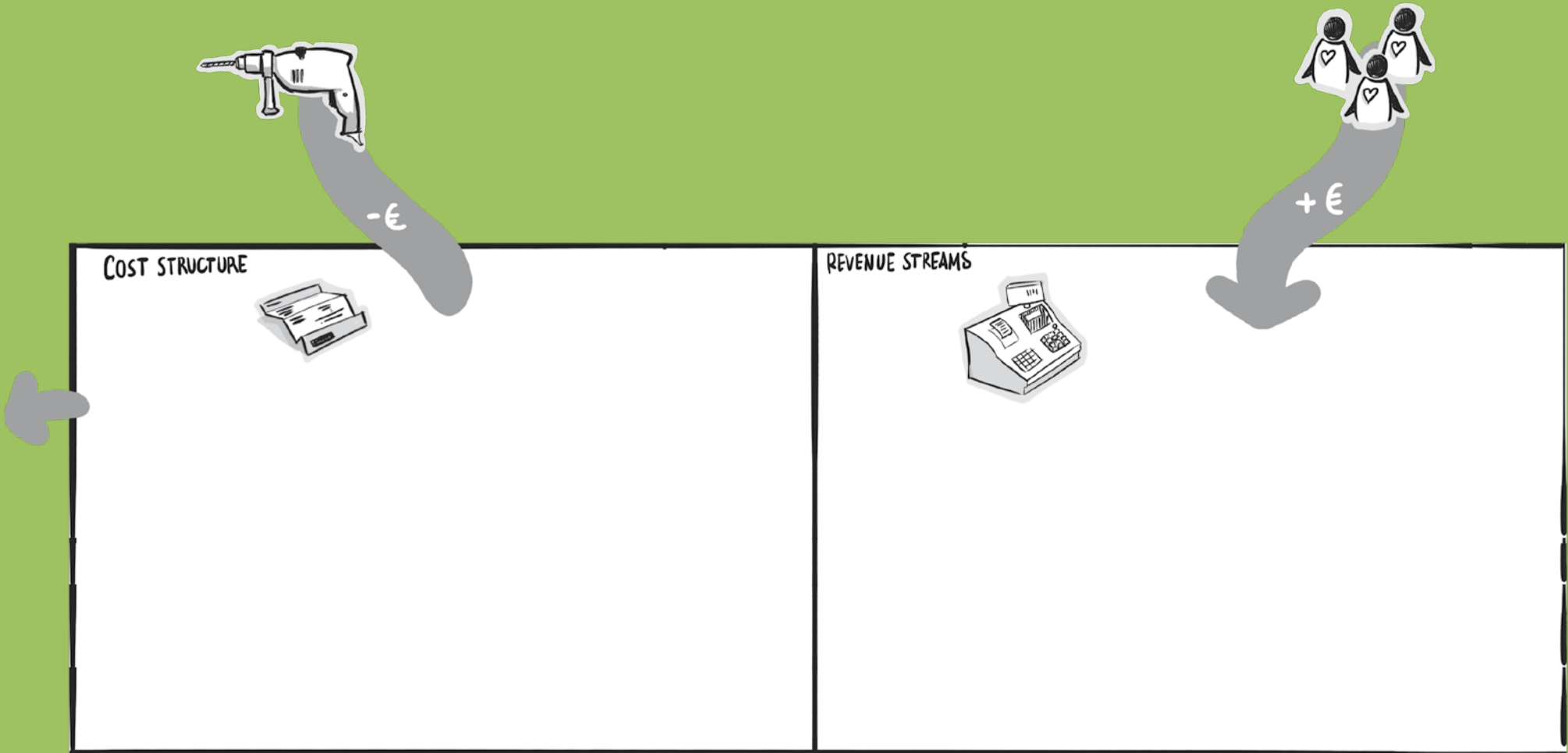
Subsidies should cover around 50% of the initial costs of the solar house PV systems and the rest should be included in the usage fee. The company in partnership with government or other institutions will buy and own the PV systems.

At the moment it is not clear where to get these subsidies from. It could be a governmental incentive, or an international green initiative. The repayment period (in case of a loan) and amount of return from buying PV systems will be based on the initial purchase price, with rate of interest added and a small premium for administration of this mechanism

Asset sale: coming from the recycling of PV systems on the long run. So it is a revenue that will have effect once batteries and PV systems become old (5 to 10 years).

# Exercise 18

*Summary of the cost structure and revenue streams*



**Notes**

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**Note**

At this point, you should have already sketched a complete Green Business Model covering all the aspects needed to launch your business idea!

Remember that you can use the individual Green Business Model canvas sheet to rewrite all the conclusions gathered from previous exercises in the given blocks. If necessary, print an additional copy to put it clean and everything in order



