



## Green is good

**An initiative by Enterprise Ireland is helping Irish manufacturing firms to gain a competitive edge by producing 'environmentally superior products', writes Seán Duke.**

**T**hese days pressure coming from multi-nationals and EU legislation — both in place and pending — is putting huge pressure on Irish manufacturing firms to reduce the environmental impacts of their products all along the supply chain. A pilot initiative was launched by Enterprise Ireland in March 1999 to provide funds for Irish SME's to assess the potential for making environmentally superior products that cost no more than the original products. The success of the scheme, which provided funding for firms in a variety of sectors, has encouraged the government agency to incorporate the ESP initiative into the standard toolkit of business support available to its clients.

The Enterprise Ireland initiative started two years ago was aimed at assisting those companies that saw the changes that were coming down the road, and wished to do something about it. Financial support of 50 per cent of projects up to a maximum of £25,000 (€31,740) was provided to approved participant SME's. There was a maximum budget of £250,000 (€317,435), and 14 out of 25 applicants were funded. The companies that received support included firms producing toner cartridges for a multi-national; an electronic receiver unit built into a car that received signals from a key fob transmitter; a long-life computer and a recyclable packaging system.

To remain competitive, it has become increasingly important for manufacturing firms to reduce the environmental impact of their products. Multi-nationals such as Philips and Xerox and others have been producing products with a reduced environmental burden for some time, and demand the same of their suppliers. This reality at home and abroad led Enterprise Ireland to come up with the concept of 'environmentally superior products' (ESP) — a scheme set up to help firms reduce the environmental impact of their products, without affecting product quality or increasing its cost.

*Right: This chair produced by Jacobsen Ltd. Tuam is made with environmentally friendly materials that can aid recycling and extend the usable life of the chair.*



In the new climate the multi-nationals are putting pressure on their suppliers to help them meet their obligations under the directives. Those that provide them with the solutions required can re-enforce the existing business relationships and expand into new markets. Those that don't move quickly, risk being dropped by their customers.

The other factor driving Irish SME's to produce environmentally superior products, aside from the multinationals, is the impact of EU legislation - already in place or pending. The automotive and electronics industries, both of which produce high levels of waste, are in the firing line, and the principle of 'polluter pays' is coming into force. There is the 'end of life vehicle' directive, officially adopted by the European Parliament in September 2000. This requires that 'end of life vehicles' should no longer be a source of pollution and a waste of resources. It sets clear, quantified targets for reuse, recycling and recovery of vehicles and their components; and pushes producers to manufacture new more recyclable vehicles. There is also the proposed waste electrical and electronic equipment (WEEE) directive. A draft of this directive was adopted in June 2000, but it has yet to become EU law. This directive requires increased recycling of electrical and electronic equipment, and producers are deemed responsible for this. Both pieces of legislation mean that manufacturers must act to reduce the environmental impact of their products. Those that don't will lose out.

Mergon International, Castlepollard, produces toner cartridges for photocopiers manufactured by a well-known multi-national. The cartridges were already made from recycled plastic, but the funds from the ESP scheme helped to further reduce the environmental impact. The Galway based company, which is also located in Anderson, South Carolina, found they could make a new environmentally superior cartridges by eliminating a potentially damaging welding ring, which emits non-ionising radiation during the assembly process, by increasing the reliability of 'hot plate welding'. The relationship with the customer was reinforced, and Mergon became a more competitive supplier as it had a toner cartridge that costs less, is more reliable and is environmentally a superior product. The firm now supply into new markets.

Another Galway based company, Connaught Electronics Ltd, Tuam, also made good use of ESP funds. The firm has been in existence since 1982 and employs 200 people. They manufacture the electronic receiver unit in Volvo cars that receives and manages the remote vehicle security keyless



*These plastic products produced by Sterile Technologies Ltd were made by using granulated plastic generated as a by-product from the processing of medical waste.*

entry signal from the key fob transmitter. The firm used an approach called life cycle assessment, where producers look at their product in its entirety from its conception through to its end of life. The receiver unit sits in the car the whole time, and when the driver clicks the key fob and locks the car, the receiver keeps running all the time. Using the life cycle assessment method, the in-house design team at Connaught working with Thomas Roche in AMT Ireland, reduced the energy consumption of the unit and achieved a 40 per cent reduction in the materials used in the unit. They also re-designed the receiver so that it was easier to dis-assemble, making it easier in turn to re-use and recycle. All these changes meant that Connaught could manufacture the unit faster, and at a reduced cost.

