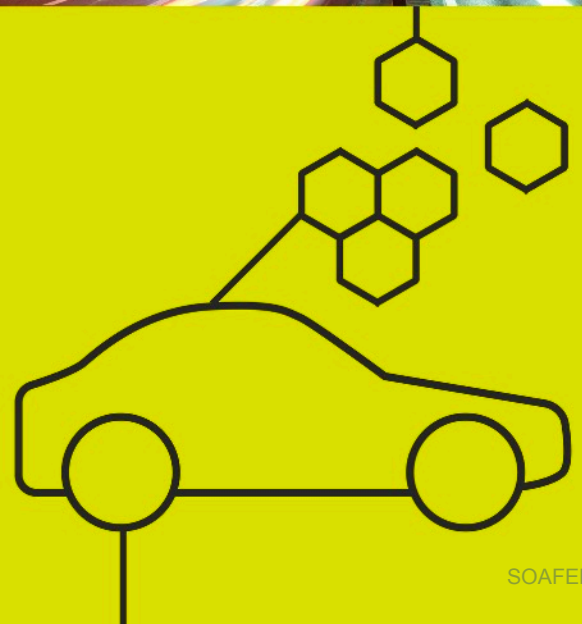
The Curse of Zonal Architecture

No free lunch theorem



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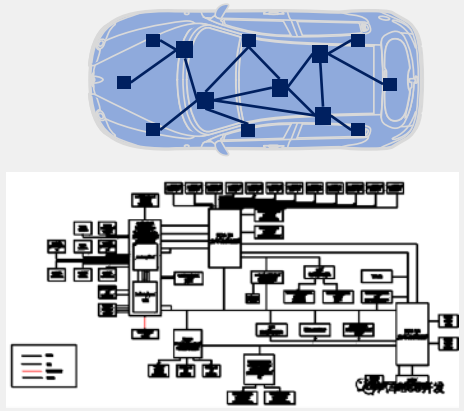
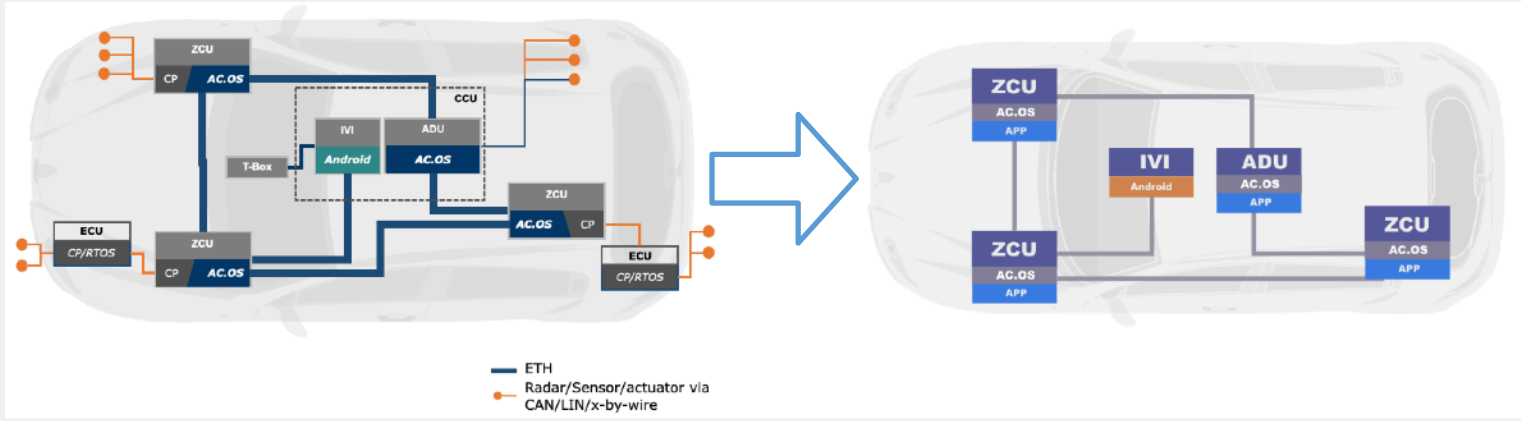
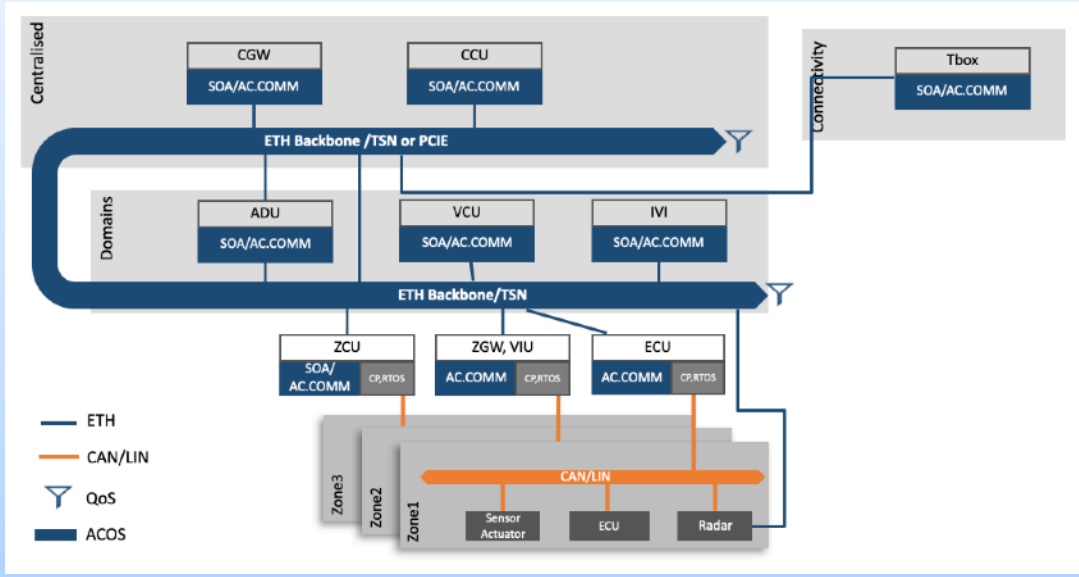
E/E architecture evolution

