

LEVEL	1
LEARNING OUTCOME	L04 Students can generate, develop and test sustainability-driven business ideas and opportunities
SPECIFIC LEARNING OUTCOME	Students can explain what a sustainable business idea is and develop their Critical Thinking
KEYWORDS	Critical thinking, value proposition, Prototype, Sustainable value
INTRODUCTION	You are now going to walk through all the phases of Design Thinking to create a sustainable business idea. For every phase there are exercises.
HOW TO WORK WITH THIS MATERIAL	<ul style="list-style-type: none"> • Show the videos about critical thinking to the class • Start brainstorming about business ideas using the templates for critical thinking • Show the video and website about the sustainable business model • Show the empty value proposition and the example • Let students work on the value proposition for their business idea by filling in the template.
TIMING	approx. 2 hours



Introduction

We are now going to walk through all the phases of Design Thinking to create a sustainable business idea. Keep the notes of the videos in mind and/or rewatch it when necessary for the next step in the design thinking phase.

In the first steps you need to develop your critical thinking skills.

Why not watch these videos:

<https://www.youtube.com/watch?v=HnJ1bqXUnIM>

<https://www.youtube.com/watch?v=dItUGF8GdTw>

Answer the following questions:

1. What is critical thinking?
2. How can you use critical thinking to develop new sustainable business ideas?
3. In which phases of the design thinking process can you implement critical thinking?

Let's walk through all the phases of the design thinking process.

For every phase there are exercises.

Phase 1: Empathizing

Empathy is a critical starting point for any design thinking endeavor. It means making design and business decisions from the perspective of the end-user or customer and truly understanding and anticipating their needs. These exercises help you get into the minds of your users, identify patterns and challenges, and relate these to the problem your team needs to solve.



If starting together in a group, use this exercise to get to know each other and to define your group goals <https://www.liberatingstructures.com/3-nine-whys/>

After that you need to define the business problem, for who are we solving a problem? Who is the customer and what are their need?

Creating personas is an effective way to focus on your user and ensure that you are designing for their top needs. Personas are a representation of your target user – their typical characteristics, challenges, and desires.

Use this template to create one or more persona's:

<https://github.com/open-design-kit/opensignkit/blob/master/resourcematerials/persona-worksheet.png>

User or customer journey mapping is another critical exercise when you are trying to build empathy for the user and uncover new ways to answer their top needs.

Use this exercise to create a customer journey for the chosen persona(s):

<http://opensignkit.org/methods/journey-maps/>

Phase 2: Defining

In the defining phase you are going to define the problem for the user and start with brainstorming to get a clear view of the possibilities. In the end of this phase you have a specific goal you



want to reach.

Use these exercises to define the problem:

<https://designsprintkit.withgoogle.com/methodology/phase2-define/assumptionsmapping>

<https://designsprintkit.withgoogle.com/methodology/phase1-understand/hmw-voting>

Phase 3: Ideation

Ideation is the phase of your project when you need to generate many different possible solutions or answers to your user's problems or challenges. You don't want to come up with one idea and put all your energy and focus into that. The goal of ideation is to go wide, come up with tons of ideas (even crazy ones) so that you have a lot to work with when it is time to focus in on some ideas to prototype and test.

Use the exercises below to create ideas for the problem:

<https://designsprintkit.withgoogle.com/methodology/phase3-sketch/crazy-8s>

<https://designsprintkit.withgoogle.com/methodology/phase3-sketch/crazy-8s-sharingand-voting>



Phase 4 & 5: Prototyping

Prototypes are built so that designers can think about their solutions in a different way (tangible product/business rather than abstract ideas), as well as to fail quickly and cheaply, so that less time and money is invested in an idea that turns out to be a bad one. It is now time to choose the best ideas from the ideation phase and to build one or multiple prototypes.

There are different ways to build a prototype. Read this article about the prototyping phase to understand how prototyping works and to know which prototypes you can build.

<https://www.interaction-design.org/literature/article/stage-4-in-the-design-thinking-process-prototype#:~:text=Prototypes%20are%20often%20used%20in,implemented%20solutions%20have%20been%20successful.>

Let's go prototyping and test your ideas with stakeholders and (potential) customers.

It is important to define a plan to execute a small-scale pilot and if you would not be able to make it work right away, change it. By planning and executing the pilot, start ups will encounter several bottlenecks that force early reconsideration of sustainable value propositions, value creation and delivery, and value capture. Based on this, the researchers have also developed a tool to support you with planning and executing the pilot. You can find the tool below. Using this tool will help you to consider everything that you need for your pilot:

1. Prototype the sustainable value proposition (business idea)

Product/service prototype

Briefly define and describe a basic version of a product / service that you can quickly implement with available resources.

Stakeholder network

List the stakeholders that are needed for creation and delivery of the product / service prototype. Specify who are the end-users / customers.



Sustainability impact

Define one or more KPI's to measure the sustainability impact generated by the prototype.

2. Prototype sustainable value creation and delivery

Plot on a timeline all the actions that each stakeholder (including end users) needs to do in order for the product/service prototype to be built and delivered to end users.

3. Prototype sustainable value capture

Costs

List the costs to create and deliver the product / service prototype and how such costs are shared across stakeholders.

Revenues

List and explain the revenue streams generated by the product / service prototype and how such revenues are shared across stakeholders.

PROTOTYPE THE SUSTAINABLE VALUE PROPOSITION	PROTOTYPE SUSTAINABLE VALUE CREATION & DELIVERY	PROTOTYPE SUSTAINABLE VALUE CAPTURE
<p>Product / Service prototype Briefly define and describe a basic version of a product / service that you can quickly implement with available resources.</p>	<p>Plot on the timeline all the actions that each stakeholder (including end users) needs to do in order for the product / service prototype to be built and delivered to end users</p> <p>STAKEHOLDER 1</p> <p>-----></p>	<p>Costs List the costs to create and deliver the product / service prototype and how such costs are shared across stakeholders.</p>
<p>Stakeholder network List the stakeholders that are needed for the creation and delivery of the product / service prototype. Specify who are the end-users / customers</p>	<p>STAKEHOLDER 2</p> <p>-----></p>	
<p>Sustainability impact Define one or more KPIs to measure the sustainability impact generated by the prototype</p>	<p>STAKEHOLDER 3</p> <p>-----></p> <p>END USER</p> <p>-----></p>	<p>Revenues List and explain the revenue streams generated by the product / service prototype and how such costs are shared across stakeholders.</p>

Use this board to create your prototype.

