Cybersecurity Certification Centre
CYBER SECURITY AGENCY OF SINGAPORE

CSA SINGAPORE

Cybersecurity Certification/Labelling Schemes

Presented by: Henry Tan,
Deputy Director
Cybersecurity Engineering Centre
Cyber Security Agency of Singapore

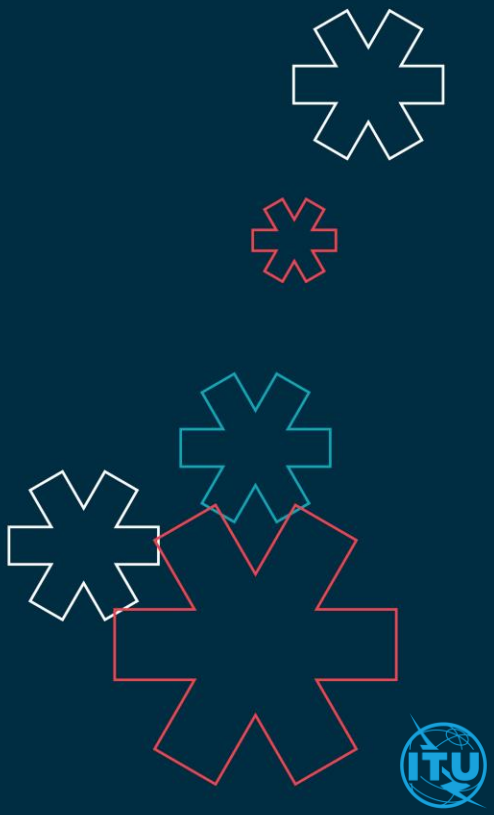
23 May 2023, Geneva

Cybersecurity Certification Centre
CYBER SECURITY AGENCY OF SINGAPORE

CSA SINGAPORE

Content

- About Cybersecurity Certification Centre (CCC)
- Cybersecurity Labelling Scheme (CLS)
- National Integrated Centre for Evaluation (NiCE)



Cybersecurity Certification Centre

CYBER SECURITY AGENCY OF SINGAPORE

Focus on Evaluation, Certification and Labelling of cybersecurity devices & products

Singapore Common Criteria Scheme

The certification of Commercial ICT products targeting international marketplace

Cybersecurity Labelling Scheme

The labelling of network-connected consumer smart devices

National IT Evaluation Scheme

The evaluation and certification of ICT products for Singapore government agencies

CLS READY

A complementary scheme to CLS for CLS products to leverage on security functionalities by CLS-Ready certified platforms

Cybersecurity Certification Centre

CYBER SECURITY AGENCY OF SINGAPORE

Focus on Evaluation, Certification and Labelling of cybersecurity devices & products

---

Cybersecurity Labelling Scheme for Medical Devices

BY CYBER SECURITY AGENCY OF SINGAPORE

Cybersecurity Certification Centre
CYBER SECURITY AGENCY OF SINGAPORE

CSA SINGAPORE

Cybersecurity Labelling Scheme

BY CYBER SECURITY AGENCY OF SINGAPORE

Cybersecurity Certification Centre
CYBER SECURITY AGENCY OF SINGAPORE

CSA SINGAPORE

PRINCIPLES, GOVERNANCE AND LEGISLATION

- Cybersecurity and Privacy by Design
- IoT Security Standards and Guidelines
- Evaluation and Certification
- Future-Proof Legislation

ECOSYSTEM DEVELOPMENT

- Responsible Industry Ecosystem
- Supply Chain Security
- Product Lifecycle Support

TECHNICAL REFERENCES AND STANDARDS

- Device Identity and Root of Trust
- Secure OS, Cloud and Applications
- Secure Communications and Infrastructure
- Security Monitoring and Analytics

Figure 6: *IoT Security Problem Spaces and Challenges*

Cybersecurity Certification Centre
CYBER SECURITY AGENCY OF SINGAPORE

CSA SINGAPORE

CONSUMERS

Making cybersecurity provisions transparent to consumers and enabling them to differentiate against poorly secured devices

