

## CCDS Introduction

# - Toward Trustful IoT Life -

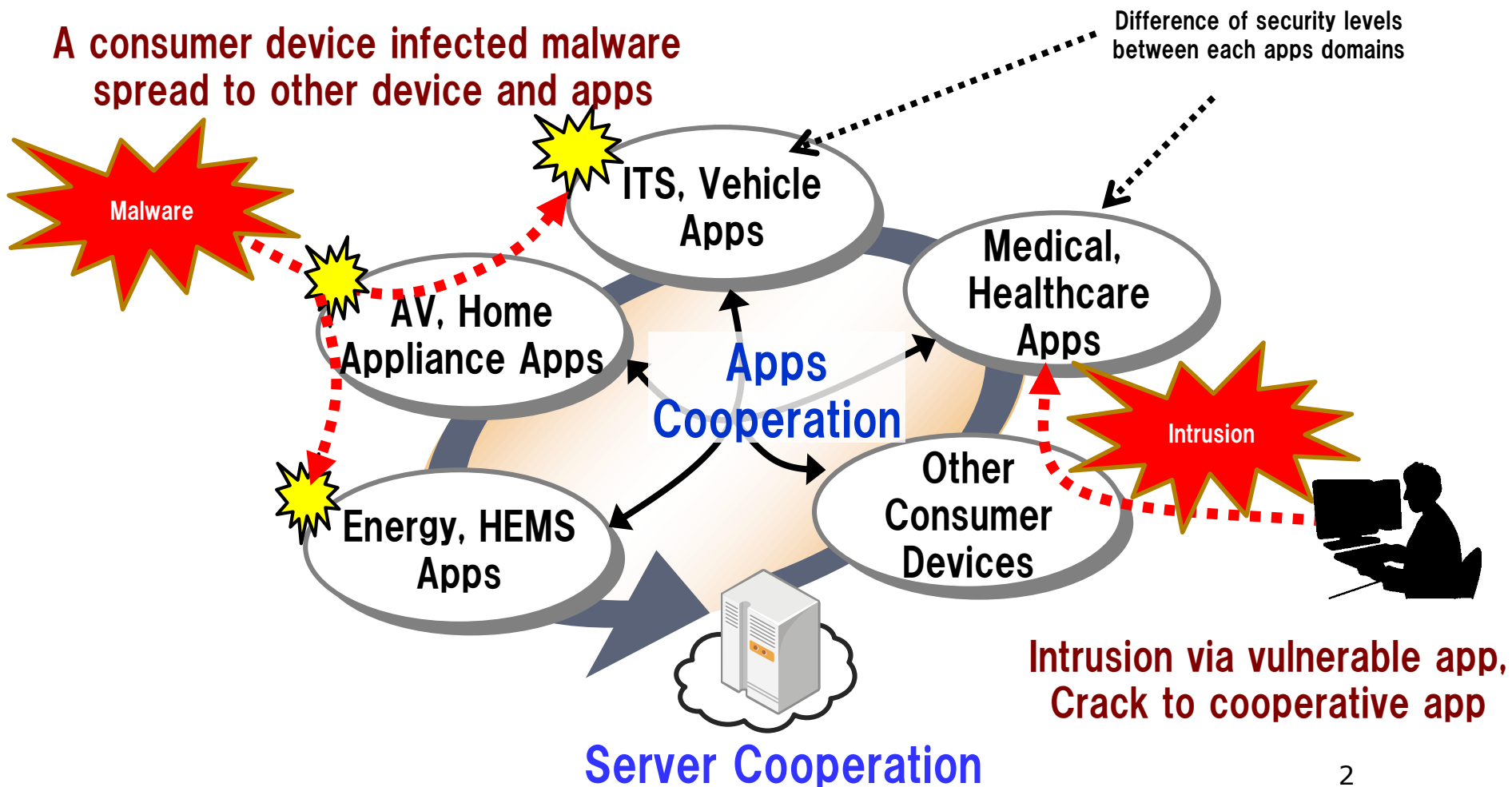
Connected Consumer Device Security Council  
(CCDS)

