

Digital Lives Decoded Singapore

Connecting to a smarter and safer digital life



Foreword

As digital developments continue at pace, reshaping the world around us, Singapore is well-positioned to capture the opportunities these advancements bring. I am pleased to present the 2024 edition of Telenor Asia Digital Lives Decoded (Singapore) report, which offers insights on how people view these rapid technological shifts.

In its third year, this edition focuses on how mobile connectivity is enabling smarter and safer lives in Singapore. It also looks at how the proliferation of new technologies, such as AI, is making a mark in Singapore, with 3 in 4 people already using AI tools in their daily lives.

The vast majority (97%) of the 1,000 respondents in Singapore surveyed own a smartphone and spend a quarter of their waking hours on their phone every day. These devices are no longer just tools for communication – they are powerful gateways to smarter, more efficient living, boosting productivity, helping people manage finances and improving health and well-being.

One of the most striking trends this year is people's optimism for the role AI can play in shaping the future in this new era of AI-integrated devices. Eight in ten believe that AI will positively impact the economy, and six in ten see it benefiting society at large.

Yet, while excitement about AI is palpable, concerns around data privacy and security remain a top priority, underscoring the need for continued education on digital safety and robust privacy protections. As we continue to navigate the intersection of convenience, innovation, and security, it's clear that the "privacy paradox" is something we must address. While people are understandably concerned about their personal data, they are equally eager to harness the full potential of AI and mobile technologies. By fostering a culture of digital literacy, responsibility, and trust, we can empower individuals to make informed decisions and create a more secure, connected future for all.

We hope this report provides a comprehensive snapshot of how people in Singapore view the digital world, and that the insights offer guidance for decision-makers as we progress towards a smarter, safer, and more connected digital world.

Håkon Bruaset Kjøl

Senior Vice President
Head of Investment Management
Deputy CEO, Telenor Asia



In this report

04

2024 snapshot

08

Living a smarter and safer digital life

12

Sophisticated scams and improving security posture

19

Navigating AI perceptions and impact

29

Conclusion

Methodology

This report is based on a survey that Telenor Asia has commissioned GWI to undertake in June and July 2024. Survey respondents were granted anonymity and Telenor’s involvement was not disclosed.

GWI has a panel of over 22 million internet users globally. To ensure its research is reflective of the online population in each market, GWI sets appropriate quotas on age, gender, and education. GWI’s recontact methodology enables respondents who have completed its core survey within the last year to be recontacted to take additional surveys. This data can then be synchronised with the core data, which consists of over 57,000 data points. All figures in this report are among internet users aged 16-64 in Singapore, and drawn from the following studies:

GWI Core

- Conducted quarterly, with questions remaining the same wave-on-wave
- Q3, Q4 2023 and Q1, Q2 2024, N=13,292

GWI Zeitgeist

- Conducted monthly on trending topics, questions change month-to-month
- April 2024, N=505

Telenor’s Custom Research

- General population survey
- Using GWI’s recontact methodology on the GWI core audience
- Fielded June 24th to July 13th 2024, N=1,000

2024 snapshot



Mobile devices are central to daily life in Singapore

Smartphone ownership is prevalent in Singapore, reaching a new high of 97% in 2023. 3 in 4 say it's their primary device for accessing the internet. Interestingly, this is slightly lower than other markets in Southeast Asia.

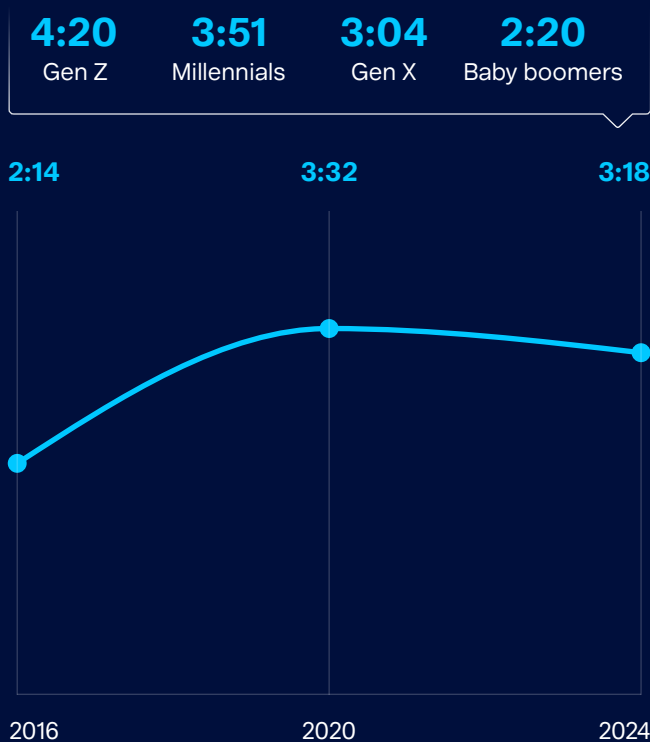
In 2024, average daily time spent online via mobile is **3 hours and 18 minutes**. This figure increased through the Covid period, peaking in 2021, but has now slightly fallen.

With behaviour increasingly shaped by mobile technologies, it is clear that mobile devices are not just communication devices, but a gateway to smarter, safer, and more connected lifestyles.

But, with the growing integration of AI into mobile devices, a strong understanding of cyber threats and maintaining a strong security posture will become even more critical to protect personal data and ensure digital safety.

Daily time

Time spent online via mobile daily (h:mm)



Singaporeans more concerned about data privacy risks than regional peers

In the face of digital evolution and increased awareness of online security, personal data privacy continues to be top of mind in Singapore.

In 2024, 36% of Singaporeans express concern about how companies are using their personal data. They are 37% more likely than the average internet user in APAC to say this. This highlights the country's heightened sensitivity to data privacy issues, possibly a result of Singapore's high internet penetration, advanced digital economy, and robust privacy regulations (like the Personal Data Protection Act).

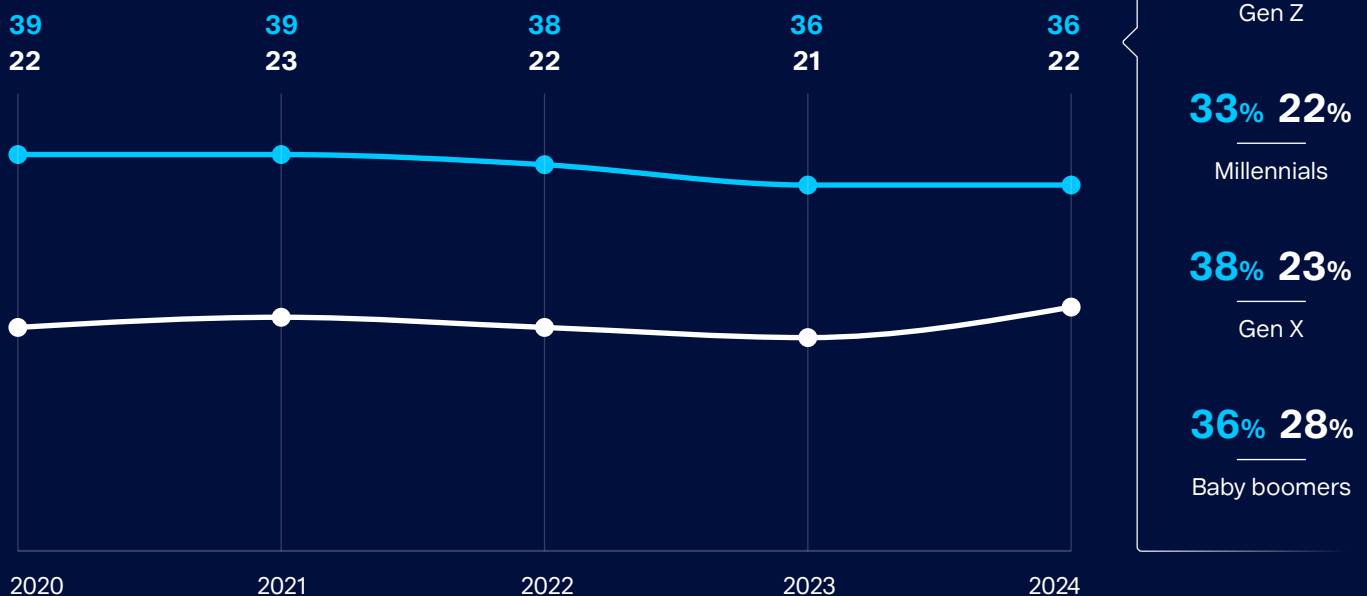
3 in 4 feel that they lack control over their personal data online. However, among this subgroup, 7 in 10 say they regularly employ privacy tools such as ad-blockers, decline cookies, clear browsing history or use VPNs.

