

**eSecurity in Victoria**  
Developing Locally, Delivering Globally



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# Minister's Message

In recent years, eSecurity has become one of the fastest growing sub-sectors in the ICT industry, both in Victoria and around the world. For the smallest and the largest companies, eSecurity is a top priority just to stay in business. And with ever-increasing reliance on networking, convergent technologies and mobile communications, demand for eSecurity products, services and specialist skills is certain to keep rising.

Victorian companies are in an excellent position to profit from this burgeoning international market. Victoria has a thriving ICT industry achieving nearly \$23 billion in revenue and more than \$1 billion in annual exports. We lead the nation in the supply of ICT graduates and expenditure on research and development and have a range of specialist sub-sectors that produce world-class products and services for global markets.

The Victorian Government is committed to maintaining this competitive edge and, in 2005, released its *ICT Industry Plan 2005–2010*. The plan identified the development of a strong ICT production sector and the use of leading-edge technology by the State as 'a smart and strategic way forward for both the ICT industry and the State as a whole'.

The *ICT Industry Plan 2005–2010* describes a comprehensive set of initiatives to encourage and support our local companies and drive sector growth. It recognises Victorian strengths in specialist sub-sectors such as eSecurity, and provides targeted assistance to help reduce some of the barriers to competing in a global market.

This niche sector has already established international recognition and holds the potential to make a more substantial impact as the market develops. For those Victorian eSecurity companies with cutting-edge skills, entrepreneurial spirit and a preparedness to invest and innovate, the Government is committing its support through initiatives outlined in this statement.

*eSecurity in Victoria: Developing Locally, Delivering Globally* describes Victoria's strengths in the eSecurity sector – from the training of a skilled workforce, through world-class R&D facilities and infrastructure to connections to global markets.

For international investors or companies looking for an Australian base, or local companies looking to expand their horizons *eSecurity in Victoria: Developing Locally, Delivering Globally* is a snapshot of what Victoria has to offer now, and into the future.



A handwritten signature in black ink that reads "Marsha Thomson". The signature is fluid and cursive, with a long, sweeping underline.

**Marsha Thomson**  
Minister for Information and  
Communication Technology



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# 1. The eSecurity Opportunity

## What is eSecurity?

Electronic security - eSecurity – is any tool, technique, or process used to protect a system's information assets. eSecurity enhances or adds value to the computer network and is composed of soft and hard infrastructure.

The soft infrastructure components are the policies, processes, protocols and guidelines that protect the system and the data from compromise.

The hard infrastructure consists of the hardware and software needed to protect the system and data from threat to security from inside and outside the organisation.

At present, eSecurity solutions can be loosely grouped under one of the following subsections:

- identity management
- applications and systems security
- security testing and assessment
- information security management
- specialised areas including documentation authentication, encryption and fraud prevention.

## The Global Market

Over the years, the global ICT industry has been subject to periods of economic turbulence. More recently, the industry has been experiencing a time of consolidation and continued steady growth.

Within this environment, the International Data Corporation's (IDC) 2005 market analysis estimates that the total worldwide eSecurity market stands at \$US27.4 billion, and predicts an annual growth rate of 16.9 percent to 2009.

The survey also predicts that worldwide security software revenue will increase from \$US10 billion in 2004 to \$US19.5 billion in 2009. Over the same period, global security services revenue is expected to grow from \$US12.2 billion to \$US29 billion, with security hardware revenue increasing from \$US5.2 billion to \$US11.8 billion.

The IDC's Australia Security Solutions 2006-2009 Forecast Update estimates that the Australian share of the international eSecurity market will follow a number of trends, including:

- growth of the security solutions market at 9.9 percent to reach nearly \$1.2 billion by 2009
- software will continue to drive market growth, increasing at 13.3 percent to reach \$546 million by 2009

- the hardware market is expected to grow at 8.4 percent to reach \$76.9 million by 2009
- the security services market is expected to grow at 7.3 percent to reach \$561 million by 2009.

The international ICT industry is shifting away from the traditional European, US and Japanese powerhouses of production and consumption towards the Asia-Pacific region, where markets are growing steadily.

This region is already a centre for ICT production, and possesses a large customer base. In addition, the ICT sector offers an attractive package of scale, competitive wage rates and a skilled workforce.

The nature of the eSecurity sector means that geography does not have to be a barrier to developing markets outside Australia. If, as expected, spending on ICT in Asia grows at an average of more than nine percent over the next few years, Victoria is well positioned to continue to exploit this progress.

For example, to date, eight out of India's top 15 ICT companies operate in Victoria, which is enhancing the local capacity to forge inroads into global supply chains, tap into a larger skills workforce, and open employment opportunities for local ICT workers.

**Witham Laboratories** is one of the few laboratories in the world accredited to perform evaluations of Personal Identification Number (PIN) entry devices to the requirements of the Australian Payments Clearing Association (APCA), and the Payment Card Industry (PCI).

The company's understanding and experience with all of the PCI requirements, physical PIN security, PIN audit and Data Site Security standards make it unique in the world.

Witham Laboratories was started in Melbourne in 1996 by Dr Stephen Roberts and a decade later has customers in Australia, New Zealand, China, Spain, the US, England, Japan, Korea, Belgium, Turkey, Colombia, Singapore, Taiwan, Fiji, Canada, France and Mongolia.

'Victoria and specifically Melbourne is a great location to operate eSecurity-related business because it has access to excellent skills and resources. Melbourne is home to some of the best universities in Australia, including ones that offer courses specifically tailored to eSecurity,' says Andrew Jameson, Principal Analyst.