Kosuke Ito, Secretary General

# ISSUE: Threats from Cooperated Devices

If even Single App is safe, but may be vulnerable in cooperated situation

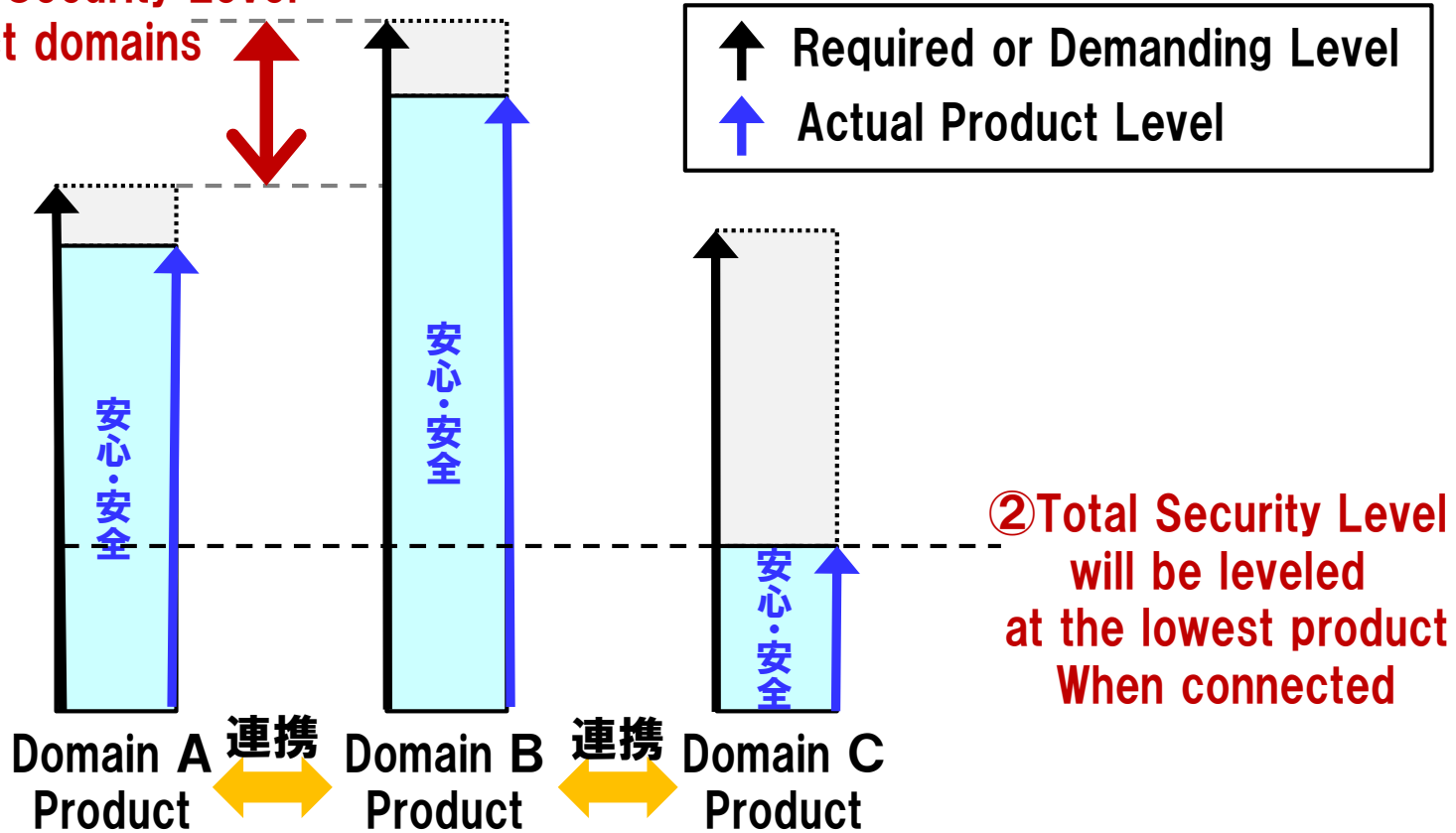
A consumer device infected malware spread to other device and apps



