Engineer shortage concerns

John Collins

Ireland urgently needs to train more engineers to support local research and development as the high cost of housing, traffic chaos and other by-products of our economic boom makes it increasingly difficult to attract foreign researchers here.

That is the view of Dr Robert Esser, director of Xilinx Research Labs Europe.

Xilinx was the first company to locate at Dublin's Citywest, and now employs 450 staff at its European headquarters there. In 2005 it committed €7.5 million to establishing a research facility in Ireland. Esser now heads that facility, but says he is concerned about his ability to find the right talent to work there.

"If you look at the numbers going into engineering, they are at an all-time low," says Esser. "As a result, companies such as ourselves, Intel and Analog Devices will have problems in recruiting Irish-based people. It was always assumed there was an adequate supply of engineers into Ireland."

He believes Science Foundation Ireland's goal of making Ireland a world-class centre for research will not be achieved without being able to attract the best international researchers.

This, of course, may be a moot point. Xilinx's international performance hit the doldrums shortly after the Irish research facility was announced, and it has not grown at the same pace as originally planned.

Esser is now focusing on getting the most out of what he has by collaborating with third-level research institutes both here and in the rest of Europe. This week alone he was finalising two proposals for EU funding as part of larger research groups, including both industry and academic partners.

"I spend a lot of time talking to researchers in the various third-level institutions. There's a lot of research money floating about in Ireland and Europe. But a lot of that money is contingent on having strong industrial collaborations."

While most industry researchers work within relatively short timeframes to get new products to market, Xilinx Labs is in what Esser calls the "luxurious position" of looking at technology that will pay off in five to seven years. This is similar to the "horizons" academics are used to, thus making Xilinx an attractive industry partner.

The most significant result of that to date is Xilinx's hook-up with the Centre for Telecommunications Value-Chain Research based at Trinity College. It is collaborating with Xilinx on a project around adaptive radio technology which could lead to much more intelligent mobile phones.

Xilinx is a leader in providing logic devices to the electronics industry and in particular a class of devices known as field programmable gate arrays which are used in everything from mobile phone base stations to DVD players.

"We are interested in being able to design complex systems," explains Esser. "Managing the complexity of modern systems is quite a challenge. Ultimately the goal of my group is to make field programmable gate arrays programmable by non-hardware experts."

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