## Victoria's ICT Capabilities

With upwards of \$22.9 billion in ICT revenue, annual exports worth around \$1 billion, the Victorian ICT industry is already a major contributor to the economic vitality of this state.

Victoria accounts for one-third of the Australian ICT industry and employs over 76,500 people.

Victoria's eSecurity sector is a significant part of the ICT industry. Local universities and industry are collaborating to ensure that the next generation of ICT workers have the necessary eSecurity capabilities to meet future market and technological challenges.

### Developing Locally

Locally, Victoria's eSecurity companies recognise the increasing importance that Standards and Accreditation have on the global market.

Capability Maturity Model Integration and the ISO group of standards provide ways to demonstrate capabilities in software engineering that can provide a major point of differentiation in some markets.

Added to these standards are software metrics – the tools that organisations must use to measure, benchmark and improve software engineering performance. Victoria is a world leader in this field and is the headquarters of the International Software Benchmarking Standards Group. ([www.isbsg.org](http://www.isbsg.org))

And, both Victoria and the eSecurity sector offer substantial advantages to overseas investors. It is significantly cheaper to operate in Australia than in Western Europe or the

US, and by providing advanced ICT and business skills, Victoria is an attractive base for launching into major markets.

To date, over 40 leading multinational eSecurity businesses have set up operations in Victoria, including CA, Symantec, IBM and more recently, Cybertrust Corporation. In addition, there are at least 20 home-grown high achievers working at the cutting edge of eSecurity.

Victoria offers the ICT sector a thriving general economy, solid infrastructure – including telecommunications and transport – excellent tertiary institutions and a sophisticated customer pool, particularly in banking, financial services and telecommunications.

Having a supportive environment that protects intellectual property (IP), not only through regulation, is one more good reason to locate in Victoria.

As one of the largest purchasers of ICT products and services in Victoria, the Government is committed to ensuring that its procurement practices support innovation and competition, while achieving value for money.

As part of the *ICT Industry Plan 2005-2010*, the Victorian Government announced a suite of ICT procurement policies. In the area of IP this means that ICT procurement contracts across the Victorian Government now provide, by default, that ownership of IP developed under contract is vested in the contractor rather than the Government.

Strategies such as these help to create a supportive environment for developing IP and give the local ICT sector the means to achieve global success.



With the aim of decreasing the cost of doing business with government, the Victorian Government's eServices Panel streamlines the tender process that companies must navigate to win Government service contracts. Recently, an eSecurity sub-category was added to the eService's Panel classification list in recognition of the growing imperative to protect information systems and encourage participation by local companies.

The Government also considers that it should take a leadership position to ensure the security of its own data. Under the guidance of the Office of the Chief Information Officer, an IT Security Community of Practice has been convened. This brings together departments and agencies to facilitate and support the development of whole-of-government security standards, practices and services.

Victoria's reputation for innovative ICT development is based in its universities and research facilities. Local tertiary institutions produce around 39 percent of the nation's ICT graduates, with a number of these institutions offering specialised eSecurity courses and degrees, and conducting eSecurity research that is producing pioneering security solutions. In addition, Victoria accounts for more than 36 percent of the national private sector expenditure on ICT R&D.

Mindful of the critical importance of innovation for economic performance, the Victorian Government encourages the establishment of a robust infrastructure for advanced ICT research to maximise opportunities for industry and academic collaboration.

### Delivering Globally

Victoria's eSecurity sector is carving out a lucrative niche position in the global arena by offering tailored and highly specialised products and services.

**Witham Laboratories** and **Senetas Corporation Ltd** are two examples of successful home-grown companies that are exporting to the world.

As outlined in the *ICT Industry Plan 2005-2010*, the Victorian Government has encouraged a coordinated approach to the promotion of the ICT industry in strategically important markets.

The Government has also committed to:

- continuing support for companies who are planning and executing export strategies
- expanding its in-market support for local companies to facilitate better access to information from the market
- providing assistance to companies to achieve results from their overseas visits.

Details on the various Victorian Government industry support programs available to the ICT sector are outlined in section 3: Supporting the Sector.

Established in Melbourne in 1999 by CEO and Chairman Francis Galbally, **Senetas Corporation Ltd's** success has been built on the quality of its world-leading encryption products and its ability to tailor and implement whole-of-organisation security systems.

Its CypherNet range of encryption devices, developed in Melbourne, have the highest international levels of accreditation and are trusted by government, military and commercial organisations in Australia and internationally - including the Blue Chip Australian Banking agencies, US Department of Defence, and Asian and European law-enforcement agencies.

With its head office in Melbourne, a branch in Sydney and worldwide distributors, Senetas employs over 60 people, and in 2006 achieved a record annual revenue of \$23.6 million and net profit of \$9.7 million.

The Victorian Government has worked with its stakeholders to provide a comprehensive response to the international eSecurity opportunity by:

- focusing on strategies for reaching lucrative niche markets
- supporting Victorian companies to succeed globally
- developing a highly-skilled workforce to meet the needs of industry nationally and internationally
- supporting R&D through the establishment of world-class facilities and infrastructure
- facilitating collaboration between the public and private sectors
- providing resources and support to showcase the Victorian eSecurity sector to the world.



## 2. Victoria: Meeting Needs and Maximising Potential

### Developing Skills and Investing in the Future

The Victorian ICT industry is underpinned by a world-class tertiary education sector and highly advanced R&D.