There is clearly a knowledge gap to fill to help consumers use these tools. These figures suggest a disconnect between the use of these privacy measures and an understanding of their effectiveness, suggesting that even with these tools, fundamental concerns about privacy are not fully alleviated.

Attitudes to online privacy

% who say the following describes them

- I feel in control of my personal data online
- I worry about how companies use my personal data online



Concerns are similar across generations, but Boomers expect more from brands

In other APAC markets, baby boomers are the most worried about how their personal data is being used. In Singapore, however, these concerns are similar across generations. Baby boomers are the most likely generation to want brands to be transparent about how they collect and use data, however, with almost 1 in 2 saying this.

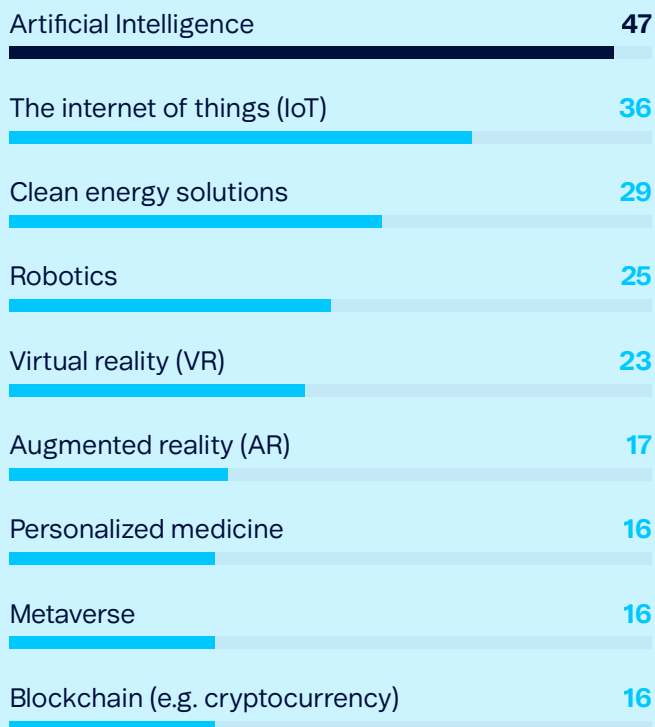
AI excitement is building, but views on its impact are divided

When looking at attitudes towards emerging technologies, nearly 1 in 2 Singaporeans say they are excited by AI. This excitement is consistent across age groups, with enthusiasm highest among males (53%) and high-income consumers (53%).

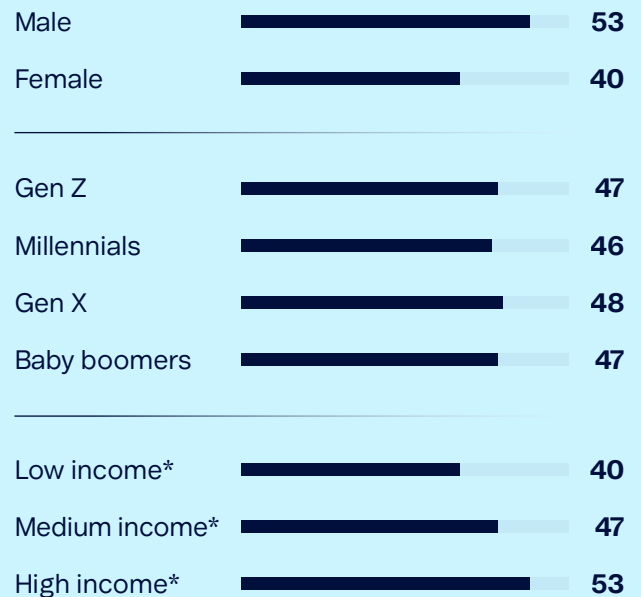
Proving it's not just a passing trend, excitement around AI has increased by almost 10% points in the last two years, from 38% in 2022 to 47% in 2024. The role of AI has also grown in significance, with people using it to improve research, efficiency and generate ideas. As AI continues to evolve, its uses will diversify. Looking ahead, people hope to use AI more for problem solving and data analysis.

Excitement for emerging technologies

% who are excited about these technologies



AI excitement by demographics



*Low income ≤30,000, medium income 30,001–80,000, high income ≥80,001 • Source: GWI Core • Audience: 13,292 internet users aged 16-64

6 in 10 believe AI will have a positive impact on the future of society



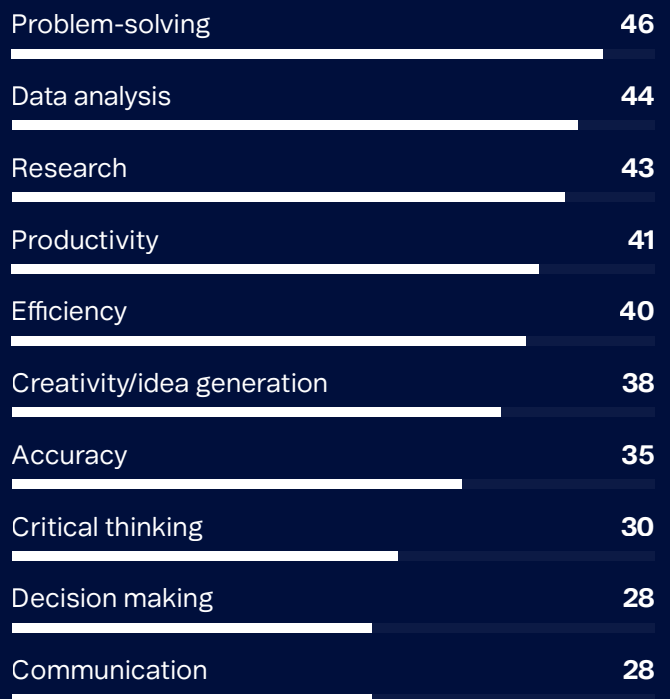
Skills improved by AI

% who say these skills are their most improved by using of AI



Future impact on skills

% who hope AI will become more useful for these skills in the future





Living a smarter and safer digital life

Mobiles are contributing to smarter living in Singapore

For respondents in Singapore, the mobile phone is a tool that keeps them entertained and up to date with the latest news. Being able to track physical health, manage finances and online learning are also ways the mobile has enabled consumers to lead smarter and more connected lives.

Social connectivity

87% find the mobile phone a helpful tool for maintaining their social life. 1 in 4 say the device enables a smarter life through connecting them with like-minded individuals online. The ability to stay in touch with others is regarded as the top benefit of mobile use.

Access to information and online learning

64% believe that the ability to search for quick answers and solutions on their mobile device has also contributed to a smarter lifestyle, while 43% cite access to online learning as a key benefit. Men also tap on their mobile devices more for information. 29% of male respondents say the first thing they do in the morning is to read news updates on their mobile phones, versus 16% of women.

Financial management

Despite the sensitive nature of financial information and associated risks, access to financial management tools is one of the top three benefits for Singapore respondents. Nearly 2 in 3 access online banking and manage finances on their mobile phone. Mobile phones also facilitate smarter financial management with tools like mobile wallets and expense tracking apps. The latter is particularly important to the younger generations. (35% vs 23% of older generations).

