



Digital Lives of Australians 2022

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Disclaimer: In preparing this report we have presented and interpreted information that we believe to be relevant for completing the agreed task in a professional manner. It is important to understand that we have sought to ensure the accuracy of all the information incorporated into this report. Where we have made assumptions as a part of interpreting the data in this report, we have sought to make those assumptions clear. Similarly, we have sought to make clear where we are expressing our professional opinion rather than reporting findings. Please ensure that you take these assumptions into account when using this report as the basis for any decision-making. The qualitative research findings included throughout this report should not be considered statistically representative and cannot be extrapolated to the general population. This project was conducted in accordance with AS: ISO2025:2019 guidelines, to which SEC Newgate Research is accredited.

01

Introduction

Foreword from Rosemary Sinclair AM, auDA CEO

I am pleased to present our Digital Lives of Australians 2022 research report, building on our inaugural study in 2021.

The 2022 findings demonstrate that Australians are acutely aware of the criticality of the internet and the value it contributes to our everyday lives.

Online social connections, acquisition of knowledge and access to goods and services positively impact the lives of Australian internet users, 98% of whom say the internet adds value to their lives. For small businesses, ease of remote working and interaction with customers are primary benefits of digital connectivity and 84% say their business would struggle to survive without the internet.

These findings reinforce that which many intrinsically know - the internet enriches our lives in many, varied ways. However, the use of digital technology is not without its challenges. As the research in this report indicates, Australian consumers and small businesses face a range of digital difficulties. These include:

- **A digital skills gap** – preventing small businesses from effectively harnessing online opportunities such as website development, data visualisation and Search Engine Optimisation (SEO).
- **Cyber security** – this is a primary concern with 80% of consumers worried about their data being stolen and fewer than 50% of small businesses very confident about processes to protect their online security.
 - Despite this, many are unsure of how to protect themselves. More than one third of consumers and one quarter of small businesses turn to search engines for cyber security information. Only 6% of consumers and 12% of small businesses referred to government cyber security resources in the three months prior to the survey.
- **Emerging internet technologies** – consumers and small businesses are cautiously optimistic about emerging technologies but hold concerns about cyber security, data privacy and the impacts of automation. Overall this may slow the adoption of these technologies.



Rosemary Sinclair AM
auDA Chief Executive Officer

01 Introduction

Challenges also bring opportunities. While less than half of consumers are very confident online, those who feel confident managing their cyber security are more confident online overall. This suggests that improving cyber security skills might support Australians to utilise the internet more fully, and by extension, access greater benefit from it, contributing further to Australia's digital economy.

Our vision at auDA is to unlock positive social and economic value for Australians through an open, free, secure and global internet.

Our comprehensive Digital Lives of Australians research undertaken by auDA research partner SEC Newgate furthers this aim by informing our support for Australia's digital ecosystem, including our approach to innovation, and our continued delivery of a trusted .au domain for all Australians. We hope it also encourages robust discussion and proactive initiatives from the internet industry, governments, the business and educational sectors to drive tangible improvements for Australian consumers and small businesses.

"Imagine if everyone's thoughts, memories, knowledge, views and beliefs were written up in a library. The internet is like that! Full of opinions, facts, fiction, images and new ideas."

Woman, 18-34 years, Regional VIC



Methodology summary

The findings in this report are drawn from a cross sectional research program undertaken with a sample of Australian adults and small businesses (1-19 employees) between June and August 2022. The 2022 research builds upon the inaugural Digital Lives of Australians study in 2021 with an expanded methodology.

Qualitative discussions

The methodology for *Digital Lives of Australians 2022* was expanded to include an element of qualitative research, comprising two components.

An online discussion forum was held over 5 days in June with 38 participants (24 consumers and 14 small business representatives). The forum included a range of individual and group tasks, activities and discussion threads, moderated by SEC Newgate's qualitative research specialists.

Following the online forum, 14 participants (6 consumers and 8 small business representatives) were selected to take part in a one-on-one interview. A further 6 interviews were conducted with participants who were not in the online forum and who were identified as low confidence internet users.

Quantitative survey

Two parallel surveys were undertaken in August 2022. The first comprised a sample of 1,514 Australian adults and the second 393 small businesses.

Both surveys were administered online with participants sourced from commercial opt-in research panels. Participants were able to complete the survey at their own pace, at a time convenient to them and received a nominal incentive payment in the form of reward points upon completion.

The consumer survey included 150 telephone interviews to provide broader coverage of the population than is possible when using opt-in online research panels only.

All participants who completed the survey online were, by definition, internet users. Within the telephone component of the consumer survey, 21 out of the 150 participants indicated that they never use the internet. This cohort answered a reduced set of questions.

The sample was weighted to reflect population profile. For the consumer sample, the weighting design included age, sex, geographic location, highest level of education and workforce participation. The small business sample weighting design included industry sector and geographic location.

The survey contained many questions consistent with the 2021 study to enable comparison. Notable differences between time periods have been noted in the report. New questions were added to the survey to provide more detailed exploration of key issues.

When making comparisons with 2021 it is important to bear in mind the different macro-environmental context in which the two surveys were conducted. At the time of the 2021 survey much of the country was subject to COVID-19 lockdown restrictions, whereas almost all restrictions had been lifted at the time of the 2022 survey, and most industries and service sectors had returned to in-person activities and communication.

SEC Newgate Research is one of Australia's preeminent market and social research firms for issues, opinion and reputation research amongst senior stakeholders, influencers, the community, customers and employees. We explore and measure knowledge, attitudes and behaviours to inform decisions around policies, organisational strategies, communications and messaging. SEC Newgate Research is accredited to ISO 20252:2019 (the international standard for market research) and holds membership of The Research Society.

Throughout the report these icons are used to indicate findings for consumers and small businesses.



02

Snapshot of key findings

02 Snapshot of key findings



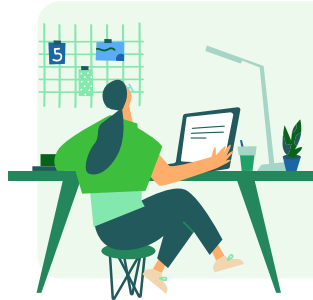
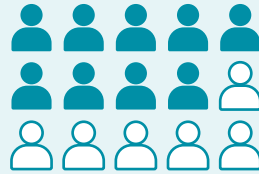
Value of the internet

98%

of Australian **consumers** feel the internet delivers value to their lives

61%

of working **Australians** say they could not do their job without the internet



84%

of **small businesses** would struggle to operate without the internet

The internet is **most valuable** to small businesses for:

- Flexible working
- Customer engagement

Digital skills



Career progression is the leading motivator for those wanting to develop their digital skills

Small business demand for key digital skills outweighs **consumer** interest. **The digital skills gap** is greatest for:

- Website development
- Data visualisation
- Search Engine Optimisation (SEO)
- Customer Relationship Management (CRM)



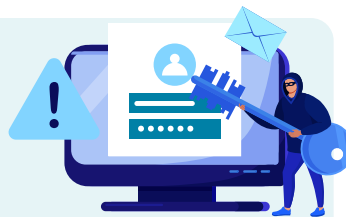
Cyber security

80%

of **consumers** are concerned about their personal data being stolen

74%

believe cyber criminals are becoming smarter and more sophisticated



Only **54% of consumers** and **72% of small businesses** change their passwords every few months



***** 54%

***** 72%

Future of the internet

Despite broad awareness of key emerging technologies such as the metaverse, very few **consumers** or **small businesses** feel they have a good understanding of them



Example	Consumers	Small businesses
Aware of the metaverse	70%	78%
Know a lot about it	6%	7%

Australians are mostly optimistic about the **future of the internet** and feel:

- 43%** Hopeful
- 41%** Intrigued
- 35%** Excited
- 27%** Overwhelmed
- 26%** Apprehensive



03

The value of the internet



03 The value of the internet



Almost all Australian consumers and small businesses feel the internet enriches their daily lives and provides significant value.