As eSecurity becomes increasingly complex and impacts on every part of business life, a highly skilled workforce will not only support the success of the sector, but given the importance of ICT to the Victorian economy, it will also benefit the community more broadly.

To grow and succeed, the Victorian eSecurity sector must continually innovate and develop local intellectual property. Strong links between the tertiary sector and industry are fundamentally important to facilitating this as well as providing the workforce required to implement, sell and service new developments, locally and globally.

The Victorian Government has taken a lead in building the bridges to link education to industry by establishing the infrastructure necessary to support these relationships.

By Australian standards, Victoria invests heavily in ICT R&D, with the State's private sector ICT R&D accounting for upwards of 36 percent of the national total.

The Government will continue to work with the education sector and industry to improve links between the two, leading to better sharing of research, greater skills exchange and making ICT careers more appealing to young people.

'Victoria offers a unique environment for high-end development centres – universities that produce world class skills, a stable workforce that is loyal to the businesses it works for and a legal environment that protects the IP we are developing.'

Dr Eugene Dozortsev, Vice President  
Research and Development eTrust Security Solutions,  
CA International Inc.

### ●● Realising the benefits of working together

Founded in the US in 1976, CA is one of the world's largest IT management software companies. CA's Australian subsidiary, CA (Pacific) Pty Ltd, established in 1979 now employs more than 600 staff and plays a critical role in the development of the company's eSecurity solutions.

CA's largest eService security R&D lab outside the US is in Richmond, Melbourne. The lab is recognised as a Corporate Centre of Excellence for Security, and its focus is to address key security issues such as identity and access management and threat management technology as well as undertaking ground-breaking work in eSecurity.

More than one third of CA's local R&D staff is hired from its internship program that takes advantage of the skill base of students from local universities.

CA has committed \$300,000 over the next three years to Swinburne, RMIT and Deakin Universities, to establish scholarships, research links and internships in various eSecurity areas.

One of the research collaborations that has already commenced between CA and Swinburne involves the development of security-aware service oriented architecture (SOA) technologies. These technologies help deliver secure and robust enterprise systems and generate significant benefits and opportunities for both consumer and provider organisations.

In addition, CA has committed over \$100,000 to collaborate with other Victorian universities at both the undergraduate and postgraduate level.



## ●● Understanding and meeting industry needs

Victoria's tertiary institutions have responded well to the needs of the ICT and eSecurity sectors, both in terms of the courses they are providing and the R&D that is being undertaken. A strong relationship between academia and business has been a guiding feature in these institutional changes.

Reflecting the increased industry demand for skills in eSecurity the Faculty of Information Technology at **Monash University** will offer two eSecurity degree options from 2007: the Bachelor of Information Technology and the Masters of Information Technology. Both will have a major in Security.

At the **University of Melbourne**, the Organisational and Information Security Group (OISG) in the Department of Information Systems brings together experts with both research and professional experience in eSecurity and business processes. The OISG has particular strengths in security governance, security culture,

risk management, and business continuity planning. The School of Enterprise offers additional eSecurity training, research across various disciplines and consulting services.

**Swinburne University of Technology** has also built its reputation on its collaborative efforts with industry, and its partners include the EU Adaptive Services Grid Consortium, NICTA, CSIRO, CA, Microsoft, SAP, Telstra, and Cisco Systems. Swinburne University also works extensively with end-user organisations such as Powercor and VicRoads.

Industry collaboration has been the hallmark of eSecurity training at **Deakin University**. The University's student Advisory Panel includes industry representation from eSecurity to ensure the university stays up-to-date with current movements in industry research and hiring trends. Deakin is also working with other universities in Australia and overseas, as well as with government

organisations, and research bodies such as CSIRO. In addition, companies including CA, KeyTrust, Cybernet and IBM work with students on eSecurity projects.

The **Royal Melbourne Institute of Technology University** has a strong history of working with industry. The Program Advisory Committee of the Information Security and Assurance postgraduate programs comprises industry representatives and RMIT academic staff, and advises on matters concerning the development, delivery and assessment of industry-related courses.

At the **University of Ballarat**, the Centre for Informatics and Applied Optimisation (CIAO) undertakes research in eSecurity fostered by the research cluster InSeCt (Information Security Cluster), involving data security, network security, transactional security, encryption, identity theft, web security and computer forensics.



## Making Global Connections

To succeed on the world stage, the Victorian ICT sector needs not only to match, but stay ahead, of its international competitors.

SMEs must be pro-active in understanding market developments here and overseas. Victorian companies must be outwardly focused and capable of identifying and pursuing market opportunities wherever they are. SMEs must maintain strong entrepreneurial and business skills as well as identify and support the technical skills that will generate innovative products and services.

Many local ICT companies have achieved global success through partnerships. By adopting a variety of formal and informal arrangements with multinationals, Victorian eSecurity companies are forging partnerships and networks to acquire the skills, experience and resources necessary to build scale, innovate and compete on the global market.

These arrangements offer R&D opportunities, and entry to lucrative global supply chains and disparate customer pools.

In addition, the Victorian Government has programs in place to help Victorian eSecurity businesses enter and compete in local and global markets.

The **ICT Trade Events and Export Assistance Program** has proved to be one of the most popular and successful programs for Victorian companies.

The ICT Trade Events and Export Assistance Program was established to provide Victoria's export-ready ICT companies with financial assistance of up to \$10,000 each to take their products to the world market through involvement in overseas trade expos and business missions.