Tracking physical health

1 in 3 say monitoring their health and fitness through various apps and connected devices has enabled them to live a smarter life, with older generations more likely to say this. This is in line with the Healthier SG movement and popularity of wearables in Singapore.



How mobiles help daily life

% who say their mobile phone has been extremely helpful in the following areas of life

● Extremely helpful ● Helpful ● Unhelpful

Keeping you entertained



Keeping up to date with the latest news



Social life



Teaches me new skills



Staying active



Career



Work-life balance



Ways mobile is allowing smarter life

% who say their mobile phone has allowed them to live a smarter life in the following ways



Source: Telenor Study
Audience: 1,000 internet users aged 16-64

Reasons mobile benefits outweigh the risks

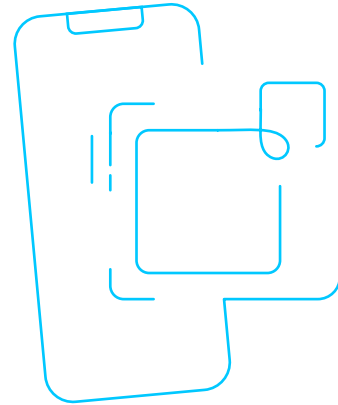
% who say this is why the benefits of a mobile phone outweigh the potential risks



Source: Telenor Study
Audience: 892 internet users aged 16-64

People feel safer in real life (IRL) with their mobile

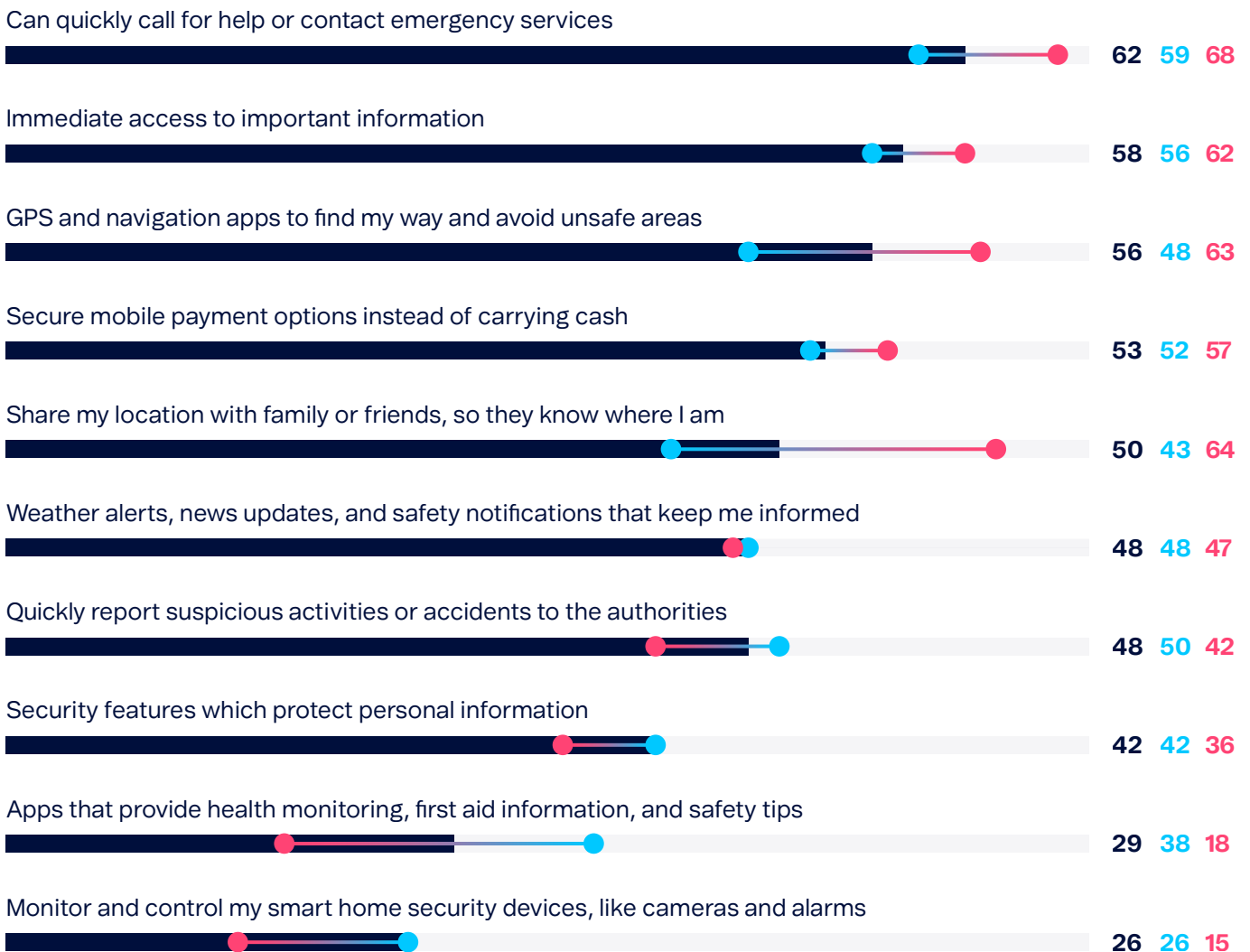
The impact of the mobile phone on safety is generally positive. Among those who feel safer with their mobile device, 62% say the ability to quickly call for help in emergencies is the top benefit. Physical safety is also important, with features like GPS and navigation apps helping users to find their way and share their location with family and friends.



Reasons mobile makes them feel safe

% who say this is why their mobile phone makes them feel safer

● All ● Male ● Female



Source: Telenor Study • Audience: 278 internet users aged 16-64 who say their mobile makes them feel more safe

Sophisticated scams and improving security posture



Home to 80 of the world's top 100 technology firms, Singapore has reaped the benefits of being a hub of business and innovation in Southeast Asia. Alongside this growth, however, is a rise in scams and cybercrime, with SGD\$651.23 billion lost to scams in 2023.

Source: Nadine Chua (2024, February 18). Scam victims in S'pore lost \$651.8m in 2023, with record high of over 46,000 cases reported. [The Straits Times](#).

Sophisticated financial scams are Singaporeans' biggest worry

Financial scams are people's top concern, followed by deep fakes, identity theft and data breaches. 7 in 10 frequently worry about the security of their online accounts, while 8 in 10 find it challenging to stay informed about the latest threats, especially among the older groups.

