PRESOURCE

4. PRODUCTS

INTRODUCTION

The following elements focus on assessing the potential for improving the environmental, economic and social value of a product, giving in the meantime inspirations to guide the company's effort in this direction.
Once the company has selected one of its products (or a line of products), these elements represent a wide set where to find the most suitable and important ones for the specific case, since the company has not to follow each and every one of them, because, for example, some of them can be not significant for the selected product and some can be in contrast with some others and an expert decision is needed.
Table 1.3 is designed to support this screening and prioritization activity, allowing to "switch off" some of the elements and focus only on the most important ones.
In addition, these indications have to be integrated and balanced with other design factors, such as, for instance, functionality, aesthetics, and cost.

One sub-section about ANALYSIS

Five sub-sections about ENVIRONMENTALLY SUSTAINABLE DESIGN

One sub-section about SOCIALLY SUSTAINABLE DESIGN

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4. PRODUCTS

ANALYSIS OF THE ENVIRONMENTAL IMPACTS OF THE PRODUCT LIFECYCLE

4.1 Evaluation of consumption of resources (materials, water and energy) related to the product life cycle

NA	Absence	Preparation	Integration	Proaction	WEIGHT
0	Nothing has been done yet	Data about the consumption of resources are available from different stakeholders and different product life cycle phases	A qualitative or quantitative analysis has been performed	We evaluate the consumption of resources related to each of our products and use that as an indicator when selecting among different design choices (e.g. water footprint)	A B C
	1	2	3	4	
$S_{our.}$	Int				
$R_{em.}$	For considerations about the packaging of the product, please refer to element 4.17				

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4. PRODUCTS

ENVIRONMENTALLY SUSTAINABLE DESIGN (ECO-DESIGN) FOR THE DISTRIBUTION PHASE

4.17 Design for the minimization of environmental impacts related to packaging (material consumption minimization, use of renewable materials, use of not hazardous materials, use of returnable/reusable packaging)

NA	Absence	Preparation	Integration	Proaction	WEIGHT
0	Nothing has been done yet	We are assessing different packaging options on the market in terms of their environmental profile	We design the packaging for our products in order to reduce its environmental impact	We design our products to reduce the need for packaging and, when needed, we design it to be reusable, as packaging or part of the product	A B C
	1	2	3	4	
Sour.	Int				
Rem.					

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4. PRODUCTS

SOCIALLY SUSTAINABLE DESIGN

4.31 Design products that enable or promote low-impact lifestyles (e.g. sustainable mobility, healthy recreational activities, reduction of wasteful consumption)

NA	Absence	Preparation	Integration	Proaction	WEIGHT
0	Nothing has been done yet	We are collecting information from the market about how our products integrate and influence the lifestyle of our customers	When designing our products we always take into consideration the impact they will have on the lifestyles of our customers	We collaborate with different stakeholders such as schools, the national health system, local authorities, waste management companies, to design our products in order to make them contribute to the local (and global) wellbeing.	A B C
	1	2	3	4	
$S_{our.}$	Int				
$R_{em.}$	For considerations about the packaging of the product, please refer to element 4.17				

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Suggested tool: Life Cycle Assessment

