

# Basic Concepts on Ecodesign

## Unit 12 Ecodesign Practical Cases

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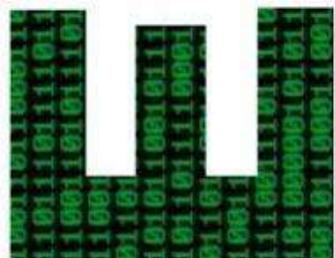


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On completion of this unit, a learner will:

- Know practical cases of Ecodesign application in companies from different sectors.



## 12.1 Introduction

Once the theoretical basic contents have been covered, it is time to show practical applications of Ecodesign.

Three practical cases of companies from different sectors are brought forward:

- Food
- Furniture and upholstery, textil and leather
- Electrical and electronic products

The main aim is to be aware of how, why and what for these companies introduce ecodesign requirements in the design and development of new products.

- Food sector
  - Company: HERO ESPAÑA.
  - Product: Packages and Packaging with less environmental impact.
- Furniture and upholstery sector (textil-leather)
  - Company: SANCAL DISEÑO.
  - Product: Rock table.
- Electrical and electronic products sector.
  - LIFEAK consultancy.
  - Product: Body dryer

## 12.2 Food Sector

### 12.2.1 Company Introduction: HERO ESPAÑA



Hero España is one of Spain's biggest companies in infant food and nutrition. It manufactures, stores and markets a wide range of food products made with the best raw materials and painstaking processes of production to offer consumers the highest quality, while making an active and positive contribution to sustainable development.

Most of Hero España's products occupy a clear leading position in their respective sectors, being highly respected in the market and stading out for their commitment to innovation, quality and food safety.



Hero España forms part of the Hero Group, a business model that has always been based on delighting consumers by preserving the goodness of nature with nutritional food of freshness and high quality, following original recipes and natural processes free from preservatives, additives and artificial colours.

This is a family-owned company which has grown to become a successful international Group. Nowadays, Hero's products are marketed in the five continents; its expansion continues under the leadership of the fourth generation of the Oetker family.

More than 94 years later, it can be said that Hero has moved on from being a traditional food company to become an advanced nutrition company, orientated towards innovation. The soundness of its record proves that it has been able to adapt to the changes and the needs of the market.

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**Product families of Hero España:**

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- |   |  |
|---|--|
| - Infant food                               | - Diet and/or special foods:                           |
| - Jams, marmalades, combinations and honey. | - Syrups, vegetables, juices and nectars.              |
| - Healthy snacks.                           | - Exclusive products for the hotel and catering trade. |
| - Precooked dishes and sauces.              |  |
- 

The Mission, vision and values of HERO ESPAÑA are:

**Mission**

To delight the consumers by preserving the goodness of nature with:

- Top quality products.
- A spirit of continuous innovation and development of new products and processes.
- Rigorous controls in each one of the manufacturing processes.
- Respect for biodiversity.
- Professional development inside the company.

**Values**

Values guide us and inspire our personality.



In Hero España, we have a corporate culture with enterprising values that guide us towards success: Strength, change, enterprising spirit, speed, family.

## Environment

Respect for the environment is paramount for Hero España. All of its activity takes into account the minimising its impact on the environment and applying the best practices of efficiency and optimisation in the consumption of resources and management of waste.

Hero España has an Environmental Policy and an Environmental Management System based on a dynamic process that follows the cycle of "planning, putting into practice, checking and reviewing". It is designed in accordance with the requirements of the international standard UNE-IN-ISO 14001 and entered in the EMAS Registry with No. ES-MU-000002.

The Environmental Management System is integrated with the Quality System and the Food Safety System.

*"The preservation of the environment and care for the people are written into the DNA of the company"*

### 12.2.2 Product: Packages and Packaging with less Environmental Impact.

On 2 June 2016 took place the VIII edition of the Sustainable Development Awards organised by the Agricultural, Water and Environmental Council of the Murcia Region.

Hero España was awarded for its reduction close to the 3,000 tonnes of packages and packaging (cardboard, glass, plastic and metal) and the use of 95% of the recycled cardboard, results of a projects led by the Innovation and Quality Department through the implementation of more than 200 measures, in which the following departments intervened: Purchase, Logistics, Maintenance, Quality, Environment, Production and Marketing.



## SUSTAINABLE DEVELOPMENT AWARD

*This prize rewards the work performed and our commitment to take care of and protect biodiversity.*



### Consumption of material resources

Minimising the environmental impact of packaging is essential in the food industry. Practically all the products are launched to the market in them and their consumption generates a series of environmental impacts, both in the process of manufacture and distribution and also in their final management once the food has been consumed.

