Cyber Security Research Report

Prepared for Australian Signals Directorate

September 2020



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Background, objectives and methodology

Background

The Australian Cyber Security Centre (ASCS) runs the Stay Smart Online (SSO) Program to provide relevant and timely information on how home internet users and small businesses can protect themselves from cyber security threats such as software vulnerabilities, online scams, malicious activities and risky online behaviours. This includes an annual campaign: *Stay Smart Online Week*, which aims to raise awareness and drive behaviour change to improve cyber security.

The ASCS identified a need to conduct exploratory research to better understand audience awareness of cyber security practices, as well as the ACSC and SSO brand recognition. Identification of audience segments, specifically, which groups are most likely to change their behaviour or be resistant to change, is also required.

This research will be used to inform next steps in branding and communications.



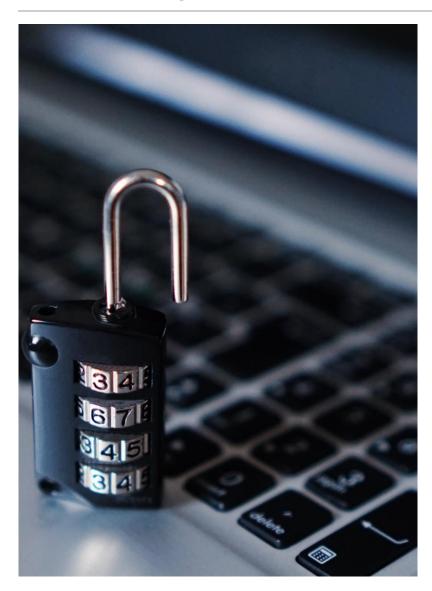
Australian Government

Australian Signals Directorate

/-CSC Australian

Australian Cyber Security Centre

Research objectives



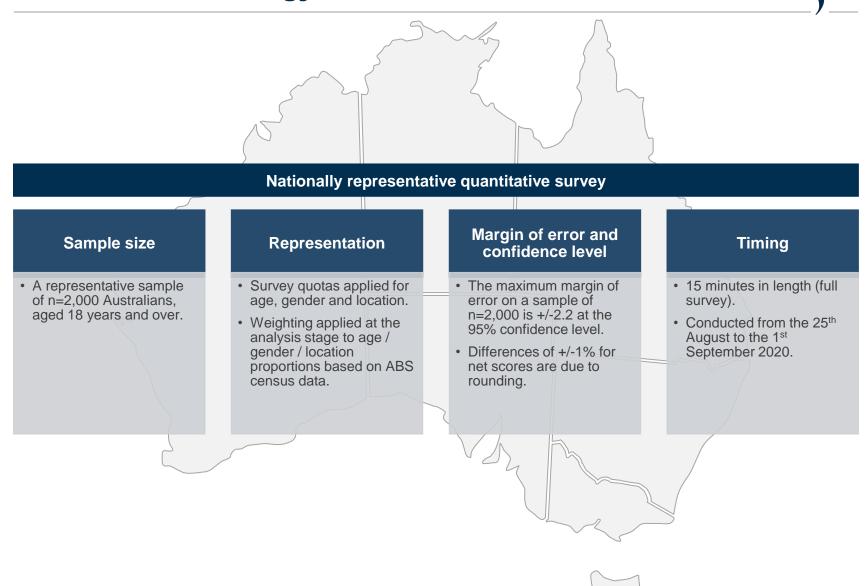
The overarching objective of the research program is to understand levels of community awareness, understanding and behaviours in relation to the current cyber security threat in Australia.

The research will also establish the need and requirement (or otherwise) for communications to various audiences within the Australian community and inform communication imperatives.

Specifically, the research was designed to establish:

- Awareness of the ASCS and knowledge of the services and information it provides.
- Knowledge of where to go for information.
- Types of information desired by the Australian public.
- Levels of trust in various organisations and entities.
- The importance of online security to various subgroups within the community.
- Levels of confusion with other services and information sources, both government and nongovernment sponsored.
- Changes that people are willing or unwilling to make around cyber security.

Research methodology



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Reporting notes: segment definitions



The table below shows the definitions of sub-sample segments described throughout the report:

| Label | Description |
|----------------------|--|
| SME | Owner, financial partner or main decision maker in an Australian business turning over more than \$75,000 per annum |
| SME contracts cyber | SME which hires or contracts a company/provider to manage IT and cyber security |
| ATSI | Aboriginal or Torres Strait Islander origin |
| CALD | Culturally and/or linguistically diverse |
| Kids in hhold | Dependent children aged 18 years or under living in household |
| Kids 0-9 yrs | Dependent children aged 9 years or under living in household |
| Kids 10-18 yrs | Dependent children aged between 10 to 18 years living in household |
| Heavy internet user | Average of 6 hours or more spent on the internet each day, either personally or at workplace |
| Medium internet user | Average of 2 to 6 hours spent on the internet each day, either personally or at workplace |
| Light internet user | Average of up to 2 hours or less spent on the internet each day, either personally or at workplace |
| 'Savvy' segment | Those with an expert or good understanding of cyber security who have implemented cyber security measures in their household to a great or moderate extent |
| 'Moderate' segment | Those with an average understanding of cyber security who have implemented cyber security measures in their household to some extent or better |
| 'At risk' segment | Those with a low or no understanding of cyber security and/or have implemented cyber security measures in their household to a small extent or not at all |

Executive summary



Key insights summary and recommendations



Cyber security information is relevant to everyone Use of multiple devices and programs leaves Australians exposed to cyber attack in a multitude of ways. Almost universal internet connection also means that almost everyone is vulnerable, with older and lower income people the most out of their depth and least likely to be able to detect threats and protect themselves.

Poor understanding and competency make some groups more vulnerable

An obvious need for better education and information

Complacency compounds potential exposure to cyber attack

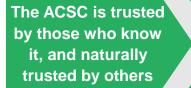
Lack of a known cyber security agency hampers reporting of attacks Many more people are aware of the risks and concerned about cyber security than are actually capable and prepared against attacks. For example, older people, regional residents, lower income earners and light internet users all report lower levels of understanding or competency and should be a key target for information.

Very few people know clearly what to do or where to go to be cyber secure, even though they are generally aware of and concerned about a wide range of potential threats across a variety of platforms and activities. The need for improved education and information could not be clearer.

There is some complacency towards cyber security, with feelings of security exceeding measures actually implemented. Many people admit to the implementation of little or no security measures. Improved implementation of basic cyber security protocols is required across the population.

Government websites are considered a key information source on cyber security, yet for the many people experiencing cyber breaches, only about 1 in 2 typically reports, with a key reason being not knowing where to report. Lack of awareness of a dedicated Government cyber security agency is part of the problem.

Key insights summary and recommendations (cont'd)



There is low existing awareness of the ACSC, but very high trust among this aware group, comparable to trust of the Australian Federal Police. Importantly, the ACSC is intuitively thought of as the best source of cyber security information and for assistance on cyber crimes.

The ACSC name automatically gives it credibility

The ACSC fills a gap in the market for a trusted source on cyber security

Most want more cyber security info from a single Government site The Australian Cyber Security Agency, by its very name, is naturally seen to have credibility on cyber security issues. The ACSC engenders confidence. It is a well-kept secret that needs to be shared and potentially positioned as the single source for Government information and assistance on cyber security.

Australians are generally interested in knowing or hearing more about the Australian Cyber Security Strategy, especially a 24/7 hotline. Most people would go to the ACSC website for information or assistance on cyber crime, so it appears to fill a gap in the market for a trusted Government source on cyber security.

It is a particularly compelling result that half the population wants to hear more about cyber security. Identity theft, internet fraud, ransomware and email compromise are the key areas of interest, but interest extends to all threats. A single dedicated Government website is the main preferred source of information.

Key opportunities for the ACSC

1. Raise profile of ACSC as the trusted Government source on cyber security

The name says it all – brand it consistently across all communications and advice and make the ACSC the automatic go-to for all cyber security matters.

2. Define the core offerings

Clearly define the role of the ACSC – <u>the</u> site for prevention, reporting and response on cyber security.

3. Tailor content to meet the needs of the different cyber segments

Tailor content for different cyber segments:

- At risk need basic easy-to-follow information and advice to reduce their confusion.
- **Moderates** need more detailed information to match their capacity to their exposure.
- **Savvy** need detailed, sophisticated and up-to-date information to help keep them informed and responsive to emerging threats.



What is the ACSC's role for each of the cyber segments?

Savvy segment: High level understanding of cyber security and implementation of cyber security measures.

'Savvy' segment is proactively looking for information and advice to make them even more cyber secure

- Highly connected, internet dependent and both aware and concerned about cyber security threats they are actively interested in knowing more.
- ACSC can play a vital role, as a ready reference for information and recommended actions on new and emerging cyber threats.
- Prime segment candidate to subscribe to or follow the ACSC for alerts.



Moderate segment: Average level understanding of cyber security and implementation of cyber security measures.

'Moderate' segment is apathetic towards risks and need ACSC as an easy go-to single source of trusted information

- Underestimate risks and their level of unpreparedness for cyber attacks. A mistaken sense of security means they can be apathetic towards information.
- Role for the ACSC is to provide information and advice on the range of threats via simple, easy to follow guides on how to become more cyber secure.
- Raise profile of ACSC as trusted go-to source on cyber security.

At risk segment: Poor understanding of cyber security and implementation of cyber security measures.

'At risk' segment has poor comprehension on cyber security and ACSC needs to reach out to them to provide basic protection

- Poor comprehension and capacity on cyber security makes them particularly vulnerable to attack and loss.
- Imperative is to raise profile of ACSC as a trusted source on cyber security.
- ACSC should provide step-by-step explanations, actions and advice on basic protocols and behaviours to implement at least minimum protection.

Detailed findings

Context



Section summary – context



Internet usage is extensive across a range of devices The advent of connectivity of a wide range of household and portable devices, particularly smart phones, laptops and tablets, are a key reason for extensive internet usage. Approximately one in three (36%) adult Australians uses the internet for six hours a day or more, and three out of four (74%) spend more than two hours per day connected to the internet.

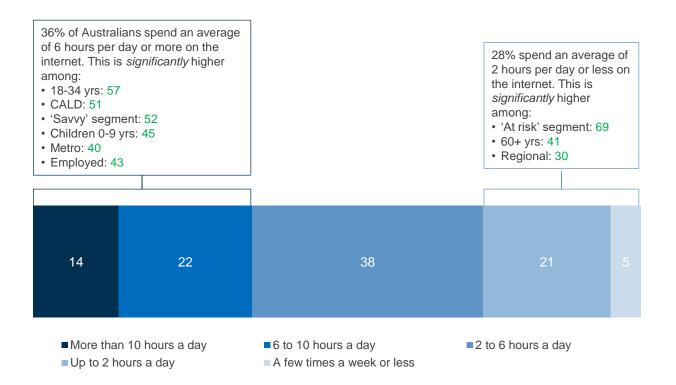
Social media is no longer just the domain of young people It is a truism that social media is synonymous with youth, and indeed most under 35s report using five or more sites, but it is not exclusively their domain. The number of social media sites used does decrease with age, but most 35-59 year olds use three or more sites and most over 60s use two or more sites. In order, Facebook, Messenger, YouTube, Instagram and WhatsApp are the main sites.

Google dominates search engines and browsers Google Chrome (56%) and Google (54%) dominate search engines used, with one out of every two people using at least one of these Google products. These products are useable on both a Windows and Apple platforms, in contrast to Safari (22%), the third-most commonly used browser, exclusive to Apple devices. On average, Australians use two search engines or browsers.

Email usage is universal, with a preference for a single provider Email usage is universal, with 99% of Australian adults having an account. People do not use as many different providers as they do with browsers and social media. On average, people use 1.5 email providers, with potentially different providers used between work and home, although people may have multiple accounts with the same provider. Gmail (41%), Hotmail (39%) and Outlook (34%) are the key email providers used.

On average, younger and metro Australians are heavy internet users, older and regional Australians lighter users

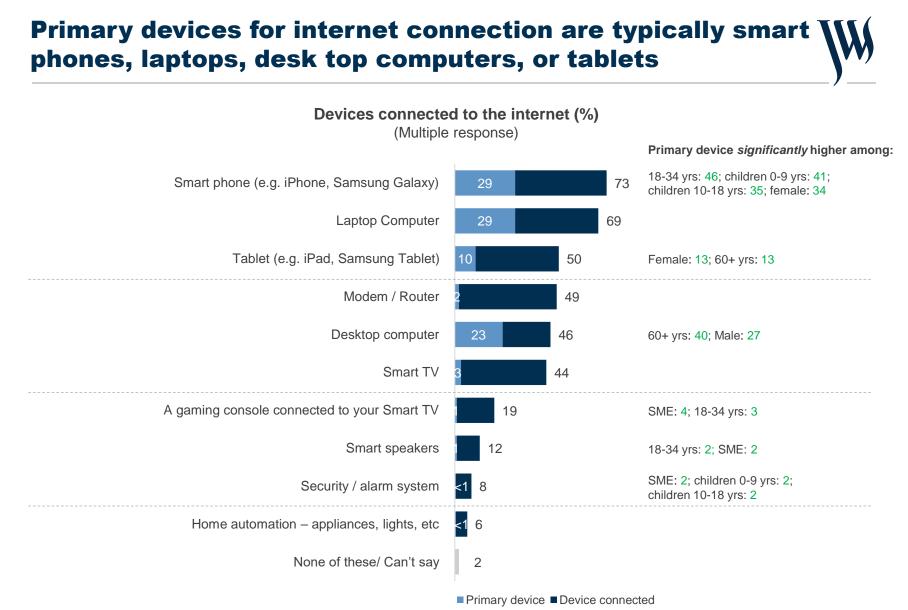
Average time spent on internet (%)



Significantly higher than the total at the 95% confidence interval.

S4. On average, how much of each day do you spend on the internet, either personally or at your workplace?

