

DESIGE Thinking

A Guide for Prototyping and Testing Solutions for the Sustainable Development Goals



Empowered lives. Resilient nations.

DESIGN Thinking

A Guide for Prototyping and Testing Solutions for the Sustainable Development Goals





This Guide was developed under the direction of UNDP's Youth Leadership Programme (YLP) in the Arab States. Under the theme "Innovation for Sustainable Development," YLP aims to support youth across the Arab region address sustainable development challenges in their communities and countries with a specific focus on gender equality and women's empowerment. The Guide has been designed to provide guidance, tools and tips for users as they prototype, test and implement their ideas.

©2017 UNDP

The views, analyses and policy recommendations in this publication do not necessarily reflect the views of the United Nations Development Programme, its Executive Board Members or UN Member States. The publication is the work of an independent team of authors sponsored by the Regional Bureau for Arab States, UNDP.



The Guide was developed in collaboration with COMMITT, a consulting company specialized in communication, strategy and design thinking.

Acknowledgements:

UNDP acknowledges the contribution of the COMMITT team Ines Cheniour, Marwa Raissi, Hamdi Khelifa and Moez Ben Ismail to the guide. The contribution of the UNDP team and management in Tunisia and particularly Eduardo Lopez-Mancisidor as well as collegues in the UNDP regional hub in Amman, Jennifer Colville, Kawtar Zerouali, Noeman Alsayyad and Shatha Mahmoud were significant for the materialization of the guide. Special thanks to Benjamin C Lang for his efforts in proofreading. This guide would not have been possible without the leadership and support of Khaled Abdelshafi (Regional Hub Director) and Yakup Beris (Regional Programme Coordinator) who have been leading and guiding the Youth Leadership Programme (YLP) since 2015.

SUMMARY SUSTAINABLE DEVELOPMENT GOALS AND DESIGN THINKING INTRODUCTION

| 1 PROTOTYPING | |
|---------------------------|--|
| What is a prototyme? | |
| what is a prototype? | |
| Why do we prototype? | |
| What can we prototype? | |
| How do we prototype? | |
| Examples of projects | |
| The Service Blueprint | |
| The Business Model Canvas | |

2 TESTING _____

| What can we test? | 29 |
|---|----|
| Why do we test? | 29 |
| How do we test? | 29 |
| How do we prepare the test on the ground? | 31 |
| How do we get feedback? | 32 |
| How do we test on the ground? | 32 |

3 IMPLEMENTING

| ERENCES | 39 |
|--------------------------------------|----|
| Monitoring and evaluation | 37 |
| Building a solid network of partners | 36 |
| Planning for action | 35 |
| Assessing resources | 34 |
| | |

REFERENCES ANNEXES

| 1. The journey map | 40 |
|-------------------------------------|----|
| 2. Storyboard | 41 |
| 3. The Service Blueprint | 42 |
| 4. Business Model Canvas | 43 |
| 5. Test cards | 44 |
| 6. Preparing the test on the ground | 45 |
| 7. Getting feedback | 46 |
| 8. Resources assessment | 47 |
| 9. Action plan | 48 |
| | |

4 6

SUSTAINABLE DEVELOPMENT GOALS AND DESIGN THINKING

As the Millennium Development Goals came to a close in 2015, United Nations member states universally adopted Agenda 2030, a set of 17 sustainable development goals that provide a roadmap to end poverty, protect the planet and ensure prosperity for all.

SDGs

The Sustainable Development Goals (SDGs), also called "Global Goals", aim to bring the countries and citizens of the world together and establish a peaceful and prosperous world by eradicating poverty and protecting the planet. This program is based on 17 interrelated goals. Thus, the success of a goal depends on the fulfillment of one or more other objectives.

The SDGs are intended to improve the lives of future generations through partnership and pragmatism by offering a framework of goals, targets, and indicators that each country can adapt to suit its development context. The objectives of this Guide are to help young people realize the major role they can play in contributing to the future of their communities and to support them in taking actions that can help achieve the SDGs.



SUSTAINABLE GCALS

What is Design Thinking?

Design Thinking is a problem-solving approach and a human-centered innovation. It's a fivestep process: Observation, Ideation, Prototyping, Testing and Implementation. It puts people we design for at the center of the process and invites them to co-create solutions.

Why Design Thinking for SDGs?

