Automotive iHSM Security Solution
課題解決に向けて

Toru Furukawa
Senior Field Application Engineer
Silicon IP div, Rambus

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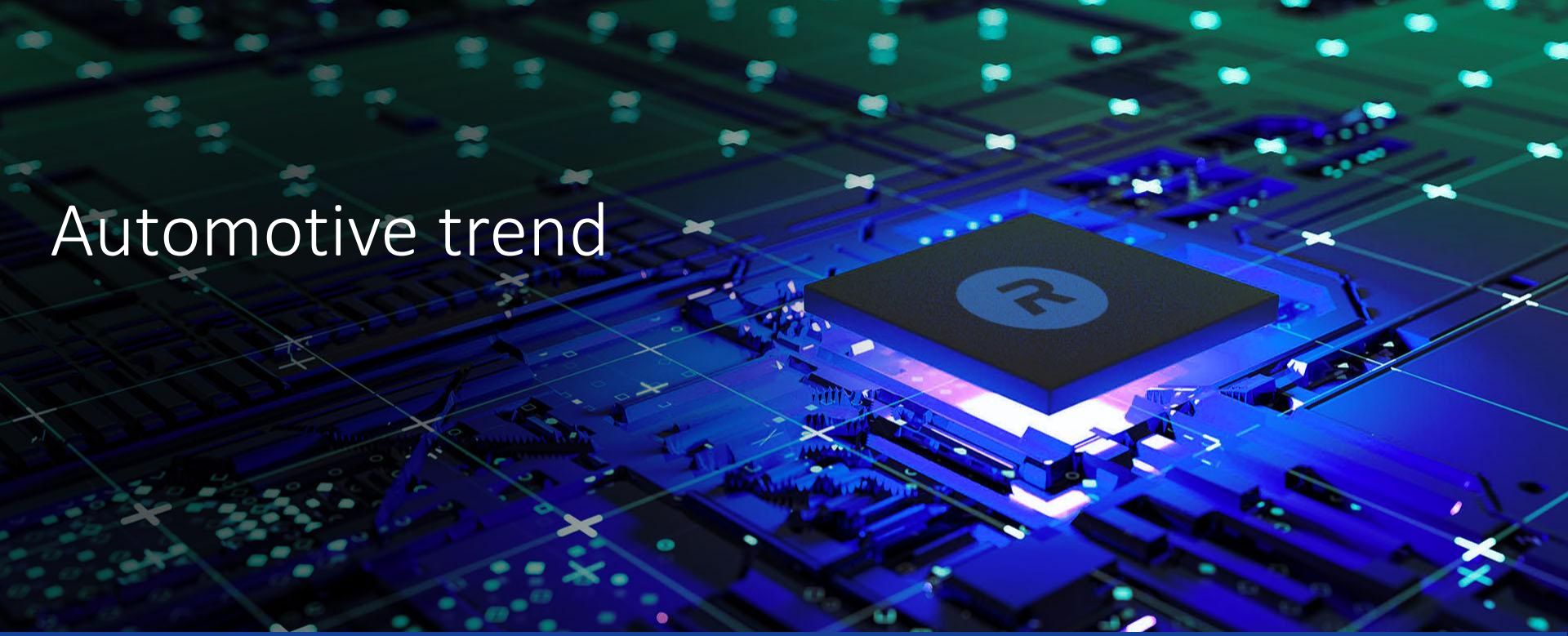
Agenda

- Automotive Trend （オートモーティブ動向のおさらい）
- Realizing Software-Defined Vehicle（見えてきた課題）
  - Opportunities and Challenges
- ETAS/Rambus Bundled Automotive Security Solution
  - イータス＆ラムバスからのバンドル・ソリューション
- iHSM benefits & Value-Add（その利点と価値）
- Summary and call to action（まとめ）

Automotive trend



A paradigm shift

Automotive Transformation（OTAによる持続的な価値の提供）

Customer experience

A transformation from an isolated mechanical car to a highly inter-connected software-driven car for ultimate customer driving experience