Combined with a series of **Emerging Markets Strategies**, which provide local ICT companies with market intelligence to identify lucrative overseas opportunities, Victorian eSecurity businesses can make more informed decisions about where best to invest their time and finances on the international stage.

### ●● Selling Victorian know-how to the world

In April 2006, the Victorian Government led 21 Victorian companies on a trade mission to Japan.

eSecurity software development specialist, **Hardcat Pty Ltd**, was among the group. Based in Melbourne, Hardcat has offices in Australia and the UK with resellers in Malaysia, Hong Kong, USA, Canada and Africa.

The modular Hardcat system, catering for the complete life cycle of an asset, allows clients to pick

and choose modules that best fit their requirements. Over 1,000 blue chip companies across 32 countries use Hardcat products, including key clients No. 10 Downing Street (UK), the Ministry of Defence (UK), Department of Defence (US) and Victoria Police.

As a result of the Japanese mission, Hardcat successfully negotiated sales agreements for their system with the British School in Tokyo and Hartford Life Insurance Japan.



‘Senetas was profiled in a case study prepared for the Victorian Government’s ICT Trade Events and Export Assistance Program, and through this, we received wide recognition. We also recently received valuable business support from the Agent-General in London, as the company undertook some business development activities in the UK.’

Francis Galbally, Executive Chairman, Senetas.

### ●● Brokering international alliances

In mid-2006, the Victorian Government facilitated an alliance with US giants Hewlett-Packard (HP) and Intel, on behalf of Melbourne-based eSecurity company **Cebridge**.

Cebridge has developed a world first technology, Locked Data Method, that ensures crucial business information remains available even when disaster strikes.

While traditional information back-up systems have limitations and are prone to failure, Cebridge’s Locked Data Method removes human error from the data back-up process.

The system also ensures data is stored in at least two distinct locations at any one time and uses military-level encryption.

The Cebridge-HP-Intel alliance has seen the pilot implementation of the Locked Data Method technology in Austrade Offices in Bangladesh, the Philippines, Singapore and Australia.

Once the technology has been piloted successfully, the alliance will work toward global implementation.

According to Cebridge Managing Director Cary Lockwood: ‘HP and Intel recognise the need for innovative eSecurity to stay at the cutting edge. Partnering with Cebridge gives them the ability to capture a new world market.’

Currently, Locked Data Method technology is used by OZChild and the Royal Flying Doctor Service.



## Building Local Partnerships

The Victorian Government recognises the vital roles that collaboration plays in overcoming obstacles to growth and driving further development of the local ICT industry.

The creation of industry clusters not only delivers the inherent benefits of collaboration such as knowledge transfer and economies of scale, it also provides an effective means of profiling the collective strengths of the Victorian industry overseas and a single point of contact for interested global entities.

Collaboration between Victorian and international companies and the local education and R&D sector will be supported by the Government's three year \$1 million **ICT Linkages Program** to develop existing collaborative organisations and the establishment of new and emerging clusters and networks in strategic areas.

## SECIA eSecurity

In July 2006, the State's eSecurity cluster, SECIA, received \$100,000 in government support through the ICT Linkages Program.

This consortium of eSecurity companies, universities and research institutions, recognises that a coordinated approach is the best way to tackle the impact of global competition on the sector's growth.

It is the view of the consortium that opportunities for providers of eSecurity software, hardware and associated services are expected to increase significantly as demand for eSecurity products and services increases and fraud prevention measures become stricter.

This puts increasing demand on community and industry to establish reliable means of proving identity in the electronic services world.

As the consortium says: 'It is timely for industry, universities and other research, organisations to seize the opportunities presented by these changes in order to develop the capabilities to provide cost-effective and accessible solutions.'

The objectives of the SECIA as outlined by the founder members are to:

- grow demand for products and services associated with the security of electronic information in Victoria
- grow the capability of industry in Victoria to meet this demand
- grow the capability of the Victorian eSecurity industry to succeed in national and international markets
- ensure that professionals with suitable eSecurity skills are available for companies in the eSecurity industry, as well as companies that use eSecurity products and services.

To meet these objectives, SECIA will undertake the following activities:

- encourage networking – between suppliers of eSecurity goods and services, eSecurity customers, and students seeking a career in the eSecurity industry