Intrusion via vulnerable app, Crack to cooperative app

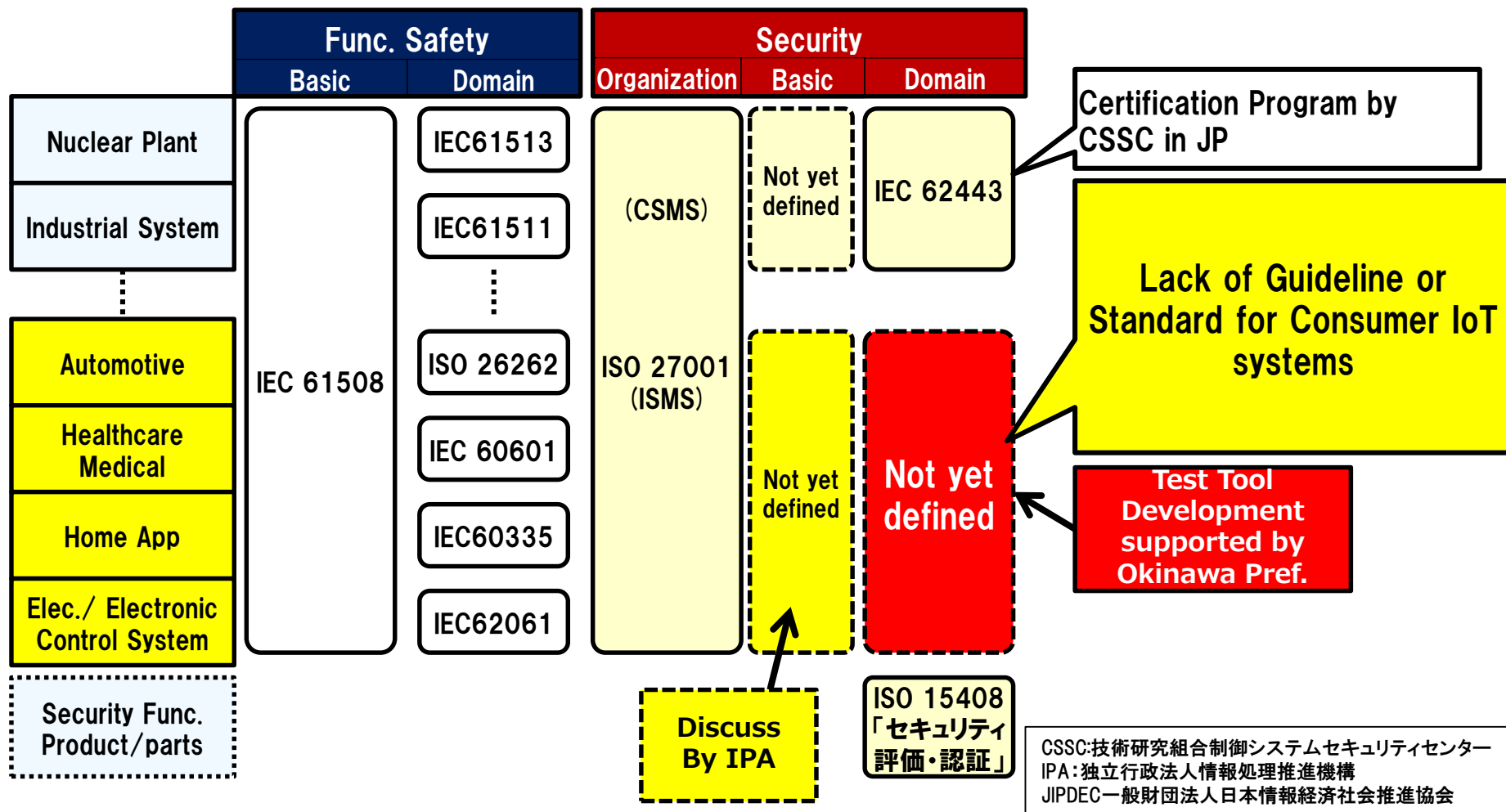
# Trust (safety and security) Level Difference

