BAMBOO BUILDERS

STRENGTHENING SCAM READINESS IN SINGAPORE

Insights into Vulnerabilities, Threats and Pathways to Greater Protection
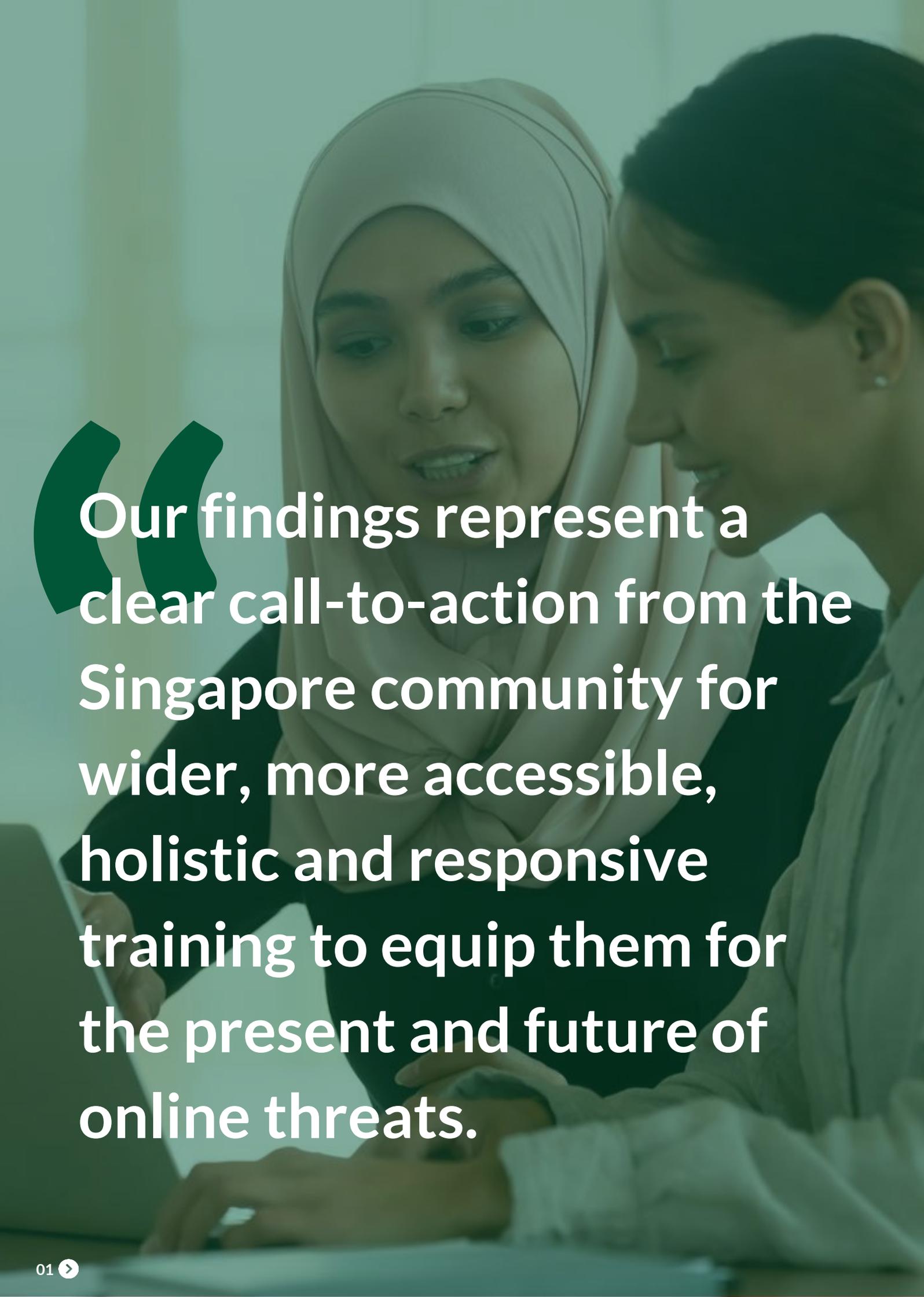
"**Our findings represent a clear call-to-action from the Singapore community for wider, more accessible, holistic and responsive training to equip them for the present and future of online threats.**

Contents

Report Partnership

Supported by Google.org, Bamboo Builders launched SG ScamWISE, a national campaign to strengthen the resilience of 100,000 end beneficiaries in Singapore against scams. Bamboo Builders has thus sponsored Tech for Good Institute to develop the report 'Strengthening Scam Readiness in Singapore: Insights into Vulnerabilities, Threats, and Pathways to Greater Protection'.

