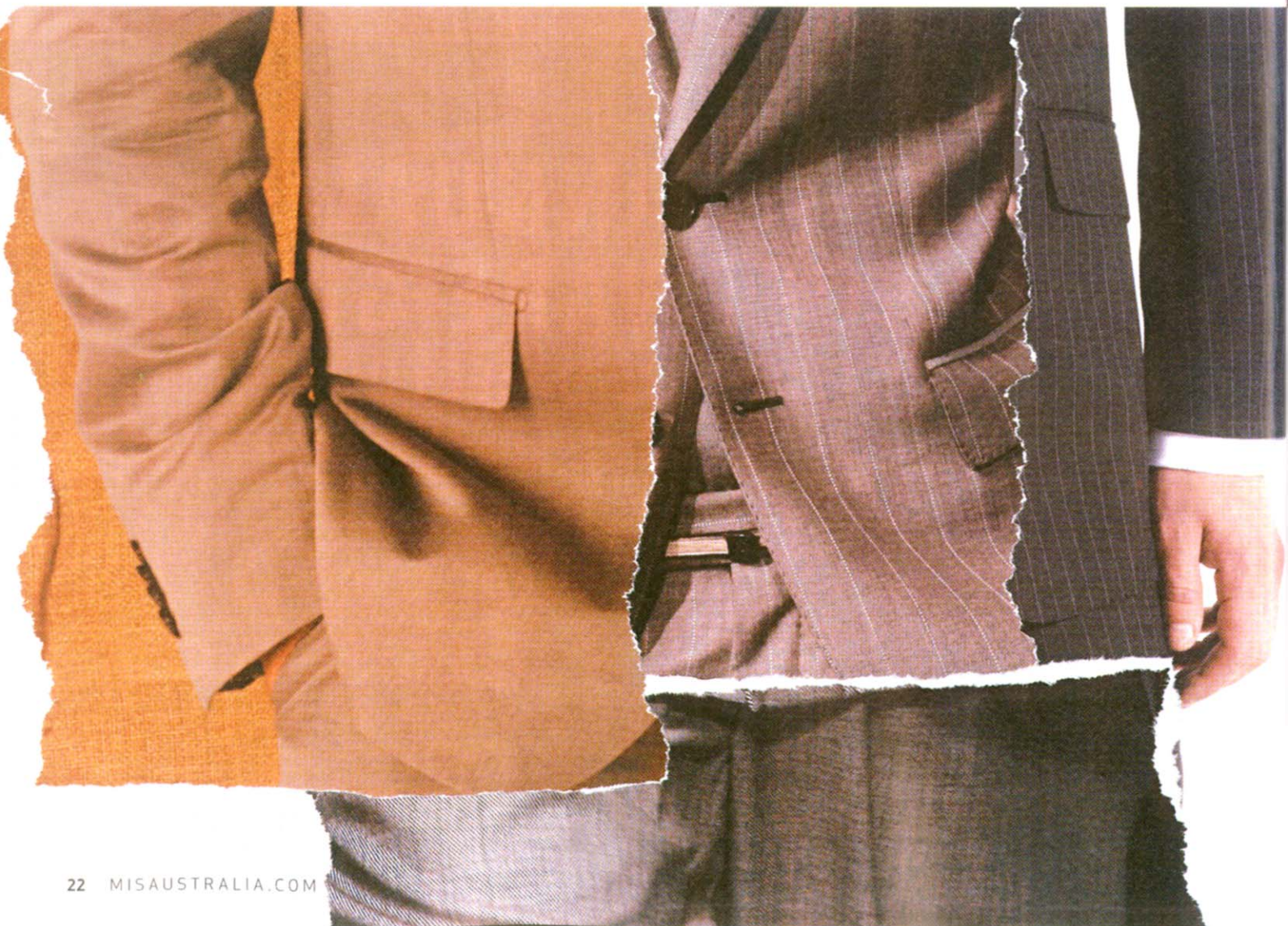




# SKILLS TO SUIT



Graduates are no longer beating a path to the doors of IT firms and the industry needs to take a look in the mirror and ask itself why, **Paul Smith** writes.

