

SWIM and Horizon 2020 Support Mechanism

Working for a Sustainable Mediterranean, Caring for our Future

Eco-design of food and beverage packaging with Edtool

Presented by:

Hichem Salem and Anna Ibañez, PM on Green Entrepreneurship at SCP/RAC

SWIM and Horizon 2020 SM

12th December 2018, Barcelona, Spain

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1. INTRODUCTION

Edtool and its User Guide is part of the work done within the “Sustainability of Products and Services” area.

Coordination:

Xavier Gabarrell, Project Coordinator (UAB)

Tool Development and and User Guide

UAB (Xavier Gabarrell, Pere Llorach, Joan Rieradevall)

inèdit (Ramon Farreny, Markel Cormenzana, Raul Garcia-Lozano, Carles M. Gasol)

Participants:

Province of Bologna (Marino Cavallo, Viviana Melchiorre)

ENEA (Mario Tarantini, Arianna Dominici)

CRO-CPC (Goran Romac, Ivana Ivicic),

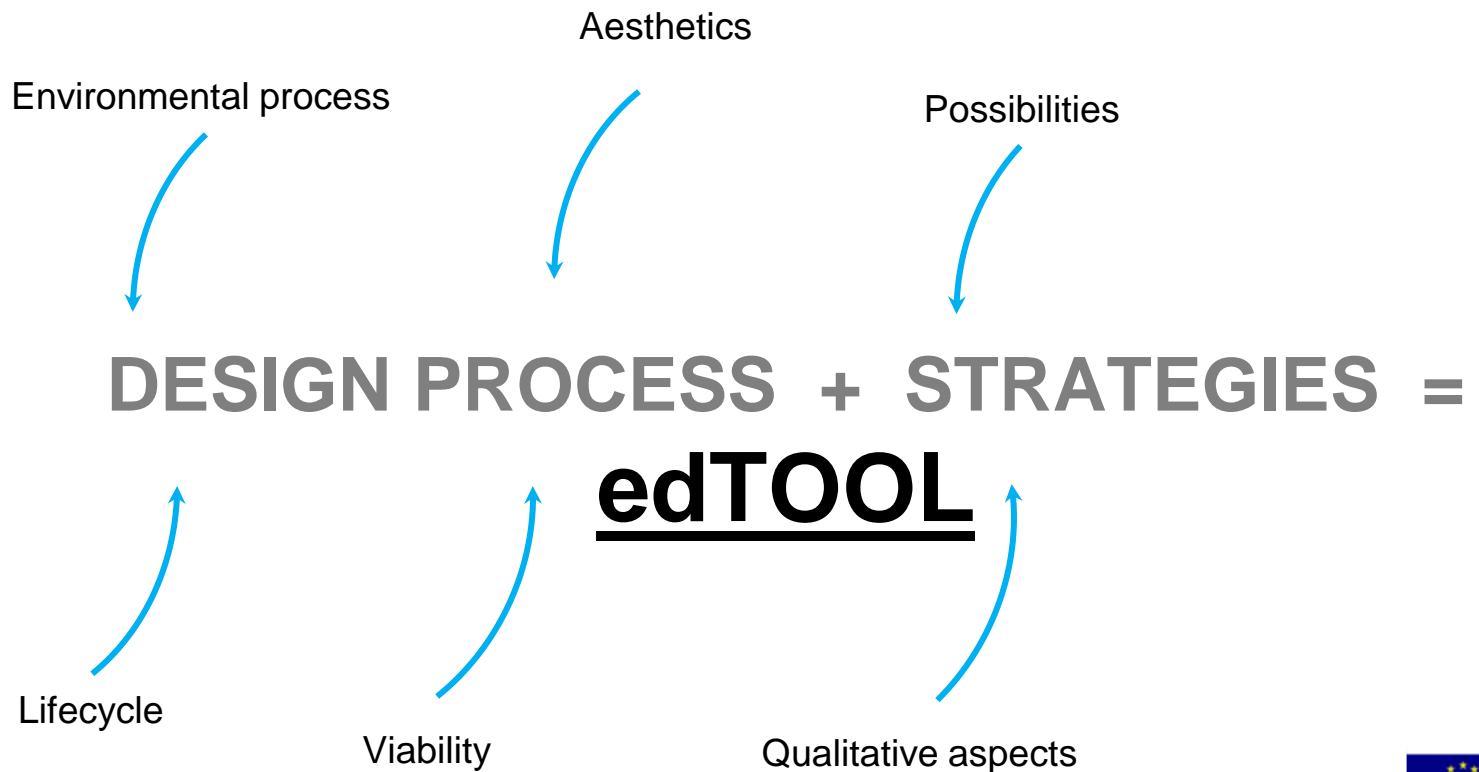
IAT (Anne Furphy, Victor Vázquez, Lorenzo Chacon).

SSSUP (Tiberio Daddi, Maria Rosa de Giacomo)

1. INTRODUCTION

Aim of the Tool

edTOOL aims to improve the sustainability of products and services by implementing ecodesign in companies in a step-by-step intuitive way



1. INTRODUCTION

Edtool characteristics:

- Useful to guide companies through the process of ecodesign implementation.
- Flexible and propositive, with recommendations for the environmental improvement.
- Practical, with real examples from the partners' experience.

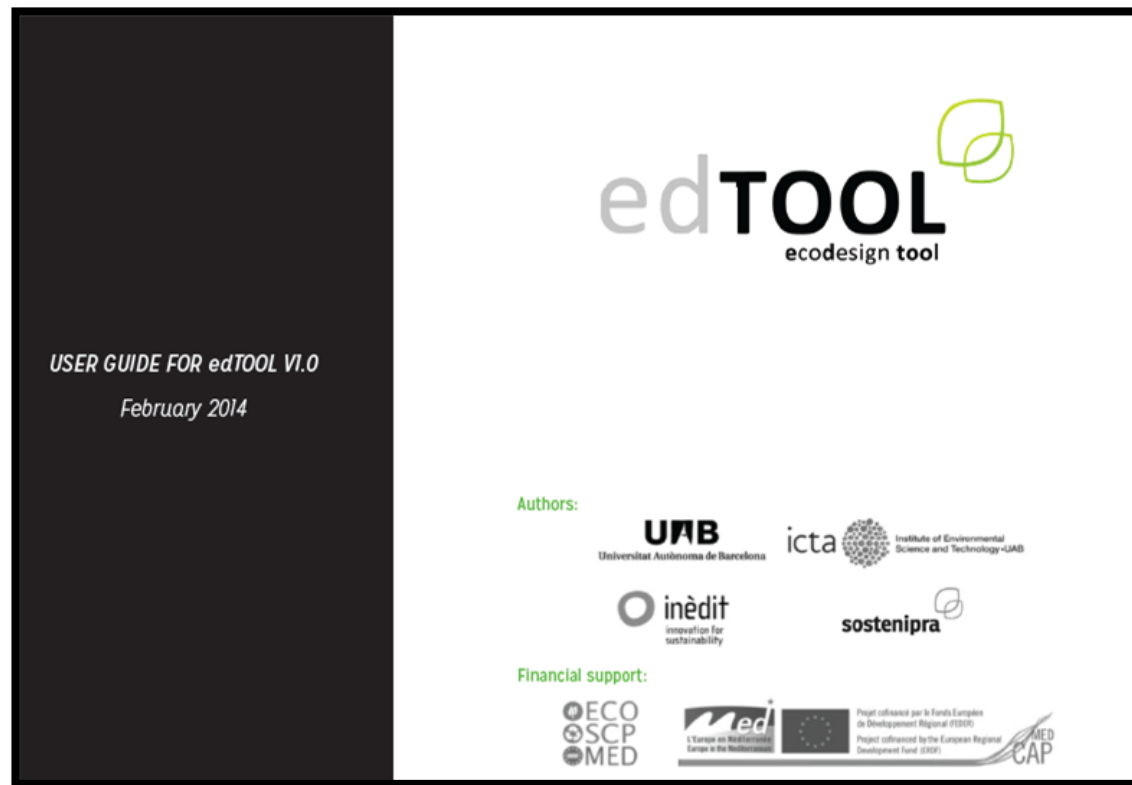
1. INTRODUCTION

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- Practical, with real examples from the partners' experience.

1. INTRODUCTION

Edtool User Guide



1. INTRODUCTION

Edtool User Guide

- It provides detailed descriptions and clarifications on the use of edTOOL.
- In addition, **three practical case studies** are presented within the guide: a Knife, a Wooden Packaging for wine bottles and a Jacket



ARCOS



FINSA
asociación de vinificadores



ECOALF

1. INTRODUCTION

Available online at:

<http://edtool.sostenipra.cat>

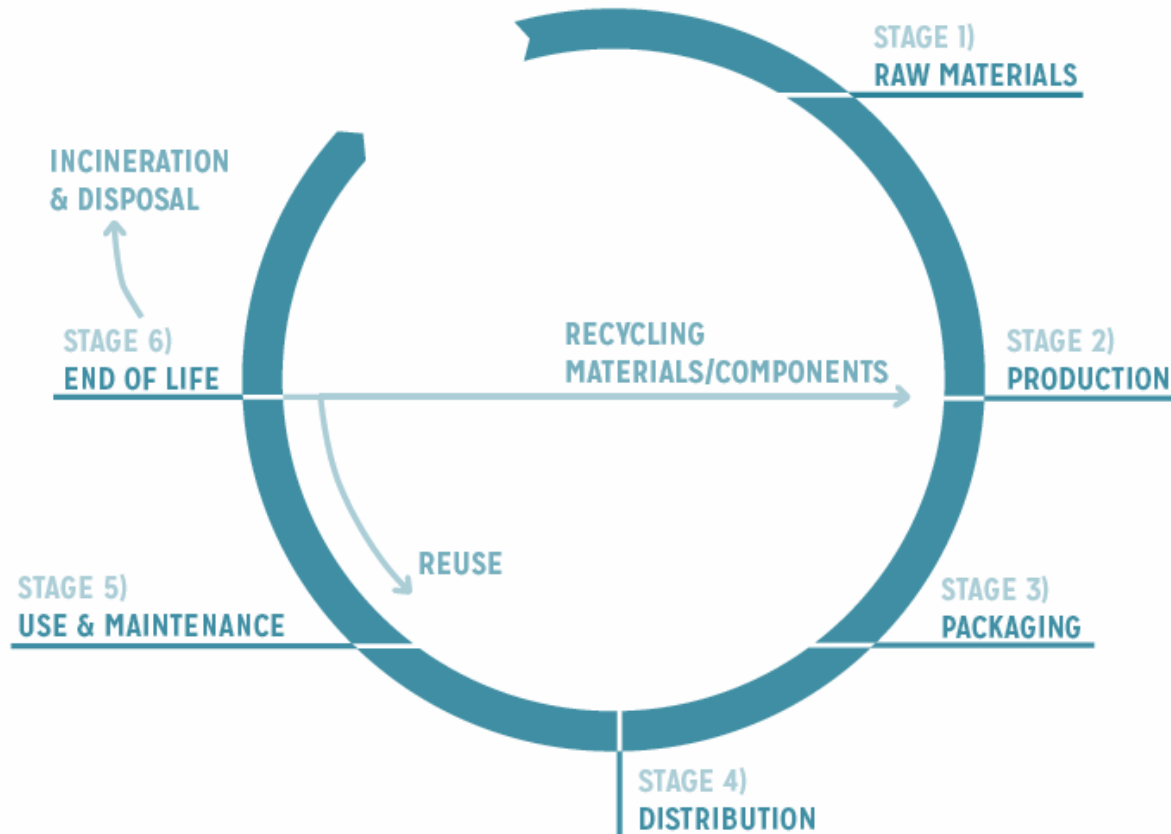
Demo user: edtool@ineditinnova.com

Password: edtool

Several case studies are available
for consultation



2. PREVIOUS CONSIDERATION



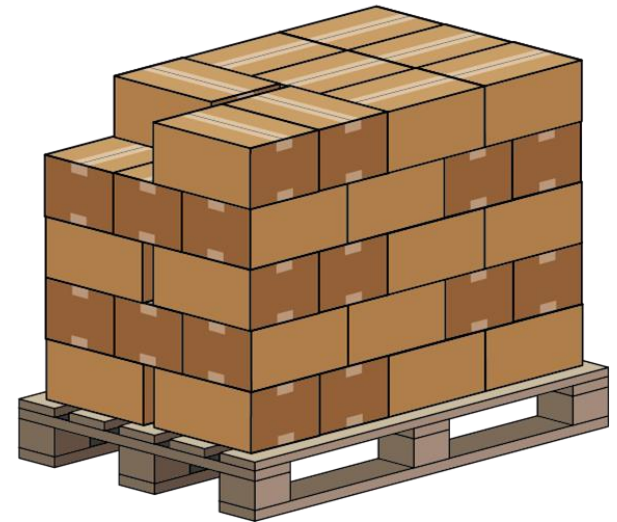
2. PREVIOUS CONSIDERATION



Packaging primary

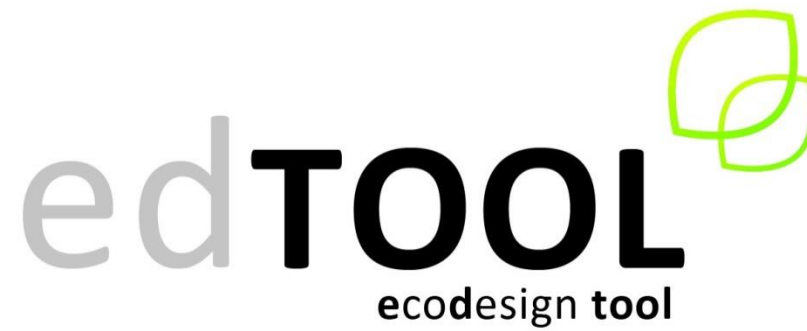


Packaging secondary



Packaging Tertiary

2. PREVIOUS CONSIDERATION



2. PREVIOUS CONSIDERATION

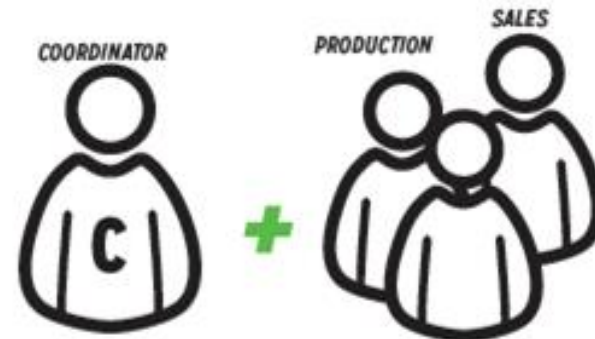
The tool can be use for the ecodesign of products and services, although its implementation is more straightforward for the case of product ecodesign.

2. PREVIOUS CONSIDERATION

edTOOL considers two types of users for each project:
An ecodesign Project Coordinator and a series of ecodesign Team Members.

The Project Coordinator will be the one in charge of using the web-based tool.

The Team Members will be invited by the Coordinator and will have access to all the information introduced in the tool, but limited edition permits.



2. PREVIOUS CONSIDERATION

Structure



2. PREVIOUS CONSIDERATION

Step 1. Initial Definition

This step will be useful for the Coordinator to define:

the team,
the product/ service to be assessed,
the legal requisites affecting the product/service,
The market environment, and
the environmental assessment criteria to be used in next step.



2. PREVIOUS CONSIDERATION

Example:

- Candy glam ring
 - How many spare parts have this product?

