



Victoria's Cyber Strategy 2021

A Cyber Safe Victoria



Authorised and published by the Victorian Government Melbourne April 2021

© Copyright State of Victoria 2021

You are free to re-use this work under a Creative Commons Attribution 4.0 license, provided you credit the State of Victoria (Department of Premier and Cabinet) as author, indicate if changes were made and comply with the other license terms. The license does not apply to any images, photographs or branding, including Government logos.

This document is also available in Word and PDF format at www.dpc.vic.gov.au

ISBN 978-1-925789-61-4 (pdf/online/MS word)

Acknowledgment of Country

The Victorian Government acknowledges Aboriginal and Torres Strait Islander people as the Traditional Custodians of the land.

The Victorian Government also acknowledges and pays respect to the Elders, past and present and is committed to working with Aboriginal and Torres Strait Islander communities to achieve a shared vision of safer and more resilient communities.

Table of contents

1	Foreword	4
2	Overview	6
3	The threat environment	10
4	Opportunity	12
5	Our vision	14
	The safe and reliable delivery of government services	16
	A cyber safe place to work, live and learn	16
	A vibrant cyber economy	17
6	Strategy implementation	18
7	Delivery partners	21

Foreword

1



Technology and the internet continue to transform the way Victorians live, work and learn.

The year of 2020 highlighted our reliance on digital solutions – more than any other time in our history and our take-up of technology and devices with internet access is accelerating quickly.

Digital technologies and social media are a global phenomenon of our times and once labour-intensive processes are now handled seamlessly through advancements in automation, artificial intelligence and machine learning.

Although recent advancements in digital technologies have made life easier for Victorians, they also give rise to risks which have potential to harm the very people they were designed to benefit.

The Victorian Government has an important role to play in protecting government systems against cyber-attacks, as well as supporting private industry and the community to be resilient to the challenges of the digital world.

This strategy will serve to protect the safety and data of Victorians and keep safe the critical infrastructure on which we all depend. Support for industry and community in this arena is crucial - leading to improved service delivery and reliability, and an overall reduction in cyber risk.

Keeping citizens safe from cyber dangers is a challenge for nations around the world. But with ever present cyber risk, also comes opportunity.

Global investment in cyber products and services continues to expand and Victoria is well placed to capitalise through its world leading universities, TAFEs, research, telecommunications and financial institutions.

With this strategy more cyber business and cyber jobs will call Victoria home.

Victoria was the first state in Australia to develop a dedicated whole of government Cyber Strategy and I am delighted to present this important update which affirms our Government's commitment to building a cyber safe Victoria.

The Hon. Danny Pearson MP
Minister for Government Services



The COVID-19 pandemic has clearly demonstrated that being able to connect to the internet is neither luxury, nor recreation – it has become a necessity. Technology and connectivity has become essential to our ability to navigate daily life and to participate in society and the economy.

The online parts of our lives and our work are advancing rapidly, involving millions of transactions of personal and financial data every second.

With more and more business and personal interactions online, cybercrime is a key risk and will continue to be so in the future. This Strategy outlines how we are responding to this – by developing and leveraging the considerable strengths Victoria has in technology, innovation, entrepreneurship and problem solving.

This period of rapid change presents challenges but also opportunities. With this Strategy, the Victorian Government recognises that cyber security is not only essential for the operations of our government and our digital economy but also represents a huge industry opportunity, with global spending on cyber security projected to reach US\$207 billion by 2024.

Victoria's world-class tech ecosystem will help us meet this challenge head on. We are focused on accelerating our cyber security capabilities to meet growing demand for services and expertise. We recognise that meeting this demand will enable us to help local businesses grow and create jobs.

This Strategy sets out a vision for a Cyber Safe Victoria that supports the accelerating digitalisation of our key industries, while safeguarding the activities of government, businesses and all Victorians. It is a key foundation of our economic recovery and future prosperity.