**DOWN THE** years, publications, conference speakers and researchers have been more than happy to tell chief information officers what their big concerns of the day are. Many forests have been harvested to print the vast quantities of magazines that tell CIOs that they are now most worried about Y2K, e-commerce, identity theft, corporate governance, keeping projects on time, cutting costs or whatever else is flavour of the month.

But there is one issue that has always been on the list, which unites CIOs from the business and government ends of the spectrum. It has festered like a fungal infection on the foot of the IT industry and has now become a full-grown bunion, threatening to keep everyone from moving freely. Put simply, nobody wants to work in IT.

The skills shortage has always been an issue of interest but there is evidence to suggest we haven't seen anything yet. While demand for skilled staff continues to rise, it

appears the idea of a career in the IT industry is anathema to Australia's bright young things. The figures aren't pretty. A recent survey by the Australian Association of Graduate Employers paints a healthy picture for IT graduates and a worrying one for employers. It reveals that 70 per cent of graduates moving into IT roles are receiving multiple job offers.

Yet, despite holding all the cards, the number of students opting to study IT-related courses continues to nosedive.

In March, federal government figures for the past academic year showed that despite an overall rise of more than 5 per cent in the number of students starting university since 2006, the number of students studying technology had fallen by almost 4 per cent.

The executive dean of Queensland University of Technology's faculty of IT is Simon Kaplan. "As a result of the falling interest in IT," he says, "we're producing far fewer graduates and the quality of students entering IT programs has fallen all around the country.

"At a time when the level of IT jobs available is starting to rival the numbers of the dotcom boom and the Y2K furore, IT student numbers are starting to approach levels not seen since the late 1970s and early 1980s.

"It's a situation of crisis proportions - even the international outsourcing companies are struggling to find new recruits. Every industry now depends on IT. It's a horrible mess."

Kaplan is able to witness first hand the attitudes and opinions of the next generation workforce and says that however much the industry may kid itself that it has shed the dreary nerdy image of the past, that perception still pervades.

Despite the opportunities on offer and the growing importance of technology in the business world, the industry as a whole has to find ways to make IT attractive to school leavers as a career option, he says.

It is not just down to cartoonish stereotypes but to the attitudes of those who advise impressionable young minds. Kaplan says career advisers have admitted to him that they advise students against jobs in IT because they think the career options are limited and that all potential work has been outsourced to India.

"It's a bit of a joke that people imagine the nerdy guy who comes in to the classroom to fix the broken computer is at the top of the IT profession," Kaplan says. "The truth is he's barely on the bottom rung, but that's not what people perceive."

Diana Eilert experienced the gnarly side of the skills shortage when she held responsibility for, among other things, the technology strategy at Suncorp-Metway



before it acquired Promina. In her new role as chief executive of recruitment specialists Clarius Group, which includes ICT specialist firm Candle Australia, she is seeing an increasingly cutthroat market for suitable talent.

She says that while IT's image problem may seem like an easy excuse, work needs to be done to convince people there is a viable career path in the industry.

"Back when I was in university, tech was the funky new thing," she says. "I can remember my father saying to me that computers were the thing of the future. But now I think people are seeing lots of work outsourced to India and it's kind of lost the sense of being the way of the future."

"There's certainly an image problem. It doesn't attract women, for example. There are just not many women in IT - it tends to be very male dominated for some reason."

"People need to get a sense of what's available to them. There are an enormous number of options available, yet people often think you'll be in a dark room changing tapes and cartridges in a data centre or sitting at a PC in the dark, keying in code."

Altis Consulting chief executive officer Gavin Cooke, says the businesses and government agencies that are bemoaning the lack of talent beating a path to their doors should take a look in the mirror and question their own role in the mess. He says the seeds for the shortage of workers with a few years' experience and business skills were sown in the early years of the decade.

The dotcom boom at the end of the last century and the early days of this one pulled a lot of people into the IT industry from non-typical backgrounds because of demand. When this was heightened by the furore over the threat of Y2K, a booming industry was created

## STUDY TARGETS LAG IN IT SKILLS

Businesses and universities need to change the way technology skills are taught and marketed to avoid a chronic shortage of useful talent in the next decade, research at the University of Melbourne suggests.