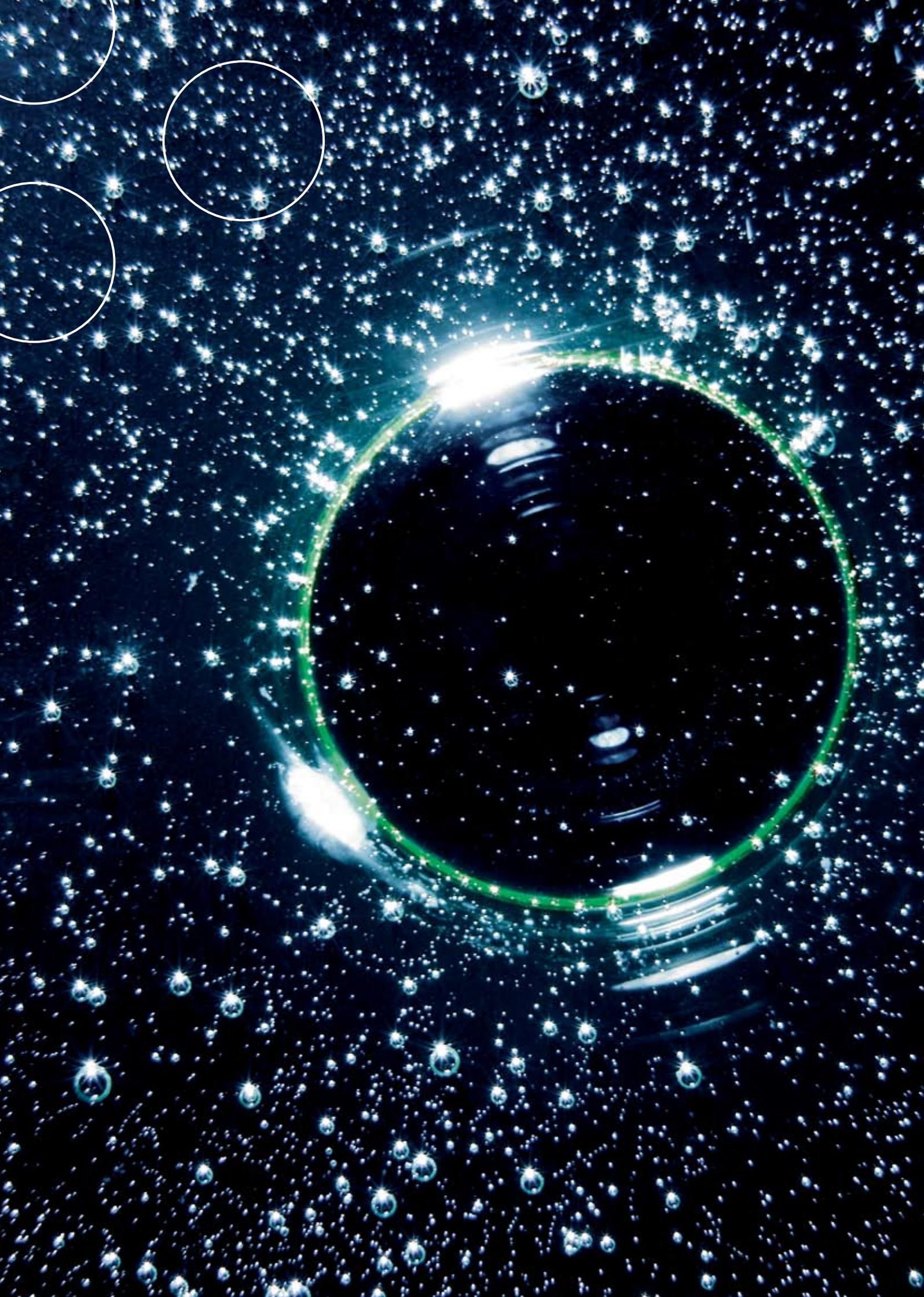
- encourage collaborations – between cluster members to develop new knowledge and technology, and to leverage each other's capabilities and strengths to provide the capability to win new business and expand the industry sector
- provide career pathways for students – by incorporating industry-relevant and supervised projects in undergraduate and postgraduate courses
- share insights – between members concerning technology and market trends
- promote the cluster – in national and international markets.

As a result of these activities, it is expected that eSecurity product and service suppliers will be better able to meet industry and government needs locally, nationally and internationally.

Other outcomes include potential customers being better educated and better able to conceive eSecurity specifications; universities having a better perspective of the commercial eSecurity space, which can be transferred to students; and eSecurity course content better meeting industry needs.

The creation of new jobs in Victoria in companies providing eSecurity products and services is expected to be another important flow-on effect from the cluster activity.

SECIA has so far attracted interest from some 80 companies, universities and government bodies, and is establishing its influence both nationally and internationally.



# 3. Supporting the Sector: Government Programs and Contacts

## Export Support

The Victorian Government has implemented a wide range of initiatives and programs to drive Victoria's eSecurity export market, including:

- The **Emerging Market Strategies** which assist local ICT companies to gather market intelligence and identify opportunities in high-potential international markets. The Government has the resources to gather independent market intelligence and is well-placed to be the nexus between two markets – whether it be facilitating an inward investment or brokering an export partnership between a Victorian ICT company and a client within an emerging market. The Government's **Access America, Access China** and **Access Middle East** programs are also available for companies exploring new markets.  
[www.mmv.vic.gov.au](http://www.mmv.vic.gov.au)
- The **ICT Trade Events and Export Assistance Program** provides Victoria's export-ready ICT companies with financial assistance to take their products to the world market. Involvement in overseas trade fairs gives local players the chance to establish an international profile, benchmark achievements, open new markets and gather new clients. Eligible companies are now able to receiving funding of up to \$10,000.  
[www.mmv.vic.gov.au](http://www.mmv.vic.gov.au)
- **Spotlight on Victoria**, demonstrating the capabilities of Victorian ICT companies to international markets.  
[www.mmv.vic.gov.au](http://www.mmv.vic.gov.au)

- Appointing an ICT investment and business development officer at the **Victorian Government Business Office** in Bangalore, India.  
[www.mmv.vic.gov.au](http://www.mmv.vic.gov.au)
- Showcasing Victoria's ICT capabilities through the **VicIT** database of Victorian companies available on the MMV website.  
[www.vicit.com.au](http://www.vicit.com.au)
- Assisting companies to explore and develop export opportunities through the **Opening Doors to Export Program**.  
[www.business.vic.gov.au](http://www.business.vic.gov.au)
- Providing elementary training, mentoring and business relationship development skills to Victorian ICT companies so these organisations can produce a three to five-year export action plan. This program, **Developing Business Skills for ICT Entrepreneurs**, is a joint initiative with the Australian Information Industry Association.  
[www.aiia.com.au](http://www.aiia.com.au)