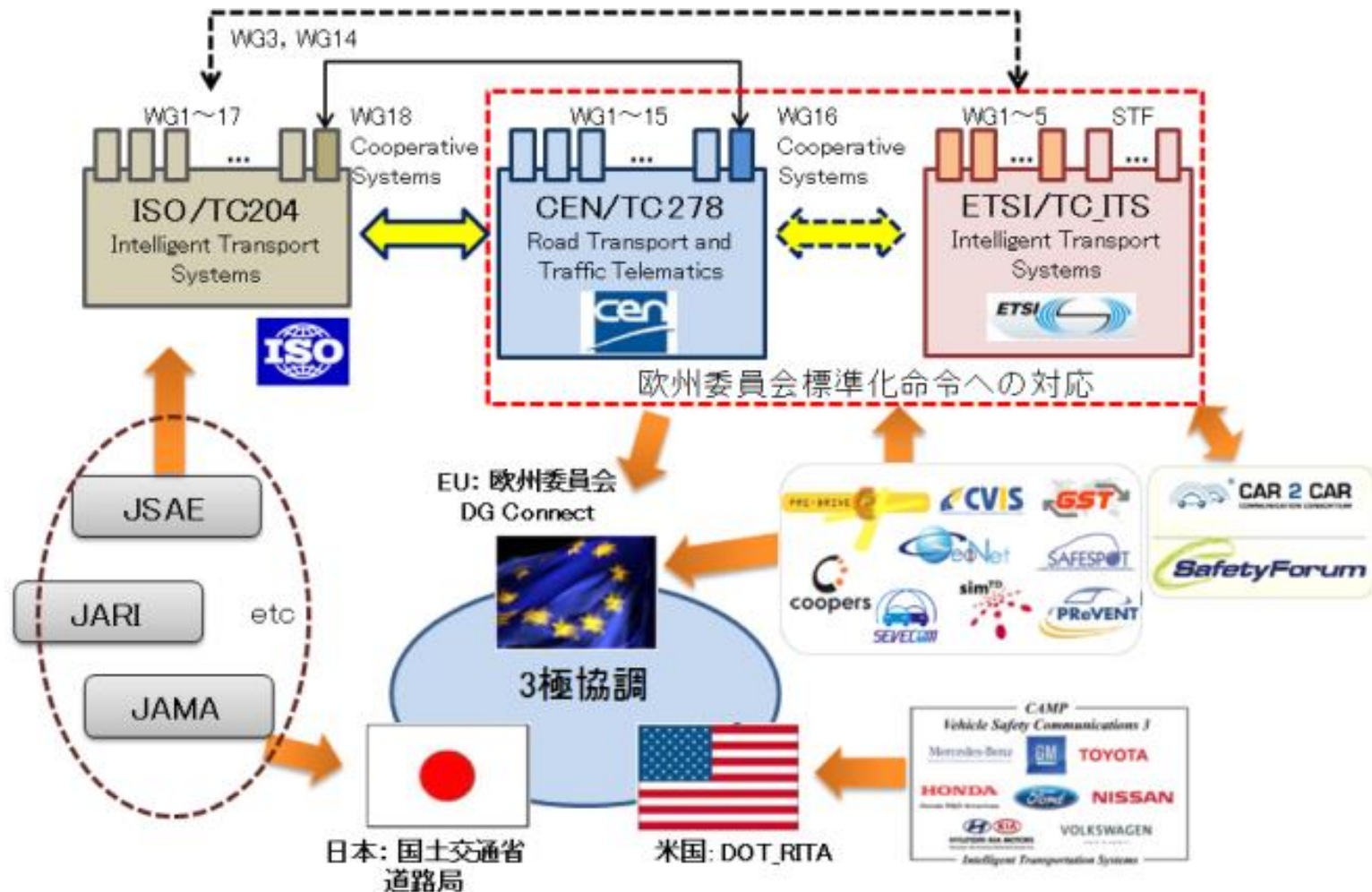
## ① Different Level of Requirement For Safety and Security Level by product domains



