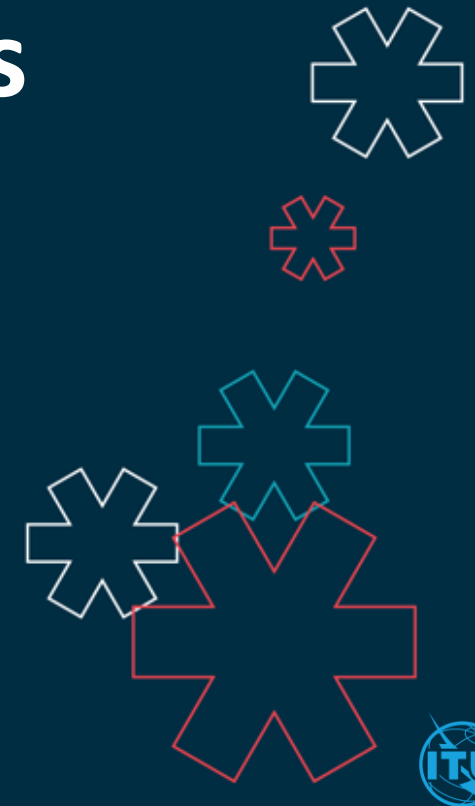


# Cybersecurity Certification/Labeling Schemes

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

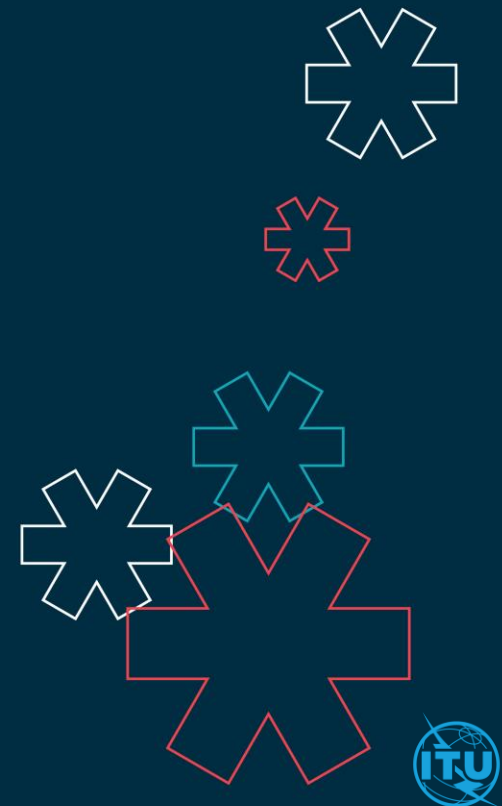
23 May 2023, Geneva



# Content

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- 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



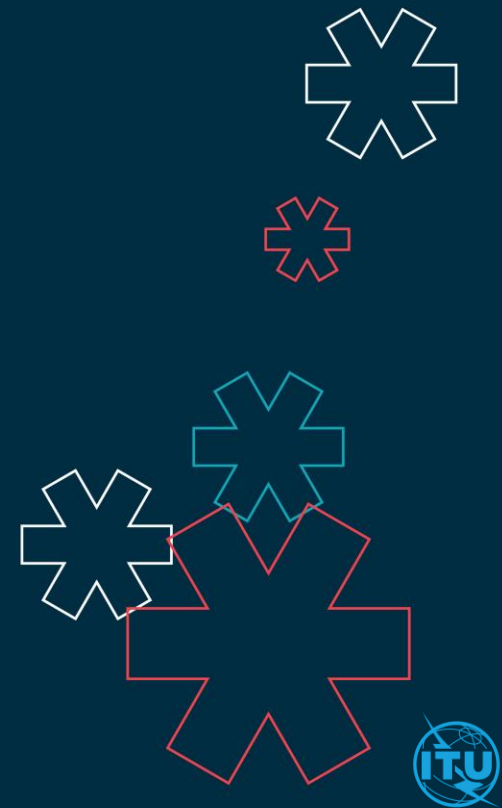
National  
IT Evaluation  
Scheme



The evaluation and certification of ICT products for Singapore government agencies