Singapore Consumer Survey on IoT Security

82%
Cybersecurity label as part of consideration when purchasing smart devices

87%
Important to have a labelling scheme for smart devices

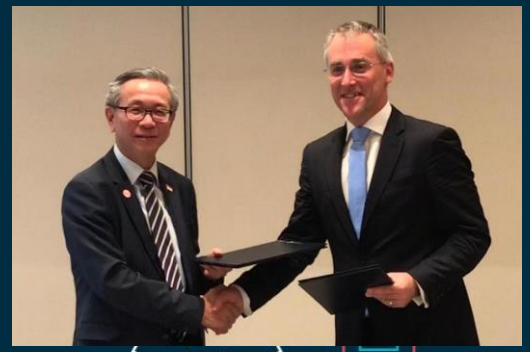
75%
CLS is a step in the right direction towards a more cybersecure society

DEVELOPERS

Help manufacturers to differentiate themselves in the market and thus, incentivise manufacturers to produce more secure devices

ECONOMY

To grow the economy, working with International Partners for mutual recognition to reduce duplicated testing and improve market access



- **Reduce attack surface, enhance security**
- **Safer & more secure cyberspace**

Cybersecurity Certification Centre
CYBER SECURITY AGENCY OF SINGAPORE

CSA SINGAPORE

*	**	***	****

Level 1
Meet baseline security requirements

Level 2
Adherence to International Standards

Level 3
Adherence to the Principles of Security-by-Design, Absence of known common software vulnerabilities

Level 4
Resistance against common cyber attacks

Penetration Testing

Lifecycle Requirements + Software Binary Analysis

Adherence to International Standards

Security Baseline Requirements

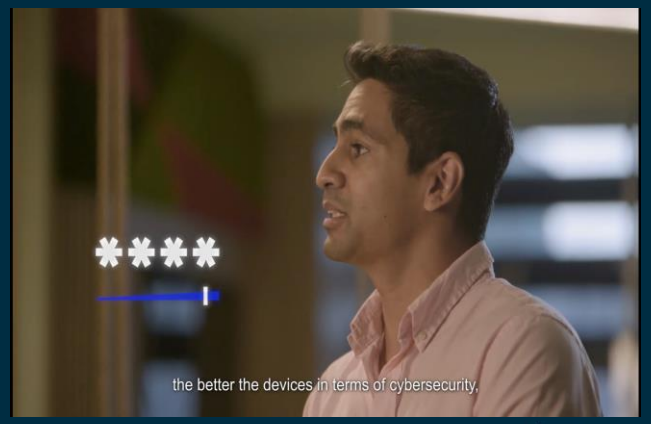
Validated Developer Declaration of Conformance

3rd Party Independent Testing

Cybersecurity Certification Centre
CYBER SECURITY AGENCY OF SINGAPORE

CSA SINGAPORE

- The CLS is a **voluntary scheme**, with the exception of Wi-Fi Routers (mandatory).
- The CLS covers all categories of IoT devices such as Wi-Fi Routers and Smart Home Hubs.