Traditional EE Architecture





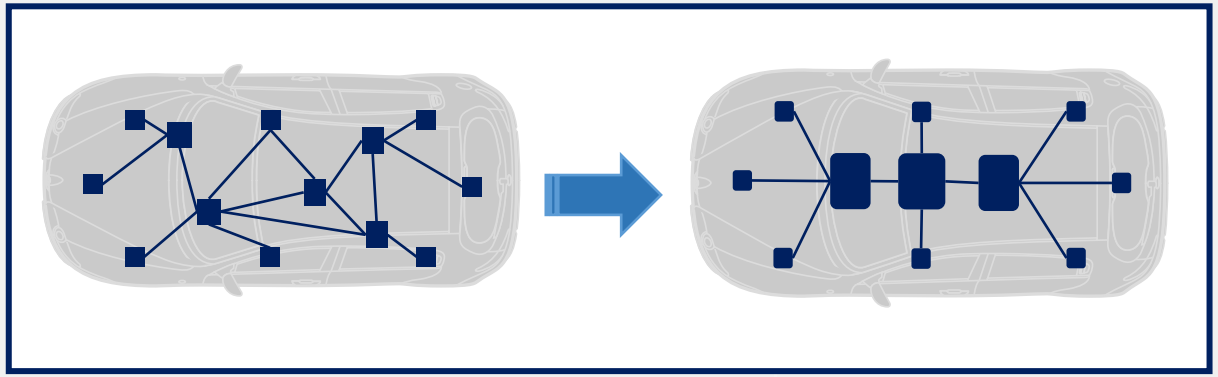
Full Zonal Centralised Computing EEA

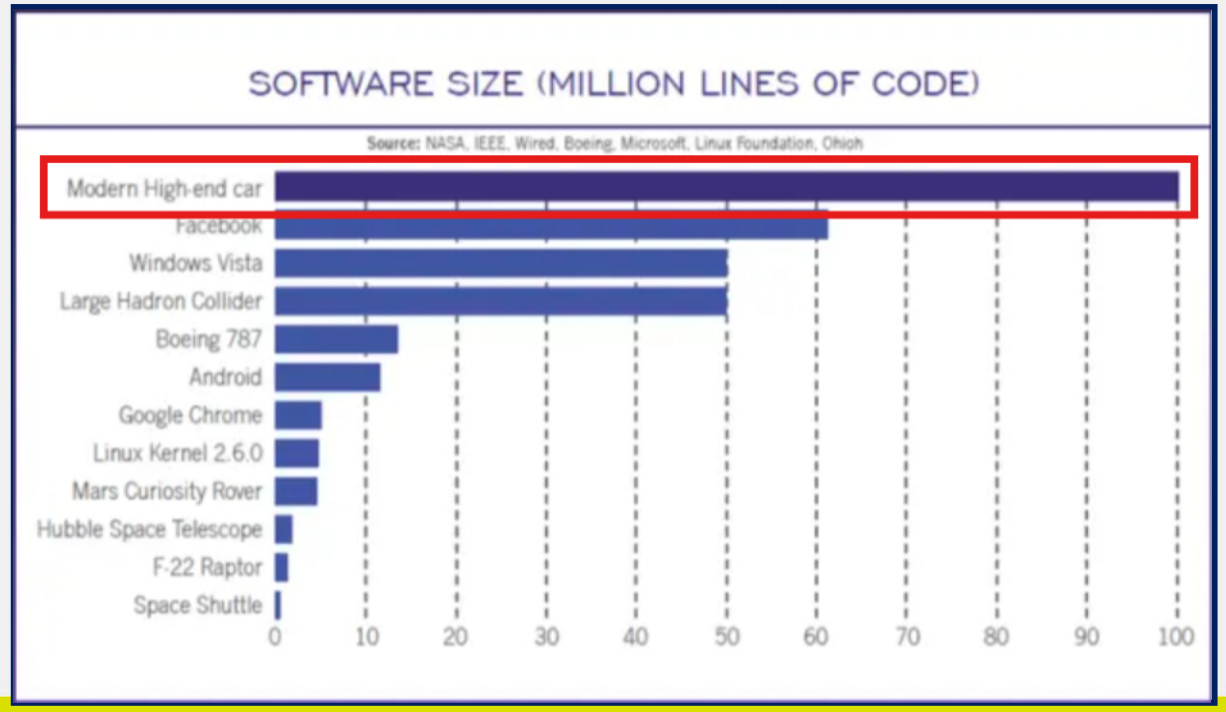


Key Challenges

- Single Point of Failure
- Software Complexity
- Latency and Bandwidth Bottlenecks
- Power and Thermal Management
- Security Vulnerabilities
- Transition Costs and Legacy Systems
- Standardization Gaps

TCO challenge due to E/E architecture evolution





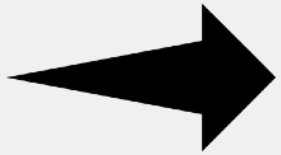
Reduced HW Cost

TCO=$$$?

Increased SW Cost

Mitigation Strategies

- Single Point of Failure
- Software Complexity
- Latency and Bandwidth Bottlenecks
- Power and Thermal Management
- Security Vulnerabilities
- Transition Costs and Legacy Systems
- Standardization Gaps



- Redundancy
- Modular Software
- High-Speed Networks
- Elastic Functional Safety Framework
- E2E Cybersecurity Frameworks
- Legacy Compatibility (Flexibility)
- Collaborative Standards