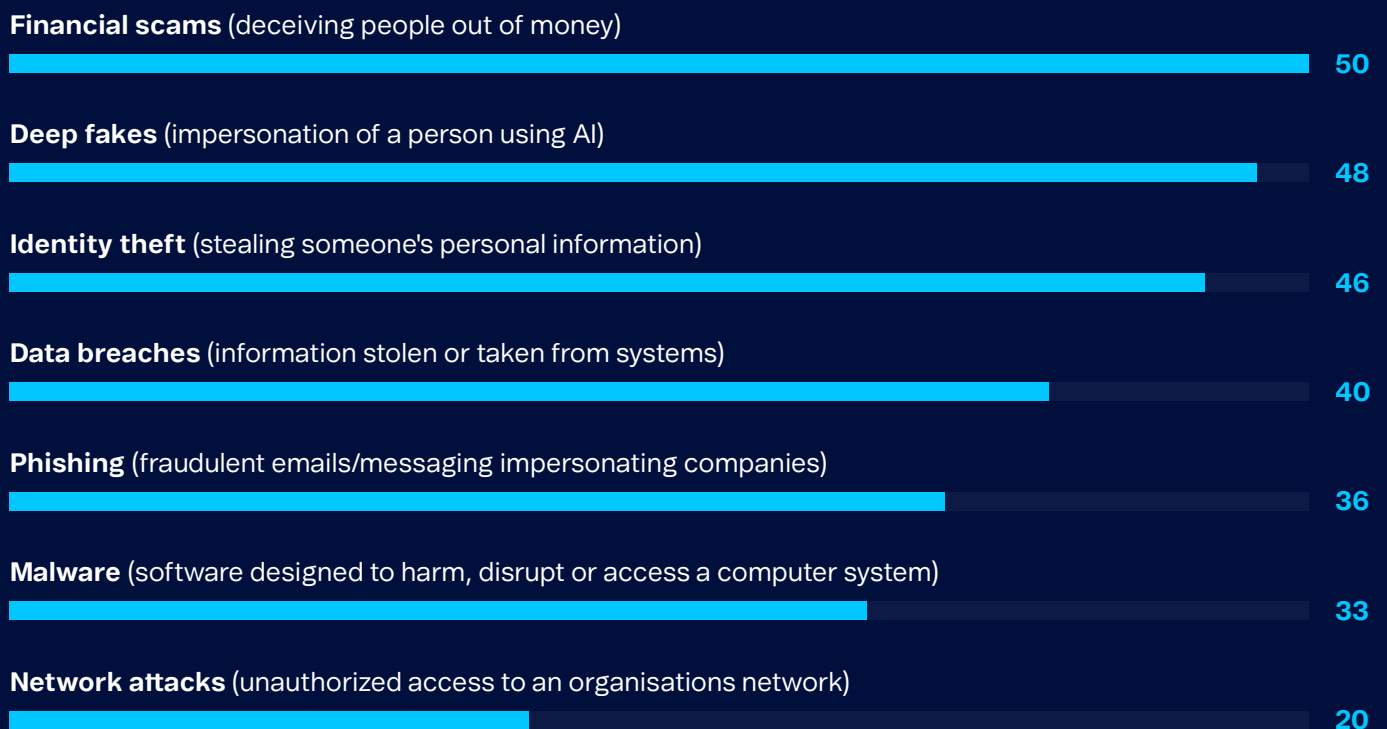
Majority use privacy measures, but inconvenience hinders adoption

96% of respondents employ at least one privacy measure, with the most common being clearing browsers, opting out of lists and declining further contact.

Those not utilising these tools, in particular male respondents and younger people, cite inconvenience and being time-consuming as common reasons for their lack of adoption.

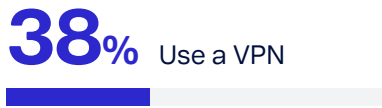
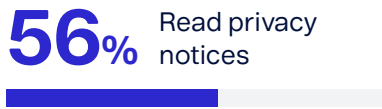
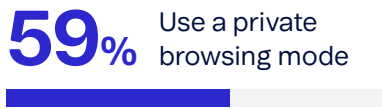
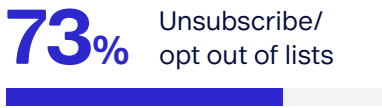
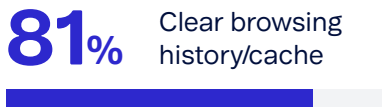
Cyber threat concerns

% who say these are top concerns with new technology like generative AI and Internet of Things (IoT)



Privacy tools used

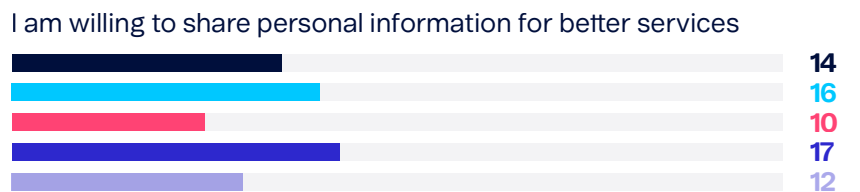
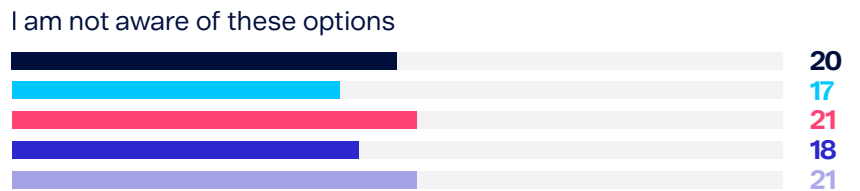
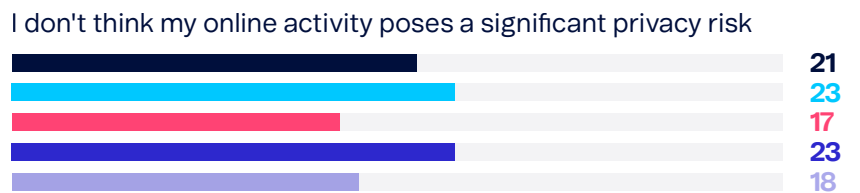
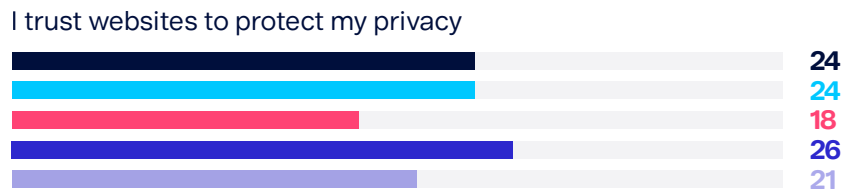
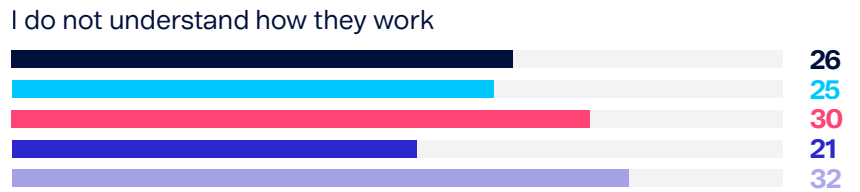
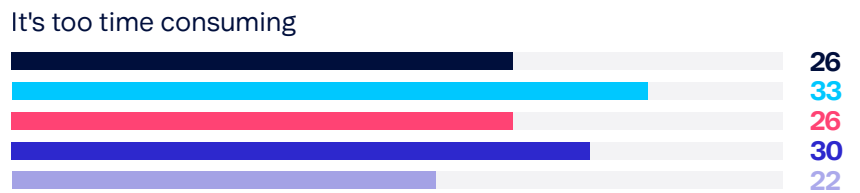
% who use the following online privacy options



Reasons for not taking action

Among those who do not take one or more privacy actions, % who say this is why

- All ● Male ● Female
- Gen Z & millennials ● Gen X & baby boomers



Additionally, a lack of understanding of how tools work is a key deterrent especially for women and older generations. These latter two groups also feel less confident in their ability to protect their data online.

Interestingly, men are more likely than women to say they frequently worry about the security of their online accounts (76% versus 71%), and to find it challenging to stay well informed (80% versus 76%). Older consumers also struggle to keep up to date.

These findings underscore the need for greater awareness and education on privacy tools to help people protect their personal data more effectively. Investing in training on how to use these tools could bolster their confidence in protecting themselves against sophisticated scams.



Data privacy attitudes

% who agree with the following statements

● All ● Male ● Female ● Gen Z & millennials ● Gen X & baby boomers

Find it challenging to stay informed about the latest online security threats



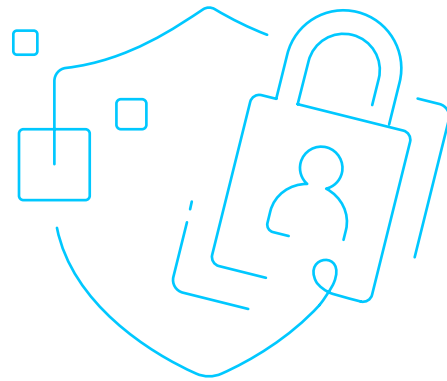
Frequently worry about the security of my online accounts