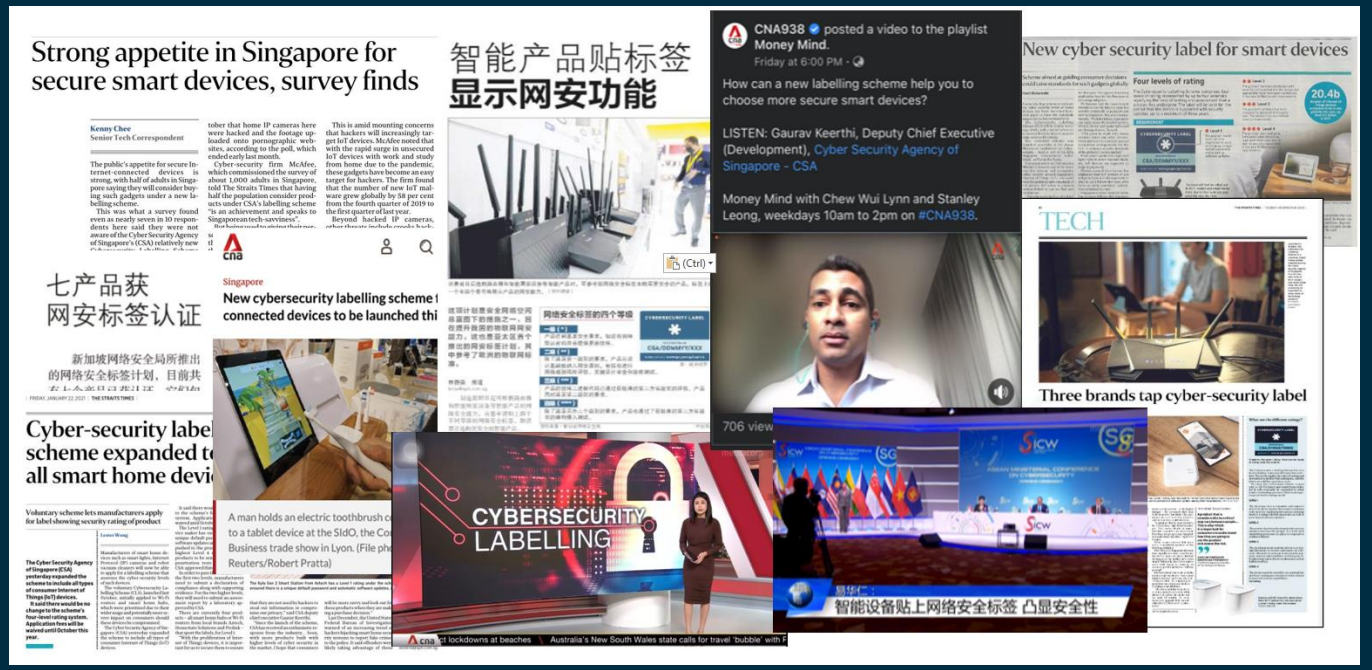


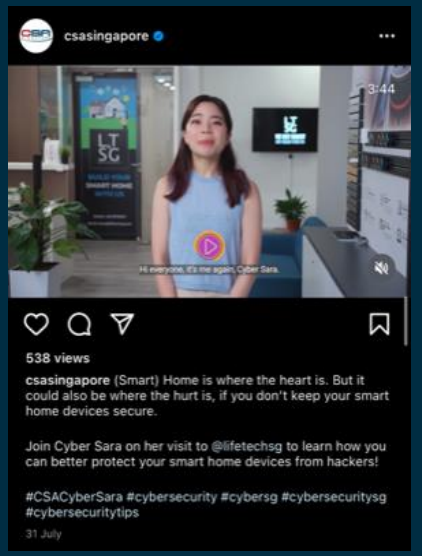
Just because a device has been awarded the Level 4 rating doesn't mean it is impervious to attacks. It just means that the device was designed with security concepts in mind and tested by third-party labs to be able to resist against common cyber-attacks.

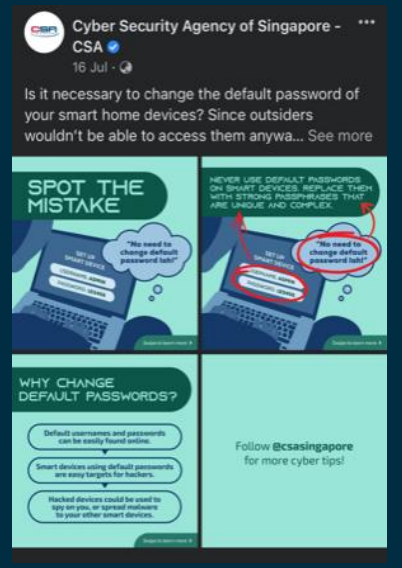
Cybersecurity Certification Centre
CYBER SECURITY AGENCY OF SINGAPORE