In Victoria our cyber security industry is poised to thrive. With a strong vision shared by government and industry we will launch even more local innovators and entrepreneurs onto the global stage as we grow our cyber capability and future proof Victoria's economy.

The Hon. Jaala Pulford
*Minister for Employment,
Minister for Innovation, Medical Research and the Digital Economy,
Minister for Small Business*

Overview

2

The rapid uptake of digital technology is changing the way Victorians work, live and learn. It is also creating new opportunities for us to connect with government and industry, and within our many communities.



The tremendous benefits brought by digital transformation have been highlighted during the coronavirus (COVID-19) global health pandemic. We have experienced a rapid shift to remote work and online service delivery, with e-commerce proving vital to many people and businesses. Our continued shift online has also allowed us to stay in touch, be entertained and remain informed throughout Victoria's response to the pandemic.

This change has magnified cyber risks that require a strategic and coordinated response. One in three Australians have fallen victim to cybercrime, with an estimated cost to Australia's economy of \$29 billion annually. The amount of personal and sensitive data at risk of exposure or compromise is growing. And the delivery of our essential services is increasingly vulnerable to malicious actors seeking to threaten the safety and security of Victorians.

It is crucial that we manage any risks that arise with an increased online presence. The Victorian Government acknowledges the opportunities for new thinking presented by the increased global reliance on the internet. We will promote these opportunities, recognising that growth in the state's cyber sector benefits all Victorians.

Victoria's Cyber Strategy 2021 sets the Victorian Government's cyber agenda for the next five years. It defines long-term objectives and provides the framework for an annual Mission Delivery Plan.

We have experienced a rapid shift to remote work and online service delivery, with e-commerce proving vital to many people and businesses.

Victoria's Cyber Strategy 2021 will be delivered through three core missions:

1. The safe and reliable delivery of government services
2. A cyber safe place to work, live and learn
3. A vibrant cyber economy.

Delivering these outcomes will require input from across government, industry and the community to improve Victoria's cyber resilience.

We all have a shared responsibility to create a cyber safe Victoria.

Terminology

For the purpose of this strategy, the Victorian Government is focused on a number of online security, crime and safety risks, which we refer to as 'cyber risks'.

We use the term 'cyber risks' to encompass the following individual concepts:

- Cyber security – protecting the confidentiality, integrity and availability of computer systems and data
- Cyber safety – protecting individuals using computer systems from harm
- Cybercrime – traditional criminal offences committed using (or enabled via) technology, and crimes against technology systems.

This strategy brings together key risks and issues associated with all three concepts.



The threat environment

3

Government, industry and the community face constant threat from cyber criminals, organised crime groups, online vandals, trusted insiders, advanced persistent threat groups and foreign governments.



In recent years cyber attackers around the world have disrupted the operation of critical infrastructure and essential services, exposed vast amounts of sensitive and personal information, and caused significant financial losses and emotional harm across communities.

Victorian Government IT networks face constant threat of cyber-attack. Private companies face similar challenges, with malicious cyber attackers constantly threatening to disrupt vital systems and services.

Australians report a new cyber-attack to the Australian Cyber Security Centre every 10 minutes. One-in-four of these reports involves Victorians who have fallen victim to malicious cyber activity, such as online scams and fraud.

The financial, emotional and service delivery impacts of malicious cyber activity are significant. Industry estimates suggest the cost of cybercrime to the Australian economy is \$29 billion annually.

Responding to this challenge requires strong collaboration across government, industry and the community. We all have a shared responsibility to help create a cyber safe Victoria.

The Victorian Government is continually enhancing the protection of its IT systems to support safe and reliable delivery of services. From people's medical records, to sensitive police data, sensitive and personal information held by government needs to be protected against misuse and inappropriate access. Services delivered either online or in the physical world, from water monitoring to traffic lights, need to be resilient to cyber-attacks. And digital communications such as official websites and emails from government must be trustworthy and free from manipulation.

