



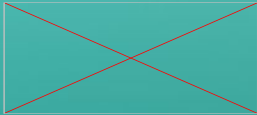
Automotive SW in Open ecosystems: is not (yet) mainstream

Vishal Suresh

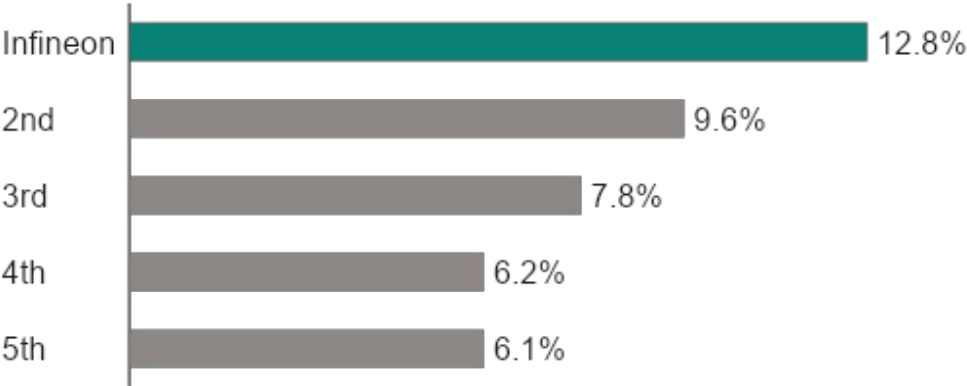
AOSS Starnberg, June 2026



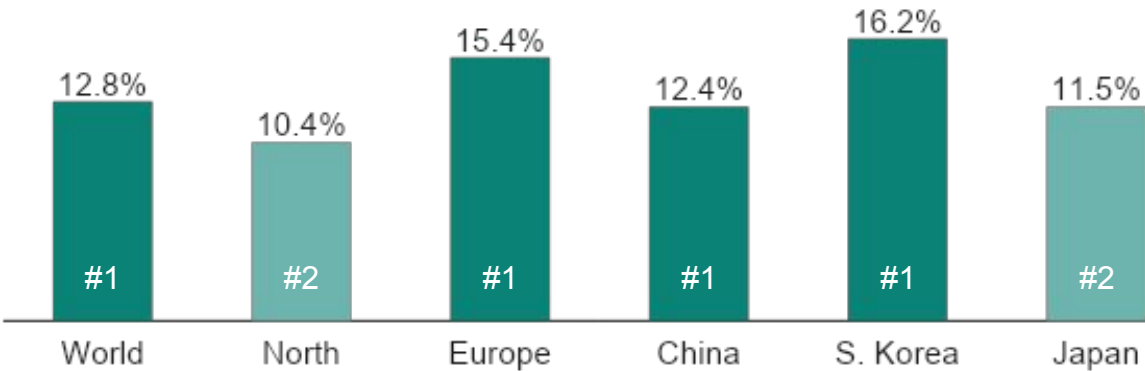
Infiniteon's top market position is built on system competence based on an industry-leading product portfolio



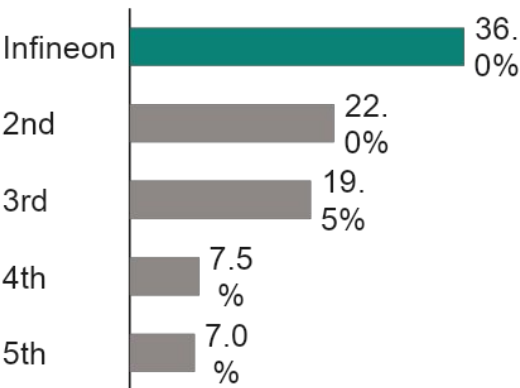
Automotive semiconductors (2025 total market: \$74,408m; +6.4% y-y)