Adopting a human-centered approach is believing that all problems -as difficult to eradicate as they may seem- such as poverty, gender equality, and access to clean water, can still be solved. This is all the more compelling when the people who are primarily affected are the ones tackling the problems head-on.

Human-centered design is an effective approach whether for the creation of objects, experiences, services or social businesses because it puts human beings, their needs and desires at the center of priorities.

Iteration in Design Thinking

If project management is conventionally conceived in a linear approach, Design Thinking is a iterative method that is based on intuition and a back-andforth motion among observation, reflection, and the development of ideas.

In fact, an idea becomes a project as it is being prototyped and tested on the ground. It will be adjusted based on comments and observations gathered from users.

Prototyping and testing steps are repeated several times and are an integral part of the implementation phase.

Design Thinking is a favored approach by UNDP for achieving the SDGs because:

- It is based on empathy
- 2 It makes it possible to materialize ideas
- 3 It leads to desirable, feasible and viable solutions
- It uses methods that combine analysis and intuition
- It involves those who are most affected by a given problem



INTRODUCTION

«The faster we make our ideas tangible, the sooner we will be able to evaluate them, refine them, and zero in on the best solution.»

- Tim Brown, Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation

Human-centered design, a gradual thinking process

1 Inspiration

During this phase, the aim is to understand people. You observe their lives, you listen to their hopes and desires, and together you become more skillful (smart) in facing the challenge.

2 Ideation

This step consists of making sense of all collected information. You have generated several ideas, and it is time to identify design opportunities, give them a shape through prototyping, test them, and refine your solution.

3 Implementation

Once your solution is found, you must give it life, put it in the market, and maximize its impact on the world.



Prototype, Test, Learn, and Repeat

It is a matter of understanding that prototyping is not a straight line, it's a loop.

1. Prototype in order to reflect

Prototyping gives life to your idea. You keep learning and understanding better throughout its development. It is a matter of building a model that reflects best your concept and allows you to get feedback to either improve or abandon your idea.

2. Test in order to get feedback

Once your prototype is ready, you will need to get feedback from target users. Prototyping is really successful and effective when you get honest and frank feedback from the people who will benefit from your idea.

3. Learn in order to improve

In the sphere of "human-centered design", failure is perceived as an opportunity for learning and improvement. Prototyping and testing your idea provide feedback more quickly and oftentimes more inexpensively.

4. Repeat in order to refine

How does this method lead to an ultimate solution? Prototyping and testing help you learn directly from people, and opens you to a range of possibilities and to creativity. However, it does not allow you to precisely identify what is most desirable, feasible, and viable for target individuals. This openness and mode of resolution are called "divergence and convergence". You will diverge and converge several times so that at each new cycle of your prototyping and testing you will get closer to the final solution for the market.

Why this Guide?

This Guide is for young people whose brilliant ideas are actively contributing to the achievement of the SDGs and better futures in their communities and countries. In this Guide, they will find tools and tips for prototyping, testing and implementing their solutions to today's most pressing development challenges.

How to use it?

This Guide contains three types of content:

- Theoretical content that is designed to clarify and explain the importance of each step.
- Content for reference with pre-filled forms including examples that explain the development of each stage.
- Practical content with specific tips that aim to help support young people while drawing their attention to important details.



1 Prototyping



Whether building a castle on the beach, making a shelter with cushions, or offering a necklace made of macaroni to your mother, you are creating your first prototypes without even realizing it.

What is a prototype?

Prototyping means making your idea come to life so you can learn from it. It's building a model of what you think your concept should look or feel like in order to get feedback to improve, change, or possibly even abandon your idea.

Why do we prototype?

- 1. To shape your ideas
- 2. To continue reflecting on and refining your idea
- 3. To test your idea and see if you need to pursue it
- 4. To reduce risks of failure

TIPS

- Be simple and ready to start all over again
- Do not get too attached to your idea
- Opt for quantity









What can we prototype?

Prototyping an object

To test its form and function.



Prototyping a space

The space itself is a product, e.g., public restrooms. The space is a place of interaction, e.g., a waiting room.



Create an actual experiential link (the prototype space becomes the experimentation place) Define the user's experience: the irritating factors and the emotions that people feel when they use the product or service

- 11

ESTING



Prototyping a human/machine interaction



How do we prototype?