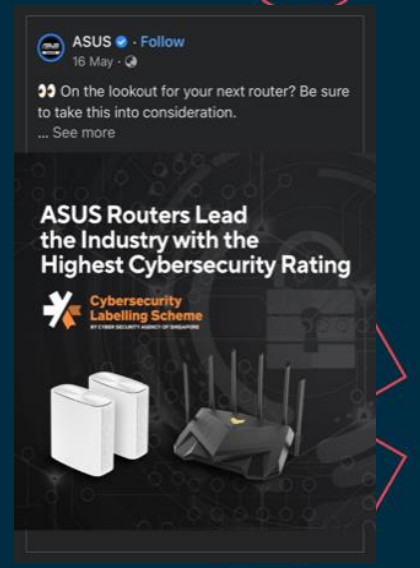
CSA SINGAPORE

Media, Roadshows, Social Media







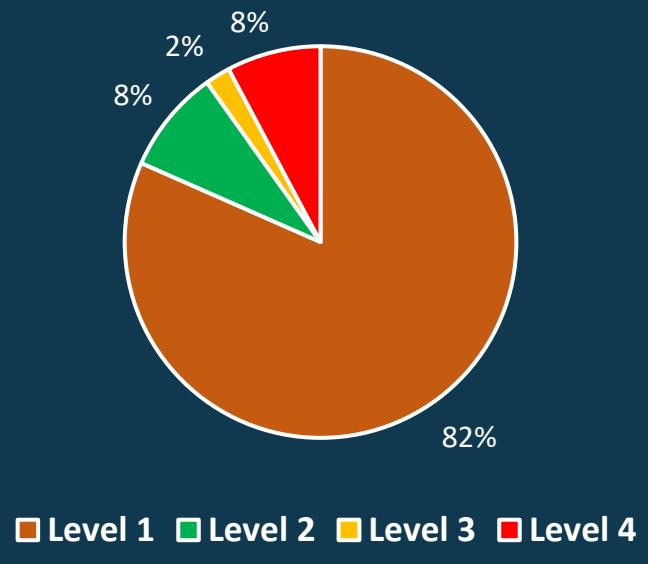


Cybersecurity Certification Centre
CYBER SECURITY AGENCY OF SINGAPORE

CSA SINGAPORE

Close to 300 labelled devices since launch in Oct 2020

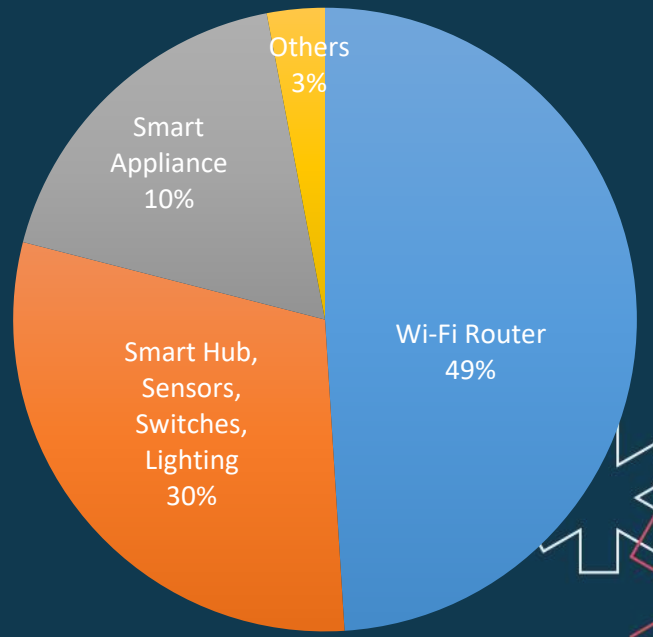
Applications for CLS by levels



Manufacturers seeking higher levels of security labelling

Current observation indicates increased interest to develop more secure products, with developers applying for higher levels **after** obtaining level 1.