Australians of all ages believe the internet adds at least some value to their lives, while a third say they couldn't live without it. Residents of New South Wales (35%), Victoria (35%) and Queensland (32%) are more likely than those in other parts of Australia to consider the internet invaluable (South Australia (25%), Western Australia (24%), Tasmania / ACT / NT (25% combined)).

Younger Australians are more likely to say the internet is invaluable in their lives than older Australians. Yet, of those aged 70 years or above, only 3% say they do not need the internet. This highlights the internet's universal value.

Similarly, most small businesses (84%) feel their business would struggle to function without the internet.

Sole traders are less dependent on the internet than employing businesses, but the vast majority feel it provides meaningful value. The value of the internet to small businesses increases in line with business size – small businesses with 5-19 employees consider it most valuable to their business.

98%

feel the internet adds at least some value to their lives

18-34	99%
35-49	98%
50-69	98%
70+	97%

32%

consider the internet invaluable and couldn't live without it

18-34	41%
35-49	38%
50-69	25%
70+	14%

84%

feel the business would struggle to function without the internet

Sole traders	76%
Micro (1-4 employees)	84%
Small (5-19 employees)	93%
Health	95%
Hospitality	93%
Business and Tech	90%
Construction and Trades	81%
Retail and Beauty	73%
Education and Care	71%
Supply chain and Manufacturing	65%

"The internet makes lots of things easier and quicker. Like paying bills and doing research. It makes it easier to keep in touch with people who live overseas or far away."

Woman, 35-49 years, Regional SA



"My business would not exist without the internet. It started as an online business, and this is the only way I can manage it. I am in a rural area, so a physical store isn't an option. I would not be able to have a business if I had no internet."

Craft/Online retail business, Regional VIC





Consumers deeply value the internet for enabling social connection, but it is the functional benefits it provides that are most widely valued.

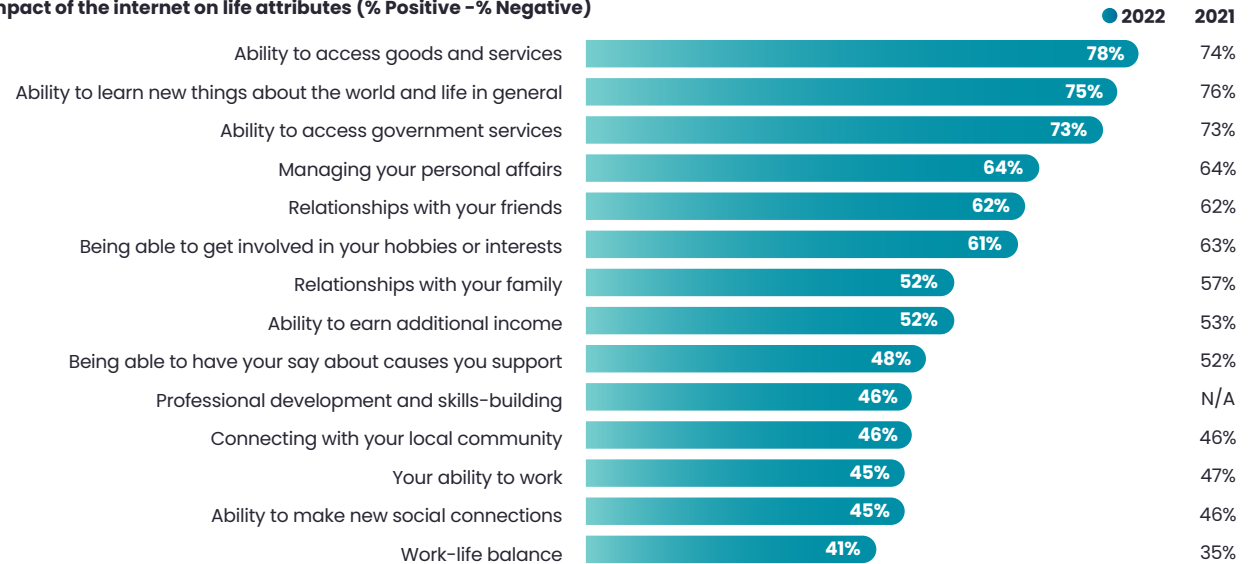
Enabling communication with others – via social media, messaging apps and the like – is the most prominent unprompted benefit of the internet for consumers and the thing people say they would miss most without it.

This benefit was felt acutely during the pandemic when many people were unable to see their loved ones due to lockdowns and travel restrictions. This experience remains clear in consumers’ minds in 2022 and reinforces the value of the internet.

When prompted with a range of attributes, consumers indicate that the internet has a net positive impact across a wide range of factors. Most people feel it has a positive impact on accessing goods and services (including government services), information and learning, managing personal affairs, pursuing hobbies and interests, and relationships with friends.

Notably, this year fewer consumers report that the internet has a positive impact on their relationships with family compared to 2021. This indicates there is less dependence on the internet for these interactions now that pandemic restrictions have eased, and people can meet in person again. Nonetheless, the crucial role that the internet played in sustaining connections with family and friends during the pandemic has not been forgotten.

Net impact of the internet on life attributes (% Positive – % Negative)



“The internet makes it so easy to stay in touch with family and friends, keep up with news and world events, and manage things in your day-to-day life.”

Woman, 50–69 years, Regional NSW



“It’s the little life admin things like not having to line up at the post office to pay a bill. I have started booking medical appointments online which is great since it’s so difficult to get a call answered at the local GP.”

Man, 18–34 years, Melbourne



03 The value of the internet



The internet is vital to Australia's skilled migrants, enabling them to participate in the workforce while staying connected with their homeland.

Survey participants from culturally and linguistically diverse backgrounds (CALD) (i.e. born overseas and speak a language other than English) were younger on average, more likely to live in Australia's major capital cities and to be in the workforce.

One in five of this cohort has a hybrid working arrangement – significantly higher compared to the broader workforce.

They are significantly more likely to consider the internet very important in their life and to require the internet to perform their job.

In addition to their reliance on the internet for working, culturally and linguistically diverse consumers are more dependent on the internet for communicating with friends and family. They are more likely to make video calls and use instant messaging apps and exhibit higher confidence with these online activities.

Being able to communicate with friends and family via the internet was important for everyone during the pandemic when travel restrictions were in place. It remains a highly valued benefit for those Australians with family in other countries, enabling them to maintain close connections with their loved ones.