How we (AutoCore) optimizes TCO

AutoCore SYS Advantages

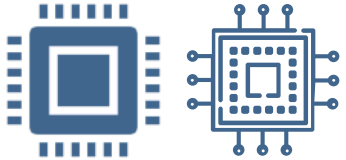
Pre-installed Apps & Services

Unified App platform

Modular design

ISO26262 ISO21434

Embedded FuSa & Security



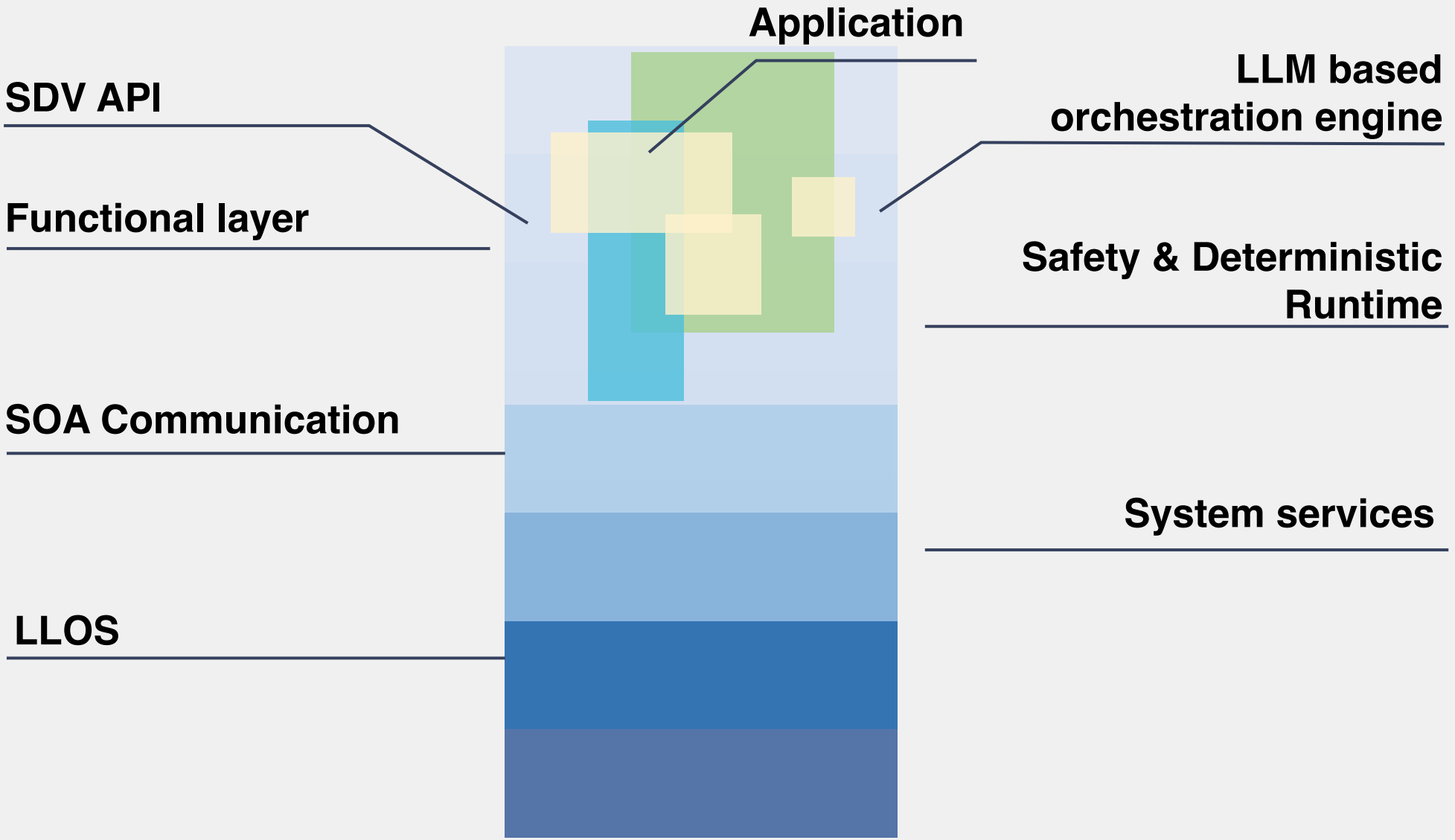
