



just imagine

A looming IT skills crisis threatens to leave a scores of promising Australian technologies underdeveloped and uncommercialised. Brad Howarth recently attended Microsoft's annual 'Imagine Cup' in Paris to gauge exactly what is at stake.



Edward Hooper had been hanging around with the head gardener at the Mornington Peninsula's Morning Star Estate gardens and winery to see the problem at hand.

With water becoming an ever more precious resource, but consumer expectations for a quality product rising, something needed to be done to take the guesswork out of keeping the vines and other plants watered, while avoiding wastage.

So the seed was planted for SOAK (Smart Operational Agriculture tool Kit), an integrated software and hardware sensor system designed by four university students that represents a potentially affordable solution not just for Morning Star, but for farmers and gardeners throughout Australia.

It also became their winning entry in the software design category at the Imagine Cup, held in Paris in July. The Cup, which is staged annually by Microsoft, brought together more than 100 university students (from a pool of more than 200,000 entrants worldwide) who competed in categories ranging from building a technology-based business concept to solving complex algorithms or creating a short film. Teams came from all corners of the world, including several from South America and Africa, with all entries based around the theme of 'the environment'. (I was lucky enough to be in attendance as a guest of Microsoft.)

Hooper, together with teammates David Burela, Dimaz Pramudya and Long Zheng, accepted their award in front of 1,300 students, dignitaries and academics at a ceremony held at the Louvre – a rare honour for a group barely into their 20s.

The Imagine Cup demonstrated two concepts that are easily overlooked. Firstly, you do not need decades of experience and a tonne of money to be an entrepreneur.

Secondly, technology is going to play a key role in solving the environmental crisis that now faces us.

Both points were evident in the Rural Innovation category of the Cup. Here, five teams from the developing world were selected to compete, with entries from Columbia, South Africa, Egypt, Indonesia and India.

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The winning entry, from team Antarmuka of Indonesia, involved an environmental reporting system that would make it easy for Indonesians to report everything from illegal logging to an oil spill.

"We cannot improve the environment without involving the people also," says team leader Ella Madanella Dwi Mustika. "A lot of environmental problems in Indonesia are being handled slowly because of a lack of information, but with this system hopefully the information will be sent faster.

"You can just send a report, and the system will determine which authority to forward the information to. If it can see a keyword like 'oil' and 'spill' it will send the information to the authority that is the closest that can handle the problem."

The system is designed to work in any language – an important factor in a country of 737 practiced languages.

The problems highlighted by the Imagine Cup entries are universal, and in some cases the projects will have a life

beyond the event itself. Team SOAK is hopeful about the commercial potential of their system, but even if that fails, their strong standing at the event has guaranteed them the pick of jobs and projects.

For Microsoft, the Imagine Cup is more than just a gesture of goodwill – it is also a handy tool for ensuring that university students are developing software using its tools and frameworks. But it also serves a higher purpose in providing a direct incentive for students to develop innovative systems and solve complex problem. And it actually makes the idea of studying software development at university look interesting.

Australia is facing an IT skills crisis that far outstrips the shortages we are experiencing today. The Australian Computer Society recently reported that IT job vacancies will grow to 14,000 by 2010 and 25,000 by 2020 unless steps are taken now.

Not only is a skills shortage a major burden on Australia's economic prosperity, it also impedes the development of innovative solutions to combat climate change.

While IT is said to be contributing around two percent of all carbon emissions today, it will play a far more important role in finding innovative ways to reduce emissions from other sources. Solving those problems will be big business in the future.

We may have missed getting on the information technology bandwagon when it made nations like the US, Sweden, Germany and Israel wealthy. Let's hope that short-sighted policy decisions don't result in us missing the next one. We could all learn a lot from the students at the Imagine Cup. ✎

Brad Howarth is a journalist and author of 'Innovation and the Emerging Markets Where the Next Bulls Will Run', a study on the challenges facing small Australian technology companies. You can read his blog at lagrangepoint.typepad.com