Electrification

Automated Driving

Digital user experience

Long-term vehicle value

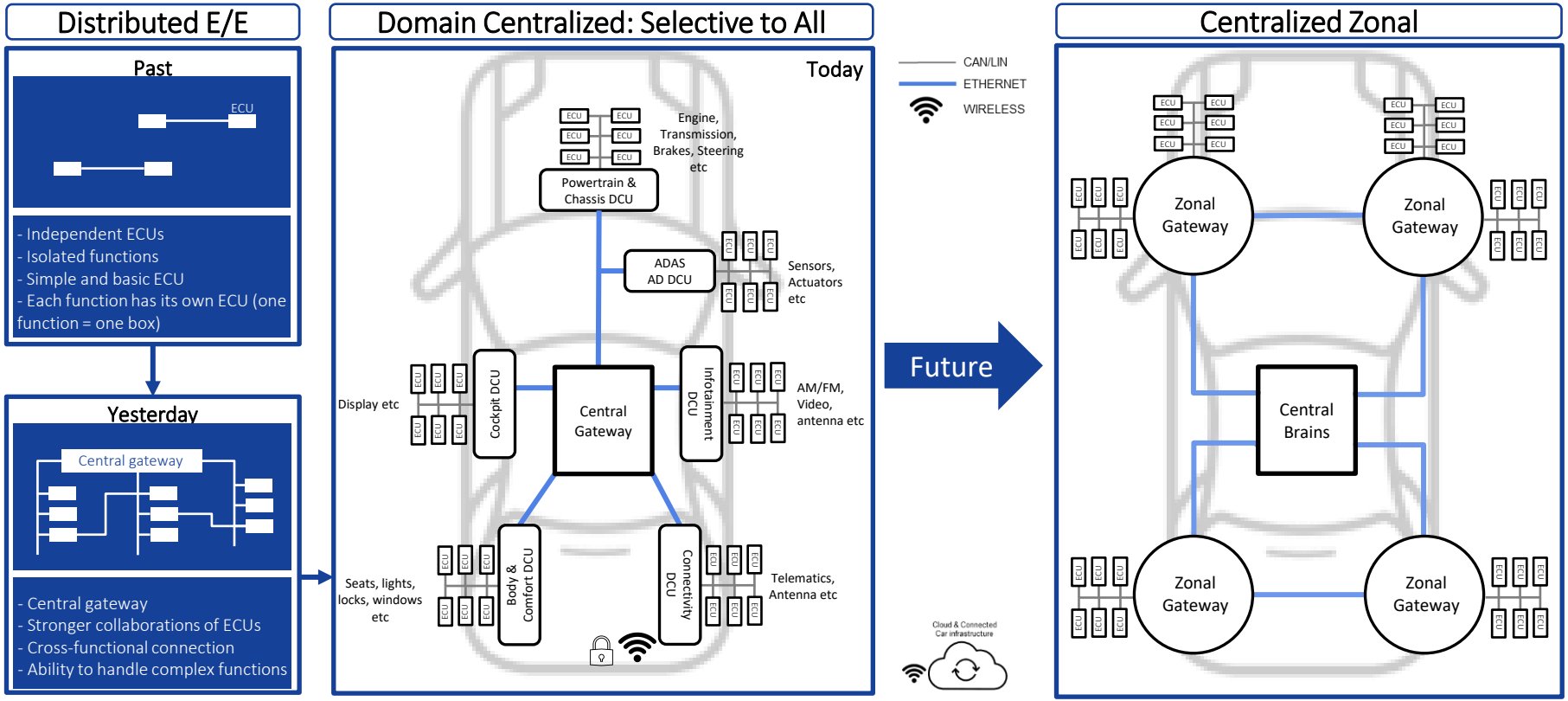
Cost efficiency

Environmental sustainability

Safety & security

E/E Architectural Transformation（E/Eアーキテクチャ進むECUの統合）

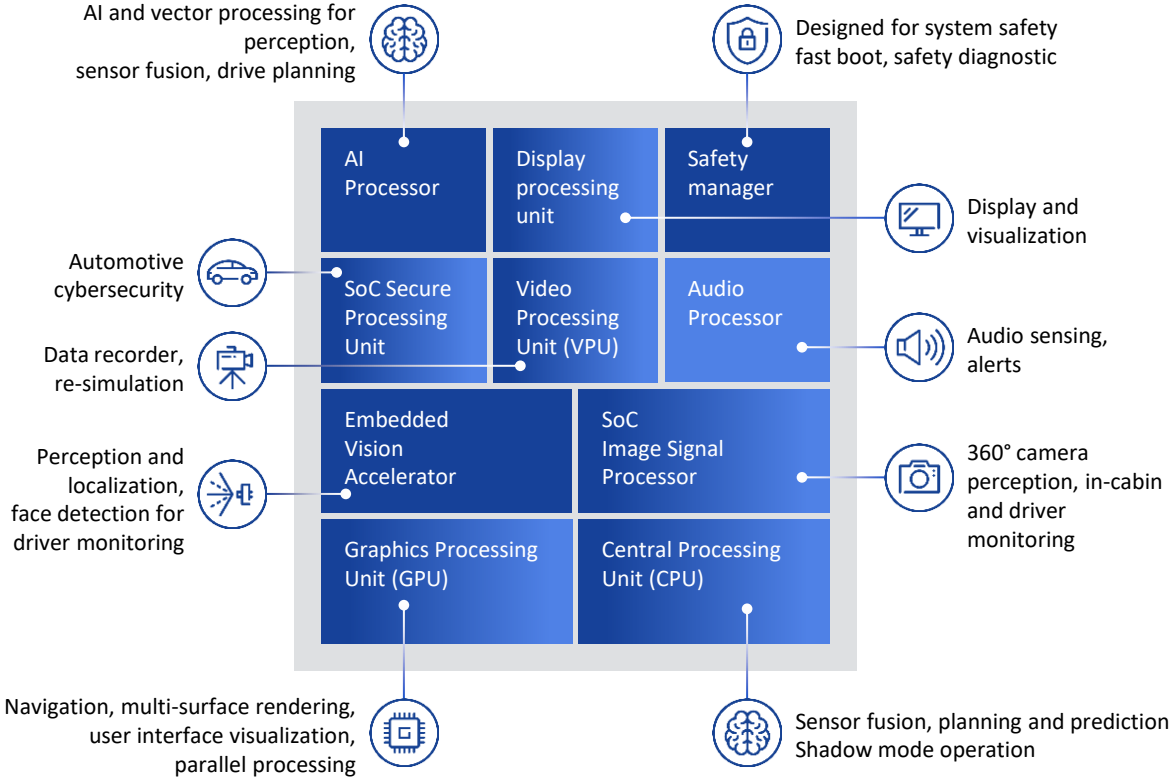
From isolated functions → domain centralized → centralized zonal E/E architecture



System-on-chip (SoC) Architecture（SoCとソフトウェアの大規模化）

The cornerstone of E/E architecture

Automotive SoC are equipped with multiple computing islands and heterogenous architecture to
- Handle large amount of data
- Execute real-time decision-making algorithms
- Process sophisticated software in real time