2. PREVIOUS CONSIDERATION

Example:

- Candy glam ring

Quantitatives features

Paperboard, PE expanded,
PS, EVA
115 x 70 x 158 mm
1272cm³
118,7g



2. PREVIOUS CONSIDERATION



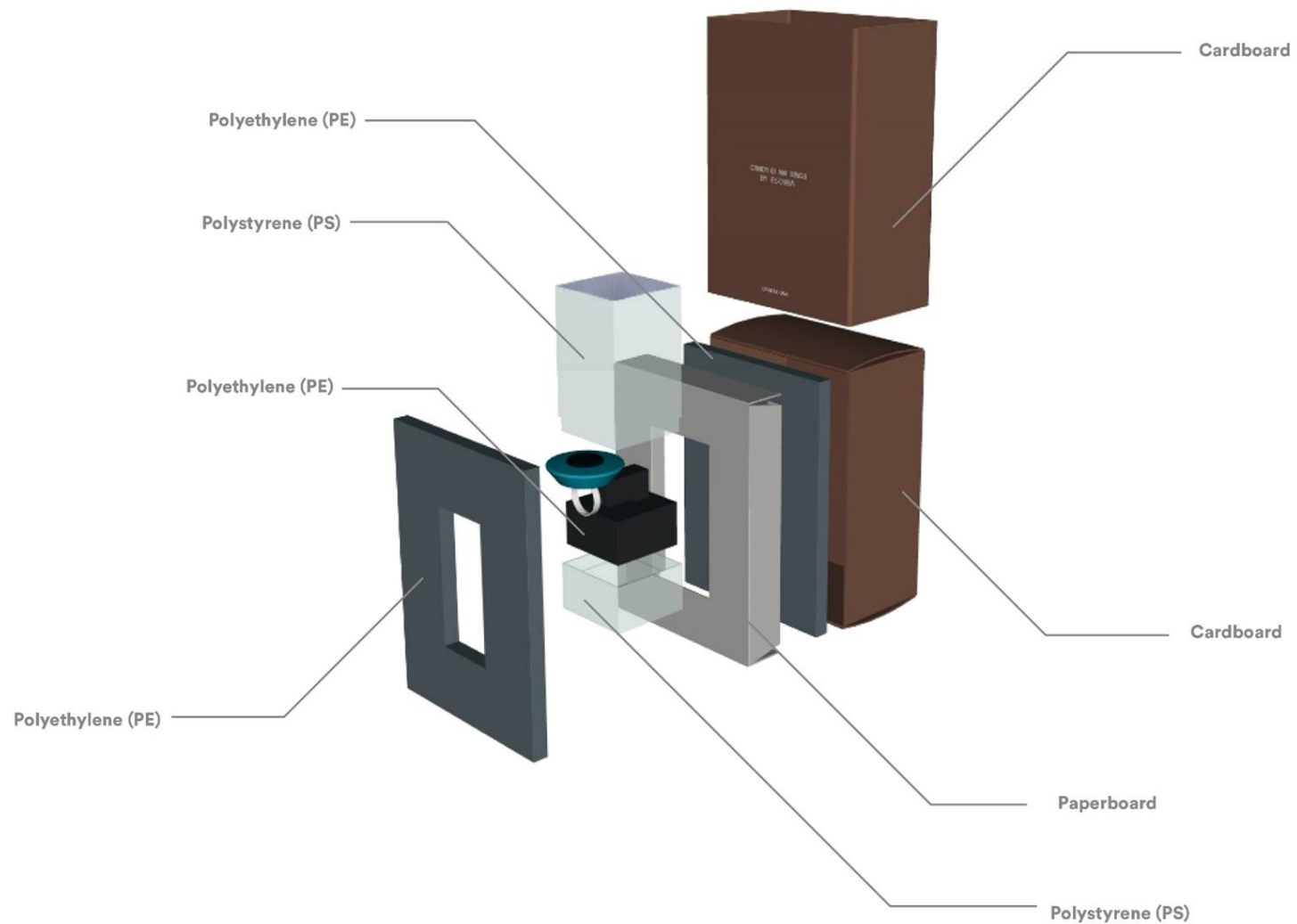
Primary
packaging



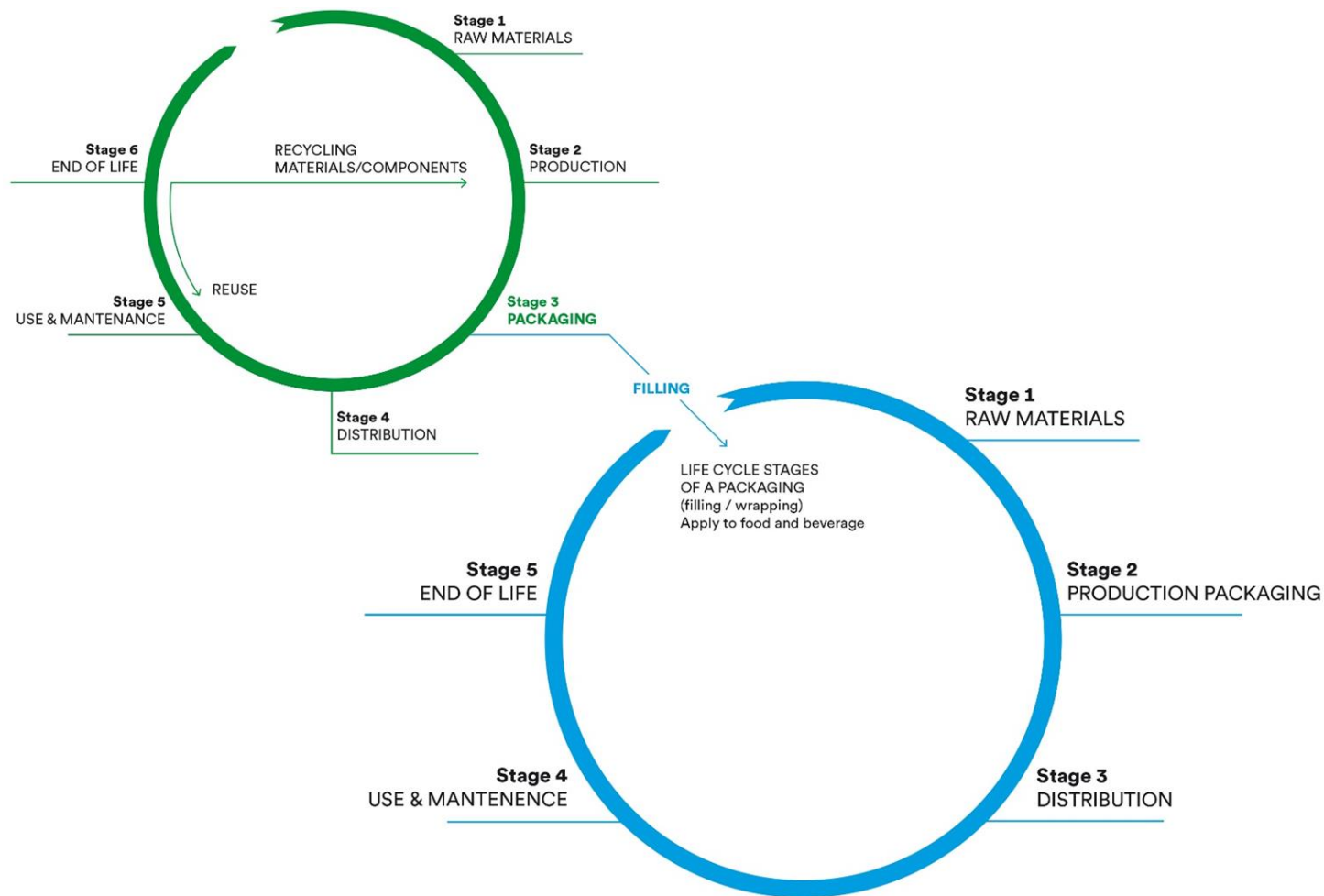
Secondary
packaging



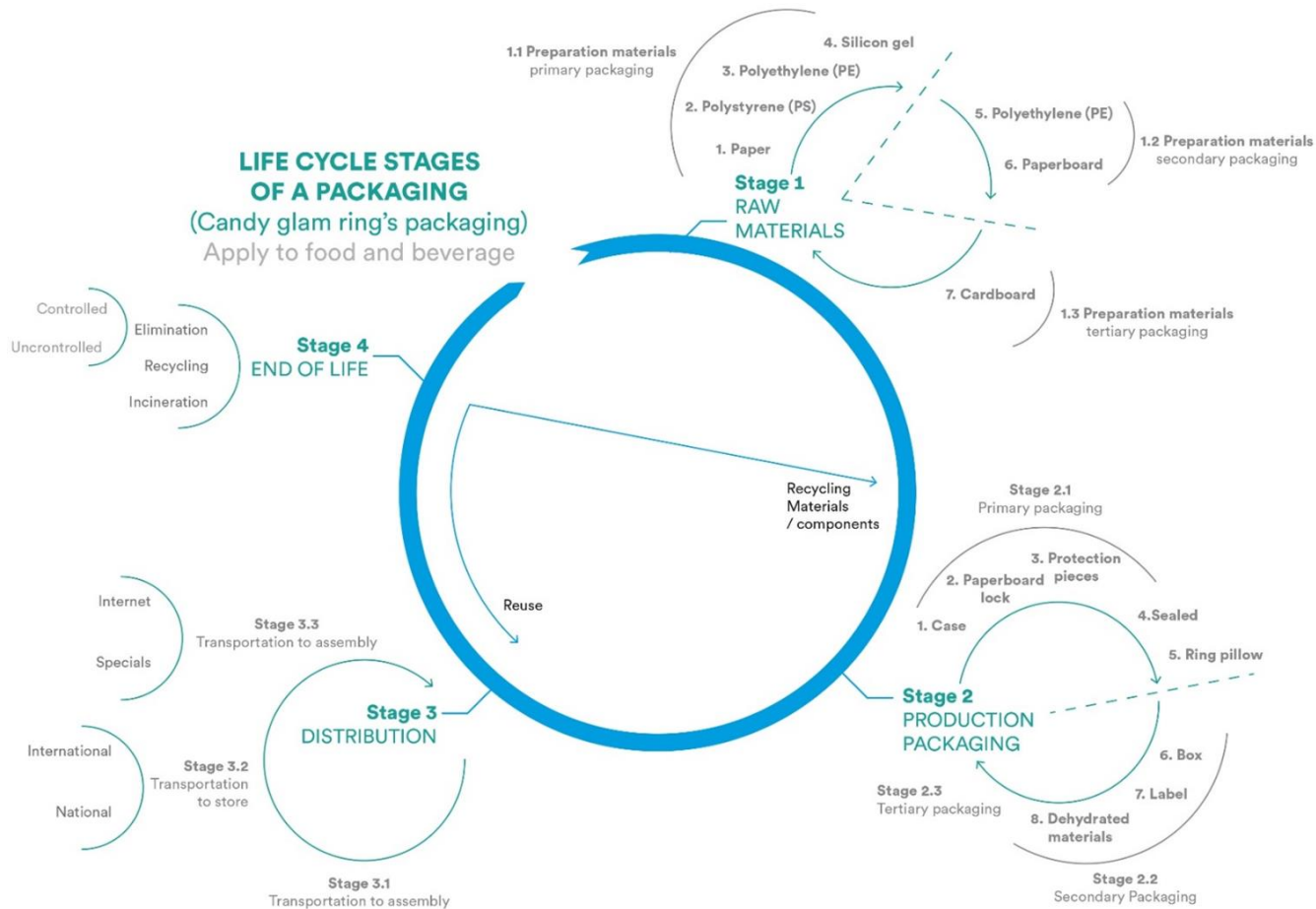
2. PREVIOUS CONSIDERATION



2. PREVIOUS CONSIDERATION



2. PREVIOUS CONSIDERATION



3. INITIAL DEFINITION

FIRST STEP

Registration process

1

edTOOL ecodesign tool

edTOOL is a practical and progressive ecodesign web-based tool for the improvement of the sustainability of products and services.

Partners:

UNB Universitat Autònoma de Barcelona

icta Institut de Recerca en Ciències i Tecnologia - UAB

inèdit innovation for sustainability

sostenipra

Partners:

Ramon Farrer, Raul Garcia-Ladana, Carlos M. Garcia (Instituto de I+D+i)

José Rosado, Pere Urzack, Xavier Galanet (Universitat Autònoma de Barcelona)

Financial support:

OECD, ESCP, EBC, etc.

2

Register

Name:

Surname:

E-mail:

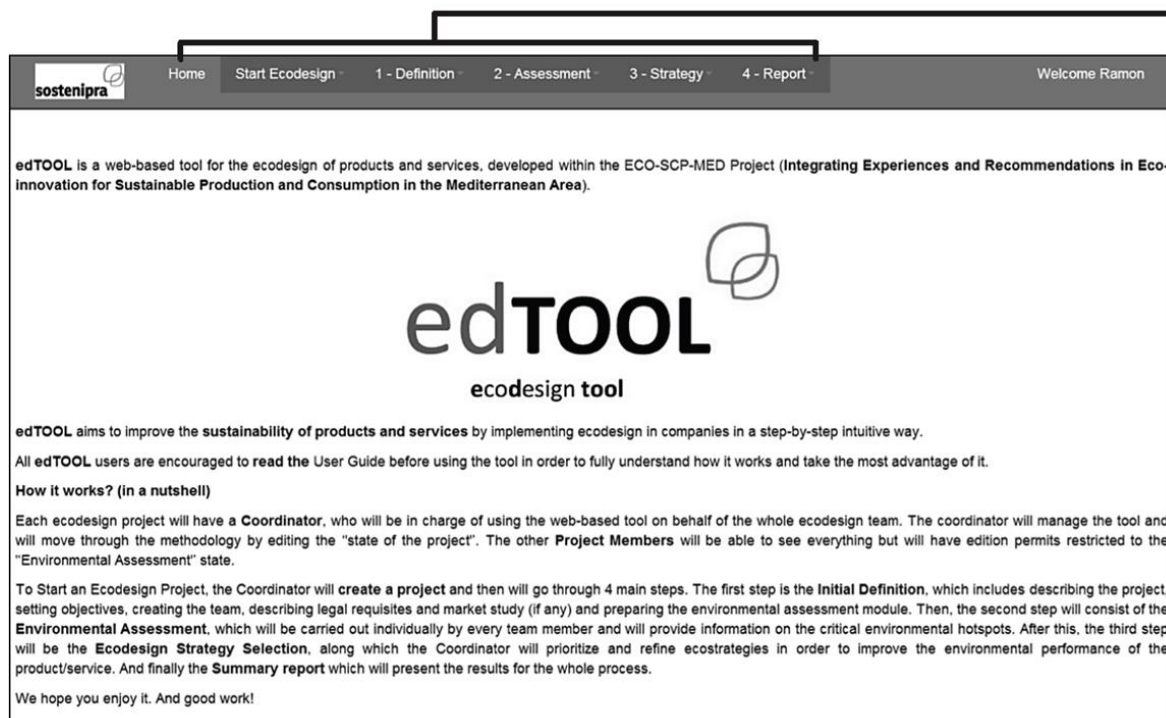
Password:

Verify Password:

Register

3. INITIAL DEFINITION

Homepage



The screenshot shows the homepage of the edTOOL web-based tool. The header includes the 'sostenipra' logo, a navigation menu with 'Home', 'Start Ecodesign', '1 - Definition', '2 - Assessment', '3 - Strategy', and '4 - Report', and a 'Welcome Ramon' message. The main content area features the 'edTOOL' logo and the text 'ecodesign tool'. Below this, it states that edTOOL is a web-based tool for the ecodesign of products and services, developed within the ECO-SCP-MED Project. It aims to improve the sustainability of products and services by implementing ecodesign in companies in a step-by-step intuitive way. All users are encouraged to read the User Guide before using the tool. The 'How it works?' section explains that each project has a Coordinator who manages the tool and moves through the methodology by editing the 'state of the project'. The other Project Members can see everything but have restricted editing permissions. The process involves 4 main steps: Initial Definition, Environmental Assessment, Ecodesign Strategy Selection, and Summary report.

sostenipra Home Start Ecodesign 1 - Definition 2 - Assessment 3 - Strategy 4 - Report Welcome Ramon

edTOOL is a web-based tool for the ecodesign of products and services, developed within the ECO-SCP-MED Project (Integrating Experiences and Recommendations in Eco-Innovation for Sustainable Production and Consumption in the Mediterranean Area).

edTOOL
ecodesign tool

edTOOL aims to improve the sustainability of products and services by implementing ecodesign in companies in a step-by-step intuitive way.