We must be creative in order to give life to a successful prototype. Prototyping methods are numerous. Here are four main prototyping methods:

1. The journey map :

This method allows you to understand your user's usage cycle: it starts with "how they know that your product exists" and ends with "how they would recommend it to others". The journey map is a recommended prototyping method for any type of idea and can be used throughout all phases of implementation.



2. Storyboard :

This method consists of illustrating in detail the user and the context in which they use your product. This allows you to collect more detail on who they are, who is with them, where they are, the expressions on their face, how they handle the product (e.g., a multi-purpose backpack or application with multiple functions).

The storyboard is a bit more detailed than the journey map, yet both help you live the experience from a user's perspective.



Ines hears about Citizen+ while she is driving.



As she gets close to home, she stops to take pictures of the pothole through which she often drives through.



She launches the Citizen+ application.



The application instantly locates her position and asks her to report a problem from that same place (i.e., to send a request).



She confirms. The camera is turned on and takes pictures of the pothole.

3. Roleplay :

This method allows you to go through the experience before the user goes through it. This helps you to relate to the users and build empathy for them as well as identify difficulties or constraints that might be faced by them.

This method is ideal for testing human or environmental interaction.



4. The physical prototype (quick prototype) :

This method is the opportunity to handle the product and understand its challenges, features, and specifications. The physical prototype allows for the testing of the form and the use of the object.



Examples of projects and types of prototyping that can be considered.

Here, we provide some examples of the types of information that can be collected from each method of prototyping.

1. Designing an object:

Nomade is a handy travel bag that can be adapted depending on the type of trip. It can be pulled by its wheels for a business trip or carried as a backpack for a hiking trip.

| Journey Map | Imagine the life cycle: A client spots the bag in a store. S/he buys it, uses it for the time for a trip to a developed city with a well-developed transportation system. S/he will also use it a second time for a trip across India where s/he will have to walk a lot and transform the suitcase into a backpack. |
|-------------------------------|---|
| Storyboard | See the different ways to use the bag and the stages of its transformation to move from one style to another. |
| Roleplay | Roleplaying is not very relevant to this example. |
| Physical (Quick) Prototype | Draw a template that best reflects your idea, plan it out and build a prototype made of cardboard or cloth if you have the necessary skills (even basic ones) in sewing in order to see the different compartments, the zipper, the folding system, if any. |



Please DONATE

2. Designing a Human/space interaction:

In order to raise awareness about the extinction of bees, an international NGO decided to use a London street corner to hold an awareness raising campaign along with a fundraiser.

| Journey Map | Imagine the life cycle: A person passes in front of the installation. The person receives an informational flyer. The person makes a donation. |
|-------------------------------|--|
| Storyboard | Break the section up in order to create a scenario for the various steps of staging the bees. -Or- Break up the interaction with the target audience in order to organize the logical sequence (information, awareness, commitment). |
| Roleplay | Refine language and test different approaches for citizens on the street. |
| Physical (Quick) Prototype | Prototyping urban installation and imagine it in its real space. |

3. Designing a human/human interaction:

The House of Rattan (La Maison du Rotin) is a furniture store that aims to introduce a new advisory service on decoration for its customers.

| Journey Map | Imagine the life cycle: A customer hears about the service during an in-store visit (or mail.) S/he makes an appointment for a decorating service. The decorator pays a visit to the customer and then the designer suggests a furniture set to the customer that matches their decoration and lifestyle. The customer is happy and posts pictures of their house on social media websites. | | |
|-------------------------------|--|--------|---|
| Storyboard | Create a scenario of the first contact with the customer: who will welcome customers at the entry or further inside the store? Do we invite the customer to the decoration area? Do we present a promotional printout or not, etc.? | | |
| Roleplay | Work on approaching the client, presentation language, and the sale of the service | | |
| Physical (Quick) Prototype | It may be relevant here to use the physical prototype if we wish to simulate a decorative corner in the store with samples and a display screen. | WWWW C |) |
| | | | |
| | | | |

4. Designing a human/machine interaction:

Citizen+ is an application that allows citizens to work with the municipality to report breakage and urban damages.

| Journey Map | Imagine the life cycle of your application from the moment the user hears about your product until they share it with another person. |
|-------------------------------|---|
| Storyboard | View different environments (inside the car, on foot) during which the user is using the application and anticipate any constraints that may arise. |
| Roleplay | Create a scenario of the language and approach of the prototype that could convince municipality officials to embrace the concept and become strategic and technical partners. |
| Physical (Quick) Prototype | Create screenshots of the various interfaces and imagine the user's interaction with the application's features. |





The service blueprint

What is it?