The research, which is being conducted over three years by a number of leading academics including former Commonwealth Bank of Australia chief technology officer Peter Reynolds, is aimed at finding out what technology skills Australian businesses will need between 2010 and 2019. The qualitative study is focusing on 12 national and international organisations with a head office in Melbourne in the finance, retail, manufacturing and government sector.

Reynolds says initial findings indicate the IT industry needs to take a longer term view of the changing nature of technology work being carried out by Australian companies and do more to discourage negative perceptions of IT careers. IT skills related to business analysis rather than the ability to write technology programs need to be developed to support the many Australian companies embarking on large-scale, technology-based business process transformation projects.

Traditional programming skills increasingly will be sourced much more economically from offshore service providers.

"As businesses put in larger packages in their organisations, we're seeing much more reliance on project management, change management and professional skills like managing suppliers and understanding how to solve business problems with IT," Reynolds says.

"All the CIOs we talk to say it's difficult to find good people. Many are very worried about a skills shortage that's exacerbated by the very low university enrolments at the moment."

London School of Economics professor of technology work and globalisation Leslie Willcocks is part of the research team and says Australia faces tougher problems with IT skills supply than other Western economies because of its geographic isolation.

While whole sectors of the British economy are being propped up by the immigration of skilled workers from European Union-member countries such as Poland, Bulgaria and Romania, he says Australia needs to focus more on how to develop the skills it will need.

Reynolds says the Masters course in information systems at the University of Melbourne has taken into account the initial findings of its research and is now focused on three elements: project management, managing sourcing and business analytics.

He says the biggest problem is attracting students.

"Student's entry into university is primarily driven by their parents and parents are not advising their kids to go into an IT career because they have negative perceptions about the potential for a career in technology," Reynolds says.

"But there's high demand from Australian companies. They need these skills and it's an interesting and exciting job to be applying technology change across an organisation."

and all agreed that the business landscape was changing irreversibly.

However, when the bust occurred shortly afterwards, Cooke says businesses simply pulled down the shutters to IT graduates and left them flapping in the breeze.

He recalls that when he began his career as a graduate at Qantas, the company provided a full graduate training program. It would hire a dozen graduates every six months and offer a clear and impressive career path.

"However, after the bust they just stopped," he says. "So did government departments and the big consulting houses, and then IBM and other big IT firms.