The value of the internet among migrants

CALD consumers		Non-CALD consumers
20%	Have a hybrid work arrangement	11%
64%	Consider the internet very important to their lives	51%
74%	Could not do their job without the internet	60%
63%	Make video calls	47%
84%	Confident making video calls	72%
66%	Use instant messaging apps daily	52%
81%	Confident using instant messaging apps	71%

03 The value of the internet



Social connection

"My parents and siblings are all based overseas. Through Facebook and Messenger I am able to talk and see them almost every day. I don't feel homesick or lonely because I can see my parents and siblings and we even get to update our activities through our family's chat group. Last week was my Dad's 75th birthday and although I was not there with them, I felt like I was part of the celebration."

Woman, 18-34 years, Regional VIC



Information and learning

"Last year I was thinking of learning Spanish, and I surfed on the internet to find a free and good teaching site. I found a really good website and installed the application on my mobile phone. Every day I study a little bit and now I am so happy with my learning."

Man, 70+ years, Regional NSW



Managing personal affairs

"I have a lot of information I need to keep and access. I used to use a paper filing system but I discovered an app where I can save and import all information I am interested in or need for a project. I can organise the information by project folder or interest area. I use keywords to search and locate the information easily on my computer and phone. Best of all I can access the information wherever I am."

Man, 50-69 years, Regional NSW



03 The value of the internet



The internet enables the working lives of many Australians and underpins remote and hybrid work patterns.

Working Australians depend on the internet. Almost two thirds (61%) say they could not do their job at all without the internet. Those who work from home, either exclusively or as part of a hybrid working arrangement, are more likely to depend on the internet to perform their job.

More than half of working Australians believe the internet has a positive impact on their work-life balance. Those who work in an office environment are most likely to feel this is the case, and women experience this benefit more than men do (60% vs 55% respectively).

Qualitatively, the main benefits related to work-life balance are the ability to work remotely, to maintain social connections while working and to access online content while working.

Working remotely – people value the ability to access work systems remotely and have more time to spend with family and friends when not commuting to and from a workplace.

Social connections – social media and other communication apps and platforms enable people to maintain connections with family and friends during the workday.

Online content – accessing content such as music or games provides a sense of relaxation or enjoyment during or after work.

61% of working Australians say they could not do their job without the internet

Hybrid workers (work from home and another location)	85%
Work from home only	76%
Work on site only	54%
NSW	69%
VIC	61%
WA	61%
QLD	57%
SA	45%
TAS/ACT/NT	46%

57% of working Australians say the internet has a positive impact on their work-life balance

Office workers	60%
Skilled and manual workers	51%
Women	60%
Men	55%

“It allows me to work from home and gives me more flexibility around when I work, allowing me to spend more time with family.”

Woman, 35–49 years, ACT



“The internet is vital to be able to do one’s job. I work with a national company with headquarters in Melbourne and rely on the internet to connect with my colleagues.”

Man, 50–69 years, Regional SA





Small businesses depend on the internet for customer engagement and value the flexibility it affords them to work remotely and independently.

The two main ways the internet benefits small businesses are enabling interaction with customers and remote working. This is unchanged since 2021.

While customer interaction is the number one benefit for employing businesses, for sole traders the top-rated benefit is the ability to work from home. This highlights how the internet facilitates freedom and flexibility for self-employed Australians.

Small businesses in the business and technology and arts sectors are most likely to consider the ability to work from home a major benefit.

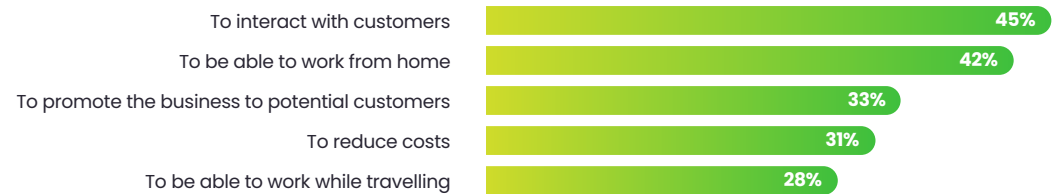
45% selected 'to interact with customers' as a benefit

Person icon	Sole traders	42%
Group icon	Micro (1-4 employees)	46%
Group icon	Small (5-19 employees)	47%

42% selected 'to be able to work from home' as a benefit

Person icon	Sole traders	52%	Bar chart icon	Business & Tech	61%
Group icon	Micro	40%	Music note icon	Arts	60%
Group icon	Small	31%	Graduation cap icon	Education & Care	56%

Top 5 ways that small businesses benefit from the internet (% selecting each benefit)



03 The value of the internet



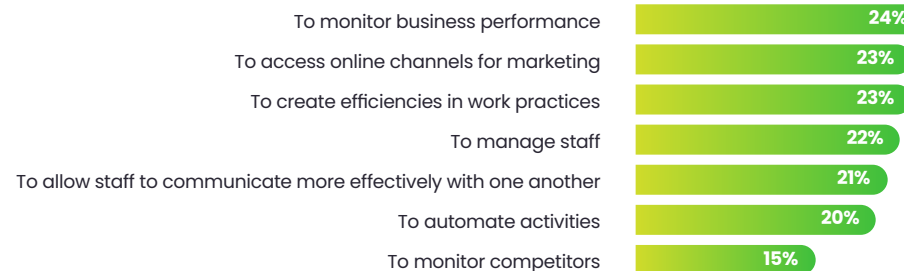
The internet enables a range of technologies that offer small businesses the potential for greater efficiency, profitability and competitive advantage, but many are not taking advantage of these benefits currently.

Beyond the main benefits of customer interaction and remote working, the internet provides benefits to small businesses related to promotion, monitoring and streamlining of business functions. Currently, only a minority of small businesses are realising these benefits, however, those that do, feel it gives them a competitive advantage over other businesses. Notably, those that use the internet in the following ways are most likely to feel it gives them a competitive edge:

- Monitor business performance
- Manage staff
- Automate activities.

Compared to last year the internet is considered less important to small businesses for communication between staff as people return to the workplace and communicate more in-person rather than online.

Other ways that small businesses benefit from the internet (% selecting each benefit)



Among those who feel their internet use gives the business an advantage over competitors...

35% Monitor business performance

33% Manage staff

29% Automate activities

Allows staff to communicate more effectively with one another (rated an important reason for the business to use the internet)

65% in 2022

73% in 2021





Older Australians are less confident with common online activities but there is enthusiasm to learn.

Beyond sending emails or finding news or information online, older Australians are generally less confident in their ability to undertake common online activities.

Fewer than half of those aged 70 years or above are very confident making online purchases or using online tools for social connection such as instant messaging apps and video calls.

Some older participants in the qualitative discussions expressed a desire to be more self-sufficient online but are currently reliant on others for guidance and support. Those not already doing so expressed interest in being able to keep in touch with family and friends via video calls and messaging apps.

This is reflected in the survey data with a relatively high proportion of those aged 70 years or above interested in learning more about making video calls and sending emails.

It is however the younger age groups that are most interested in strengthening their ability to do things such as creating content and selling products or services online.