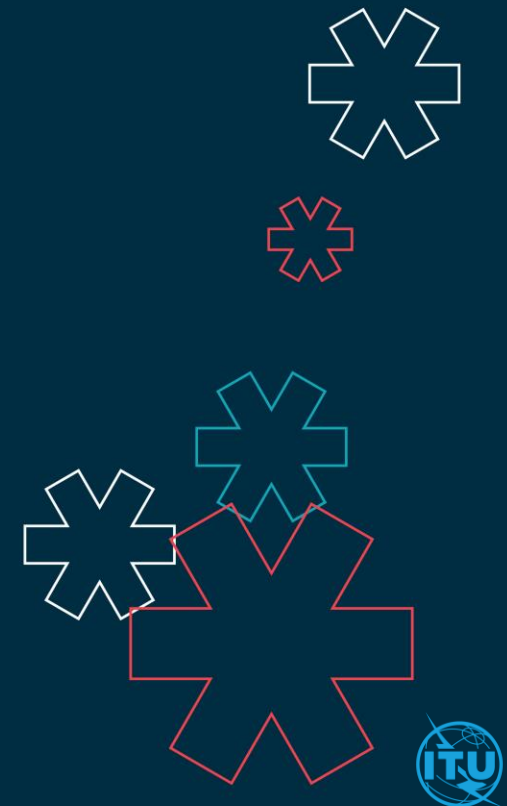
A complementary scheme to CLS for CLS products to leverage on security functionalities by CLS-Ready certified platforms





**Cybersecurity  
Certification Centre**  
CYBER SECURITY AGENCY OF SINGAPORE

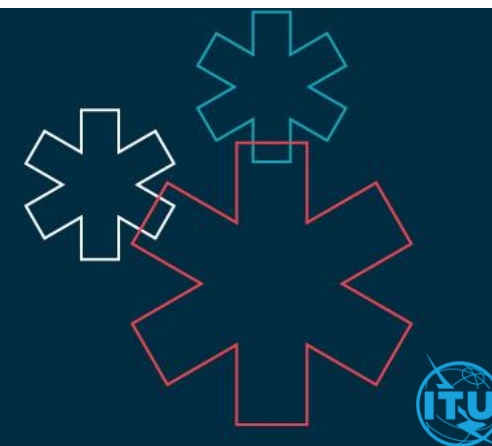
Focus on Evaluation, Certification and Labelling of cybersecurity devices & products





# Cybersecurity Labelling Scheme

BY CYBER SECURITY AGENCY OF SINGAPORE



# THE IoT SECURITY LANDSCAPE

ADOPTION AND HARMONISATION OF SECURITY SOLUTIONS FOR THE INTERNET OF THINGS


**TNO** innovation for life

Jointly commissioned by:  
 Cyber Security Agency of Singapore  
 Ministry of Economic Affairs and Climate Policy of the Netherlands