These impacts derive from the consumption of raw materials, fuel and energy in processes and transport, water consumption, generation of waste, and atmospheric spills and emissions, among others.

In order to minimise these impacts Hero España has been working since 1995 on ecodesign measures focused on reducing the packaging of the products that it makes.

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#### *Impacts minimising of Hero España:*

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Encouraging policies to make them lighter by:

- redesigning packaging.
  - reducing gauges and thicknesses.
  - elimination of superfluous packaging.
  - looking for alternatives.
- 

In the Video 1 of this Unit 12 we interview Hero España. They explain to us the measures they have taken and the company department involved to achieve a reduction of 3,000 tonnes of packages and packaging, and the use of recycled cardboard.



## 12.3 Furniture and Upholstery Sector (Textil-Leather)

The data presented below related to the company SANCAL DISEÑO have been collated from the company's website and from interviews with staff:

- Source: <http://www.sancal.com>

### 12.3.1 Company Introduction: SANCAL DISEÑO



SANCAL DISEÑO is a reference company in the upholstered and auxiliary furniture sector due to its constant evolution towards the improvement of its processes and products with an innovative design and a strong commitment to quality and the environment.

*This company's trajectory is marked by the relentless search for new challenges to guarantee the continuity of the business with a clear policy:*

*"Design innovation", "Product Quality", "Quality Customer Service" and "Responsibility with the environment".*

The Sancal project is a continuous flow of ideas. That is why this is an unfinished project which maintains illusion and non-conformism since the first day and as a family project wishes to extend its identity in time.

#### **Quality**

In 1998 the company took the road of quality obtaining the product quality certificate "Quality symbol", a road they still drive today. They perform tests to materials and new prototypes to check the product's durability, strength, etc., to ensure its durability according to the intended use, and to comply with the applicable quality standard.

Later on, the company grew bigger in organisational maturity and they took a step forward implementing a Quality Management System according to the standard UNE-EN ISO 9001 in 2003. Since then they have been part of several projects with CETEM in the field of technological and processes innovation, which has led them to be positioned and recognised at an international level.



## Environment

SANCAL DISEÑO always thoughtful in its projects as a company, decided to embody its commitment to the environment and implement an environmental management system according to UNE-EN ISO 14001 obtaining in 2010 the certificate.

In the meantime, the Murcia Region granted them with the distinctive of Committed Company to Sustainable Development.



The Management of the company communicates the need to take measures to reduce resources, recycle and the rational use of energy for the improve commitment of the environment. Along the years, they have been part of several innovation and ecodesign projects conducted by CETEM.

### *DESIGNS TO USE AND USE*

*Sancal considers that it is important to control the ecologic consequences from the moment in which the product is conceived. To think about its use and durability. Good design and quality are characteristics that the furniture requires more today and which contribute to minimise its environmental impact. Bad quality and passing fads are the best enemies of sustainability.*

*In this way, the most important contribution of Sancal to the environment is the functionality and longevity of its products. Its desire is to offer useful and durable products that resist to the passing of time both for its quality and for its nice and timeless design. Their motto is the sustainable consumption that is why they create products to use and use.*



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### **Awards an international recognition to design**

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- **Designpreis** Design Award of the Federal Republic of Germany (Berlin)2009: nomination.
  - **Delta awards.** Awards organised by the ADI-FAD foundation (Barcelona, Spain). 1997: finalist; 2007: finalist.
  - Design contest organised by the technological centre CETEM (Murcia, Spain).  
1997: first and third prize  
1999: first prize  
2000: third prize  
2003: second prize  
2004: third prize  
2006: second prize  
2008: thir prize  
2009: second prize 2013: second prize  
2014: second prize 2016:  
third prize  
2017: first prize.
  - **Innovation Contest** organised by the Instituto de Fomento INFO (Murcia, Spain)  
2003: first prize.
  - **Regional Award** of Region of Mucia Design (Murcia, Spain)  
2003: second prize.
  - **Premios Prizes.** Prizes Awards of Architecture efímera (Valencia, Spain)  
2000: special metntion to best stand of FIM
  - **Discovering 15 years of Design.** Exhibition organised by the technological centre CETEM (Murcia, Spain)2009: Yecla
  - **300% Spanish Design.** International exhibition organised by the National Society for the Foreign Cultural Action SEACEX.  
2005: Tokio; 2006: Lisbon;  
2007: Shanghai
  - **Furnishing cession for sceneries.**  
2002: Todo sobre mi madre (Almodóvar)  
2009: Los abrazos rotos (Almodóvar)  
2009: El método Grönholm (Tamzin Townsend)  
2009: Acusados (Producciones Ida y Vuelta).
  - **Furnishing cession for museums.**  
2004: hall of the National Art Museum of Catalonia MNAC (Barcelona, Spain)  
2007: permanent exhibition of the Museum of Decorative Arts(Barcelona, Spain)
  - **Casa Barcelona** project for the Olympic Villa (Barcelona, Spain)  
1992: firm team
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### 12.3.2 Product: Rock table.