This report explores Singapore's current scam readiness and highlights key opportunities for collaboration, partnership, and education. It aims to inform stakeholders and support a whole-of-society approach to strengthening scam prevention, ensuring that our digital future remains secure and robust.

Bamboo Builders is a Singapore-based social enterprise working to #BuildChangeBetter. They close gaps in traditional education by empowering people with real-world skills to tackle real-world problems for a more confident future.

Find out more: **bamboobuilders.org**

Google.org applies Google's innovation, research, and resources to promote progress and expand opportunity for everyone.

Find out more: **https://www.google.org/**

The **Tech For Good Institute** is a non-profit organisation working to advance the promise of technology and the digital economy for inclusive, equitable and sustainable growth in Southeast Asia. The Institute serves as a platform for research, conversations and collaborations focused on Southeast Asia while staying connected to the rest of the world. Our work is centred on issues at the intersection of technology, society and the economy, and is intrinsically linked to the region's development. The Institute was founded by Grab, to advance the vision of a thriving, innovative Southeast Asia for all.

Find out more: **techforgoodinstitute.org**

Foreword
EMPOWERING SINGAPORE AGAINST SCAMS

In today's digital age, scams have become a pervasive threat, evolving in scale and sophistication. Singapore, despite its reputation for safety and security, has emerged as a prime target for bad actors. The increasing size and complexity of scams call for urgent collective action to bolster our society's resilience.

At Bamboo Builders, we have empowered tens of thousands of leaders to tackle societal challenges through innovative solutions in Singapore and ASEAN. This study represents our commitment to tackling societal challenges of the digital era by fostering awareness and preparedness against scams.

Our research aims to assess Singaporeans' scam awareness and identify critical gaps in preparedness across all age groups. The findings delve into areas of vulnerability, examine the growing influence of AI in the evolution of scams and provide actionable recommendations to strengthen scam resilience.

As we face increasingly sophisticated threats, a whole-of-society approach is essential. Through this report, we hope to inspire collaborative efforts to Build Change Better, ensuring a safer digital future for all.

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STUDY METHODOLOGY

To achieve a deep understanding of a cross-section of children, teenagers, adults and the elderly in Singapore, the study employed the following methodology:

Sample Profile

General population, from 10 to 74 years old Singaporeans and Permanent Residents

Research Methodology

Hybrid Online and Face-to-Face Interviews
(Random Street Intercepts)

Total Sample: n=1000

Online Surveys: 800
18 - 74 years old: 800
Face-to Face Interviews: 200
10 - 12 years old: 75
13 - 17 years old: 125

Gender Breakdown

Male: 502
Female: 498

Survey Period

2 September - 16 September 2024

EXECUTIVE SUMMARY

Scams are a growing concern in Singapore, with nearly half of the respondents surveyed being personally affected or knowing someone who has been. While confidence in scam detection is high, significant gaps in actual detection skills persist, leaving many vulnerable. Young people and parents face distinct challenges, particularly as AI-driven scams emerge as a significant new threat. Scam readiness must continually adapt and evolve to address these emerging risks effectively.

The Scope of the Problem

Scams Widespread Across Society

- 1 in 3 Singaporeans surveyed have been victims of scams, rising to 49% among those aged 18–34.
- Concern is near-universal, with 97% worried about scams.

Confidence vs Competence

Mind the Confidence-to-Skills Gap

- 84% of the respondents overestimate their scam detection abilities.
- Only 2 in 5 Singaporeans can correctly identify phishing emails.

Beware the Overconfidence of Youth

- 98% of teens surveyed are confident in their scam detection skills, but their limited exposure to scams makes them highly vulnerable as they encounter new online threats.

Emerging Challenges

Keeping Pace with Growing Sophistication of Scams

- Only 5% of Singaporeans surveyed are highly confident in detecting AI-generated fraud.
- Elderly population (55+) feel least prepared, underlining the need for targeted education.

Youth Awareness Not Matched by Preparedness

- While 96% of children surveyed receive scam education in schools, their detection rates remain low at 35%, which signifies the need to also continually evolve our scam readiness efforts.
- 86% of children online feel more confident spotting AI-generated fakes than traditional scams. There is a need to ensure that this confidence must translate into effective detection skills.

Response Preparedness

Glaring Lack of Scam Response Preparedness

- Only 2 in 3 respondents know how to respond to scams appropriately.
- Parents especially lack clear plans for addressing scams involving children.

Community as a Double-Edged Sword

Family and Friends as Trusted Sources

- Family and friends are the most trusted sources of scam information, ahead of government sources.
- While community linkages are critical, over-reliance could delay assistance from government authorities like the police or banks, which should remain a key part of a holistic scam response plan.