How confident are you...? (Very confident)	All Consumers	18 to 34	35 to 49	50 to 69	70+
Sending an email	74%	73%	74%	75%	78%
Finding news or information you need online	60%	63%	62%	59%	50%
Buying products or services online or booking appointments	57%	60%	60%	57%	45%
Using instant messaging apps	50%	69%	56%	35%	24%
Making a video call	47%	61%	53%	34%	29%
Posting content on social media platforms	42%	55%	47%	33%	21%
Selling products or services online	28%	35%	28%	25%	18%
Troubleshooting to solve internet connection problems	23%	31%	26%	17%	9%
Creating and publishing content online (e.g. website or blog)	19%	30%	21%	11%	5%

Interested in learning more	All Consumers	18 to 34	35 to 49	50 to 69	70+
Troubleshooting to solve internet connection problems	31%	34%	25%	31%	37%
Creating and publishing content online	23%	33%	28%	15%	12%
Selling products or services online	23%	32%	25%	15%	13%
Finding news or information you need online	13%	19%	10%	8%	12%
Posting content on social media	12%	21%	13%	4%	7%
Sending emails, including with attachments	11%	13%	11%	9%	15%
Buying products or services online or booking appointments	11%	16%	10%	6%	10%
Making or receiving a video calls	10%	13%	8%	7%	15%

Significantly higher than other age groups
 Significantly lower than other age groups

Middle aged woman wishes to utilise the internet more



Young man seeks to broaden his digital skills with hopes to open a business



Bernadette*, 50, is semi-retired and lives in regional New South Wales. Having originally trained and worked as a doctor, she currently works as a carer. Bernadette uses the internet to keep up to date with medical news and appreciates the ease with which she can access this information via the internet. She uses social media to stay connected with her local community, follows online video bloggers and uses a meditation app to relax. Bernadette would like to create her own blog or website where she can share her medical knowledge but lacks the confidence to do so. She needs help and guidance to build these online sites and hopes to find face to face training, or government funded or sponsored options to develop these digital skills.

Amir*, aged 32, lives in Melbourne and works in the emergency services. The nature of his job means he often finds himself 'out in field' in regional Victoria where internet access can be limited.

Amir is quite confident with common online activities such as emails, browsing the internet, booking appointments and occasional online shopping from trusted retailers. Besides the benefits for life admin, the internet enables him to maintain connections with relatives overseas and keep them updated on his newborn son's milestones via social media and video calls.

Bernadette is concerned about cyber security and feels she should be doing more to stay secure online. She wants to know more about password security and feels she should start using a password manager. She intends to conduct research to build her understanding of password managers. The quality of her internet connection is sometimes a frustration for Bernadette when watching streaming services.

Bernadette is awe struck by the technological advances that have occurred in recent years and how the internet is developing. She is grateful to be living during this period of technological advancement and openly embraces different functions of the internet.

In the near future, Amir hopes to earn some extra income trading shares online using an app (after realising that broker fees can be high, he would like to do this for himself). He doesn't think it would be too risky if it's all in one app and would feel more secure if it had multi-factor authentication. He plans on watching YouTube videos to teach himself how to use the trading app.

In five years' time he plans to open a small business. He knows he will need a social media presence and a basic website. Again, he plans to use YouTube videos as his main resource for gaining the skills and confidence to build the website himself.

04

Digital skills



A digital skills gap looms that may prevent small businesses from harnessing the benefits of more advanced online activities expected to be important in the future.

Looking forward, more advanced digital skills will be important in an increasingly digital economy.

Survey participants were asked to rate their ability and interest across 13 emerging digital skills. Approximately one third or more of the small businesses surveyed expressed interest in developing each skill within their business. However, a relatively smaller proportion of consumers said they would like to carry out those skills in the future.

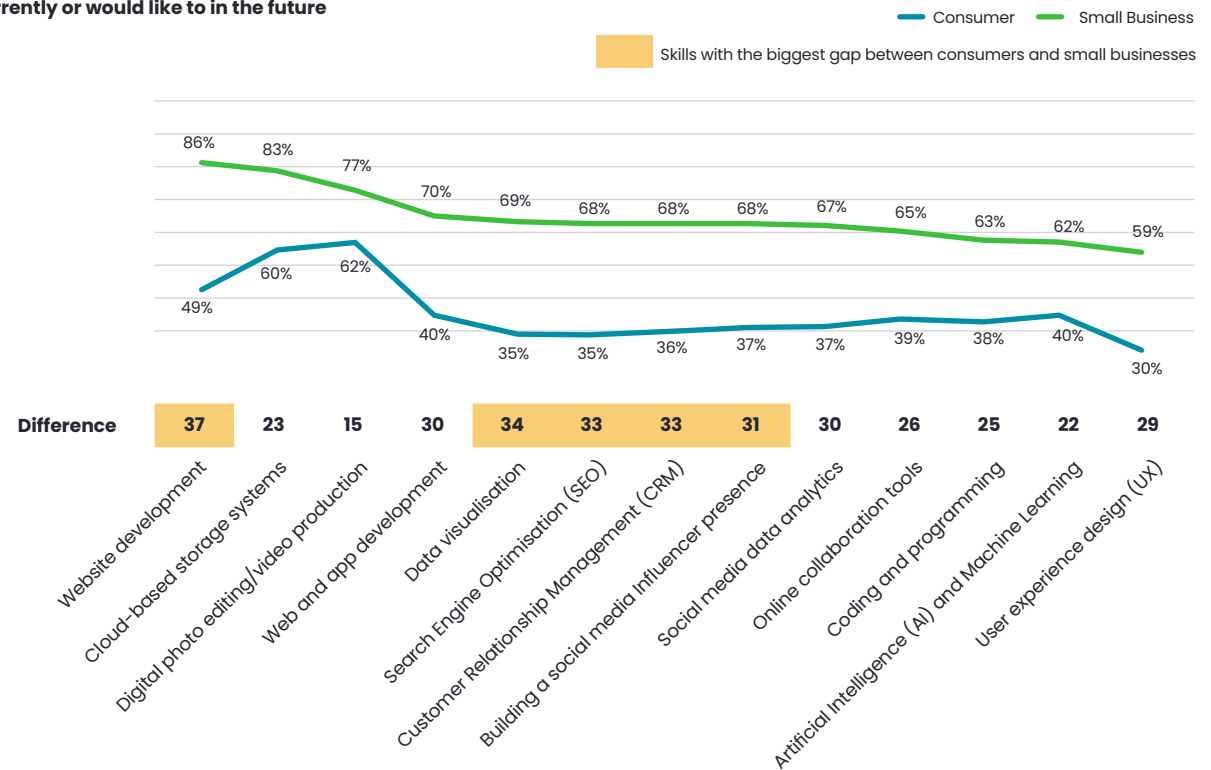
The biggest gaps are in:

- Developing and maintaining a website
- Working with data visualisation
- Deploying Search Engine Optimisation (SEO)
- Using Customer Relationship Management (CRM) software
- Building a social media Influencer presence either for yourself or someone else.