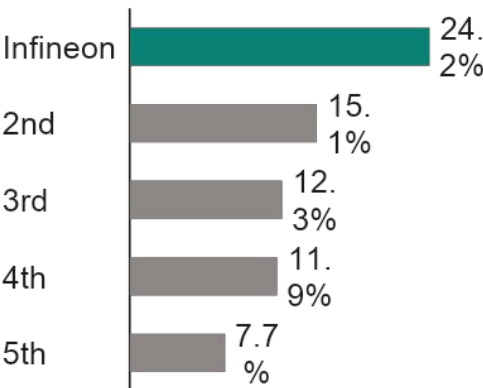
Infiniteon's 2025 market share and position by region



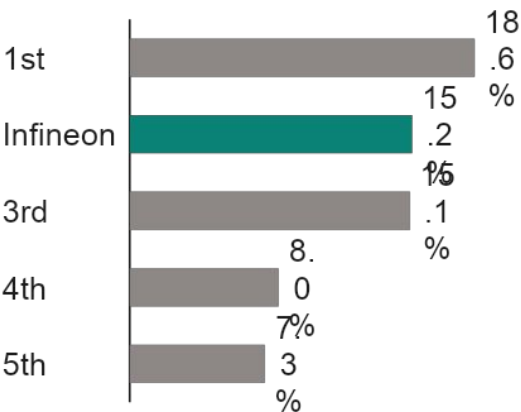
MCUs



Power

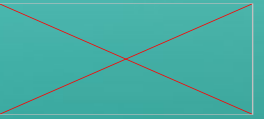


Sensors¹



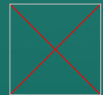
TechInsights: Automotive Semiconductor Vendor Market Shares. April 2026. ¹ Sensors: S&P Global: Automotive Semiconductor Market Shares 2025. April 2026.

Software-Defined-Vehicles demand dependable computing – Infineon’s market-leading solutions ensure safety and reliability

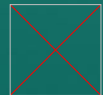


Challenges

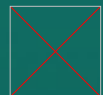
- Modularity & continuous feature upgrades
- Consolidation of ECUs and wiring harness
- Scalability across vehicle models
- Holistic developer journey



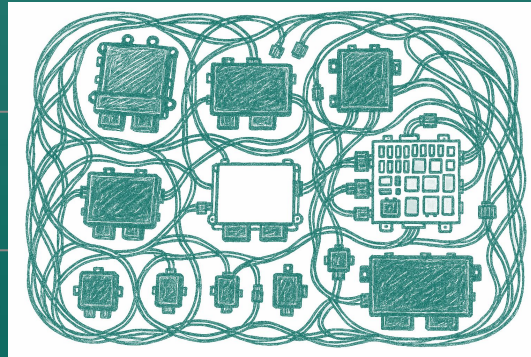
70 – 110 ECUs



Up to 5 km wiring harness

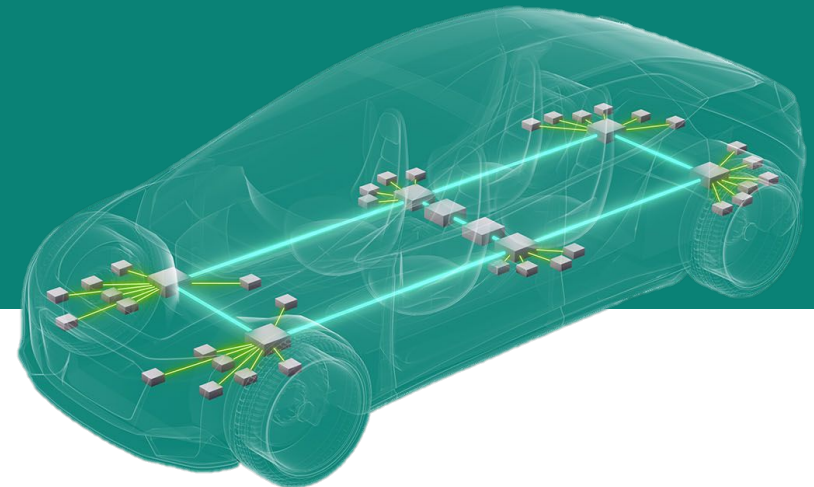


10 – 15 car models

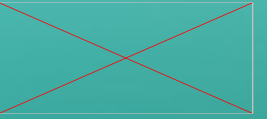


Solution

- Dependable microcontroller portfolio as the backbone for scalable EE architectures
- Efficient, reliable compute, control and high-speed communication
- Virtualization; AI acceleration
- SW & Tools ecosystem