Opportunities for Improvement

Most Singaporeans Are Eager and Ready for Training

- 80% of Singaporeans surveyed are eager to attend anti-scam training.
- Short courses are preferred across all age groups, signaling an opportunity for scalable education initiatives.

KEY INSIGHTS AND ANALYSIS

Key Insight #1

# Scams affect everyone, with working-age adults being the most vulnerable.

Almost one-in-three (30%) adult Singaporean respondents have personally been a victim of a scam and nearly half know a victim of a scam personally.

The most victimised age group is not the elderly, as commonly believed, but adults aged between 18 and 34 years old. For this age group, half have been scammed themselves and two in three know a scam victim personally.

While the scam awareness and sophistication of young adults are high, they also tend to be the age group most connected to the internet and exposed to threats through multiple channels, including messaging apps, e-commerce apps, and personal and work emails, among others. This ubiquitous digital access, combined with the fact that many Singaporeans in this age have disposable income and make frequent digital payments, makes them a ripe target for scammers.

This vulnerability highlights how nobody can be complacent about their scam preparedness, regardless of age.

Been a Victim of a Scam

- Yes
- No

30%

70%
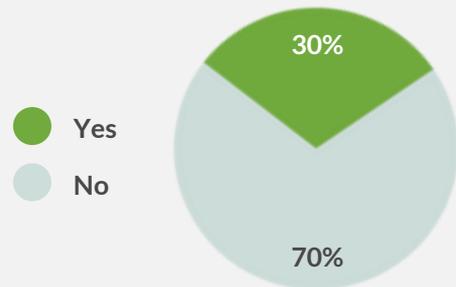
Age Breakdown of Scam Victims

	13-17 y.o	18-34 y.o	35-54 y.o	55 y.o. & above
Yes	4%	49%	33%	28%
No	96%	51%	67%	72%

Know a Scam Victim

- Yes
- No

47%

53%
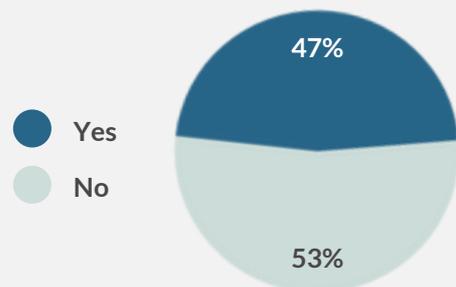
Age Breakdown of Those Who Know a Scam Victim

	13-17 y.o	18-34 y.o	35-54 y.o	55 y.o. & above
Yes	24%	64%	52%	44%
No	76%	36%	48%	56%

(13-74 yos; n=925)

Key Insight #2

There is an evident gap between scam detection confidence and actual scam detection skills.

Nearly all survey respondents expressed concern about scams (97%). Additionally, respondents noted that they are confident in their ability to detect a scam when they see one: 84% of Singaporeans surveyed back their scam detection skills.

However, this sense of security is not well-founded. Our study included a series of scam identification tests. Only two in five were able to successfully identify phishing emails, despite the mock-up containing many tell-tale signs of a scam.

The results were similarly poor for app scams (cryptocurrency) and message scams (job offers), with half of the respondents failing these identification tests—matching the proportion who failed to correctly identify the legitimate email in the series. Scam emails (e.g., "Nigerian Prince") and phishing SMSs showed slightly better results, yet at least one in three respondents still failed these tests.

The gap between perceived and actual abilities in scam detection is significant, highlighting a vulnerability that scammers can exploit by preying on complacency. As scam tactics continually evolve and grow in sophistication, providing relevant, up-to-date, and ongoing education will be essential in aligning actual detection skills with the high levels of confidence reported by individuals.

How confident are you in your ability to detect a scam?

84%

Confident

Not Confident

16%
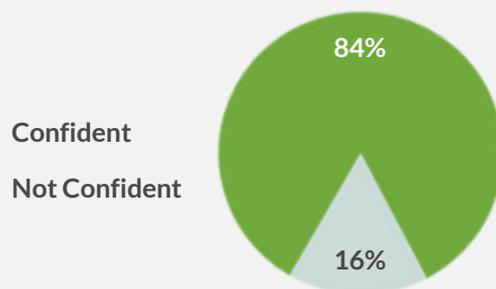
Success Rate of Scam Detection Tests

70%
Scam SMS (Phishing)

65%
Scam Email (Nigerian Prince Scam)

52%
Scam Apps
(Crypto Investment Scam)

49%
Scam Messages
(Job Scam)

46%
Legitimate Email

43%
Phishing Email

(13-74 yos; n=925)

There is a need to keep pace with the growing sophistication of scams.