## Case study

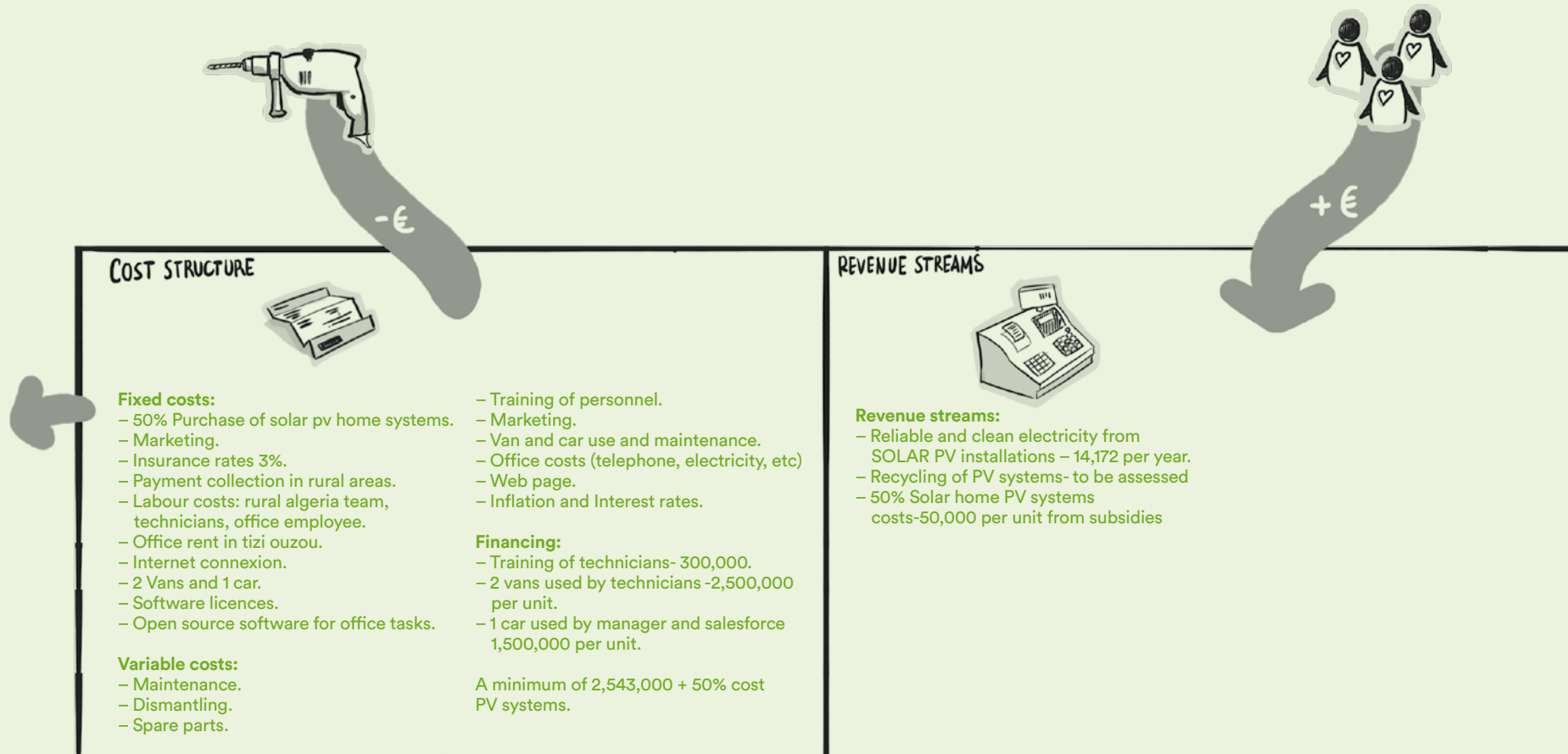
### *Summary of costs and revenues.*

---

Solar Rural Algeria team has roughly estimated the costs and revenues of their activity, so they can have an idea on the number of clients they need to start the business. They still need to research on the costs of some items, therefore, the cost structure they have at the moment will probably increase.

As they realized that the financing needs are too high, they will look for real options to lease their vehicles in order to decrease them. However, at this stage and since they are not clear whether it is an option in the area of work, they decided to include the vehicle costs (purchase) as an upfront investment.

---



### Conclusion

With these values we roughly estimate that we need around 700 systems installed if we buy the vehicles and around 300 if we lease them to cover the operating costs of the company. With information starting to emerge on the actual operating costs of other ESCO projects, it appears that the minimum size needed for profitable operation, including paying for the initial capital is when the company has 150-200 clients on a fee-for-service programme.