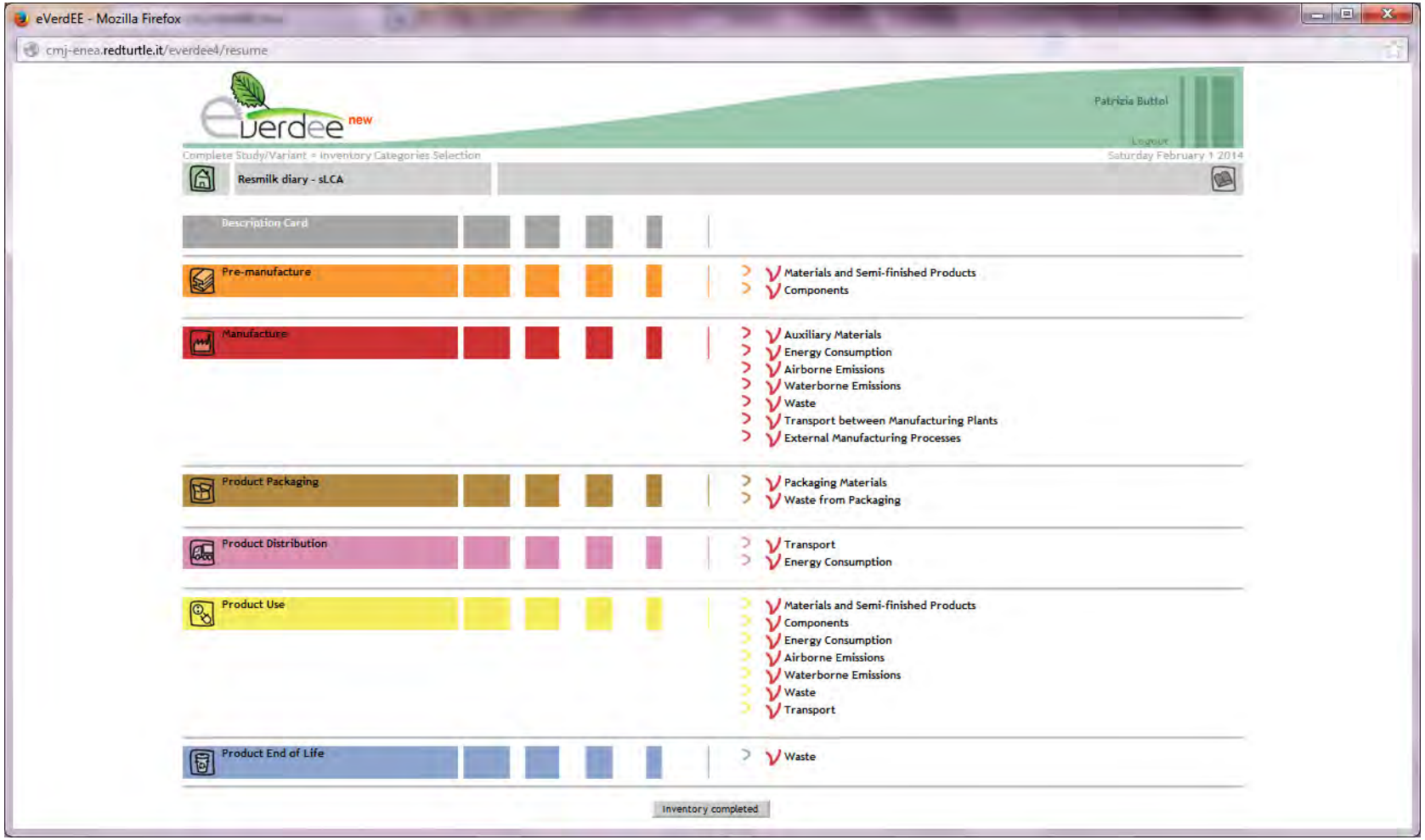
- Life Cycle Assessment (LCA) tools (e.g. Umberto, GaBi, SimaPro, OpenLCA)

- Simplified LCA tools (e.g. eVerdEE, ECO-it, GaBi lite, Sustainable minds)