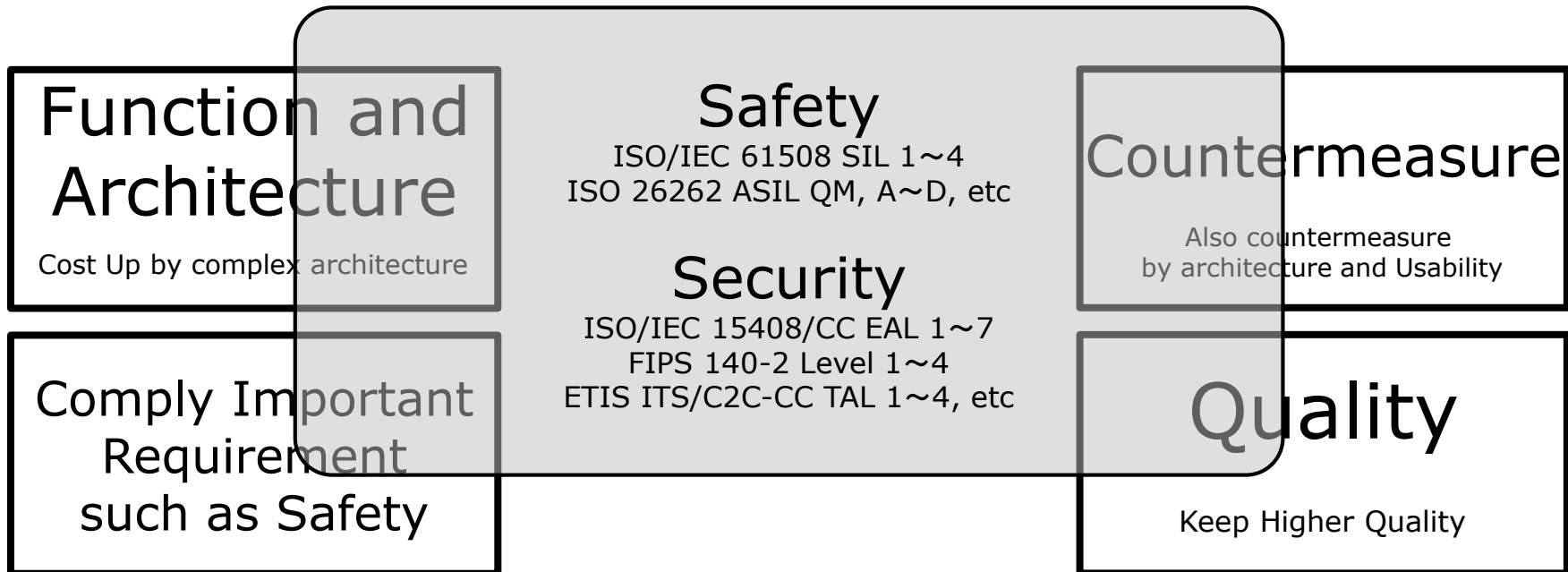
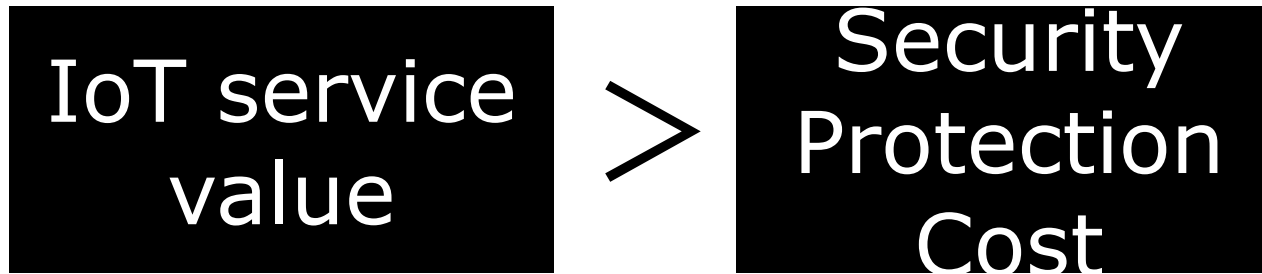
# Lack of Security Standard for IoT