Multiple chipset support

Multiple EEA support

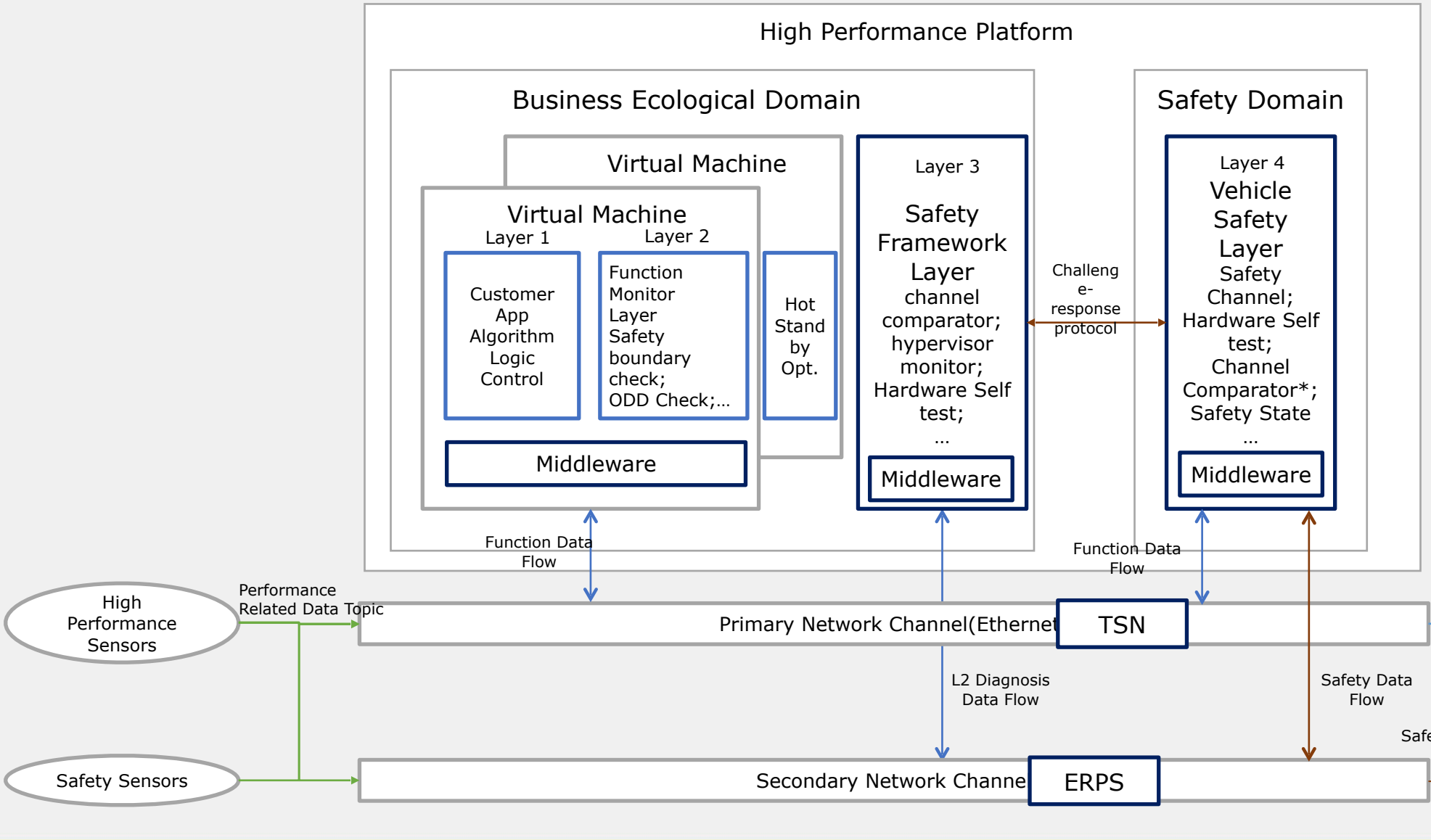
TCO Optimization products

- Cockpit & ADAS Fusion OS
- Driving & Parking Fusion OS
- Zonal Controller OS
- Central Gateway OS
- And more….