Example of application

EverdEE: cmj-enea.redturtle.it/everdee4/login2

PRESOURCE Example of application



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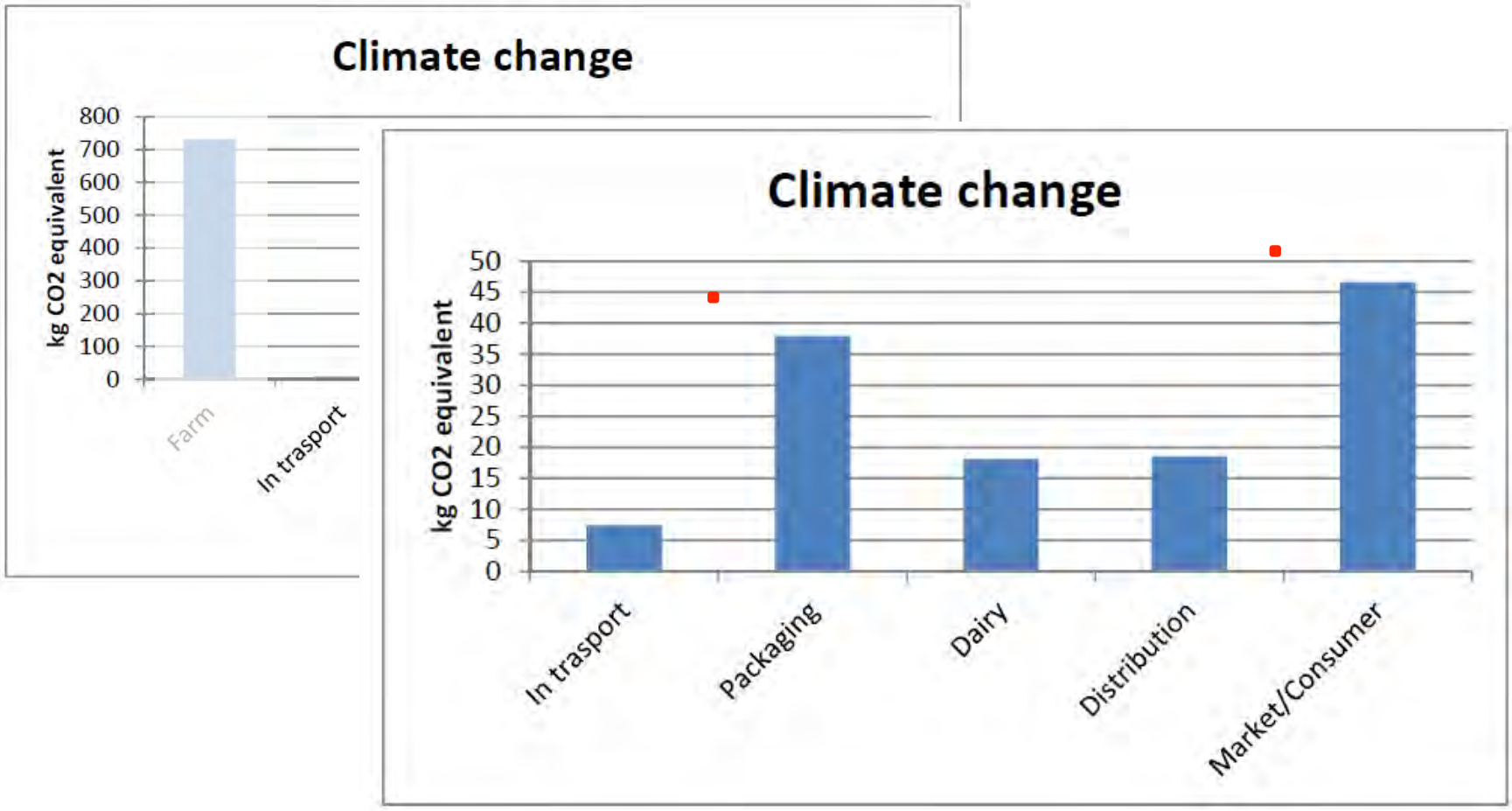
Example of application