The rapid development of emerging technologies, including artificial intelligence (AI), has sparked concerns about the potential misuse of its capabilities, such as creating deepfake videos. While confidence in detecting general scams is often overstated, as highlighted in Insight #2, this confidence does not extend to AI-generated content.

Only about 43% of respondents feel confident in identifying fake AI-generated material, while 5% express no confidence at all. Confidence also declines with age, with teenagers being the most optimistic, whereas fewer than one in three individuals over the age of 55 believe they could recognise illegitimate AI-created content.

How confident are you in your ability to detect fake or doctored videos/ messages/images etc generated with AI?
(13-74 yos; n=925)

Legend: ● Confident ● Neutral ● Not confident

	Overall	13-17 y.o.	18-34 y.o.	35-54 y.o.	55 y.o. & above
Confident	43%	78%	49%	42%	30%
Neutral	52%	22%	45%	54%	64%
Not confident	5%	1%	6%	4%	8%
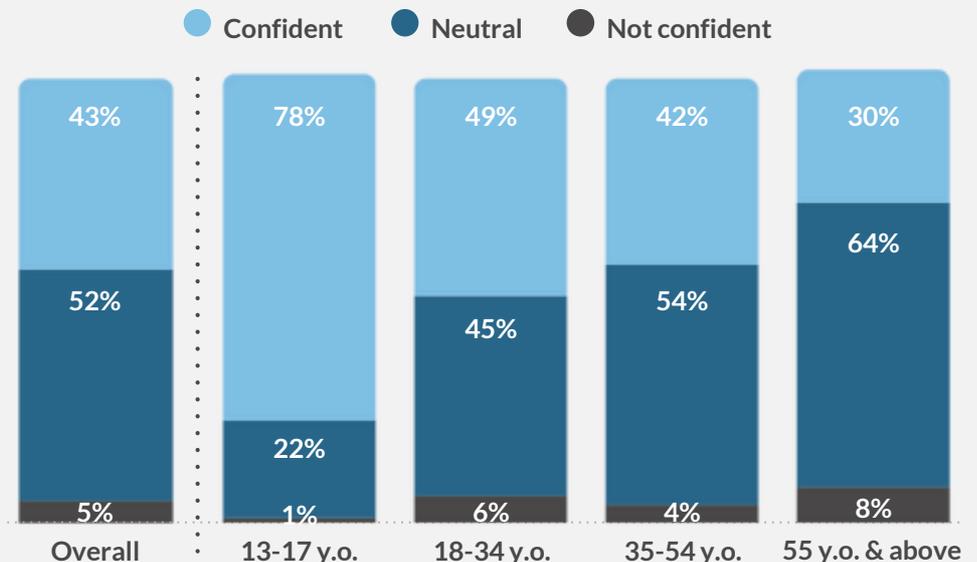
AI is advancing rapidly, providing scammers with increasingly sophisticated tools. The lack of confidence expressed by many reflects a self-awareness of the need to improve their skills in detecting AI-generated fakes. Targeted training and education programmes will be crucial in equipping individuals to combat the risks posed by AI-powered scams, with a particular focus on supporting the senior age group, who are more vulnerable to such threats.

Key Insight #4

Teenage self-assurance against scams could lead to overconfidence.

Only a small percentage of Singaporean teenagers surveyed (4%) have fallen victim to a scam. As most are not yet of working age and have limited financial resources—if they have bank accounts at all—it is understandable that scammers tend to target other demographics.

This low exposure to scams may contribute to the overwhelming self-assurance observed among youth: 98% of teenage respondents expressed confidence in their scam detection abilities, and 78% felt confident in identifying AI fakes. These are by far the highest rates among all age groups in the study. However, as revealed by the scam detection tests, teenagers were not discernibly better than their older counterparts at identifying scams, highlighting a significant gap between their confidence and actual ability.

The combination of youth overconfidence and limited exposure to scams leaves them particularly vulnerable as they transition into adulthood. As they begin to secure jobs, open personal and work email accounts, earn money, and join the digital banking ecosystem, they will inevitably face a growing array of unfamiliar online threats.

4%
The proportion of 13 to 17 year-olds in the study who have been victims of an online scam.

98%
Percentage of teenage respondents who feel confident they can correctly identify an online scam.

78%
Almost four-in-five teenage respondents are confident in their ability to detect fake or doctored AI scams.

(13-17 yos; n=125)

There is a lack of scam response preparedness across age groups.

In the unfortunate event that you become a victim of a scam, do you know what to do?