All edTOOL users are encouraged to read the User Guide before using the tool in order to fully understand how it works and take the most advantage of it.

How it works? (in a nutshell)

Each ecodesign project will have a **Coordinator**, who will be in charge of using the web-based tool on behalf of the whole ecodesign team. The coordinator will manage the tool and will move through the methodology by editing the "state of the project". The other **Project Members** will be able to see everything but will have edition permits restricted to the "Environmental Assessment" state.

To Start an Ecodesign Project, the Coordinator will **create a project** and then will go through 4 main steps. The first step is the **Initial Definition**, which includes describing the project, setting objectives, creating the team, describing legal requisites and market study (if any) and preparing the environmental assessment module. Then, the second step will consist of the **Environmental Assessment**, which will be carried out individually by every team member and will provide information on the critical environmental hotspots. After this, the third step will be the **Ecodesign Strategy Selection**, along which the Coordinator will prioritize and refine ecostrategies in order to improve the environmental performance of the product/service. And finally the **Summary report** which will present the results for the whole process.

We hope you enjoy it. And good work!

0) PREVIOUS
CONSIDERATIONS

1) DEFINITION

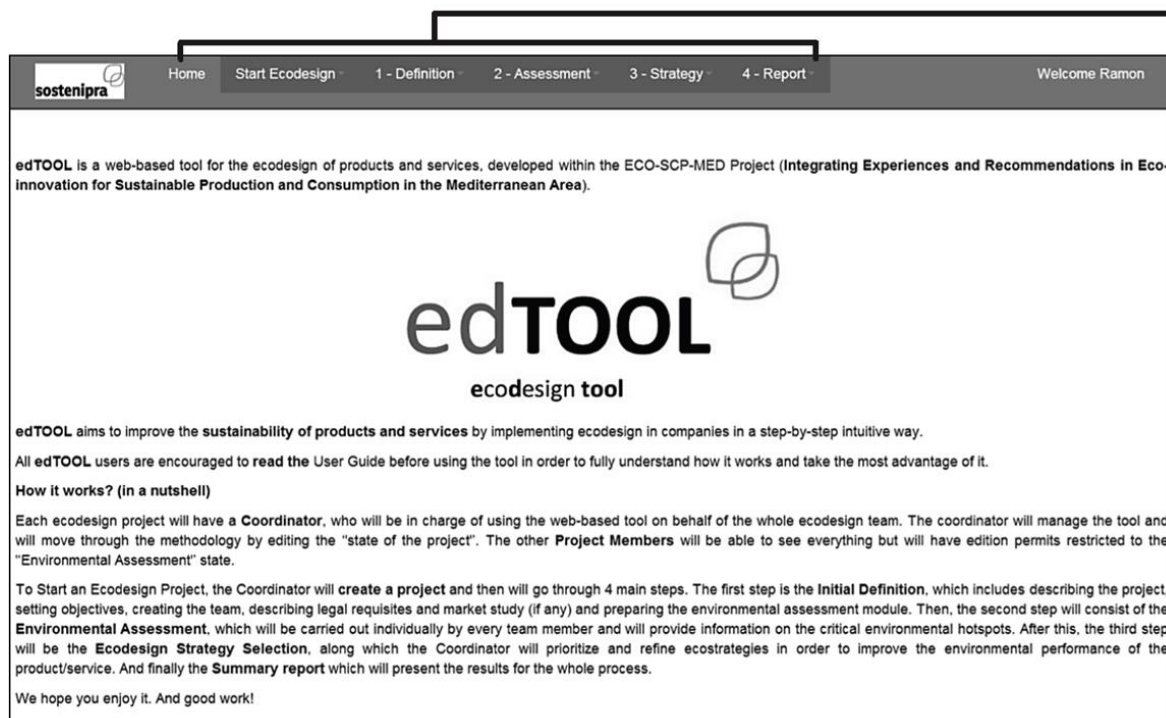
2) ASSESSMENT

3) STRATEGY

4) REPORT

3. INITIAL DEFINITION

Homepage



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sostenipra Home Start Ecodesign 1 - Definition 2 - Assessment 3 - Strategy 4 - Report Welcome Ramon

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We hope you enjoy it. And good work!

0) PREVIOUS
CONSIDERATIONS

1) DEFINITION

2) ASSESSMENT

3) STRATEGY

4) REPORT

3. INITIAL DEFINITION

IMPORTANT

Main menu

edTOOL is based on four different states that are controlled by **the Coordinator**:


- (1) Initial Definition
- (2) Environmental Assessment
- (3) Strategy Selection
- (4) Summary Report.



The state menu:
Here is where you are in the process

3. INITIAL DEFINITION

START A NEW PROJECT

1  Home Start Ecodesign ▾ 1 - Definition ▾ 2 - Assessment ▾ 3 - Strategy ▾ 4 - Report ▾

Current project: Chair State: New Ecodesign Project (Project's Coordinator can change the state.)
Select Ecodesign Project


Ecodesign Project

Create new ecodesign project

Please, introduce a name for your new project. It is suggested to use the name of the product/service to be ecodesigned.

Name:

Figure 10. Creation of a new ecodesign project project.


2  Home Start Ecodesign ▾ 1 - Definition ▾ 2 - Assessment ▾ 3 - Strategy ▾ 4 - Report ▾ Welcome Ramon

Current project: Knife State: 1 - Initial definition Change state: 1 - Initial definition

Ecodesign Project

List of ecodesign projects you are a member of

Projects you are a member of (you can change your active project from this list)

Project name	State	Created on	
Knife 	Initial definition	2014-01-17 14:53:01	Active


3. INITIAL DEFINITION

Main Menu

Start ecodesign project > New ecodesign project

State menu

Current project > State 1.initial definition > **Change State: 1-Initial Definition**

 Home Start Ecodesign ▾ 1 - Definition ▾ 2 - Assessment ▾ 3 - Strategy ▾ 4 - Report ▾ Welcome Andrés ▾

Current project: **Training** State: **1 - Initial definition** ⓘ Change state: 1- Initial definition ▾ Save

Ecodesign Project Create new ecodesign project

Please, introduce a name for your new project. It is suggested to use the name of the product/service to be ecodesigned.

Name:

Submit

3. INITIAL DEFINITION

If you already have a project

The screenshot shows the 'sostenipra' web application interface. A green circle with the number '3' is overlaid on the top left. The top navigation bar includes 'Home', 'Start Ecodesign', and a progress bar with steps: '1 - Definition', '2 - Assessment', '3 - Strategy', and '4 - Report'. A dropdown menu for 'Start Ecodesign' is open, showing 'New Ecodesign Project' and 'Select Ecodesign Project'. Below the navigation bar, the current project is 'Knife' and the state is '1- Initial definition'. A 'Save' button is visible. The main section is titled 'Ecodesign Project' with the subtitle 'List of ecodesign projects you are a member of'. Below this, a section titled 'Projects you are a member of (you can change your active project from this list)' contains a table with two rows: 'Chair' and 'Knife'. The 'Knife' row is highlighted and has an 'Active' status.

Project name	State	Created on	
Chair ⓘ	Initial definition	2014-01-15 12:08:13	Select as active
Knife ⓘ	Initial definition	2014-01-17 14:49:37	Active

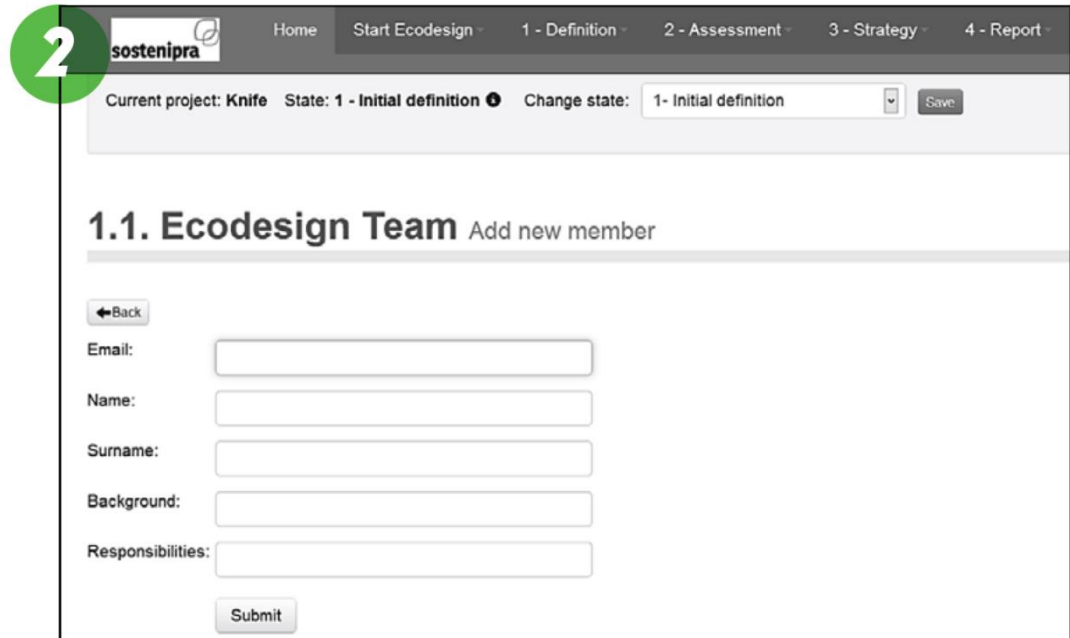
3. INITIAL DEFINITION

ECODESIGN TEAM

- Multidisciplinary team (direction, technicians, engineers, managers, marketing...).

- Generally, the higher participation, the better.

Recommended between 5-10 members



The screenshot shows a web application interface for managing an Ecodesign Team. A green circle with the number '2' is overlaid on the top left. The interface includes a navigation bar with links: Home, Start Ecodesign, 1 - Definition, 2 - Assessment, 3 - Strategy, and 4 - Report. Below the navigation bar, it displays 'Current project: Knife' and 'State: 1 - Initial definition'. A 'Change state:' dropdown menu is set to '1- Initial definition' with a 'Save' button. The main section is titled '1.1. Ecodesign Team' with a subtitle 'Add new member'. It contains a 'Back' button and five input fields labeled 'Email:', 'Name:', 'Surname:', 'Background:', and 'Responsibilities:'. A 'Submit' button is at the bottom.

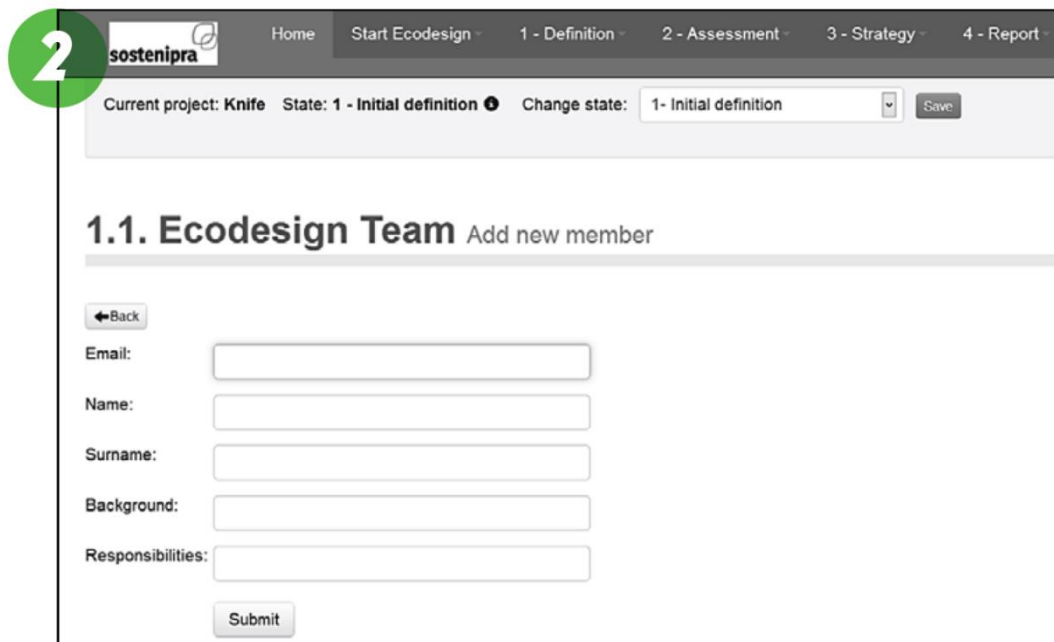
3. INITIAL DEFINITION

Main Menu

1.Definition > 1.1 ecodesign team > **Add membres**

State menu

Current project > State 1.initial definition > **Change State: 1-Initial Definition**



The screenshot displays the 'sostenipra' web application interface. A green circle with the number '2' is overlaid on the top left. The top navigation bar includes links for Home, Start Ecodesign, 1 - Definition, 2 - Assessment, 3 - Strategy, and 4 - Report. Below the navigation bar, the current project is 'Knife' and the state is '1 - Initial definition'. A 'Change state:' dropdown menu is set to '1- Initial definition' with a 'Save' button next to it. The main content area is titled '1.1. Ecodesign Team' with a subtitle 'Add new member'. A 'Back' button is located at the top left of the form. The form contains five input fields: 'Email:', 'Name:', 'Surname:', 'Background:', and 'Responsibilities:'. A 'Submit' button is at the bottom of the form.

3. INITIAL DEFINITION

PROJECT DESCRIPTION AND OBJECTIVES

The Coordinator will describe the product/service to be ecodesigned and will indicate what are the general objectives pursued with this project .

1.2. Ecodesign Project Description & Objectives

Please, describe the product/service to be ecodesigned and the objectives that are pursued by using edTOOL.

Name:	<input type="text" value="Knife"/>
Description:	<div><p>The reference Knife presents high durability and ergonomics, and is resistant to high temperatures. It is conceived for professional use.</p></div>
Objectives:	<div><p>This ecodesign project aims to:</p><ul style="list-style-type: none">- assess the environmental impact of the reference Knife- identify environmental improvement strategies- ecodesign a new Knife</div>

3. INITIAL DEFINITION

Main Menu

1.Definition > 1.2 Descriptions & objectives > **Fill the boxes**

State menu

Current project > State 1.initial definition > **Change State: 1-Initial Definition**

1.2. Ecodesign Project Description & Objectives

Please, describe the product/service to be ecodesigned and the objectives that are pursued by using edTOOL.