Small businesses expect to incorporate new digital skills into the business in a variety of ways. Some expect they will hire someone with the skills or outsource to skilled contractors rather than learning the skills themselves. The survey data suggests that those looking to hire or outsource these digital skills may face a shortfall in the skilled workforce that is available.

These findings highlight the areas where demand for digital skills training will be greatest.

Can do currently or would like to in the future





Younger Australians and skilled migrants hold the key to unlocking growth in the digital skills of the future.

While only a small proportion of the general population currently feel they are capable of carrying out emerging digital skills, there is interest in developing these skills – especially among men, those aged 18–34 years, those who live in Australia’s major capital cities and those from a culturally and linguistically diverse background.

Career progression and monetisation are leading motivators for those wanting to develop digital skills. The qualitative research showed that, for consumers as well as small businesses, the skills people want to develop tend to be things they can gain monetary value from, either for their current work, career prospects or future business initiatives.

The significantly higher interest among men suggests that efforts may be needed to improve gender balance and diversity in emerging digital skills.

Interest in emerging digital skills (% who would like to do in future)

Significantly higher than opposite segments

	All consumers	Men	18–34	CALD
Developing and maintaining a website	36%	38%	50%	48%
Using digital photo editing and/or video production tools	36%	35%	38%	45%
Working with Artificial Intelligence (AI) and Machine Learning	33%	42%	45%	46%
Working in web and app development	31%	34%	48%	38%
Undertaking website or app coding and programming	29%	32%	44%	42%
Undertaking website or social media data analytics	28%	31%	43%	40%
Using cloud-based storage systems	27%	27%	27%	35%
Deploying Search Engine Optimisation (SEO)	27%	31%	41%	38%
Building a social media Influencer presence	26%	26%	46%	32%
Working with data visualisation	25%	27%	38%	38%
Working in user experience design (UX)	23%	26%	37%	38%
Using online collaboration tools	23%	25%	32%	35%
Using Customer Relationship Management (CRM) software	22%	25%	36%	33%

“AI and Machine Learning is becoming increasingly embedded into all types of industries whether that be driving an electric vehicle or software used to set pricing of a hotel room based on several factors such as demand, competition, and pricing levels. Getting a good understanding of how AI and Machine Learning works will be beneficial for me to stay up-to-date with the skills required to operate as a finance professional.”

Man, 18–34 years, Melbourne



04 Digital skills



Digital skills training is expected to occur within a micro credentials learning environment.

Consumers interested in developing their digital skills expect to access training primarily through online platforms. Some older consumers would prefer in-person training.

There is an expectation that information and resources will be available online, either as free content or paid courses. Whatever the format, consumers prefer short, 'bite-sized' modules that enable them to focus on a specific skill and learn quickly.

There is a willingness to pay for training that will equip them with skills they can use to earn money in the future, however, the expectation is that costs will be relatively low and therefore easily accessible.

Not all small businesses are able to afford to hire staff with digital skills or to pay an external contractor. Instead, they will look to develop digital skills themselves.

Like consumers, small businesses looking to develop new digital skills themselves expect to be able to access a range of learning opportunities, from free self-guided resources, to fee-based formal training.

"I would like to access training online via platforms such as LinkedIn Learning. To keep me interested it needs to be bite-sized and to-the-point. I would appreciate the training to be delivered by experts in the field. I'd be happy to pay to access training but wouldn't be willing to spend huge amounts on learning these skills, when most of the stuff these days is available one way or the other online, for free."

Man, 18-34 years, Melbourne



"I prefer short courses between 6 to 8 weeks but having the ability to do it at your own time and convenience. Also, it is very important that you have a support group that you can access any time, who you can bounce ideas off and get guidance from. I prefer that courses are delivered by someone who can use practical examples (have hands-on experience). I am happy to fund my own training with subsidy from either the government or my workplace."

Woman, 35-49 years, Adelaide



Case study: Digital skills

Established construction business embraces online activities and enhances digital skills



Dimitri*, 62, owns a construction company in outer Melbourne. A builder by trade, he recognised the need to embrace digital technologies to move the business forward and had a steep learning curve adapting to new ways of doing business online during COVID-19.

Dimitri uses the internet for a range of business activities. He uses an internet banking app and considers this invaluable for the ability to make fast payments due to materials shortages in the industry. He uses a hardware store app for buying materials – this records purchases which is useful at tax time.

While he is interested in exploring more ways of improving business processes and efficiency via the internet, Dimitri intends to hire people with the right skills rather than learning himself. He recently hired someone

to establish a customer relationship management (CRM) system for the business and hopes this will be the first of many new hires who are not tradespeople.

Dimitri pays a tech consultant (referred by a family member) to provide advice on cyber security. He now has a monthly reminder to update passwords and has installed antivirus software on his devices to perform regular scans. This gives him reassurance about not being hacked or scammed.

While he started using the internet out of necessity, Dimitri is excited about future possibilities to incorporate internet technologies into his business. He is interested in the idea of being able to offer his clients virtual tours of properties and he would like to employ someone to build a business website.



05

Cyber security



Cyber security is an ever-present concern that undermines consumer confidence in using the internet.

Less than half (47%) of all internet users feel very confident using the internet. This is unchanged from 2021 (46%).

Confidence continues to correlate with age, with younger consumers being most confident and older consumers the least confident. Also consistent with last year, internet users in Australia's major capital cities are more confident than those elsewhere in Australia.

Security of personal information and online privacy remain the issues that most internet users are worried about. Concern stems from an underlying fear of loss (of either personal data or money). A majority of consumers worry to some extent about these things, despite a slight easing this year.

Women, older consumers (aged 70 years or above) and people from culturally and linguistically diverse backgrounds are among those most worried about cyber security threats.

Those who feel confident managing their cyber security are significantly more confident overall using the internet. This reinforces the importance of building awareness of prudent cyber security behaviours to enable more Australians to access greater benefit from the internet.

47% of internet users are very confident using the internet

18-34	63%	50-69	39%
35-49	53%	70+	19%

How worried are you about these issues when using the internet? (% very or somewhat worried)

	All consumers	Women	70+	CALD
Having personal data stolen	81%	84%	86%	91%
The security of your personal information	79%	82%	82%	87%
Your money being stolen by hackers or scammers	79%	83%	80%	88%
The privacy of your online activities	76%	79%	79%	85%
Falling victim to an online threat such as a phishing scam	68%	70%	74%	75%
Being misled or deceived by fake news and misinformation online	63%	64%	69%	75%
Being tricked into signing up for things that you don't want or need	58%	60%	56%	69%

Significantly higher than opposite segments





Many internet users feel they cannot afford to be complacent due to the perceived ubiquity of cyber security threats, yet many don't know how to protect themselves.

During qualitative discussions with consumers, many described their personal experiences (or those of a friend or family member) of falling victim to online scams or having their devices or systems hacked. People had strong recollections of these events, demonstrating the significant impact they had.

Feelings about these experiences range from embarrassment to anger. Above all there is a sense of frustration that it happened and that they must remain vigilant to avoid it happening again. Compounding this is a sense that the nature of threats is constantly evolving, making it difficult to maintain a sense of security.