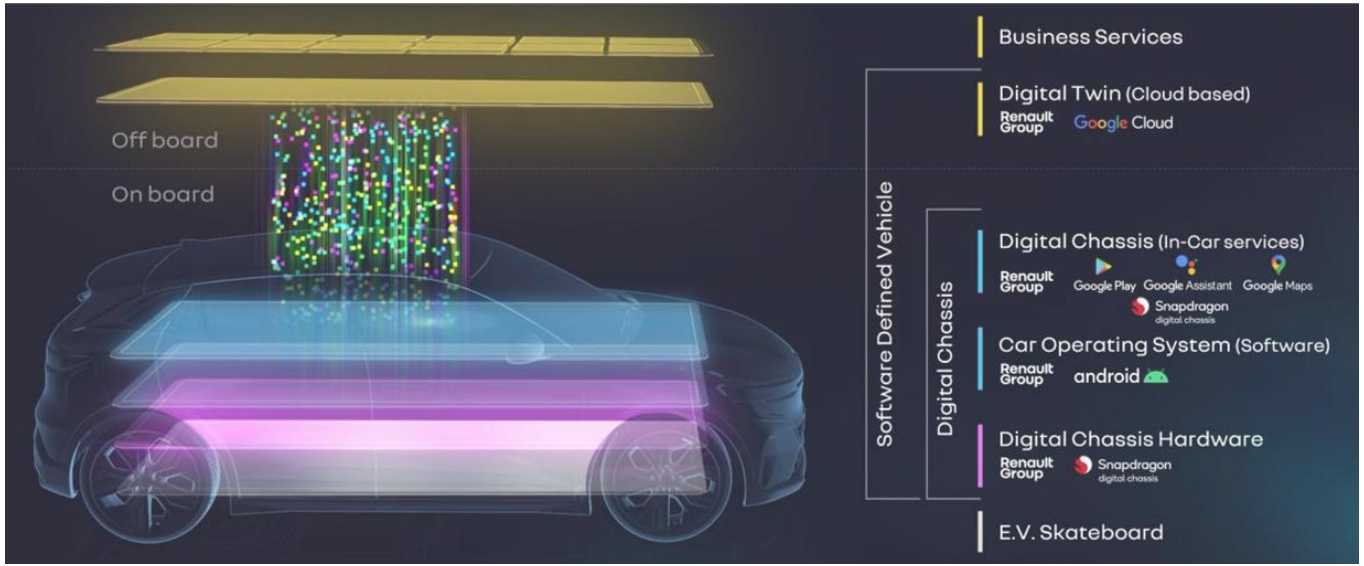


Realizing Software-defined Vehicle

Opportunities and challenges

Software-defined-vehicle (SDV)（恩恵と課題）

Value and benefits



https://www.renaultgroup.com/en/magazine/our-group-news/all-about-software-defined-vehicle/

- Enhance customers' experience
- Establish new business models
- Increase automation
- Enhance end-to-end security
- Enable preventative maintenance
- Establish feedback loop

Challenges（標準化、規制への対応、迅速な市場への投入）

HW & SW integration

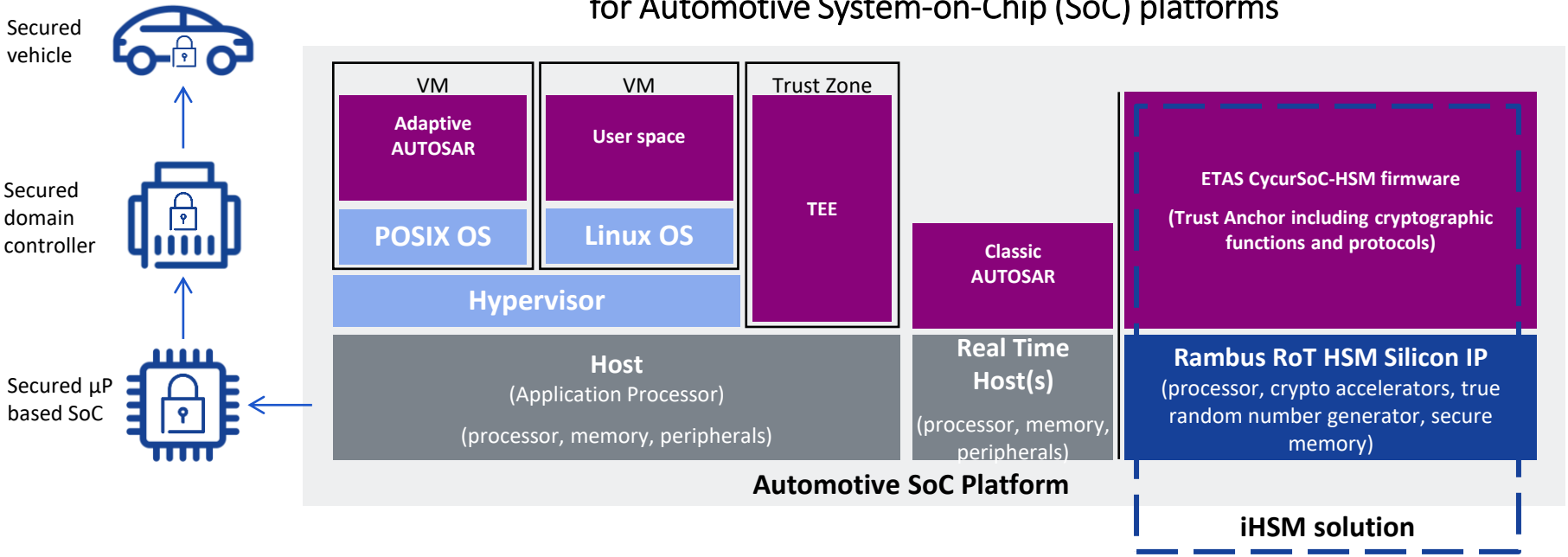
ETAS/Rambus Automotive SoC Security Solution