Feel confident in my ability to protect my personal information online



Improving security posture is a top priority for Singaporeans

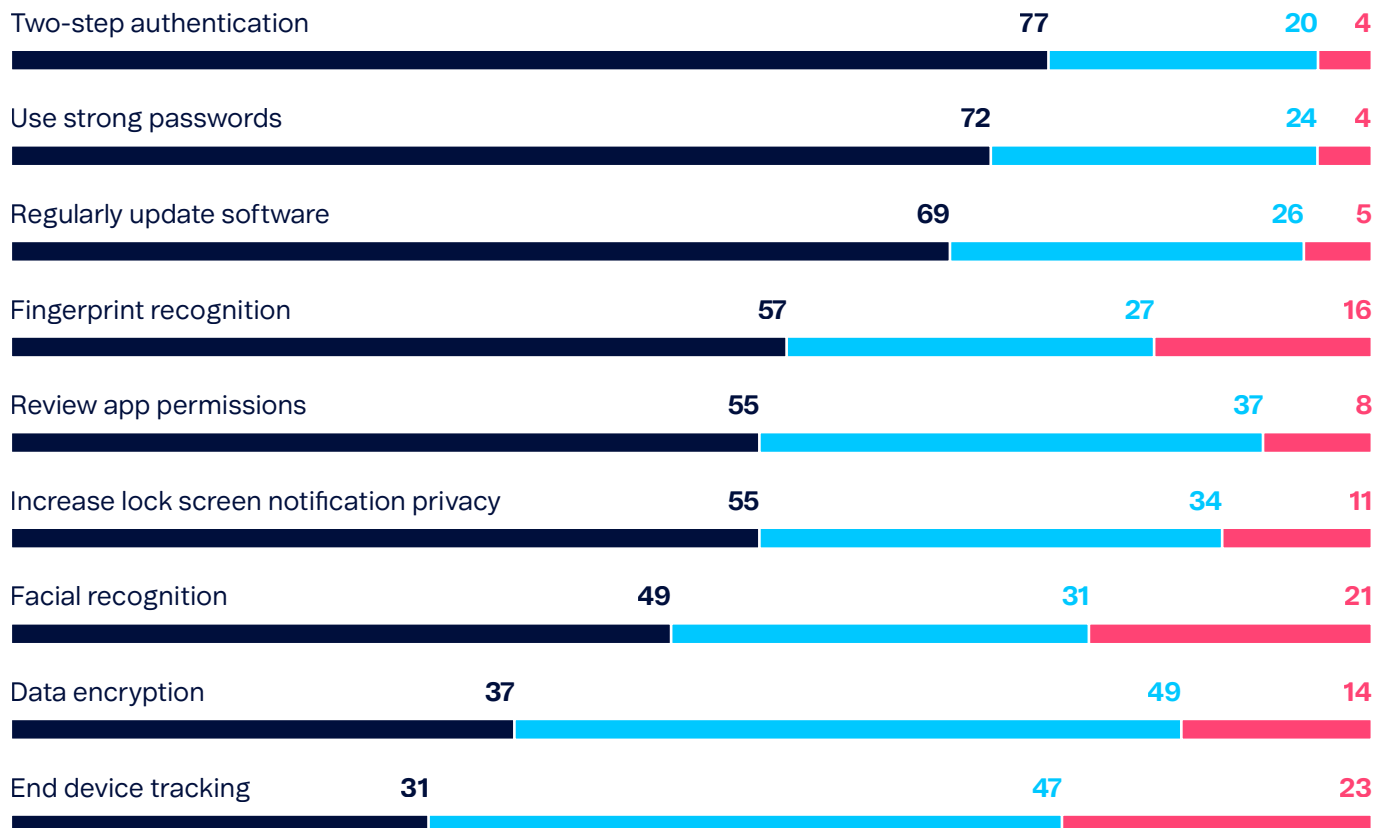


Singapore respondents are also taking active steps to improve the security on their mobile phones or intend to do so in the future. The most popular measures include using two-step authentications (77%), strong passwords (72%), and regularly updating software (69%). However, they are most cautious about the use of personal identifiers, like fingerprint and facial recognition.

Improving security posture

% who say the following with regards to improving the security on their mobile phone

● Currently doing ● Intend to do ● Will not do



Source: Telenor Study • Audience: 1,000 internet users aged 16-64

Gen Zs and millennials take the lead in online confidence

Gen Z and millennials are more confident in their ability to protect their personal information online compared to older generations, which is reflected in their online behaviour. They are more likely to use online privacy options such as private browsing mode (71%) and ad-blockers (60%). Additionally, they also lead in using a number of security measures on their mobile, including facial recognition (53%), fingerprint recognition (61%) and data encryption (39%).



The privacy paradox – to share or not to share?

Interestingly, ending device tracking ranks lowest among actions that people are currently doing. Almost 1 in 2 intend to do this in the future, but 23% say they will not. This highlights the common privacy paradox: people are concerned about location tracking yet are unwilling to give up the daily conveniences that come from allowing technology to track them.



But whose responsibility is all this, anyway?

People clearly perceive a shared responsibility between institutions and individuals when it comes to cybersecurity and protecting online safety, especially the oldest generations. Nearly two-thirds (65%) believe that the government is responsible for ensuring online safety. This is echoed across generations and indicates a clear public demand for stronger regulatory oversight. Service providers, such as banks and telecom companies, are also seen as important players, while 47% believe that responsibility falls on themselves.

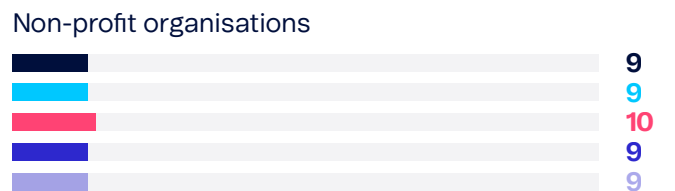
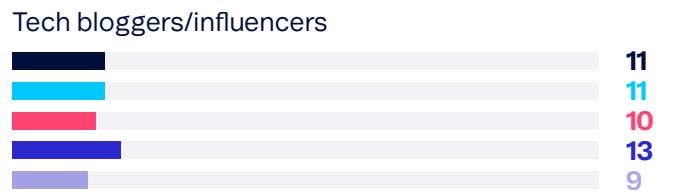
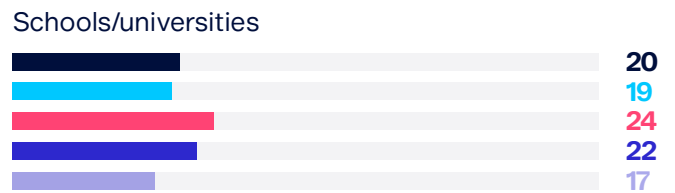
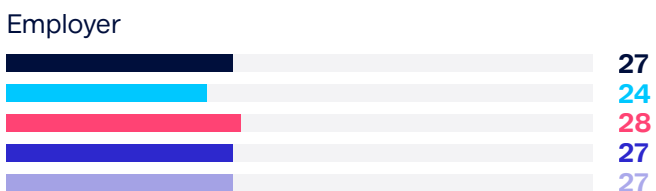
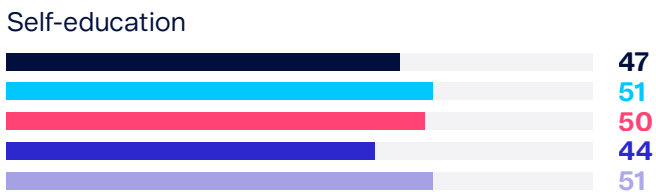
2 in 3 believe that government should take responsibility for online safety

Responsibility for online safety

% who say the following should take responsibility for ensuring their online safety