## Collaboration Support

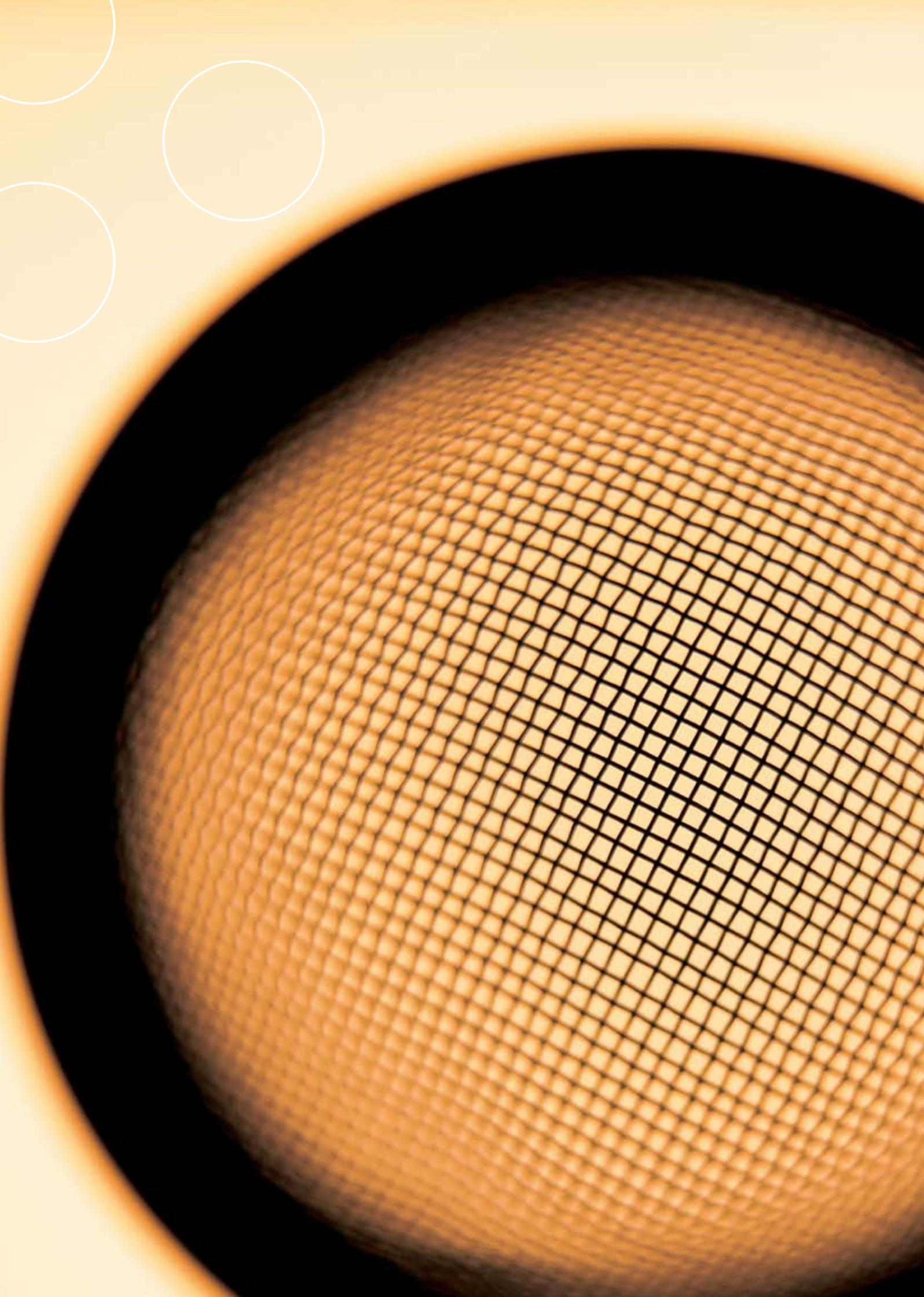
The Government has successfully implemented a number of initiatives designed to facilitate and support collaboration, including:

- The **ICT Linkages Program** supports the establishment of new industry clusters and networks by targeting emerging opportunities in ICT where Victoria can develop a competitive advantage. This is done by stimulating links between Victorian ICT companies, as well as facilitating synergies between companies and the local education user and R&D communities.  
[www.mmv.vic.gov.au](http://www.mmv.vic.gov.au)

## Skills and Education Support

The Government has worked closely with industry and the education sector to implement a number of initiatives that encourage the development of ICT skills and expertise.

- Implementing the \$450,000 **Industry and Universities Collaboration Pilot Program**, which promotes ICT as a study-path, improves graduates' job-readiness and increases the quality and number of links between industry and the education sector.  
[www.mmv.vic.gov.au](http://www.mmv.vic.gov.au)
- The Government's highly successful \$1.1 million **ICT Scholarship Program** supports ICT postgraduates undertaking research in Victorian universities.  
[www.mmv.vic.gov.au](http://www.mmv.vic.gov.au)
- Supporting the ICT Scholarship Program is the \$370,000 **ICT Industry Skills Scholarship Pilot Program** to encourage industry-based work experience to enhance the attractiveness of ICT courses.  
[www.mmv.vic.gov.au](http://www.mmv.vic.gov.au)
- In collaboration with the technology industry and education sector, the Government is playing a leading role in raising young peoples awareness about studying for a career in ICT with the **ICT: Start Here Go Anywhere** campaign.  
[www.youthcentral.vic.gov.au/jobs/ict](http://www.youthcentral.vic.gov.au/jobs/ict)
- The report, **Attitudes to ICT careers and study among 17–19 year old Victorians**, provides a valuable insight into the attitudes of this age group towards ICT. The report assists the Government and industry bodies to better understand how to more effectively communicate the complexities and dynamics of ICT courses and careers for young people.  
[www.mmv.vic.gov.au/Skillsandcareers](http://www.mmv.vic.gov.au/Skillsandcareers)