## 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

## CONSUMERS

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



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

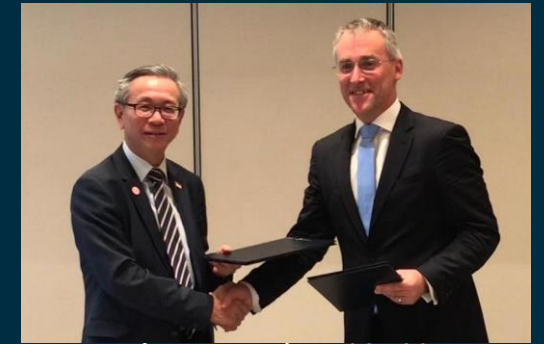
## DEVELOPERS

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

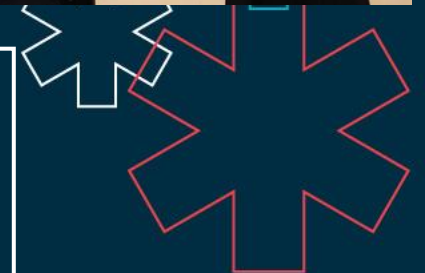


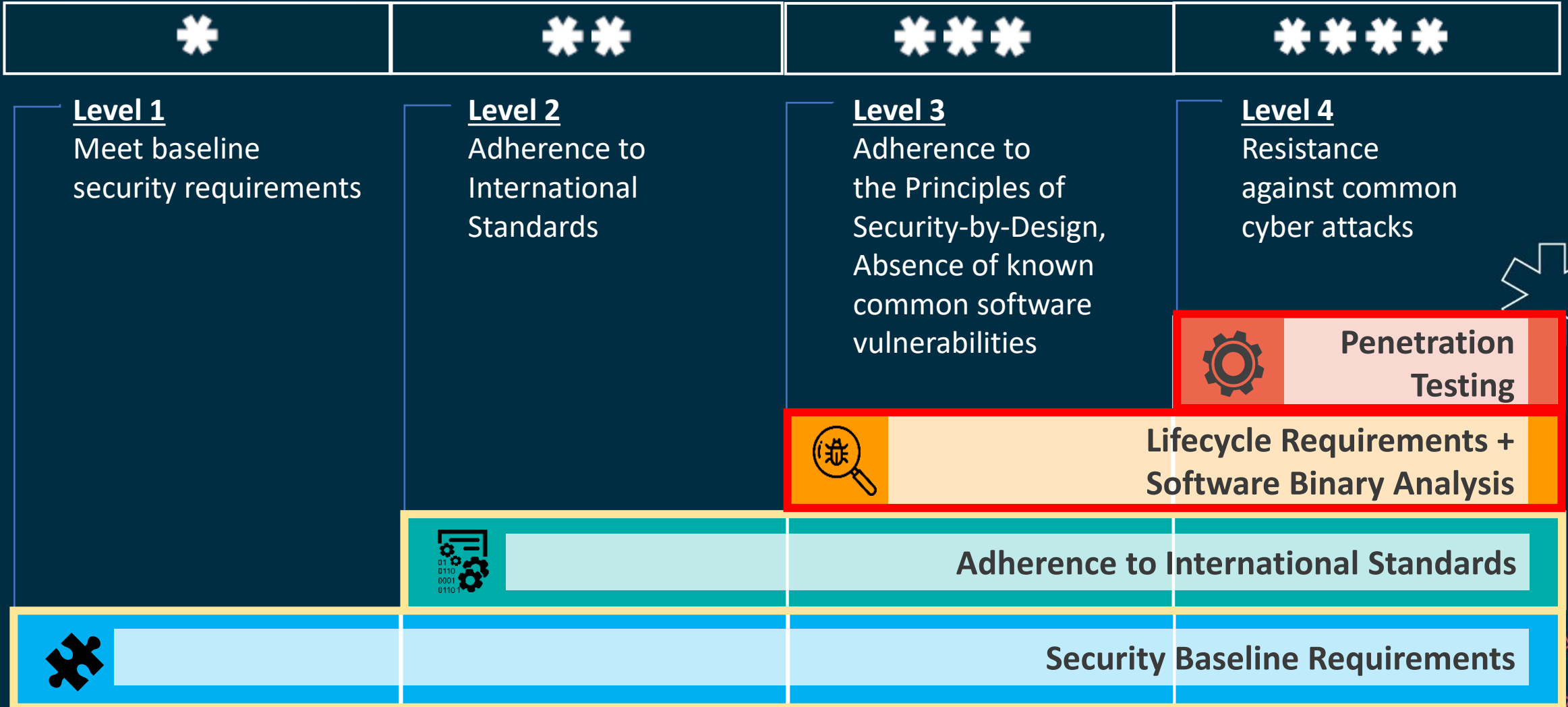
## ECONOMY

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



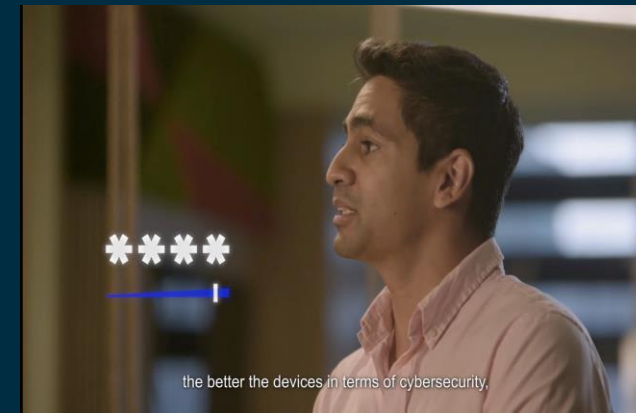


 Validated Developer Declaration of Conformance

 3<sup>rd</sup> Party Independent Testing



- 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.