- Increasing the threats on IoT systems
- Lack of Security Standard for IoT





JARI・「ITSに関する国際的な標準化の取り組み」  
<http://www.jari.or.jp/tabid/113/Default.aspx>

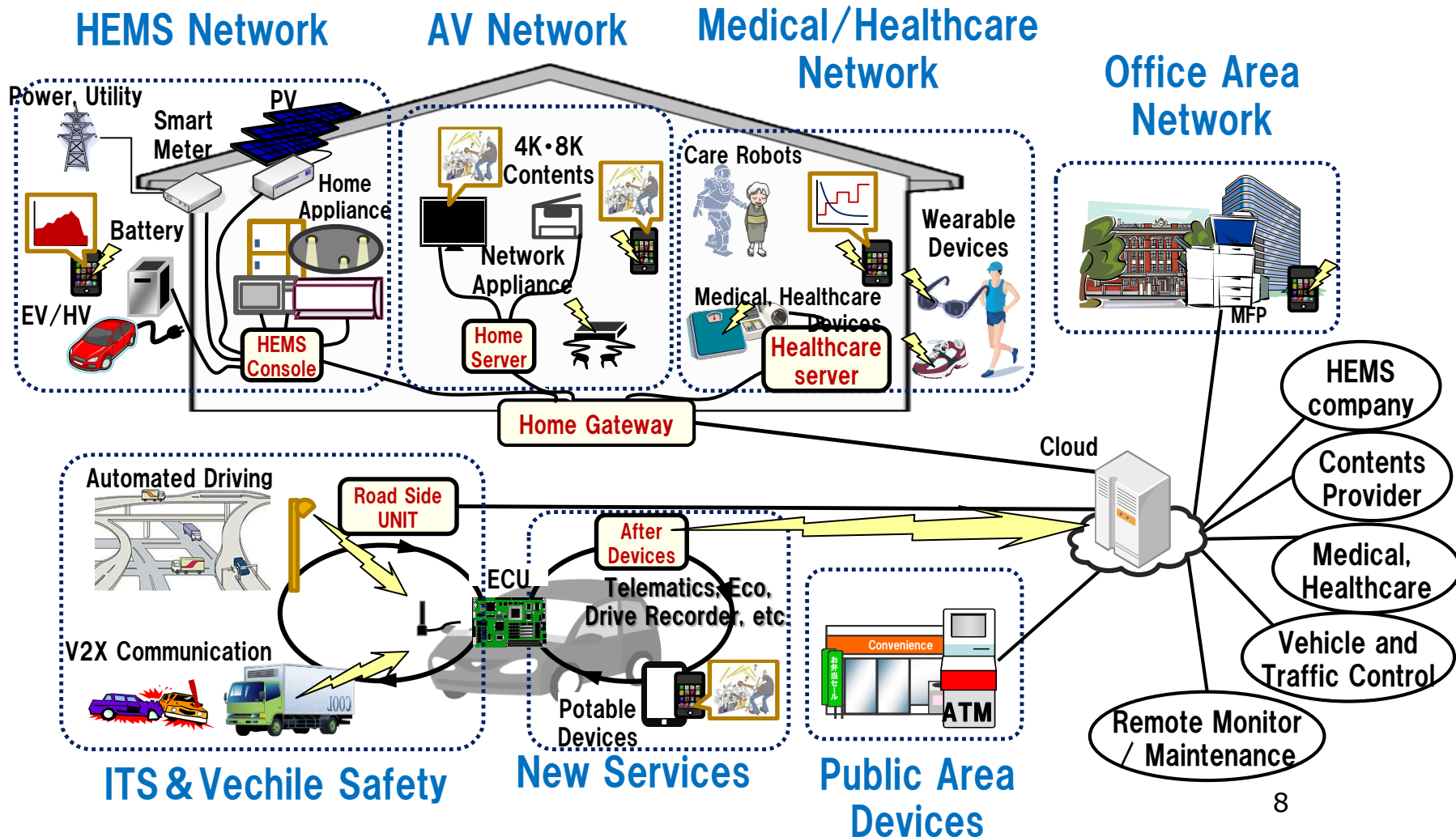


Different Priority and Judgement level  
Product domain by domain

- Name: Connected Consumer Device Security council
- Est: October 6<sup>th</sup>, 2014
- Chairman: Dr. Hideyuki Tokuda
  - Prof. of Keio University
  - Special Advisor of Cyber Security to the Cabinet
- Representative Director: Dr. Tsukasa Ogino
  - Kyoto University
- Director: Dr. Atsuhiko Goto
  - Prof. of Inst. Of Information Security
- Director: Katsutoshi Hasegawa (President, eSol Inc.)
- Director: Hiroyuki Hattori (Director, Witz)
- Member: 74 (Principal/Regular:30, General:33, Academic:11)

# SCOPE:

Embedded/IoT/M2M in general, Connected Consumer Devices which are not operated (monitored and controlled) by professionals





## Goal

Among daily usage of the consumer devices, unexpected device behavior affects injury, risk one's life, financial property. Our goal is to make the connected consumer devices working cooperative with safety and security. For the sustainable goal, we promote security awareness and reference point of good practices to all stakeholder company and organization in each domains.

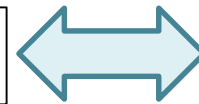
## Activities

1. **Definition of secure development guidelines** for consumer devices and discuss global standardization
2. Discuss **certification scheme** based on secure development guideline
3. Discuss the way of assurance for basically consumer **safety and security**
4. **Development of vulnerabilities validation** in cooperated consumer devices
5. **Building test beds** for verify attacks and countermeasures
6. **Human resource** development through those activities
7. Along with standards of development and security, we support development of validation tools and verification environment

# CCDS External Cooperation



IoT Security Guideline Dev.



Connected World  
Development  
Guideline WG

- ・Design Process Guide = **Security by Design**
- ・Security Testing Guide -> **International Std.**  
安心、安全な**サービス・製品開発**を目指す！

IoT Vuln. Evaluation PF Dev.



- ・Vulnerability Testing Tool Development
  - ・Testing Scenario Development
- Developing the Security Testing Platform**

## 経済社会の活力の向上及び持続的発展

～費用から投資へ～

Security By Design (SBD)  
System Design with Security Consideration  
from planning and design stage

▶ 安全なIoTシステムを構築

▶ IoTシステムに係る大規模な事業について、サイバーセキュリティ戦略本部による総合調整等により、必要な対策を整合的に実施するための体制等を整備

▶ エネルギーIoTシステム

Preparation of the general guidelines  
to affect security on IoT system

ガイドライン等を整備

高度な技術開発・実証事業の実施

▶ セキュリティバイデザインを促した企業経営の推進

▶ 企業におけるセキュリティに係る取組が市場等から正当に評価される仕組みの構築

▶ 経営層と  
▶ 民民間・

Enforcement of the technology development and proof trial  
in consideration of the characteristic (long life cycle,  
limit of the processing capacity) of the IoT system,  
importance of the hardware genuine nature

