

Global Commercialization Policy for Cybersecurity in V2X & Mobility

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Best Auto Cybersecurity
Product/Service 2019



The Automotive Tech
Company of the Year Finalist 2020

Automotive Cybersecurity
Product of the Year Finalist 2021



2020 Global Cyber
Achievement Award



2020 & 2021
Automotive Cybersecurity
Company of the Year



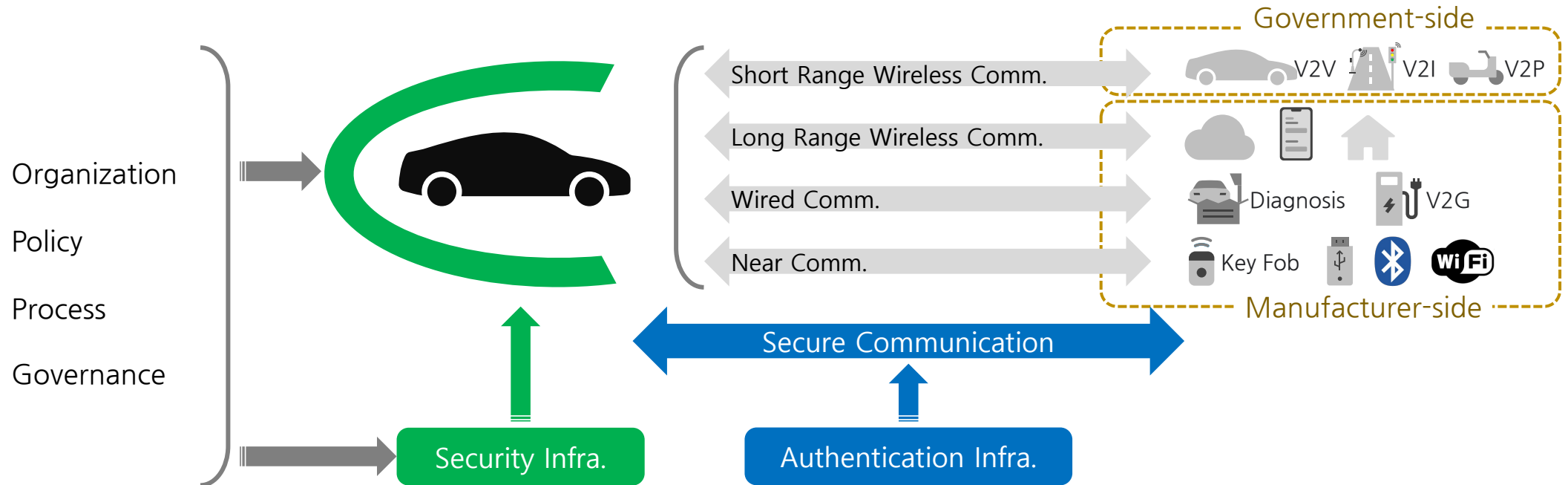
Artificial Intelligence Industry Association
2020 Emerging AI+X Top 100 Company
Mobility Category