Name:

Knife

Description:

The reference Knife presents high durability and ergonomics, and is resistant to high temperatures. It is conceived for professional use.

Objectives:

This ecodesign project aims to:

- assess the environmental impact of the reference Knife
- identify environmental improvement strategies
- ecodesign a new Knife

3. INITIAL DEFINITION

LEGAL REQUISITES (Optional Step)

The Coordinator will be able to describe the most important legislation and regulations affecting the product/service, which will need to be considered when thinking of potential strategies and new ecodesigned concepts

1.3. Legal requisites Create new legal requisite

Name:

UNE-EN-ISO-8442/1

Description:

Materials and articles in contact with foodstuffs -- Cutlery and table holloware -- Part 1: Requirements for cutlery for the preparation of food

3. INITIAL DEFINITION

Main Menu

1.Definition > 1.3 Legal requisites > Add requisite (**Fill the boxes**)

State menu

Current project > State 1.initial definition > **Change State: 1-Initial Definition**

1.3. Legal requisites Create new legal requisite

Name:

UNE-EN-ISO-8442/1

Description:

Materials and articles in contact with
foodstuffs -- Cutlery and table
holloware -- Part 1: Requirements for
cutlery for the preparation of food

3. INITIAL DEFINITION

MARKET STUDY (Optional Step)




The Coordinator can introduce a description and image of the related products/service existing in the market, result of a Market Study

1.4. Market study Information on competing products/services.

[Optional Step] Please, describe the alternatives to your product already existing in the market.

Add market study

3 records found

Description	Image	
Arcos Titanium Select - Knife with a pure titanium blade		View Edit Delete
Kyotop Knife (Kyocera) - Ceramic blade		View Edit Delete
Martínez & Gascón Knife - Blade recovered by teflon in order to reduce maintenance		View Edit Delete

3. INITIAL DEFINITION

Main Menu

1.Definition > 1.4 Market study > Add market study (**Fill the boxes**) > add image




State menu

Current project > State 1.initial definition > **Change State: 1-Initial Definition**

1.4. Market study Information on competing products/services.

[Optional Step] Please, describe the alternatives to your product already existing in the market.

[Add market study](#) 3 records found

Description	Image	
Arcos Titanium Select - Knife with a pure titanium blade		View Edit Delete
Kyotop Knife (Kyocera) - Ceramic blade		View Edit Delete
Martínez & Gascón Knife - Blade recovered by teflon in order to reduce maintenance		View Edit Delete

3. INITIAL DEFINITION

CUSTOMIZE CRITERIA

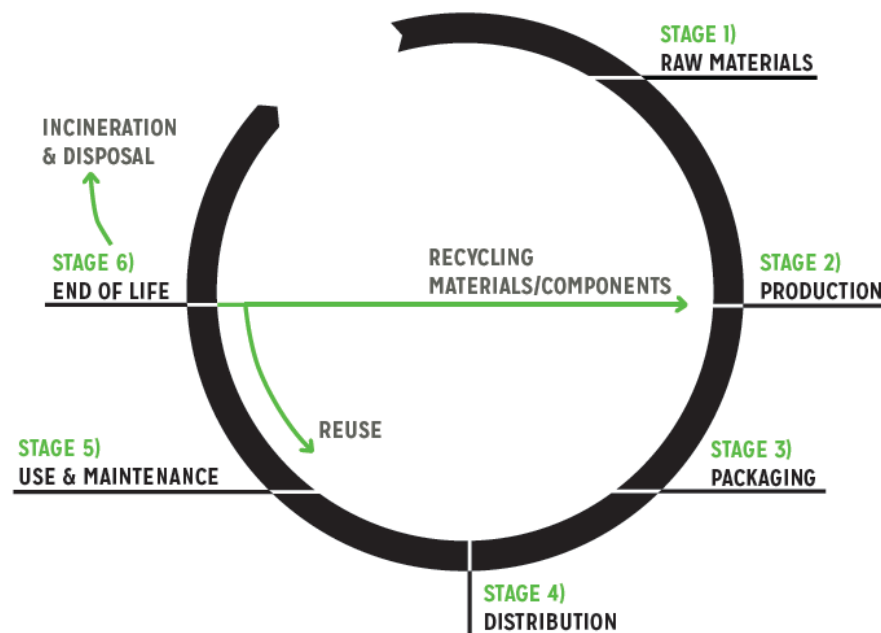
Preparation for the Environmental Assessment that will be performed by means of a **Qualitative Assessment of Life Cycle Criteria**.

This is a qualitative environmental assessment tool based on the study of life cycle stages. In brief, this tool places in a spider web diagram the various life cycle stages and shows a score which is representative of the degree of environmental performance of each stage against several criteria that characterize them.

3. INITIAL DEFINITION

CUSTOMIZE CRITERIA

Preparation for the Environmental Assessment that will be performed by means of a **Qualitative Assessment of Life Cycle Criteria**.



3. INITIAL DEFINITION



Criteria game

3. INITIAL DEFINITION

CUSTOMIZE CRITERIA

The Coordinator can edit the matrix of life cycle criteria (remove, add predefined or new ones)

The screenshot shows the Edtool software interface. The navigation bar at the top includes links for Home, Start Ecodesign, 1 - Definition (selected), 2 - Assessment, 3 - Strategy, and 4 - Report. A dropdown menu for '1 - Definition' is open, showing options: 1.1. Ecodesign Team, 1.2. Description & Objectives, 1.3. Legal Requisites, 1.4. Market Study, 1.5. Customize Lifecycle stages (highlighted), and 1.6. Customize Criteria. The main content area is titled '1.5 Customize Lifecycle'. It contains a text box stating: 'You can customize the lifecycle stages of the project. The minimum number of stages allowed is: 3.' Below this, there are buttons for 'Add lifecycle stage', 'Add custom lifecycle stage', and 'Manage custom lifecycle stages'. A form for adding a new stage is visible, with 'Production' selected in the 'Lifecycle stage' dropdown and '6' in the 'Position' field. Below the form is a table with 5 rows and 3 columns: 'Position', 'Lifecycle stage', and a set of controls (up/down arrows and a delete 'X' icon). The table contains the following data:

Position	Lifecycle stage	
1	Raw Materials	↓ X
2	Production/packaging	↑ ↓ X
3	Distribution	↑ ↓ X
4	Use & Maintenance	↑ ↓ X
5	End of life	↑ X

At the bottom of the interface, there is a footer that says: 'You can download Edtool's User Guide here: English French'.

3. INITIAL DEFINITION

Main Menu

1.Definition > 1.5 Customize lifecycle stages > Add lifecycle stages/add custom lifecycle stages

State menu

Current project > State 1.initial definition > **Change State: 1-Initial Definition**

The screenshot shows the Edtool software interface. The top navigation bar includes links for Home, Start Ecodesign, 1 - Definition (selected), 2 - Assessment, 3 - Strategy, and 4 - Report. The user is logged in as 'Andrés'. The current project is 'Training' and the state is '1 - Initial definition'. A dropdown menu for '1.5 Customize Lifecycle stages' is open, showing options: 1.1 Ecodesign Team, 1.2 Description & Objectives, 1.3 Legal Requisites, 1.4 Market Study, 1.5 Customize Lifecycle stages (selected), and 1.6 Customize Criteria.

The main section is titled '1.5 Customize Lifecycle'. It states: 'You can customize the lifecycle stages of the project. The minimum number of stages allowed is: 3.' Below this, there are buttons for 'Add lifecycle stage' and 'Add custom lifecycle stage'. A 'Manage custom lifecycle stages' button is also present.

Below the buttons, there is a form with a 'Lifecycle stage' dropdown (set to 'Production') and a 'Position' input (set to '6'). An 'Add' button is next to it.

The main part of the interface is a table with 5 rows, showing the current lifecycle stages:

Position	Lifecycle stage	
1	Raw Materials	↓ ✕
2	Production/packaging	↑ ↓ ✕
3	Distribution	↑ ↓ ✕
4	Use & Maintenance	↑ ↓ ✕
5	End of life	↑ ✕

At the bottom, there is a footer with the text: 'You can download Edtool's User Guide here: English French' and 'Glyphicons Free licensed under CC BY 3.0.'

3. INITIAL DEFINITION

CUSTOMIZE CRITERIA

The Coordinator can edit the matrix of life cycle criteria (remove, add predefined or new ones)

sostenipra Home Start Ecodesign 1 - Definition 2 - Assessment 3 - Strategy 4 - Report Welcome Andrés

Current project: **Training** State: 1 - Initial definition Change state: **1 - Initial definition** Save

1- Initial definition
2- Environmental assessment

1.5 Customize Lifecycle stages

You can customize the lifecycle stages of the project. The minimum number of stages allowed is: 3.

Add lifecycle stage Add custom lifecycle stage Manage custom lifecycle stages

Lifecycle stage: Production Position: 6 Add

Position	Lifecycle stage	
1	Raw Materials	↓ ×
2	Production/packaging	↑ ↓ ×
3	Distribution	↑ ↓ ×
4	Use & Maintenance	↑ ↓ ×
5	End of life	↑ ×

You can download Edtool's User Guide here: [English](#) [French](#)

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3. INITIAL DEFINITION

CUSTOMIZE CRITERIA

The Coordinator can edit the matrix of life cycle criteria (remove, add predefined or new ones)

sostenipra Home Start Ecodesign 1 - Definition 2 - Assessment 3 - Strategy 4 - Report Welcome Ramon

Add Add custom

Add criterion to lifecycle stages:

Lifecycle stage: 1 - Raw Materials Criterion: Embodied energy on material

Add

Stage 1 Raw Materials	Stage 2 Production	Stage 3 Packaging	Stage 4 Distribution	Stage 5 Use & Maintenance	Stage 6 End of life
Diversity of materials ⓘ ✕	Process complexity ⓘ ✕	Standardization of packaging sizes ⓘ ✕	Efficiency of transported load ⓘ ✕	Environmental communication for the use ⓘ ✕	Separability of components ⓘ ✕
Amount of materials ⓘ ✕	Efficiency of production technology ⓘ ✕	Amount of packaging materials ⓘ ✕	Efficiency of occupied volume ⓘ ✕	Materials' use efficiency ⓘ ✕	Communication about end-of-life ⓘ ✕
Ecological rucksack of materials ⓘ ✕	Energy efficiency ⓘ ✕	Packaging to Product volume ratio ⓘ ✕	Distances ⓘ ✕	Energy use efficiency ⓘ ✕	Identifiability of materials ⓘ ✕
Renewability ⓘ ✕	Waste generation ⓘ ✕	Packaging to Product weight ratio ⓘ ✕	Transportation routes ⓘ ✕	Service life ⓘ ✕	Reusability ⓘ ✕
Scarcity ⓘ ✕	Closed/Open production cycle ⓘ ✕	Diversity of materials ⓘ ✕	Energy efficiency of transportation modes ⓘ ✕	Multifunctionality ⓘ ✕	Environmentally-sound waste management ⓘ ✕
				Maintenance needs ⓘ ✕	

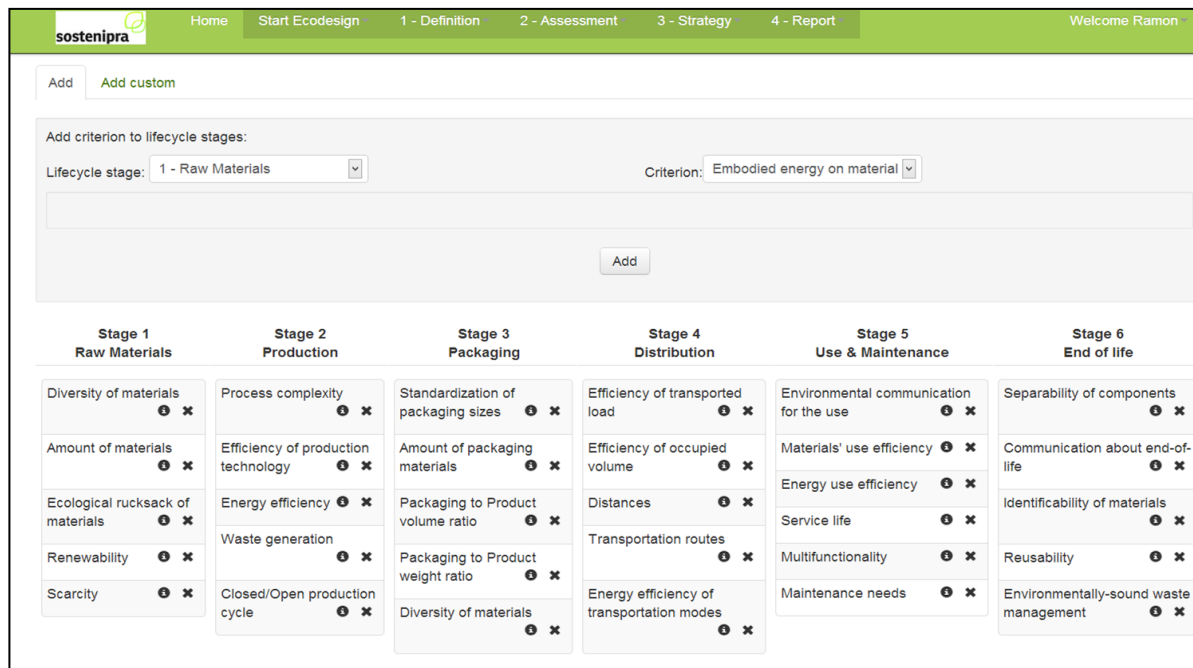
3. INITIAL DEFINITION

Main Menu

1.Definition > 1.6 customize criteria > **select the stages and criterias**

State menu

Current project > State 1.initial definition > **Change State: 2-environmental assessment > save**



sostenipra Home Start Ecodesign 1 - Definition 2 - Assessment 3 - Strategy 4 - Report Welcome Ramon

Add Add custom

Add criterion to lifecycle stages:

Lifecycle stage: 1 - Raw Materials Criterion: Embodied energy on material

Add

Stage 1 Raw Materials	Stage 2 Production	Stage 3 Packaging	Stage 4 Distribution	Stage 5 Use & Maintenance	Stage 6 End of life
Diversity of materials ⓘ x	Process complexity ⓘ x	Standardization of packaging sizes ⓘ x	Efficiency of transported load ⓘ x	Environmental communication for the use ⓘ x	Separability of components ⓘ x
Amount of materials ⓘ x	Efficiency of production technology ⓘ x	Amount of packaging materials ⓘ x	Efficiency of occupied volume ⓘ x	Materials' use efficiency ⓘ x	Communication about end-of-life ⓘ x
Ecological rucksack of materials ⓘ x	Energy efficiency ⓘ x	Packaging to Product volume ratio ⓘ x	Distances ⓘ x	Energy use efficiency ⓘ x	Identifiability of materials ⓘ x
Renewability ⓘ x	Waste generation ⓘ x	Packaging to Product weight ratio ⓘ x	Transportation routes ⓘ x	Service life ⓘ x	Reusability ⓘ x
Scarcity ⓘ x	Closed/Open production cycle ⓘ x	Diversity of materials ⓘ x	Energy efficiency of transportation modes ⓘ x	Multifunctionality ⓘ x	Environmentally-sound waste management ⓘ x
				Maintenance needs ⓘ x	

3. INITIAL DEFINITION

Main Menu

1.Definition > 1.6 customize criteria > **select the stages and criterias**

State menu

Current project > State 1.initial definition > **Change State: 2-environmental assessment > save**

Add Add custom

Add criterion to lifecycle stages:

Lifecycle stage: 2 - Production

Criterion: Energy efficiency

It refers to the level of intricateness of the production process. It can be simplified as the number of p

Add

Stage 1 Raw Materials Stage 2 Production Stage 3 Packaging Stage 4 Distribution Stage 5 Use & Maintenance Stage 6 End of life

Energy efficiency

Process complexity

Efficiency of production technology

Raw materials efficiency

Origin of energy

Waste generation

Interaction with other organizations aiming at ecoefficiency

Closed/Open production cycle

Production - market location

Add Add custom

Lifecycle Stage Id: 2 - Production

Name: Non-metal waste production

Description: Amount of non-metal waste production per unit of product

Add

3. INITIAL DEFINITION

Main Menu

1. Definition > 1.6 customize criteria > **select the stages and criterias**

State menu

Current project > State 1. initial definition > **Change State: 1-Initial Defenition**

The screenshot shows the 'sostenipra' web application interface. The top navigation bar includes links for Home, Start Ecodesign, 1 - Definition, 2 - Assessment, 3 - Strategy, and 4 - Report. The current state is '1 - Initial definition'. The main content area is titled '1.6 Customize criteria for Environmental Assessment'. It contains a table of life cycle stages and criteria, with a section for 'Embodied energy on material'.