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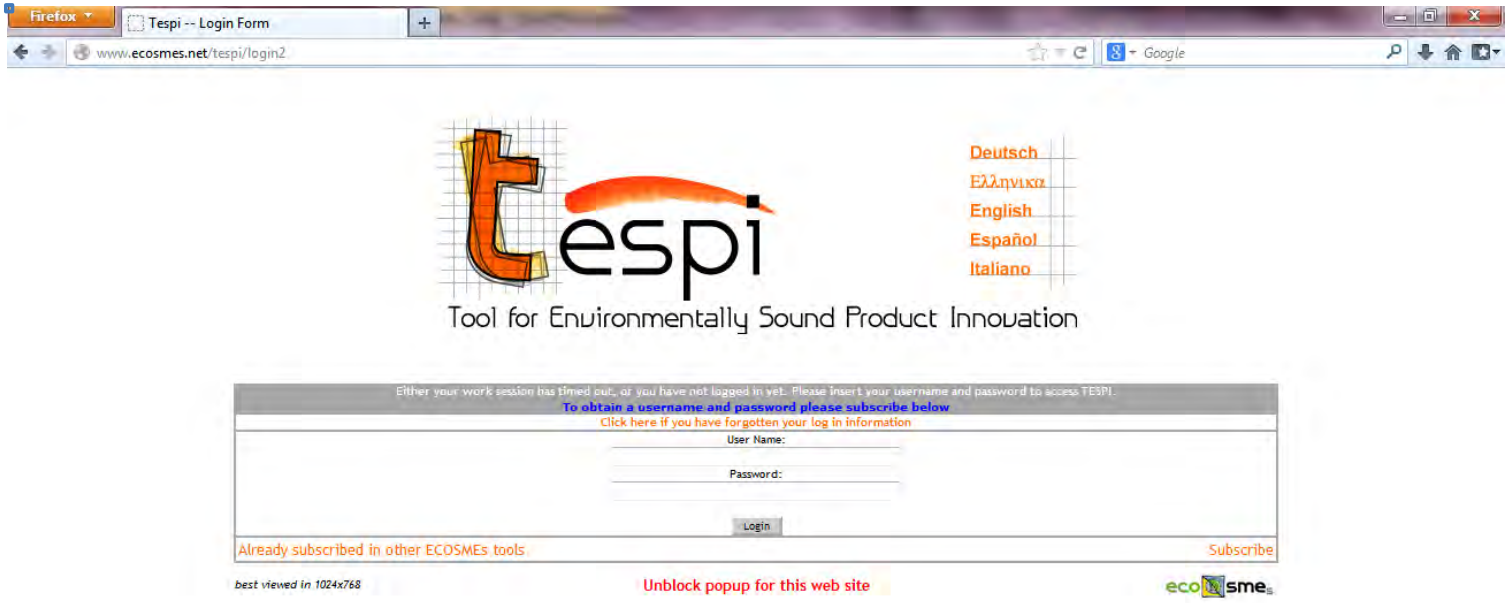
PRESOURCE Suggested tool: Eco-design

- Tespi
- SIS Toolkit
- Design for Sustainability (D4S)
- EcoDesign Pilot
- Cambridge Sustainable Design Toolkit
- …