## Strong appetite in Singapore for secure smart devices, survey finds

**Kenay Chee**  
Senior Tech Correspondent

The public's appetite for secure Internet-connected devices is strong, with half of adults in Singapore saying they will consider buying such gadgets under a new labelling scheme.

This was what a survey found, even as nearly seven in 10 respondents here said they were not aware of the Cyber Security Agency of Singapore's (CSA) relatively new...

## 智能产品贴标签 显示网安功能

This is amid mounting concerns that hackers will increasingly target IoT devices. McAfee noted that with the rapid surge in connected IoT devices with work and study from home due to the pandemic, these gadgets have become an easy target for hackers. The firm found that the number of new IoT malware grew globally by 56 per cent from the fourth quarter of 2019 to the first quarter of last year.

Beyond hacked IP cameras, other threats include remote hack-

**CNA938** posted a video to the playlist **Money Mind**.  
Friday at 6:00 PM · 🌐

How can a new labelling scheme help you to choose more secure smart devices?

**LISTEN:** Gaurav Keerthi, Deputy Chief Executive (Development), Cyber Security Agency of Singapore - CSA

Money Mind with Chew Wui Lynn and Stanley Leong, weekdays 10am to 2pm on #CNA938.

### New cyber security label for smart devices

Four levels of rating

20.4k

### TECH

#### Three brands tap cyber-security label

## 七产品获网安标签认证

新加坡网络安全局所推出的网络安全标签计划，目前共

**Singapore**  
New cybersecurity labelling scheme for connected devices to be launched this



## Cyber-security labelling scheme expanded to all smart home devices

Voluntary scheme lets manufacturers apply for label showing security rating of product

The Cyber Security Agency of Singapore (CSA) yesterday expanded the scheme to include all types of consumer devices.

A man holds an electric toothbrush to a tablet device at the SMO, the Consumer Electronics Show in Lyon. (File photo by Reuters/Robert Pratta)

## CYBERSECURITY LABELLING

### 智能设备贴上网网络安全标签 凸显安全性

**csasingapore** • 3:44

Hi everyone, it's the agent, Cyber Sara.

538 views

csasingapore (Smart) Home is where the heart is. But it could also be where the hurt is, if you don't keep your smart home devices secure.

Join Cyber Sara on her visit to @lifetechsg to learn how you can better protect your smart home devices from hackers!

#CSACyberSara #cybersecurity #cybersg #cybersecuritysg #cybersecuritytips

31 July

**Cyber Security Agency of Singapore - CSA**  
23 May · 🌐

Thinking of setting up your own "smart home"? Check out this video by [Lianhe Zaobao 联合早报](#) featuring smart home owner, Mr Louis Ang's "techie" abode.

Get the lowdown from Mr Ang on how he ensures his smart home is secure by purchasing products with the Cybersecurity Labelling Scheme (CLS).

zaobao.com.sg

137 智能产品获网安认证 86% 得最低一星等级标签

**Cyber Security Agency of Singapore - CSA**  
16 Jul · 🌐

Is it necessary to change the default password of your smart home devices? Since outsiders wouldn't be able to access them anyway... See more

### SPOT THE MISTAKE

NEVER USE DEFAULT PASSWORDS ON SMART DEVICES. REPLACE THEM WITH STRONG PASSWORDS THAT ARE UNIQUE AND COMPLEX.

🚫 You need to change default password!

🚫 You need to change default password!

### WHY CHANGE DEFAULT PASSWORDS?

Default usernames and passwords can be easily found online.

Smart devices using default passwords are easy targets for hackers.

Hacked devices could be used to spy on you, or spread malware to your other smart devices.

Follow @csasingapore for more cyber tips!

