

### THE ROLE OF DESIGN: From the creative process to Life Cycle Design

#### INTRODUCTION

The ECOSIGN project has created an Eco-Innovation Skills Alliance in four European countries (Slovenia, Spain, Romania and Italy) with the aim of addressing the lack of knowledge of designers coming from three economic sectors - food packaging, electronic goods and clothing/textile- in Eco-design (design for the environment: is the integration of environmental considerations in product development).

For such reason, the ECOSIGN team has created a quarterly Newsletter to exchange knowledge and information focused on those sectors in order to reduce environmental impact during the products life-cycle, including the use of raw materials and natural resources, manufacturing, packaging, transport, disposal and recycling.

Much more information about the Eco-design topic can be found on Ecosign website, Twitter, Facebook and LinkedIn.

Ecosign project will end on 31 October 2018 with the main result to create a new joint curriculum and a training course for European Eco Designers that will add skills and competences to the designers regarding environmental technologies.

#### THE ROLE OF DESIGN IN TEXTILE

According to the evolution of the environmental topic in a mid-long term perspective, Textile & Clothing is expected to focus on a circular and efficient economic model, optimizing the use of domestic resources.

Customers today already show to be remarkably influenced in the purchasing process by the importance of emotional factors, being led to focus the attention on sustainable eco-friendly products.

#### From design to new business model

In this perspective, the contribution that a creative approach could give in the planning phase of the production process, to be extended to the entire product life-cycle, could reveal itself as an important factor.

In fact, in order to answer to the emerging needs of the market, that is more and more interested in the sustainable aspects of products, it is necessary to use recyclable materials and a circular productive process and to ensure competitive costs and customized productions, with higher flexibility, resource efficiency and a reduction of water consumption.

In this sense, the achievement of good results for those objectives could be fulfilled only with the contribution of a careful and accurate planning process. The planning stage, design included, should be sustainability-oriented, aiming at lengthening the life-cycle of textile products, favoring their dismantling and material reuse to make recycling process easier.

Furthermore, this approach should be integrated with the introduction of new business models, both to align efficiency requirements of resources and "Circularity" with profitability and to offer incentives to stimulate customers in returning textile materials to the supplier at the end of their life-cycle.

As far as reuse is concerned (i.e. a prolongation of the product life-cycle through its re-enhancement in new applications on new markets), creative ideas - that includes product revaluation and re-introduction on the market - are extremely important. Innovation is today a fundamental tool for the industry to answer to the emerging needs of the market and to cope with international competitiveness, through new planning solutions and improving companies' know-how and

expertise.

The collaboration between design, industry and science is at the basis of successful projects and products. Along with expressive, formal and functional qualities of industrial products, the role of design become however important. This is due also to its creative potential, also during planning procedure integrated with engineering, technology and innovation knowledge to define not only the aesthetic aspect of the final product, but also its entire production process and life-cycle within the framework of Circular Economy.

Thanks to a new method, named Life Cycle Costing (LCC), it is possible to evaluate the economic impact of costs linked to all processes involved in the entire product life-cycle, considering also the involvement of good or harmful effects that could affect the whole system in which production, life and disposal of products take place.

The goal of the LCC methods is to minimize costs of each step of the product life-cycle, guaranteeing, this way, economic benefits for both producers and end-users. In particular, the LCC method allows to optimize the planning of new products and to obtain better results in terms of duration, performance and sustainability, thanks to suitable customization, less wastes, improved energy saving and the enhancement of environmental and social aspects.

### **Sustainability: from the creative process to Life Cycle Design**

A company willing to plan a new strategy aiming at introducing sustainable products on the market has to cope with the compulsory need to choose towards which direction its innovative strategy has to be oriented.

Sustainability is obviously one of the main drivers for innovation from a technology, organizational, commercial and social point of view. In this sense, the creative process is assigned with a fundamental role not only in becoming a real part of a sustainable business model, but also representing an added value for sustainability throughout the entire supply chain, from procurement to distribution: a real Life Cycle Design.

The search for new ways to design and plan textile materials is the basis of the Sustainable Change Management and the related innovation, stimulated by a more "responsible" customer demand, can generate unpredictable results and mobilize new resources, opening consequently new end-use markets.

In this sense, **eco-designers** could intervene studying new ways for a reduction of the environmental impact on the planet and on all the living, adopting all related decisions.

A zero impact production is however impossible to be implemented: for that, the choice of which sustainable aspects to focus on becomes subjective.

For example, some companies choose to cut the environmental footprint down exploiting the labour of local communities, instead of industrial production and supporting local craftsmanship; or to choose local raw materials. Some other companies decide to protect jobs guaranteeing fair salaries to workers employed or to protect animals manufacturing bags and shoes using alternative materials rather than leather.

It could be stated that eco-designers should be the first to choose sustainability and, so, to become responsible for a model change that will affect both vertically and horizontally all company divisions.

### **Partners of the Ecosign Project**

