Screening eco-innovation level

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Reducing the use of natural resources and lowering the amount of harmful substances across the life-cycle of a product or process has become a must for innovation. But smaller companies have yet to make it happen.

Going green is one of the fastest growing trends, particularly in industry. But smaller size companies are often left wondering how best to become more environmentally friendly. Providing solutions to these companies was precisely the goal of the LiMaS research project, completed in 2011. It aimed at supplying small and medium enterprises (SMEs) with a first screening instrument to start integrating eco-innovation into their

business. This project led to the development of web-based solution featuring energy level consumption during manufacturing. This application is specifically geared towards companies manufacturing energy using products, such as boilers, industrial furnaces and transformers as well asthose manufacturing electrical and electronic equipment.

For example, Spanish electrical and electronic equipment company Protón Electrónica based in Trapagaran, has implemented the program developed by the project. It is particularly interested in the application performing a simplified assessment of the environmental impact of the product from its creation to its end-of-life, also known as life cycle assessment (LCA). The advantage of this web-based tool is that it requires input of data only once through an initial questionnaire. It also covers a broad variety of topics in addition, to LCA. These include details of how to calculate a product carbon footprint, how to improve its eco-design and the possibility to gain eco-labels, as well as legislative requirements, hazardous substances monitoring and prioritisation of environmental aspects for management.

The programme makes it "easy and quick to calculate the environmental improvements of a certain product and compare it with competitors," Angel Vidal, CEO of the Protón Electrónica, tells youris.com. The company is now working on the development of LED lights to substitute the gas ones used in public spaces. "Each time we have undergone a redesign we have used the program to verify the improvements in terms of how much CO2, water, toxic substances and energy we would save through the product's life-cycle and how many heavy metals we would avoid compared to the gas lights," explains Vidal.

Previous experience working with SMEs taught project partners that [implementing eco-innovation can be the beneficial because their] main impact is related to energy consumption during the usage phase,"

explains project co-ordinator Juan Carlos Alonso, eco-innovation project manager at consultancy SIMPPLE, based in Tarragona, Spain. He also remarks that he previously noticed there was a big gap between the first needs of a SME and the complexity or the too specific focus of existing professional eco-innovation tools.

This initiative therefore fills a gap in the eco-innovation market. Although there are tools that are easy to use in the market, such as eco-design indicator tool, the relevant information is not gathered in one place. What is more, most tools do not have information related regulatory compliance. "What is great about the package is that it's a one stop shop and a good introduction for the non-experts to first ensure their products are compliant and then go beyond that to [become] eco-innovative leaders," says Ben Peace, sustainable innovation specialist at sustainable design and innovation consultancy C-Tech Innovation, located in Chester, UK.

According to others, possible limitations relate more to the nature of computer models than to the details of the software. "In nature there are processes that cannot be anticipated mathematically, such as energy fluxes," says Ioan Ciumasu, director of the master degree in management of eco-innovation at the University of Versailles, France, adding: "moreover these predictive models work between thresholds and after that threshold they stop working." He also notes that the value of these tools is as good as the value of the assumptions they have taken and that they require good data, where methods to measure pollution and vary between countries.

Experts agree on the need for wider dissemination in Europe of the benefits of eco-innovation not only from an environmental but also from an economic and competitiveness perspective as higher initial investment but energy saving in the long run. This is an issue specifically critical for many SMEs deeply affected by the crisis. Ciumasu

concludes: "I think that many enterprises do see the advantages of eco-innovation but need to find out how to assimilate it in their products, and this takes time."

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