

Victoria's ICT Skills Initiatives

DEPARTMENT OF BUSINESS AND INNOVATION



Message from the Minister

Information and communication technology (ICT) is critical to supporting business innovation and driving Victoria's growth. However, this activity can only be delivered with a skilled and responsive ICT workforce. To secure this workforce and make sure Victorian businesses have the people they need tomorrow, it is essential that we act today.

The initiatives outlined below represent an investment of around \$2 million, through to 2013, to deliver targeted programs necessary for continued growth of ICT in Victoria. This includes encouraging students to pursue ICT-related careers, tapping potential sources of workers, and delivering training programs that are responsive to industry needs.

These initiatives are a reflection of the importance of ICT as an enabler of innovation, to boost productivity growth and drive transformation.

The Hon Gordon Rich-Phillips MLC
Minister for Technology

Overview

ICT is well-established in business operations and strategy and an effective, proven driver of productivity. Increasingly, businesses need skilled ICT workers to support business transformation and enable innovation in products and services to give them a competitive edge.

In the last few years, Victoria has relied on an increasing population to provide economic growth, but this trend cannot continue. Future growth must come from improvements in innovation and productivity. With generally low unemployment, businesses need to work smarter to stay ahead, and this means more effectively understanding and applying ICT.

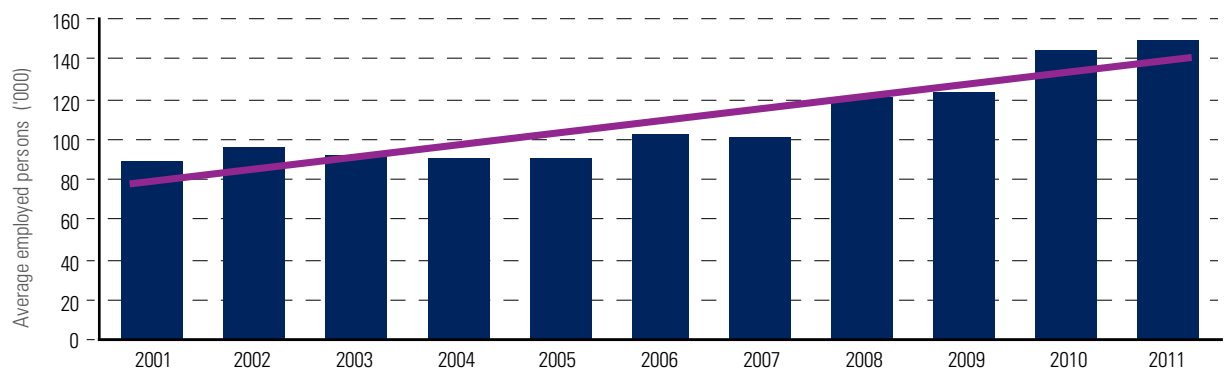
The ongoing development of a highly-skilled ICT workforce will play a vital role in all sectors of the Victorian economy. ICT can underpin

integrated transport solutions, advances in medical research, more efficient use of resources, and better education. As one of the major users and purchasers of technology services, the Victorian Government is reliant on a skilled technology workforce. Having a good local supply of ICT skills also improves Victoria's ability to attract investment to the State.

Around 145,000 Victorians are employed in ICT in Victoria, accounting for over five per cent of the total Victorian workforce¹. Within the ICT workforce, including both IT and telecommunications streams, there is steadily increasing demand for ICT professionals.

¹ Australian Bureau of Statistics, Labour Force Market Survey, May 2011

Table 1: Average ICT employment in Victoria 2001–11





For the foreseeable future, ICT skills will be in demand. Courses in ICT must teach the latest skills as well as an understanding of how to apply them in the workforce. Victoria has the strongest skilled supply of ICT graduates of any Australian state, but enrolments have been weak in the last ten years and there will continue to be areas where supply will not meet industry needs either in quality or quantity.

To meet future demand, we need an education and training system that will continue to deliver skilled workers over the long-term. At the same time, it must be agile enough to respond quickly to emerging needs driven by technology and market developments. Both the higher education and vocational education and training (VET) sectors have important, complementary roles to play to achieve the right balance.

The industry already has active and engaged associations, such as the Australian Information Industry Association, the Australian Industry Group, the Australian Computer Society and the Victorian Information Technology Teachers Association, which deliver support to ICT workers and businesses. Working with these bodies, the Government can help to coordinate initiatives, drive collaboration among key players, and provide information about prevailing trends and opportunities.

This suite of ICT initiatives will help to address some of the needs of the industry and ensure that Victoria stays at the leading edge of ICT skills development and application. It will have a focus on three important areas:

- > **Careers awareness** – working with education providers and industry to address inaccurate perceptions of ICT careers and encourage students to pursue ICT-related courses and careers.
- > **Skills building** – enhancing the quality and breadth of ICT courses and improving job readiness of ICT graduates.
- > **Growing the workforce** – increasing the supply of ICT workers from non-education pathways, and increasing the number of women in ICT.

