



Sustainability starts with design

Resources are not endless and what we produce and consume has a significant impact on our environment. In this context design has a decisive role to play. Two European projects help designers to work with ecodesign for greater sustainability.

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CREATING PRODUCTS AND SERVICES that do not negatively affect the environment and climate is the foundation of ecodesign. Several dimensions must be considered: creating the conditions for minimal waste, taking social aspects into consideration, and observing human rights. A designer's decisions largely determine what environmental impact the resulting products and services will have. It is therefore important to include this aspect from the planning stage in order to create design that is sustainable and circular.

Many people are requesting the knowledge and tools to enable them to work with ecodesign. Several concepts are available, such as Cradle to Cradle and Circular Product Design. These encompass ways of thinking and methods that foster a more sustainable approach. The conditions for using them vary, but the need of greater expertise within fields that are not always included in traditional design educations, both in the areas of technology and materials science, unites them.

Sustainability and business enterprise

A study done by SVID this spring concludes that one of the topics businesspeople think about most regarding the move to sustainability is how to combine ecodesign with profitability. The companies further wish to study the examples of other

players in closely related business activities in order to see how they can work in a way that is both sustainable and financially successful.

At the economic level, the task is not only to ensure the profitability of one's own products but also to consider issues such as the banks' attitude to new business models. This was demonstrated, for example, by a project in the Netherlands that involved developing street lighting for bicycle paths. Circular, long-term design plans and business models turned out to be difficult to implement when the banks did not want to work with long-term time frames. In this situation, predecessors and good examples are necessary.

Design for new customer behaviours

The complex nature of ecodesign also lies in understanding and shaping behaviour patterns. Design choices affect – and are affected by – consumer behaviour. Let us take the mobile phone as an example. Today mobile phones contain a tiny amount of gold. From a sustainability perspective, it might be a good choice to increase the amount of gold in the phones so that recycling becomes more economically sustainable. The problem is that most phones are not currently returned for recycling – so an increased amount of gold would not neces-



If the computers being scrapped daily in Sweden alone were stacked on top of each other, they would surpass the world's highest building, the Burj Khalifa.

sarily have a positive effect but would instead be negative. Herein lies a dilemma: should we start with new designs, new recycling technologies or new solutions for collecting end-of-life products?

We need cross cooperation's to bring out best solutions to be achieved, and let consumers successfully be informed about what they should consider, when making their own choices.

Tools and methods require data

Just as in the above-mentioned case of the telephones, it is not always apparent what is the right decision. Tools, knowledge about them, and data all help. To make the correct design decision about such factors as the choice of materials, designers can use Life Cycle Assessment (LCA) tools. Sometimes it can turn out that more – not less – material is preferable if this leads to altered behaviour.

Let us take food waste as one example. If we add more packaging material to extend the food's shelf life, make the product recloseable, and reduce portion size, this can have a

positive effect on the amount of food waste. Recent calculations done at Karlstad University showed that the extra material needed to package two half loaves of bread instead of one whole loaf corresponded to one-tenth of a slice of bread. But to be able to answer whether this was the most sustainable alternative, it had to be compared with how much less bread was wasted thanks to the smaller packets – and this information was not available. This indicates the need for more knowledge about consumption patterns, better data collection, and better exchange of information between various parties.

Inrego – reuse as a business concept

Inrego is one successful example of a business concept that combines sustainability, behaviour change and profitability. The company collects used IT equipment such as mobile phones, refurbishes them and resells them. If a product cannot be mended or does not meet the criteria for being sold, it is sent to a "rescue station" where the material can be sorted and matched to other components before being combined to form new products.

Inrego has been profitable since it was founded in 1995 despite a difficulty of obtaining more of the products that can be reused. Services designed to simplify and encourage greater reuse are badly needed and help to create sustainable behaviour patterns. The companies that offer solutions to reinforce this change will benefit both the environment and their own finances.

“Ecodesign Circle” and “Circular Design” support companies and universities

With examples such as reuse, recycling and changing consumer patterns, there is a great need for new design solutions. Two European projects are underway that aim to develop and disseminate knowledge about ecodesign to companies, designers and university students.

“EcoDesign Circle” is a joint venture between various design organisations and universities in countries around the Baltic Sea, and particularly targets SMEs. The project aims to help create jobs for tomorrow’s markets by increasing the resources and capacity for including environmental aspects in design. The development of new ecodesign products will facilitate the step towards a circular economy, and the work is aimed at both businesspeople and educational institutions. A new platform will be launched in the form of a sustainability guide featuring tools, methods, networks and learning resources for students and others to use in their education. In order to spread knowledge about the innovation potential that exists with ecodesign, there is also a focus on joint ventures and various communicative activities in order to increase awareness and transparency about much-needed behavioural change.

“Circular Design: Learning for Innovative Design for Sustainability” is a project that will help to increase the supply of and demand for ecodesigned projects and services on the market. The project is run mainly by various European universities. The development of training materials and sustainability strategies for innovative design will increase the sustainable consumption choices and provide new business opportunities for both third-level educational institutions and industries in Europe. Universities, design centres and companies will cooperate in the project to increase sustainable design and to identify possibilities for sustainable products, services and business opportunities.

These types of collaborative process will accelerate the great need for sustainable solutions in design. Among other things, there is a need for strategies and for the design training of students, faculty members and companies. At the same time, we can see how the growing number of innovative solutions in the wake of digitalisation is contributing to this development. Concerns that the sustainability aspects will not be profitable are being dispelled as the regions that are investing in renewable and environmentally beneficial solutions are proving to be economically successful. New research, more knowledge, and more innovations are leading to sustainable business models and a healthier world. The trend is hopeful! ■

FACTS Concepts

Ecodesign

A collective concept in which, thanks to design solutions, products and services are created without negatively impacting the environment and the climate. The aim of ecodesign is to create the conditions for minimal or zero waste when a product is consumed, and to lead the work towards a circular process.

Cradle to Cradle

The Cradle to Cradle principle involves the fact that our social development and product development have much to gain from resembling ecological systems in which energy and materials are “used” effectively and cyclically instead of being “used up” and creating waste.

Circular product design

This involves designing products whose production and consumption cause the least possible impact. What remains after the product is used can be returned to the manufacturer, reused by the consumer, or returned to nature in a way that does not negatively impact the environment.

Projects

Circular Design: Learning for Innovative Design for Sustainability

The aim is to promote the sustainable consumption and production of products and services in Europe.

It involves 13 partners, European universities, design centres and companies in Catalonia (Spain), Ireland, the Netherlands and Sweden. The Swedish partners are Linköping University, Habermann Design & Development and SVID.

Funded by Erasmus+, the European Union programme for education, training, youth and sport within the field of social entrepreneurship and pedagogical innovation.

EcoDesign Circle

A three-year project that aims to increase knowledge about ecodesign among the Baltic region’s small and medium-size enterprises, designers and design organisations. The work is led by SVID in collaboration with Green Leap at KTH Royal Institute of Technology together with design organisations and universities in Germany, Estonia, Lithuania, Poland and Finland.

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