This includes accessing the internet on any device such as smartphones, iPads / tablets, laptop or desktop computers and includes any manner of internet activities such as checking email, online gaming, browsing social media, streaming video, online shopping, etcetera. Base: All respondents (n=2,000).



connected device would you say is your primary device: which do you spend most of your time on? Base: All respondents (n=2,000).

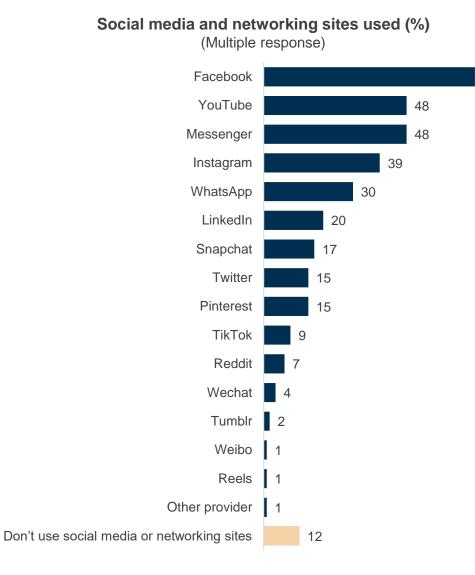
Significantly higher than the total at the 95% confidence interval.

Q5. Which of the following devices do you have connected to the internet? / Q6. Thinking about all your online activities, which internet

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Seven in ten Australians use Facebook, almost half use YouTube or Messenger



There is high usage of social media across all demographics and segments



Social media and networking sites used (%) (cont'd) (Multiple response)

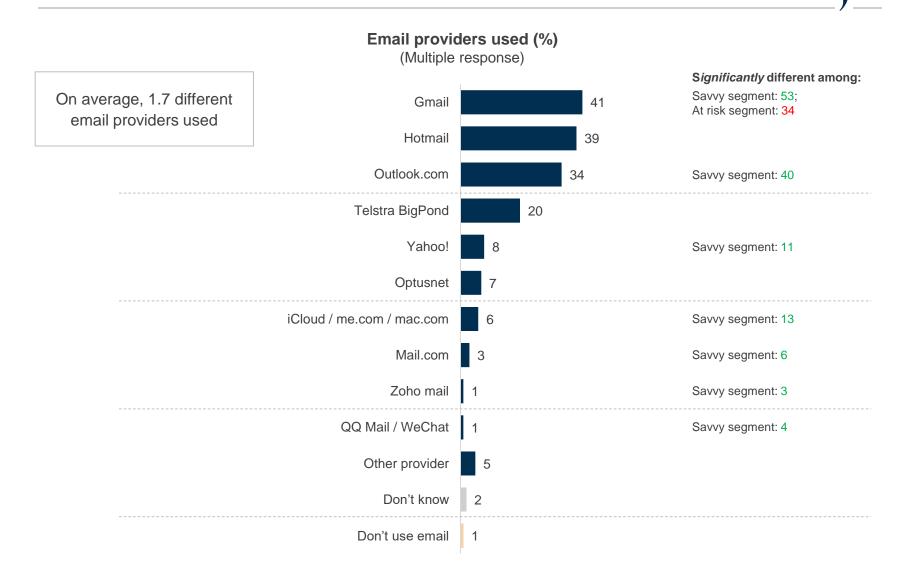
| | Total | Male | Female | 18-34 | 35-59 | 60+ | Motro | ro Regional SME Contracts | | Kids in | Int | ernet l | lse | Segment | | | | |
|--|-------|------|--------|-------|-------|-----|-------|---------------------------|-------|---------|-------|---------|------|---------|-------|----------|---------|--|
| | TOLAI | Wale | remaie | yrs | yrs | yrs | Wetro | Regional | SIVIE | cyber | hhold | Heavy | Med. | Light | Savvy | Moderate | At risk | |
| Facebook | 71 | 69 | 74 | 76 | 73 | 63 | 72 | 71 | 69 | 70 | 77 | 78 | 72 | 61 | 74 | 74 | 70 | |
| Messenger | 48 | 42 | 54 | 63 | 46 | 35 | 49 | 46 | 45 | 50 | 52 | 57 | 48 | 35 | 51 | 49 | 48 | |
| YouTube | 48 | 50 | 46 | 64 | 45 | 33 | 48 | 47 | 50 | 61 | 50 | 59 | 48 | 31 | 61 | 49 | 43 | |
| Instagram | 39 | 36 | 42 | 66 | 35 | 15 | 42 | 34 | 44 | 56 | 46 | 53 | 35 | 24 | 53 | 40 | 33 | |
| WhatsApp | 30 | 32 | 29 | 38 | 34 | 16 | 36 | 19 | 35 | 42 | 43 | 37 | 29 | 22 | 42 | 31 | 27 | |
| LinkedIn | 20 | 23 | 17 | 25 | 22 | 11 | 24 | 13 | 25 | 25 | 23 | 31 | 17 | 10 | 33 | 19 | 18 | |
| Snapchat | 17 | 15 | 19 | 41 | 10 | 2 | 18 | 17 | 22 | 32 | 19 | 25 | 16 | 8 | 25 | 17 | 16 | |
| Pinterest | 15 | 8 | 22 | 20 | 14 | 13 | 14 | 18 | 17 | 21 | 16 | 20 | 15 | 10 | 17 | 18 | 14 | |
| Twitter | 15 | 18 | 12 | 23 | 15 | 7 | 16 | 12 | 20 | 25 | 18 | 24 | 12 | 6 | 25 | 15 | 12 | |
| TikTok | 9 | 8 | 9 | 20 | 5 | 1 | 10 | 6 | 16 | 22 | 12 | 15 | 6 | 3 | 18 | 7 | 6 | |
| Reddit | 7 | 8 | 6 | 17 | 4 | 1 | 8 | 5 | 9 | 12 | 5 | 14 | 5 | 1 | 14 | 6 | 5 | |
| Wechat | 4 | 4 | 4 | 7 | 4 | 1 | 5 | 2 | 6 | 11 | 6 | 6 | 3 | 3 | 8 | 4 | 2 | |
| Tumblr | 2 | 3 | 2 | 5 | 2 | 1 | 2 | 3 | 4 | 4 | 2 | 5 | 2 | 1 | 6 | 2 | 2 | |
| Reels | 1 | 1 | 1 | 3 | <1 | 0 | 1 | 1 | 3 | 3 | 2 | 2 | 1 | <1 | 3 | <1 | 1 | |
| Other provider | 1 | 1 | 1 | <1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | <1 | 2 | 1 | <1 | |
| Weibo | 1 | 1 | 1 | 2 | <1 | 0 | 1 | 1 | 3 | 4 | 1 | 2 | 0 | 0 | 2 | 1 | <1 | |
| Don't use social media or networking sites | 12 | 12 | 12 | 4 | 10 | 24 | 11 | 14 | 8 | 2 | 4 | 5 | 12 | 23 | 6 | 10 | 14 | |

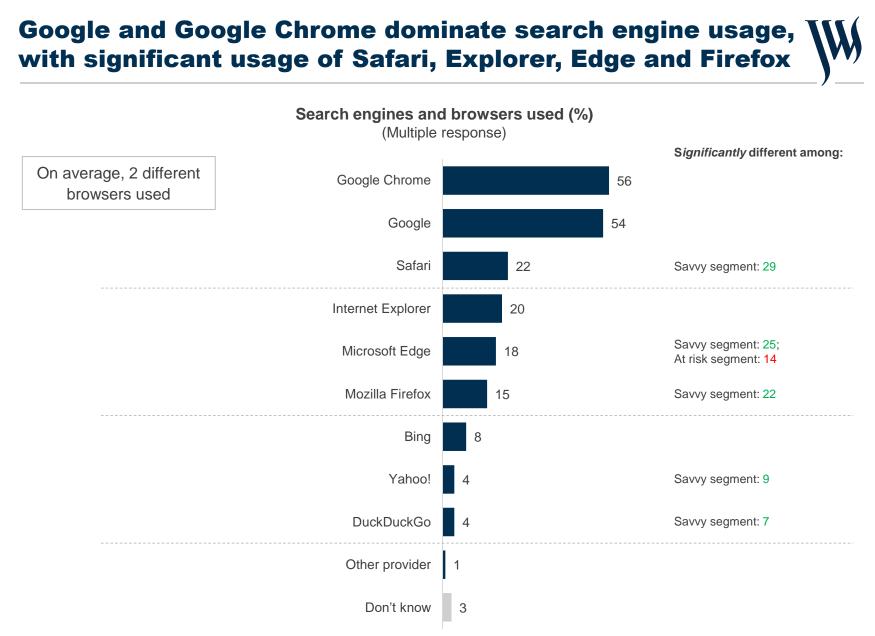
Most Australians use multiple social media platforms, with most younger Australians using five or more sites

Social media and networking sites used (%) (cont'd) (Multiple response)

| | Total | Male | Female | 18-34 | 35-59 | 60+ | Motro | Regional | SME | SME contracts | Kids in | Inte | rnet U | se | | Segment | | |
|--------------|-------|------|--------|-------|-------|-----|-------|----------|-------|------------------|---------|-------|--------|-------|-------|----------|---------|--|
| | TOLAI | Wate | remale | yrs | yrs | yrs | Wetro | Regional | SIVIE | cyber | hhold | Heavy | Med. | Light | Savvy | Moderate | At risk | |
| Total 1 only | 18 | 19 | 17 | 12 | 18 | 24 | 17 | 19 | 18 | 13 | 18 | 13 | 18 | 23 | 12 | 17 | 20 | |
| Total 2+ | 70 | 69 | 71 | 84 | 72 | 52 | 72 | 67 | 74 | 84 | 78 | 82 | 70 | 54 | 82 | 72 | 66 | |
| Total 3+ | 55 | 53 | 57 | 76 | 54 | 33 | 57 | 50 | 58 | 70 | 64 | 68 | 54 | 36 | 69 | 56 | 51 | |
| Total 4+ | 41 | 38 | 44 | 65 | 38 | 20 | 44 | 35 | 45 | 56 | 48 | 56 | 38 | 23 | 56 | 43 | 37 | |
| Total 5+ | 30 | 27 | 32 | 53 | 25 | 12 | 33 | 25 | 34 | 40 | 35 | 45 | 27 | 13 | 43 | 31 | 26 | |

There is universal usage of email, with Gmail, Hotmail, Outlook and Telstra BigPond the dominant providers





Understanding of cyber security

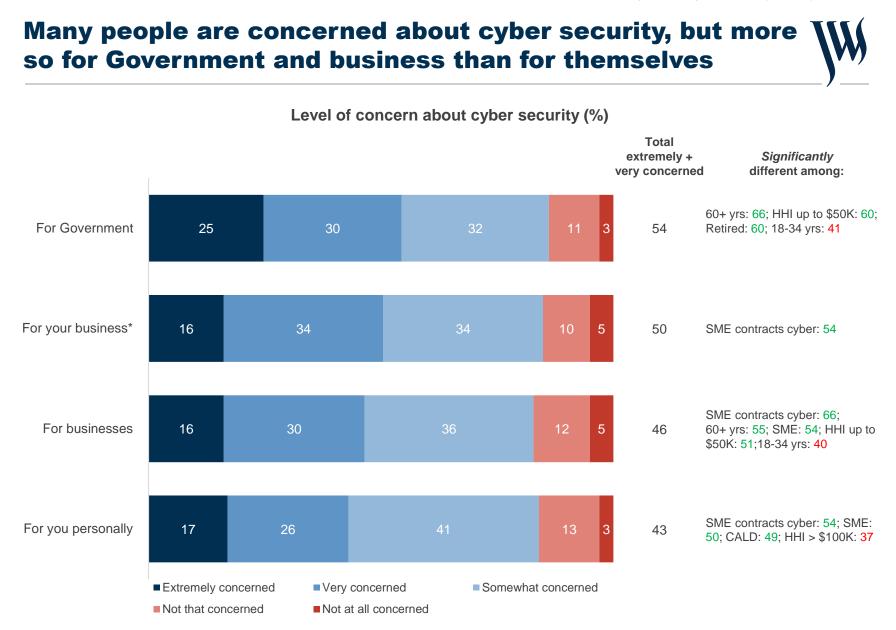
Section summary – understanding of cyber security

High levels of concern about cyber security Levels of concern about cyber security are high, with approximately one in two Australians indicating they are 'extremely' or 'very concerned' about it. They are most concerned about cyber security for Government (54%) and business (46%), more so than for themselves (43%).

Cyber security concerns are exacerbated by varying degrees of understanding Cyber concerns are possibly exacerbated by the varying levels of understanding of cyber security. The majority understands cyber security, but only one in four (28%) considers themselves to have an 'expert' or 'good understanding'. Many are cognisant of the vulnerabilities every time they are online, as most agree anyone can be the victim of cyber crime, with potentially very serious consequences.

High levels of threat awareness but limited understanding Awareness of cyber security threats is quite high, with between 63% and 77% having heard of the range of threats. However, understanding is far lower, with most only knowing 'a bit' about each threat. This lack of knowledge can contribute to higher levels of anxiety and increase the potential of becoming a victim. The greatest cyber security concerns relate to identity theft (76%) and fraud (72%).

Perception of risk does not necessarily reflect the reality Perception of the risk of experiencing a cyber breach does not reflect levels of concern. Using social media is seen as attracting the highest level of vulnerability, with three out of five (60%) believing a breach is likely, yet only a third (34%) believe gaming and e-sports carry a risk. Some Australians' self-assessment of their understanding may not reflect reality.