- All
- Male
- Female
- Gen Z & millennials
- Gen X & baby boomers

Source: Telenor Study • Audience: 1,000 internet users aged 16-64

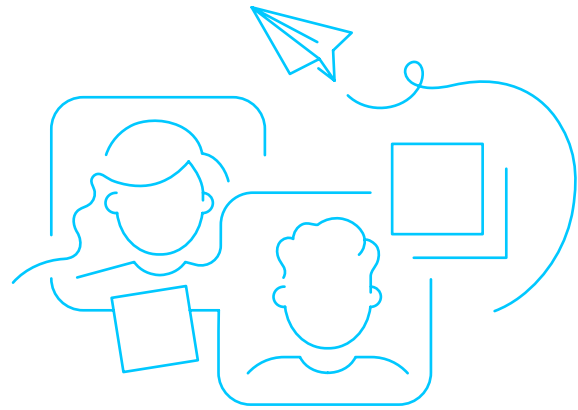


Navigating AI perceptions and impact



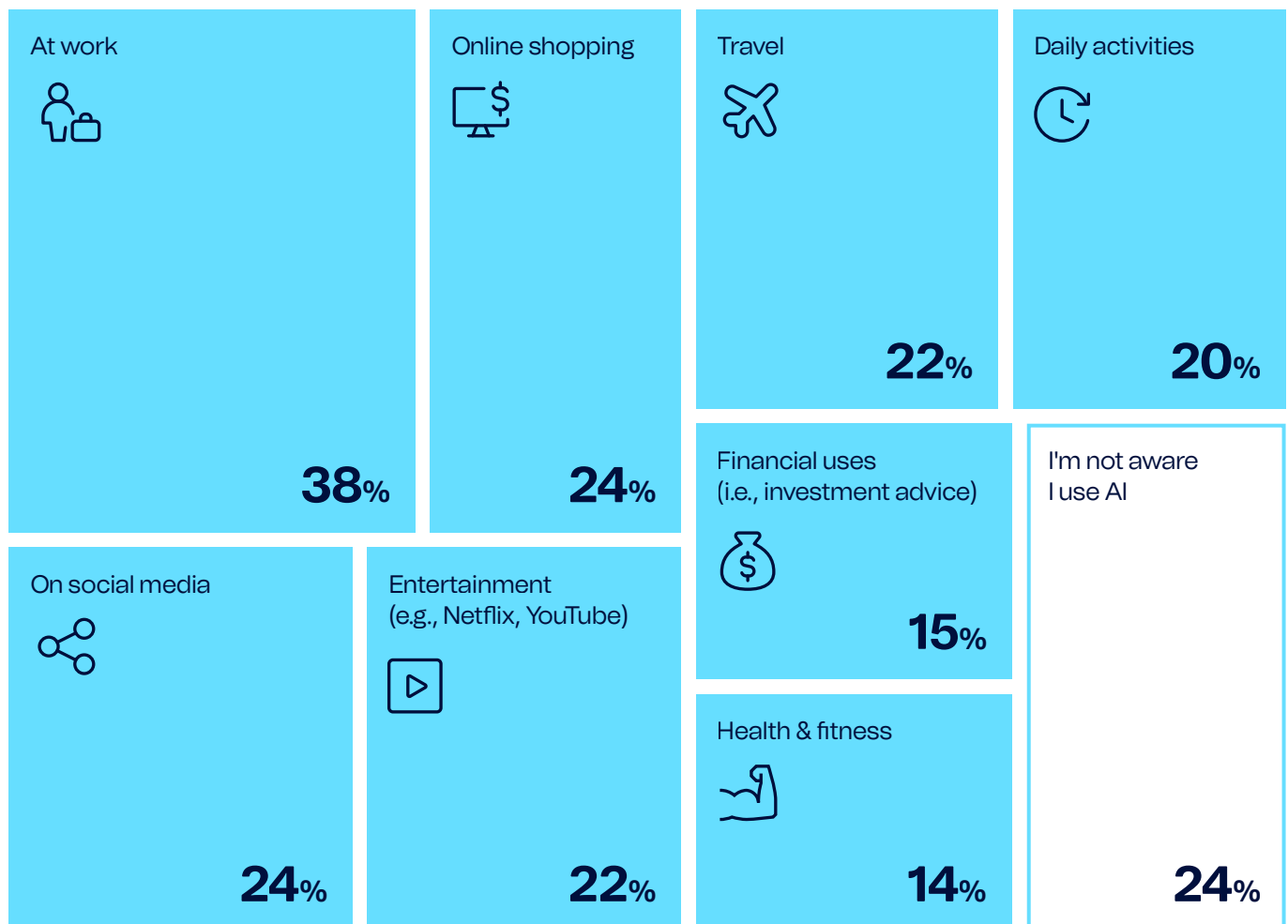
Singaporeans are excited about AI, but trust is divided

Enthusiasm for AI in Singapore is clear, with 3 in 4 respondents already using AI tools in their daily lives. However, despite the rise and proliferation of generative AI platforms in recent years, trust in AI generated information is divided, with financial and medical advice inviting the greatest scepticism.