Legend: ━━ Yes ━━ No

	Overall (n=925)	13-17 y.o. (n=125)	18-34 y.o. (n=168)	35-54 y.o. (n=232)	55 y.o. & above (n=400)	Male (n=466)	Female (n=459)	Know a scam victim or have been scammed (n=502)	Do not know a scam victim or have not been scammed (n=717)	Confident in detecting scams (n=778)	Not confident in detecting scams (n=147)
Yes	66%	62%	74%	66%	64%	68%	64%	75%	61%	70%	46%
No	34%	38%	26%	34%	36%	32%	36%	25%	39%	30%	54%
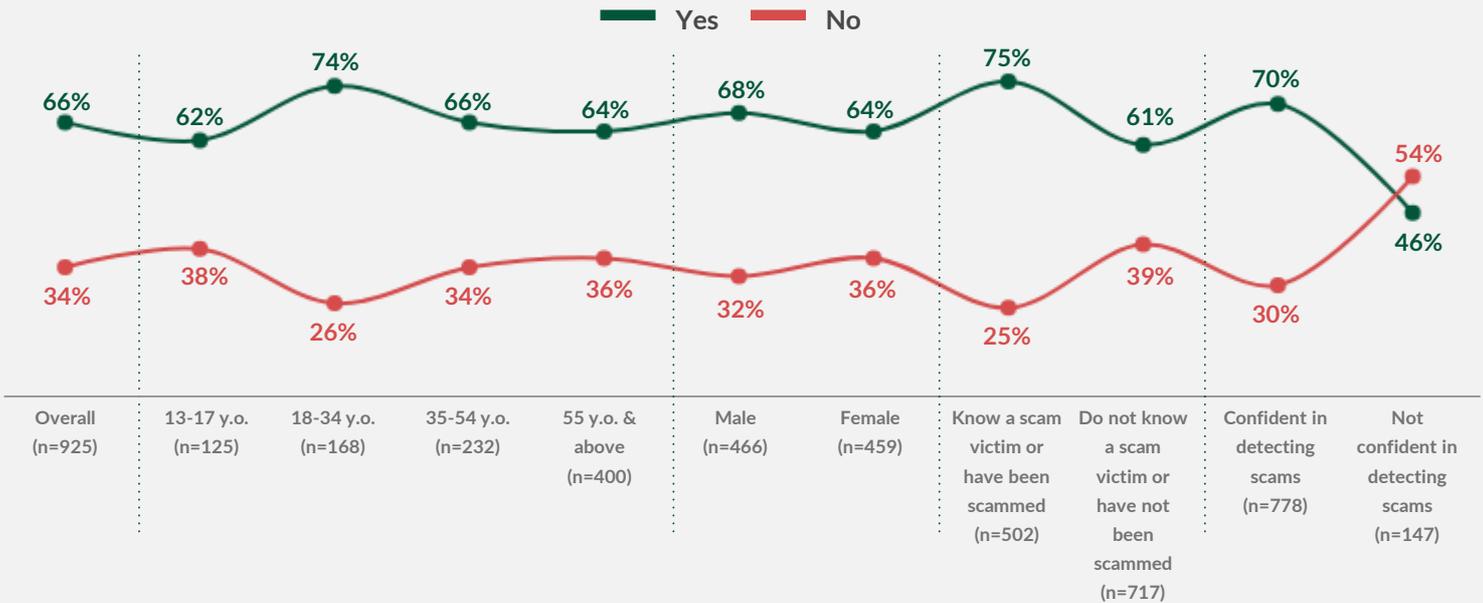
Given the high incidence of scams in Singapore, it is essential to have an effective and comprehensive scam response plan that can be swiftly implemented in emergencies. Unfortunately, our study highlights concerning gaps in scam preparedness.

Only two in three respondents believe they know how to respond to a scam, with confidence lowest among those who have not experienced one firsthand. Upon examining the actions included in their response plans, half of the respondents (52%) overlook critical steps, such as recovering access to compromised accounts. Moreover, nearly two in five (38%) would take potentially dangerous actions.

It is clear that enhancing scam response preparedness in Singapore is an urgent and essential priority.

84% of 10 to 12-year-old respondents say they have a scam response plan!

If you become a victim of a scam, what steps will you take?	Overall
I will contact my bank/financial institution and freeze my accounts/credit cards	83%
I will make a police report	83%
I will inform my friends/family members to alert them not to believe those who call pretending to be me	61%
I will immediately try and recover access to my personal accounts	48%
I will share the link or phone number that the scammers provided to help others avoid them. *(Incorrect action)*	38%

Key Insight #6

Scam readiness efforts in schools need to evolve.