# Case study

## Green business canvas prototype

KEY STAKEHOLDERS	KEY ACTIVITIES & RESOURCES	VALUE PROPOSITION	CUSTOMER RELATIONSHIPS & CHANNELS	CUSTOMER SEGMENTS
<p><b>Technicians:</b> employment – supervise PV systems.</p> <p><b>Community leader:</b> feedback &amp; decision making.</p> <p><b>Local government:</b> feed-back; villagers satisfaction- regulatory frameworks.</p> <p><b>Suppliers:</b> partnership &amp; customer provider; provision of solar PV systems</p> <p><b>Renewable energy companies:</b> Competitors.</p> <p><b>Government:</b> partnership; pilot project- influence other stakeholders, legislation.</p> <p><b>Bank:</b> partnership; clients- credit and fee collection.</p> <p><b>Sonelgaz:</b> competitors, improve electricity infrastructure.</p> <p><b>Community:</b> feedback; attitudes towards project.</p>	<p><b>Activities:</b></p> <ul style="list-style-type: none"> <li>–Purchase, installation and maintenance of solar house pv systems.</li> <li>–Training of technicians and sales force</li> <li>–Informing customers.</li> <li>–Financial, legal and contractual management.</li> <li>–Lobby local government.</li> <li>–Managing facilities logistics and storage of materials.</li> <li>–Reinforce the stability of supply.</li> <li>–Negotiations with suppliers.</li> <li>–Managing the recycling of pv systems.</li> </ul> <p><b>Resources:</b></p> <ul style="list-style-type: none"> <li>–The team, technicians and office employee.</li> <li>–Warehouse.</li> <li>–Storage room.</li> <li>–Office in tizi ouzou.</li> <li>–2 Vans and 1 car.</li> <li>–Web page.</li> <li>–Softwares and licences.</li> <li>–Mortgage.</li> <li>–Microcredits.</li> </ul>	<p>Provision of electricity from solar pv systems to households and businesses from the tizi ouzou region at an affordable price (fee-for-service) that involves the installation, maintenance and dismantling of solar pv systems as a means to improve local welfare while minimising the environmental impact.</p>	<p><b>Relationships:</b></p> <ul style="list-style-type: none"> <li>–Worf of mouth among community members.</li> <li>–Proactive approach to clients: village and personal meetings</li> <li>–Customers as part of the project.</li> <li>–Technicians act as trainers or advice givers fro customers, promoting good practices for longevity and efficiency.</li> <li>–Need to improve delivery to have a better relationship with them.</li> <li>–Seek continious feedback from customers.</li> <li>–Strong after sales assistance.</li> </ul> <p><b>Channels:</b></p> <ul style="list-style-type: none"> <li>–Face-to face interaction.</li> <li>–Mobile phone.</li> <li>–Clear and simple webpage.</li> </ul>	<p><b>Segments:</b></p> <ul style="list-style-type: none"> <li>–Rural households and small businesses- co-creation.</li> </ul> <p><b>Profile:</b></p> <ul style="list-style-type: none"> <li>–Low population, low income.</li> <li>–Willing to improve opportunities.</li> <li>–Fear dealing with legal and technical issues.</li> <li>–Can withdraw if the project is complex to develop.</li> </ul> <p><b>Market:</b></p> <ul style="list-style-type: none"> <li>–Niche of electricity services market where there is no competition.</li> <li>–Added value: quality and reliable service tailored to customers' needs; customers' engagement in the design and implementation of the project.</li> </ul>
<p><b>COST STRUCTURE</b></p> <p><b>Fixed costs:</b></p> <ul style="list-style-type: none"> <li>–Marketing.</li> <li>–Insurance rates 3%.</li> <li>–Payment collection in rural areas.</li> <li>–Labour costs: rural algeria team, technicians, office employee.</li> <li>–Office rent in tizi ouzou.</li> <li>–Internet connexion.</li> <li>–Software licences.</li> <li>–Open source software for office tasks.</li> </ul> <p><b>Variable costs:</b></p> <ul style="list-style-type: none"> <li>–Maintenance &amp; spare parts.</li> <li>–Training of personnel.</li> <li>–Marketing.</li> <li>–Van and car use and maintenance.</li> <li>–Office costs (telephone, electricity, etc)</li> <li>–Web page.</li> <li>–Inflation and interest rates.</li> </ul> <p><b>Financing:</b></p> <ul style="list-style-type: none"> <li>–Purchase of solar pv home.</li> </ul> <p>systems -109, 815.            –Training of technicians- 300,000.            –2 Vans used by technicians -2,500,000 per unit            –1 Car used by manager and salesforce – 1,500,000 per unit.            –At least 2.543.000.  <i>(All currencies are in dinars).</i></p>		<p><b>REVENUE STREAMS</b></p> <ul style="list-style-type: none"> <li>–Reliable and clean electricity from SOLAR PV installations – 14,172 per year.</li> <li>–Recycling of PV systems- to be assessed.</li> <li>–Solar home PV systems-50,000 per unit from subsidies or microcredits.</li> </ul>		





## Case study

### Green business canvas prototype

KEY STAKEHOLDERS	KEY ACTIVITIES & RESOURCES	VALUE PROPOSITION	CUSTOMER RELATIONSHIPS & CHANNELS	CUSTOMER SEGMENTS
<p>–local authorities for landfill management.</p>	<p><b>Key activities:</b> –Collecting any kind of electronic and electric equipment. –Refurbishing some of them. –Disposing the rest into landfill.</p> <p><b>Key resources:</b> –Personal car and trailer. –Own workforce. –3 employees.</p>	<p>Collection and refurbishment of outdated computer equipment from organisations and private persons in order to help disadvantaged people afford to pay for cheap appliances while decreasing the amount of waste disposed in landfills.</p>	<p>Direct prospection of the customers and direct feedback from them Bulletin boards at educational institutions shop (for giving used appliances and selling refurbished items)</p>	<p><b>Potential customers:</b> public organisation SMEs Students any private person</p> <p><b>Beneficiaries:</b> Landfill manager, local authorities in charge of waste management, local population living in the surroundings of the landfill.</p>
<p><b>COST STRUCTURE</b></p> <p>–Collecting costs (transportation, fuel). –refurbishment costs. –renting cost of the repair workshop. –Salaries of the 3 workers + Omar’s remuneration. –buying costs of old items to be refurbished (given by private persons).</p>			<p><b>REVENUE STREAMS</b></p> <p>Fee for service paid by organisations and companies willing to get rid of old equipment evenues from the sales of refurbished items directly in the shop.</p>	