The cost savings meant that the firm became more competitive to Volvo, and the multi-national have decided to stick with them and increased their orders. They are also helping Volvo meet their requirements under the 'end of life' directive and the upcoming WEEE directive. In addition, the sales

revenue for Connaught has now increased because they are now selling their product into a wider distribution area, and to other car manufacturers. It was Ir£25,000 well spent through the ESP scheme.

Multimedia Computer Systems Ltd, based in Rathfarnham Dublin, is a small firm, employing 10 people, that produces the MicroPro PC, an environmentally friendly computer aimed at the domestic PC market which is designed to have a longer life span. The market is the home computer user that does not want to spend a fortune on a computer and does not want to have to buy a new one every year or two. This is a promising market to aim at given the current downturn in demand for home PCs as people do not appear to feel the need to regularly upgrade their home computer.

In time, the company could capture a share of the business market, as firms realise that it is not always necessary to buy new units every year or two. The Dublin company have designed the MicroPro PC so that it is readily upgradeable. The firm provide a service where they repair and maintain all the



computers and printers they sell, which extends their operational lifetime. The ESP funds were used by Multimedia to help them comply with their obligations under WEEE, and to gain a sought after EU Eco-Label. It is anticipated that the label will differentiate the company from its many larger competitors and help it to gain market share. The larger PC manufacturers have not actively sought the Eco-Label, as the business need is not yet perceived to be there. This reticence should help Multimedia in the longer term.

Packaging is a major source of waste in microelectronics, automotive and other industries. Products today are often not produced in their entirety in one plant. For example, wing mirrors might be produced at a factory in Dublin, packaged, sent to a plant in Asia where another bit is bolted onto them, and then off to somewhere else, for another piece to be added to the product. The packaging travels with the wing mirrors until the final component is added and, at this

final endpoint, the packaging becomes waste. In many cases, the waste in these two industries constitutes non-reusable cardboard box packaging that must be disposed of. This is a cost to the producer, and Abbey Vac Forming, Slane, sought funding under ESP to generate new packaging that could change in shape and size and be re-used again and again.

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Abbey Vac are completing the development of innovative, low cost durable, recycled plastic packaging units which, following use, can be stacked similarly to the stacking of open egg boxes. This reduces the volume taken up by used packaging and allows for cost effective return of the packaging to the originator for re-use. The low cost of the product produced in Slane distinguishes it from other competing products. The environmental benefits from the new product were numerous: the new packaging replaced cardboard and expanded polystyrene packaging; better protection of products through cushioning and weatherability; the use of just one

material facilitates end of life recycling; a variety of sizes and types of boxes are provided; and one third of the energy is required to produce a single vacuum forming box compared to a cardboard box.

Other firms that received ESP funding were Jacobson Ltd, Tuam, Co. Galway - a longer life office chair; Connaught Timber, Loughrea, Co. Galway - a woodchip garden mulch; Woodfab Timber Ltd, Anghrim Co. Wicklow - analysis of environmental impact of timber fencing; JFC Manufacturing Ltd, Tuam, Co. Galway - a livestock watering system for extreme climates; Sterile Technologies Ireland, Naas Road, Dublin - feasibility study for products produced from recycled plastic waste; and Roche Manufacturing Ltd, Claregalway, Co. Galway - design of a crusher for separation and re-use of waste concrete and steel from hollow core concrete.

The same funding mechanisms as under the pilot initiative apply for a second round of funding under ESP. For larger projects, other funding options within the Enterprise Ireland toolkit may also be considered, according to Dorothy Maxwell, Environment Unit, Enterprise Ireland. For further information Tel: 00 353 1 8082558, Fax: 00 353 1 8082259 or E-mail: dorothy.maxwell@enterpriseireland.com ■

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