The education system has clearly taken proactive steps to introduce scam education to Singaporeans from an early age, contributing to the remarkable 95% awareness of online scams among the 10 to 12-year-old children in our study. Nearly all children in this age group (96%) reported receiving scam education in school, with an impressive 88% expressing satisfaction with the quality of this education. These results are a mark of progress in building scam awareness from a young age.

However, the efficacy, extent and relevance of the existing scam education curriculum may need review when we consider the low scam detection skills of children. Furthermore, early intervention and ongoing education will be needed more than ever to strengthen their scam resilience as they grow older.

One thing is clear: today's children are poised to lead highly digital lives. Currently, 85% of children aged 10 to 12 report frequent online activity, with 78% using social media. Despite age restrictions, underage children are actively on platforms such as Instagram, WhatsApp, and TikTok, highlighting their ability to navigate online spaces even when parents attempt to limit access. This early and unsupervised online presence increases their vulnerability to scams.

Note: The data discussed on this page relates only to the 10 to 12-year-old respondents in the study (n=75)

86%
of 10 to 12-year-olds are frequently online.

95%
of 10 to 12-year-olds are aware of scams.

96%
have received some form of scam education in school.

Only
36%
could recognise a scam email.
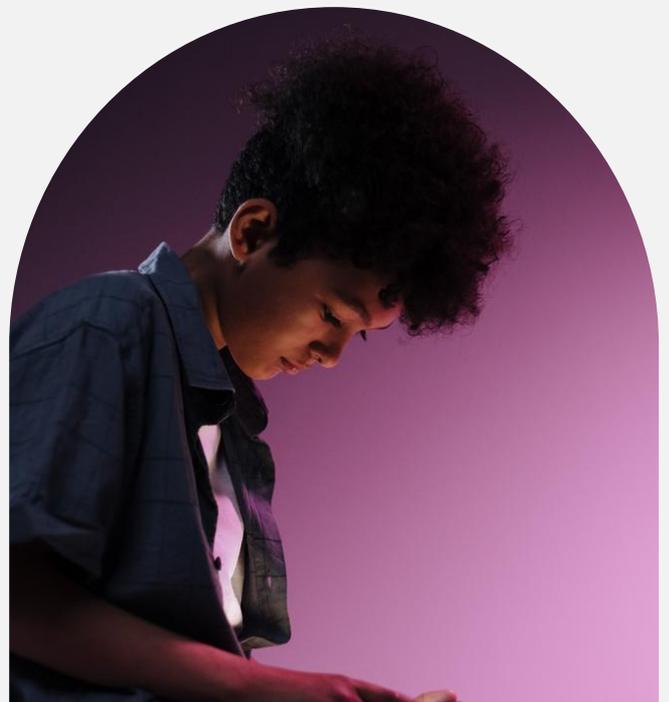
Family and friends are the most trusted providers of scam information and support.

Primary Sources of Information on Scams

	Overall	13-17 y.o.	18-34 y.o.	35-54 y.o.	55 y.o. & above
Family/Friends	**46%**	**41%**	**44%**	**40%**	**52%**
Government websites/apps/resources	**45%**	**60%**	**48%**	**41%**	**44%**
Social Media	**37%**	**47%**	**47%**	**44%**	**25%**
Advertisements on TV, radio, newspaper, etc	**32%**	**20%**	**23%**	**35%**	**39%**
Online Search Engines	**32%**	**32%**	**37%**	**36%**	**26%**

Family and friends play a crucial role in enhancing scam readiness in Singapore, with 46% of respondents citing them as their primary source of scam information—ahead of government sources (45%) and social media (37%). The trust placed in these close-knit networks underscores their value as a first line of defence against scams but also reveals a potential vulnerability if these sources are poorly informed. To strengthen this defence, advice from trusted individuals should be supplemented with regular reference to dedicated government resources on scam tactics and prevention.

This reliance on close social networks extends beyond awareness to response. We found that 61% of respondents plan to turn to family and friends for support after encountering a scam, making it the third most frequent action taken (after contacting the bank and police; see Insight #5). However, among the 13-17 cohort, this figure drops significantly to 48%. This suggests a potential gap in how younger individuals seek help.

Engaging trusted networks is clearly vital in enhancing scam resilience. Moving forward, it will be essential to raise awareness and improve scam knowledge across these networks to prevent gaps and misinformation.

Additionally, fostering an environment where younger Singaporeans feel encouraged to seek advice from family and peers will further strengthen collective scam preparedness.

Key Insight #8

Majority of respondents are eager and ready for further scam readiness training.

Our study highlights that scam awareness, detection, and response planning need to evolve. As scam cases continue to rise and AI-driven threats make scams even more sophisticated, enhancing scam resilience has become an urgent priority.