The company according to its quality and environmental policy, and being aware of the limited natural resources, undertakes research and development projects to continually improve its processes and designs with the aim of improving the environmental impact of its products and processes protecting the environment.



The Rock table is one of the products upon which the company decided to apply improvements on the associated environmental aspects and impacts.

Description of the product:

Rock is a small family of tables inspired by the abundance, exuberance and optimism of the 50s. Rock is available in 3 sizes. The larger the top, the lower is the table. Why such difference? To achieve an interaction between tables so that each design is a unique one. The largest top has a height of 31 cm, the medium one of 35 cm and the smallest one of 39 cm.



*Pictures of the product: Rock table*

The technical characteristics of the Rock table are:

- Lacquered top of lacquered MDF.
- Wooden top stained of meshed oak veneer with black edge (except for the white stain, where the edge and the underside are white).
- Mirror top of 4 mm grey mirror on MDF top with black edge.
- Glass top, 10 mm thick tempered glass smoked finish with central black serigraphy.
- Central foot and base: F1 steel coated and lacquer.



- Lifting table with two position pneumatic system.

### ECODESIGN APPLIED TO THE PRODUCT: ROCK TABLE

The company performed an Strategic Environmental Assessment, SEA, to obtain a first environmental diagnosis of the product on a qualitative level.

The interpretation of the results of this SEA detected the stages with a higher potential environmental impact and the strategies that conditioned them the most.

Environmental improvements were applied and the Life Cycle of the product was assessed a second time to obtain quantified data of the improvements.

A comparison between the SEA of the initial products and the SEA of the redesigned one is displayed on the right chart.

The actions taken were the following:

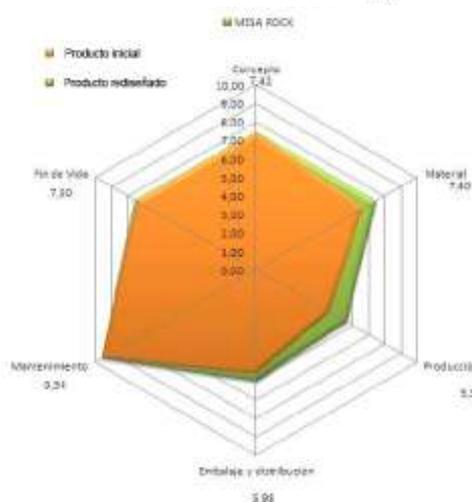
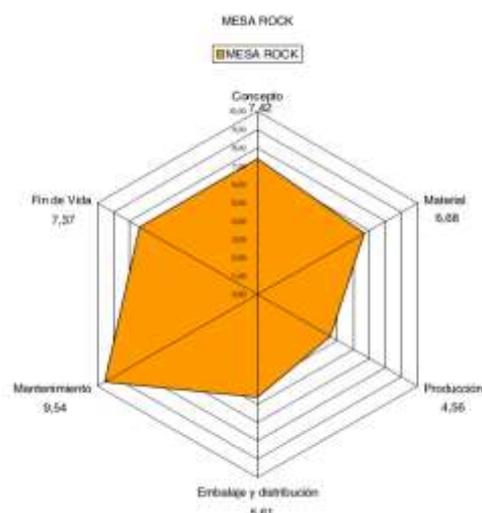
- A change in the materials used, e.g. the products to finish the table (tints and lacquers with fewer content on volatile organic compounds).
- Redesign of the packaging of the product to reduce the volume and protect the product avoiding shipping damages.

In the Video 2 of this Unit 12 we interview Sancal Diseño. They explain to us the environmental improvements they have performed on the product Rock table.

## 12.4 ELECTRICAL AND ELECTRONIC PRODUCTS SECTOR

The data presented below related to the company LIFEAK JOB ACCOMMODATION SOLUTIONS FOR LIFE and the product VALIRYO® have been collated from the company's website:

Source: <http://valiryo.com>



## 12.4.1 Company Introduction: LIFEAK JOB ACCOMMODATION SOLUTIONS FOR LIFE

*LIFEAK Job Accommodation Solutions for Life is a consultancy founded by Ion Esandi and Patxi Fabo to offer a better response to daily challenges through technological development.*

### **R+D+i**

Valiryo®, its flagship project, has been entirely developed in Spain, both by the company engineers team and with collaborations with the best technological and electronic development centres of Navarre and the Basque country. The development and continuous improvement are our philosophy.

