![ETSI - The Standards People]

# Security Conference

## CSA IoT Certification: Is EN 303 645 your one-stop shop for Global Consumer IoT Regulatory Compliance?

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# Global Leadership



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# Global Collaboration

Mission:
- **Simplify** IoT complexity
- Create open paths to **IoT adoption**
- Deliver & promote **universal open standards**
- Enable all objects to **securely connect** & interact.

Goals:
- Enable industry **collaboration**
- Accelerate **market growth**
- Deliver **value** to members & the market

Actions:
- **Standards** Development
- Testing and **Certification**
- Market **Engagement**

# Building the Foundation & Future of the IoT

| Matter | Zigbee |
|---|---|
| Health and Wellness | Access Control |

**Data Model**

| Product Security | Data Privacy |
|---|---|

| Member Group China | EU Interest Group | Industry Stakeholder Groups |
|---|---|---|

## Membership by Geography

**600** Engaged Companies, with over **6,100** individuals from **45** countries.

24.1%
30.9%
6.0%
39.0%
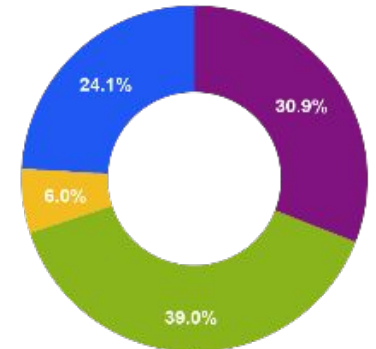
● Americas  ● EMEA  ● Asia-Pac/Japan  ● China

## Membership by Industry

22.7%
57.6%
4.9%
14.8%

**39%** Growth in Participants Level Member Companies year-over-year, year-to-date
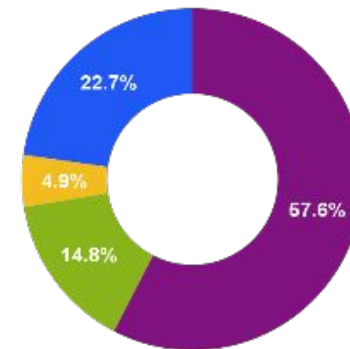
● Devices, Manufacturers & Sensors  ● Ecosystems, Platforms & NW Svcs
● Retailers & Channels  ● Silicon, SW, Integrators & Design

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# Product Security Certification

# Current Situation

**Attacks against IoT systems continue to grow**

In numbers, sophistication, and impact

**Governments are responding with standards and regulations**

USA - NIST 8259, NIST IR 8425, NIST SP 800-213 and various laws

EU - Cyber Security Act, Cyber Resiliency Act and revised Radio Equipment Directive

*Referencing standards such as IEC 62443 & ETSI EN 303 645*

UK -  Product Security and Telecommunications Infrastructure bill

Singapore, Finland, China, etc.

**National certification/labeling programs**

USA, Singapore, Finland, etc.

**Diverging requirements will lead to high costs and complexity**

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- Dozens of **standards**, **policies** and **regulations** for IoT devices worldwide requiring basic cyber hygiene

- Vast majority of them are voluntary

- Growing consumer recognition for security: Visibility is required
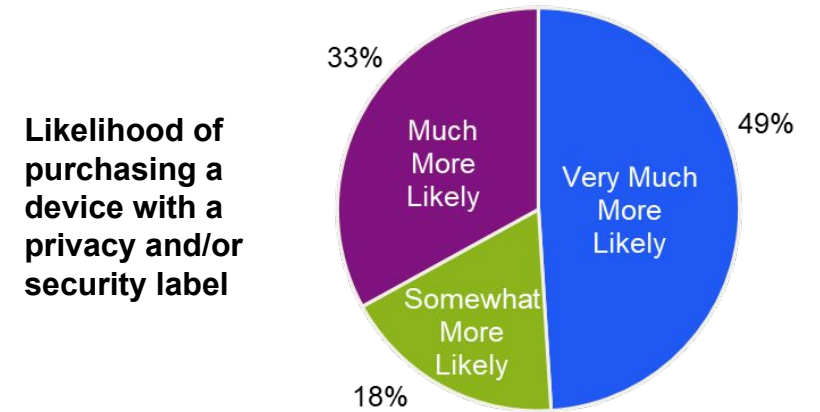
- Complex fragmentation landscape

Consumer IoT Device Cybersecurity Standards, Policies, and Certification Schemes

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https://omdia.tech.informa.com/-/media/tech/omdia/marketing/commissioned-research/pdfs/consumer-iot-device-cybersecurity-standards-policies-and-certification-schemes.pdf