Current project: Training State: 1 - Initial definition Change state: 1- Initial definition

1.6 Customize criteria for Environmental Assessment

This table presents the most common life cycle stages for any product/service:
materials > production > packaging > distribution > use & maintenance > end of life

For each life cycle stage, a selection of default life cycle criteria is presented, which will be used in order to perform an environmental assessment of the reference product/service. The criteria included in the table should be adapted to each project, so you may remove some of the default life cycle criteria or add new ones. Additional life cycle criteria can be added from a predefined list with other criteria, available under the **Add label** or you can create new customized criteria under the **Add custom** label.

For your guidance, please, note that the User Guide includes a list of potential life cycle criteria and a brief description of each of them. Once you are finished with the customization of life cycle criteria, please change the state of the project to 2 - **Environmental Assessment**. By doing so, all team members will be able to proceed with the environmental assessment.

Add Add custom

Lifecycle stage: Raw Materials Criterion: Embodied energy on material

Embodied Energy is the sum of all the energy required to produce any goods or services, considered as if that energy was incorporated or 'embodied' in the product itself.

Add

Stage 1 Raw Materials	Stage 3 Distribution	Stage 4 Use & Maintenance	Stage 5 End of life
Diversity of materials	Efficiency of transported load	Environmental communication for the use	Separability of components
Amount of materials	Efficiency of occupied volume	Materials' use efficiency	Communication about end-of-life
Ecological rucksack of materials	Distances	Energy use efficiency	Identifiability of materials
Renewability	Transportation routes	Service life	Reusability
Scarcity	Energy efficiency of transportation modes	Multifunctionality	Environmentally-sound waste management
Recycled content	Environmental impact of transportation system	Maintenance needs	Energy valorization potential

3. INITIAL DEFINITION

Main Menu

2, Assessment > 2.1 Assess criteria > **select the stages and criterias**

State menu

Current project > State 1.initial definition > **Change State: 2-Environmental assessment > save**

The screenshot displays the 'sostenipra' web application interface. At the top, a green navigation bar contains the logo and menu items: Home, Start Ecodesign, 1 - Definition, 2 - Assessment (selected), 3 - Strategy, and 4 - Report. A user greeting 'Welcome Andrés' is on the right. Below the navigation bar, a status bar shows 'Current project: Training', 'State: 1 - Initial definition', and a 'Change state' dropdown menu. The dropdown menu is open, showing '2.1. Assess Criteria' (highlighted) and '2.2. Results'. A 'Save' button is also visible. The main content area is titled '2.1. Environmental Assessment' in green. It contains instructions: 'Please, assess each lifecycle criterion (from 1 to 5) using the given (scale▼)', 'Make sure to use integer values and leave a '0' if you do not have the information to answer. Finally, click 'Save' when you are finished.', and 'The results of the assessment will be made available when the coordinator changes the state of the project to 3-Strategy Selection.' A light blue banner states: 'Assessment of life cycle criteria can only be made when the project state is 2 - Environmental assessment'. At the bottom, a grey box provides a link to 'Edtool's User Guide' in English and French, and a footer note: 'Glyphicons Free licensed under CC BY 3.0.'

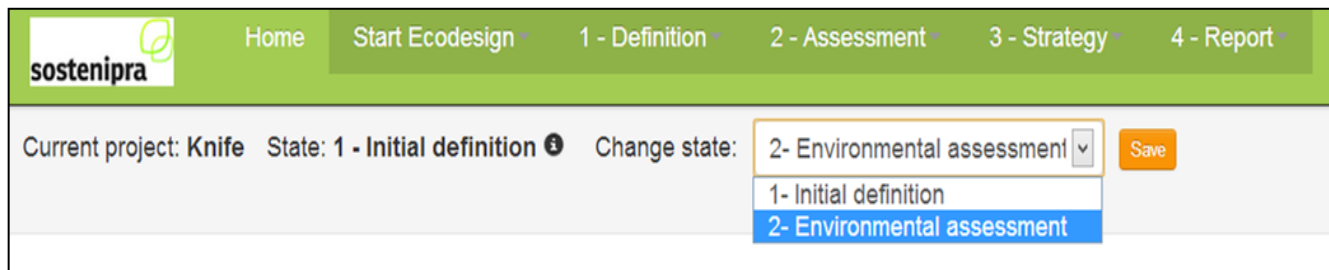
3. INITIAL DEFINITION

Main Menu

2, Assessment > 2.2 Assess criteria > **select the stages and criterias**

State menu

Current project > State 1.initial definition > **Change State: 2-Environmental assessment > save**



The screenshot displays the 'sostenipra' web application interface. At the top, a green navigation bar contains the logo and a menu with items: Home, Start Ecodesign, 1 - Definition, 2 - Assessment, 3 - Strategy, and 4 - Report. Below this, a light gray header bar shows 'Current project: Knife' and 'State: 1 - Initial definition' with an information icon. To the right, a 'Change state:' label is followed by a dropdown menu currently showing '2- Environmental assessment'. The dropdown is open, revealing two options: '1- Initial definition' and '2- Environmental assessment', with the latter highlighted in blue. An orange 'Save' button is positioned to the right of the dropdown.

3. INITIAL DEFINITION

edTOOL includes a database of generic life cycle criteria (See User Guide)

ANNEX B) LIFE CYCLE CRITERIA AND STRATEGIES

List of life cycle criteria

Materials	Diversity of materials	<i>It can be represented by the number of different typologies of materials involved in the product. In general, less is better.</i>
	Amount of materials	<i>It can be represented by the weight of the materials involved in the product. The less material has to be used in a product, the less resources will be consumed in the production process.</i>
	Ecological rucksack of materials	<i>An Ecological Rucksack is the total quantity of materials moved from nature to create a product or service, minus the actual weight of the product. That is, ecological rucksacks look at hidden material flows. Ecological rucksacks take a life cycle approach and signify the environmental strain or resource efficiency of the product or service.</i>
	Embodied energy on materials	<i>Embodied Energy is the sum of all the energy required to produce any goods or services, considered as if that energy was incorporated or 'embodied' in the product itself.</i>
	Renewability	<i>A renewable resource is a natural resource which can replenish with the passage of time, either through biological reproduction or other naturally recurring processes.</i>
	Durability	<i>Durability is aimed at extending the lifetime of products thanks to the inherent material properties.</i>
	Scarcity	<i>It refers to the lack or the limited existence of resources that are fundamental for the product or service provided. The more scarce, the worse.</i>
	Recycled content	<i>The proportion, by mass, of recycled material in a product or packaging. Only pre-consumer and post-consumer materials shall be considered as recycled content.</i>
	Recovered components	<i>Recovered materials are products, components or parts of a production or waste stream captured or separated for reuse (without processing, which would be recycling).</i>
	Recyclability	<i>Recyclability refers to the ability of a material to be captured and separated from a waste stream for being recycled.</i>
	Biodegradability	<i>Biodegradability refers to the capability of being decomposed by biological agents, especially bacteria.</i>
	Origin of materials	<i>The origin of materials refers to the geographical location from which they are obtained. Local materials are desirable due to shorter distances.</i>
	Toxicity	<i>Toxicity refers to the degree to which a substance can damage an organism.</i>

4. ASSESSMENT



Step 2. Environmental Assessment

Throughout this step each member of the team will evaluate the previously defined criteria and results will be presented to the coordinator.



Ensures each member evaluates.
Ensures consistency of results.
Assesses criteria.



Assess criteria.

4. ASSESSMENT

ASSESS CRITERIA


Each ecodesign team member can assess the criteria, using a scale from 1 to 5

1	Enormous room for improvement (0%)
2	Big room for improvement (25%)
3	Some room for improvement (50%)
4	Small room for improvement (75%)
5	No room for improvement (100%)
0	No data available / not applicable

4. ASSESSMENT

ASSESS CRITERIA

Each ecodesign team member can assess the criteria, using a scale from 1 to 5

HomeStart Ecodesign1 - Definition2 - Assessment3 - Strategy4 - ReportWelcome Ramon

2.1. Environmental Assessment

Please, assess each lifecycle criterion (from 1 to 5) using the given (scale▼)

Make sure to use integer values and leave a '0' if you do not have the information to answer. Finally, click 'Save' when you are finished.

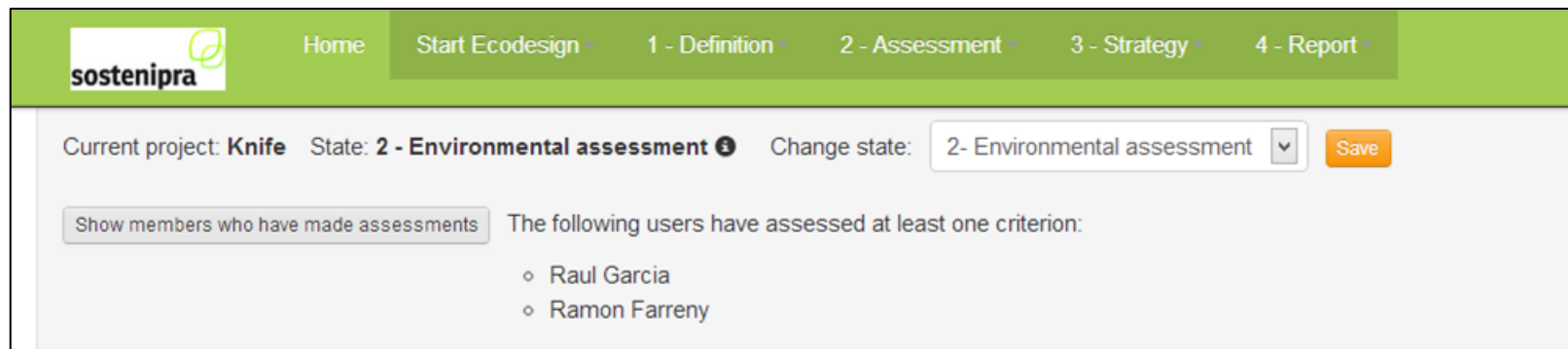
The results of the assessment will be made available when the coordinator changes the state of the project to **3-Strategy Selection**.

Stage 1 Raw Materials	Stage 2 Production	Stage 3 Packaging	Stage 4 Distribution	Stage 5 Use & Maintenance	Stage 6 End of life
Diversity of materials 5	Energy efficiency 2	Amount of packaging materials 3	Environmental impact of transportation system 3	Environmental communication for the use 2	Separability of components 2
Amount of materials 2	Water efficiency 3	Diversity of materials 4	Optimization of distribution 4	Materials' use efficiency 3	Identifiability of materials 5
Recycled content 2	Renewability of energy 4	Reciclability 4	Optimization of internal transports 3	Maintenance needs 2	Recyclability potential 4
Reciclability 3	Treatment of generated waste 4	Recycled content 3		Environmental Communication for the Maintenance 3	
Origin of materials 3	Wastewater management 4	Packaging Reuse/ Recovery Rate 4		Low-maintenance materials 5	
	Metal waste generation 2				
	Non-metal waste production 3				

4. ASSESSMENT

ASSESS CRITERIA

The Coordinator is able to see who whas already assessed the criteria.



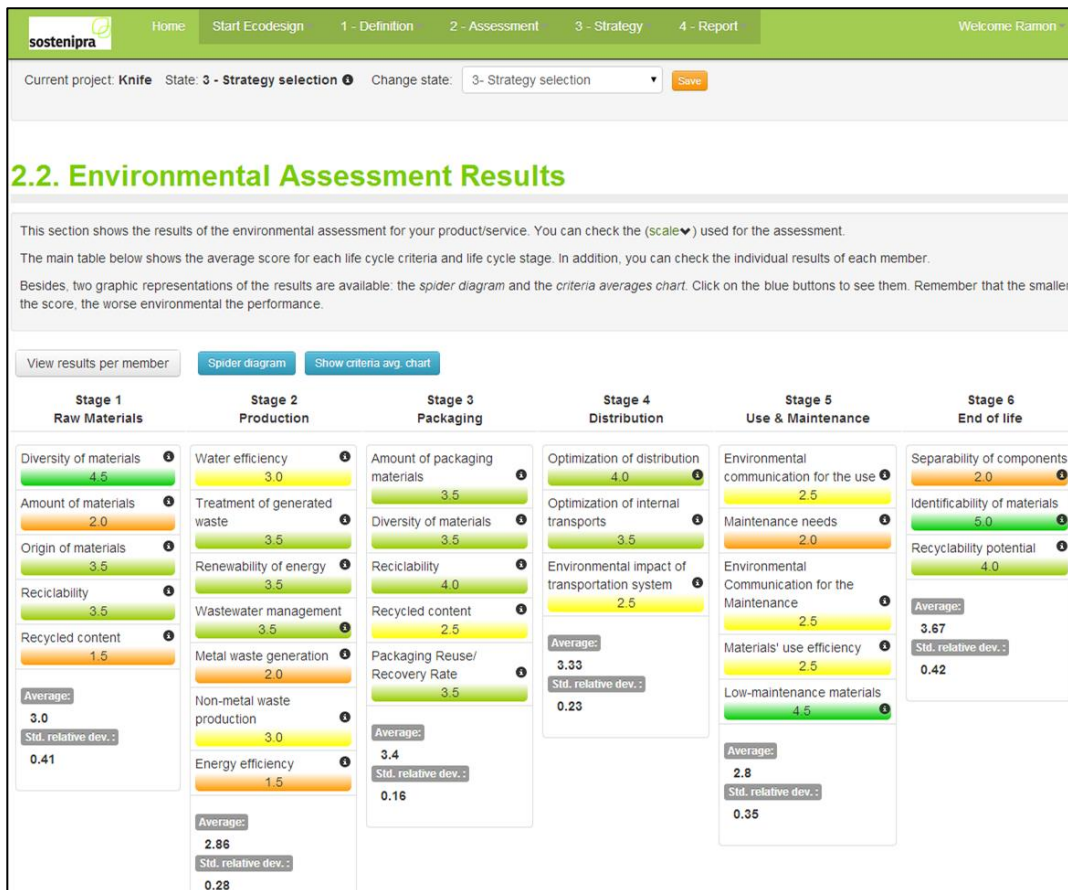
The screenshot displays the 'sostenipra' web application interface. The top navigation bar is green and contains the following links: Home, Start Ecodesign, 1 - Definition, 2 - Assessment, 3 - Strategy, and 4 - Report. The '2 - Assessment' link is highlighted. Below the navigation bar, the current project is 'Knife' and the state is '2 - Environmental assessment'. A 'Change state:' dropdown menu is set to '2- Environmental assessment', and a 'Save' button is next to it. A button labeled 'Show members who have made assessments' is present. Below this button, the text 'The following users have assessed at least one criterion:' is followed by a list of two users: Raul Garcia and Ramon Farreny.