Three quarters (74%) of consumers surveyed agreed that cyber criminals are becoming smarter and more sophisticated, so it is important to stay up-to-date with the latest online security trends, and yet just over half (56%) feel confident they have safeguards in place to keep their personal data secure online. Just over a third (35%) agree that cybercrime is an unavoidable aspect of using the internet. One in five (20%) are not worried about cybercrime as they feel they do not have much to lose – perhaps highlighting that some people lack an in-depth understanding of potential threats and impacts.

Interestingly, a majority of consumers who have a hybrid working arrangement feel more vulnerable to cyber security threats while working at home and relatively safer at their workplace. Women are significantly more likely than men to have this concern. Given the general expectation around the likelihood of hybrid work patterns becoming a permanent reality for many working Australians, this highlights an important issue that will require attention from employers and the technology sector broadly to ensure secure online activity from workplaces.

	Total	♀ Women	♂ Men
Cyber criminals are becoming smarter and more sophisticated, so it is important to stay up-to-date with the latest online security trends	74%	81%	67%
I am more worried about cyber security at home than I am at work as I don't have the resources of my workplace to guard against it	62%	78%	52%
I feel confident that I have safeguards in place to keep my personal data secure online	56%	57%	55%
Cybercrime is an unavoidable aspect of using the internet – I am willing to accept the risk rather than miss out on doing the activities I want to do online	35%	35%	36%
I am not worried about cybercrime as I don't feel I have much to lose	20%	20%	20%

"I fear my information being stolen by an outsider or my computer being crippled by a virus and not knowing how to fix the problem. I worry about having my information used to create false identities."

Man, 50-69 years, Regional NSW





Many small businesses continue to lack confidence with their online security.

Only half of all small businesses are very confident using the internet. Employing businesses are less confident than sole traders, reflecting their greater dependence on the internet.

Like consumers, confidence is undermined by concerns about cyber security. They perceive a constant threat from hackers which for some is anxiety inducing, especially those who have fallen victim to cybercrime in the past.

Fear of online scams or hoaxes is the biggest concern that small businesses have in relation to the internet; 90% say this is a concern and 31% say it is a major concern.

Small business' fear of data breaches relates to the confidential business information they hold about employees or customers, and financial data. Part of their concern is a sense that recovery from falling victim to a cyber attack would be complex and time-consuming, taking them away from their businesses and ability to generate a livelihood.

Consequently, less than half of the small businesses surveyed feel very confident with processes to protect their online security. Confidence is highest for creating strong passwords and lowest for knowing how to spot an online scam.

50% of small businesses are very confident using the internet

Sole traders	57%
Micro (1-4 employees)	53%
Small (5-19 employees)	39%

How confident are you with...?	Very confident
Creating strong passwords for websites or apps	48%
Knowing how to keep your staff and clients' personal data secure online	42%
Knowing how to safely back up your business' data and files	38%
Knowing what to do or who to contact if your business had an online security breach	37%
Knowing how to keep your business' information secure online	36%
Being able to spot an online scam	32%

Major concerns when using the internet (%)	
Fear of online scams or hoaxes	31%
The security of your business's data	29%
The privacy of your business's online activities	29%
Disruption to business while new technology is being implemented	26%
Being tricked into signing up for things that you don't want or need	23%

“The exposure of our staff or customers' details being leaked would be a serious problem that would shake their confidence in our ability to be a trusted business.”

Domestic cleaning, Regional VIC



Consumer wary about online transactions after falling victim to cybercrime



Ange* is a 70-year-old retiree who lives in a retirement village in outer Brisbane. Since losing her partner a couple of years ago Ange has found solace on the internet – establishing connections with other people via online gaming and becoming friends with them on Facebook. She has a curious mind and loves to use the internet to find answers to the myriad questions she has about the world in general. She enjoys playing online games and reading online to keep her mind active.

Having lost money to a cryptocurrency scam, Ange is wary of using bank cards for online payments for fear of having money stolen. She doesn't trust "anything to do

with money" online and instead uses phone banking to pay bills. She has used PayPal for online purchases and feels secure using PayPal due to its payment protection policy and general positive reputation.

Online safety is an ever-present concern – Ange is fearful of viruses that may infect her devices if she clicks on something without realising the danger. She is also wary of "bad people" who she might encounter on the online platforms that she uses. She has passwords written down on paper and admits she is not very good at updating them regularly.

Sole trader confident online but nervous when it comes to cyber security



Maria* is a 51-year-old sole trader who runs a pet welfare business. The business is based in Sydney and added an online presence (online store and Zoom consultations) during the COVID-19 pandemic. The business is currently run 90% online.

Having been impacted by cybercrime on two occasions Maria no longer accepts online payments for fear of being hacked. She doesn't trust online payments and prefers in-person cash payments or will accept bank transfer payments made over the phone.

Maria notes that she presently has no budget to invest in cyber security. She has Norton Security installed but this has had little impact on her sense of online safety.

Maria feels forgotten as a sole trader and would like the government to offer more services regarding cyber security to small businesses, such as more advice to victims and feels more should have been done to assist her to recover lost costs.

She would like the government to support sole traders to develop their internet skills such as how to improve online presence, how to run a website and how to prevent being a victim of cybercrime.

Maria is particularly interested in online safety and wants to increase the security of the business as a priority. She notes she does not have the budget to do this currently but will look into this once she has a higher annual turnover.



A majority of internet users have inadequate password management behaviours, leaving themselves vulnerable to cyber security threats.

Weak passwords are considered one of the greatest online security risks, leaving users vulnerable to cyber threats. Despite this, a minority of consumers and small businesses have sound password management behaviours.

Many people report feeling overwhelmed by the number of passwords they are required to remember, which can be a source of frustration. In turn, many have developed shortcuts to ease this perceived burden, some of which leave them vulnerable to cyber threats.

Just over half (54%) of consumers change their passwords for commonly used websites or apps at least every few months and 11% report never changing their passwords. Small businesses are more vigilant, with almost three quarters (72%) changing passwords every few months and 6% saying they never do so.

These findings suggest the community would benefit from cyber security education to significantly boost uptake of sound behaviours, including better password management. Younger consumers (aged 18 to 34 years) and those from a culturally and linguistically diverse background are most likely to use password managers, but other groups may require more targeted information and guidance, such as details of how they work and the associated costs.

Online security behaviours	Consumers	Small businesses
Ensure you install software updates when they are released	39%	36%
Back up data and files regularly	37%	41%
Use strong passwords suggested by websites	36%	27%
Avoid using websites that do not start with https or display the padlock symbol	35%	27%
Use multi-factor authentication wherever it is available	35%	36%
Keep a record of your passwords in a notebook or on paper	29%	21%
Check privacy or security settings of apps or software before you install them	27%	35%
Check privacy or security settings of websites before you use them	24%	27%
Use stored passwords on your device(s) or via online platforms	23%	20%
Use the same password for multiple websites and apps	22%	N/A
Use a secure password storage website or app	20%	22%
Keep a record of your passwords on your computer or on your phone	16%	15%

How often do you change your passwords for commonly used websites or apps?	Consumers	Small businesses
At least once a month	18%	40%
Every few months	35%	32%
Less often	36%	22%
Never	11%	6%

“I forget and get complacent about changing my passwords and I’m too comfortable with remembering the ones I have.”

