

Wideblue, a product design specialist spun out of Polaroid, is taking its expertise in optoelectronics into the medical industry and beyond

Winner

Breakthrough Product Award

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Seeing the future

A growing trend among design consultancies is to develop their own products. While this can be fraught with danger, consultancies realise that, if they can get it right, the revenues from an in-house product can dwarf those from traditional 'fees for service'.

Dumbarton-based Wideblue, created as a spin-out from Polaroid, has taken this step. "Our expertise," says director Grant King, "is in optoelectronics, which forms the basis of everything we do."

Wideblue has set up a separate company, PWB, to commercialise its most promising product – a self-examination tool called Breastlight, whose history is a heartening story of innovation success. A retired professor of health physics had the idea for a breast examination product – and went as far as to build a demonstrator, using off-the-shelf components. While it got across the principle – that shining a strong light through breast tissue could be an important part of a self-examination regime – the product needed serious work, in order to make it commercially viable.

Wideblue spotted the opportunity – and helped to take the idea forward with assistance from various grants and awards. Its optoelectronics expertise and design skills were crucial. From early on, the company knew it had to use LEDs as the light source. But it also knew of several technical problems – one being that LEDs begin to lose performance at high temperature.

"For this reason, we had to devise a thermal management system to remove heat from the LEDs," says product

design leader Robin Sayer. Product styling was also crucial: focus group feedback revealed the device would need to be intuitive and comfortable to use – a further reason for efficient thermal management.

Another refinement had to do with product perception. At low voltage, LEDs quite naturally produce a variable light output. An array of LEDs would then have differing levels of brightness, giving a perception of malfunction. "We decided to ramp up the voltage – but to pulse it at the same time," says King. "This solved the problem and meant that we used only 10% of the power."

Following a 'soft' launch to the medical profession, the company plans a commercial launch near the end of the year. "You have to be very careful

how you market such an emotive product as this," says King.

Breastlight is far from being Wideblue's only offering. It has developed a number of products for clients, such as Biopta – which measures the response of human tissue to varying concentrations of new drugs. It automates a process that was previously carried out by a PhD biochemist, using a very expensive microscope.

Again, optoelectronics played a key role in its design. And this level of specialist knowledge can be a real advantage when it comes to winning new business.

"We don't typically bid for work against other design consultancies," says King. "People tend to know us, so we get referrals."



Profile

Location: Dumbarton

Employees: 15

Focus: Expertise is in optoelectronics for the medical industry and beyond