Current project: **Knife** State: **2 - Environmental assessment** ⓘ Change state: 2- Environmental assessment ▼ Save

Show members who have made assessments The following users have assessed at least one criterion:

- Raul Garcia
- Ramon Farreny

4. ASSESSMENT



ENVIRONMENTAL ASSESSMENT RESULTS

Averages for criteria and for life cycle stage are obtained.

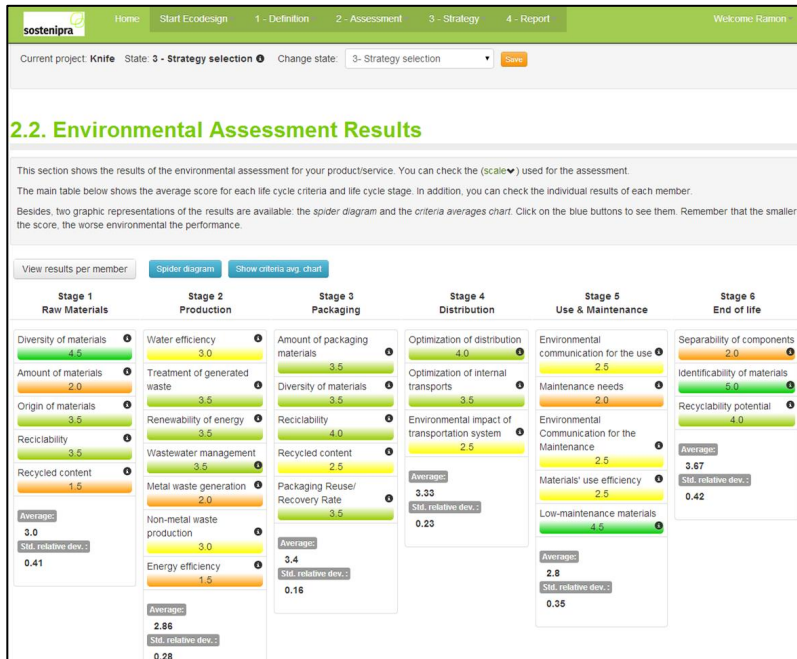
4. ASSESSMENT

Main Menu

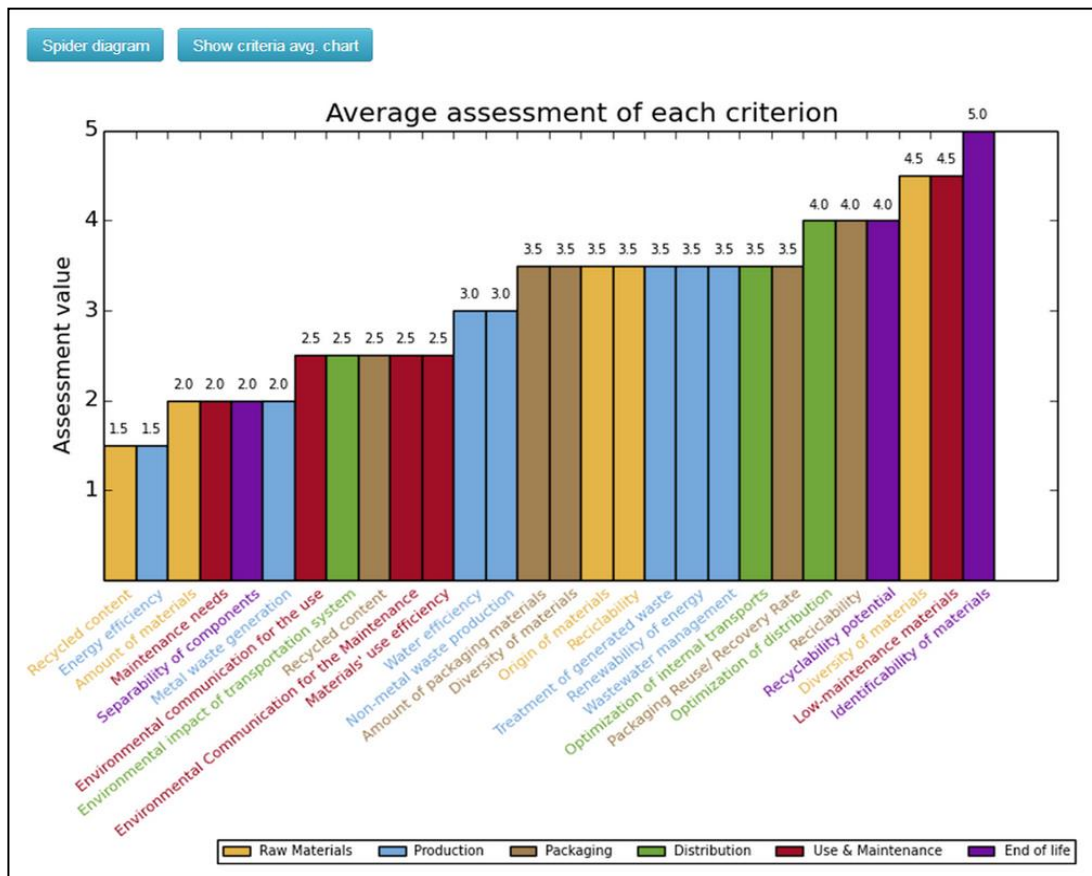
2, Assessment > 2.2 Results >

State menu

Current project > State 1.initial definition > **Change State: 3-Strategy selection > save**



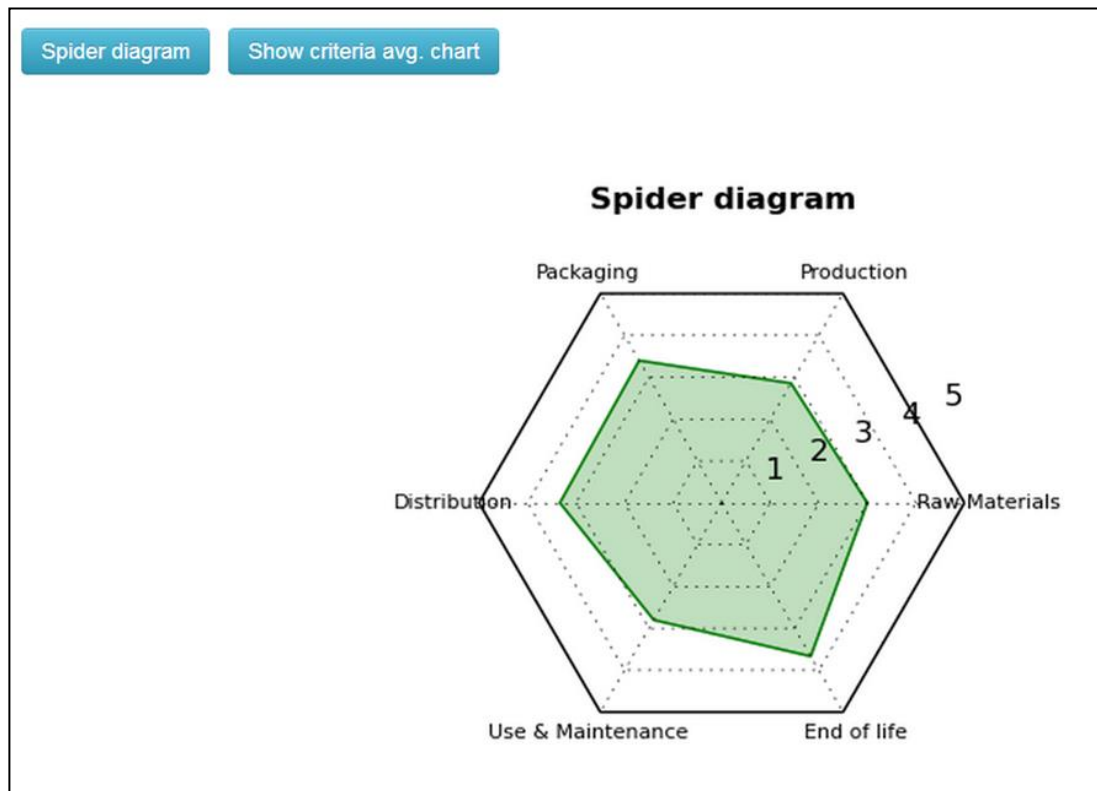
4. ASSESSMENT



ENVIRONMENTAL ASSESSMENT RESULTS

Bar diagram.

4. ASSESSMENT



ENVIRONMENTAL ASSESSMENT


RESULTS

The main result: Spider diagram.

The environmental assessment results shows where attention should be paid in order to increase the environmental performance of the product/service.

With this information, **edTOOL** suggest a set of environmental improvement strategies.

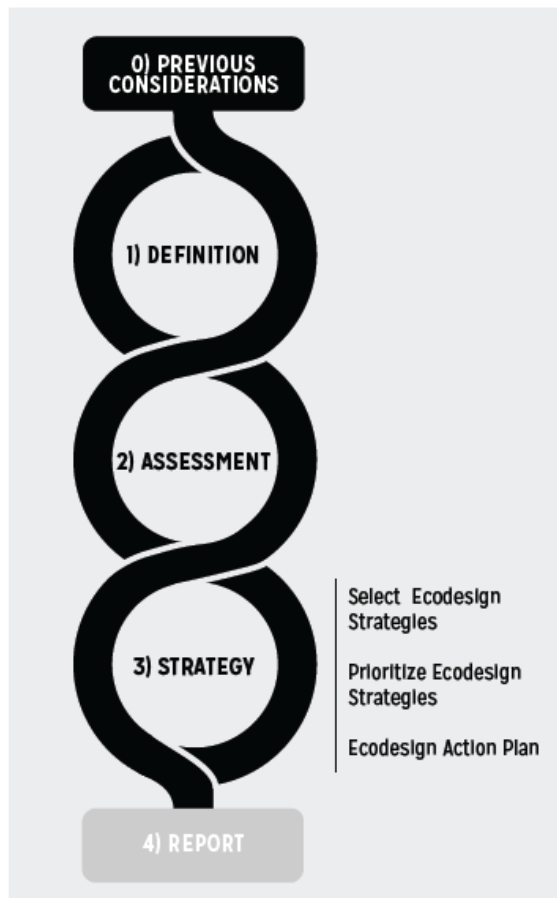
4. ASSESSMENT

 Home Start Ecodesign 1 - Definition 2 - Assessment 3			
View average results			
Raw Materials			
Diversity of materials	③	5	4
Amount of materials	③	2	2
Recycled content	③	2	1
Recyclability	③	3	4
Origin of materials	③	3	4
Production			
Energy efficiency	③	2	1
Water efficiency	③	3	3
Renewability of energy	③	4	3
Treatment of generated waste	③	4	3
Wastewater management	③	4	3
Metal waste generation	③	2	2
Non-metal waste production	③	3	3
Packaging			
Amount of packaging materials	③	3	4
Diversity of materials	③	4	3
Recyclability	③	4	4
Recycled content	③	3	2
Packaging Reuse/ Recovery Rate	③	4	3

ENVIRONMENTAL ASSESSMENT RESULTS

The individual scores can also be observed by the Coordinator.

4.STRATEGY



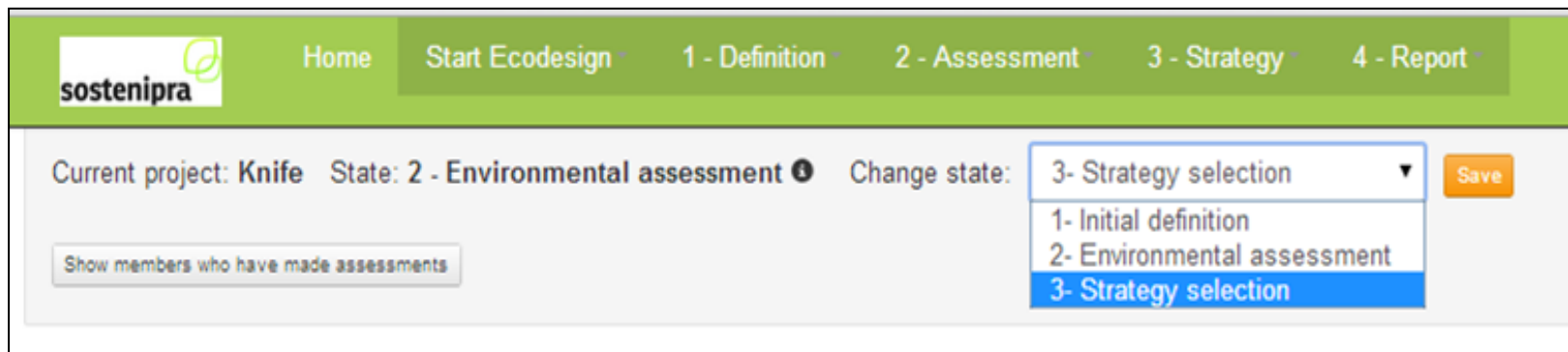
Step 3. Strategy Assessment

Throughout this step the potential ecodesign strategies are selected, prioritized and materialized into an Action Plan.



4.STRATEGY

In order to process (obtain averages) the whole ecodesign team results, the Coordinator has to move to the next State. This will terminate the 'criteria edition process'



The screenshot displays the 'sostenipra' web application interface. At the top, a green navigation bar contains the logo and a series of tabs: 'Home', 'Start Ecodesign', '1 - Definition', '2 - Assessment', '3 - Strategy', and '4 - Report'. The '3 - Strategy' tab is currently selected. Below the navigation bar, the main content area shows 'Current project: Knife' and 'State: 2 - Environmental assessment'. To the right of this, there is a 'Change state:' label followed by a dropdown menu. The dropdown menu is open, showing three options: '1- Initial definition', '2- Environmental assessment', and '3- Strategy selection'. The '3- Strategy selection' option is highlighted in blue. To the right of the dropdown menu is an orange 'Save' button. Below the 'Current project' and 'State' information, there is a button labeled 'Show members who have made assessments'.