The pre-integrated, pre-validated, pre-certified HW/SW HSM solution

iHSM Bundled Security Solution（課題解決に向けて）

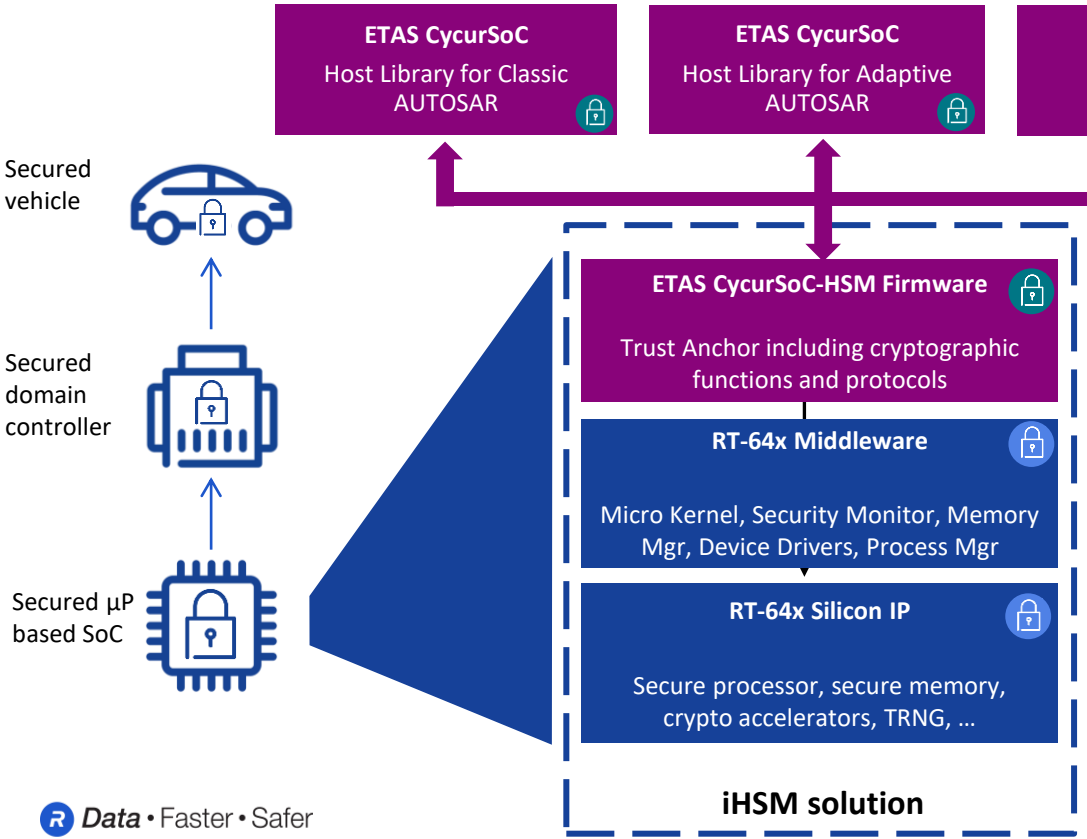
Pre-integrated, -tested and -validated solution