Example of application

Tespi: www.ecosmes.net/tespi/login2



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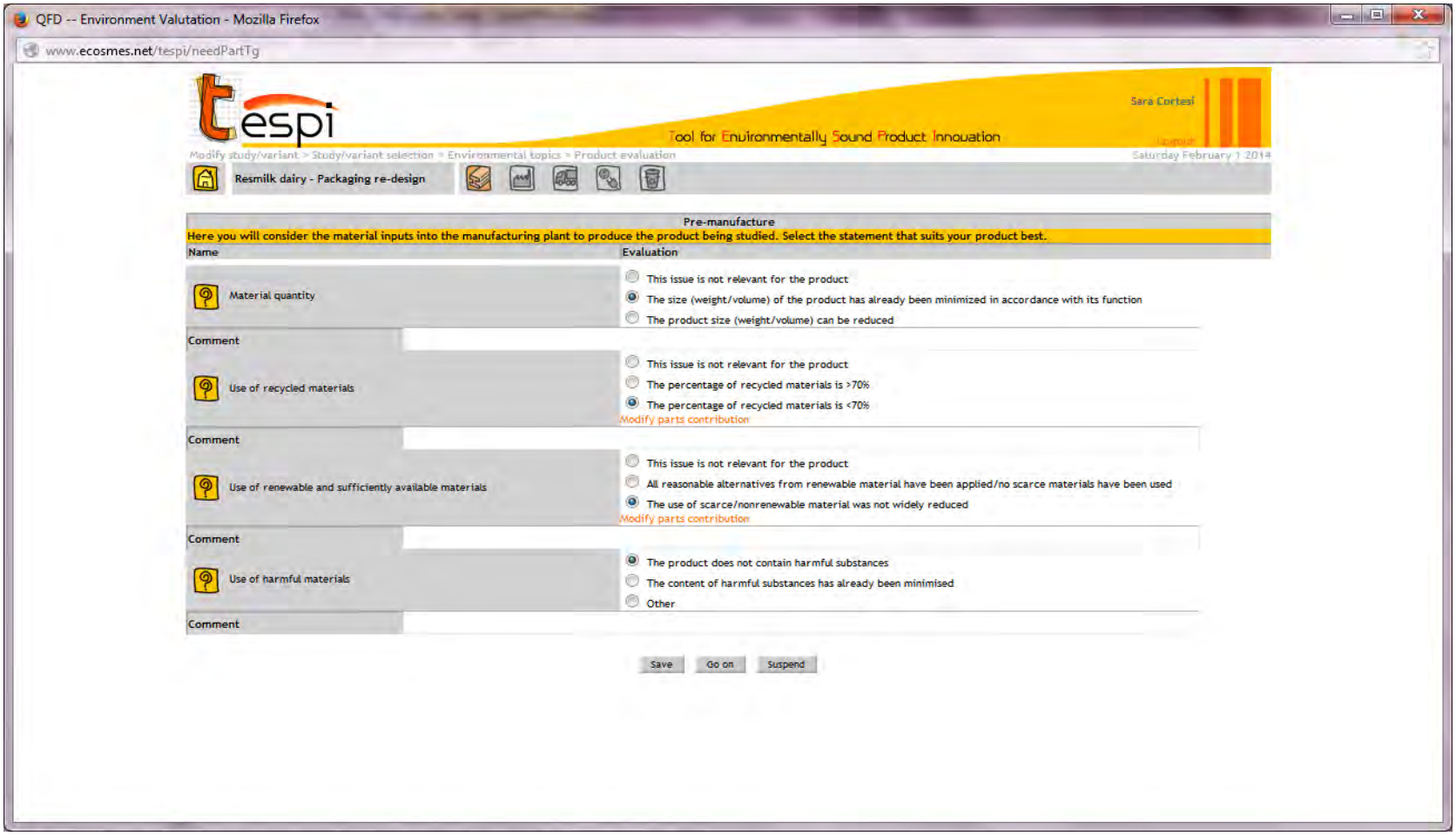
PRESOURCE Example of application



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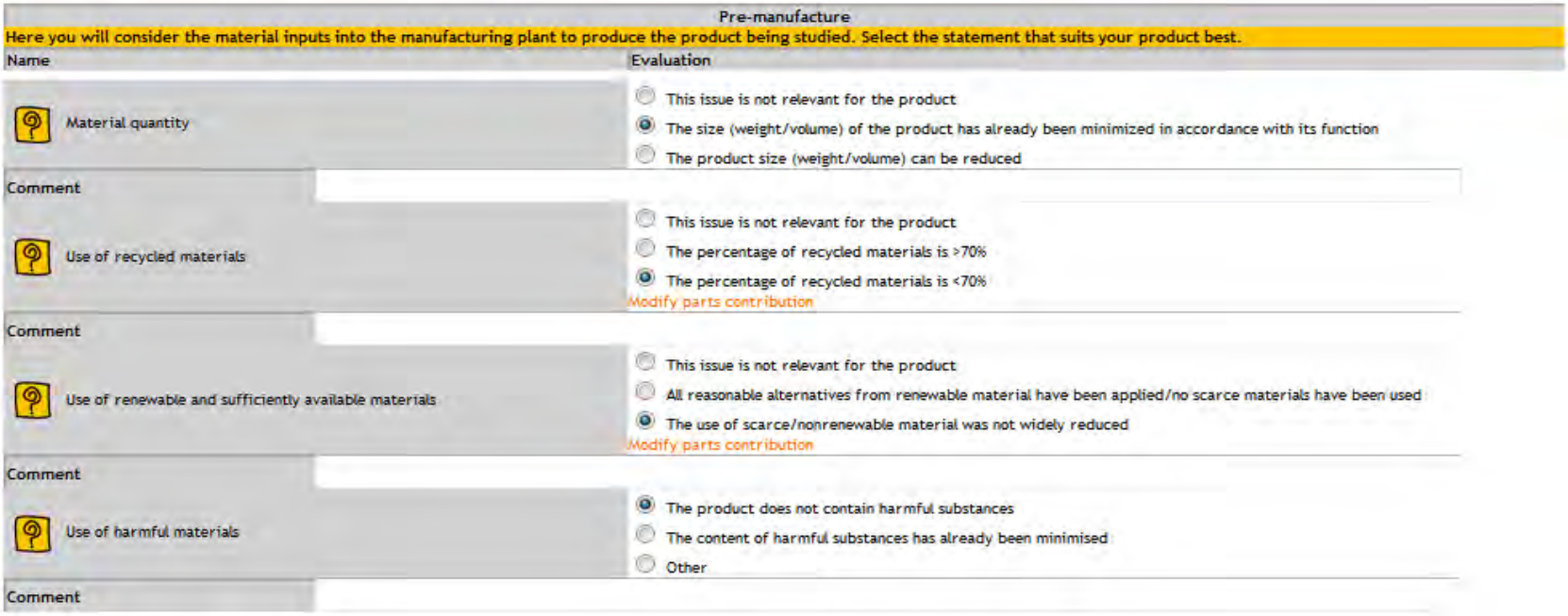
Example of application