The service blueprint is a tool used to prototype a service. It is a modeling method that allows the visualization of the user's experience and interaction with your offering (service, product, etc.). The visualization helps you identify your assets and gaps so that you can optimize both the experience of the user/client and your venture's performance.

When to use it?

The service blueprint is relevant at the beginning of the ideation process as well as in more advanced phases. In fact, it allows you to:

- Break down the different aspects of your service at each step.
- Structure and organize the development of new services.
- Improve already existing services in order to improve their quality.

How to fill it out?

- 1. Start by identifying the service you want to model through the service blueprint.
- 2. Specify your service target type of user.
- 3. Use the journey map to fill in the first category "User Actions".

4. Add a horizontal column "Time" in order to specify the duration of each action at the level of the "User Actions".

5. Think vertically about each user action and fill in each column from the first line "Physical Evidence" to the fifth line "Support" by answering the following questions:

- What is the right material for each user action? (To fill in line 1: "Physical Evidence")
- What are the activities put forward by the project team to ensure the specific action? (To fill in line 3: "Front-of-stage")
- What activities are invisible to the user that are carried out by the project team to ensure the smooth running of the activities of line 2 "Front-of-stage"? (To fill in line 4: "Back-of-stage" or "back office")
- What technical / IT system is involved to ensure the good implementation of the project team activities? (To fill in line 5: "Support Processes")

6. Now that your blueprint is complete, identify the emotions your user experiences at each step of the usage process.

TIPS

The service blueprint is used in addition to the journey map (See p.13)





INTRODUCTION

PROTOTYPING

TESTING



How to detect innovation opportunities?

In addition to the overview of all service components (needs, progress, objectives...) that the service blueprint offers, the diagram below demonstrates how to re-assess the service. In fact, it raises questions that are relevant to its development that make it more original.

These questions become "innovation opportunities". In general, these innovation opportunities are at the level of the contact line, i.e., the line of interaction between user and the project team. Thus, innovation takes place at the level of "user actions" and therefore at the service level. We should remember to make the necessary changes in order to adopt the "Front-of-Stage" activities into the innovations introduced into the service.

Innovation opportunities optimize the performance of the service:

- by reducing the time necessary to complete a task,
- by limiting expenses,
- by acting on the frustration of the user in order to improve the service and change their emotion.



In order to offer a more optimized and intuitive user experience, we offer to assist the user step-by-step rather than make them read a user manual. In order to avoid information duplication, we display other breakage reports that were reported by other users in the same area. In order to increase the number of users, mobilize community participation, and improve the credibility of the information posted by the user, we suggest adding a feature of sharing the breakage report on social networks.

Keep in mind

- Like any management model, this model does not adapt to all types of projects. If your service is simple, the blueprint may be more complex than you need.
- Set quality measures, i.e., indicators that can give you an estimate of the success of your service. (For example, in the case of Citizen+: what is the time for reporting a breakage? How many people have used the application?)
- Take into consideration the emotions of the user while using your service. For example : For Citizen+, we thought that it would be annoying to read a whole page on how to use the application. To make the user experience more enjoyable, we thought about assisting the user during the breakage report process.
- Organize front-of-stage and back-of-stage activities into sub-categories according to their nature. In fact, these activities can be implemented by the project team, equipment, the network, etc.
- Organize how the service is used in cycles or phases. For example: for Citizen+, the expected cycles are: communication cycle around the application, 1st use cycle, 2nd use cycle... It is better to provide a new service blueprint for each cycle.
- Add visuals in the form of cartoons in order to better explain the different stages of the service usage. Do not forget to add a timeline to mark each step of the usage.





The Business Model Canvas

If your idea is a business project, it may be necessary to prototype the business model.

What's this?

The Business Model Canvas (BMC) is a template that allows to quickly visualize all the strategic management aspects of a company: the product/ service, target customers, the infrastructure of the company and its finances.

When to use it?

When you reach a solid idea and you start testing it, you must have a quick idea on how this idea would be turned into a business.

How to fill it out?