4.STRATEGY

List of environmental improvement strategies

Materials	Reduce number of different types of material	<i>In general, a reduced number of different types of materials is desirable, since it simplifies all life cycle stages (e.g. procurement of materials, production processes, management of wastes, etc.). However, this strategy may be difficult to achieve for reasons of function, strength, etc.</i>
	Reduce material input by design aiming at durability	<i>This strategy aims to reduce the use of materials to the minimum, always considering the requirements of the product (strength, durability, service life, etc.).</i>
	Reduce material input by means of dematerialization	<i>Dematerialization is the replacement of a physical product with a non-physical product or service, thereby reducing the production, demand and use of physical products; and reducing the end-user's dependence on physical products. In implementing this strategy, several benefits may be achieved: cost-savings in materials, energy, transportation, consumables and the need to manage the eventual disposal and/or recycling of a physical product.</i>
	Reduce material input by means of a simple principle of functioning	<i>The reduction of non structural parts and of connecting parts allows to reduce the consumption of resources, as well as to a reduction of assembly and disassembly times.</i>
	Reduce material input by means of multifunctionality	<i>The combination of functions into one product reduces the consumption of material per function. Therefore, the consumed resources are used to provide several functions, for which reason the generated impacts could be partially allocated to each of the functions).</i>
	Use materials and components with lower ecological rucksack	<i>The consumption of resources for the supply of raw materials and the manufacture of external parts and components has an ecological rucksack, that is aggregated into the product's rucksack. Consequently, efforts should concentrate on minimizing the ecological rucksacks accompanying materials and other external parts and components. This may be realized by clearly defined requirements for the selection of suppliers, for which different assessment methods exist. In most cases indicators will be calculated from life cycle analysis data (LCA), which can be used as a basis for the assessment of the environmental impact of materials. Of course, each of the methods used yields results only within its own bounds. Therefore, knowing these limits and the potential environmental impact not detected by a given method is essential for application in practice.</i>
	Select suppliers and products under ecolabelling systems or providing environmental information	<i>Certified and ecolabelled materials are preferable</i>
	Select materials of low energy intensity	<i>Materials with low energy intensity or low embodied energy are preferable, since they reduce the cumulative energy demand of the offered product/service.</i>
	Prioritize renewable raw materials	<i>Renewable raw materials are not of fossil origin but are made, in most cases, from plants. Their use presents benefits, since other limited resources are not used and, in addition, it provides for adequate disposal.</i>
	Prioritize materials that are abundant in the environment and avoid scarce materials	<i>The use of materials that are abundant provides for greater opportunities to obtain them and avoids the depletion of other resources that are scarcer.</i>

edTOOL includes a database of generic environmental improvement strategies that could be applied to ecodesign products and services, which are grouped according to what life cycle stage they correspond to (See User Guide)

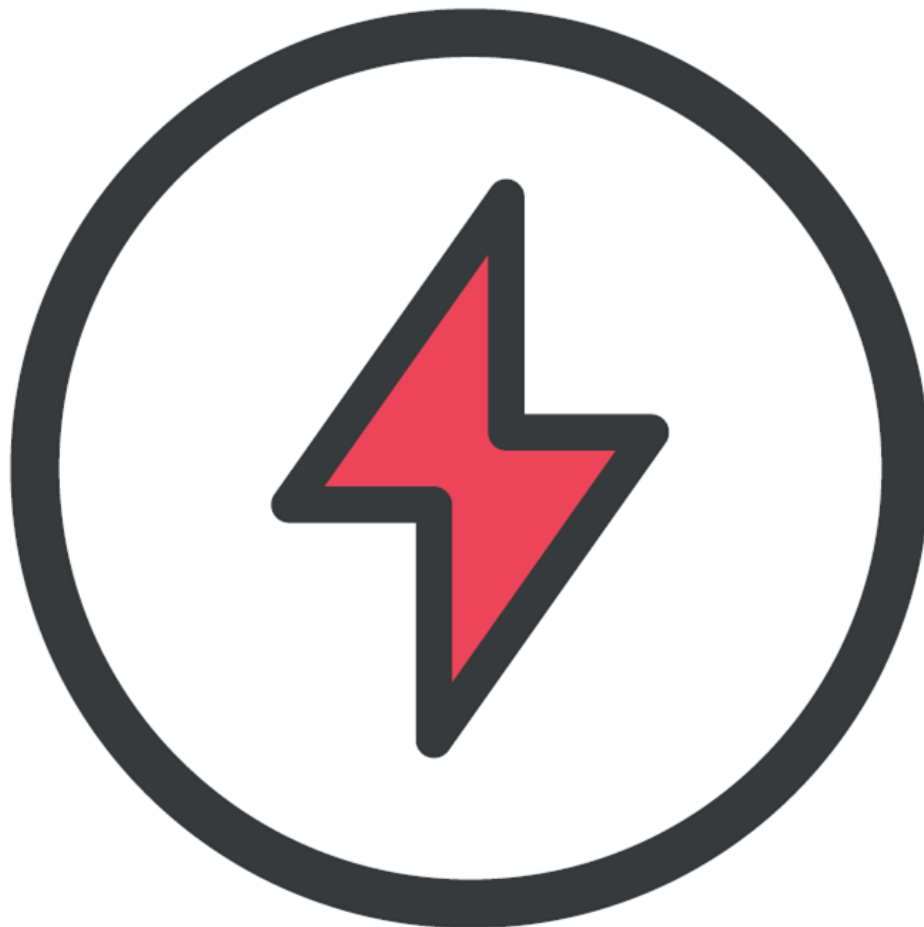
4.STRATEGY

SELECT ECODESIGN STRATEGIES

the Coordinator will need to navigate through the set of suggested strategies and check if the strategies:

- are **appropriate** for the assessed product/service, meaning that it does make sense to implement such strategy in the product/service under study.
- have already been **completed** for the product/service under study, meaning that such strategies have already been applied.

4.STRATEGY



4.STRATEGY

Main Menu

3. Strategy > 3.1 Select ecodesign strategies >

State menu

Current project > State 1.initial definition > **Change State: 3-Strategy selection > save**

sostenipra Home: Start Ecodesign 1 - Definition 2 - Assessment 3 - Strategy 4 - Report Welcome: Andrieu

Current project: **Training** State: **3 - Strategy selection** Change state: **3 - Strategy selection** Save

1- Initial definition
2- Environmental assessment
3- Strategy selection
4- Summary report

3.1. Selection of ecodesign strategies

Based on the previous environmental assessment, edTOOL suggests a series of ecodesign strategies that could be applied to your product/service. These strategies correspond to those 2 life cycle stages with worse environmental performance. Please, feel free to add other predefined strategies from the list under the **Add Strategy** label, or define new strategies under the **New Custom strategy** label. For your guidance, please, note that the User Guide includes a list of potential ecodesign strategies and a brief description of each of them.

Once the list is ready, please check if the strategies are appropriate for your product/service and if they have already been completed/applied. Only those strategies that are marked as **Appropriate** and that are not marked as **Completed** will be considered for further evaluation.

Add strategy **New custom strategy**

Lifecycle stage: Raw Materials Strategy: Reduce number of different ty

In general, a reduced number of different types of materials is desirable, since it simplifies all life cycle stages (e.g. procurement of materials, production processes, management of wastes, etc.). However, this strategy may be difficult to achieve for reasons of function, strength, etc.

Add

Strategy	Appropriate	Completed	Delete
Lifecycle stage: Distribution			
Implement a logistics broker system at the industrial park level	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Optimize the load transported in the vehicle	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Optimize the volume occupied in the vehicle	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Use stackable product packaging	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Reduce distribution distances	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Optimize transportation routes and minimize hauling operations	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.STRATEGY

sostenipra

HomeStart Ecodesign1 - Definition2 - Assessment3 - Strategy4 - Report

Welcome Andrés

Add strategyNew custom strategy

Lifecycle stage:

Raw MaterialsRaw MaterialsProduction/packagingDistributionUse & MaintenanceEnd of life

Strategy:

Reduce number of different ty

different types of materials is desirable, since it simplifies all life cycle stages (e.g. procurement of materials, production processes, management of
gy may be difficult to achieve for reasons of function, strength, etc.

Add

Strategy	Appropriate	Completed	Delete
Lifecycle stage: Distribution			
Implement a logistics broker system at the industrial park level 1	<input type="checkbox"/>	<input type="checkbox"/>	x
Optimize the load transported in the vehicle 1	<input type="checkbox"/>	<input type="checkbox"/>	x
Optimize the volume occupied in the vehicle 1	<input type="checkbox"/>	<input type="checkbox"/>	x
Use stackable product packaging 1	<input type="checkbox"/>	<input type="checkbox"/>	x
Reduce distribution distances 1	<input type="checkbox"/>	<input type="checkbox"/>	x
Optimize transportation routes and minimize hauling operations 1	<input type="checkbox"/>	<input type="checkbox"/>	x
Foster ecofriendly driving patterns 1	<input type="checkbox"/>	<input type="checkbox"/>	x
Choose environmentally acceptable means of transportation for distribution of product 1	<input type="checkbox"/>	<input type="checkbox"/>	x
Use vehicles with the most efficient technology available (less energy consumption) 1	<input type="checkbox"/>	<input type="checkbox"/>	x
Use vehicles with less emissions 1	<input type="checkbox"/>	<input type="checkbox"/>	x
Use fuels from renewable origin 1	<input type="checkbox"/>	<input type="checkbox"/>	x

You can download Edtool's User Guide here: [English](#) [French](#)

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4.STRATEGY

Strategy	Appropriate	Completed	Delete
Lifecycle stage: Production			
Minimize and simplify the production processes ⓘ	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Use low material input, low emission production technologies ⓘ	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Use efficient energy technologies in the production process ⓘ	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Use techniques that optimize energy use ⓘ	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Use water efficient technologies in the production process ⓘ	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Use technologies that optimize raw materials use in the production process ⓘ	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Preferably use renewable energy resources along the production process ⓘ	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Preferably use regionally available energy resources ⓘ	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Use techniques that reduce the generation of waste and emissions ⓘ	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Reduce fraction of rejects in production process ⓘ	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Recycle process materials whenever possible ⓘ	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Search for synergies and symbioses with neighbouring companies and organizations ⓘ	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Close material cycles in the production process ⓘ	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Recycle and reuse waste for new products/materials ⓘ	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Use parts of identical design for different products ⓘ	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Locate the production plant as close as possible to the market ⓘ	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SELECT ECODESIGN STRATEGIES

the Coordinator will need to navigate through the set of suggested strategies and check if the strategies:

4.STRATEGY

PRIORITIZE ECODESIGN STRATEGIES

The previous filter reduces the list of environmental improvement strategies to a more manageable set, which is assessed in marketing, economic and technical terms.

5	Excellent viability
4	Good viability
3	Average viability
2	Fair viability
1	Poor viability
0	No data available / not applicable

4.STRATEGY

PRIORITIZE ECODESIGN STRATEGIES

The previous filter reduces the list of environmental improvement strategies to a more manageable set, which is assessed in marketing, economic& technical terms.

Once assessed, the Coordinator is able to prioritize which strategies will be included in the Action Plan

sostenpra

HomeStart Ecodesign1 - Definition2 - Assessment3 - Strategy4 - ReportWelcome Ramon

3.2. Prioritization of ecodesign strategies

Please, assess the viability each ecodesign strategy (from 1 to 5) using the given (scale▼)

Check the strategies you want to include in the action plan. We suggest that you select **at least**, the strategies with a viability equal or higher than 4.0.

Once you have completed the assessment and selected the strategies to be included in the Action Plan, please click on **Save**.

Description	Social	Economic	Technical	Avg.	Action plan
Lifecycle stage: Raw Materials					
Reduce material input by means of dematerialization ⓘ	4	4	4	4.00	<input checked="" type="checkbox"/>
Prioritize recyclable materials ⓘ	3	2	3	2.67	<input type="checkbox"/>
Prioritize materials with a high recycled content ⓘ	4	4	4	4.00	<input checked="" type="checkbox"/>
Lifecycle stage: Production					
Minimize and simplify the production processes ⓘ	4	5	3	4.00	<input checked="" type="checkbox"/>
Use water efficient technologies in the production process ⓘ	4	2	3	3.00	<input type="checkbox"/>
Use technologies that optimize raw materials use in the production process ⓘ	4	4	3	3.67	<input type="checkbox"/>
Use techniques that reduce the generation of waste and emissions ⓘ	4	5	3	4.00	<input checked="" type="checkbox"/>
Recycle process materials whenever possible ⓘ	3	2	1	2.00	<input type="checkbox"/>
Lifecycle stage: Use & Maintenance					
Introduce environmental communication in order to foster a responsible use of the product/service ⓘ	5	5	4	4.67	<input checked="" type="checkbox"/>
Promote an efficient use of materials during use ⓘ	5	5	3	4.33	<input checked="" type="checkbox"/>
Promote an efficient use of energy during use ⓘ	3	3	2	2.67	<input type="checkbox"/>
Ensure high appreciation of the product ⓘ	4	3	2	3.00	<input type="checkbox"/>

Save

4.STRATEGY

Main Menu

3. Strategy > 3.2 Prioritize ecodesign strategies >

State menu

Current project > State 1.initial definition > **Change State: 3-Strategy selection > save**

sostenipra

HomeStart Ecodesign1 - Definition2 - Assessment3 - Strategy4 - ReportWelcome Ramon

3.2. Prioritization of ecodesign strategies

Please, assess the viability each ecodesign strategy (from 1 to 5) using the given (scale▼)

Check the strategies you want to include in the action plan. We suggest that you select **at least**, the strategies with a viability equal or higher than 4.0.

Once you have completed the assessment and selected the strategies to be included in the Action Plan, please click on **Save**.


Description	Social	Economic	Technical	Avg.	Action plan
Lifecycle stage: Raw Materials					
Reduce material input by means of dematerialization ⓘ	4	4	4	4.00	<input checked="" type="checkbox"/>
Prioritize recyclable materials ⓘ	3	2	3	2.67	<input type="checkbox"/>
Prioritize materials with a high recycled content ⓘ	4	4	4	4.00	<input checked="" type="checkbox"/>
Lifecycle stage: Production					
Minimize and simplify the production processes ⓘ	4	5	3	4.00	<input checked="" type="checkbox"/>
Use water efficient technologies in the production process ⓘ	4	2	3	3.00	<input type="checkbox"/>
Use technologies that optimize raw materials use in the production process ⓘ	4	4	3	3.67	<input type="checkbox"/>
Use techniques that reduce the generation of waste and emissions ⓘ	4	5	3	4.00	<input checked="" type="checkbox"/>
Recycle process materials whenever possible ⓘ	3	2	1	2.00	<input type="checkbox"/>
Lifecycle stage: Use & Maintenance					
Introduce environmental communication in order to foster a responsible use of the product/service ⓘ	5	5	4	4.67	<input checked="" type="checkbox"/>
Promote an efficient use of materials during use ⓘ	5	5	3	4.33	<input checked="" type="checkbox"/>
Promote an efficient use of energy during use ⓘ	3	3	2	2.67	<input type="checkbox"/>
Ensure high appreciation of the product ⓘ	4	3	2	3.00	<input type="checkbox"/>

Save

4.STRATEGY

ECODESIGN ACTION PLAN (Plus Step)

The team will define concrete actions to be carried out in order to implement the selected ecodesign strategies, establish responsibilities and deadlines. Therefore, for each strategy, the Coordinator will be able to introduce one or more actions



[Home](#) [Start Ecodesign](#) [1 - Definition](#) [2 - Assessment](#) [3 - Strategy](#) [4 - Report](#)

Welcome Ramon

3.3. Ecodesign Action Plan

Please, define concrete actions to be carried out in order to materialize the selected ecodesign strategies, and establish responsibilities and deadlines.

When the Action Plan is ready, the coordinator will be able to move forward to the **4-Summary Report** state.