# Case study

## Green business canvas prototype

KEY STAKEHOLDERS	KEY ACTIVITIES & RESOURCES	VALUE PROPOSITION	CUSTOMER RELATIONSHIPS & CHANNELS	CUSTOMER SEGMENTS
<ul style="list-style-type: none"> <li>-Organic cotton suppliers.</li> <li>-2 External collaborators.</li> <li>-Association SOY from Manshiet Nasser, Cairo.</li> </ul>	<p><b>Key activities &amp; resources:</b></p> <ul style="list-style-type: none"> <li>-Research to reduce handmade cutting time/costs.</li> <li>-Marketing campaign.</li> <li>-Managing our own organic certification.</li> <li>-Managing workshop activities and storage of materials.</li> <li>-Garments manufacturing processes (dying, cutting sewing, ironing)</li> <li>-Workforce management.</li> <li>-Online shop management.</li> <li>-Social networks management.</li> <li>-Control of supplier certifications.</li> <li>-Looking for local natural dyers.</li> <li>-Founder team and 5 workers.</li> <li>-Workshop and shop (+ small office for accounting).</li> <li>-Energy, water and water based chemicals for garments processing.</li> <li>-Raw materials (mostly cotton, PS, PE and cardboard).</li> <li>-Vehicle to get cotton from Alexandria.</li> <li>-Website for e-commerce.</li> <li>-Open office for management tasks.</li> </ul>	<p><b>Healthy (toxic free) garments for babies</b></p> <p><b>Social value:</b></p> <ul style="list-style-type: none"> <li>-Fostering organic and fair traded cotton industry.</li> <li>-Promoting sustainable and healthy textile industry.</li> </ul> <p><b>Environmental value:</b></p> <ul style="list-style-type: none"> <li>-Reduce conventional cotton use avoiding toxic pesticides and synthetic fertilizers.</li> <li>-Supporting regional organic agriculture.</li> </ul>	<p><b>Customer Relationship:</b></p> <ul style="list-style-type: none"> <li>-Very close and honest relationship with local (onsite) consumer.</li> <li>-Personalized but 'virtual' customer service for online buyers.</li> <li>-The main value of our customer relationship is the way we care so much about mothers and their babies health.</li> </ul> <p><b>Channels:</b></p> <ul style="list-style-type: none"> <li>-Shop in the center of Tanta we sell our garments to local people.</li> <li>-Online through the e-commerce website we reach more people in Cairo and Alexandria.</li> <li>-Social network like facebook.</li> </ul>	<p><b>Online buyer:</b> Middle-upper class parents (both) looking for safer garments for their children in Cairo and Alexandria up to 40 years old with higher education and international work experience.</p> <p><b>Onsite buyer:</b> Middle class parents from Tanta and close villages, mostly 20 to 30 years old mothers with an elementary education, very sensitive to health issues.</p>
<p><b>COST STRUCTURE</b></p> <p><b>Variable costs (mostly depending on production volume)</b></p> <ul style="list-style-type: none"> <li>-Raw materials supply from Turkey (material expenses per m2 and transportation) and energy, water and chemicals for garment processing.</li> <li>-Packaging and delivery costs.</li> <li>-Some event and DIY</li> </ul> <p>workshop expenses but they are fully covered by suppliers sponsorship</p> <p>2 collaborators wages for their contributions from time to time.</p> <p><b>Fixed costs (mostly upon business operations and seasons)</b></p> <ul style="list-style-type: none"> <li>-Energy water and chemicals for office and shop heat, sanitation and lightening.</li> <li>-Personnel wages (7 people, founders and 5 workers).</li> <li>-Monthly renting the workshop facility outside Tanta).</li> </ul>			<p><b>REVENUE STREAMS</b></p> <ul style="list-style-type: none"> <li>-Asset sale to customers onsite (Tanta) (approximately 60% of our profit).</li> <li>-Asset online sale to Cairo and Alexandria customers (30%).</li> <li>-Some extra order from international children schools and kindergarden in Cairo (from time to time, about 10% of our profit).</li> <li>-Sponsorship to organize free promotional event or DIY workshop (it just cover the expenses).</li> </ul>	