Woman, 50-69 years, Regional NSW





While many small businesses recognise they could do more to improve their cyber security, there is a reluctance to increase spending on security measures.

Many of the small business participants who took part in the qualitative research exhibited complacency around cyber security. While a few outliers were fearful due to past experience of cyber attacks, or confident due to rigorous proactive security management, the majority admitted it was something they didn't pay a great deal of attention to.

Many were surprised to learn that their business was 'at risk' based on a free online quiz to assess data security and privacy.

When prompted with a range of online security behaviours some, such as multi-factor authentication and data back-ups, were dismissed as being unnecessary, too time-consuming or confusing. Expense is a barrier to adopting tools such as password managers.

Of concern, only around one in five small businesses have a cyber security policy. A similar proportion have formal training or management review processes for cyber security.

More than half of the small businesses surveyed spend less than \$1,000 annually on cyber security and 17% spend nothing at all. Around a third (34%) spend more than \$1,000.

Despite recognition of the need to do more to ensure their business' online security, only a small proportion (13%) of small businesses intend to increase their spending on cyber security. This signals a need to build awareness among small businesses of the critical need to invest in cyber security, and for government and industry initiatives to uplift cyber security education, resources and solutions to help small businesses better manage cyber security risks.



Does your business do any of the following?

Provide staff with regular cyber security training	22%
Regularly talk about cyber security with staff	21%
Hires someone with responsibility for IT and online security	21%
The business has a cyber security policy	20%
Regularly talk about cyber security at Board or management meetings	18%
Provide staff with one-off cyber security training	16%
Provide staff with ad hoc cyber security updates and/or reminders	16%
Audit cyber security practices and procedures on a regular basis (i.e. annually)	16%

How much does the business spend on cyber security each year?

17%	Nothing (\$0)
39%	Less than \$1,000
34%	\$1,000 or more
10%	Don't know

How much does the business intend to spend on cyber security in the coming year?

8%	Less than this year
65%	About the same
13%	More than this year
14%	Don't know



Trusted resources for cyber security continue to have low awareness and remain underutilised.

Despite widespread concern about cyber security, many people are not sure where to access trustworthy information about online security or where to go in the event of a cyber security breach.

Search engines, family and friends remain the most likely sources of cyber security information or advice for consumers, while small businesses are most likely to use a search engine to find information themselves, or turn to a professional IT consultant or workplace IT support.

Consumer and small business participants were tasked with exploring information online about cyber security. As part of this exercise some visited the cyber.gov.au website. Those who did were positive, feeling they had learned from it, gained confidence and intended to revisit it in the future. There was a strong sense of trust in the information provided, given that it is a government website.

When prompted, less than a quarter of consumers say they would use government websites such as cyber.gov.au or esafety.gov.au. These websites were not well known by consumers. Few were aware of them and even fewer had visited the websites prior to the research.

Only 6% of consumers and 12% of small businesses reported having visited government websites for online security in the past three months. Those who did, were significantly more confident using the internet overall. While the research does not imply a causal link, it suggests there may be potential to improve confidence among internet users more broadly by supporting an uplift in cyber security practices, including generating greater awareness and usage of trusted government websites and resources.

6% Consumers
12% Small businesses

had visited a government website for information or help with online security in the past 3 months

62% Consumers
70% Small businesses

who had visited a government website for information or help with online security in the past 3 months felt very confident using the internet

Main sources used in past 3 months for help or advice in relation to online security

Consumer

Family	21%
Search engine	17%
Friends	16%
Workplace IT support	9%
Free online resources	9%
None	47%

Small business

Search engine	19%
A professional IT consultant	18%
Workplace IT support	15%
Online forums / discussion boards	14%
Family	14%
None	31%

“The cyber.gov.au website was great, easy to understand, and I found the simple layout and the screenshots displaying how to do things helpful. I will definitely return to the website.”

Small business, Healthcare, Adelaide



06

The future of the internet



The value of the internet is well established but how consumers use and benefit from it will continue to change and evolve.

A common theme during qualitative discussions was that people felt they spent enough time online and were generally satisfied with the activities they undertake currently. While most consumers expect to maintain a similar level of online activity to what they do currently, there are some who want to change their online behaviour.

Activities people would like to do more of in the future are content streaming, accessing banking and government services, and finding information online. More people said they would like to increase their participation in these activities than decrease them.

Conversely, the activities most anticipated to decrease in the future include online dating, online food delivery, gaming, virtual assistants and wearable devices. A higher proportion of consumers indicated they would like to reduce, rather than increase, their participation in each of these activities.

Younger consumers (aged 18 to 49 years) and those from a culturally and linguistically diverse background are most likely to want to do more across many of these online activities. These cohorts expect to live more of their life online in the future.

Online activities - future intention

	Do more	Do less
Find news or information online	21%	10%
Access government services online	18%	10%
Use internet or mobile banking	18%	11%
Watch or listen to a streaming service	22%	16%
Pay bills or send and receive money via online payment systems	16%	11%
Buy products other than groceries online	19%	16%
Use instant messaging apps	17%	15%
Make bookings or reservations online	17%	15%
Make or receive video calls	17%	17%
Sell products online	18%	20%
Listen to podcasts	20%	25%
Buy groceries online	15%	22%
Use social media	16%	23%
Manage investments online	13%	23%
Use an internet enabled wearable device	15%	25%
Use a virtual assistant	13%	24%
Use online food delivery platforms	13%	26%
Play video games online	14%	28%
Meet new people via online dating sites	9%	37%



Emerging internet technologies

Survey participants were asked to consider these new and emerging internet-enabled technologies:



Automated healthcare

Use of internet-enabled technologies to automate processes such as administrative tasks, data processing and analysis of test results. Allows healthcare practitioners to focus on more specialist tasks and to spend more time with patients.



Smart homes

Use of internet-enabled technologies to remotely control or automate functions such as home security, lighting, temperature and entertainment systems.



The metaverse

A virtual world that is accessed through a virtual reality headset. Users create an avatar and can interact with virtual environments and other people's avatars in the virtual world. For example, users can attend a virtual concert, view art or go shopping.



Workplace automation

Using artificial intelligence, advanced software and robotics to create systems that complete business activities with minimal (or no) direct involvement from humans; typically involves tasks that are highly repetitive, from data processing to automated machinery and vehicles.



Smart buildings

Use of internet-enabled technologies to remotely control or automate functions such as security, lighting, and temperature systems.



Blockchain

Examples include cryptocurrency (e.g. Bitcoin) and Non Fungible Tokens (NFTs). A type of public ledger that records transactions across a distributed network of computers. Data in this network is encrypted and unable to be modified once created. No central authority can control the decentralised system.



Consumers and small businesses are cautiously optimistic about emerging internet technologies. Awareness is high but has not yet translated into widespread adoption or intention to use new technologies.

Consumers have mixed attitudes to emerging technologies. They are most positive about smart homes and automated healthcare but remain cautious about the metaverse and blockchain technologies.

Smart home technology offers practical benefits such as convenience and cost saving. There are however concerns about cyber security and data privacy – a commonly held belief is that smart home devices can be easily hacked.