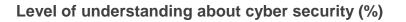


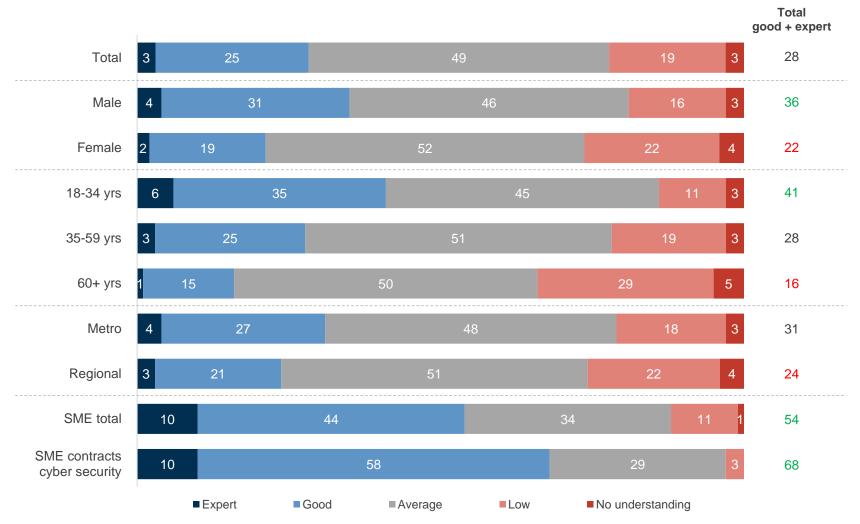
Significantly higher / lower than the total at the 95% confidence interval.

Q1. Cyber security means protecting data, information, devices and networks from malicious actors. It also involves protecting against harmful content and behaviours such as cyber bulling, image-based abuse and illegal and harmful online content. Please rate your level of concern about cyber security...

Base: All respondents (n=2,000); SMEs (n=340). *Asked only among business owners.

Women, older and regional people have the poorest understanding of cyber security

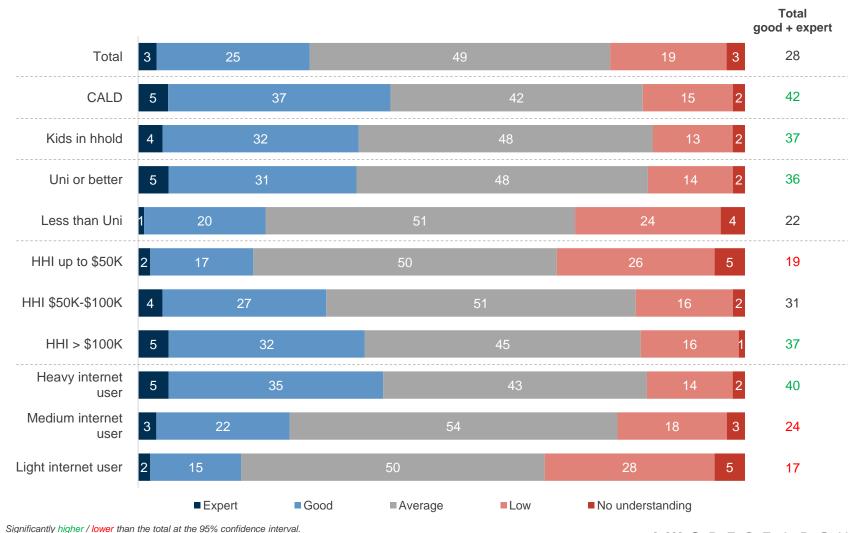




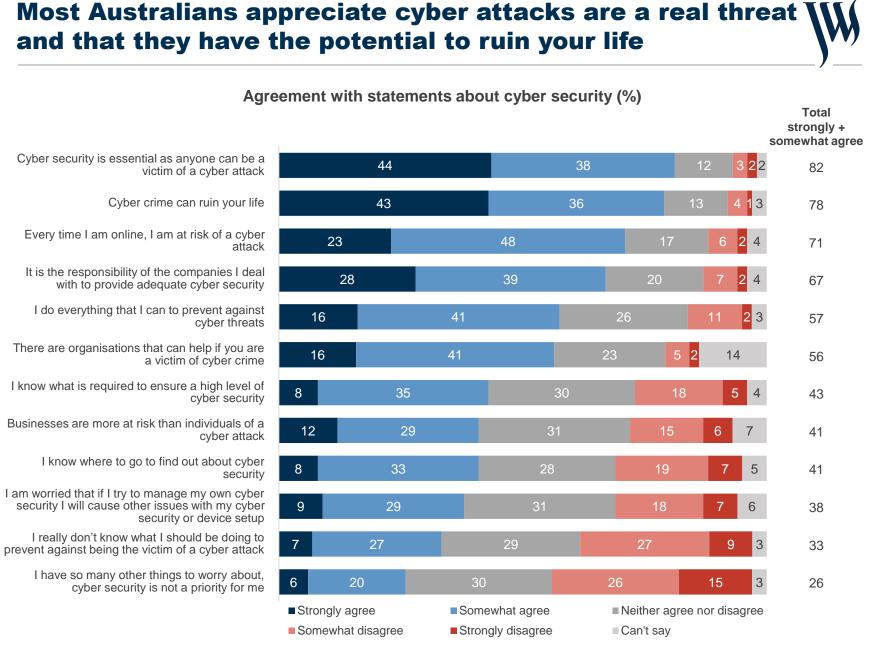
Significantly higher / lower than the total at the 95% confidence interval. Q3. Please rate your **personal level of understanding about cyber security.** Base: All respondents (n=2,000).

Lower income households and light to medium internet users also have poorer cyber understanding

Level of understanding about cyber security (%) (cont'd)



Q3. Please rate your personal level of understanding about cyber security.
 Base: All respondents (n=2,000).



Q4. How much do you agree or disagree with each of the following statements about cyber security? Base: All respondents (n=2,000).

An admittedly poor understanding of cyber security does not lead older Australians into delusion about the risks

Agreement with statements about cyber security (%) (cont'd) (Total strongly + somewhat agree)

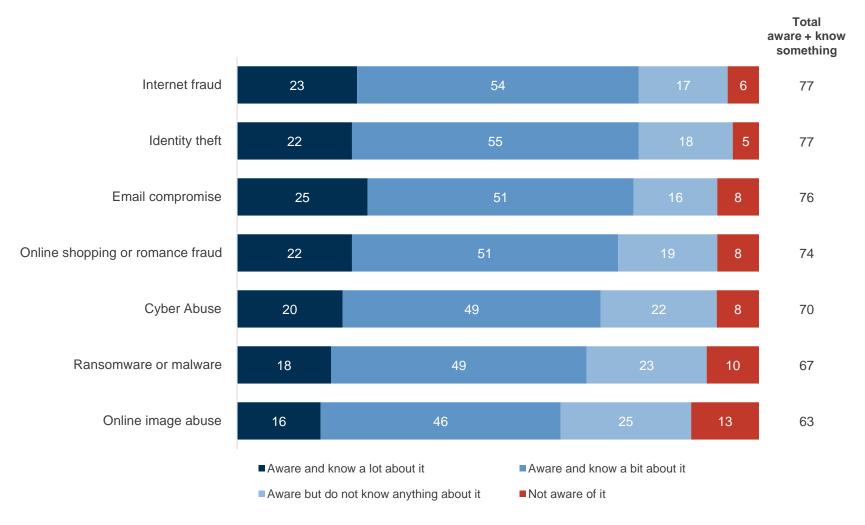
| | | | | | | SME | Internet Use | | | Segment | | | | | | |
|---|-------|------|--------|-----|-----|-----|--------------|----------|-----|--------------------|-------|------|-------|-------|----------|---------|
| | Total | Male | Female | yrs | yrs | yrs | Metro | Regional | SME | contracts cyber | Heavy | Med. | Light | Savvy | Moderate | At risk |
| Cyber security is essential as anyone can be a victim of a cyber attack | 82 | 78 | 85 | 71 | 84 | 90 | 81 | 83 | 71 | 69 | 81 | 83 | 80 | 85 | 84 | 80 |
| Cyber crime can ruin your life | 78 | 74 | 83 | 69 | 82 | 84 | 78 | 80 | 67 | 58 | 79 | 79 | 78 | 87 | 79 | 76 |
| Every time I am online, I am at risk of a cyber attack | 71 | 69 | 73 | 60 | 75 | 76 | 70 | 71 | 67 | 67 | 71 | 70 | 71 | 76 | 74 | 68 |
| It is the responsibility of the companies I deal with to provide adequate cyber security | 67 | 65 | 69 | 62 | 67 | 72 | 65 | 70 | 60 | 60 | 67 | 67 | 66 | 76 | 68 | 65 |
| I do everything that I can to prevent against cyber threats | 57 | 56 | 58 | 46 | 57 | 70 | 57 | 58 | 59 | 69 | 58 | 58 | 56 | 84 | 66 | 37 |
| There are organisations that can help if you are a victim of cyber crime | 56 | 57 | 55 | 52 | 54 | 64 | 55 | 58 | 59 | 62 | 56 | 58 | 53 | 75 | 59 | 49 |
| I know what is required to ensure a high level of cyber security | 43 | 48 | 38 | 43 | 45 | 40 | 43 | 43 | 54 | 61 | 48 | 43 | 36 | 82 | 50 | 22 |
| Businesses are more at risk than individuals of a cyber attack | 41 | 43 | 38 | 44 | 36 | 44 | 41 | 39 | 47 | 50 | 43 | 39 | 40 | 50 | 40 | 42 |
| I know where to go to find out about cyber security | 41 | 46 | 37 | 43 | 42 | 39 | 42 | 41 | 51 | 60 | 47 | 40 | 36 | 78 | 48 | 22 |
| I am worried that if I try to manage my own cyber security I will cause other issues with my cyber security or device setup | 38 | 37 | 39 | 35 | 37 | 43 | 38 | 38 | 47 | 52 | 39 | 37 | 39 | 40 | 37 | 43 |
| I really don't know what I should be doing to prevent against being the victim of a cyber attack | 33 | 29 | 38 | 34 | 30 | 38 | 34 | 31 | 36 | 32 | 30 | 33 | 39 | 25 | 25 | 47 |
| I have so many other things to worry about, cyber security is not a priority for me | 26 | 27 | 25 | 34 | 24 | 20 | 27 | 23 | 36 | 35 | 29 | 25 | 24 | 31 | 20 | 33 |

Significantly higher / lower than the total at the 95% confidence interval.

Q4. How much do you agree or disagree with each of the following statements about cyber security? Base: All respondents (n=2,000).

Majority of Australians aware and have at least some knowledge of a great range of cyber threats





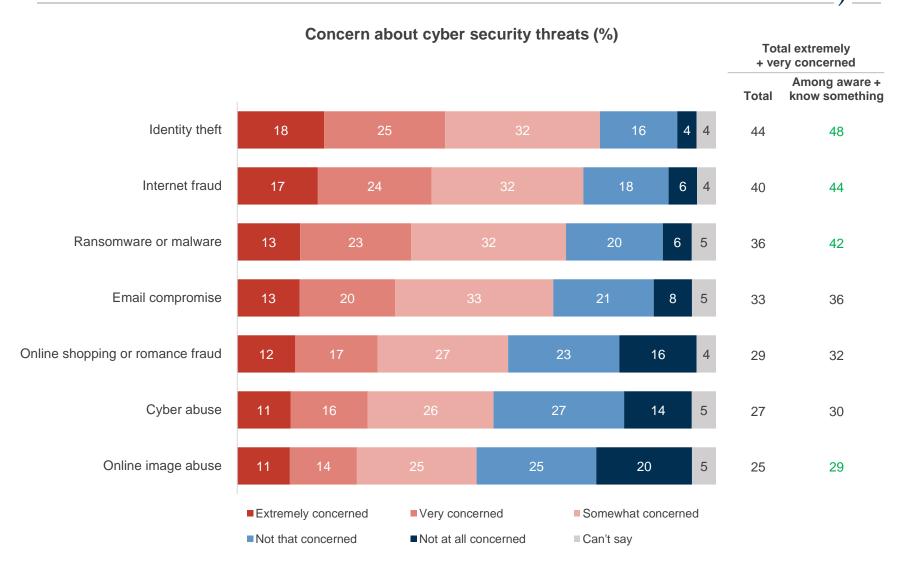
Older Australians have lower than average awareness and knowledge of many cyber security threats

| | Total | Malo | Female | 18-34 | 35-59 | 60+ | Motro | Regional | SME | SME contracts | Kids in | Inter | net Us | e | Segment | | |
|----------------------------------|-------|------|--------|-------|-------|-----|-------|----------|-------|------------------|---------|-------|--------|-------|---------|----------|---------|
| | TOLAI | wate | remaie | yrs | yrs | yrs | Metro | Regional | SIVIE | cyber | hhold | Heavy | Med. | Light | Savvy | Moderate | At risk |
| Internet fraud | 77 | 78 | 76 | 78 | 78 | 74 | 77 | 79 | 82 | 87 | 79 | 80 | 79 | 72 | 93 | 86 | 66 |
| Identity theft | 77 | 76 | 78 | 77 | 80 | 73 | 76 | 79 | 75 | 76 | 80 | 79 | 78 | 72 | 90 | 85 | 67 |
| Email compromise | 76 | 76 | 77 | 76 | 78 | 75 | 76 | 77 | 79 | 81 | 77 | 79 | 76 | 73 | 90 | 84 | 67 |
| Online shopping or romance fraud | 74 | 72 | 76 | 76 | 75 | 68 | 73 | 75 | 75 | 78 | 77 | 76 | 74 | 69 | 89 | 81 | 63 |
| Cyber Abuse | 70 | 68 | 71 | 75 | 73 | 59 | 70 | 69 | 70 | 71 | 73 | 76 | 68 | 63 | 86 | 77 | 59 |
| Ransomware or malware | 67 | 70 | 65 | 69 | 69 | 63 | 67 | 69 | 71 | 76 | 71 | 74 | 65 | 60 | 88 | 76 | 53 |
| Online image abuse | 63 | 63 | 62 | 74 | 64 | 48 | 63 | 62 | 70 | 74 | 71 | 70 | 63 | 52 | 84 | 69 | 51 |

Knowledge of cyber security threats (%) (cont'd) (Total aware + know something)

Significantly higher / lower than the total at the 95% confidence interval.

Most have at least some concern for every cyber threat, but identity theft and fraud are the key concerns



Significantly higher than the total at the 95% confidence interval.

Q18. How much of a concern are these cyber threats for you and your household?