# Step 3.

*Test*

# Test

## *Business Model*

### **It is time for another TEST!**

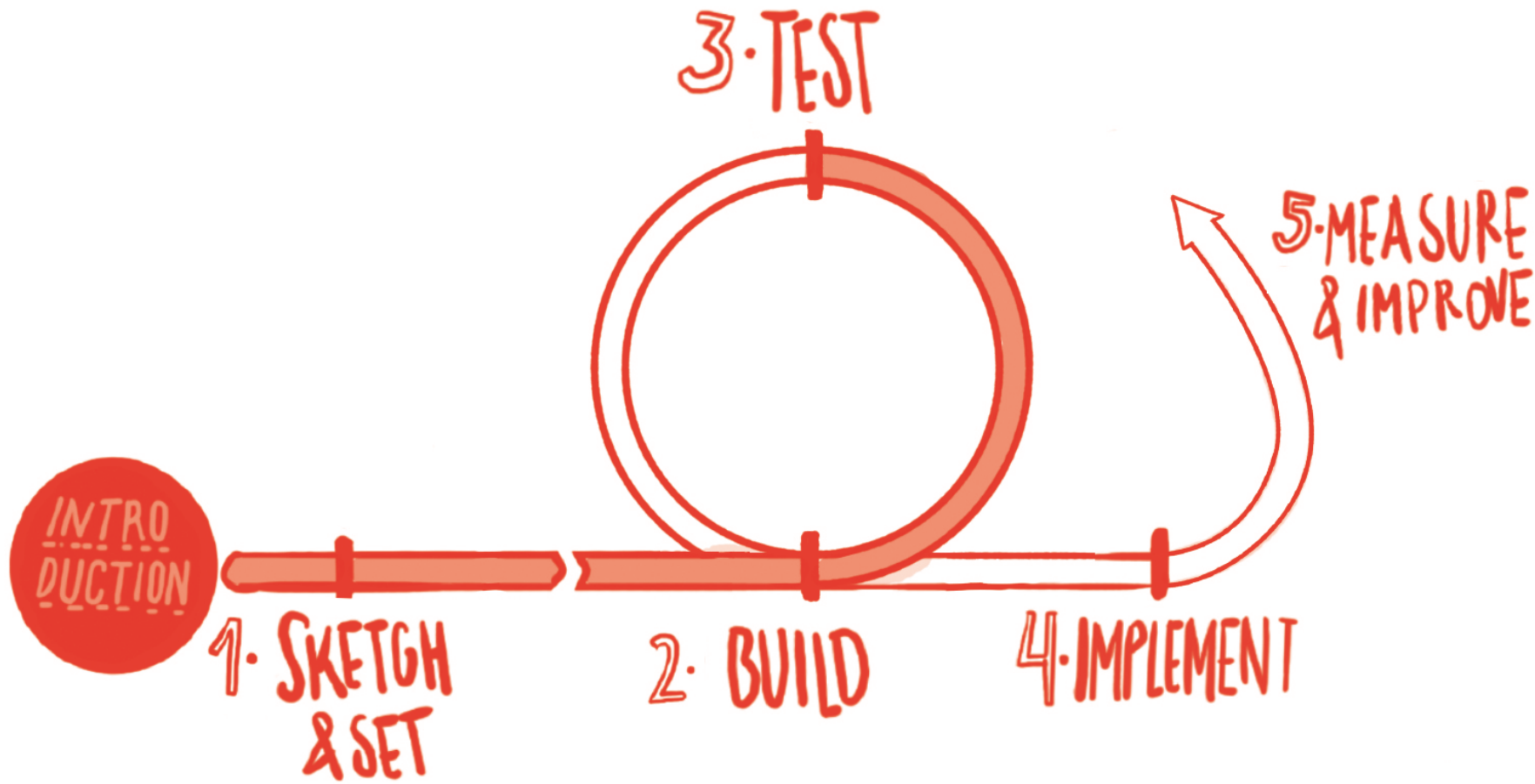
You've got a prototype, that is, a preliminary product or service. Wow, congratulations! But, do you know if it satisfies the expectations of your customers? If you will encounter any difficulties to deliver/produce it? Is it working as you expected? Will your customers be willing to pay the price you assigned? These are some uncertainties before launching it to the market.

As a means to improve and adjust your prototype to the market, you will need to engage again with your customers and stakeholders, to gather qualitative and quantitative information on your project and, very important, on the price/rates that your customers are willing to pay.

Go out again. Observe, talk and enquire!  
The test is divided into two exercises:

19a—Design the test

19b—Carry out the test and get results



# Exercise 19a

## *Design the test*

---

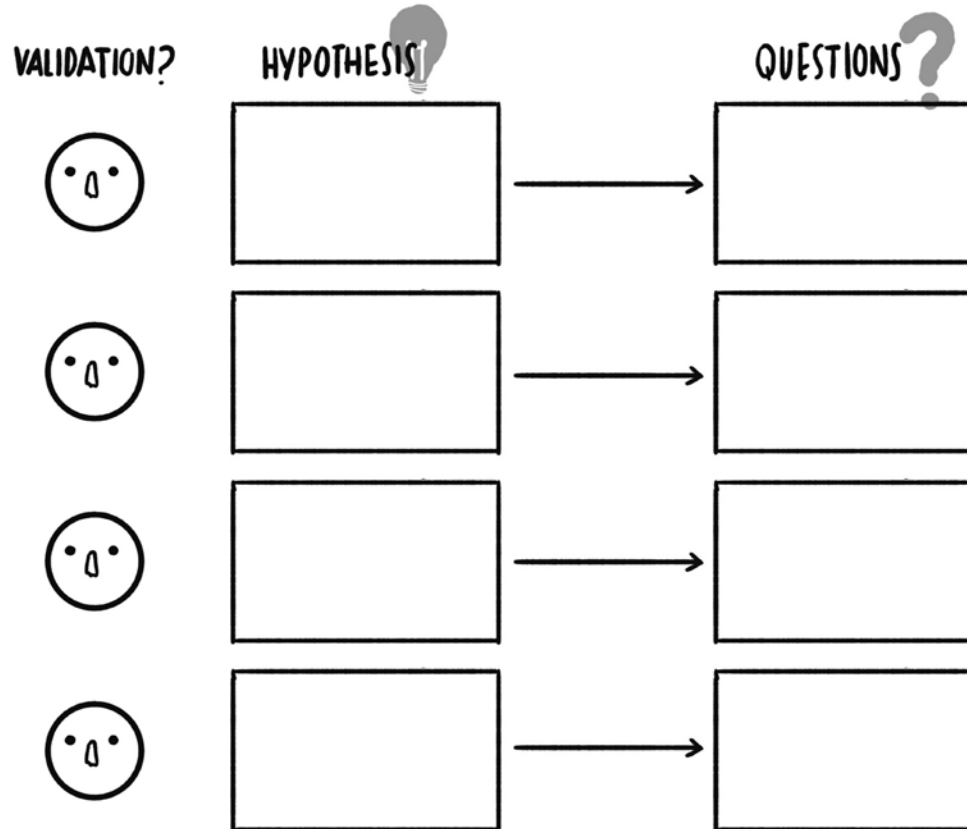
As you did before in Exercise 10, first you will need to identify those hypotheses (assumptions) that need validation (p.e. availability to pay, interest raised by your products, delivery service, acceptance of your products, etc). Then, think of the questions that you need to raise in order to check if the hypotheses are right, or the different ways to validate them.

Then, describe how are you going to test the hypotheses. How are you planning to get your idea tested is an open question for you to think and plan where, how and with whom will you test your prototype. Is it going to be on a congress, on site, with a small or big group of customers (early adopters)?