**ASUS** • Follow  
16 May · 🌐

🔔 On the lookout for your next router? Be sure to take this into consideration. ... See more

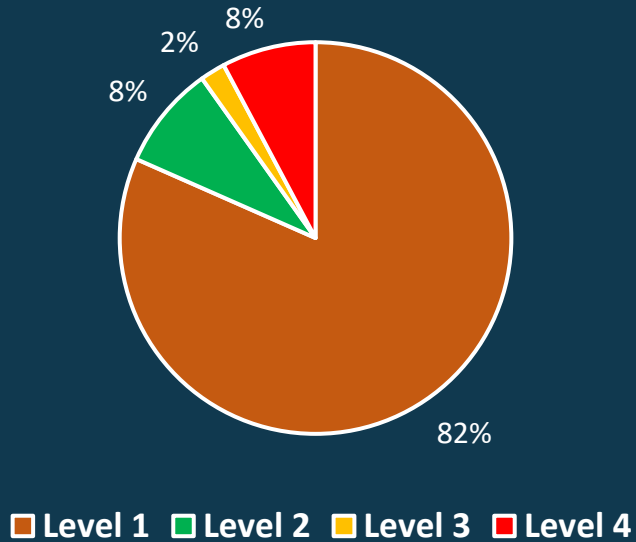
## ASUS Routers Lead the Industry with the Highest Cybersecurity Rating

**Cybersecurity Labelling Scheme**  
BY THE CYBER SECURITY AGENCY OF SINGAPORE



## Close to **300** labelled devices since launch in Oct 2020

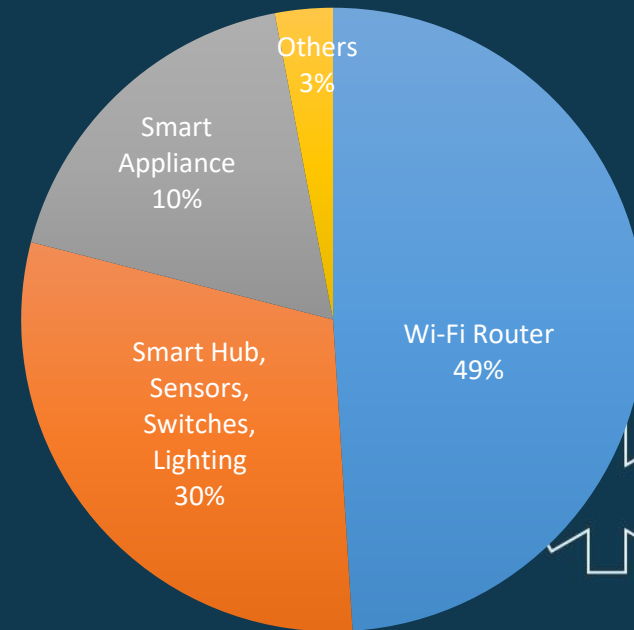
### Applications for CLS by levels



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

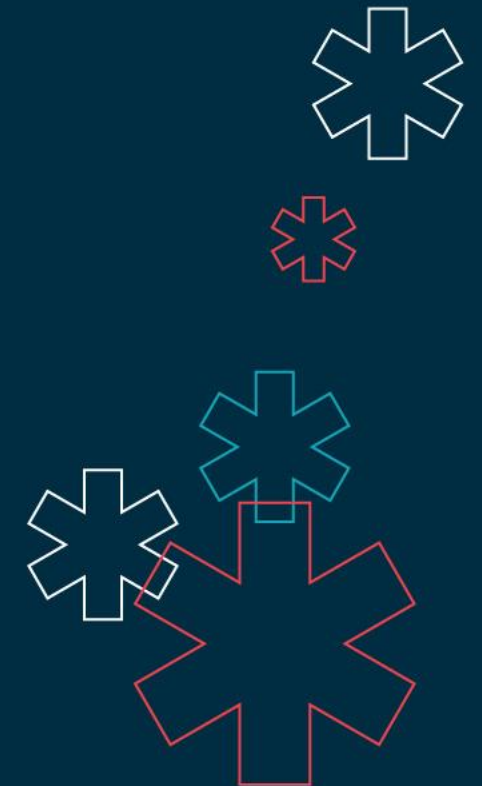




Consumer IoT Products that have met the requirements of Finland's Cybersecurity Label are recognized as Level 3 of CLS, and products with CLS Level 3 and above are recognised by Finland.