# 4. Showcasing Education: eSecurity Courses and Contacts

## Deakin University

Deakin University's School of Engineering and IT not only offers undergraduate and postgraduate courses, which include eSecurity units, but also has a three year Bachelor of Information Technology (IT Security) degree. The School of Information Systems also offers a course on business security management.

In addition, Deakin has collaborated closely with industry in eSecurity R&D to facilitate a smooth transition for their students from academia to business.

[www.deakin.edu.au](http://www.deakin.edu.au)

## Latrobe University

eSecurity is an important component of all undergraduate and postgraduate courses in the Department of Computer Science and Computer Engineering at La Trobe University. Specific units include Fault Tolerant and Reliable Systems and Network and Systems Security. In addition, the department is a CISCO Academy and provides accredited training for CISCO certification.

A number of projects in eCommerce security, wireless systems security and cryptographic systems and trust models and protocols are being carried out at honours, masters and doctorate levels. The department is also a member of the eSecurity cluster with other universities in Victoria.

[www.latrobe.edu.au/cs](http://www.latrobe.edu.au/cs)

## Monash University

The Faculty of Information Technology at Monash University offers undergraduate and postgraduate units in:

- Network Security
- Information Security
- Software Security
- Risk Assessment and Strategic Management of Information Systems.

From 2007, the faculty will offer two new degree options in the area of eSecurity:

- Bachelor of Information Technology and Systems
- Masters of Information Technology.

The Faculty of Information Technology also has extensive research activities in eSecurity with projects including secure software components, secure transactions in wireless environments, secure program migration and a systems engineering approach for Internet security.

[www.infotech.monash.edu.au](http://www.infotech.monash.edu.au)

## Royal Melbourne Institute of Technology University

Royal Melbourne Institute of Technology University (RMIT) offers a number of eSecurity postgraduate programs as well as a number of courses available to other undergraduate and postgraduate students.

Postgraduate programs in Information Security and Assurance have been accredited by the Australian Computer Society - the masters degree at professional level and the graduate diplomas at associate level.

RMIT also supports a range of internships including two with CA (Pacific) Pty Ltd and one with the RMIT University Internal Audit and Risk Management Department.

RMIT has a strong research program and in addition to substantial internal funding, the Information Security team has attracted funding from Defence funding. The team is also involved in biometrics research.

[www.rmit.edu.au/mathstats/infosec](http://www.rmit.edu.au/mathstats/infosec)

## Swinburne University of Technology

Swinburne University of Technology offers a specific degree course in eSecurity – Bachelor of Computing (Network Design and Security). The course covers general computing skills and knowledge in software development, database and information systems with a focus on networks and security.

Ten core subjects address internet security, risk and IT security and include preparations for networking certifications such as CISCO and MCSE.

Swinburne has two research centres involved in eSecurity research: the Centre for Information Technology Research and the Centre for Advanced Internet Architecture. General areas of research include: software engineering, intelligent systems, information systems, telecommunications and networking. They are also involved in world leading research in software and services security and network security and resilience.

[www.swin.edu.au/ict/courses](http://www.swin.edu.au/ict/courses)



## University of Ballarat

eSecurity is offered as a key component of all undergraduate and postgraduate courses at the School of Information Technology and Mathematical Sciences.

Specific units include:

- Information Security
- eCommerce Security
- Trust and Reputation (under development).

Research students at the University of Ballarat are undertaking eSecurity related projects at honours, masters and doctorate levels.

The Centre for Informatics and Applied Optimisation (CIAO) undertakes research in eSecurity fostered by the research cluster InSeCt (Information Security Cluster), involving data security, network security, transactional security, encryption, identity theft, web security and computer forensics.

[www.ballarat.edu.au/ard/itms](http://www.ballarat.edu.au/ard/itms)

## University of Melbourne

Through the School of Enterprise, the University of Melbourne offers a range of courses relevant to eSecurity:

- Masters in eForensics and Enterprise Security
- Graduate certificates in digital forensics, electronic crime, electronic, security risk management and eFraud investigation
- Customised short courses with either a management or technology focus on eSecurity.