Pre-manufacture

Here you will consider the material inputs into the manufacturing plant to produce the product being studied. Select the statement that suits your product best.

Name	Evaluation
Material quantity	○ This issue is not relevant for the product ◉ The size (weight/volume) of the product has already been minimized in accordance with its function ○ The product size (weight/volume) can be reduced
Comment	
Use of recycled materials	○ This issue is not relevant for the product ○ The percentage of recycled materials is >70% ◉ The percentage of recycled materials is <70% Modify parts contribution
Comment	
Use of renewable and sufficiently available materials	○ This issue is not relevant for the product ○ All reasonable alternatives from renewable material have been applied/no scarce materials have been used ◉ The use of scarce/nonrenewable material was not widely reduced Modify parts contribution
Comment	
Use of harmful materials	◉ The product does not contain harmful substances ○ The content of harmful substances has already been minimised ○ Other
Comment	

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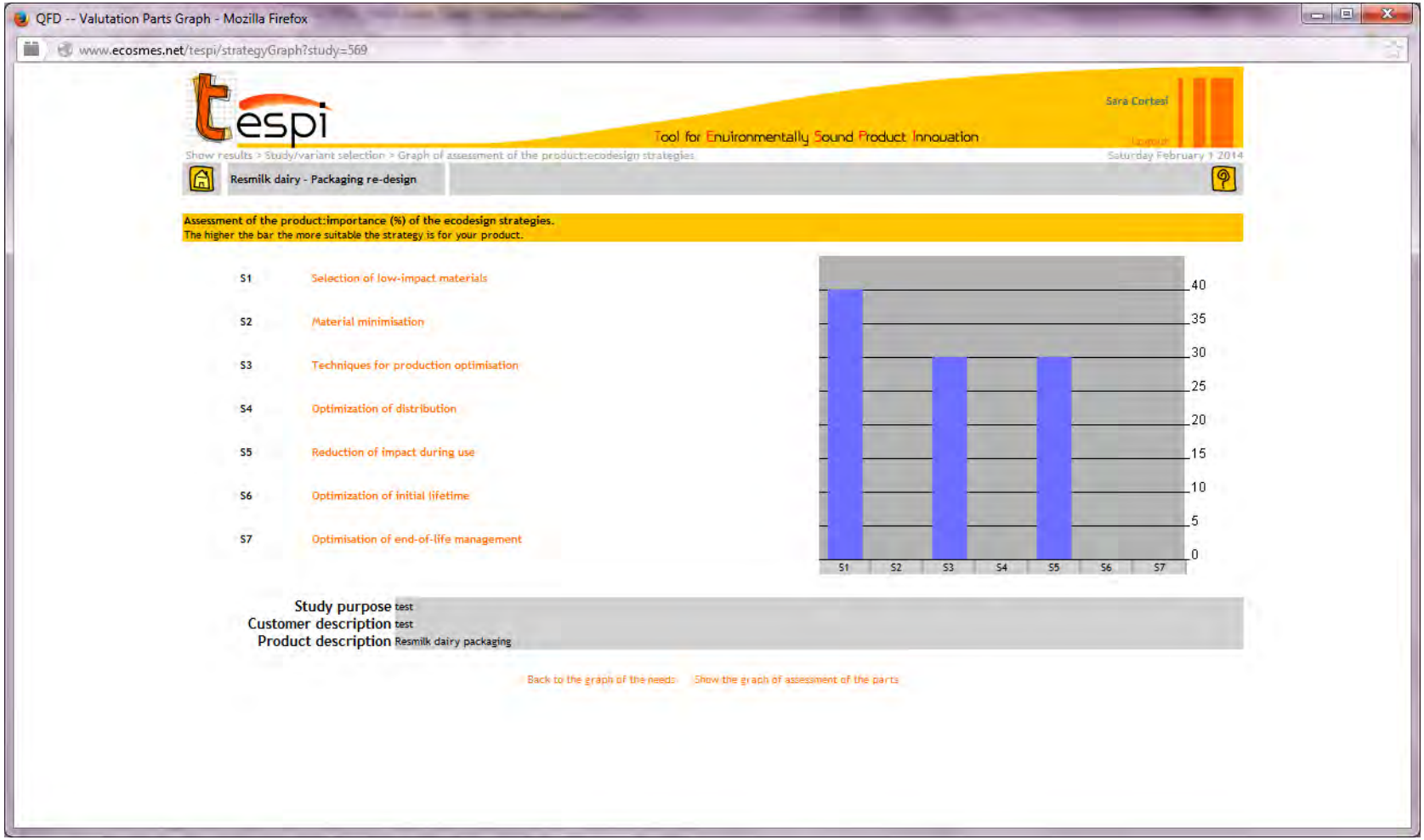
PRESOURCE Example of application