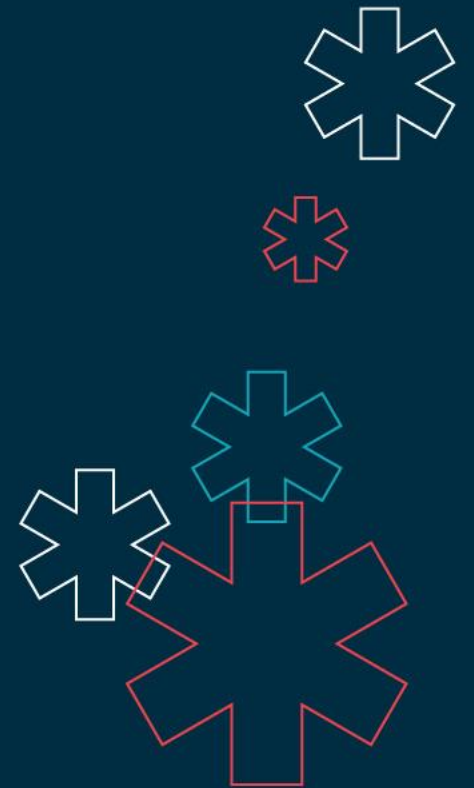
Smart consumer products issued with Germany's IT Security Label will be recognised to have fulfilled Level 2 CLS, and products with CLS Levels 2 and above will be recognised by Germany.



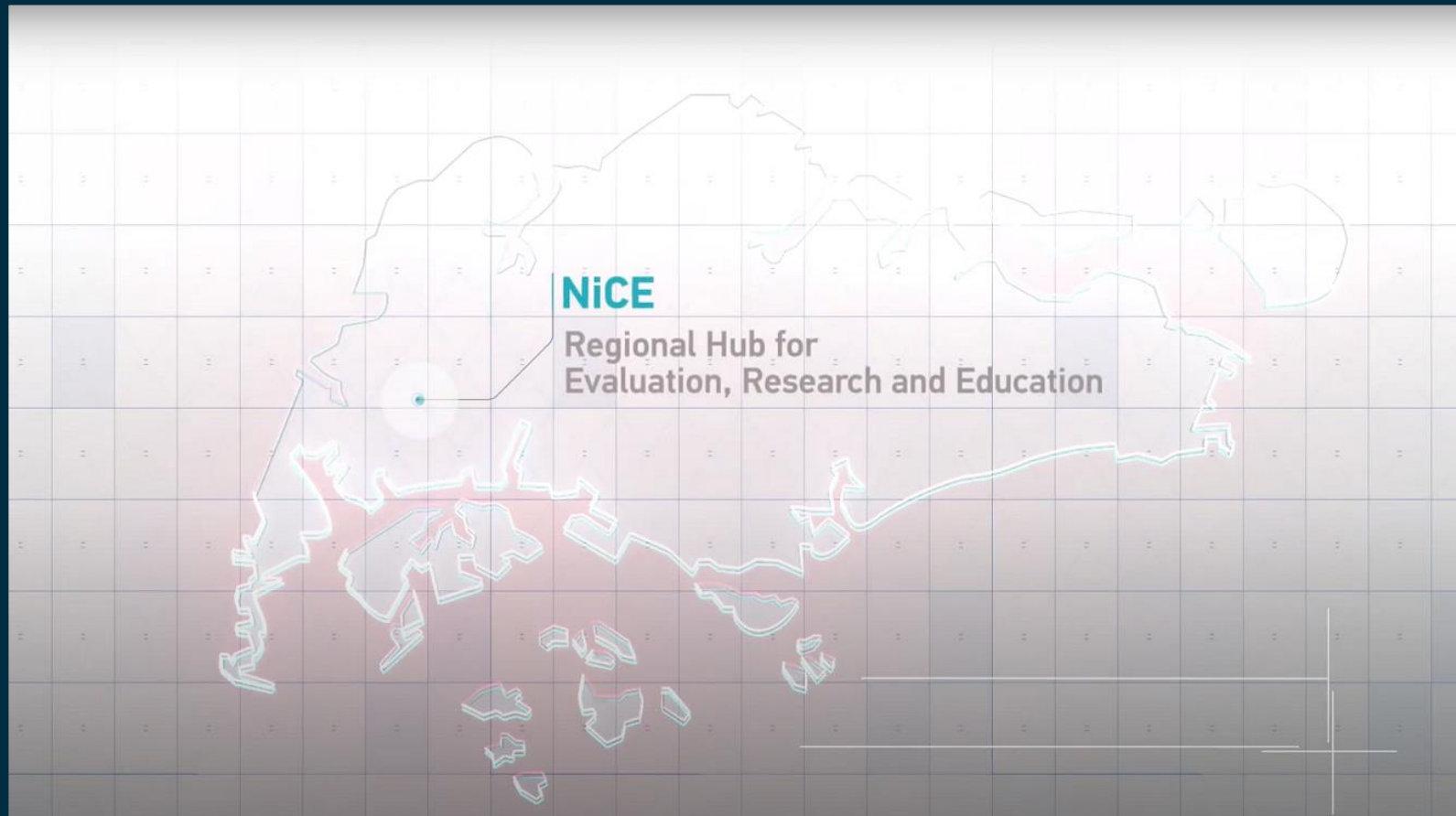
- Cybersecurity Certification Centre – <https://www.go.gov.sg/csa-ccc>
- Singapore Common Criteria Scheme – <https://www.go.gov.sg/sccs-about>
- Cybersecurity Labelling Scheme – <https://www.go.gov.sg/csa-cla>
- CLS Video - <https://www.go.gov.sg/cls-video>
- CLS-Ready: <https://www.go.gov.sg/cls-ready>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