Part of the Government’s commitment to the industry and education stakeholders is to develop and publish the best available information and statistics about ICT skills. The annual Victorian ICT Skills Snapshot is an authoritative guide to the supply of and demand for ICT workers in Victoria across all industry sectors, which brings together data and information from a diverse range of sources into a single resource.

Action areas	Initiatives
Careers awareness	<ul style="list-style-type: none"> ICT: Start Here. Go Anywhere careers awareness campaign Teacher and student package Attitudinal study ICT ambassadors pilot
Skills building	<ul style="list-style-type: none"> Technology skills work-integrated learning (TSWIL) Tertiary work-integrated learning collaboration pilot Telecommunications trainers demonstration project ICT vocational education and training (VET) trainers internships pilot International students research
Growing the workforce	<ul style="list-style-type: none"> Workforce research and development Skilled migration National Broadband Network (NBN) skills working group



Careers awareness

With the pervasiveness of ICT in the economy, a technology qualification can lead to secure and diverse work across a multitude of sectors. However, research commissioned by the Victorian Government shows that many students are not aware of the breadth of opportunities that can stem from a course or career in ICT, and many misunderstand the nature of ICT work.

The Government will work to improve awareness and understanding of ICT careers, particularly at secondary schools and encourage more young people to consider enrolling in ICT-related courses.

The main target groups are:

- > secondary school students and their key influencers
- > school leavers and tertiary students
- > ICT professionals, including mature workers looking for a career change, and skilled migrants.

ICT: Start Here. Go Anywhere careers awareness campaign

Together with industry and education stakeholders, government will deliver a targeted campaign including informative, interactive events; industry tours and briefings; online information about ICT careers and study options on the Victorian Government Youthcentral website (www.youthcentral.vic.gov.au/jobs/ICT); and collateral aimed at students and key influencers highlighting ICT study and career options across industries.

Teacher and student package

Government will provide support for a range of activities aimed at promoting awareness of ICT skills and careers among secondary school students and their IT teachers.

Activities will include supporting the Victorian Information Technology Teachers Association (VITTA) to deliver the Annual Teachers Conference which brings together educators and ICT industry representatives to enhance learning outcomes for students and professional development for teachers.

Other activities include the ICT Achievers Program to provide ICT work experience opportunities for Year 11 students; and industry tours for ICT teachers and career practitioners aimed at making sure teachers have the latest ICT training.

Attitudinal study

An attitudinal study will be conducted in 2012 to track changes in the perceptions and motivations of 14 to 19 year-old students when making ICT study and career decisions. This study will build on previous studies conducted in 2001, 2004, 2007 and 2009 and will offer opportunities for comparison.

ICT ambassadors pilot

Young ICT ambassadors will be selected to help promote ICT study and career options among young students, to help dispel myths about careers in ICT.

Skills building

To ensure studying ICT is engaging and relevant, the Victorian Government will continue to work with the post-secondary education sectors to enhance the quality and breadth of ICT courses. This will also improve the job readiness of ICT graduates.

This initiative will also help to build the skills required for the shift to an ubiquitous high-speed broadband environment over the coming years – a shift which will increase the demand for both workers and qualified trainers.

The main target groups are:

- > tertiary students
- > ICT-employing businesses
- > school leavers.

Technology skills work-integrated learning

More work-integrated learning opportunities will be created for students, to improve the job readiness of university and VET graduates. Past experience has confirmed the effectiveness of work-integrated learning in preparing students for professional practice. Such experience significantly helps students to transition into work and careers, and it also increases collaboration between industry and the education sector.