The Business Model Canvas is to be filled out as a team to allow you to challenge ideas and reflect. Oftentimes you have to develop several versions of the BMC before finding the right model. It should also be updated and adjusted regularly based on newly collected data during the testing phase and even during the implementation phase.

Register at :

https://strategyzer.com/platform/register

For free access to the online learning platform and many additional tools: Strategyzer. There are many models of BMC that you can find online, among them the Social Business Model Canvas.



PROTOTYPING

TESTING





«I tried to allow my children to take risks, to test themselves. Better broken bones than broken spirit.»

- Rose Kennedy

What we can test?

It is possible to test everything! The feature of a product or service, the way in which your target audience interacts with your solution, what might disturb them in the solution you have provided, and unexpected benefits that your solution could give them. We can test all that represents a threat to your idea and increases risks of its failure.

Why do we test?

- 1. To know whether your idea is worth implementing or not
- 2. To develop it
- 3. To make sure your idea is THE right solution and that, above all, it is well-implemented
- 4. To assess whether it will be used and appreciated by users
- 5. To probe the market (price, packaging, promotion, and place)

How do we test?

Create test cards

1. Extract hypotheses :

Go back to your journey map and/or BMC. Give hypotheses about the different key moments in your idea's life cycle.



If the user does not download the app, they will not report the facts

> If the user does not connect, they cannot receive notification

If the municipality does not cooperate, the project is less attractive to users

2. Rank hypotheses

Prioritize hypotheses that threaten the survival and the success of your solution the most. However, do not stop there. You should organize the least important hypotheses, even if they do not look like immediate dangers.

3. Fill out the Test Cards :

Test Card Strategyzer Test N°5 12 November Ease of use **STEP 1 : HYPOTHESIS** users will be able to report a breakage easily We believe that STEP 2 : TEST To verify that, we will make mock-ups in order to script the report of the breakage u u u u **STEP 3 : METRIC** And measure how fast they can accomplish it 000 **STEP 4 : CRITERIA** We are right if they will be able to do it 30 seconds. Copyright Strategyzer AG makers of Business Model Gen

Register at :

https://strategyzer.com/platform/register For free access to the online learning platform and many additional tools: Strategyzer.

How do we prepare the test on the ground?

Make sure to think about:

1. Have the test scenario:

Think of the test progress, especially in the first meeting with users until the end of the test, through all the steps you want them to accomplish.

2. Build the team:

Make sure you have the necessary human resources. It is recommended to have at least two people: one for directing the test and a second person to take notes of what they see and hear, and any other relevant information. If your test scenario requires the presence of other people, make sure to mobilize the appropriate number of people and to brief them on their roles.

3. Set the location, date and time of the test:

Choose the most appropriate location to carry out the test. Do not overlook the date and especially the time of the test to ensure the presence of the entire team.

4. Define the services or feature to be tested:

Make sure that users understand what YOU expect from them. Did they manage to distinguish the actions to be done? Did they grasp the interactions you wanted to create? Were they imbued with the atmosphere that you have created?

5. Gather testing tools:

Prototypes that you have designed will serve as tools. However, other needs may appear when writing your script: cameras, video camera, pens, notepads, posters, tables, chairs or anything else that is necessary to the success of the test.

TIPS

• There are other tools that can help you develop more advanced tests: brochures, landing page, packaging, video, a game to test the price, etc.

How do we get feedback?



How do we test on the ground?

There are three ways to incorporate improvements:

1. Planned improvement:

You collect all feedback, then you take your time to analyze and plan the necessary improvements.

2. Instantaneous improvement:

You adjust your test in real-time based on feedback collected from your users, which is a time saver.

3. Cooperative improvement:

You involve users in the process and invite them to transform their feedback into a proposition.

TIPS

- Introduce yourself and explain why you are doing this.
- Switch off your preconceived ideas and preconceptions.
- Listen and observe!



"Be creative while inventing ideas but be disciplined while implementing them."

- Amit Kalantry

Assessing resources

Why make a resources assessment?

You have an excellent idea, but what about its implementation? The team you have around you probably does not have all the required skills needed for the project. In fact, finding a good solution and implementing it are two different steps.

Making an assessment of resources will help you understand the viability of your solution and what level of help you will need. This is the first step towards turning your idea into something real.

How to make a resources assessment?