Unified Reference architecture for CCU/HPC/DCU

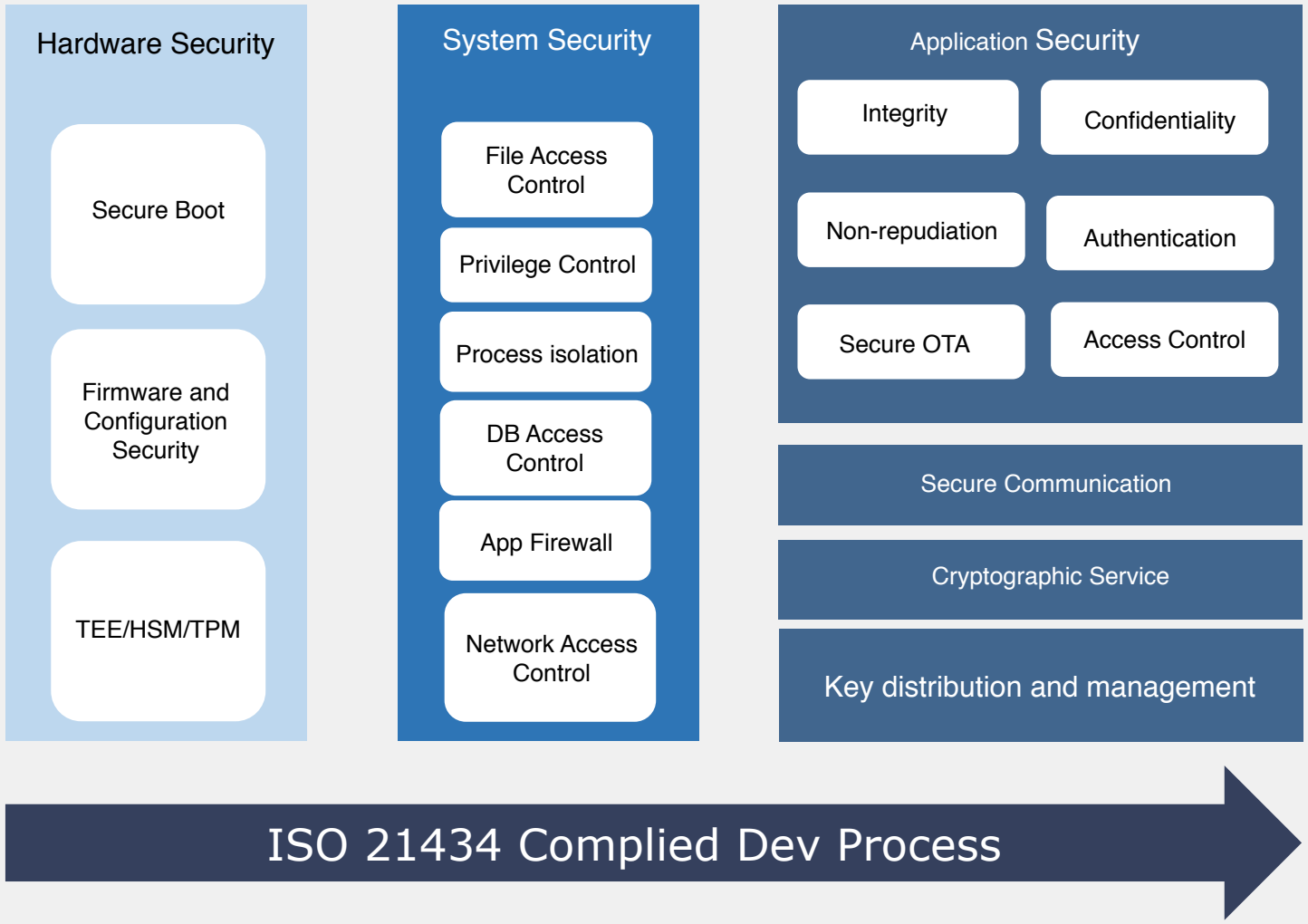


Elastic Functional Safety Framework

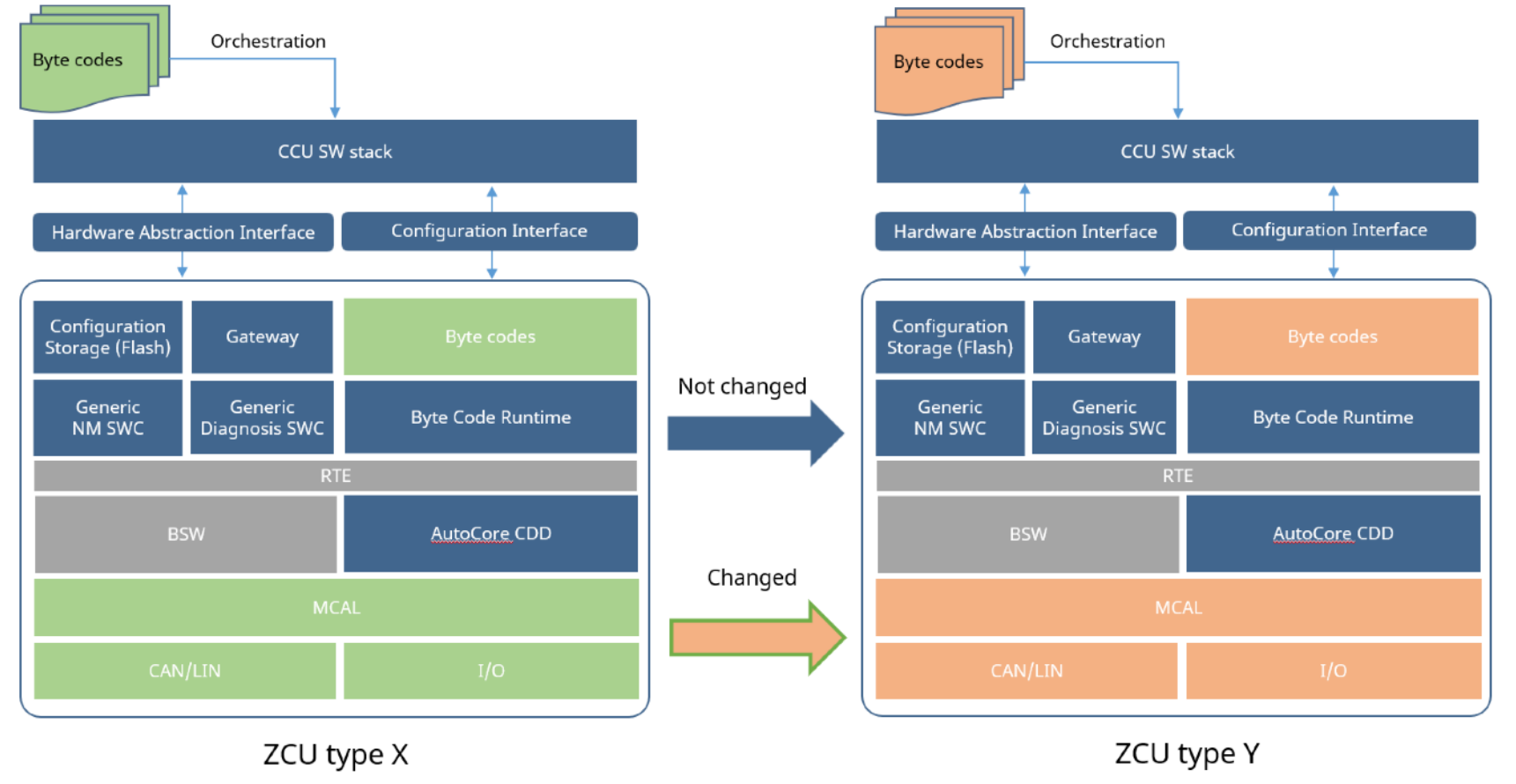


- Layer1&Layer2：Function Monitor
- Layer3：Safety Framework
- Layer4：Vehicle Safety

E2E Cybersecurity Frameworks



Standard Reprogrammable ZCU solution



Thank You