- Where are you going to test your prototype?
  - Who are going to be your early adapters? - name, number
  - How will you collect their feedback?
- 

### Notes

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**HOW ARE YOU PLANNING TO GET THOSE HYPOTHESIS TESTED?**

A large, empty rectangular box with a black border, intended for the user to write their plan for testing hypotheses.

## Exercise 19b

### *Carry out the test and get results*

Likewise you have done before, go out to the streets observe and ask your first customers, stakeholders and other people involved in your project. Get as much information as possible about customer's level of satisfaction with your product/service: its price, quality, emotions towards it, encountered problems... In summary, whether it fulfils their expectations or not!

Remember to record these findings in the following cards. Use the Discovery Card to capture the information that you collect from interviews or observations.

You may indicate data about the participant, take notes and sum up your learnings.

**DISCOVERY CARD**

INTERVIEW /  OBSERVATION

**PARTICIPANT'S DATA:**

WHICH THINGS DID PARTICIPANTS SAY/DO THAT SURPRISED YOU?      WHICH THINGS MATTER MOST TO THE PARTICIPANT?

WHICH MAIN THEMES OR LEARNINGS STOOD OUT FROM THIS INTERVENTION?      WHICH NEW TOPICS OR QUESTIONS TO EXPLORE IN FUTURE INTERVENTIONS?

**NOTES:**

OTHER

WHAT DID I LEARN ABOUT...



## Satisfaction Card

Use the Satisfaction Card to collect specific information about the satisfaction of your customers. Use it to quantify their level of satisfaction (from 1 -lowest to 5 – highest), with your product/ service in relation to a set of aspects that may influence their perception. Write their comments on the right side.

Finally, once you have gained enough understanding, get back to your canvas and fine tune it! For doing so, you can correct your previous canvas or write a new one.

### SATISFACTION CARD

QUANTIFY (1 TO 5) LEVEL OF SATISFACTION WITH OUR SERVICE/ PRODUCT  
IN RELATION TO :

COMMENTS

MEANS TO PURCHASE IT...

QUALITY...

MAINTENANCE SERVICE...

DELIVERY SERVICE...

OVERALL EXPERIENCE...

PRICE...

### Notes



## Case study

### Business model test 1/2

Solar Rural Algeria together with the local company partners have ultimated all the details to be able to launch their service. It has taken them a lot of time and effort to make things happen and they are dubious about the customers' response... In particular it took them a lot of time to get the in house solar PV systems running in the villages. Paper work, finances and tender difficulties terribly slowed down the process. However, their dreams are becoming real!

It is time to get their customers' and partners' feed-back! They would like to get some information on the quality of the service, maintenance problems and other issues that may arise.

Hassan, Amina and the technicians working with the local companies go to the village where they have installed the first 5 in house solar PV systems.

VALIDATION?

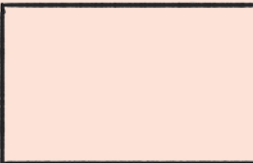


HYPOTHESIS

The price offered to customers is competitive and they are satisfied with it.

The delivery, installation and operation of PV systems is satisfactory.

The overall experience of customers is positive and they are willing to spread the word.

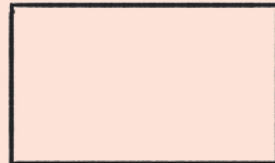


QUESTIONS?

What do you think about the price? Are you willing to pay for this service?

Have you found any technical problems? Do the batteries work properly? Is the amount of electricity generated enough for your needs?

Are you satisfied with the systems? Would you recommend it to your neighbours and colleagues?



HOW ARE YOU PLANNING TO GET THOSE HYPOTHESIS TESTED?

We will install 5 in house PV systems in village 1 and we will leave them running for three months. We will then go and survey our customers. We will also talk with Amara company, who is dealing with the installation and maintenance of the systems as well as the fees collections.

Hassan, Amina and the technicians working with the local companies go to the village where they have installed the first 5 in house solar PV systems. They meet with Mr. Salim, who is willing to give his feed-back on the experience he had with the service.

'Hello Mr. Salim, nice to see you again. We are really looking forward to hear your opinion on our service...'

## DISCOVERY CARD

INTERVIEW /  OBSERVATION

**PARTICIPANT'S DATA:** Amara Company

**WHICH THINGS DID PARTICIPANTS SAY/DO THAT SURPRISED YOU?**

Delays in monthly payments, although all the clients eventually pay.  
Make the delivery process faster!  
We had to wait too many months to have the service delivered.

**WHICH THINGS MATTER MOST TO THE PARTICIPANT?**

Clients complain of increased costs, however they feel more connected to the modern world. To train technicians on how to best ascertain continued operation of the batteries.

Although ESCO technicians were allowed to observe the installations, contractors sometimes treated these rudely, and refused to take advice, in spite of being less well trained in solar installations than the ESCO technicians.