Base: All respondents (n=2,000); those aware + know something about individual CS threats (n=499-887).

Concern about cyber security threats, by key analysis cohorts

Savvy segment: 45

• At risk segment: 22

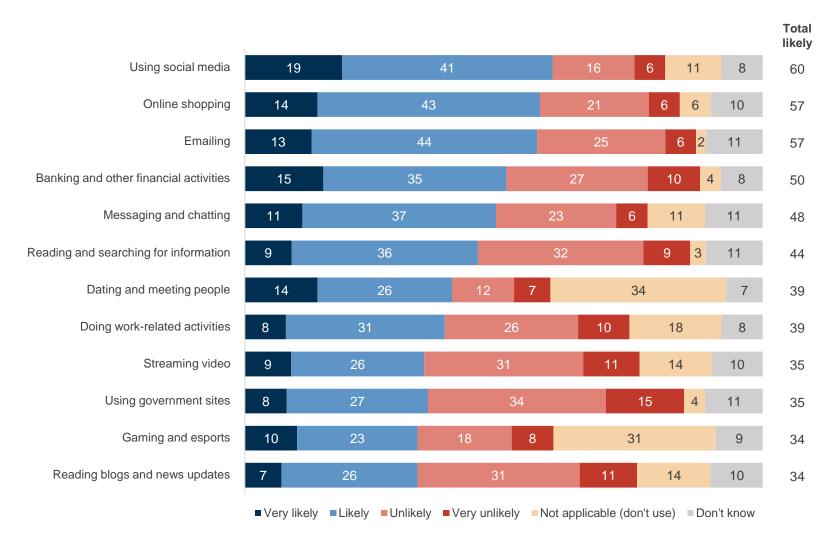
• ATSI: 44 • SME: 39



Concern about cyber security threats (%) (cont'd) (Total extremely + very concerned) 44% of Australians are extremely or very 33% of Australians are extremely or very 27% of Australians are extremely or verv concerned about identity theft, this is concerned about cyber abuse, this is concerned about email compromise, this is significantly different among: significantly different among: significantly different among: SME contracts cyber: 59 SME contracts cyber: 54 • SME contracts cyber: 48 Savvy segment: 42 Savvy segment: 55 Savvy segment: 47 • SME: 51 • ATSI: 46 • SME: 36 • 60+ yrs: 49 • SME: 42 • CALD: 32 • At risk segment: 37 • CALD: 39 • HHI up to \$50K: 32 • At risk segment: 26 • 18-34 yrs: 36 • Kids in hhold: 32 Heavy internet user: 31 At risk segment: 22 40% of Australians are extremely or very 36% of Australians are extremely or very concerned about internet fraud. this is concerned about ransomware or malware. 27% of Australians are extremely or very significantly different among: this is *significantly* different among: concerned about online image abuse, this is SME contracts cyber: 62 SME contracts cyber: 54 significantly different among: • Savvy segment: 56 Savvy segment: 52 • ATSI: 44 • ATSI: 53 • ATSI: 49 Savvv segment: 42 • SME: 50 • SME: 48 • SME contracts cyber: 41 • CALD: 49 At risk segment: 29 • SME: 37 • Kids 10-18: 47 • Kids 10-18: 36 At risk segment: 35 29% of Australians are extremely or very • CALD: 32 • Kids in hhold: 31 concerned about online shopping or romance fraud, this is significantly different Heavy internet user: 29 At risk segment: 20 among: SME contracts cyber: 50

Social media, online shopping, email and banking seen as most likely sources of cyber attacks

Likelihood to experience a cyber security breach, attack or hacking of personal information (%)



Q8. Thinking about all the programs, apps and activities you use on the internet, how likely <u>do you think you are personally</u> to experience a cyber security breach, attack or hacking of your information when you are? Base: All respondents (n=2,000).

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Light internet user: 28

• 60+ yrs: 25

Likelihood to experience a cyber security breach, attack or We hack, by key analysis cohorts

Likelihood to experience a cyber security breach, attack or hacking of personal information (%) (cont'd)

| | (| (TOtal Intery) | | | | | |
|---|--|---|--|--|--|--|--|
| 60% of Australians think they are likely to experience a CS breach, attack or hacking while using social media , this is significantly different among: • SME contracts cyber: 71 • Kids in hhold: 70 • Savvy segment: 69 • HHI > \$100K: 67 • CALD: 66 • Heavy internet user: 65 • HHI up to \$50K: 55 • Light internet user: 53 • 60+ yrs: 52 | 50% think they are likely to experience a CS breach, attack or hacking while banking and other financial activities, this is significantly different among: Savvy segment: 57 Kids in hhold: 56 Female: 54 Male: 46 48% think they are likely to experience a CS breach, attack or hacking while messaging and | 39% think they are likely to experience a CS breach, attack or hacking while dating and meeting people , this is significantly different among: • Savvy segment: 48 • SME: 47 • Kids in hhold: 46 • 35-59 yrs: 44 • 60+ yrs: 30 39% think they are likely to experience a CS breach, attack or hacking while doing work- | 35% think they are likely to experience a CS breach, attack or hacking while streaming video, this is significantly different among: ATSI: 55 SME contracts cyber: 54 SME: 46 Kids in hhold: 45 Savvy segment: 44 CALD: 41 Heavy internet user: 39 At risk segment: 30 Light internet user: 29 60+ yrs: 27 | | | | |
| 57% think they are likely to experience a CS breach, attack or hacking while online shopping , this is significantly different among: • Kids in hhold: 64 • Female: 61 • Male: 52 • 60+ yrs: 51 | chatting, this is significantly higher among: Savvy segment: 60 Kids in hhold: 58 CALD: 57 SME: 56 44% think they are likely to experience a CS breach, attack or hacking while reading and searching for information, this | related activities, this is significantly different among: SME contracts cyber: 62 SME: 52 Savvy segment: 52 ATSI: 51 Kids in hhold: 49 Heavy internet user: 44 At risk segment: 33 60+ yrs: 31 | 34% think they are likely to experience a CS breach, attack or hacking while reading blogs and news updates, this is significantly different among: SME contracts cyber: 54 SME: 49 ATSI: 48 Kids in hhold: 43 Savvy segment: 42 CALD: 40 Regional: 28 | | | | |
| 57% think they are likely to experience a CS breach, attack or hacking while emailing, this is significantly higher among: Kids in hhold: 64 | is significantly different among: • SME contracts cyber: 56 • SME: 53 • 60+ yrs: 51 • Savvy segment: 51 • Kids in hhold: 50 • 18-34 yrs: 38 | 35% think they are likely to experience a CS breach, attack or hacking while using government sites, this is significantly higher among: SME contracts cyber: 45 Kids in hhold: 42 Savvy segment: 42 | 34% think they are likely to experience a CS breach, attack or hacking while gaming and esports , this is significantly different among • SME contracts cyber: 56 • Kids in hhold: 45 • SME: 44 • Savvy segment: 43 • 35-59 yrs: 38 • Regional: 29 | | | | |

Significantly higher / lower than the total at the 95% confidence interval.

Q8. Thinking about all the programs, apps and activities you use on the internet, how likely <u>do you think you are personally</u> to experience a cyber security breach, attack or hacking of your information when you are? Base: All respondents (n=2,000).

Actions undertaken



Section summary – actions undertaken

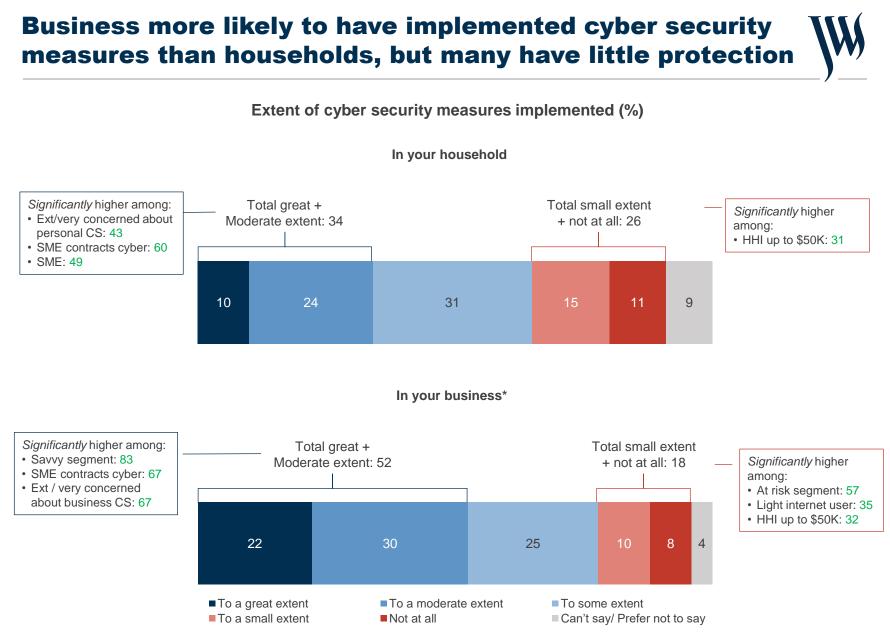


Levels of concern do not translate into implementation of preventative measures The level of cyber security is not necessarily reflected in the implementation of preventative cyber security measures. Nearly half (47%) of Australians feel secure based on the measures they have implemented, yet just 34% have put in place extensive security measures (great / moderate). SMEs are slightly more realistic, with one in two (52%) implementing extensive measures and 56% feeling secure.

Varying cyber practices leave Australians vulnerable to attack Cyber security behaviour reflects the variation in levels of awareness, understanding and concern. For example 59% of people never share their passwords and 57% say they are always wary of phishing and online scams, leaving the remaining two out of five Australians potentially vulnerable. Despite high usage, 14% of people never review their social media privacy settings.

Online searching and Government websites are top of the information consideration set To improve cyber security, Australians use a variety of approaches to find out information. Online searching is the most popular (40%), followed closely by Federal Government websites (38%), cyber security companies (32%), internet service providers (30%) and specialist IT companies (28%). The list is long, however, and 10% admit to not knowing where to look.

Cyber complacency is compounded by not knowing where to report attacks Two out of five Australians (42%) have received a phishing email in recent years, but more serious attacks such as unauthorised access to financial accounts is much lower at 15% (of which 71% reported it, the highest for all the attacks experienced). Overall, about half report any kind of attack, reasons for not reporting include: it was not considered serious enough; they didn't know where to report it; or, they thought nothing would come of it. Just 15% say they would report to ACSC's ReportCyber.



Significantly higher than the total at the 95% confidence interval.

Q12. To what extent have you implemented any cyber security measures for you personally or for your household?

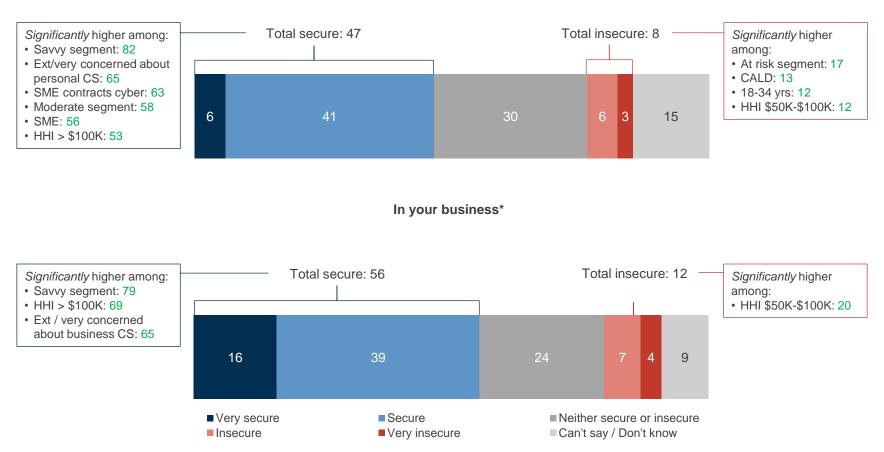
Q13. To what extent have you implemented any cyber security measures for your business?

Base: All respondents (n=2,000); SMEs (n=340).

At both a household and business level, many feel less than secure

Perceived security from cyber security measures implemented (%)

In your household



Significantly higher than the total at the 95% confidence interval.

Q14. Thinking about cyber security measures you have personally implemented, how secure do you think that you are?

Q15. Thinking about **cyber security measures you have implemented in <u>your business;</u> how secure do you think the business is? Base: All respondents (n=2,000); SMEs (n=340).**

There is a widely varying degree of implementation of specific cyber security measures

| Frequency | of cyber | secur | ity meas | ures i | mplem | ented (% | 6) | | Total |
|--------------------------------------|----------|--------|------------|--------|---------|----------|------------|--------------------|------------------------------|
| | | | | | | | | | always + most of the time |
| / online scams ive information | | | 57 | | | 24 | | 13 4 3 | 80 |
| ell anyone else your password | | | 59 | | | 18 | 1 | 2 <mark>8</mark> 2 | 78 |
| nancial or other ve transactions | | 47 | 7 | | 24 | 4 | 19 | 7 4 | 71 |
| ware or firewall tphone / tablet) | | 46 | | | 24 | | 18 | 8 4 | 70 |
| shared online | | 36 | | | 34 | | 23 | 4 3 | 70 |
| tware) updates | | 44 | | | 25 | | 20 | 83 | 69 |
| / passphrases | | 30 | | ; | 36 | | 26 | <mark>5</mark> 2 | 66 |
| ord protection) | | 44 | | | 17 | 15 | 11 | 14 | 60 |
| ie passwords – n account/login | 25 | 5 | | 29 | | 33 | | 11 2 | 54 |
| ck up your data | 22 | | 26 | | | 37 | | 11 4 | 48 |
| uthentication – or other device | 18 | | 28 | | | 32 | 1 | 2 10 | 46 |
| edia and other accounts | 19 | | 25 | | | 36 | | 14 6 | 44 |
| the authorities | 22 | | 19 | | 29 | | 25 | 5 | 41 |
| vords that have meaning to you | 16 | | 8 | 2 | 6 | | 33 | 7 | 34 |
| Network (VPN) | 11 | 14 | 23 | | | 31 | | 21 | 25 |
| s and browsers | 11 | 13 | 16 | | | 52 | | 8 | 24 |
| uspicious links | 4 6 | 13 | | | Ī | 74 | | 3 | 10* |
| | ■Always | Most c | f the time | Some | times 🔳 | Never [| Don't know | what this is | |

Be wary of phishing scams / or asking for sensitive Do not share passwords - never tell a you Avoid free Wi-Fi when conducting finance sensitive ti Use anti-virus softwar (computer / smartpho

Limit personal information sh

Install security (softwa

Use strong /complex passwords / pa

Secure your router (with password

Use unique pa a different password for each ac

Back u

Use multifactor or two-factor authority verify using your phone or o Review privacy settings on social media

Report scams and cyber threats to the

Use passphrases not passwords - 3-4 word unique mea

Use a Virtual Private Net

Use parental controls on devices an

Click on susp

*Note: There appears to be an anomaly in this percentage as the Savvy segment is overrepresented in this 10% result. As this is the most cyber security conscious segment, it is likely that they have misinterpreted this as 'do not click on suspicious links'. On this basis, this 10% is likely to be a much smaller percentage.