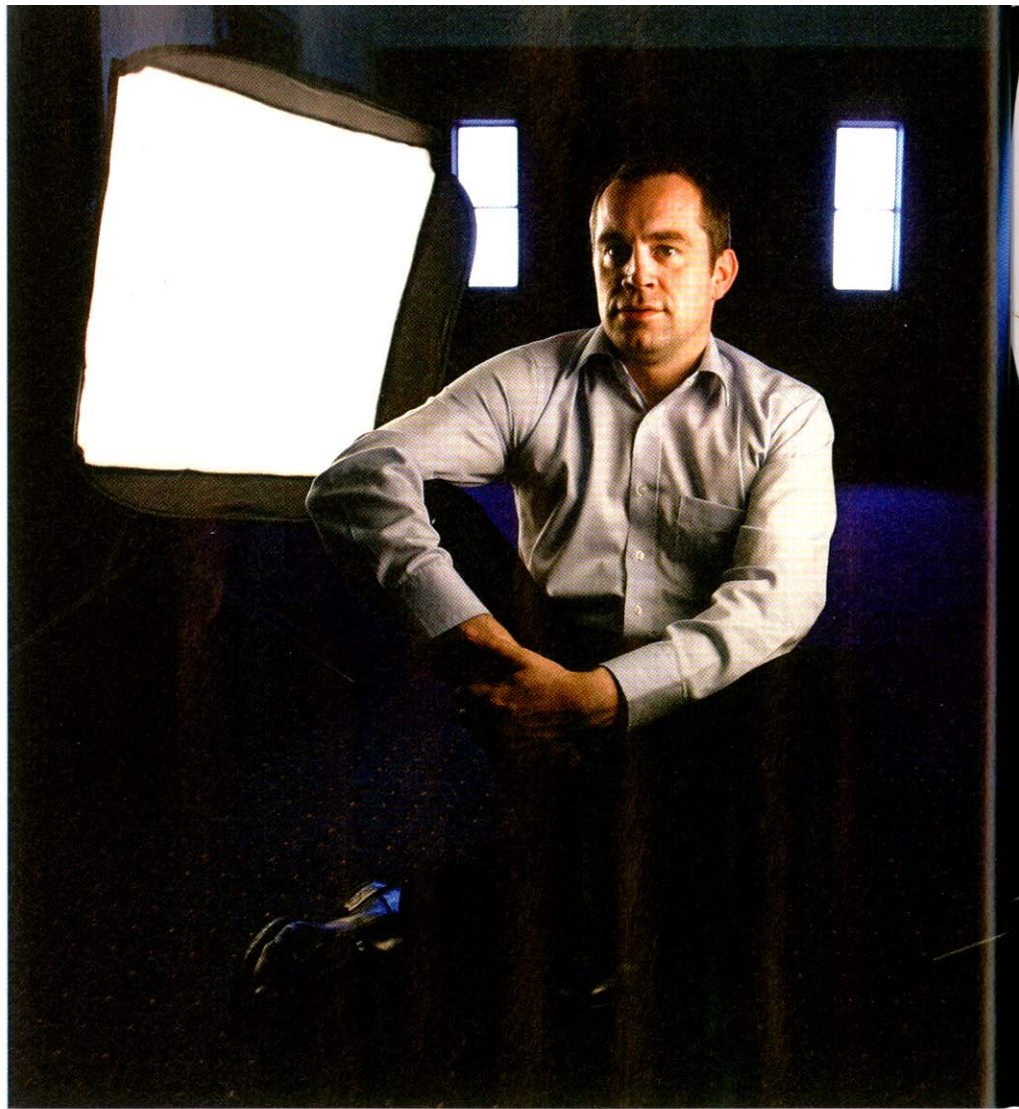
"The industry just stopped bringing new people in. My brother did an identical degree to me a few years after but there were no jobs for him when he graduated. So you started to get students halfway through a degree and ready to make career choices, and the IT roadshows stopped and people were steered away from IT. The rot set in then."

Andrew Milroy, industry director, ICT at Frost & Sullivan, also believes employers should shoulder some of the blame for the situation they find themselves in. He says they quickly became too fussy after the tech wreck and demanded their new hires arrived as a complete package of business skills and technical genius.

"Employers in Australia are a bit conservative, even now," Milroy says.

"They're not willing to take risks and are very fussy in exactly what they want and then they complain that these people aren't around, rather than taking on the people with potential to train up."

Bill Gibson, chief information officer of the Australian Tax Office, says he is managing to attract about 40 IT graduates a year but would ideally like more. He says the department has established relation-



ships with a number of universities and is achieving good results from its strategy of establishing teams in various parts of the country such as Brisbane and Adelaide.

He has accepted that he can't always expect the talent to move to Canberra, so has sought to establish meaningful operations in other areas.

"I believe the skills shortage is spotty; there is high demand in highly technical areas like IT security or computer forensics, but the areas I really want more people in are those that require sound analytical problem-solving skills," Gibson says.

"They don't necessarily have to have started their careers in computers. I see an opportunity to take people with fundamental analytical and problem-solving skills from any discipline and cross train them."

**Andrew Milroy,  
Frost & Sullivan:  
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willing to take risks  
and train people.**

## ICT CAREERS WEEK TO BROADEN HORIZONS

Australia's first National ICT Careers week is being held from July 28 to August 2 to showcase the dynamic career opportunities available to graduates across the industry.

The Australian Information Industry Association, which is organising the event, says a wide range of organisations from ICT interests to educational institutions are supporting the week through events being planned around the country.

"The National ICT Careers Week will broaden the horizons of young school leavers who may not have considered undertaking ICT studies or the possibilities involved in a career in the ICT industry," says Penny Coulter, chair of the Careers Week Steering Committee and president of the Information Technology Contract and Recruitment Association.

The business and government worlds have begun to get back on the front foot in the talent creation business. Several graduate roadshows have started again and most of the larger organisations offer graduate programs and increased internal training in order to develop and retain staff.

