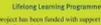




# WP1

## Situation analysis in Spain



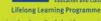
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## Brief overview of the ceramic sector in Spain

In 2008 the industry was counting with 196 ceramic tile manufacturers. Spain is the highest European consumer and has the highest global per capita consumption.

Regarding to the manufacturing of structural ceramics (mainly bricks and roofing tiles), the biggest producers are located in Toledo (16 %), Barcelona (9 %) and Valencia (8 %), which produce over 2Mt per year and Alicante (6 %), Jaén (5 %) and La Rioja (5 %), which produce over 1Mt each year.

The Spanish sanitary ware sector has been showing a decline in production since 1999. In this sense, there had been a reduction of 23.3% until 2005. Imports have gained prominence, which in 2006 grew by 39.8% in value, to place the item in the 247 M. € compared to 169.5 M. (-21%) from exports.

Source: ASCER, ANFACESA, AVEC



## Brief overview of the ceramic sector in Spain

Over the last decade Table and ornamental ware production has been decreased from 60 million pieces valued at approximately 90 M€ to 32 million pieces valued at 34 M€.

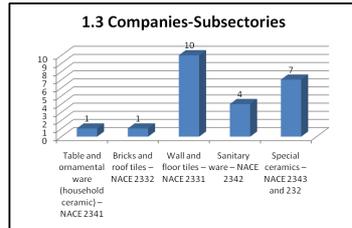
Spain is the largest producer of Ceramic frits in the world accounting for more than half of the total EU output, production in the EU is estimated at 1 - 1.25 million tonnes per year.





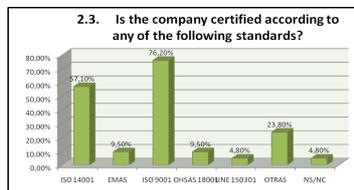
## Training and information needs on ecodesign

### Surveys in Ceramic Companies



To get the existing knowledge needs on ecodesign **21 companies** have been interviewed. **More than the 50%** of the enterprises operate in the **Wall and floor tiles**.

More than the **65%** of the questioned companies have written an **environment policy** and have an environment department. In the same way more than the **95%** of them have some **certifies** according to the following standards:



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## Training and information needs on ecodesign

### Surveys in Ceramic Companies

In the **90%** of the cases the companies perform the design of its own products with or without the specifications of their customers.

For the development of their designs more than the **85%** of them have a **design department with 11 workers on average**.

**More than the 65%** of these companies have written an environment policy and have an environment department.

**72%** of these companies systematically integrate environmental concerns in the design and development process.

In **62%** of the cases where the product design is outsourced, the environmental concerns are **integrated, too**.



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## Training and information needs on ecodesign

### Surveys in Ceramic Companies

Costs reduction, company's image and positioning are some of the factors that encourage companies to go into Ecodesign methodologies.

Lack of a clear customer demand and insufficient knowledge of Ecodesign is mentioned as one of the reasons that restrain it.

#### COMPANIES' ENVIRONMENTAL ACHIEVEMENTS

- Product used to reduce air pollutants.
- Use of recycled raw materials in the production.
- Less raw materials using, less packaging...,
- Filtering systems, filtering in melting furnace sector.
- BAT's in combustion processes.
- Zero landfill; they don't use lead.
- Eco-clays development ; less cooking temperature for saving energy,
- Water consumption saving and waste management reducing.
- Tile production using recycled material for its support.
- Reduction air pollutants by 95%, 100% recycled waste, waste material reduced by 90%.
- Smaller thickness tile making (50/60% less)
- ...



## Training and information needs on ecodesign

### Surveys in Education and Vocational Training Institutions Review of ceramic, design and ecodesign education in Spain

- To get the existing training offer **17 institutions** were questioned.
- Training on Ecodesign is mainly offered in Spain by **universities and VET institutions**. Nevertheless, some thematic conferences or workshops on this theme can also be found within other entities' activities, such as technological institutes or chambers of commerce.
- Today we can count in this country **more than 30 centres** whose training programs have **contents related to Ecodesign**.
- These courses are mainly **focused on Environment and Design**. In this sense, although most of them do not formally use the term 'ecodesign' in their titles, both subjects – environment and design – are actually **closely related**, so Ecodesign is finally included in the course program somehow.





## Training and information needs on ecodesign

### Surveys in Education and Vocational Training Institutions Review of ceramic, design and ecodesign education in Portugal

• General **courses on Design** give to this discipline an average of **75 hours**, while in the others (**technical, engineering, etc.**) that average is of **30 hours**.

• *Main contents of the courses and subjects on Ecodesign :*

➤ **General framework and concepts:** Status of the environment, ecological footprint, environmental aspects and associated impacts, national and international references on Ecodesign etc.

➤ **Theory, guidelines and processes:** Life cycle analysis and related methodologies, techniques and tools on Ecodesign.

➤ **Application:** Ecodesign case studies, best practice and examples.

**Probably, there is not a general knowledge among training centres about how Ecodesign is being developed by companies, and what their training and professional needs on this field are.**



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## Training and information needs on ecodesign

### Surveys in Business Associations

• There are six Business associations in Spain which work together with companies operating within the Spanish ceramic sector.

• As one of the additional services that most of these associations attempt to provide to the associated companies, we find the **support on the development of ecodesigned products**.