Q16. Thinking about various cyber security measures that you could implement, how often do you do the following? Base: All respondents (n=2,000).

Australians could do more when it comes to implementing cyber security measures

Frequency of cyber security measures implemented (%) (cont'd)

| | Total | 18-34 | 35-59 | 60+ | SME | SME contracts | | Kids | Kids | | Segment | |
|--|-------|-------|-------|-----|-------|------------------|------|---------|-----------|-------|----------|---------|
| | TOLAI | yrs | yrs | yrs | total | cyber | CALD | 0-9 yrs | 10-18 yrs | Savvy | Moderate | At risk |
| Be wary of phishing scams / online scams asking for sensitive information | 80 | 73 | 82 | 86 | 74 | 68 | 75 | 72 | 77 | 86 | 85 | 74 |
| Do not share passwords – never tell anyone else your password | 78 | 69 | 81 | 82 | 70 | 68 | 78 | 76 | 77 | 82 | 81 | 74 |
| Avoid free Wi-Fi when conducting financial or other sensitive transactions | 71 | 62 | 72 | 78 | 64 | 66 | 71 | 67 | 72 | 79 | 76 | 63 |
| Use anti-virus software or firewall (computer / smartphone / tablet) | 70 | 54 | 73 | 83 | 68 | 65 | 66 | 64 | 70 | 84 | 77 | 58 |
| Limit personal information shared online | 70 | 60 | 70 | 82 | 65 | 69 | 67 | 66 | 69 | 81 | 75 | 61 |
| Install security (software) updates | 69 | 54 | 72 | 79 | 67 | 65 | 64 | 65 | 66 | 83 | 76 | 56 |
| Use strong /complex passwords / passphrases | 66 | 61 | 70 | 66 | 64 | 66 | 65 | 62 | 70 | 82 | 73 | 52 |
| Secure your router (with password protection) | 60 | 61 | 63 | 55 | 63 | 65 | 62 | 62 | 65 | 81 | 66 | 46 |
| Use unique passwords – a different password for each account/login | 54 | 47 | 55 | 59 | 57 | 61 | 55 | 51 | 57 | 72 | 58 | 39 |
| Back up your data | 48 | 43 | 50 | 51 | 59 | 55 | 48 | 49 | 47 | 66 | 55 | 35 |
| Use multifactor or two-factor authentication – verify using your phone or other device | 46 | 53 | 49 | 34 | 57 | 64 | 53 | 54 | 57 | 70 | 51 | 32 |
| Review privacy settings on social media and other accounts | 44 | 46 | 45 | 40 | 53 | 57 | 47 | 42 | 48 | 66 | 49 | 28 |
| Report scams and cyber threats to the authorities | 41 | 38 | 40 | 45 | 50 | 58 | 40 | 45 | 42 | 58 | 46 | 29 |
| Use passphrases not passwords – 3-4 words that have unique meaning to you | 34 | 40 | 35 | 26 | 49 | 52 | 42 | 39 | 39 | 51 | 38 | 24 |
| Use a Virtual Private Network (VPN) | 25 | 27 | 26 | 20 | 42 | 48 | 28 | 34 | 31 | 46 | 27 | 13 |
| Use parental controls on devices and browsers | 24 | 25 | 28 | 16 | 44 | 55 | 29 | 41 | 43 | 43 | 26 | 14 |
| Click on suspicious links | 10* | 17 | 9 | 4 | 28 | 36 | 16 | 17 | 14 | 22 | 11 | 4 |

(Total always + most of the time)

* Note: There appears to be an anomaly in this percentage as the Savvy segment is overrepresented in this 10% result. As this is the most cyber security conscious segment, it is likely that they have misinterpreted this as 'do not click on suspicious links'. On this basis, this 10% is likely to be a much smaller percentage.

Significantly higher / lower than the total at the 95% confidence interval.

Q16. Thinking about various cyber security measures that you could implement, how often do you do the following? Base: All respondents (n=2,000).

Online search and Australian Government websites are the WMM main sources of cyber security information

Significantly higher among: Online search 40 Heavy internet user: 46 Australian Federal Government websites 38 60+ yrs: 45; HHI > \$100K: 43; Moderate segment: 43 Cyber security companies 32 60+ yrs: 40; Moderate segment: 37 Your internet service provider 30 60+ yrs: 45; regional: 35; HHI up to \$50K: 35 IT specialist/companies 28 Savvy segment: 37 State Government websites 23 60+ yrs: 27 21 Friends and family **Telecommunications companies** 15 60+ yrs: 24; Savvy segment: 22; regional: 20 Financial institutions such as banks 15 60+ yrs: 21; Savvy segment: 21 13 Local Government websites Savvy segment: 18; CALD: 17; female: 16 Savvy segment: 24; SME: 20; HHI > \$100K: 20; uni educated: 17; Professional and industry bodies 13 heavy internet user: 17 SME: 11; Savvy segment: 11; heavy internet user: 9; CALD: 10; 18-Media 6 34 yrs: 9 Savvy segment: 13; 18-34 yrs: 12; CALD: 12; SME: 11; kids 10-18 Social media or online forum 6 yrs: 10; male: 9; heavy internet user: 9 Don't know 10 Light internet user: 14 None of these 3

Sources to find information on improving cyber security (%) (Multiple response)

Significantly higher than the total at the 95% confidence interval.

Q19. If you want to find out what you can do to improve your cyber security, where would you find this information? Base: All respondents (n=2,000).

Unauthorised access to online banking is the incident that is most likely to be reported

Experience and reporting of cyber security attacks (%)

| Cyber security attacks ex household in last 3 | | (Amc | Whether reported ong those who experienced) | Reported among total population |
|---|----|------|--|---------------------------------|
| Received a phishing message asking for your banking or personal information | | 42 | 51 | 22 |
| Detected malicious software (e.g. spyware, ransomware, viruses, worms, Trojan horses, adware, etc.) on a computer, Wi-Fi network, smartphone, tablet, smart home, or other connected device | 22 | | 42 | 9 |
| Detected unauthorised access on an online banking or other financial account | 15 | | 71 | 11 |
| Clicked on a suspicious link or attachment | 15 | | 40 | 6 |
| Learned your personal information was exposed in a data breach | 14 | | 45 | 6 |
| Detected unauthorised access on a social media account | 13 | | 50 | 7 |
| Detected unauthorised access on another online account (not including online retail, email, social media account) | 12 | | 48 | 6 |
| Detected unauthorised access on an email account | 12 | | 52 | 6 |
| Detected unauthorised access on an online retail or shopping account | 10 | | 52 | 5 |
| Threatened with the release of sensitive personal photos, video or information that was stolen online | 9 | | 48 | 4 |
| Discovered your personal information was stolen online and used without your permission | 9 | | 56 | 5 |
| Provided personal information, financial information or money in response to a fraudulent email, text message or website | 8 | | 53 | 4 |
| Been stalked, bullied or harassed online | 8 | | 49 | 4 |
| Had a device or files locked with a demand for money to unlock the encryption | 8 | | 50 | 4 |
| Detected unauthorised access to your home or personal Wi-Fi network | 7 | | 49 | 3 |

Q20. Thinking about a range of cyber attacks, in the last 3 years, have you or any one in your household experienced any of the following...? / Q21. And did you report this attack?

Base: All respondents (n=2,000); those who experienced cyber security attacks in household in last 3 years (n=133-859).

J W S R E S E A R C H 43

Key reasons for not reporting include not knowing where to report and not having faith in the response

Reasons for not reporting cyber attack/s experienced (%) (Multiple response - among those who experienced and did not report) Significantly higher among: Did not think it was serious enough to report 33 Didn't know where or who to go to report it 28 Kids 0-9 yrs: 37; female: 34 Ext/very concerned about business CS: 26; Nothing will happen if I do report it 18 Savvy segment: 25; 18-34 yrs: 24 Ext/very concerned about business CS: 29; kids in hhold: 24; Too busy, didn't have the time 12 SME contacts CS: 26; Savvy segment: 18 Just want to forget about it 11 SME contacts CS: 21; 18-34 yrs: 17 SME contracts cyber: 21; ATSI: 20; 18-34 yrs: 17; ext/very Was too embarrassed 6 concerned about business CS: 14: kids 0-9 vrs: 12 Felt responsible for letting it happen 6 ATSI: 18; SME contracts cyber: 17; kids 0-9 yrs: 12 The information I found on reporting is too 5 ATSI: 15; ext/very concerned about business CS: 15 difficult for me to follow Some other reason 12 Don't remember/Can't say 13

Significantly higher than the total at the 95% confidence interval. Q22. Why didn't you report the cyber attack/s?

Base: Respondents who experienced cyber security attacks in household in last 3 years and did not report (n=843).

Reasons for not reporting cyber attacks, by type of attack

Reasons for not reporting cyber attack/s experienced (%)

(Multiple response – among those who experienced and did not report)

| | Total | Received phishing message | Detected malicious software | Clicked on suspicious link or attachment | Personal information exposed in data breach | Detected unauthorised access on social media account | Detected unauthorised access on another online account | | Threatened with release of sensitive personal photos, video or information stolen online |
|--|-------|---------------------------------|-----------------------------------|--|--|--|--|-----|--|
| Sample size (n=) | 843 | 379 | 236 | 151 | 131 | 109 | 105 | 100 | 78 |
| Didn't think it was serious enough to report | 33 | 38 | 35 | 37 | 28 | 36 | 23 | 27 | 34 |
| Didn't know where or who to go to report it | 28 | 32 | 36 | 29 | 23 | 28 | 25 | 32 | 30 |
| Nothing will happen if I do report it | 18 | 18 | 16 | 22 | 26 | 27 | 16 | 24 | 21 |
| Too busy, didn't have the time | 12 | 10 | 15 | 11 | 11 | 15 | 15 | 13 | 16 |
| Just want to forget about it | 11 | 8 | 12 | 14 | 10 | 18 | 14 | 11 | 21 |
| Was too embarrassed | 6 | 2 | 4 | 7 | 3 | 8 | 15 | 5 | 11 |
| Felt responsible for letting it happen | 6 | 4 | 7 | 11 | 2 | 8 | 4 | 4 | 9 |
| Info. found on reporting too difficult to follow | 5 | 4 | 5 | 6 | 6 | 8 | 9 | 6 | 9 |
| Some other reason | 12 | 15 | 9 | 2 | 25 | 6 | 12 | 8 | 10 |
| Don't remember/Can't say | 13 | 13 | 11 | 12 | 11 | 7 | 12 | 10 | 7 |

Significantly higher / lower than the total at the 95% confidence interval.

Q20. Thinking about a range of cyber attacks, in the last 3 years, have you or any one in your household experienced any of the following ...?

/ Q21. And did you report this attack? / Q22. Why didn't you report the cyber attack/s?

Base: Respondents who experienced cyber security attacks in household in last 3 years and did not report (n=843).

Reasons for not reporting cyber attacks, by type of attack (cont'd)

Reasons for not reporting cyber attack/s experienced (%) (cont'd)

(Multiple response – among those who experienced and did not report)

| | Total | Detected unauthorised access on online banking or other financial account | Detected unauthorised access on online retail or shopping account | Device or files locked with demand for money to unlock encryption | Been stalked, bullied or harassed online | Provided personal or financial information or money in response to fraudulent email, text message or website | Personal information stolen online and used | Detected unauthorised access to home or personal Wi-Fi network |
|--|-------|---|---|---|--|--|---|--|
| Sample size (n=) | 843 | 66 | 65 | 61 | 64 | 59 | 57 | 55 |
| Didn't think it was serious enough to report | 33 | 25 | 29 | 16 | 35 | 25 | 35 | 26 |
| Didn't know where or who to go to report it | 28 | 18 | 30 | 33 | 28 | 17 | 37 | 31 |
| Nothing will happen if I do report it | 18 | 17 | 21 | 18 | 27 | 28 | 31 | 15 |
| Too busy, didn't have the time | 12 | 18 | 20 | 12 | 20 | 11 | 21 | 14 |
| Just want to forget about it | 11 | 18 | 18 | 26 | 22 | 30 | 12 | 20 |
| Was too embarrassed | 6 | 13 | 7 | 7 | 12 | 10 | 13 | 9 |
| Felt responsible for letting it happen | 6 | 7 | 16 | 16 | 10 | 6 | 8 | <1 |
| Info. found on reporting too difficult to follow | 5 | 7 | 2 | 11 | 4 | 8 | 11 | 12 |
| Some other reason | 12 | 10 | 4 | 6 | 4 | 3 | 1 | 3 |
| Don't remember/Can't say | 13 | 7 | 16 | 4 | 3 | 8 | 5 | 7 |

Significantly higher / lower than the total at the 95% confidence interval.

Q20. Thinking about a range of cyber attacks, in the last 3 years, have you or any one in your household experienced any of the following ...?

/ Q21. And did you report this attack? / Q22. Why didn't you report the cyber attack/s?