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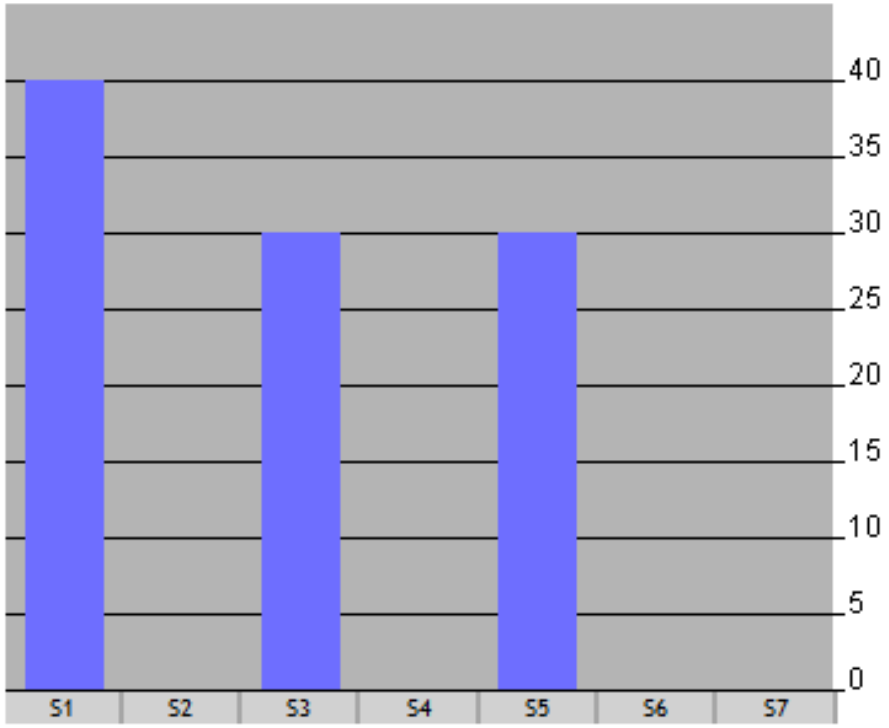
Example of application

- S1 Selection of low-impact materials
- S2 Material minimisation
- S3 Techniques for production optimisation
- S4 Optimization of distribution
- S5 Reduction of impact during use
- S6 Optimization of initial lifetime
- S7 Optimisation of end-of-life management