The Victorian Government must play a key role in supporting industry and community groups to reduce their cyber risk. This will require a comprehensive understanding of current and future cyber risks affecting Victoria. These risks will be addressed via evidence-based strategies that address the likelihood and impact of cyber risks to Victorians. Police will be supported to prevent, detect, disrupt and prosecute cybercrime and other online offending (including technology-enabled crime), by having access to the right powers and capabilities.

Central to our success in creating a cyber safe Victoria will be the cultivation of local cyber expertise and tools. We will need a vibrant cyber economy that provides internationally recognised training and development programs, with established pathways into cyber employment. This will foster the growth of our local cyber capability, support jobs for Victorians and generate economic growth throughout Victoria.

Opportunity

4

Victoria's Cyber Strategy 2021 recognises the increasingly digital nature of our world. Reliance on technology to deliver government services, from public healthcare to vehicle registration, has never been greater.



The first *Victorian Government Cyber Security Strategy 2016-2020* focused on understanding risk, establishing baseline capability and responding to cyber incidents across the Victorian Government.

It is now time to expand our focus. We will proactively help Victorians and Victorian businesses.

As Victorians take advantage of technology for work, education and entertainment, they are increasingly at risk of malicious cyber activity. Australians report a new cyber-attack to the Australian Cyber Security Centre every 10 minutes. One-in-four of these attacks involves Victorians who have fallen victim to cybercrime.

The financial and emotional impacts are significant. The Victorian Government's role in managing cyber risk is not only an essential part of protecting Victorians, but also supports Victoria's economic growth.

The global cyber security sector is expanding rapidly, and Victoria is no exception. By 2026, the global cyber market is forecast to grow to \$270 billion and Victoria's cyber industry will reach \$4.7 billion. This presents a significant opportunity for Victoria to cultivate local cyber expertise, skills and capability to help boost cyber resilience across the state.

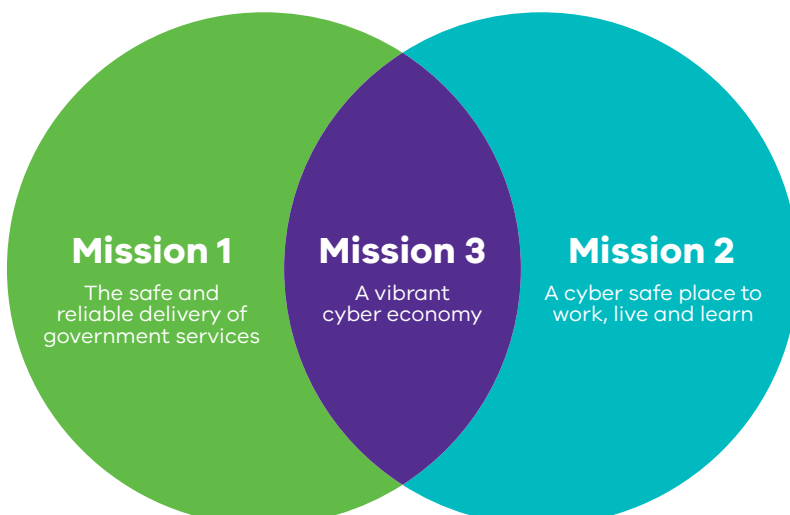
Victoria's Cyber Strategy 2021 will promote Victoria as a leading jurisdiction for people wanting to develop a career in the cyber sector. Prior to the COVID-19 global pandemic, Australia's peak cyber industry growth centre, AustCyber, estimated that an additional 18,000 cyber security roles will be required nationally by 2026.

This strategy will harness significant opportunities for Victoria, including:

- Jobs for Victorians in cyber risk management
- Support for local cyber businesses and start-ups to develop and up-scale, boosting local economies
- More opportunities for economic development through direct foreign investment and the growth of cyber skills and expertise in Victoria's technology ecosystem
- Development of a dynamic and competitive cyber sector, underpinning innovation, economic recovery and jobs growth.