Base: Respondents who experienced cyber security attacks in household in last 3 years and did not report (n=843).

Only half would seek out an Australian Government agency W to report a cyber crime, primarily ACCC Scam watch

| | (Multip | ole response) | | |
|---|---|---------------------|----|--|
| Net of those who would report a cyber crime to an | Scam watch website (ACCC) | 14 | 31 | Would contact <u>first</u> <i>significantly</i> higher among: 60+ yrs: 18; regional: 18; Moderate segment: 17 |
| Australian Government | Financial institution such as your bank | 9 23 | | 60+ yrs: 12; light internet user: 12 |
| agency: 51% | My internet provider | 8 22 | | 60+ yrs: 12 |
| Not of those who would | Would do an internet search to find out | 9 19 | | HHI > \$100K: 12 |
| Net of those who would report a cyber crime to an | Australian Federal Police | 8 19 | | |
| Australian Government agency <u>first</u> : 29% | Local state or territory police | 6 17 | | |
| (significantly higher among: | ACSC's ReportCyber | 5 15 | | 60+ yrs: 8 |
| 60+ yrs: 37; ext/very concerned about personal | Organisation hosting the site (e.g. eBay, Facebook, Twitter, Tinder, etc.) | 6 14 | | |
| CS: 33) | Friends & family | 4 14 | | 18-34 yrs: 7 |
| | IT specialist or provider | 3 10 | | SME contracts cyber: 11; Ext/very concerned about business CS: 10; SME: 6 |
| | Australian Federal Government | 2 10 | | Extinely concerned about business CS. 10, SINE. 0 |
| | My phone provider/telco | 2 10 | | |
| | State Government | 5 | | |
| | Local Government | 4 | | |
| Sc | cial media such as Facebook and Twitter | 3 | | SME: 3; Savvy segment: 3 |
| | Media | 2 | | Ext/very concerned about business CS: 5; SME: 4; 18-34 yrs: 3 |
| | Other | 2 | | SIVIE. 4, 10-34 yls. 3 |
| | Can't say | 18 | | 'At risk' segment: 23 |
| | | Would contact first | V | Nould contact |

Where to report a cybercrime or cyber attack (%)

Significantly higher than the total at the 95% confidence interval.

Q23. If you wanted to report a cybercrime or cyber attack who/where would you <u>contact first</u>? / Q24. And who/where else would you contact? Base: All respondents (n=2,000).

Segment analysis



Section summary – attitudes toward cyber security



A viable segmentation has been developed on the basis of the level of understanding and the extent of cyber security measures implemented by Australians. There is significant differentiation between the segments that will enable the ACSC to develop targeted strategies to meet the needs of a very disparate market.

Savvy segment

The Savvy segment has a good understanding of cyber security and implements a range of protective measures. This segment tends to be educated and heavy internet users through multiple devices. They are vigilant, informed, and have an ongoing interest in keeping up with the latest developments in cyber security and threats. The ACSC can help to satisfy these needs for the Savvy segment.

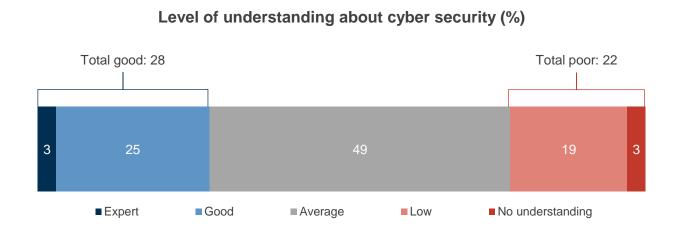
Moderate segment

Moderates are aptly described as they are average in many respects. They understand and have implemented adequate levels of cyber security but not to the same degree as the Savvy segment. As a result, while they believe they have a good level of security, they are still vulnerable due to some deficits in their knowledge and security measures. They are very receptive to learning more, particularly from the ACSC, who is perceived to be a trustworthy source.

At risk segment

'At risk' describes this segment well, based on the implementation, or lack thereof, of cyber security measures. Their knowledge and understanding of the importance of cyber security is limited, and many of them are unconcerned about cyber security. It is unclear if this is apathy or ignorance, but nonetheless, they are exposed to significant risks every time they are on the internet.

Cyber segments based on analysis of understanding (attitude) and implementation (behaviour)



Extent of cyber security measures implemented in household (%)



Q3. Please rate your **personal level of understanding about cyber security.** / Q12. To what extent have you implemented any cyber security measures for you personally or for your household? Base: All respondents (n=2,000).

Cyber security profile snapshot

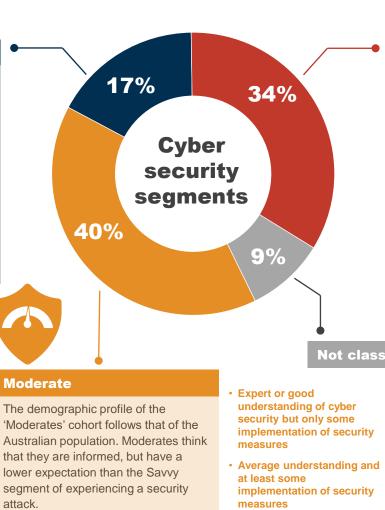




 Expert or good understanding of cyber security and have implemented cyber security measures to a great or moderate extent

Savvy

'Savvy' skews male - 61% of this cohort are men, they are more likely to be employed, have higher education levels, spend more than 6 hours per day on the internet, with household income over \$100,000, and kids. They are more likely to have a greater range of devices including alarm / security systems and home automation connected to the internet. They are also far more likely to be users of multiple social media sites (2+ sites 82% vs 70% average).



At risk

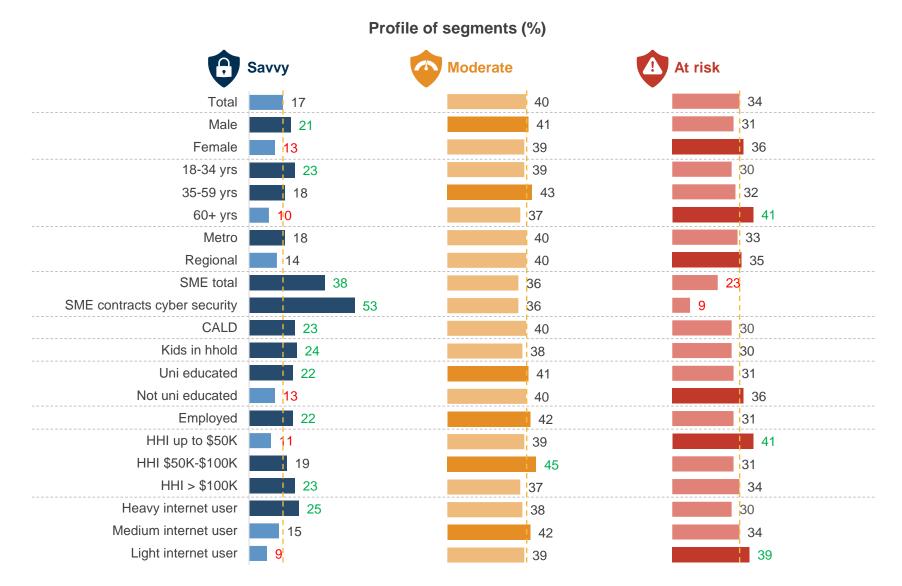
The 'At risks' skew female - 55% of this cohort are women. At risk also skews to the over 60s, households with incomes under \$50,000 and those who spend up to two hours per day on the internet. They are also less likely to use multiple social media sites, but they are still connected and vulnerable.

- Expert, good or average understanding of cyber, but security little to no implementation
- · Low understanding, regardless of security implementation

Not classified

Detailed segment profiles





Significantly higher / lower than the total at the 95% confidence interval. Base: All respondents (n=2,000).

'Savvy' segment understand how critical cyber security is at every level

🔁 Savvy (17%)

Who are they?

The Savvies skew male – comprising 61% of this cohort. They are higher income and heavy internet users, spending more than 6 hours per day on the internet. They are also more likely to have a greater range of devices including alarm / security systems and home automation connected to the internet. In addition, Savvy cohort are also far more likely to be users of multiple social media sites (2+ sites 82% vs 70% average).

What underpins their views?

- Savvies are significantly more likely to be extremely or very concerned for themselves personally about cyber security than the other segments (56% compared to 43% among all Australians).
- Consistent with this concern, they are significantly more likely to have higher levels of concern for their business (68% vs 50% average), business in general (61% vs 46% average) and the Government (65% vs 54% average).
- More than other segments, the Savvy segment think they know what is required to ensure a high level of security (82% vs 43% average). They also know where to go for information (78% vs 41% average).

- This segment more than others believes that cyber crime can ruin lives (87% vs 78% average). This acknowledgment is vital to understanding the importance of cyber security, particularly the businesses which they are more likely to believe are at greater risk (50% vs 41% average).
- Awareness of when and how breaches can occur online is greater than for other segments: for example when messaging or chatting online (60% vs 48% average), or undertaking work activities (52% vs 39% average.)
- Savvies are confident that the measures implemented for themselves (82% vs 47% average) and, if they are SMEs, their businesses (79% vs 56% average) are secure. In fact, when reviewing the measures implemented, there is an extensive and more sophisticated range of measures used, from password-protected routers (81% vs 60% average) through to multifactor authentication (70% vs 46% average) and VPNs (46% vs 25% average).
- Consistent with their other behaviour, this segment has significantly higher levels of awareness and concern for the range of cyber threats. This raises the question of whether they have experienced a cyber attack; however, the incidence of cyber attack is in line with the other segments.
- Should they want to obtain information, Savvies trust the ACSC and are significantly more likely to go to the website (72% vs 63% average).
- Overall, Savvies are significantly more likely to want to hear more about cyber security (60% vs 50% average).

The 'Moderate' segment has adequate levels of awareness and knowledge but they are still vulnerable

💁 Moderate (40%)

Who are they?

The demographic profile of the Moderate cohort follows that of the Australian population in all respects other than significantly higher middle income representation.

What underpins their views?

- Moderates <u>think</u> that they are informed about cyber security. They are more likely to know where to go to find information (48% vs 41% average). Furthermore, they are also more likely to believe that they do everything they can to prevent against cyber threats (66% vs 57% average).
- Moderates are significantly more likely to consider the measures implemented have given them a good level of personal / household security (58% vs 47% average).
- There are a number of measures they are more likely to implement, from using anti-virus software (77% vs 70% average) through to using strong passwords / phrases (73% vs 66% average). There are some differences between the Savvies and the Moderates. The Savvies have higher incidences of using more sophisticated security measures, such as VPNs and passphrases.
- Moderates are generally aware of the cyber threats and are concerned, but not to the same extent as the Savvy segment.

- In regard to the organisations that can provide assistance with cyber crimes, Moderates are significantly more likely to nominate the ACSC (52% vs 46% average). There is no apparent reason for this, other than to reinforce earlier conclusions about the power of ACSC's name association.
- The Moderates, as with all the segments, have a high level of trust in the ACSC to provide cyber security information (77% average). Compared to the Australian population overall, significantly more Moderates would go to the website to get this information (70% vs 63% average) and to report a cyber crime if they are a victim (76% vs 68% average).

The 'At risk' segment does not sufficiently comprehend the W importance of cyber security

🕨 At risk (34%)

Who are they?

The At risk segment skews female – 55% of this cohort are female. They are lower income and lighter users, spending up to two hours a day on the internet. They are also less likely to use multiple social media sites.

What underpins their views?

- As can be expected, the At risk cohort are more likely to be unconcerned about cyber security on any level – personal (21% vs 16% average), for their own business (33% vs 16% average) or business in general (18% vs 22% average).
- In the attitudinal statements, it is evident that they are less concerned about cyber security, and significantly less likely to know where to go to find out about it (22% vs 41% average). Further, approximately half of the At risk segment acknowledge that they do not know what to do to prevent against an attack (47% vs 33% average).
- Of great concern is that SMEs in this segment are <u>significantly less likely to have implemented</u> cyber security measures for their business (57% 'not at all' or 'to a small extent' vs 18% average). At risk SMEs are also less likely to consider their business secure as result of these measures (31% vs 56% average). This underestimation of risk, coupled with their low levels of cyber security knowledge, exposes them to cyber threats.

- Consistent with their other behaviours, the At risk segment are significantly less likely to have implemented any security measures, even the most basic ones of antivirus software (58% vs 70% average) or avoiding free Wi-Fi to conduct financial or sensitive transactions (63% vs 71% average).
- This unpreparedness is further compounded by their lower awareness and levels of concern in comparison to the other segments of the various cyber threats. For example, they are significantly less likely to be concerned about online shopping or romance frauds (22% vs 29% average).
- In terms of who they trust to provide information about cyber security, seven out of ten of the At risk segment would trust the ACSC. This segment is significantly less likely to be aware of or know anything about the ACSC (9% vs 19% average), so it is interesting that there is such a high level of trust.
- Further, a majority (56%) would go to the ACSC website to seek out information about cyber security. At the end of this research, nearly half (47%) indicate that they want to know more about cyber security.
- Overall, there is a vast difference in cyber security understanding and behaviour between the Savvy and At risk segments, but there is a glimmer of hope that once At risk become aware of the risks, many will want to rectify the situation and close their knowledge gaps.

Trusted organisations

Section summary – trusted organisations



Limited awareness and knowledge of the ACSC except among specific audiences The ACSC has a low level of awareness (31%) in comparison to organisations such as the AFP (75%) and Border Force (65%). Interestingly, there is greater awareness among those who have high levels of concern about cyber security for both personal (37%) and business (60%) as well as those who self-classify as having an 'expert' or 'good' understanding of cyber security.

ACSC – the name gives the organisation credibility Irrespective of low awareness levels, the ACSC is nominated by approximately one out of two Australians as the organisation that can assist with cyber security information (54%), reporting a cyber crime (45%) and assisting with cyber crimes (46%). Among those aware of the ACSC, it has exceptionally high levels of trust, on par with the AFP – the only limitation is the ACSC's low awareness.