2021
100 to Watch

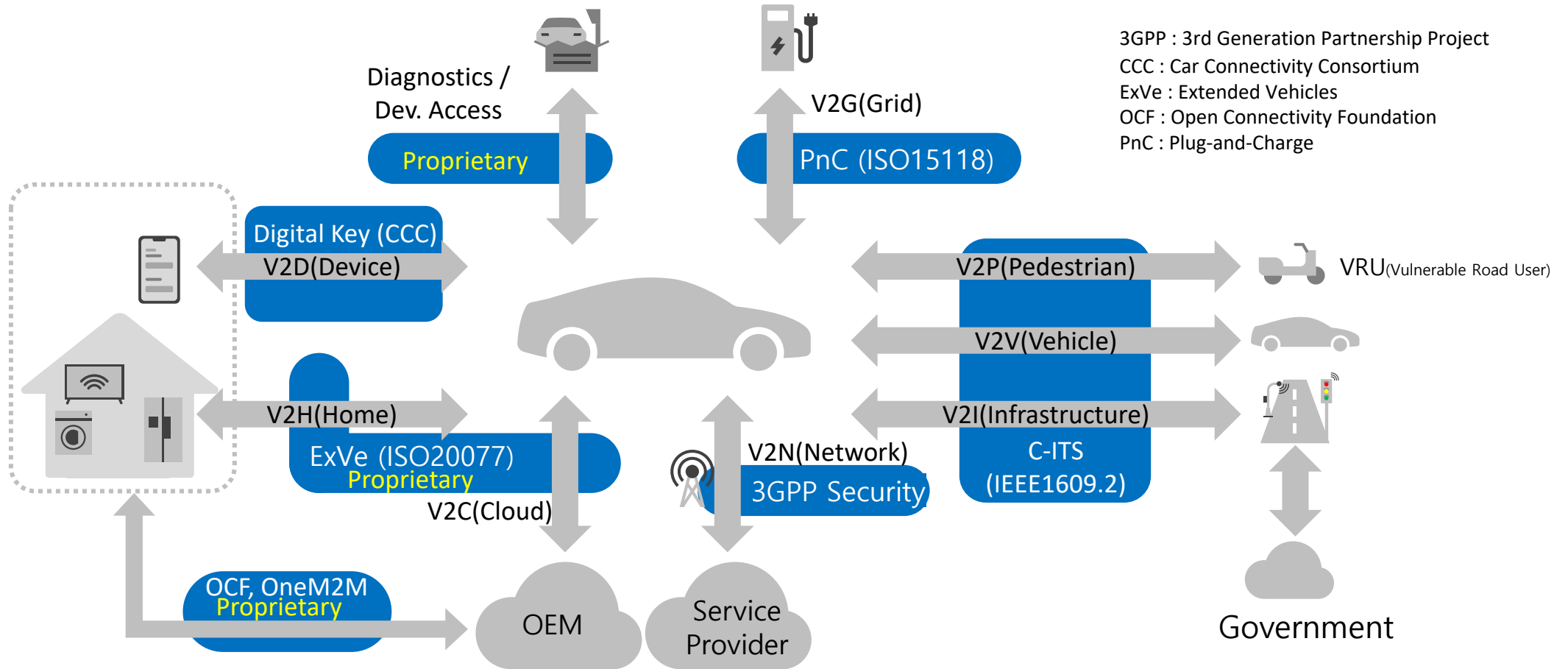
Two Aspects of Automotive Cybersecurity

- ❖ **V2X Security** provides **secure communications** between vehicles and other entities
 - ◇ Needs **Authentication Infra** as the *'Root of Trust'* for authentication
- ❖ **IVS(InVehicle System) Security** ensures the **resilience** of ECU and E/E architectures
 - ◇ Needs **Security Infra** to keep the security risk acceptable