Usage of AI tools

% who use AI in the following situations



Future impact of AI on society

% who think AI will have a positive/negative impact on the following

● All ● Gen Z & millennials ● Gen X & baby boomers

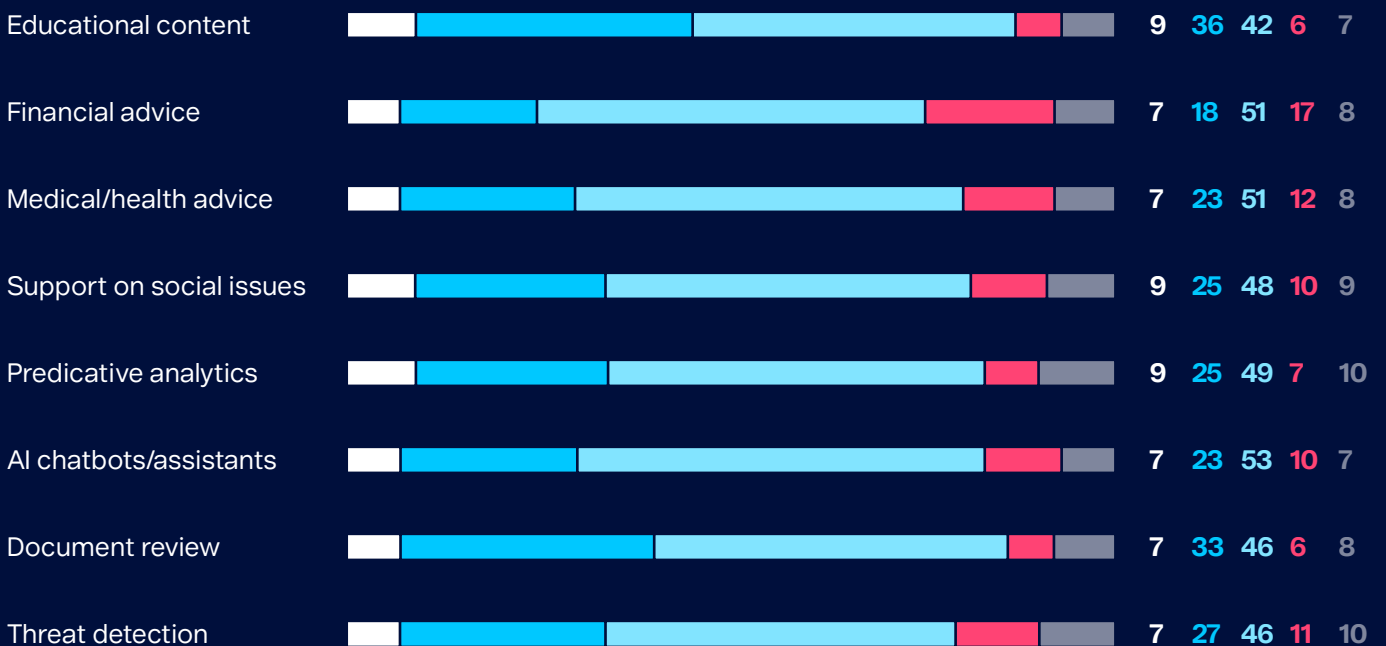




Trust in AI-generated information

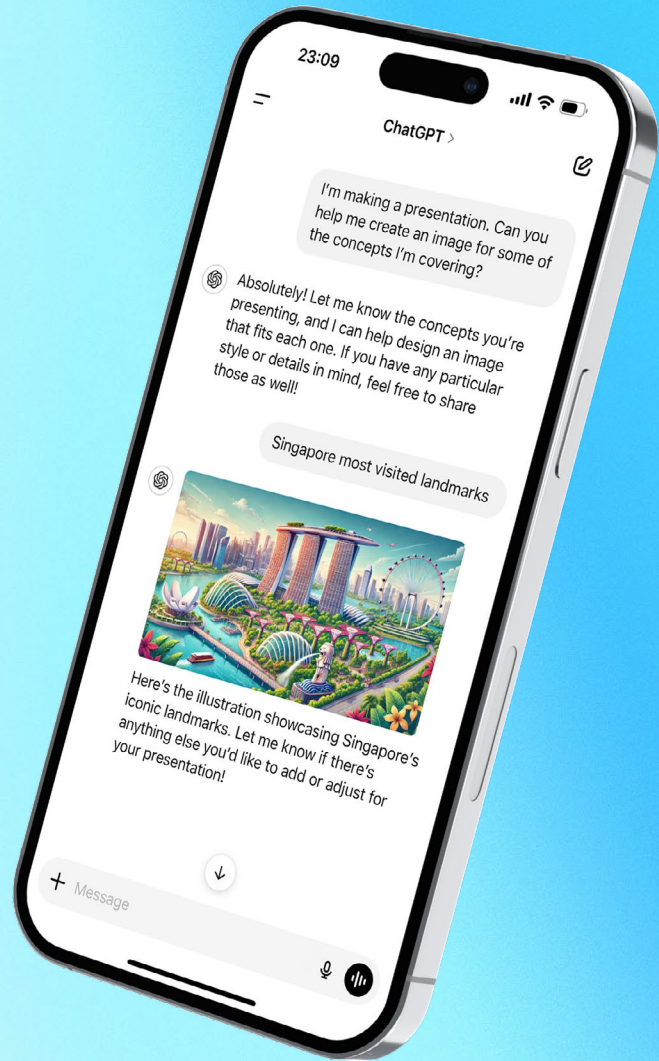
% who say they trust AI-generated information related to the following to this extent

● Trust completely ● Trust a lot ● Trust a little ● Don't trust ● Don't know



Source: Telenor Study • Audience: 1,000 internet users aged 16-64

8 in 10 believe AI will have a positive impact on Singapore's economy



AI is set to transform the economy, education and society

Despite this, Singapore respondents are greatly optimistic about the future impact of AI on society, particularly on the country's economy. This positive outlook can be attributed to the nation's robust digital infrastructure and proactive government initiatives such as Smart Nation Singapore, which sets out to harness new technology to drive digital transformation across society.

Other key areas where respondents anticipate positive impact include education, transportation and crime prediction/prevention. Nonetheless, there are generational differences to note. The younger generations are more likely to feel that AI will have a negative

impact on the arts (36%), general health (28%), and crime prediction/prevention (25%). Concerns about job security (43%) also remain prevalent.

Despite this, AI is already reshaping workplaces. Currently, 38% are using AI at work, rising to 45% among Gen Z and millennials. 1 in 3 say they trust AI-generated predictive analysis, and 4 in 10 trust AI-enabled document reviews. This gives insight into the top uses of AI at work, now and in the future.

Expanding the use of AI in the workplace is likely to build data literacy around its benefits and reduce the fears many have about its future impact.

Misuse of personal data and collection without consent are top AI fears


The new era of AI-integrated mobile phones is transforming user experience – automating tasks and hyper-charging personalisation. To make that work, increasing amounts of data from the user will be harvested.

It is no surprise then that misuse of personal data is the top concern among Singaporeans regarding AI-integrated devices, with 55% worrying about this.

The older generations are more concerned in general and are especially worried about misuse of data (62%), inadequate protection against malware and spyware (41%) and reduced critical thinking and

problem-solving (43%). This highlights deeper concerns around the long-term impact of AI on human cognitive abilities and autonomy.

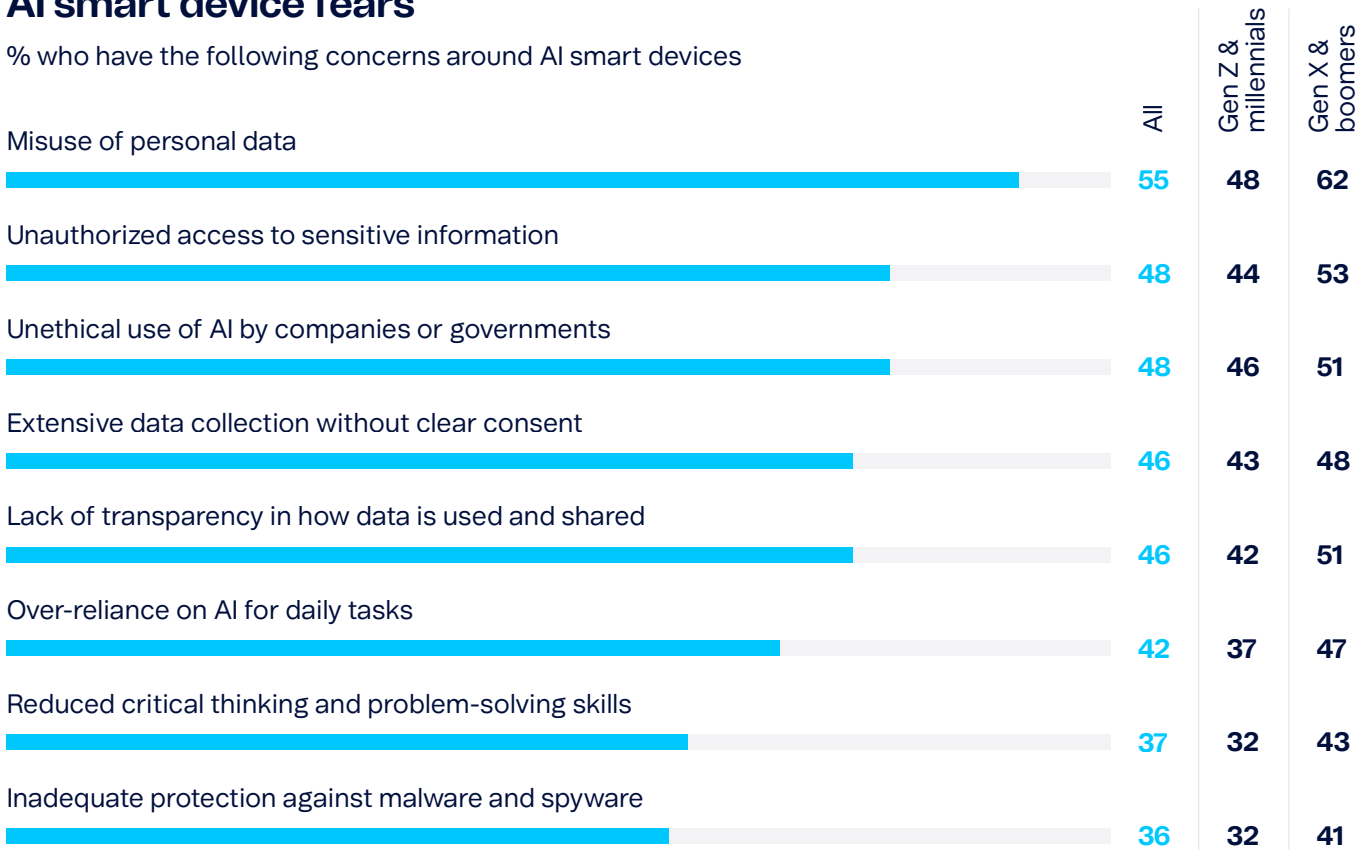
Despite growing excitement around AI among Singaporeans, they also express concerns over unethical use of AI by companies or governments, and the spread of misinformation due to AI. 6 in 10 show at least some concern for the impact AI has or will have on news stories and election campaigns, with around 1 in 4 being extremely or very concerned (GWI Zeitgeist Survey, February 2024). This is important because despite excitement, there are clear ethical and societal concerns to be addressed.