**WHICH MAIN THEMES OR LEARNINGS STOOD OUT FROM THIS INTERVENTION?**

**WHICH NEW TOPICS OR QUESTIONS TO EXPLORE IN FUTURE INTERVENTIONS?**

**NOTES:**

OTHER

**WHAT DID I LEARN ABOUT...**



# Case study

## Business model test 2/2

**SATISFACTION CARD**

QUANTIFY (1 TO 5) LEVEL OF SATISFACTION WITH OUR SERVICE/PRODUCT IN RELATION TO :

		COMMENTS
MEANS TO PURCHASE IT...	2	
QUALITY...	3	<b>Quality:</b> The light is of a higher quality. half of the batteries have decayed in less than one year!! the installations were of good quality from the beginning, but panels are shadowing and sloppy!!
MAINTENANCE SERVICE...	4	
DELIVERY SERVICE...	1	<b>Delivery service:</b> Delivery was very, very delayed. Some of my neighbours lost faith in the process, and some even withdrew their applications.
OVERALL EXPERIENCE...	3	<b>Overall experience:</b> Provided children with the opportunity to study after dark. Our opportunity to play music and watch video.
PRICE...	3	
		The system was overused, and although I learnt that I could not press the batteries beyond certain limits, some of the batteries were not fully recharged ever, and went out of commission!
		<b>Price:</b> Paying a higher price than what was previously spent on candles and kerosene for lighting. However, they are willing to pay for it because this new system provides added value.



### Note

The information gathered in this test will help you tailor your prototype to the customers' expectations but also to adjust specific problems or difficulties that may have arisen with your stakeholders and partners.

Remember that the discovery card can be useful to take notes from the interviews or observations. On the other side, the satisfaction card is thought to be used to collect feedback from customers regarding their satisfaction with your products/service.

After the test, Hassan and Amina realize that one of the main challenges is related to the second hypothesis: they will need to pay attention to it in order to improve. If they make changes in the delivery and maintenance service, the overall experience will improve. For this, they will need to work with the technicians and with suppliers. As regards the price (first hypothesis), the general feeling is that customers will be willing to pay for it considering the added value of the service.

# Step 4.

*Implement*

# Implement

## *Well done!*

---

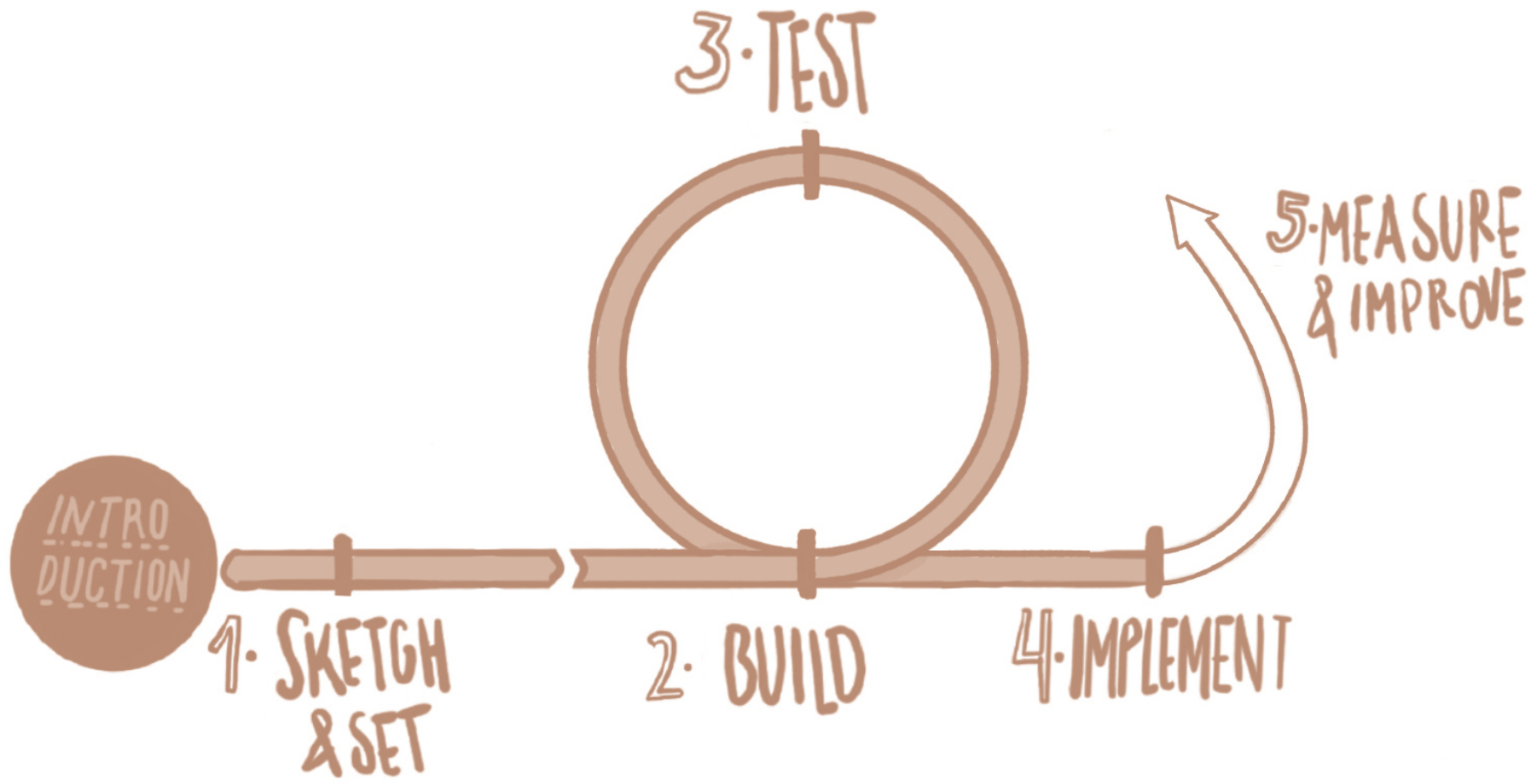
You have designed and validated your business model. So, you have a pretty well defined idea of what do you want to do, with whom and for whom, and what do you need to make it happen. To enter the market it is time to polish this idea and to make it doable.