Victoria's ICT industry alone includes almost 20,000 businesses, almost 140,000 employees and annual revenue of \$38.4 billion (almost 9 percent of GDP). Victoria is also home to many technology or internet-based companies, of which the top 10 have a market value of \$66.74 billion and annual revenue of \$7.7 billion.

Uplifting Victoria's cyber industry capability can provide government, industry and the community with access to the local talent, expertise and tools needed to manage cyber risk. We can accelerate Victorian businesses transition to move more services online, removing barriers for government to adopt new digital technologies, and facilitating partnerships with academic and research institutions that drive local innovation.



Our vision

5

Victoria's Cyber Strategy 2021

The Victorian Government's vision is a cyber safe Victoria. A place where government, industry and the community connect and deliver services safely and securely online and in the physical world, with reduced risk.



We want to cultivate Victoria's cyber economy to develop and export world-leading cyber people and tools.

Our vision will be achieved through three core missions:

- The safe and reliable delivery of government services
- A cyber safe place to work, live and learn
- A vibrant cyber economy



Figure 1 - To deliver a cyber safe Victoria, requires focus on delivering government, community and industry outcomes.

The safe and reliable delivery of government services

As with all modern organisations, Victorian Government IT systems face constant threat of malicious cyber activity.

These incidents involve online scams and fraud, malware and denial-of-service attacks, and the defacement of government websites. They threaten the safe and reliable delivery of government services and the confidentiality of sensitive and personal information.

This mission aims to strengthen the defences of Victorian Government systems and services proportionate to current and emerging threats. These actions will protect the confidentiality and integrity of sensitive information and support the reliable delivery of IT-dependent government services to the Victorian community.

Safe and reliable means:

- The confidentiality of sensitive and personal information held by the Victorian Government is protected
- Services delivered either online or in the physical world are resilient to cyber-attacks and can be quickly recovered when interrupted
- Online communication channels are trustworthy and free from interference.

It is important that Victorian Government organisations lead by example in the successful management of cyber risk. Reaching this level of maturity will require significant input from the local cyber sector, which will support the Victorian economy to grow.

A cyber safe place to work, live and learn

All Victorians who use digital systems and services experience some level of cyber risk. Data from the Australian Cyber Security Centre shows that too often Victorians are falling victim to these cyber-attacks, with a new cybercrime reported in Victoria every 40 minutes.

This mission aims to support individuals, households, businesses and community groups to connect, engage and work safely online. The Victorian Government will support improved alignment of community engagement, education, legislation, policing and emergency management arrangements to foster a cyber resilient culture for Victoria.

Victorian Government organisations must be an exemplar of successful management of cyber risk.

A cyber safe place to work, live and learn means:

- Victorians receive practical advice about how to reduce cyber risks
- Police are supported to prevent, detect, disrupt and prosecute cybercrime and other online offending (including technology-enabled crime)
- Critical infrastructure owners and operators, and essential services providers, are supported to improve their cyber resilience.

A vibrant cyber economy

Cyber security is an essential foundation to a successful digital economy. As businesses increasingly work online, cybercrime represents a significant risk to Victoria's economy. At the same time, cyber security represents a considerable opportunity for business and job growth in a digital economy.

As Victoria seeks to further develop the knowledge, expertise and tools required to combat current and future cyber risks, we must develop a strong cyber workforce and economy. Local cyber security skills and tools will be essential to supporting enhanced cyber resilience. This will help business and the government position Victoria as a global leader in the cyber market.

The development of stronger industry cyber security skills are a key enabler of digital economic growth. These skilled workers will underpin investment and jobs growth and are a key pillar of Victoria's economic recovery from the coronavirus (COVID-19) pandemic.