1 in 2 worry about AI integrated devices misusing personal data

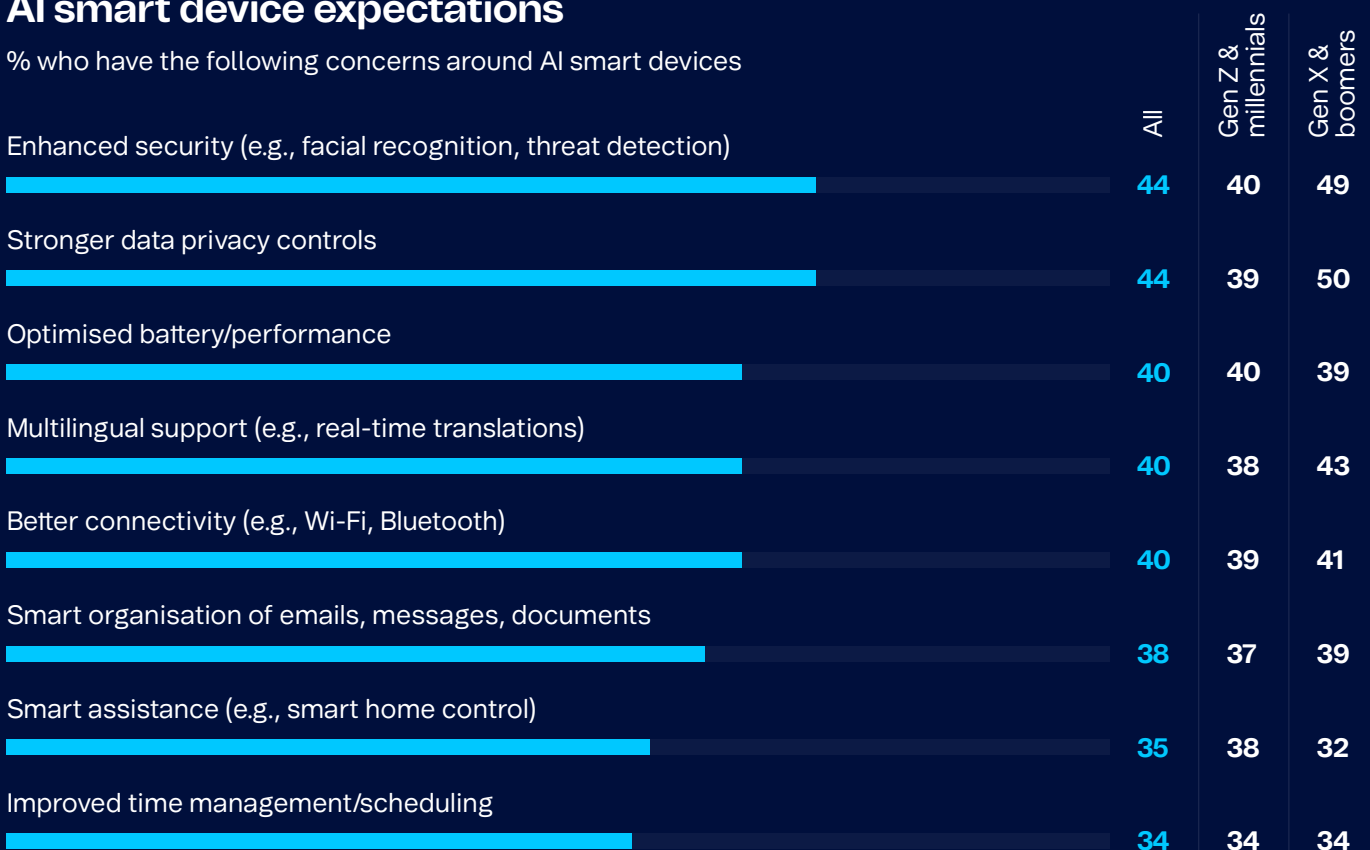
AI smart device fears

% who have the following concerns around AI smart devices



AI smart device expectations

% who have the following concerns around AI smart devices



44% expect an AI smart device to provide enhanced security


Anxiety goes hand in hand with excitement

On the flipside, people are aware of the ways in which AI can contribute to a smarter and safer life. 44% of Singaporeans say they expect AI smart devices to provide enhanced security and stronger data privacy controls, particularly appealing to older generations.

Alongside security benefits, the younger generations also expect better connectivity (e.g. Wi-Fi, Bluetooth) and optimised battery/performance. They are more likely than older generations to expect AI to enhance personalised recommendations.

54% of respondents believe AI can make their mobile more efficient, and 6 in 10 feel AI integrations will make a positive impact on their daily mobile use. Interestingly, even those concerned about data privacy share similar views on efficiency and are excited about the potential benefits of AI.

This highlights a paradox: despite privacy concerns, many still acknowledge the significant benefits AI provide. These fears do not diminish enthusiasm; rather, addressing them could further boost adoption.

A photograph of a man and a woman standing together in a modern office or public space, looking at a smartphone held by the man. The man is wearing a light blue button-down shirt and glasses, and the woman is wearing a tan top and glasses. They are both looking intently at the phone. The background shows a large window with a view of a cityscape.

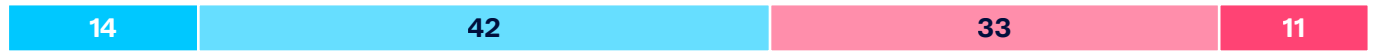
56% show excitement about the possibilities AI could bring

AI attitudes

% who say the following with regards to these statements (4-point scales)

Excitement vs. anxious

● I am excited about the possibilities AI could bring AI integration makes me feel anxious ●



All



Gen Z & millennials



Gen X & baby boomers

Efficiency

● I believe AI can make my mobile more efficient My mobile is already very efficient ●



All



Gen Z & millennials



Gen X & baby boomers

Positive contributions

● AI integration will make a positive contribution to my daily mobile use AI will not make much difference ●



All



Gen Z & millennials



Gen X & baby boomers



Women need more convincing of AI benefits

Women tend to be more anxious about AI when compared to men, and also appear to have less faith in AI's ability to make an impact on their life. They are 19% more likely than men to believe that their mobile phone is already very efficient without AI integration. This apprehension may stem from a general lack of knowledge about AI. To bridge this gap, it is important to highlight how AI can enhance

mobile experiences in ways that resonate with their specific needs and interests. For instance, women are 27% more likely to credit their mobile phones with helping them to live smarter lives by keeping track of tasks and to-do lists. Emphasising efficiency or 'personal assistant' features thus would help to demonstrate the benefits of AI and help shift perceptions.



Conclusion

The 2024 edition of Telenor Asia Digital Lives Decoded highlights the significant role mobile phones play in the daily lives of people in Singapore. From enhancing social connectivity and productivity to supporting online and physical safety through advanced security features and GPS tracking, mobile phones have become indispensable tools for living smarter, safer, and more connected lives.

Enthusiasm for AI in Singapore also continues to grow and outpace the rest of Southeast Asia. But demonstrating how AI can further enrich the mobile experience will be crucial in ensuring this trend continues. Raising awareness of the enhanced security features and data privacy controls in AI-enabled devices can reassure a security-conscious population, as personal data privacy remains a significant concern particularly among older generations and women.

To bolster security, people are increasingly taking active measures such as using two-step authentications, strong passwords, and regularly updating software. Yet, there is a noticeable gap in knowledge and

confidence, especially among older consumers and women. Looking ahead, there is a need for greater education on specific tools like VPNs, ad-blockers, and personal identifiers to help safeguard against threats and protect personal data effectively.

As AI continues to transform workplaces, education and society at large, establishing a strong foundation of understanding and harnessing AI is crucial to alleviating concerns, particularly around data security and ethical use. Initiatives such as the AI Verify Foundation, which Telenor Asia is part of, are important to building such a foundation. Tapping into the collective wisdom of the global opensource community will be critical to develop the tools and frameworks that can ensure ethical AI and trustworthiness in this technology.

By prioritising education, awareness, and holding high standards around what we consider responsible technology, we can create a more secure digital landscape that empowers all Singaporeans to live confidently in the digital age.



 telenor asia | **GW.**