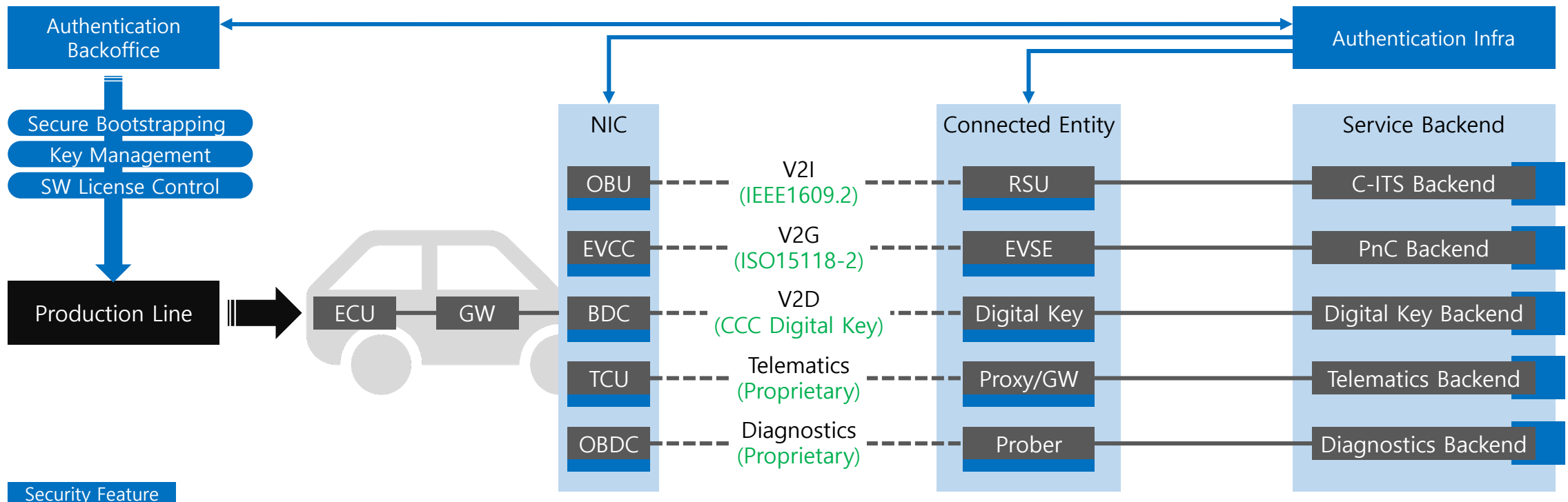
V2X Security Scope of AUTOCRYPT

- ❖ Mainly focusing in C-ITS and PnC for security solutions
- ❖ Customer projects in other areas



V2X Security Solution of AUTOCRYPT

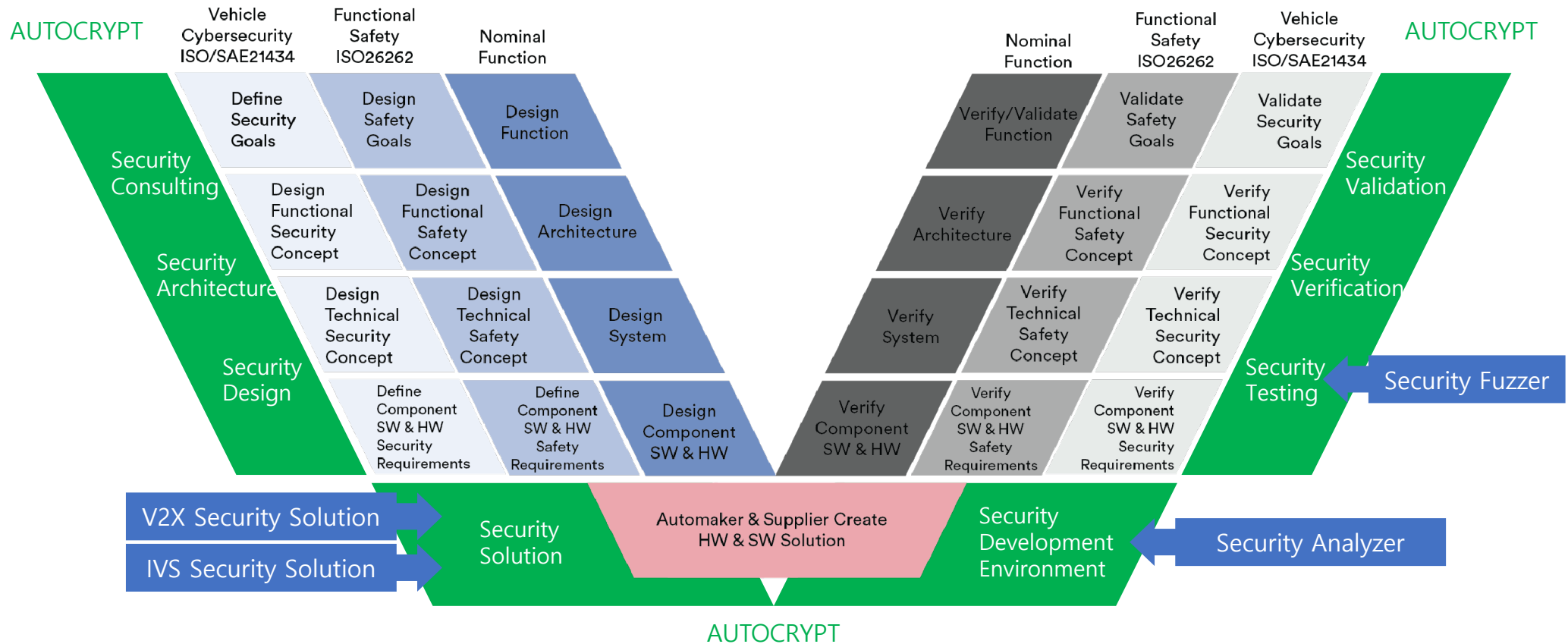
- ❖ Security Agents for NIC inside of vehicles, Connected Entities and Service Backends
- ❖ Authentication Infra to issue and manage the public key certificates
- ❖ Authentication Backoffice to manage security credentials in the end of the production line