### **MANUFACTURING**

Valiryo® is completely manufactured in Spain, collaborating with several specialised firms from Navarre and the Basque country.

The mission, vision and values of LIFEAK JOB ACCOMMODATION SOLUTIONS FOR LIFE are:

#### **Mission**

Lifeak's mission is to market eco-innovative products with a massive and international application. In our designs we consider the wide range of users that the market covers.

#### **Vision**

Lifeak's vision is to turn into an instrument to embody ideas of their own and from others, with a catalogue of personal products able to meet daily requirements of people through eco-innovative designs and solutions.

#### **Values**

- Work to make a change in the world.
- Passion.
- Fellowship and teamwork.
- Commitment and perseverance.
- Humility.
- Empathy.
- Efficiency - respect for the environment.



- Flexibility.
- Optimism.

### Social Commitment

Social commitment has always been our fundamental purpose. We have been awarded with several prizes and selected in 2013 as the Empresa Momentum Project (BBVA, ESADE and PwC) as the entrepreneurial project with the largest growth potential.

Currently Valiryo collaborates with one of leading Special Employment Centres in our country, Lantegui Batuak, which provides job opportunities for more than 2,500 people with intellectual, physical, sensory and mental disorders at its 25 work centres and extensive service network in Bizkaia.

#### 12.4.2 Product: Valiryo body dryer <sup>®</sup>.

*VALIRYO <sup>®</sup> reduces the environmental impact arising from washing and drying bath towels. This advantage is particularly relevant in facilities with a high turnover of towels such as hotels, where practically all the towels are changed on a daily basis.*



*Pictures of the product: VALIRYO <sup>®</sup>*

### LESS CONSUMPTION OF WATER

According to data supplied by several different entities, the process involving the dilution of cleaning products implies the pollution of 5 additional litres of water for each litre of water used.

Based on these figures, the additional pollution of water generated by washing one towel would be 65 litres, as 13 litres of water are used to wash each towel.



In brief, 78 litres of water are saved each time Valiryo® is used instead of a towel.

In accordance with the data provided by the entity Ecologists in Action, each time Valiryo® is used instead of a towel would save the same amount of water used in: 1 shower, 8 cisterns or leaving the tap open for 6 and a half minutes.

The data provided is based on data supplied by the INE in Spain and may vary in accordance with the country in question and the type of facility.

### LESS CO<sub>2</sub> EMISSIONS

Likewise, each use of Valiryo® prevents the emission of CO<sub>2</sub> into the atmosphere, due to reducing the pollution generated by washing machines and tumble dryers.

More specifically, in an industrial environment, the total environmental savings thanks to Valiryo® (each time it is used instead of a towel) amount to 0.55 kg of CO<sub>2</sub>, and in a private environment (in a residential unit housing 4 people and where the towels are washed every 5 days), savings would amount to 0.044 kg of CO<sub>2</sub> per use.

Taking into consideration the CO<sub>2</sub> levels processed by certain trees over the year, using Valiryo® instead of a towel would be equivalent to planting 13 Japanese plum trees.

Furthermore, based on the CO<sub>2</sub> emission per kilometre of a 1.2 TSI 86 cv SEAT Leon, the use of Valiryo® would result in saving the pollution emitted by the car over 1,891 kilometres.



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#### **Valiryo's mission ®:**

- To replace obsolete towels with a more efficient body dryer which reduces the consumption of water and electricity due to savings in relation to washing and drying towels and enhancing our quality of life.

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#### **Valiryo's most relevant applications ®:**

- HOTELS: Enhance your customers' experience with a value greater than that of towels, optimise your laundry costs and man hours and reduce the environmental impact of your facilities. Innovate to ensure you remain at the forefront of your market.



- 
- GYMS AND SPAS: Guarantees privacy, it can be installed in the shower. more sustainable facilities and financial savings in the changing room.
  - HOME: A comfortable dry with no moisture, reducing effort and consumption of water, electricity and detergents associated with washing and drying towels. A choice for people with mobility issues, guarantees the safety of the user by preventing falls and injury, recovering their personal independence.
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In the Video 3 of this Unit 12 we interview LIFEAK. They explain to us the environmental advantages involved in the use of their flagship product, Valiryo<sup>®</sup>.