Consumers don't see obvious practical benefits at an individual level in the metaverse but are excited about the potential benefits of augmented and virtual reality to enable people who live in remote areas, who have chronic health conditions, or are otherwise vulnerable to access services remotely.

Small businesses are more positive than consumers about emerging technologies, particularly smart building technology and workplace automation. Around a third of businesses report they are likely to use each of workplace automation, smart buildings, the metaverse or blockchain in the future. Some small businesses feel blockchain could be a viable payment method in the future, but many consider it too risky.

Expectations of significant cost and complexity also serve to dampen enthusiasm for emerging technologies, for both consumers and small businesses, as do concerns about the erosion of in-person social interaction and the impact of automation on employment, albeit to a lesser extent.

Consequently, many consumers and small businesses remain hesitant about adopting emerging technologies. Reassurance that laws and regulation are in place to protect against potential harms would support future uptake.

Consumer attitudes to emerging technologies

Consumers

	Automated healthcare	Smart homes	The metaverse	Blockchain
Aware	59%	88%	70%	66%
Know a lot	5%	9%	6%	6%
Likely to use in future	N/A	35%	18%	18%
Positive sentiment	38%	42%	21%	19%

Small businesses

	Workplace automation	Smart buildings	The metaverse	Blockchain
Aware	79%	71%	78%	74%
Know a lot	9%	9%	7%	8%
Likely to use in future	32%	37%	30%	28%
Positive sentiment	40%	51%	34%	33%



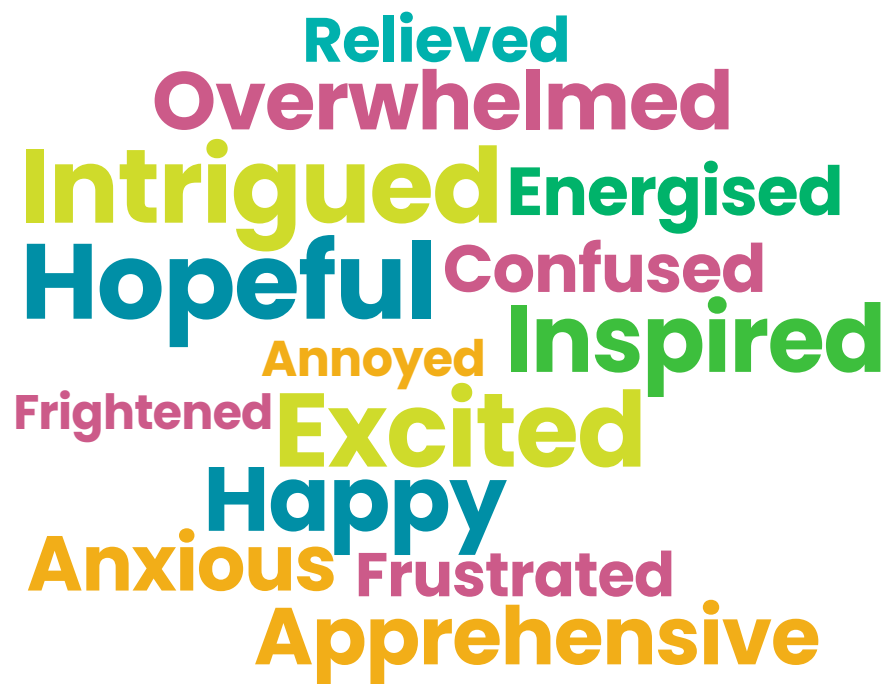


The outlook for the internet and the online activities of the future is mostly positive, although there is some apprehension.

On balance, consumers have a positive outlook when thinking about the types of online activities and services that will be available in the future. From a prompted list, people are more likely to select positive words to describe their feelings about the future of the internet.

Younger Australians (aged 18 to 34 years) are the most positive, while people from a culturally and linguistically diverse background feel more excited when considering the ways in which the internet will be used in the future.

However, for some there is an undertone of apprehension and a sense that the changes are overwhelming. Older Australians, especially those aged 70 years or above, are most likely to select negative emotions which offset their positive sentiment. They are more likely to feel apprehensive and confused when thinking about future applications of internet technology, reinforcing the need for support and guidance as these new digital activities roll out.



“The future of the internet seems to be bright and dark at the same time. Bright because I see a lot of enhancements and things happening faster. Dark because there seems to be a lot of privacy issues.”

Woman, 18–34 years, Melbourne



“I believe there are a lot of benefits of emerging technologies that could greatly enhance the lives and experiences of everyone, but these come with risks that haven’t even been discovered or defined yet.”

Man, 50–69 years, Melbourne



Detailed sample breakdown

Throughout this report, results are presented for various consumer and small business subgroups within the survey sample. The tables opposite show the unweighted sample size for each subgroup.

Consumer segments

Category	Group	Description	Sample size
Gender	Women	Identify as a woman	811
	Men	Identify as a man	703
Age	18-34	Aged 18 to 34 years (inclusive)	429
	35-49	Aged 35 to 49 years (inclusive)	406
	50-69	Aged 50 to 69 years (inclusive)	386
Location	70+	Aged 70 years or above	293
	NSW	Live in New South Wales	448
	VIC	Live in Victoria	367
	QLD	Live in Queensland	307
Background	WA	Live in Western Australia	159
	SA	Live in South Australia	138
	TAS/ACT/NT	Live in Tasmania, Australian Capital Territory or Northern Territory	95
	Culturally and linguistically diverse (CALD)	Born overseas and speak a language other than English	163
	Not CALD	Do not meet above criteria	1,351
Occupation	Office workers	Work in a professional, managerial or other executive role, or non-managerial offices, sales or service worker	609
	Skilled and manual workers	Work as a skilled or semi-skilled tradesperson, plant or machine operator, driver or other transport worker, general labourer or manual worker	210
	Work on site only	Work exclusively at a dedicated place of business that is exclusive to your company (e.g. office, factory, shop, or other venue) or premises shared with other businesses (i.e. coworking space)	572
Place of work	Work from home only	Work from home exclusively	138
	Hybrid workers	Work from home and from another location	105

Small business segments

Category	Group	Description	Sample size
Company size	Sole trader	Self-employed with no employees	150
	Micro	Business has 1 to 4 employees	127
	Small	Business has 5 to 19 employees	116
Sector	Arts	Business operates mainly in Arts and entertainment	16
	Business and Tech	Business operates mainly in Professional services, or Consulting, or Finance and insurance, or IT and computing, or Marketing, or Property and real estate	88
	Construction and Trades	Business operates mainly in Construction, or Trades, or Utilities, or Cleaning and maintenance, or Automotive products and services	64
	Education and Care	Business operates mainly in Education, or Caring and support services	23
	Health	Business operates mainly in Healthcare, or Medical services, or Pets and veterinary	36
	Hospitality	Business operates mainly in Accommodation, or Food and beverage, or Agriculture	28
Retail and Beauty	Business operates mainly in Clothing and accessories, or Retail, or Personal care	76	
Supply chain and manufacturing	Business operates mainly in Import, export and wholesale, or Manufacturing, or Printing, graphic design and signwriting, or Transport and logistics	29	

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