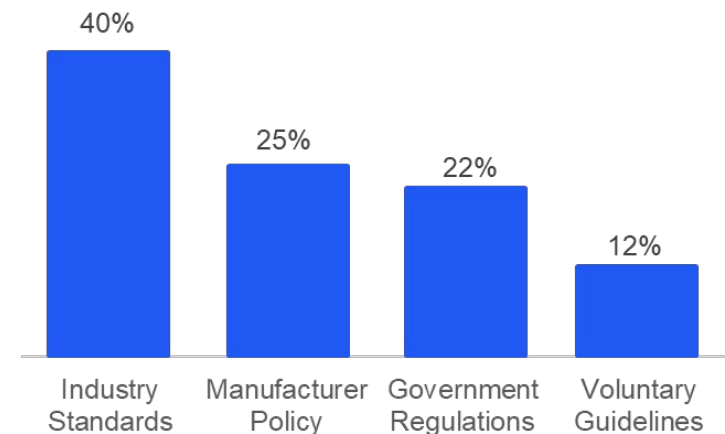# Summary of IoT device security specifications by geographic region

| Region | IoT Device Security Spec | Mandatory/ voluntary | Certification | Labeling | Key Standard Referenced |
|---|---|---|---|---|---|
| **Asia** | | | | | |
| Australia | Under development | Voluntary | Yes | Yes | ETSI EN 303 645 |
| China | Yes | Mandatory | No | No | None |
| India | Yes | Voluntary | Yes | Yes | ETSI EN 303 645 |
| Japan | Yes | Voluntary | No | No | NIST, ETSI EN 303 645 |
| Singapore | Yes | Voluntary | Yes | Yes | ETSI EN 303 645 |
| South Korea | Yes | Voluntary | Yes | Yes | ITU X.1352 |
| Thailand | Under development | Voluntary | No | No | None |
| Vietnam | Yes | Voluntary | No | No | ETSI EN 303 645 |
| **Europe** | | | | | |
| France | Yes | Voluntary | No | No | ETSI EN 303 645 |
| Germany | Yes | Voluntary | Yes | Yes | ETSI EN 303 645 |
| Spain | No | Voluntary | No | No | None |
| UK | Yes | Mandatory | Yes | Yes | ETSI EN 303 645 |
| **Americas** | | | | | |
| Brazil | Yes | Mandatory | Yes | Yes | ETSI EN 303 645, ISO/IEC 27402 |
| US | Yes | Voluntary | Yes | Yes | NIST IR 8425 |

# Consumer Expectations on the Rise

- Security and Privacy are key attributes for connected device purchase
  - 84% rate security as important or very important in purchase decision

- Privacy/Security labeling will make a purchase impact

- Consumers are looking to Industry standards; but stakeholder collaboration is needed
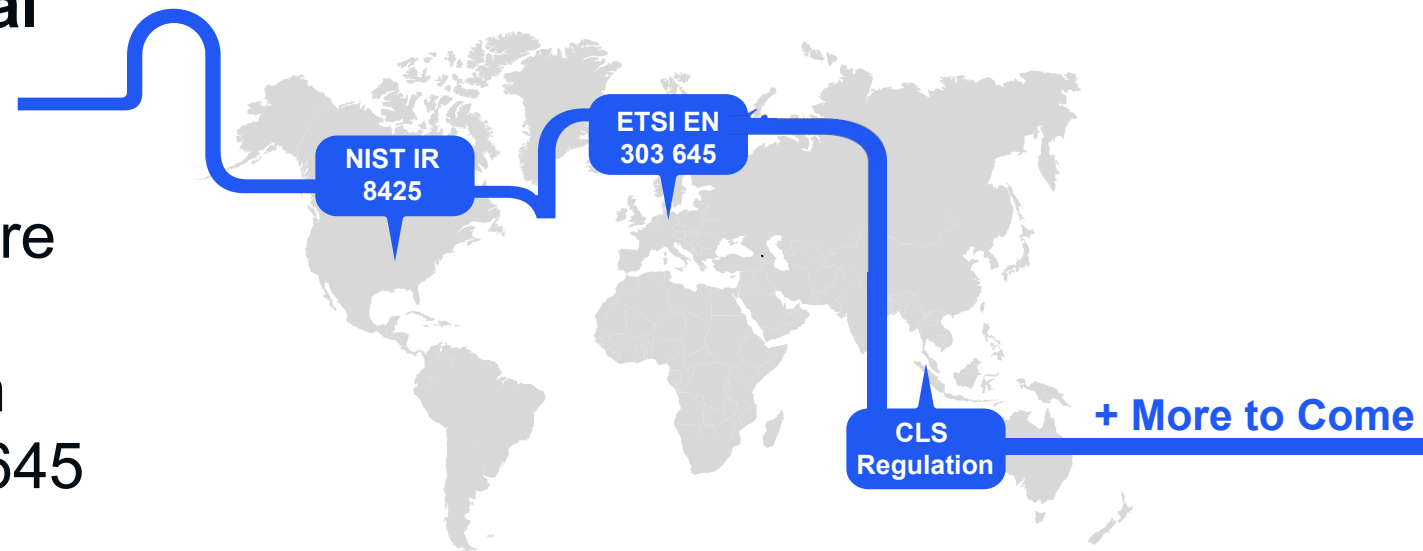
**Likelihood of purchasing a device with a privacy and/or security label**