To be able to do so, you must carefully plan the development, management and operations of your business. It is, another phase of your business creation, which includes developing a financial plan, a legal management plan, a roadmap, and a management and operational plan. You can find these phases extensively explained in Step 4 of the Handbook.

---

In order to get your business successfully implemented into the market you should follow some final steps that are described in the Handbook. Remember to check it and thoroughly develop the following:

- Legal management plan**
- Operational & management plan**
- Roadmap**







# Step 5.

*Measure and improve*

## Exercise 20

### *Indicators*

---

You are running your business! But, do you know whether you are achieving your project objectives? Are you being as efficient as possible? Is there something that could be improved?

You won't be able to answer these questions without a measurement system in place that allows you to track progress.

During the creation of your business you have set project indicators-to assess the accomplishment of project objectives, and environmental performance indicators-to evaluate the environmental and social impact of key activities and key resources. You have also identified the systemic boundaries and forces of change that may affect the business, the customers and stakeholders.

Use all this information to set measurement parameters and to initiate a cycle of continual improvement. You can find information about it in Step 5 of the Handbook.

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### PROJECT INDICATORS:

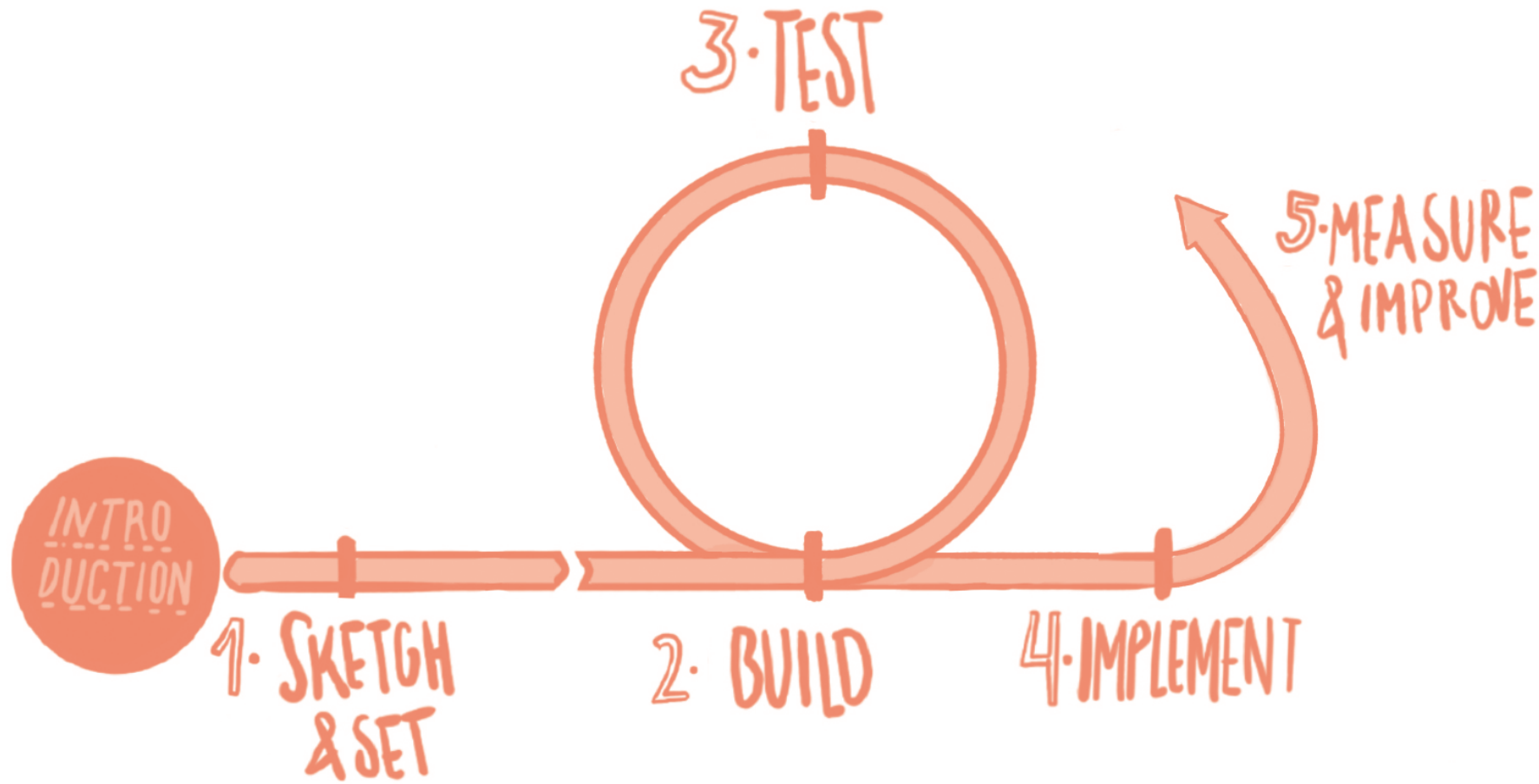


The project indicators are related to the objectives defined in exercise 4 (Set your goals). Go back to those objectives and define an indicator or a set of indicators for each objective. Remember that these indicators should be measurable and useful to keep track of your progress.



### ENVIRONMENTAL PERFORMANCE INDICATORS:

During exercise 14 (ecodesign), you have calculated an overall performance indicator based on the different ecodesign strategies that you apply in your business. Go back to this exercise and check what score did you obtain (see Card 9). This indicator will be useful to track progress on the environmental performance of your business.





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