Device Categories



Cybersecurity Certification Centre
CYBER SECURITY AGENCY OF SINGAPORE

CSA SINGAPORE

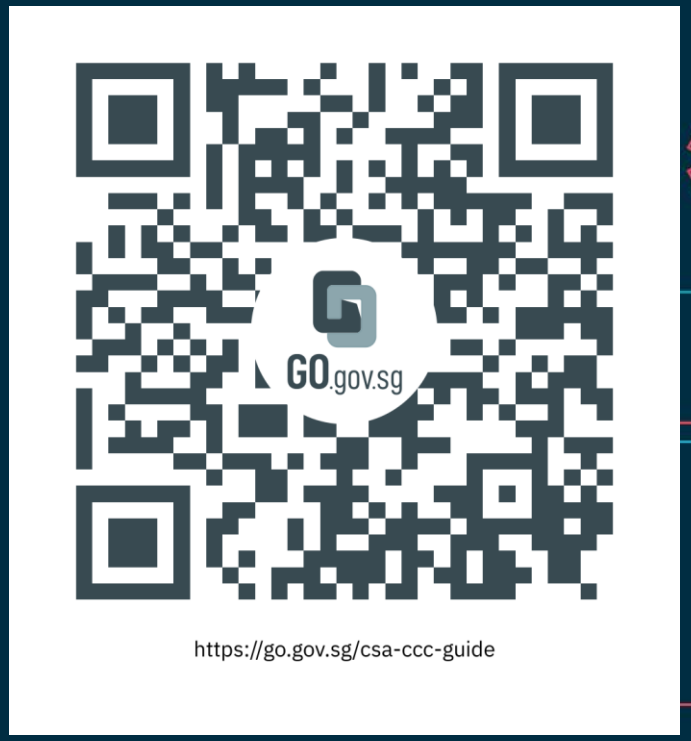
Mutual Recognition Arrangement

Consumer IoT Products that have met the requirements of Finland's Cybersecurity Label are recognized as Level 3 of CLS, and products with CLS Level 3 and above are recognised by Finland.

Smart consumer products issued with Germany's IT Security Label will be recognised to have fulfilled Level 2 CLS, and products with CLS Levels 2 and above will be recognised by Germany.

More Information

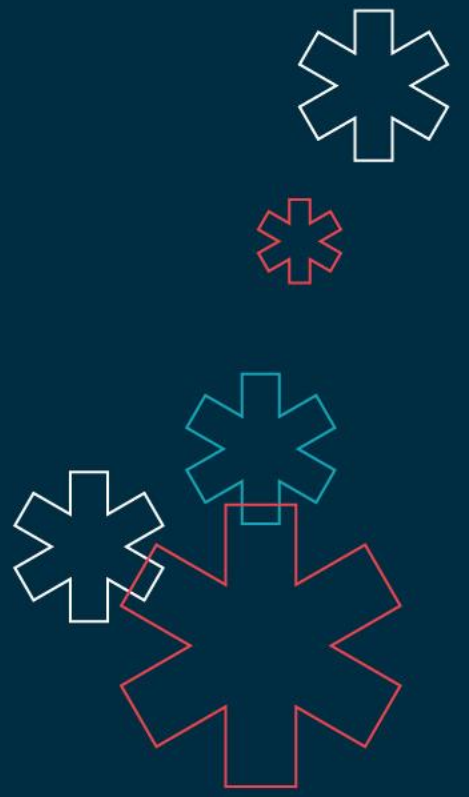
- Cybersecurity Certification Centre – https://www.go.gov.sg/csa-ccc
- Singapore Common Criteria Scheme – https://www.go.gov.sg/sccs-about
- Cybersecurity Labelling Scheme – https://www.go.gov.sg/csa-cls
- CLS Video - https://www.go.gov.sg/cls-video
- CLS-Ready: https://www.go.gov.sg/cls-ready
- CLS (MD): https://www.go.gov.sg/cls-md