The mission aims to develop strategic partnerships to grow dynamic and competitive cyber security businesses and talent. This will underpin digital transformation, growth and new thinking across every sector of the Victorian economy

Our actions will position Victoria as a global leader in the cyber security sector and support the state's ongoing economic prosperity.

A vibrant cyber economy means:

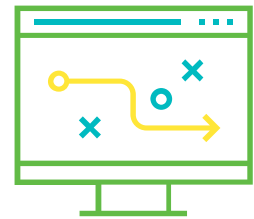
- We grow and advance Victoria's technology ecosystem
- Victoria's skills training and development program is Internationally recognised and has established pathways into cyber employment
- Increasing private and public investment in Victoria's cyber businesses, research and expertise as key enablers of digital economic growth

-

Strategy implementation 6

All Victorians share responsibility for improving their cyber resilience.

- Individuals, households and community groups should seek to understand their cyber risks and take steps to continually protect their devices, online accounts and data from harm
- Government and industry should continually improve their cyber resilience to support the safe and reliable delivery of services and protect sensitive and personal information from harm
- All organisations, big and small, should make cyber risk management a core part of ongoing business risk management.



Critical to the success of Victoria's Cyber Strategy 2021 is providing government, industry and the community with the support, knowledge and guidance needed to improve their cyber resilience.

The Victorian Government Chief Information Security Officer (CISO) will release annual Mission Delivery Plans that outline specific activities associated with the three core missions identified in this strategy. The CISO will develop this plan in consultation with relevant stakeholders across government, industry and the community.



The CISO will publish an annual statement on the progress of activities against each of the three core missions.

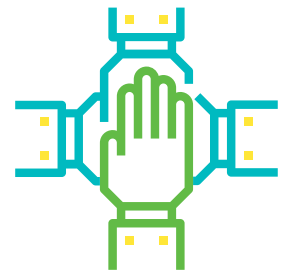
Our development of annual Mission Deliver Plans acknowledges the rapidly changing digital environment, and the evolving cyber risks faced by government, industry and the community.



Delivery partners

7

Effective reduction of cyber risk requires collaboration across government, industry and the community. Cyber risk knows no boundaries and does not adhere to jurisdictional or geographical borders.



The Victorian Government recognises that strong domestic and international partnerships, spanning government, industry and the community, are essential to successfully delivering Victoria's Cyber Strategy 2021.

Victorian Government

The Victorian Government is a collection of over 1,800 agencies that hold unique capabilities and provide a variety of services and contact points to the public. This strategy will leverage the collective capability of all Victorian Government agencies to deliver on our three core cyber safe missions.

Government partnerships

Australia's national, state and territory governments recognise the interconnected nature of cyber risk and its effect on Australia's national interests.

The Victorian Government will remain a key participant in the National Cyber Security Committee, contributing to the development of national cyber risk management strategies and actions. We recognise the ongoing and ever-changing nature of our threat landscape, and the importance of collaborative risk mitigation efforts.

We will advocate and prioritise joint cyber investments with other states, territories and the Australian Government wherever practical. It is important to reduce the cost of cyber security to government and lessen the burden on the cyber industry to service government needs.

Industry partnerships

Cyber security is essential to Victoria's 600,000+ businesses and presents opportunities to grow new businesses and jobs. The government will work with industry at all levels including corporates, industry associations, startups, not-for-profits and SMEs to spread cyber security awareness, build expertise and encourage innovation.

Cyber is a highly evolving field with continual innovation occurring both in industry and government entities. The sharing of this knowledge and capability is beneficial for Victoria as a whole. The government will improve knowledge sharing with industry and improve procurement practices to allow for faster engagement with industry for support.

Academic partnerships

Victoria is renowned for the quality of its academic institutions. The Victorian Government will work with local academic institutions to help educate Victorians about being cyber smart and continue to be a world leader in cyber research.

The government will work with industry at all levels including corporates, industry associations, startups, not-for-profits and SMEs to spread cyber security awareness, build expertise and encourage innovation.