Infineon belief: Intelligent Zone controllers and balanced centralization is the backbone of Software-defined-Vehicles



Optimized system cost & flexibility through zonal intelligence and balanced centralization



Cost-effective networking by keeping traffic local



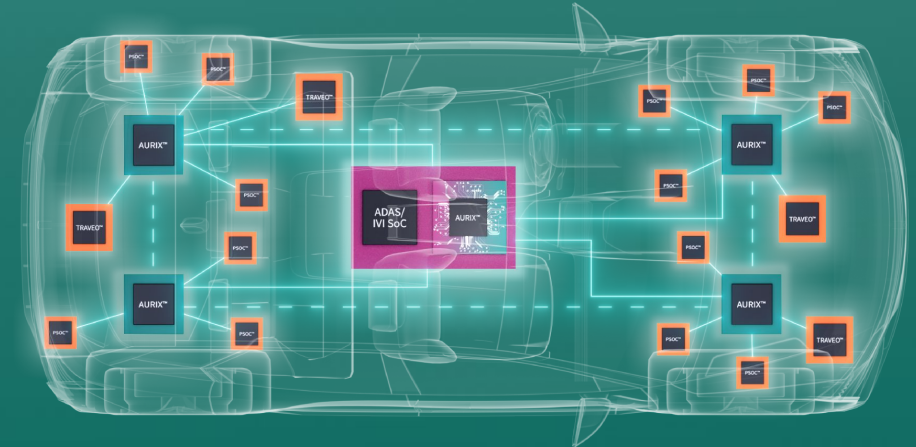
Clean integration of power distribution and I/O



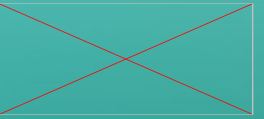
Improved safety and security via separation and containment



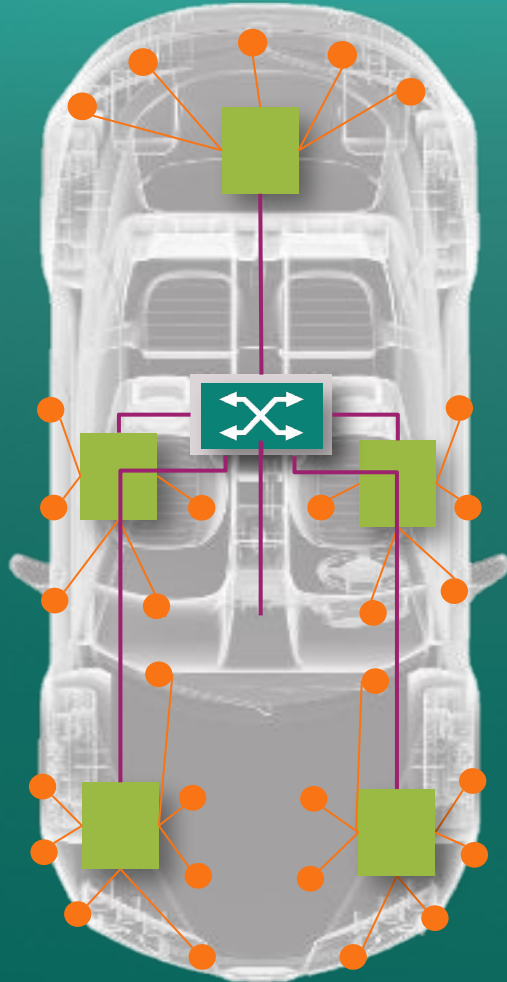
Simple software deployment and reconfiguration



Impact on evolving E/E architectures on IFX software portfolio



SW Architecture trends



OEM
involvement

■ HPC

- Unix-based, POSIX, open source
- MCU Safety Companion □ offload MPU
- Service based Com
- Hypervisor

■ Zone / Domains

- HW-accelerated coms, security, AI, filters
- SecOC, MacSec
- AUTOSAR and beyond
- Service to signal (Some/IP, DDS..)