NIC(Network Interface Controller), OBU(OnBoard Unit), EVCC(EV Comm. Controller), BDC(Body Controller), TCU(Telematic Controller Unit), OBDC(OnBoard Diagnostic Controller)

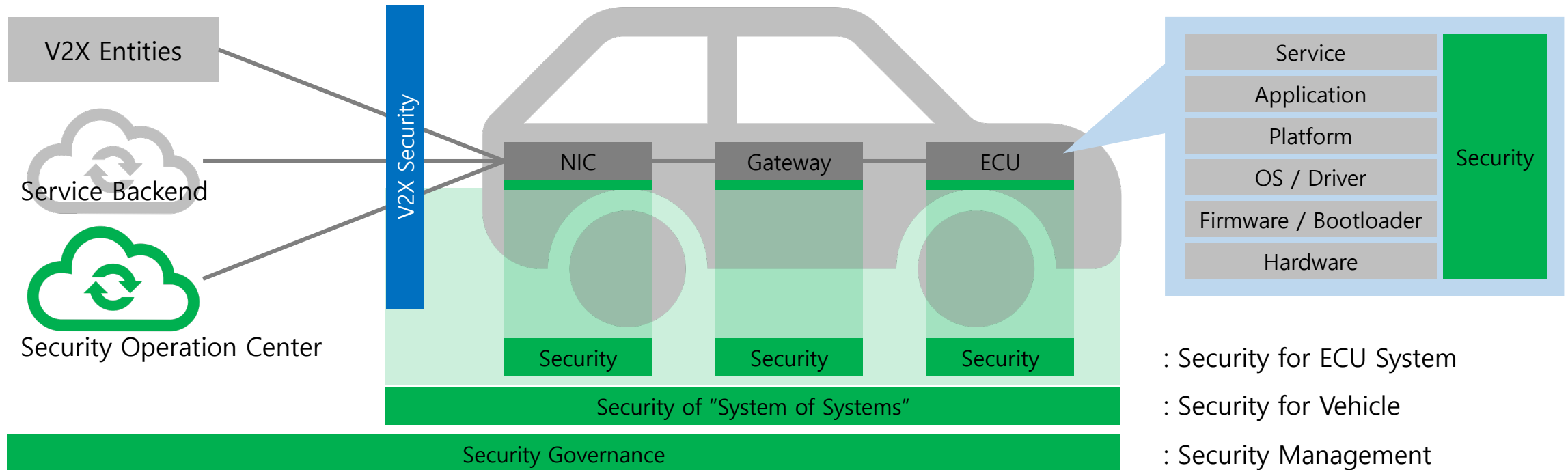
IVS Security Scope of AUTOCRYPT

- ❖ Helps customers to prepare the compliance with UN-R155 & ISO21434
- ❖ Provides customers with security solutions and security tools



IVS Security Solution of AUTOCRYPT

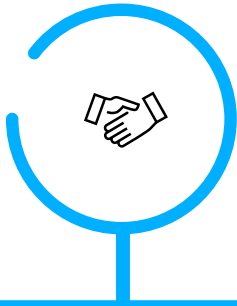
- ❖ Security for ECU System : system hardening, secure boot, system integrity, secure updates, ..
- ❖ Security for E/E Architecture : intrusion detection, key management, data security, ...
- ❖ Security Governance : security consulting, testing, verification&validation, ...



Global Partnerships in Public Sectors

Projects	Summary
<ul style="list-style-type: none">• University in Germany• 2024.01~2026.12	<ul style="list-style-type: none">• Research and develop security design patterns for <i>charging stations and battery management systems</i>
<ul style="list-style-type: none">• University in Germany• 2023.03~2024.02	<ul style="list-style-type: none">• Enhance and optimize cybersecurity testing efficiency by integrating with <i>Hardware-in-the-Loop</i> environment
<ul style="list-style-type: none">• Connected Car Tech Co. + CySec Co. in UK• 2023.11 ~ 2026.10	<ul style="list-style-type: none">• Develop a TCU integrating <i>IDS and OTA updates</i> to enhance TCU security
<ul style="list-style-type: none">• Czechia Consortium of Public and Private Sector• 2022.12 ~ 2025.11	<ul style="list-style-type: none">• Address various cyber threats when operating large autonomous vehicle fleets