1. Gather your project team and consider the following (you can go back to your Business Model Canvas to help you with this task):

- distribution,
- partners you need,
- needed skills for implementation.

2. Fill out a table by theme (distribution, partnership, implementing skills). Start filling out the first three columns of each table. It is possible that the answers are not obvious and that you have to reshuffle certain points in order to reach an agreement.

3. Make an assessment of skills around the table and assign tasks to team members. Identify the missing needs in the last column.

| Distribution | Wh | o will implement the a | action? | What is n | eeded? |
|--|---|---|---------------------------------------|-------------------|--------------------|
| (Door to door, a specific store, subscription) | Steps | Expected Results | Who is responsible for doing it? | What we have | What is missing |
| Downloadable for free at the app store | - Develop on Android - Develop on iOS | -The mobile application can be used by any type of smartphones | - Android devloper - iOS developer | -Android devloper | -iOS developer |

Example : Citizen+ Mobile App

Planning for action

Why develop an action plan?

Going from a great idea to a successful project requires planning. An action plan helps you gather your partners around a project, define the steps you must take and develop a timetable for accomplishing them. You can go back to your resources assessment for clarity.

How to develop an action plan?

1. Gather both the project team and the most important partners.

2. Print a big calendar for the next 18 months. Put sticky notes on key steps and the corresponding dates. It's easy to get confused during this exercise: start with the big steps that you need to accomplish in one, three, and six months then list in detail tasks to be performed under each step.

3. Use different colors of sticky notes based on milestones. It is possible that you reorganize them gradually and that they will pile up on your calendar. They should look more like blocks of squares than a large diamond made of sticky notes.

4. Assign a written task to a team member. There can be two roles per task: a performer and a supervisor.

You have developed your most effective action plan.

Example of an Action Plan:

| Project | Responsible | | Jı | ıly | | | Aug | gust | | | Septe | mbe | r |
|-------------------------------|-------------|---|----|-----|---|---|-----|------|---|---|-------|-----|---|
| | | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| Web Project | | | | | | | | | | | | | |
| website | | | | | | | | | | | | | |
| website - drafting | | | | | | | | | | | | | |
| website - design | Sana | | | | | | | | | | | | |
| website - content integration | Ali | | | | | | | | | | | | |
| Blog | | | | | | | | | | | | | |
| content writing | Basma | | | | | | | | | | | | |
| content integration | Ali | | | | | | | | | | | | |
| creation of a Facebook page | Ali | | | | | | | | | | | | |
| Posts planification | Basma | | | | | | | | | | | | |

Building a solid network of partners

Why develop partnerships?

In almost all projects, whether profitable or not, it is important to surround yourself with strategic partners. However, it is a must to bring together partners depending on our needs and whose vision and expectations match yours.

How to develop partnerships?

Referring to your resources assessment and the Business Model Canvas, identify partnerships that need to be developed.

1. Gather your team and your most important partners, ideally the same team that worked on the action plan.

2. Start with a brainstorming exercise to identify your needs: maybe you need media coverage, financing, or raw materials, etc.

3. Make a list of people you know with the help of people around the table. This list may contain the names of potential partners or people who can help you grow your network.

4. Now set exactly :

- a) what you expect from each potential partner you want to approach,
- b) what a partnership with you could offer to them,
- c) when you will need their intervention,
- d) which member of the team is most likely to approach them,
- e) what is the deadline for partners final response.

Monitoring and evaluation

Why monitor and evaluate?

When you make progress in your design process, you are continuously learning, adjusting and refining your solution. Monitoring and evaluation let you know how close you are to success. This will be useful when you want to convince partners and investors of the viability of your business or social project.

How to do it?

There are several available tools. However, they can be expensive. Here is a method that allows you to design your in-house monitoring and evaluation tool.

- 1. Determine why you need monitoring and evaluation:
 - a) To show the impact?
 - b) To get funding?
 - c) To optimize performance?
 - d) To generate more income?

2. Gather your partners around the reflection. There are chances that they have done this for other projects.

3. Check if you have the in-house expertise to do so. You might need to hire an external consultant to help you.

Repeat prototyping-testing steps

In the Design Thinking approach, iteration is the essence of innovation! You should constantly observe users, test your ideas, listen to feedback and improve your product/service.