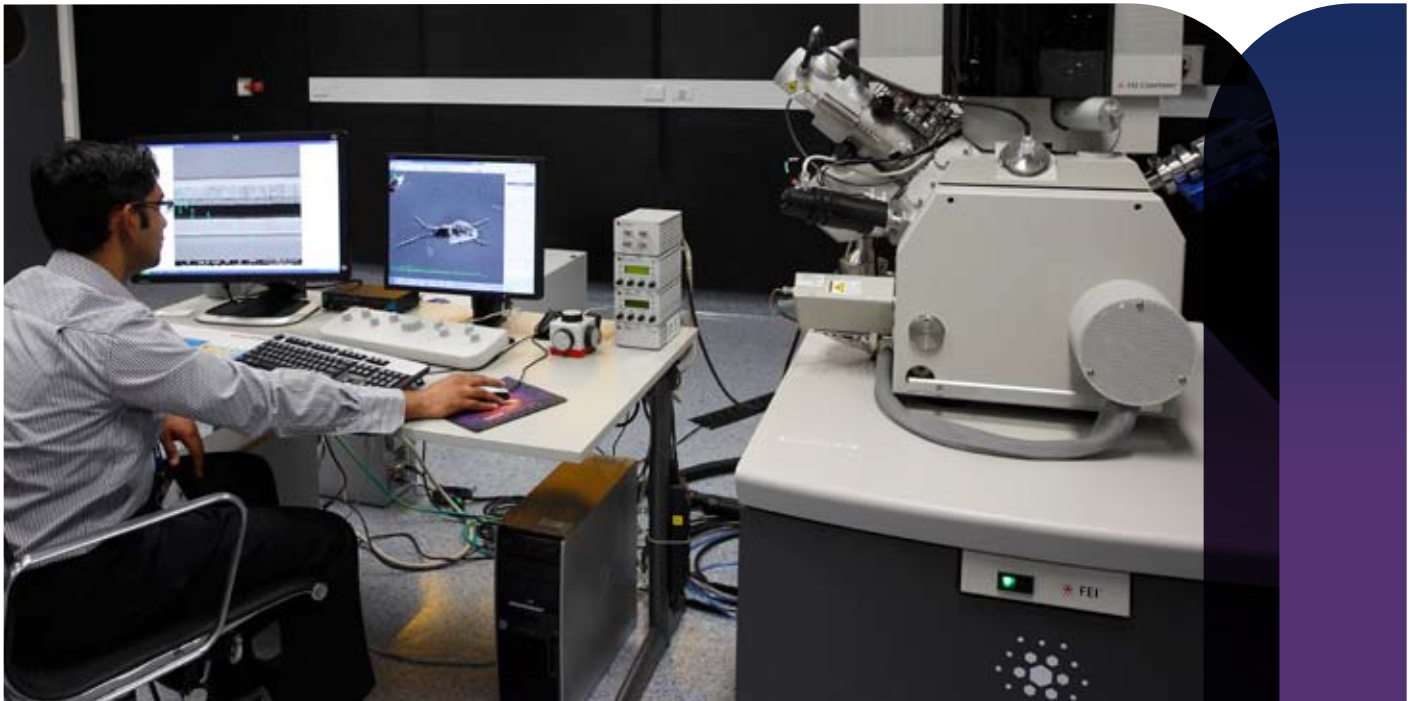
Tertiary work-integrated learning collaboration pilot

Government will investigate the need for ICT university graduates to pay full fees to access top-up training in the VET sector. A pilot program will be delivered with Skills Victoria to:

- > develop partnerships between universities, the VET sector and industry
- > develop an articulated pathway for students to attain VET qualifications while concurrently completing higher education
- > demonstrate access to VET qualifications, using the Victorian Training Guarantee, while studying higher education.

Telecommunications trainers demonstration project

The National Broadband Network (NBN) rollout has generated significant demand for qualified people to deliver relevant training in areas such as provisioning of broadband infrastructure and household integration. This project will provide certified trainers with the capability and qualifications to deliver this training. In turn, Victorian workers will upgrade their skills and have the chance to further leverage opportunities created by new broadband infrastructure and the digital broadcasting switchover.



ICT VET trainers internships pilot

This pilot program will aim to refresh and maintain the currency of VET trainers' ICT industry experience and expertise. VET trainers will be offered opportunities to undertake internships or 'industry placements' for up to three months. In addition, ICT industry representatives will be offered opportunities to teach at registered training organisations (RTOs), or to present guest lectures.

International students research

A research project will investigate factors that currently affect the transition of international ICT students into the Victorian workforce. The research will explore the international student cohort studying ICT qualifications in Victoria, with a view to identifying the trends in their countries of origin, their pre- and post-qualification intentions, and what barriers to graduate employment they experience.

Growing the workforce

Markets and demand are both changing rapidly, making it critical to better understand and support a variety of sources for skilled ICT workers. For example, statistics reveal a potential for increasing the numbers of women, migrants and international students pursuing local ICT careers. Each of these cohorts faces specific issues in gaining or returning to employment, and there may be a role for government in reducing some of the barriers.

The ICT workforce is also highly contracted. This has implications for ongoing training and skills development, and career stability. Again, if government gains a clearer understanding of the barriers to businesses establishing longer term ICT career development pathways, there may be ways government can help.

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The main target groups are:

- > ICT professionals
- > career changers and former ICT professionals (now outside the workforce)
- > skilled migrants
- > returning to work professionals.

Workforce research and development

New research will be carried out to investigate how SMEs approach professional development for ICT contractors, and what factors compel contractors to accept this responsibility for themselves.

Research will also seek to understand some of the trends associated with professionals returning to work, career changers, and/or retirees as a potential source of supply for ICT skills, and the factors that might attract these cohorts into the ICT workforce.

Skilled migration

Government will provide useful resources and information targeted for ICT professionals migrating, or looking to migrate to Victoria, to help ensure these people experience a seamless transition to work.

NBN skills

Government will continue to work in collaboration with the NBN Co to investigate the skills needed to construct and operate the NBN. This will involve assisting in the development of NBN Co's Workforce Development Strategy, with particular emphasis on Victorian circumstances, skills and training needs.