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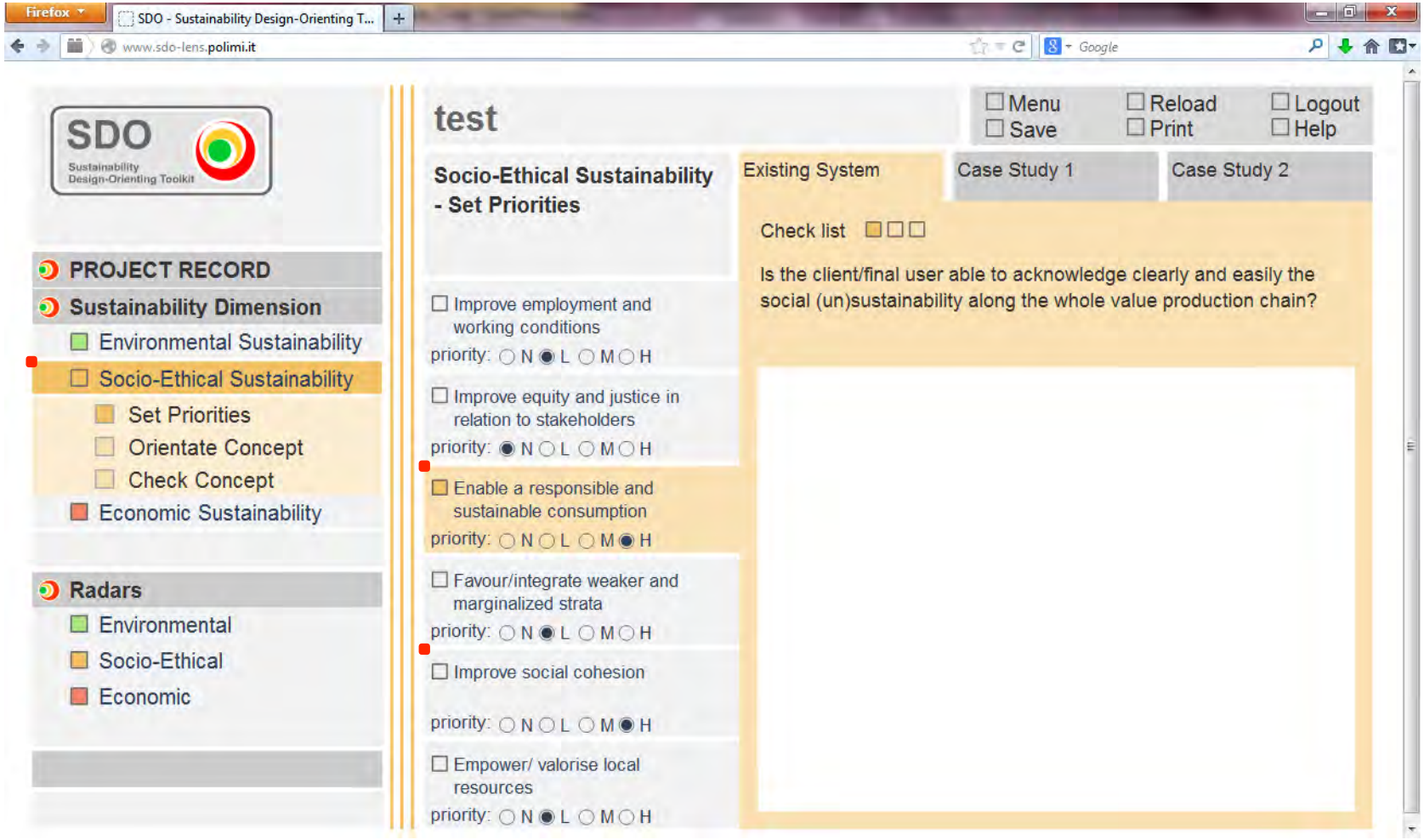
Suggested tool: Socially sustainable design

- Sustainability Design-Orienting (SDO) Toolkit

Example of application

SDO Toolkit: www.sdo-lens.polimi.it

PRESOURCE Example of application



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