▶ セキュリティ

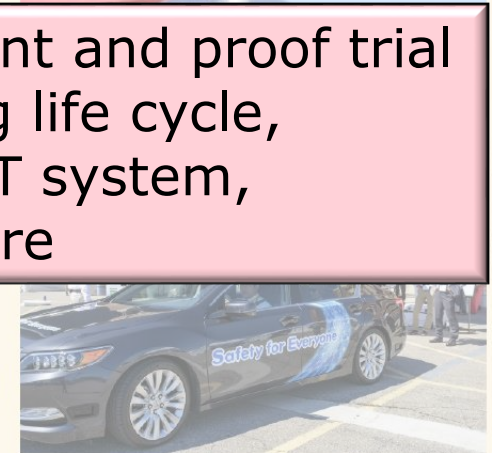
▶ 政府系

▶ 中小企業等のソフトウェアセキュリティに有効なセキュリティ監査の普及促進

▶ サイバーセキュリティ産業の振興に向けた制度の見直し(リバースエンジニアリング等)

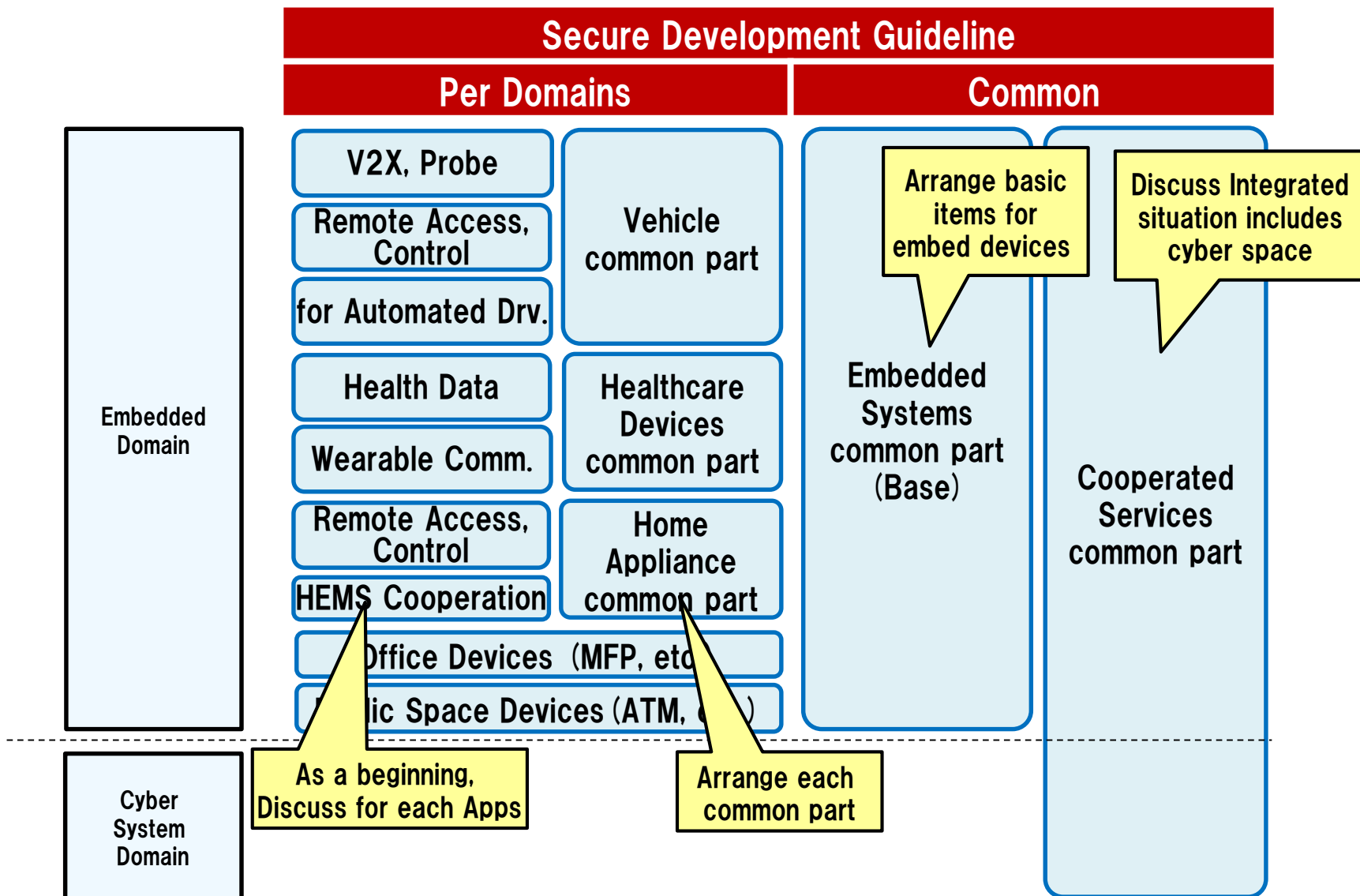
▶ IoTシステム等のセキュリティに係る国際的な標準規格や相互承認枠組み作りの国際的議論を主導