Cybersecurity Certification Centre
CYBER SECURITY AGENCY OF SINGAPORE

CSA SINGAPORE

National Integrated Centre for Evaluation

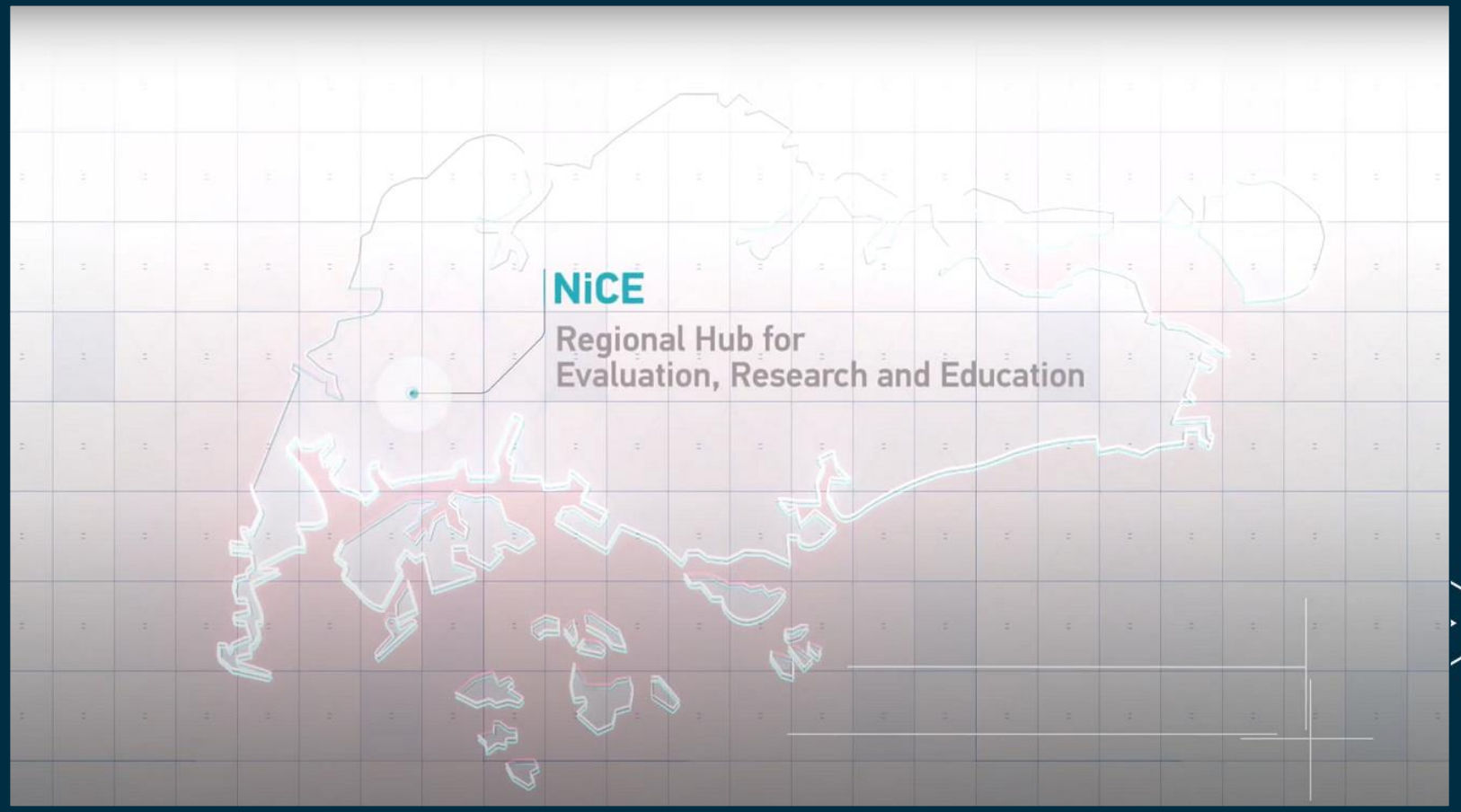


Cybersecurity Certification Centre
CYBER SECURITY AGENCY OF SINGAPORE

CSA SINGAPORE

NANYANG TECHNOLOGICAL UNIVERSITY SINGAPORE

Corporate Video for NiCE



https://www.youtube.com/watch?v=GnQGoJK94Pk

Cybersecurity Certification Centre
CYBER SECURITY AGENCY OF SINGAPORE

CSA SINGAPORE

NANYANG TECHNOLOGICAL UNIVERSITY SINGAPORE

Officially Launched on 18th May 2022

Cybersecurity Certification Centre
CYBER SECURITY AGENCY OF SINGAPORE

CSA SINGAPORE

NANYANG TECHNOLOGICAL UNIVERSITY SINGAPORE

NiCE: One-Stop Centre for

Evaluation

Seed a community of practice, Grow TIC (Cyber)

- Access to state-of-the-art equipment
- Provide expert guidance for equipment use and share knowledge with users
- Foster close Government-Academia-Industry partnership to grow TIC(cyber)

Research

Drive research to automate, and deepen evaluation through advanced security evaluation techniques

- Hardware security,
- Software security
- Cryptography implementation
- Mobility and Secure Communications evaluation

Education

Build pipeline of local product evaluation talent

- Conduct training for industry-ready competencies
- Enhance cybersecurity curriculum for tertiary students
- Meet demand for security evaluation professionals

Cybersecurity Certification Centre
CYBER SECURITY AGENCY OF SINGAPORE

CSA SINGAPORE

NANYANG TECHNOLOGICAL UNIVERSITY SINGAPORE

For More Information

Website: http://www.ntu.edu.sg/nice

Email: NiCE_enquiries@ntu.edu.sg

An initiative by | Cybersecurity Certification Centre
CYBER SECURITY AGENCY OF SINGAPORE

National Integrated Centre for Evaluation

Questions

Thank You!

For further enquiries, please contact certification@csa.gov.sg