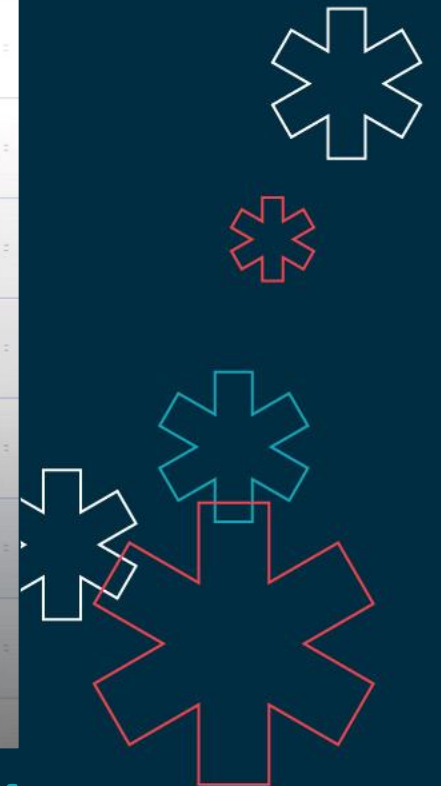
# National Integrated Centre for Evaluation



# Corporate Video for NiCE



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



## Officially Launched on 18<sup>th</sup> May 2022





# 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

OFFICIAL (CLOSED)



**NANYANG  
TECHNOLOGICAL  
UNIVERSITY**  
**SINGAPORE**

For More Information

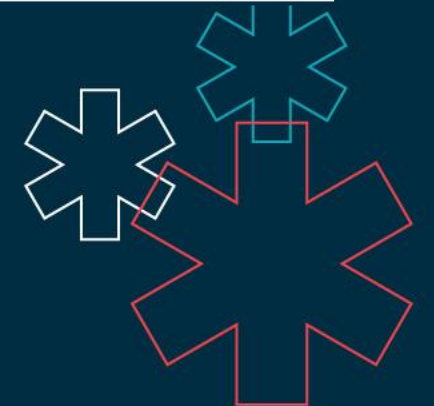
Website: <http://www.ntu.edu.sg/nice>

Email: [NiCE\\_enquiries@ntu.edu.sg](mailto:NiCE_enquiries@ntu.edu.sg)

An initiative by



**National Integrated Centre for Evaluation**





**Questions**

**Thank You!**

For further enquiries, please contact [certification@csa.gov.sg](mailto:certification@csa.gov.sg)