Strategies	Actions						
Lifecycle stage: Raw Materials							
Reduce material input by means of dematerialization ①	<div>Add action</div> <table><thead><tr><th>Action</th><th>Deadline</th><th>Responsible</th></tr></thead><tbody><tr><td>✂ ✕ Reduce the thickness of the blade (from 3 to 2.5 mm)</td><td>2015-01-01</td><td>Head of Technical Department</td></tr></tbody></table>	Action	Deadline	Responsible	✂ ✕ Reduce the thickness of the blade (from 3 to 2.5 mm)	2015-01-01	Head of Technical Department
Action	Deadline	Responsible					
✂ ✕ Reduce the thickness of the blade (from 3 to 2.5 mm)	2015-01-01	Head of Technical Department					
Prioritize materials with a high recycled content ①	<div>Add action</div> <table><thead><tr><th>Action</th><th>Deadline</th><th>Responsible</th></tr></thead><tbody><tr><td>✂ ✕ Handle with recycled PP content inside and virgin PP outside (by means of co-injection)</td><td>2014-06-01</td><td>Head of Technical Department</td></tr></tbody></table>	Action	Deadline	Responsible	✂ ✕ Handle with recycled PP content inside and virgin PP outside (by means of co-injection)	2014-06-01	Head of Technical Department
Action	Deadline	Responsible					
✂ ✕ Handle with recycled PP content inside and virgin PP outside (by means of co-injection)	2014-06-01	Head of Technical Department					
Lifecycle stage: Production							
Minimize and simplify the production processes ①	<div>Add action</div> <table><thead><tr><th>Action</th><th>Deadline</th><th>Responsible</th></tr></thead><tbody><tr><td>✂ ✕ Automatization of metal die-cast process to reduce process waste</td><td>2016-01-01</td><td>Head of Technical Department</td></tr></tbody></table>	Action	Deadline	Responsible	✂ ✕ Automatization of metal die-cast process to reduce process waste	2016-01-01	Head of Technical Department
Action	Deadline	Responsible					
✂ ✕ Automatization of metal die-cast process to reduce process waste	2016-01-01	Head of Technical Department					

4.STRATEGY

Main Menu

3. Strategy > 3.3 Ecodesign plan >

State menu

Current project > State 3-Strategy > **Change State: 4-Summary report > save > Observse the summary**

Main Menu

3. Report > 4.12Summary report >

State menu

Current project > State 3-Report > **Change State: 4-Summary report > save > Observse the summary**

4.STRATEGY

 Home Start Ecodesign 1 - Definition 2 - Assessment 3 - Strategy 4 - Report

Current project: **Knife** State: **4 - Summary report** ⓘ Change state:

- 1- Initial definition
- 2- Environmental assessment
- 3- Strategy selection
- 4- Summary report**

6.STRATEGY



Step 4. Report

Throughout this step a report is obtained, which summarizes the main results of the ecodesign project.



Generates the report.

6.STRATEGY

SUMMARY REPORT

The contents of the Summary report are pre-established in order to provide a common means of reporting the results of the implementation of **edTOOL**:

- Ecodesign Team
- Description & Objectives
- Life Cycle Assessment
- Spider diagram
- Action Plan

6.STRATEGY

sostenipra Home Start Ecodesign 1 - Vision 2 - Assessment 3 - Strategy 4 - Report Welcome Hamon

Current project: Knife State: 4 - Summary report Change state: 4 - Summary report Save

4.1. Summary report

Knife

Ecodesign Team

Name	Email	Background	Responsibilities
Ramon Farreny	indep@hotmail.com	CEO	Coordinator
Raul Garcia	raul@medinnova.com	Industrial Designer	Conceptual design
Esther Sanze	esther.sanze@uab.cat	Environmental Sciences	Environmental Assessment

Description & Objectives

Description: The reference Knife presents high durability and ergonomics, and is resistant to high temperatures. It is conceived for professional use.

Objectives: This ecodesign project aims to: - assess the environmental impact of the reference Knife - identify environmental improvement strategies - ecodesign a new Knife

Lifecycle Assessment

Stage 1 Raw Materials	Stage 2 Production	Stage 3 Packaging	Stage 4 Distribution	Stage 5 Use & Maintenance	Stage 6 End of life
Diversity of materials 4.5	Water efficiency 3.0	Amount of packaging materials 3.5	Optimization of distribution 4.0	Environmental communication for the use 2.5	Separability of components 2.0
Amount of materials 2.0	Treatment of generated waste 3.5	Diversity of materials 3.5	Optimization of internal transports 3.5	Maintenance needs 2.0	Identifiability of materials 5.0
Origin of materials 3.5	Renewability of energy 3.5	Recyclability 4.0	Environmental impact of transportation system 2.5	Environmental Communication for the Maintenance 2.5	Recyclability potential 4.0
Recyclability 3.5	Wastewater management 3.5	Recycled content 2.5	Average: 3.33 Std. relative dev.: 0.23	Materials' use efficiency 2.5	Average: 3.67 Std. relative dev.: 0.42
Recycled content 1.5	Metal waste generation 2.0	Packaging Reuse/ Recovery Rate 3.5		Low-maintenance materials 4.5	
Average: 3.0 Std. relative dev.: 0.41	Non-metal waste production 3.0	Average: 3.4 Std. relative dev.: 0.16		Average: 2.9 Std. relative dev.: 0.35	
	Energy efficiency 1.5				
	Average: 2.86 Std. relative dev.: 0.26				

Spider diagram

Action plan

Strategies	Actions		
Lifecycle stage: Raw Materials			
Reduce material input by means of dematerialization	Action Reduce the thickness of the blade (from 3 to 2.5 mm)	Deadline 2015-01-01	Responsible Head of Technical Department
Prioritize materials with a high recycled content	Action Handle with recycled PP content inside and virgin PP outside (by means of co-injection)	Deadline 2014-06-01	Responsible Head of Technical Department
Lifecycle stage: Production			
Minimize and simplify the production processes	Action Automatization of metal die-cast process to reduce process waste	Deadline 2016-01-01	Responsible Head of Technical Department
Use techniques that reduce the generation of waste and emissions	Action See previous action	Deadline None	Responsible
Reduce fraction of rejects in production process	Action See previous action	Deadline None	Responsible
Lifecycle stage: Use & Maintenance			
Introduce environmental communication in order to foster a responsible use of the product/service	Action Include information regarding an appropriate maintenance of the knife (e.g. how to use the cloth provided with the knife to clean it)	Deadline 2014-04-01	Responsible Head of Technical Department

6.STRATEGY

CUSTOMIZED REPORT

THIS allows the Coordinator to choose what information will be included in the Report:

sostenipra

Home Start Ecodesign 1 - Definition 2 - Assessment 3 - Strategy 4 - Report

Current project: Knife State: 4 - Summary report Change state: 4- Summary report Save

4.2. Summary report Annex

Choose the elements you want to include in the report:

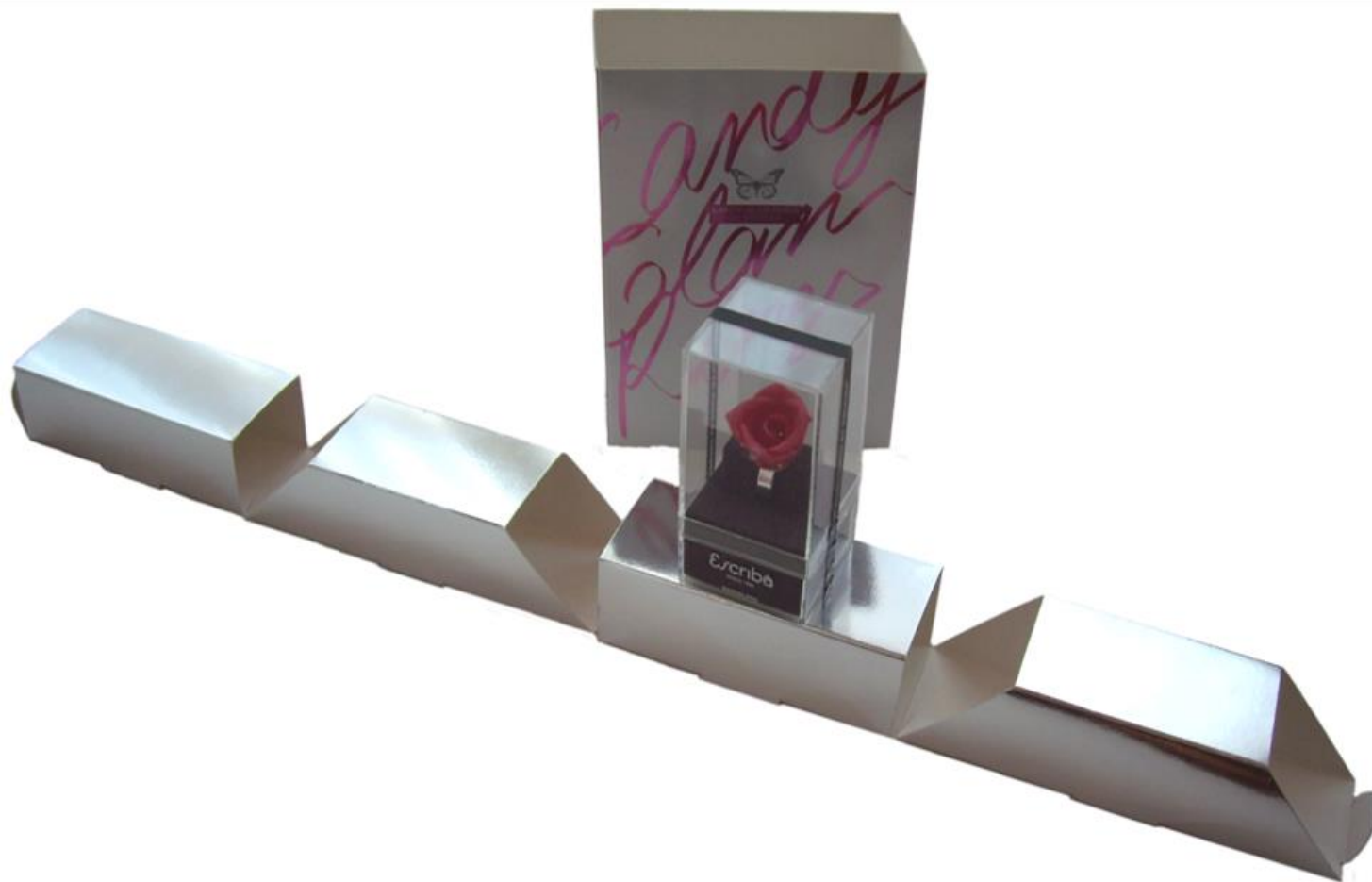
- Project name ☒
- 1.1. Ecodesign Team ☒
- 1.2. Description & Objectives ☒
- 1.3. Legal requisites ☒
- 1.4. Market study ☒
- 2.2. Lifecycle assessment ☒
- 2.2. Spider diagram ☒
- 2.2. Lifecycle assessment bar chart ☒
- 3.1. Ecodesign Strategies ☒
- 3.2. Ecodesign Strategy Prioritization ☒
- 3.2. Strategies assessment bar chart ☒
- 3.3. Action Plan ☒

Generate

Ecobriefing



Ecobriefing



Ecobriefing

Ecobriefing

The ecobriefing aims to identify the environmentally critical aspects and reduce their impact through ecodesign and lifecycle stages.

Concept

Elimination the unnecessary components

Simplify the spare componentes

Materials

Reduction of the amount of materials

Avoid materiales that comes from fossil deposits

Reduction of material diversity

Distribution

Optimization of transport volume

Ecobriefing

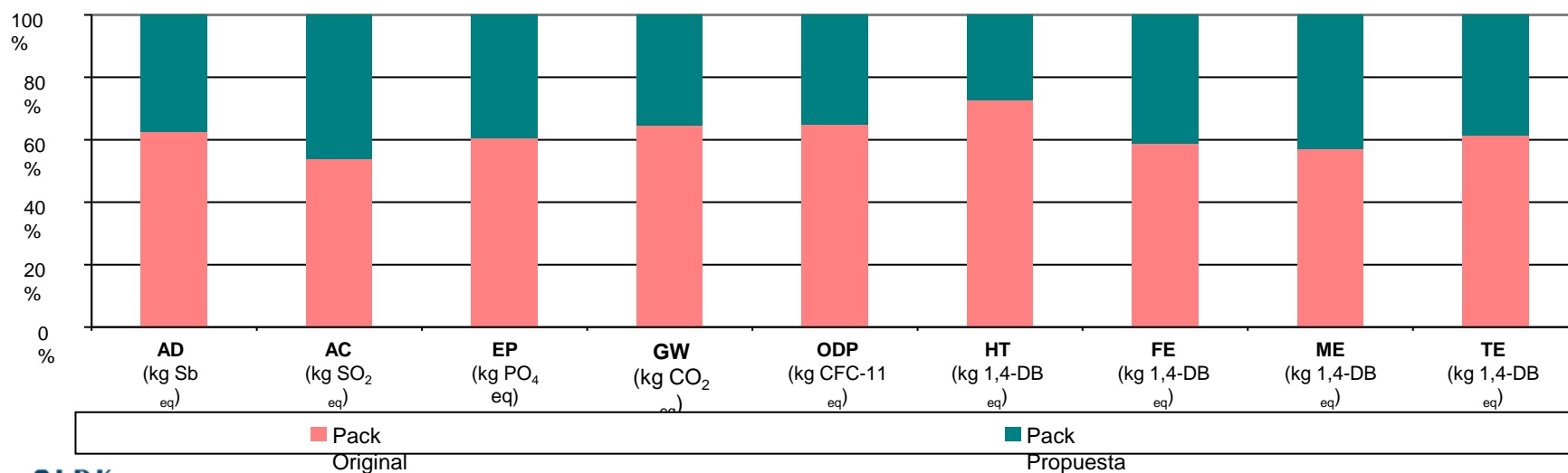
- Re design the case and their internal “locks”.
- New packaging must be consistent with the product.
- Protect the product.
- Improve the product visibility.
- Simplify the packaging assembly and disassembly.
- Avoid drastic changes during the manufacturing.
- Reduce the environmental impact.

Ecobriefing

Aspectos cuantificables	Pack original	Pack propuesta	Porcentaje de mejora
Peso	118,7g	81,77g	↓31%
Volumen	1272cm ³	906cm ³	↓29%
Envase por unidad de transporte	20u.	28u.	↑29%
Tiempo de montaje	31s.	19s.	↓39%
Coste de los materiales	1,34 €	1,04 €	↓10%

Ecobriefing

Aspectos cuantificables	Pack original	Pack propuesta	Porcentaje de mejora
<i>Impacto ambiental</i>	-	-	↓23,5%
<i>Pisada de carbono (CO₂ eq)</i>	217g	121g	↓44%



SWIM-H2020 SM

For further information

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LinkedIn Page

[SWIM-H2020 SM LinkedIn](#)

Facebook Page

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SWIM and Horizon 2020 Support Mechanism

Working for a Sustainable Mediterranean, Caring for our Future

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SWIM and Horizon 2020 Support Mechanism

Working for a Sustainable Mediterranean, Caring for our Future

Eco design your own product or service

Presented by:

Hichem Salem and Anna Ibañez, PM on Green Entrepreneurship at SCP/RAC

SWIM and Horizon 2020 SM

12th December 2018, Barcelona, Spain

This Project is funded by the European Union



Design your own project - First meeting

1. Define your project

Project:

Description:

Aims

2. Team members

Roles

Persona

Position

edTOOL summary

Could you draw down the process of the edtool ?

edTOOL Elevator pitch

Currently we find us with _____
User's problem/challenge

That effecting to _____
Target / users

In this context, edTool _____
What is edtool?

Offering you _____
Solutions or benefits for the user

Because only edTool has _____
Support (equipment, technology, knowledge, etc.)

SWIM and Horizon 2020 Support Mechanism

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