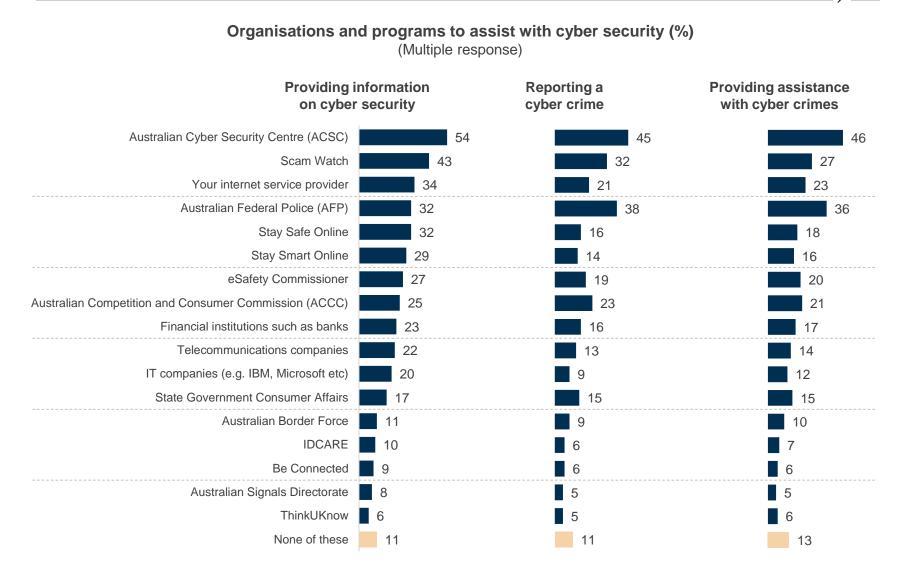
Awareness and trust of Stay Smart Online is low Awareness of the Stay Smart Online program is low, with less than 1 in 3 (31%) aware of the program and very few knowing a lot about it. There is not a strong association that the ACSC runs the program. Overall, Stay Smart Online has a limited trust rating among those aware of it.

The ACSC has relatively low awareness, although Stay Smart Online awareness is even lower

Awareness of cyber security organisations and programs (%) Total aware + know something Australian Federal Police (AFP) 17 75 6 13 11 Australian Border Force 65 Australian Competition and Consumer 13 14 65 Commission (ACCC) 22 State Government Consumer Affairs 8 53 Scam Watch 7 41 36 Australian Cyber Security Centre 42 6 31 (ACSC) Stay Safe Online 4 63 20 eSafety Commissioner 4 63 19 Stay Smart Online 5 66 18 Australian Signals Directorate 5 68 17 76 Be Connected 13 80 **IDCARE** 3 11 ThinkUKnow 3 80 10 Aware and know a lot about them Aware and know a bit about them

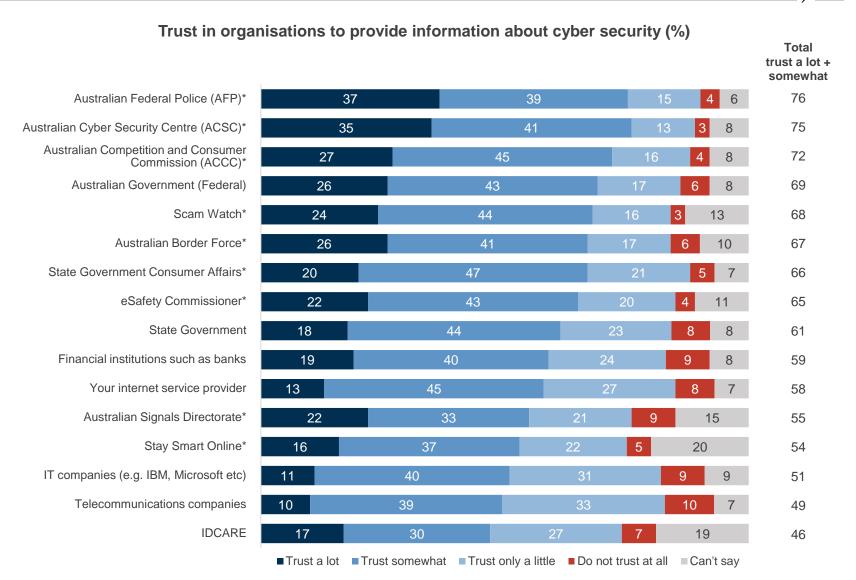
Aware but do not know anything about them Not aware of them

The ACSC has the highest top-of-mind association for cyber security information, reporting, and assistance

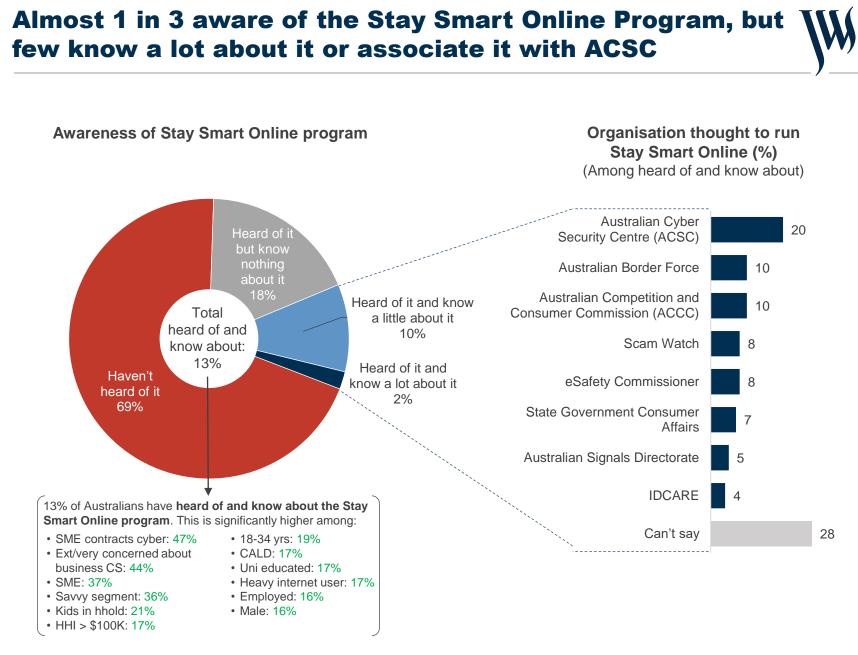


Q26. And which of these organisations or programs do you think could assist with... A. Providing information about cyber security? / B. Reporting a cyber crime? / C. Providing assistance with cyber crimes? Base: All respondents (n=2,000).

Among those aware of each individual organisation, the ACSC has the highest trust rating after the AFP



Q29. How much do you trust these organisations to provide you information about cyber security? Base: All respondents (n=2,000). *Asked only among those aware of organisation.



Significantly higher than the total at the 95% confidence interval.

Q27. Have you heard of the Stay Smart Online program? / Q28. Do you know what organisation runs the Stay Smart Online program? Base: All respondents (n=2,000); heard of Stay Smart Online program (n=242).

Australian Cyber Security Centre (ACSC) and 2020 Strategy



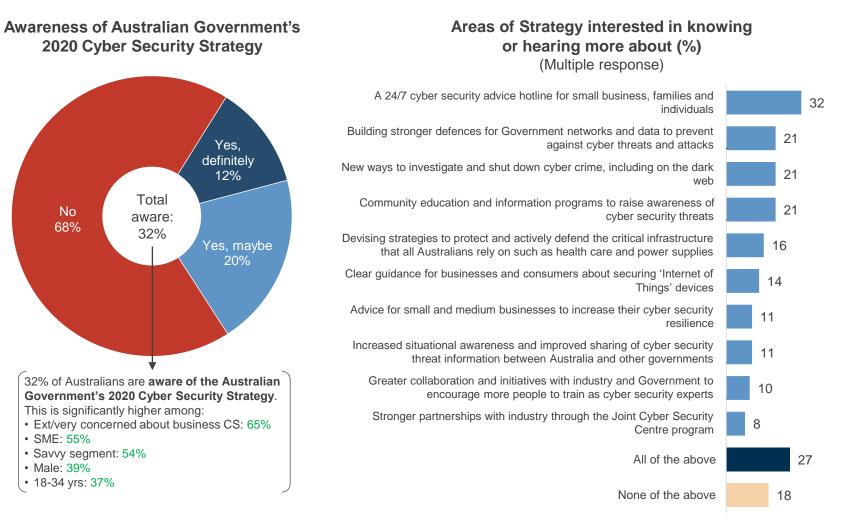
Section summary – ACSC and the 2020 Cyber Security Strategy

Appetite exists to know more about Government cyber security initiatives Awareness of the 2020 Cyber Security Strategy is low, with only about one in ten (12%) having 'definitely' heard of it. Once prompted, there is a lot of interest in hearing about the different initiatives, particularly the 24/7 cyber security advice hotline (32%). More than a quarter (27%) want to know about all aspects of the Strategy and less than one in five (18%) are not interested in hearing anything.

The ACSC needs to define its role and raise its profile Given an explanation of the ACSC and its mission, 47% claim some awareness, but only 19% say they have even limited knowledge of the ACSC. This contrasts with the 31% who earlier said they are aware of the ACSC and claim to know something. It can be hypothesised that, initially, Australians may have confused it with another organisation, such as the ACCC.

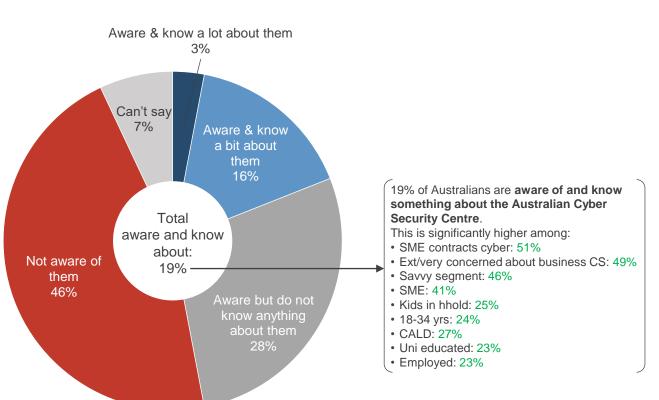
ACSC – a one-stopshop for cyber security The two main areas of interest in the ACSC's services are 'to get assistance if they are a victim of cyber crime' (68%) and 'going to the website to get information about security' (63%). There is less, but still considerable, appetite for following the ACSC on social media (42%) or subscribing to the ACSC alert service (39%).

Prompted awareness of the ACSC 2020 Cyber Security Strategy is low, but there is interest in a 24/7 cyber hotline



Significantly higher than the total at the 95% confidence interval. Q30. The Australian Government recently announced its 2020 Cyber Security Strategy, where \$1.67 billion will be invested over 10 years to bolster cyber security. Before now, were you aware of this announcement? / Q31. Following are some of the areas of focus of the Australian Government's Cyber Security Strategy. Which areas are you interested in knowing or hearing more about? Base: All respondents (n=2.000).

When prompted, less than 1 in 5 Australians has knowledge of the ACSC beyond having heard of it



Prompted awareness of the Australian Cyber Security Centre

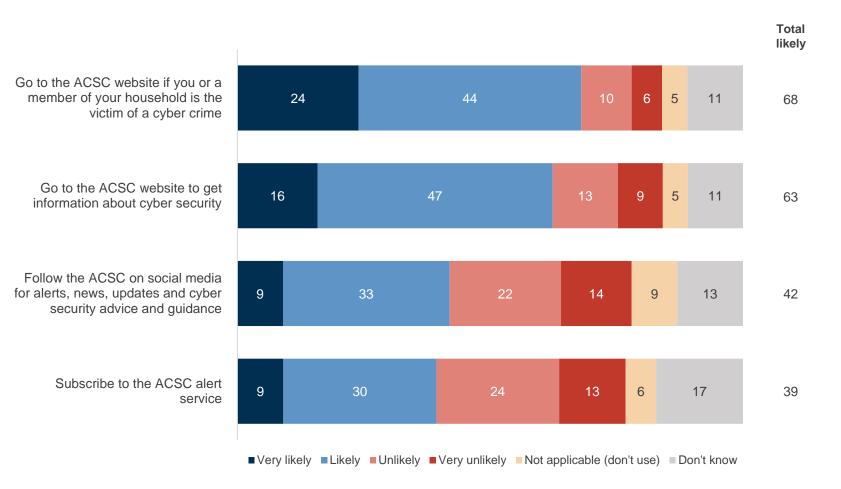
Significantly higher than the total at the 95% confidence interval.

Q32. The Australian Cyber Security Centre (ACSC) provides advice and information about how to protect you, your family and your business online. ACSC leads the Australian Government's efforts to improve cyber security. Their role is to help make Australia the safest place to connect online. The ACSC is also responsible for running the Stay Smart Online program. Prior to reading the above, were you aware of the ACSC and how much do you know about them (other than what you have just read)? Base: All respondents (n=2,000).

JWSRESEARCH 65

Providing support to victims of cyber crime or information on cyber security are most likely reasons to use ACSC

Likelihood to undertake actions (%)



Information needs



Section summary – information needs

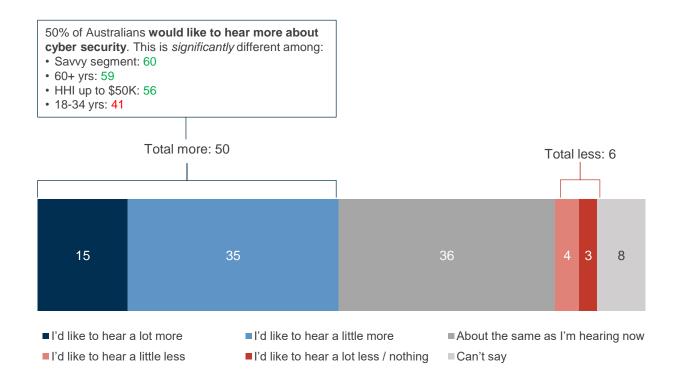
There is unmet demand for more cyber security information There is an unmet demand for more, readily accessible information about cyber security. One in every two Australians (50%) wants to hear more. This figure is even higher among those who have already expressed that they are 'extremely' or 'very concerned' about cyber security. Only 6% have no interest in any information. There is an urgency to provide this information due to the level of exposure to cyber attacks of a notable proportion of SMEs and households.