REFERENCES

While being inspired by several references in Design Thinking, COMMITT gathered in a guide key stages of prototyping, testing and implementation to fit the needs of young participants for the challenges of achieving the SDGs universally adopted by UN member states.

Below, you will find links to some references used to enrich your knowledge of Design Thinking and go further in mastering the concept of humancentered design in general.

Websites

www.ideo.org www.fuelfor.net www.strategyzer.com www.diytoolkit.org

Youtube Videos

Protopyping google glass https://youtu.be/d5_h1VuwD6g

Le scanner https://youtu.be/jajduxPD6H4

Comment remplir un buisness model canvas https://www.youtube.com/watch?v=QoAOzMTLP5s&feature=youtu.be

Books

HCD_toolkit http://www.designkit.org/resources/1

Value proposition design https://strategyzer.com/books/value-proposition-design

Buisness model canvas http://www.businessmodelgeneration.com/book

Online Courses

Design Thinking for innovation https://www.coursera.org/learn/design-thinking-innovation

Design thinking for social innovation http://online.stanford.edu/course/design-thinking-action-lab

IdeoU

http://www.ideou.com/ https://orbi.ulg.ac.be/bitstream/2268/188228/1/Plaquette-R%C3%A9veil-en-Form-Design-thinking.pdf

http://www.innoweo.com/uncategorized/design-thinkingcustomer-journey-canvas/#comments

http://www.innoweo.com/methode-dinnovation/ design-thinking-service-blueprint/

http://www.ivee.fr/service-blueprint-indispensablea-la-transformation-numerique/

http://www.cooper.com/journal/2014/08/serviceblueprints-laying-the-foundation

ANNEXES

1. Journey Map :

| Journey map | |
|-----------------------------------|---------------------------------------|
| Place sticky note of idea here | Name of your idea Brief Description : |
| Who is this for? | What are you trying to learn? |
| Journey Map: | |