The dean of the IT faculty at University of Technology, Sydney, David Wilson, says businesses are increasingly keen to sponsor programs and students. Its Bachelor of IT course has been run only for sponsored students and its 2008 intake of 33 was its biggest for 14 years. UTS is one of many

NSW institutions that held graduate fairs earlier this year.

Wilson says the number of scholarships offered tends to be a reflection of supply and demand for graduates. Interest is now coming from businesses of all sizes. IBM, Westpac Banking Corporation, Commonwealth Bank of Australia and American Express have been sponsors since 1988 but four of its new sponsors are relatively small software engineering organisations.

"The main driver for these businesses is to get the first bite of the cherry when the graduates emerge into the workforce," Wilson says.

"Although there's no legal requirement, there is a moral imperative on the student that if they've received a scholarship from a company then they should join them. Over the past few years, 85 to 90 per cent have joined one of the sponsor organisations."

Wilson says that IT workers, compared with those in other disciplines, are more likely to be motivated by interesting work, so CIOs looking to elevate their organisation from the throng should highlight the fact that they will develop interesting and

marketable skills if potential candidates decide to join them. While it can feel self-defeating to develop talent within your team only to see them then attract offers from elsewhere, Wilson says businesses will have to accept that this is part and parcel of life.

Jeff Smith, CIO at Suncorp-Metway, is an advocate of the concept of providing a challenging and interesting working environment for his IT team in order to attract new recruits and retain existing valued staff. He says he is convinced that people want to go and work where they can be productive and exercise their passion, and believes that many become disappointed when they enter the workforce in a big organisation and see all the bureaucracy and roadblocks to development.

Smith has developed an agile approach to IT projects and has recently begun work on a program of 25 to 30 courses with Queensland University of Technology, which will be provided for internal staff and eventually to other students at the university.

Like many CIOs, Smith is critical of some of the technology degrees offered by Australian universities and believes that by working alongside these institutions, courses can be made more relevant to business needs. He says universities usually have very fragmented programs and advises academics to copy what some of the world's best universities do, which is to simplify their programs.

"If you go to Stanford or Berkeley (universities in the US), they have two programs, generally analysis and computer science. They figure that as long as they teach the core pieces and they get good at it, technology will change every month once you leave uni, so the graduates will be able to adapt to it," Smith says.

"I think the universities here try to adapt real time in terms of the teaching, so instead of having two programs they'll have 10. But if you do that you become mediocre at it. The courses are too specific;

you can't be an expert in 10 different things. If it were up to me, they'd go back to just a hardcore computer science program and a business analysis program."

John Wadeson, CIO at Centrelink, says that on top of the constant need to fill IT positions caused by a wider skills shortage, graduate recruitment is extremely important due to the ageing workforce.

Centrelink has a lot of employees in their 50s and recruiting younger staff is necessary to keep numbers up and ensure a balance of age groups.

Wadeson says he has been happy with the standard of graduates he has hired in the past couple of years and has started to adopt graduate-friendly initiatives to boost numbers. Also, a development centre in Adelaide has helped attract graduates.

"We've been really successful with the Adelaide universities," he says. "This is because we can offer their graduates the chance to work on really big systems as part of a national organisation, while staying in Adelaide. Also, in Adelaide you aren't competing as much with the private sector.

"Additionally, we've begun an apprenticeship program which targets people with aptitude and encourages them to study. This is embryonic, though, so I'm still hoping the universities manage to come up with some imaginative ways forward."

Milroy of Frost & Sullivan says the idea that the offshoring of jobs to India has decimated the potential for an IT career in Australia has been blown out of all proportion, given the comparatively small proportion of work that leaves the country. He says that instead of looking overseas and complaining that foreigners are doing our jobs, we should be encouraging more foreigners to do jobs we can't fill.

He says the government needs to make its immigration controls more flexible and representative of the professional demands of the country.

"They make immigration more complicated than it needs to be," he says. "Singapore is much easier and therefore doesn't face shortages to the extent that the Australian economy does. If you get a job you're in.

"Instead of saying exactly what qualifications and experience a person has to have before they can work here, I'd be more inclined to say that if someone can offer you a job in Australia then you're welcome to come in." \*

LOUIE DOUVIS