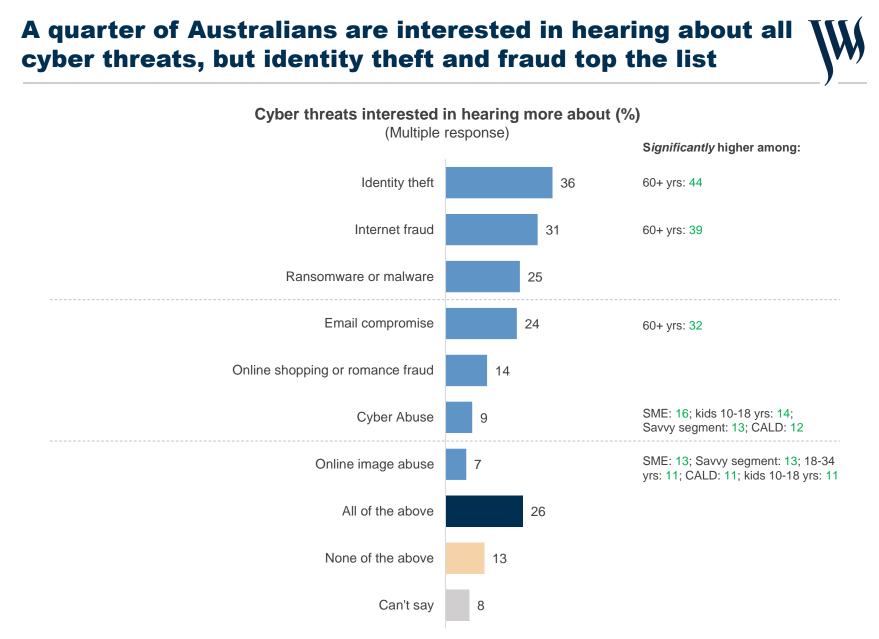
Avoiding internet fraud and theft is of paramount concern The types of cyber threats Australians want to know about are consistent with their greatest concerns: identify theft (36%), internet fraud (31%), ransomware (25%) and email compromise (24%). One in four Australians want to know about all potential threats. In addition to more information, Australians are also eager to learn how to be more secure online, with only 10% having no interest in more information about how to be secure online.

ACSC is the ideal source for disseminating cyber security information For most Australians, the preferred source to receive cyber security information is through Government websites. A single dedicated Government website is the leading preference of two out of every five Australians (38%), coupled with other Government websites such as myGov (33%). A single site is more appropriate as it is a single touchpoint for everything cyber-related. It simplifies the search process and reduces confusion, an important consideration for people who are confused and concerned about cyber security.

Half the population wants to hear more on cyber security, more so among older and lower income Australians

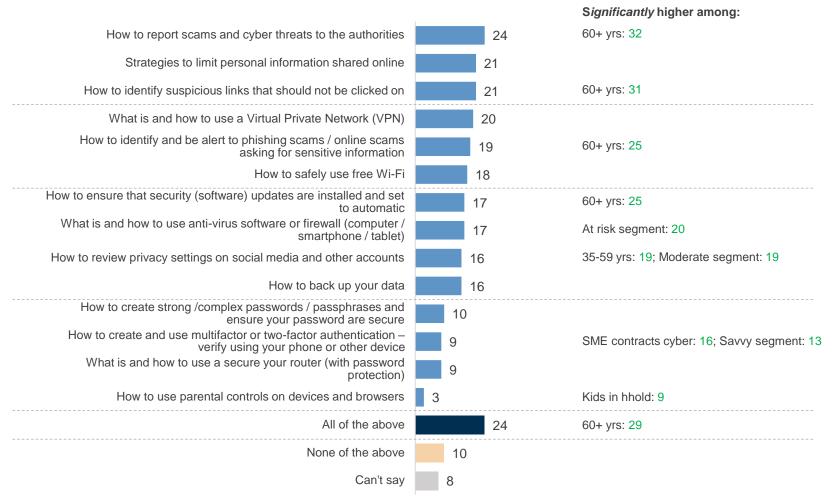
Required level of information cyber security (%)





There is keen interest in hearing about the many ways to ensure online security

Cyber security solutions interested in hearing more about (%)

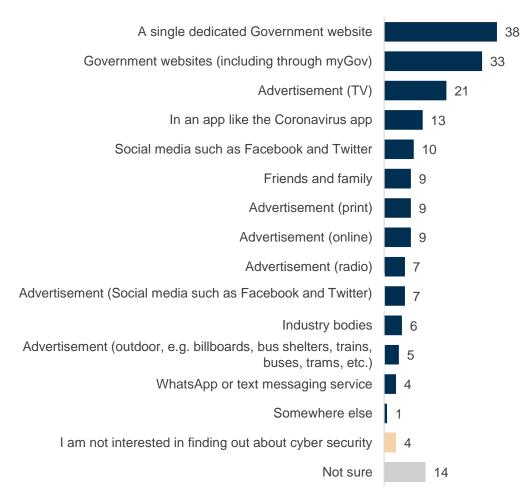


(Multiple response)

Government websites are the preferred source of cyber security information, a single site is the main preference

Preferred source for information about cyber security (%)

(Multiple response – up to three)



Q37. How would you **prefer** to find out about cyber security, including: How to be cyber safe and prevent against attacks; What to do if I you have been a victim of cyber crime; How to find out about scams; Cyber information and resources. Base: All respondents (n=2,000).

A single dedicated website is the most preferred source for cyber security information and advice across all groups

Preferred source for information about cyber security (%) (cont'd)

| | Total | 18-34 | 35-59 | 60+ | SME | SME | CALD | Kids in | | Segment | |
|--|-------|-------|-------|-----|-----|--------------|------|---------|-------|----------|---------|
| | TOLAI | yrs | yrs | yrs | | contracts CS | CALD | hhold | Savvy | Moderate | At risk |
| A single dedicated Government website | 38 | 24 | 40 | 52 | 30 | 27 | 35 | 30 | 37 | 44 | 37 |
| Government websites (including through myGov) | 33 | 23 | 33 | 43 | 26 | 27 | 34 | 28 | 33 | 35 | 33 |
| Advertisement (TV) | 21 | 14 | 24 | 24 | 19 | 15 | 17 | 16 | 21 | 20 | 24 |
| In an app like the Coronavirus app | 13 | 12 | 12 | 14 | 13 | 19 | 13 | 14 | 16 | 15 | 12 |
| Social media such as Facebook and Twitter | 10 | 14 | 9 | 7 | 11 | 13 | 11 | 11 | 10 | 12 | 10 |
| Friends & family | 9 | 12 | 7 | 7 | 12 | 15 | 11 | 10 | 10 | 8 | 9 |
| Advertisement (print) | 9 | 6 | 7 | 13 | 11 | 12 | 7 | 9 | 10 | 8 | 8 |
| Advertisement (online) | 9 | 12 | 10 | 5 | 12 | 13 | 10 | 11 | 11 | 9 | 8 |
| Advertisement (radio) | 7 | 8 | 6 | 6 | 8 | 12 | 7 | 8 | 8 | 6 | 6 |
| Advertisement (social media such as Facebook and Twitter) | 7 | 12 | 6 | 3 | 11 | 9 | 11 | 11 | 9 | 7 | 7 |
| Industry bodies | 6 | 7 | 6 | 4 | 10 | 9 | 8 | 6 | 9 | 7 | 4 |
| Advertisement (outdoor, e.g. billboards, bus shelters, trains, buses, trams, etc) | 5 | 9 | 4 | 3 | 6 | 7 | 6 | 5 | 9 | 5 | 5 |
| WhatsApp or text messaging service | 4 | 5 | 4 | 4 | 7 | 8 | 8 | 5 | 6 | 4 | 4 |
| Somewhere else | 1 | 1 | 1 | 2 | <1 | 0 | 1 | 1 | 3 | 1 | 1 |
| Not interested in finding out about cyber security | 4 | 4 | 5 | 4 | 3 | 3 | 3 | 5 | 3 | 2 | 6 |
| Not sure | 14 | 17 | 14 | 10 | 10 | 6 | 11 | 13 | 7 | 12 | 14 |

(Multiple response – up to three)

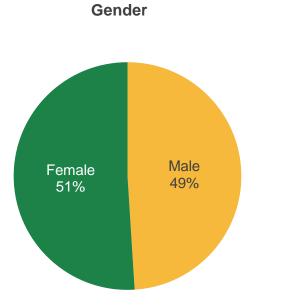
Significantly higher / lower than the total at the 95% confidence interval.

Q37. How would you **prefer** to find out about cyber security, including: How to be cyber safe and prevent against attacks; What to do if I you have been a victim of cyber crime; How to find out about scams; Cyber information and resources. Base: All respondents (n=2,000).

Appendix: Demographics

Demographics





The data set has been weighted to reflect the demographic makeup (by gender, age and location) of the Australian population.

| Age | % |
|-------------------|----|
| 18 to 34 years | 30 |
| 35 to 59 years | 42 |
| 60+ years | 28 |
| Location | % |
| Metro | 67 |
| Regional | 33 |
| ATSI | % |
| Yes | 4 |
| No | 94 |
| Prefer not to say | 2 |

S1. Please indicate your gender. / S2. To which of the following age groups do you belong? / S3a. And what is your postcode? / D1. Are you of Aboriginal or Torres Strait Islander origin? Base: All respondents (n=2,000).

Demographics (cont'd)

| Dependent children in household | % |
|--|----|
| Yes | 24 |
| No | 75 |
| Prefer not to say | 2 |
| Age(s) of dependent children (multiple response – among those with dependent children in household) | % |
| 0 to 4 years | 31 |
| 5 to 9 years | 36 |
| 10 to 12 years | 32 |
| 13 to 15 years | 27 |
| 16 to 18 years | 22 |
| Prefer not to say | 1 |

| Education | % |
|-----------------------------------|----|
| Post graduate degree | 13 |
| Graduate certificate or diploma | 7 |
| Bachelor degree | 26 |
| Advanced diploma / Diploma | 11 |
| TAFE / Technical certificate | 18 |
| Year 12 | 13 |
| Year 11 | 3 |
| Year 10 or below | 8 |
| Don't know / Prefer not to say | 2 |
| Household income | % |

| Household income | % |
|-------------------------------|----|
| \$0-\$20,000 | 5 |
| \$20,001-\$50,000 | 22 |
| \$50,001-\$75,000 | 16 |
| \$75,001-\$100,000 | 15 |
| \$100,001-\$200,000 | 22 |
| More than \$200,000 | 7 |
| Can't say / Prefer not to say | 13 |

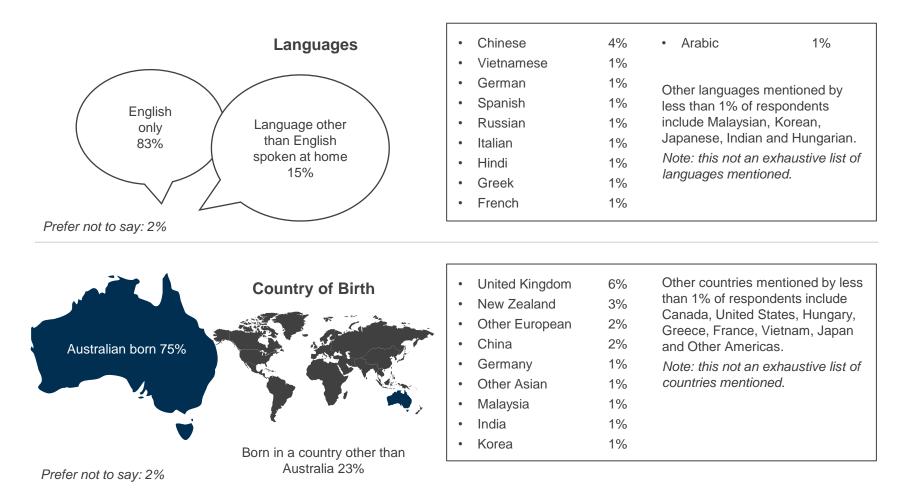
| Employment status | % |
|--|----|
| Employed full-time | 38 |
| Employed part-time or casual | 16 |
| Self employed | 6 |
| At home / Home duties | 7 |
| Retired – fully self-funded | 6 |
| Retired - part self-funded, part pension | 5 |
| Retired – full pensioner | 10 |
| Not retired – pensioner or benefits | 3 |
| Unemployed | 5 |
| Student | 3 |
| Prefer not to say | 2 |

D4. Do you have dependent children aged 18 years or under living in your household? / D5. Which age group/s are your child/ren in? / D6. What is your highest completed educational qualification?/ D7. What is your current employment status? / D8. Please indicate your household annual income from all sources before tax?

Base: All respondents (n=2,000); those with dependent children in household (n=449).

Cultural and Linguistically Diverse demographics

CALD: 20%



SME demographics



| SME | % |
|---|----|
| Yes, owner / financial partner / main decision maker | 18 |
| No | 81 |
| Prefer not to say | 1 |
| Hire or contract company/provider to manage business IT and CS (among SMEs) | % |
| Yes, I hire or contract a company/provider to manage IT only | 22 |
| Yes, I hire or contract a company/provider to manage cyber security only | 14 |
| Yes, I hire or contract a company/provider to manage both IT and cyber security | 24 |
| No, I don't hire or contract a company/provider to manage either IT or cyber security | 37 |
| Not sure | 3 |

S5. Are you the owner, financial partner or main decision maker in an Australian business turning over more than \$75,000 per annum? / S6. Do you hire or contract a company/provider to manage your IT and cyber security for your business? Base: All respondents (n=2,000); SMEs (n=340).

THERE ARE OVER 25 MILLION PEOPLE IN AUSTRALIA....

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