On a positive note, there is widespread recognition among respondents of the need for greater scam awareness, with 81% willing to attend anti-scam training. Young adults and parents are the most enthusiastic groups, with 84% expressing interest. While schools and government agencies are already making commendable efforts in scam education, these findings highlight a clear demand for broader, more accessible and comprehensive scam readiness programmes to prepare the community for current and emerging online threats. Parents, in particular, are a critical group to train, as they bear the responsibility of safeguarding not only themselves but also their children.

Looking ahead, tailored training programmes from trusted partners in the community will be vital in bolstering society's digital defence posture and safeguarding individuals against scams. Notably, respondents expressed a preference for shorter, more focused sessions, highlighting the need for concise and accessible scam readiness training.

Scam Training Willingness

81%

● Willing

○ Unwilling

19%
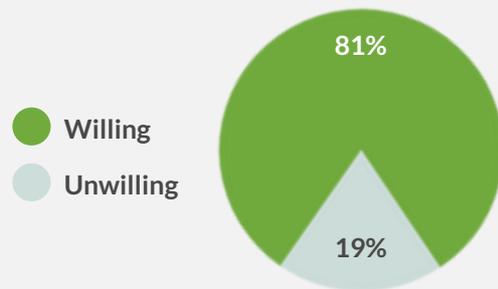
Preferred Duration of Scam Training

	Overall	13-17 y.o.	18-34 y.o.	35-54 y.o.	55 y.o. & above
Less than 5 hours	61%	77%	52%	62%	58%
1 day course (5-10 hours)	26%	12%	29%	25%	31%
2 day course	8%	7%	8%	8%	7%
5-10 hours Quarterly Courses	3%	1%	8%	3%	3%
5-10 hours Yearly Courses	2%	3%	4%	2%	1%

Recommendations for a Digitally Resilient Singapore

01 Bridge the Confidence-to-Skills Gap with Practical Training

Mandatory scam detection workshops could be implemented in schools, workplaces and community centres, leveraging real-world examples. These programmes could be integrated into the national curriculum from primary to tertiary education, using age-appropriate, interactive tools to foster continuous scam awareness. These trainings should also be updated continuously to account to evolving threats such as AI-generated scams.

02 Strengthen Readiness with Clear Toolkits and Response Plans

Equipping Singaporeans with "Scam Readiness Toolkits" and a national "Scam Response Plan" ensure they can detect and respond to scams effectively. These resources should include actionable steps, such as securing accounts and contacting authorities, supported by workshops and outreach programmes. These toolkits and response plans should remain accessible to all members of the society.

03 Empowering Communities to Support the Vulnerable

Special attention should focus on empowering parents and community leaders to support vulnerable groups, such as children and the elderly. This includes training to recognise risks, respond effectively, and foster safe environments. Empowered leaders can advocate for vulnerable groups and ensure they are protected and well-supported when faced with online scams.

04 Foster a Whole-of-Society Approach for Resilience

Scam resilience requires collaboration among governments, businesses, academia, and civil society, each contributing their unique expertise. Governments can provide regulatory frameworks, while business can share on enhancing protection and detection, Meanwhile, academia and community groups can integrate scam awareness into education and community engagements. Adopting a whole-of-society approach in combating scams strengthens readiness and resilience for all.

Conclusion

Staying Ahead of the Threat: Building a Safer Digital Future

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This study highlights the widespread and evolving threat of scams in Singapore, revealing critical gaps in detection skills, overconfidence among younger individuals, and a lack of prepared response plans across all age groups. While many Singaporeans are concerned and eager to enhance their scam readiness, low confidence in identifying AI-driven scams highlights pressing areas for improvement.

To address these challenges, stakeholders should prioritise implementing accessible, targeted training programmes tailored for all segments of society. Emphasising shorter, more frequent sessions can help strengthen scam detection and response capabilities. Special attention should be given to empowering parents and community leaders, enabling them to better support vulnerable groups, such as children and the elderly.

While we hope our study contributes meaningfully to the discourse on strengthening scam readiness in Singapore, we acknowledge certain limitations and propose future areas of research.

- This study relied on self-reported data, which may have resulted in an overestimation of respondents' abilities and knowledge, as past scam experiences might not have been accurately recognised or reported. Future research employing observational or experimental methods could offer more precise insights.

- While our robust sample spanned generations, further exploration of children's perspectives would provide valuable depth.

- A more detailed analysis of Singaporeans' preferences for scam readiness training—specifically the tools and methods they find most effective—would greatly benefit course designers and practitioners.