Effects Through The Partnerships in Public Sector



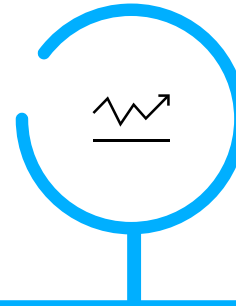
Partnership with Local OEMs

Partnerships with local institutes and universities can create opportunities for collaborating with major local OEMs, Tiers, and engineering firms



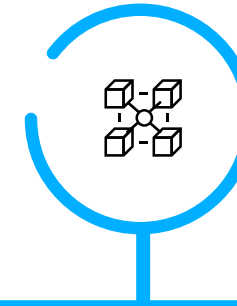
Pioneer Technologies

Collaborative R&D with academia and major local tech companies can lead to pioneering technology advancements in the SDV environment



Global Recognition

Presentation of R&D deliverables as case studies at global major events will enhance Autocrypt's global recognition



Enhanced Interoperability

By validating cybersecurity standards that differ across regions, enhanced interoperability can be attained

Global Partnerships in Private Sectors : C-ITS(V2V/V2I) Security

Projects

- V2X Security with Global Tier 1 Supplier in USA
- '21.11~'23.09 / '23.07~ '24.07 / '23.09~'23.12

- V2X Security with Global Tier 1 Supplier in Japan
- 2022.05 ~ 2023.09

- V2X Security with Global IT consulting and service firm based in Japan
- 2023.07 ~ 2025.06

- V2X Security with V2X Solution Provider in Australia
- 2022.08 ~ ongoing

- V2X Security with V2X hardware and software solutions provider based in Canada
- 2022.04 ~ 2023.08

Summary

- Autocrypt supplies V2X ITS security libraries and SCMS clients based on all standards including US, EU, and CN
- Partnership is extending beyond V2X into other In-Vehicle Network domains
- Not only with V2X but Autocrypt's Security Fuzzer, Security Analyzer, and other testing services are in discussion within the scope of the partnership

Global Partnerships in Private Sectors : IVS Security

Projects

- IVS Security for TCU with Global Tier 1 Supplier based in US
- 2021.11 ~ ongoing

- Comprehensive Security Partnership with US based Global Tier 1 based in US
- 2023.08 ~ ongoing

- Comprehensive Security Partnership A Global Major Electronic Company's Vehicle Components Solutions Division
- 2023.01 ~ ongoing

- Security Tests using HiL Test Systems with Major Engineering Companies in Germany
- 2023.03 ~ ongoing

Summary

- A comprehensive security partnership spanning the entirety of the partner's production process
- Implementing security design elements such as Intrusion Detection Systems (IDS) in the TCU Zonal environment moving towards SDV
- Active partnership discussion which may even include the potential for a joint venture (JV)

Global Partnerships in Private Sectors : PnC Security

Projects

Summary

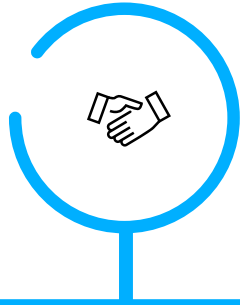
- European EV Charging Services and Solutions Provider
 - 2019.11 ~ ongoing
-

- Develop a PKI system based on ISO 15118 to enable Plug and Charge capabilities in EVs and charging stations.

- North American eMobility Service Provider
- 2023.06 ~ 2024.12

- Establish PnC PKI to enable secure Plug and Charge features and manage related certificates.

Effects Through The Partnerships in Private Sector



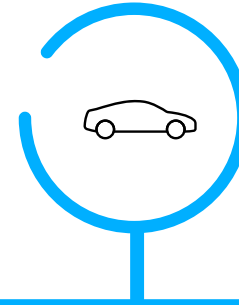
Business Opportunities

Through a strategic partnership with major global Tier 1 suppliers, an opportunity to expand business across the entire automotive industry



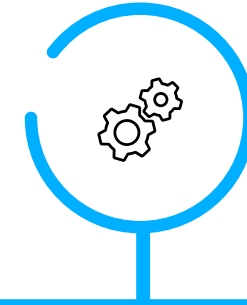
Presence in the Auto Industry

Since these Tier 1 suppliers serve diverse global clients, partnering with them is projected to enhance Autocrypt's global influence



OEM Environment Penetration

Furthermore, these partnerships significantly increase the potential for projects with OEMs, who are major customers of global Tier 1 suppliers



Time and Cost Efficiency

Can efficiently develop products that appeal to target customers in terms of both time and cost (e.g., testing in a HiL environment)



Thank You

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