- 49% Very Much More Likely
- 33% Much More Likely
- 18% Somewhat More Likely

**How should security be implemented?**

- 40% Industry Standards
- 25% Manufacturer Policy
- 22% Government Regulations
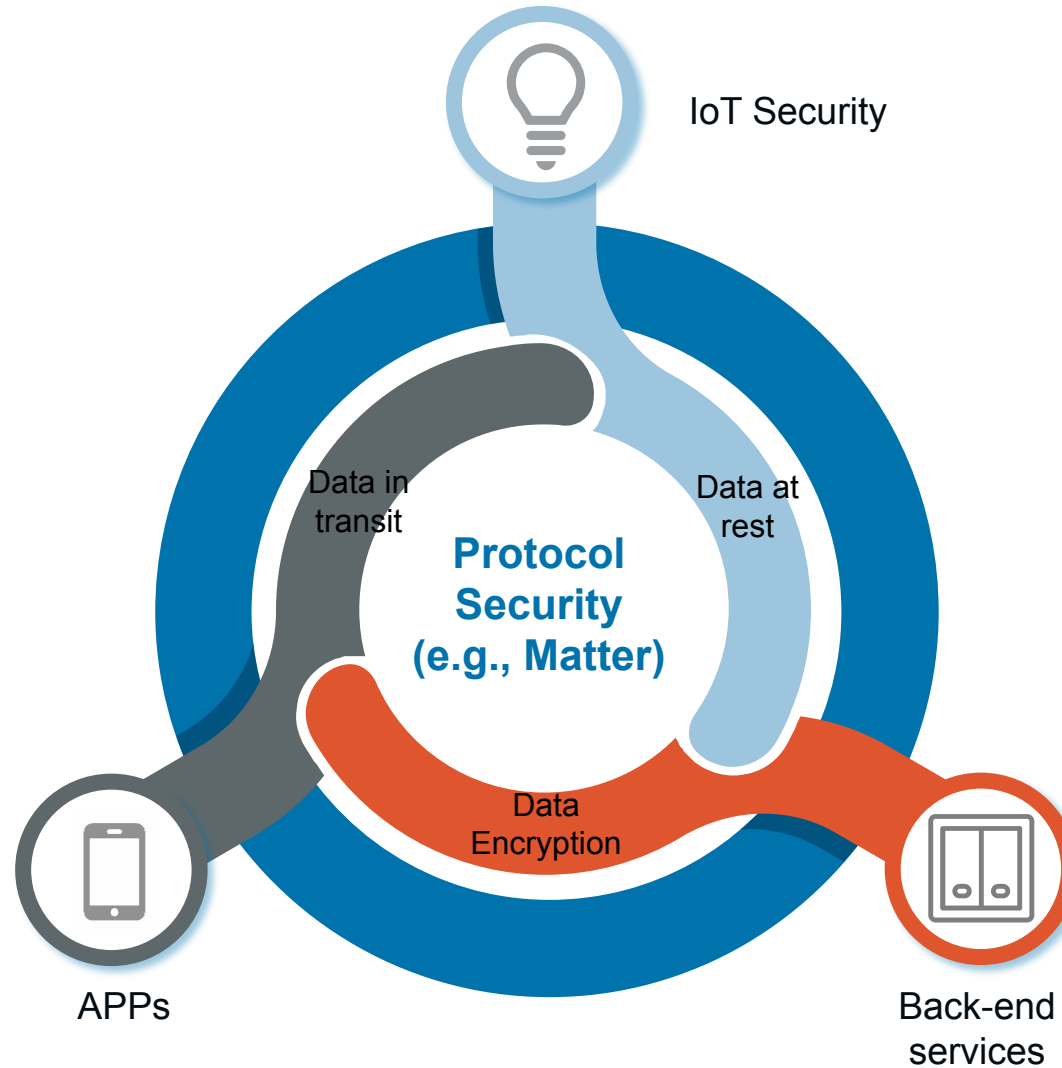- 12% Voluntary Guidelines

