

# SInnDesign Manual

Authors:

Cristina Rocha | David Camocho | Olatz Errazkin | Oihana Hernaez | Irina Celades | Teresa Ros | Dionísia Portela |  
Elsa Faria | Graça Bonifácio | Maria Kalleitner-Huber | Rainer Pamminger | Stig Hirsbak | Kirsten Schmidt |  
Anne Marie Mathiasen | Anna Gullmann

-- 2015 --





# Contents of the manual

- **Presentation of the Manual**

## **10 THEORETICAL MODULES**

- **Introduction**
- **Design for sustainability overview**
- **Innovation and design for sustainability**
- **Design for sustainability processes**
- **Stakeholders engagement**
- **Analysis of sustainability profile**
- **Design for sustainability principles**
- **Creativity techniques**
- **Sustainability communication**
- **Design and sustainability management**

## **07 PRACTICAL MODULES**

- **Motivating factors**
- **DfS brief**
- **Stakeholder analysis**
- **Ecodesign PILOT**
- **Design for sustainability checklists**
- **QFD: Quality Function Deployment**
- **Matrix for evaluation of DfS ideas**



## Presentation of the Manual

The SInnDesign Manual support building knowledge and competences on Design for Sustainability by taking the students through the relevant aspects. It is possible to focus on the modules one-by-one, or to include all of them in a holistic approach unveiling the complete DfS process.

The Manual is composed a series of Theoretical Modules and Practical Modules primarily target students for self-learning and teachers and trainers' lectures and can be used and adapted to fit different curricula.

The Theoretical Modules are complemented by more advanced knowledge, available in the SInnDesign Background Materials. To each Theoretical Module of the Manual corresponds a Module in the Background Materials. The Practical Modules of the Manual support the teaching and learning of the SInnDesign Tools.

English and the partners' languages: Portuguese, Spanish, German and Danish. It is available for download.

The SInnDesign modules have been tested in pilot training sessions in Portugal, Spain, Austria and Denmark to validate the methodology adopted and to evaluate the results of the project.



# SInnDesign Manual

10 Theoretical modules

07 Practical modules

Supported by



Complementary to





**Introduction** – Presents the SInnDesign project and its results

**Design for sustainability overview** – Describes the importance of the design for sustainability based on the relationship between social, economic and environmental impacts related to the production and consumption of products throughout their life cycle.

**Innovation and design for sustainability** – Discusses what product innovation is and how it relates to sustainability, presents different levels of innovation (from incremental to radical) and relates these with the SInnDesign modules and tools.

**Stakeholder engagement** – Explains the importance of stakeholder engagement in DfS and suggest how to plan for and implement this engagement.

**Design for sustainability processes** – Explains the processes of developing a DfS project for (i) product development and (ii) product-service development, and relates them with innovation levels.

**Analysis of sustainability profile** – Introduces the basic concepts, methods and tools for obtaining environmental, economic and social profiles of products, throughout their entire life cycles.

**Design for sustainability principles** – Presents eight principles that can be used to identify the most important environmental and social impacts in the life cycle of the product/service and to guide the design team in developing more sustainable solutions.

**Creativity techniques** – Describes the most common, tried and tested techniques for generating ideas, refining them and collectively agreeing on the most promising ideas, with tips and examples for direct application.

**Sustainability communication** – Explains what sustainability communication is and its importance in design for sustainability. It presents also the principles and guidelines to develop a sustainability communication plan

**Design and sustainability management** – Presents the integration of DfS with business procedures and management systems, including social responsibility practices, in order to promote a systematic adoption of DfS.

The **Design for Sustainability brief tool** helps design teams to develop a systematic overview of all the information needed for understanding and presenting the objectives of the design process.

**The Motivation Factors tool** supports the company in understanding how and why Design for Sustainability is important for the business and consequently, what should be the level of ambition and innovation of the Design for Sustainability project.

The **Design for Sustainability Checklists** constitutes a qualitative tool based on eight principles organized according to the life cycle stages of the product. These sustainability principles address essential, specific issues a designer needs to consider in the sustainable product and product-service development process.

In the **Quality Function Deployment tool**, stakeholder requirements from customer, employees, shareholders, etc. are translated into technical design parameters. This supports product designer to understand the stakeholder and integrate them directly into product and service development.

The **Matrix for evaluation of Design for Sustainability Ideas tool** supports the evaluation and prioritization of the identified potentials regarding their technical, economic, environmental, social and market feasibility. The application of this tool thus creates a basis for sound decision making.

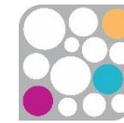
The **Stakeholder Analysis tool** supports the process of identifying relevant stakeholders and creating an overview of their interests in sustainability related aspects related to the products or services. Moreover, the tool supports prioritization of stakeholders to help locating the most important ones.

The **Ecodesign PILOT -“Product Investigation, Learning and Optimization Tool for sustainable development”** allows finding suitable tasks for the implementation of the strategies into the product improvement process. This tool was not developed within the SInnDesign; however, within this project, new specific data was added in relation to one of the SInnDesign target sectors: home textiles.



# The Manual is part of a set of SlnnDesign resources





Visit the SInnDesign website to learn more: [www.sinndesignproject.eu](http://www.sinndesignproject.eu)



## SUSTAINABLE INNOVATION THROUGH DESIGN

The aim of SInnDesign is to develop training materials and tools for design for sustainability (DfS) of furniture, textiles for the habitat and building materials, leading to innovative and competitive solutions.



SInnDesign  
**Building Materials**

In 2007, the distribution channels of



SInnDesign  
**Textiles**

In 2011, the European textile and



SInnDesign  
**Furniture**

The number of enterprises in the

This resource is part of the training materials developed in the SInnDesign project.

The material may be used in whole or in parts for any educational purpose, with acknowledgement of the source, without special permission from the authors. SInnDesign authors would appreciate receiving a copy of any publication, presentation or course program that uses this material as a source.

More information about the project and training materials available at:

[www.sinndesignproject.eu](http://www.sinndesignproject.eu)