• By these kind of additional services, business associations **try to provide their associates with information, guidance and tools on those matters that interest them most, and Ecodesign is one of the issues they are usually asked about.**

Asking personnel	Information demanded
Marketing, architects, builders, environmental experts...	General information on Ecodesign, tools, ecoefficient materials, ecolabels, certification...



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## Training and information needs on ecodesign

### Surveys in Business Associations

- Business associations have also begun to participate in some projects related to Ecodesign, as for example: LCA (life cycle assessment) of ceramic tiles, EDP pilot project on ceramic tiles or the selection of ecological criteria for EU Ecolabel for hard coverings.

- The associations in general consider Ecodesign as a promising approach for the development of the sector. In this sense, they believe that Ecodesign can be a tool to provide with a renewed product and company image in the ceramic industry and that it could also promote improvements in the manufacturing processes and in the rest of stages within the product life cycle.

***“ Ecodesign itself can be a strategic line for the sector as a way for product differentiation.”***



## Training and information needs on ecodesign

### Surveys in Business Associations

- In their opinion, this industry is already carrying out tasks on Ecodesign, mainly in the manufacturing stage, but it is a matter where a lot remains to be done, so all the information and documentation that can reach the industry will be very useful.

- The associations remark that advances in eco-design issues related to the manufacture of ceramic tile are necessary and relevant to the ceramic sector, as well as information related to sustainable construction.





## Gaps analysis: Training needs and offers on ecodesign in ceramics

### 1.

The assessment, together with a description of the ceramic sector and subsectors in Spain, *confirmed the lack as well as interest in ecodesign know-how in the ceramic sector and thus the pertinence of InEDIC*. Most of the answers to the question “why not perform ecodesign?” were “lack of know-how”, followed by “lack of customer demand”.



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## Gaps analysis: Training needs and offers on ecodesign in ceramics

### 2.

It was observed in the sample that most companies have freedom to change their products, have in-house design and development and employ designers, so *designers and product developers are the adequate target group within the industry* for the project's results.



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### Gaps analysis: Training needs and offers on ecodesign in ceramics

## 3.

In order to contribute to the competitiveness of the ceramic sector in Spain, ecodesign should support the most promising business strategies, having in mind the characteristics of the different products and their markets. Thus, *InEDIC should promote the production of high quality and environmentally superior products and address relevant opportunities for the different subsectors.*



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### Gaps analysis: Training needs and offers on ecodesign in ceramics

## 4.

If the environmental improvements are analyzed *few of them related with the design of the product will be discovered.* Only a few achievements such as less raw materials using, less packaging, recycled materials or water consumption saving and waste management reducing, are direct consequences of a ecodesigned product.

*The project should emphasise the innovation and environmental improvements potential of ecodesign through the methodological approach of the training materials and the availability of inspiring examples and case studies.*



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## Gaps analysis: Training needs and offers on ecodesign in ceramics

### 5.

The subsectors related to construction are very important in view of the Ecodesign of energy-related products Directive. *In the environmental evaluation of products and as part of proposed ecodesign strategies, InEDIC should encompass the role of ceramic products in the sustainability profile of buildings (energy efficiency and water saving, a.o.).*



## Gaps analysis: Training needs and offers on ecodesign in ceramics

### 6.

Although there are criteria defined for the EU ecolabel for hard flooring and product category rules for environmental product declarations of ceramic products, the Spanish companies don't believe in the importance of these communication tools. *Given their importance and direct relation to ecodesign, InEDIC should address ecolabels and environmental product declarations in the training materials.*





## Gaps analysis: Training needs and offers on ecodesign in ceramics

### 7.

The energy bill of ceramic companies is a very important production cost and therefore *ecodesign measures that influence the energy consumption aspect are very valuable for the companies.*



## Gaps analysis: Training needs and offers on ecodesign in ceramics

### 8.

More than half of the responding companies were certified according to ISO 9001; approximately one third also had an environmental management system (ISO 14001/EMAS) in place; half of the companies that stated their motivations to perform ecodesign referred “standard’s requirements”. The conclusion is that the *InEDIC training materials should include the relationship between ecodesign and quality/environmental management systems.*





## Gaps analysis: Training needs and offers on ecodesign in ceramics

### 9.

Accordingly, and given the importance companies awarded to market requirements and, to a less degree, to production aspects in product design, the consideration of the *influence of designers in production processes as well as tools to address and anticipate market requirements should be included in the InEDIC tools and materials.*



## Gaps analysis: Training needs and offers on ecodesign in ceramics

- ✓Tools for life cycle assessment of ceramic products
- ✓Ecodesign strategies for ceramic products
- ✓Communication tools for (eco)designed products
- ✓Creativity techniques
- ✓Environmental information on ceramic raw materials
- ✓Environmental information on ceramic technologies
- ✓Tools for ecodesign options generation
- ✓Eco labeling criteria

*All proposed topics for the InEDIC training materials were considered important by the majority of the respondents.*





Innovation and  
EcoDesign in the  
Ceramic Industry

**Project core partner:**

PROSPEKTIKER-Foresight and Prospective - Strategic Studies.  
[www.prospektiker.es](http://www.prospektiker.es)

ITC-Tecnological Ceramic Institute.  
[www.itc.uji.es/](http://www.itc.uji.es/)



   
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