A unified and collaborative effort will be essential to building a scam-resilient society, empowering Singaporeans with the necessary skills and awareness to navigate the digital age safely.
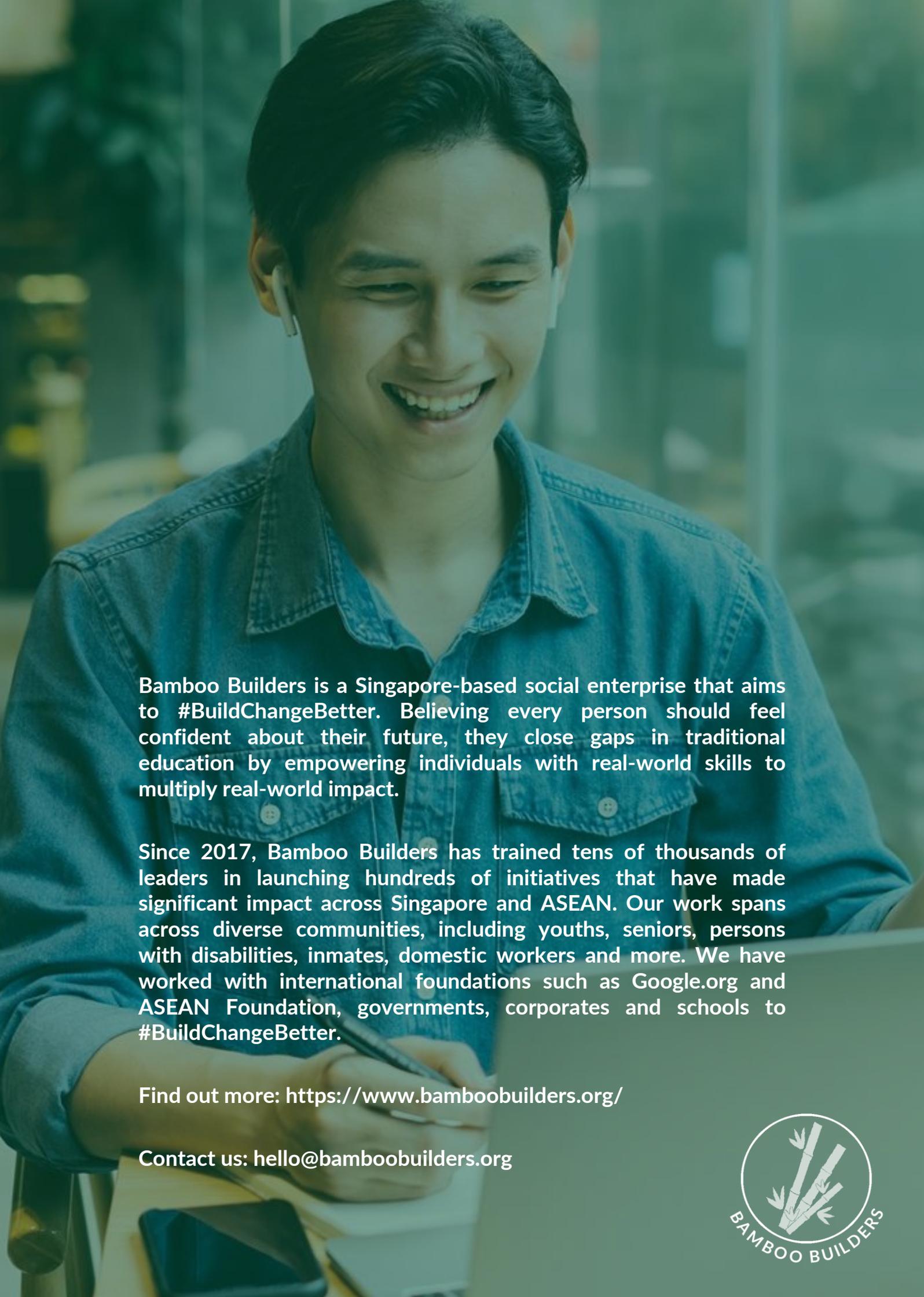
Bamboo Builders is a Singapore-based social enterprise that aims to #BuildChangeBetter. Believing every person should feel confident about their future, they close gaps in traditional education by empowering individuals with real-world skills to multiply real-world impact.

Since 2017, Bamboo Builders has trained tens of thousands of leaders in launching hundreds of initiatives that have made significant impact across Singapore and ASEAN. Our work spans across diverse communities, including youths, seniors, persons with disabilities, inmates, domestic workers and more. We have worked with international foundations such as Google.org and ASEAN Foundation, governments, corporates and schools to #BuildChangeBetter.

Find out more: https://www.bamboobuilders.org/

Contact us: hello@bamboobuilders.org

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