▶ 知財漏えい防止強化など、公正なビジネス環境を整備

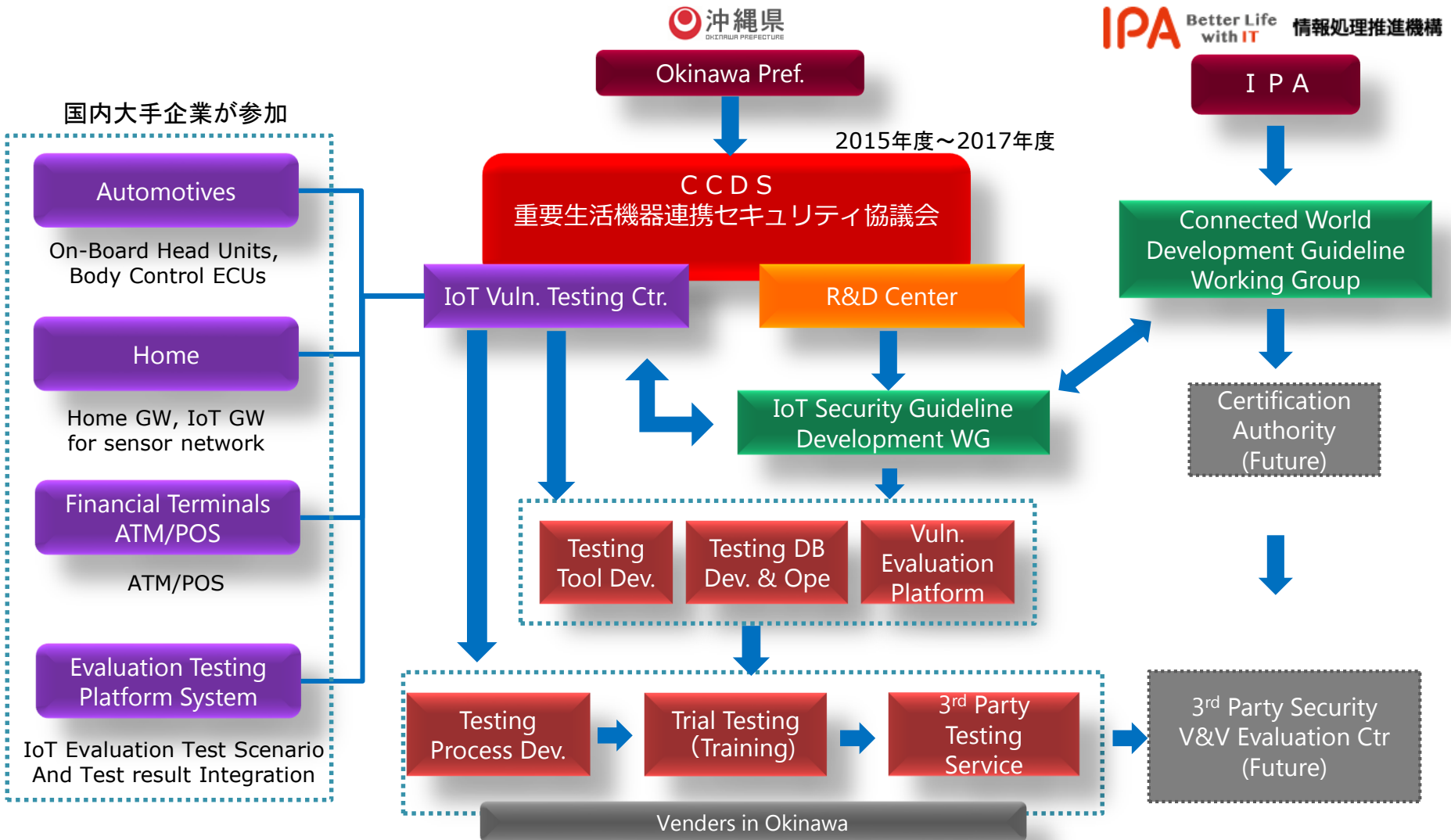


▲自動運転車の実証実験

# PLAN: Secure Development Guideline Definition



# Founding the 3<sup>rd</sup> Party Security V&V Evaluation Center



V&V: Verification and Validation  
 Vuln: Vulnerability