# Product Security - A Global Approach

- Our Solution:
  - Create a product security certification, based on **global** requirements

- Certify once, qualify everywhere
  - USA - NIST IR 8425
  - Singapore - CLS Regulation
  - Many more - ETSI EN 303 645

- More to come in the future

NIST IR 8425

ETSI EN 303 645

CLS Regulation

**+ More to Come**

# What is Product Security?



IoT Security

Data in transit

Data at rest

**Protocol Security (e.g., Matter)**

Data Encryption

APPs

Back-end services

# Product Security WG Purpose

**Develop a product security certification program**

- ✓ Used to assure the security and privacy of IoT products
- ✓ Product security, not just protocol security
- ✓ Multiple levels of security may be defined
- ✓ Scope may also include process related items
- ✓ Based on existing product security regulations
- ✓ Open with broad participation
- ✓ Granting a mark recognized by regulators and consumers as a seal confirming the product security meets requirements
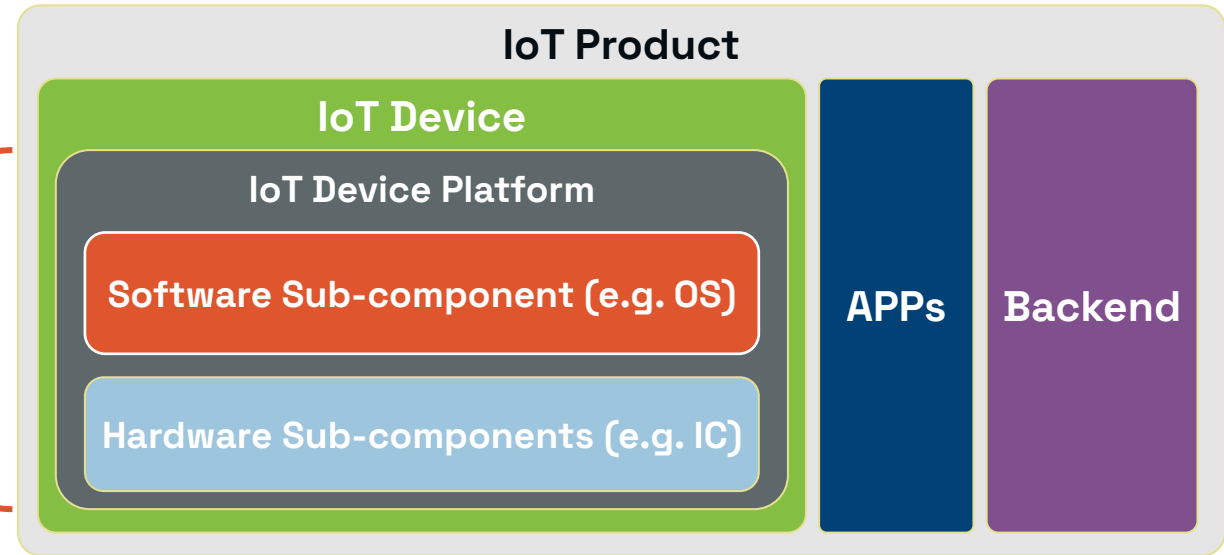
# PSWG Certification

**Conformance Evidence:**

- EU RED
- USA IoT Labelling
- Singapore CSA CLS
- ...

**CSA PSWG**
IoT Device Certification

CSA PSWG
Composition Programs:
**CC, SESIP, PSA Certified**

## IoT Product

### IoT Device

#### IoT Device Platform

**Software Sub-component (e.g. OS)**

**Hardware Sub-components (e.g. IC)**

**APPs**

**Backend**

# Product Security Certification Benefits

**Consumers:**
- Identify properly secured IoT products
- Rely on one global certification
- Gain confidence in the security of certified IoT products

**Manufacturers:**
- Allay consumer concerns about product security, boosting demand
- Gain recognition for good security
- Certify once, qualify in many countries
- Simplify product security certification, avoid excessive costs
- Use pre-certified sub-components to reduce effort further

**Regulators:**
- Easily get broad compliance with IoT security regulations

**All:**
- Advance the state of the art in consumer IoT product security
- Reduce security incidents with certified products

# What's next

- Launching the program in Q1 2024

- Engagement at international level

- Authorities and industry working towards the same goal

Collaborate and help each other to solve this problem:

**CSA PSWG is leading the way**

# Q&A



The Connectivity Standards Alliance is the foundation and future of the Internet of Things. With its Members' diverse expertise, robust certification programs, and a full suite of open IoT solutions the Alliance is leading the movement toward transforming the way we live, work and play.

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