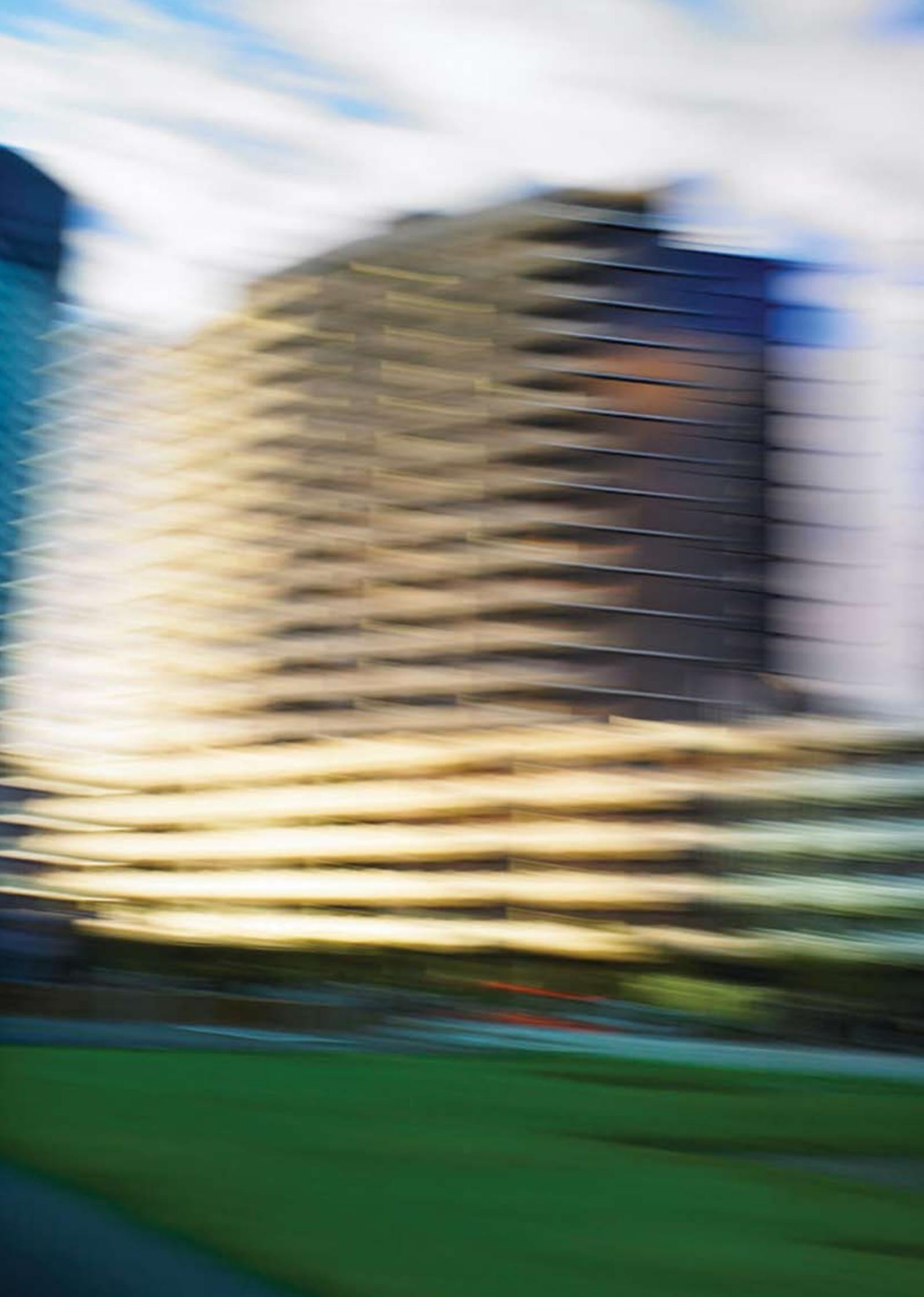
The Organisational and Information Security Group (OISG) within the Department of Information Systems undertakes research in eSecurity with particular strengths in security governance, security culture, risk management and business continuity planning.

### Information Systems

[www.dis.unimelb.edu.au/research/groups/oisg/index.html](http://www.dis.unimelb.edu.au/research/groups/oisg/index.html)

### School of Enterprise

[www.soe.unimelb.edu.au](http://www.soe.unimelb.edu.au)





## For further information on Victoria's Clusters of Excellence, go to:

Electronic Games  
[www.mmv.vic.gov.au/games](http://www.mmv.vic.gov.au/games)

eLearning  
[www.mmv.vic.gov.au/eLearning](http://www.mmv.vic.gov.au/eLearning)

Victorian Microelectronics  
Designer Network  
[www.mmv.vic.gov.au/microelectronics](http://www.mmv.vic.gov.au/microelectronics)

Victorian Photonics Network  
[www.vpn.net.au](http://www.vpn.net.au)

Intelligent Transport Systems (ITSVIC)  
[www.mmv.vic.gov.au/  
IntelligentTransportSystems](http://www.mmv.vic.gov.au/IntelligentTransportSystems)

Victoria.NET  
[www.victoriadotnet.com.au](http://www.victoriadotnet.com.au)

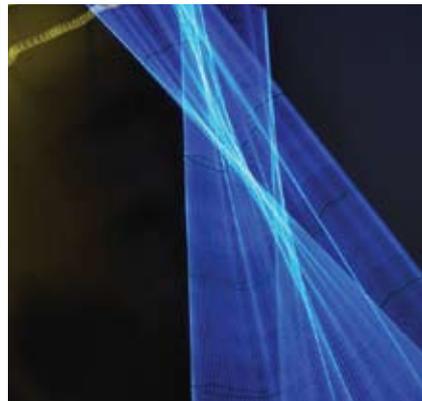
Open Source Victoria  
[www.osv.org.au](http://www.osv.org.au)

RFID Association of Australia  
[www.rfidaa.org](http://www.rfidaa.org)

Victorian Women in ICT Network  
[www.vicictforwomen.com.au](http://www.vicictforwomen.com.au)

Enterprise Java Victoria (EJV)  
[www.ejv.vic.org.au](http://www.ejv.vic.org.au)





[www.mmv.vic.gov.au](http://www.mmv.vic.gov.au)