Full stack Rambus RoT HSM Silicon IP and CycurSoC HSM FW solution
for Automotive System-on-Chip (SoC) platforms



iHSM Bundled Security Solution（HW/SWの事前統合と検証）

Pre-integrated, -tested and -validated solution



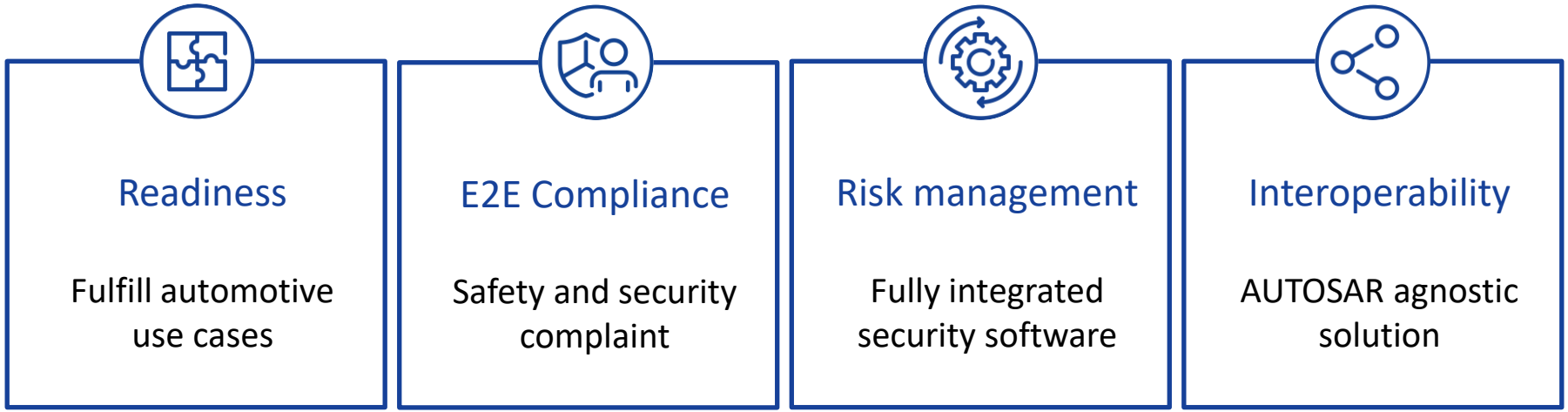
iHSM solution establishes root of trust for applications and SoCs incl. HPC, DCUs, Smart sensors, Central Gateways, ADAS, IVI, Telematic Units etc..

ETAS ESCRYPT CycurSoC-HSM Security components

Rambus Root of Trust/HSM Silicon IP + Rambus SDK

Solution Highlights（ソリューション・ハイライト）

Pre-integrated, -tested and -validated solution



Summay &（まとめ）
Call to action

Collaboration and standardization are essential for success

Automotive SoC Security Solution（セキュリティ・ソリューション）

Summary

- Speed up the integration activities and development for Tier 1s and OEMs
  ~ 12 - 18 months timeline acceleration
- Early security defect findings mechanism
  ~ reducing bugs and improve time to fix significantly
- Simplify the realization of security use cases through early integration
  Having secure boot and communication achieved properly right from the beginning
- Achieve technical risk mitigation strategy and adhere to compliance regulations
  Get compliant ready security solution right from the beginning

Call to action（最後に）

The growing complexity of hardware and software in modern vehicles, the rapidly expanding cyber threat landscape, and the increasing sophistication of adversaries targeting highly connected software-defined vehicles make

- strategic *collaborations* for integrated security solutions and
- *API standardization* for hardware-software interoperability

mission-critical.

Hence a call to the automotive industry to collaborate on *identifying and prioritizing* key HSM hardware and software *APIs for standardization* to enhance interoperability and ecosystem compatibility,
ultimately boosting Time to Market (TTM) and Time to Revenue (TTR) efficiency.


Thank you
ご清聴ありがとうございました