2. Storyboard :





3. The Service Blueprint

| nce | |
|---|--|
| | |
| | |
| | |
| es | |
| | |
| | |



4. Business Model Canvas:

5. Test Cards:

| Test Card | © Strategyzer | Test Card | © Strategyzer |
|---|---|---|---|
| | | | |
| | | | |
| STEP 1 : HYPOTHESIS | | STEP 1 : HYPOTHESIS | |
| We believe that | | We believe that | |
| | | | |
| | | | A A A |
| STEP 2 : TEST | | STEP 2 : TEST | |
| To verify that, we will | | To verify that, we will | |
| | | | |
| | | | . 8 8 4 4 |
| STED 3 - METRIC | | STED 3 - METDIC | |
| And measure | | And measure | |
| | | | |
| | 000 | | 000 |
| STEP 4 : CRITERIA | | STEP 4 : CRITERIA | |
| We are right if | | We are right if | |
| | | | |
| | | | |
| Copyright Strategyzer AG | The makers of Business Model Generation and Strategyzer | Copyright Strategyzer AG | The makers of Business Model Generation and Strategyzer |
| | | | |
| | | | |
| Test Card | () Strategyzer | Test Card | © Strategyzer |
| Test Card | © Strategyzer | Test Card | © Strategyzer |
| Test Card | © Strategyzer | Test Card | @Strategyzer |
| Test Card | () Strategyzer | Test Card | © Strategyzer |
| Test Card | © Strategyzer | Test Card | © Strategyzer |
| Test Card STEP 1 : HYPOTHESIS We believe that | © Strategyzer | Test Card | ڻ Strategyzer |
| Test Card | © Strategyzer | Test Card STEP 1: HYPOTHESIS We believe that | ن Strategyzer |
| Test Card STEP 1 : HYPOTHESIS We believe that | C Strategyzer | Test Card STEP 1 : HYPOTHESIS We believe that | ن Strategyzer |
| Test Card STEP 1 : HYPOTHESIS We believe that | C) Strategyzer | Test Card STEP 1 : HYPOTHESIS We believe that STEP 2 : TEST To verify that, we will | ن Strategyzer |
| Test Card STEP 1 : HYPOTHESIS We believe that | ن Strategyzer | STEP 1: HYPOTHESIS We believe that STEP 2: TEST To verify that, we will | ت Strategyzer |
| Test Card STEP 1 : HYPOTHESIS We believe that | | STEP 1: HYPOTHESIS We believe that STEP 2: TEST To verify that, we will | © Strategyzer |
| Test Card STEP 1 : HYPOTHESIS We believe that STEP 2 : TEST To verify that, we will | (*) Strategyzer | Test Card STEP 1: HYPOTHESIS We believe that STEP 2: TEST To verify that, we will | UStrategyzer |
| Test Card STEP 1 : HYPOTHESIS We believe that STEP 2 : TEST To verify that, we will STEP 3 : METRIC And measure | (2) Strategyzer | STEP 1: HYPOTHESIS We believe that STEP 2: TEST To verify that, we will STEP 3: METRIC And measure | UStrategyzer |
| Test Card STEP 1 : HYPOTHESIS We believe that STEP 2 : TEST To verify that, we will STEP 3 : METRIC And measure | | STEP 1: HYPOTHESIS We believe that STEP 2: TEST To verify that, we will STEP 3: METRIC And measure | UStrategyzer |
| Test Card STEP 1 : HYPOTHESIS We believe that STEP 2 : TEST To verify that, we will STEP 3 : METRIC And measure | C O O | STEP 1: HYPOTHESIS We believe that STEP 2: TEST To verify that, we will STEP 3: METRIC And measure | |
| Test Card STEP 1 : HYPOTHESIS We believe that STEP 2 : TEST To verify that, we will STEP 3 : METRIC And measure STEP 4 : CRITERIA | (2) Strategyzer | Test Card STEP 1: HYPOTHESIS We believe that STEP 2: TEST To verify that, we will STEP 3: METRIC And measure STEP 4: CPITEDIA | © Strategyzer |
| STEP 1 : HYPOTHESIS We believe that STEP 2 : TEST To verify that, we will STEP 3 : METRIC And measure STEP 4 : CRITERIA We are right if | C Strategyzer | Test Card STEP 1: HYPOTHESIS We believe that STEP 2: TEST To verify that, we will STEP 3: METRIC And measure STEP 4: CRITERIA We are right if | |
| STEP 1 : HYPOTHESIS We believe that STEP 2 : TEST To verify that, we will STEP 3 : METRIC And measure STEP 4 : CRITERIA We are right if | (2) Strategyzer | Test Card STEP 1: HYPOTHESIS We believe that STEP 2: TEST To verify that, we will STEP 3: METRIC And measure STEP 4: CRITERIA We are right if | |
| STEP 1 : HYPOTHESIS We believe that STEP 2 : TEST To verify that, we will STEP 3 : METRIC And measure STEP 4 : CRITERIA We are right if | | Test Card STEP 1: HYPOTHESIS We believe that STEP 2: TEST To verify that, we will STEP 3: METRIC And measure STEP 4: CRITERIA We are right if | |
| STEP 1 : HYPOTHESIS We believe that STEP 2 : TEST To verify that, we will STEP 3 : METRIC And measure STEP 4 : CRITERIA We are right if | (2) Strategyzer | Test Card STEP 1: HYPOTHESIS We believe that STEP 2: TEST To verify that, we will STEP 3: METRIC And measure STEP 4: CRITERIA We are right if | |

To learn more about the test sheets, go to : www.strategyzer.com

6. Preparing for the Test on the Ground:

| Test Preparation Form |
|--|
| 1. Have the test scenario : |
| 2. Build the team : |
| |
| 3. Set the location, date and time of the test: |
| 4. Define the services or features to be tested: |
| 5. Gather testing tools: |
| |

7. Getting feedback :

| Feedback Form | |
|--|--|
| What worked? What did people value the most? What resonated with them about the idea? | What didn't work? What would you change? Were there suggestions for improvement? What did you learn that will make it better? |
| What questions came up? What needs further investigation? What made you curious? | What new inspiration arose? What surprised you? What might you try next? |

Resources Assessment Form

| Distribution | Who will implement the action? | | | What is needed? | | | | |
|---|--------------------------------|------------------|-------------------------------------|-----------------|-----------------|--|--|--|
| door, a specific store, subscription) | Steps | Expected Results | Who is responsible for doing it? | What we have | What is missing | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Action Plan Form

| Project | Responsible | | Мо | nth | | | Мо | nth | | | Мо | nth | |
|---------|-------------|---|----|-----|---|---|----|-----|---|---|----|-----|---|
| | | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| L, | | | | | | | | | L | | | | |

NOTES

NOTES