■ Edge ECU

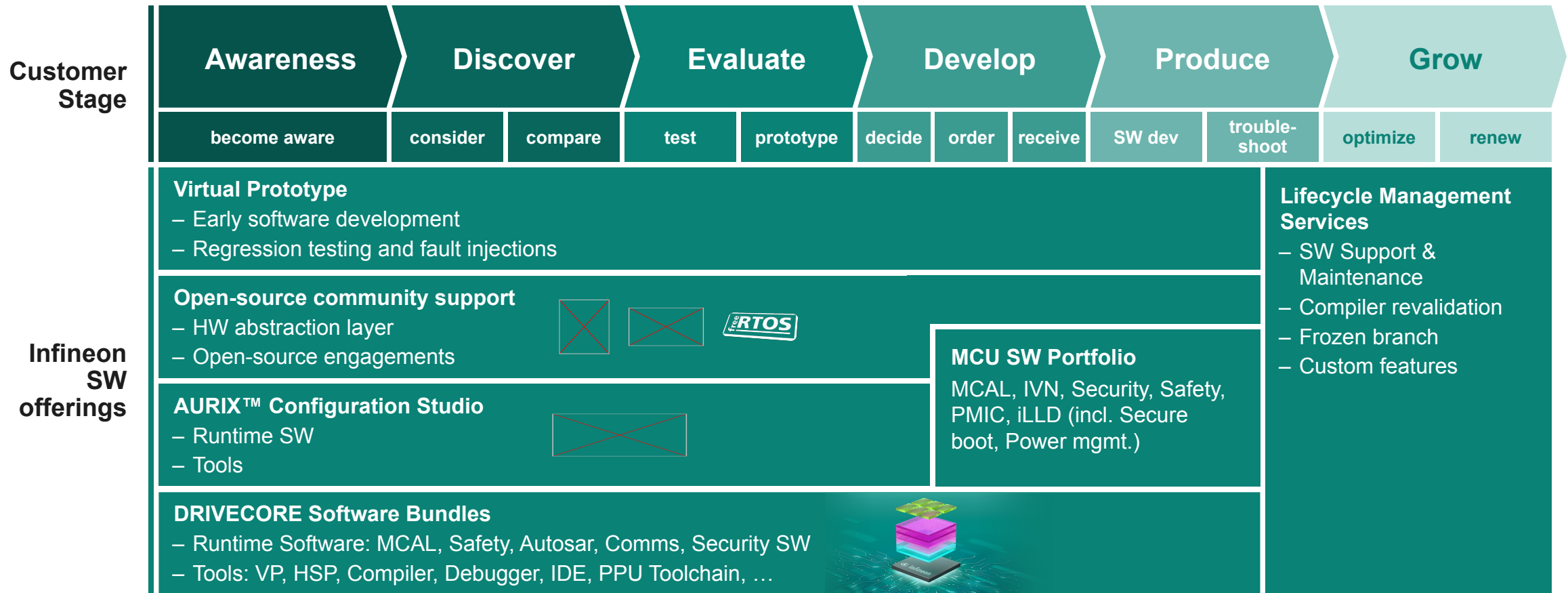
- Sense & control
- Bare metal, small RTOS
- Pre-processing
- Signal based Com / raw data

Impact on Infineon

ISO21434 Open Source
Time-to-Market
ASPICE ISO26262
New Runtimes Virtualization
AUTOSAR PQC
DDS ThreadX
Some/IP FreeRTOS Zephyr
1722 Shift Left
CI/CD MBD vHIL
RUST

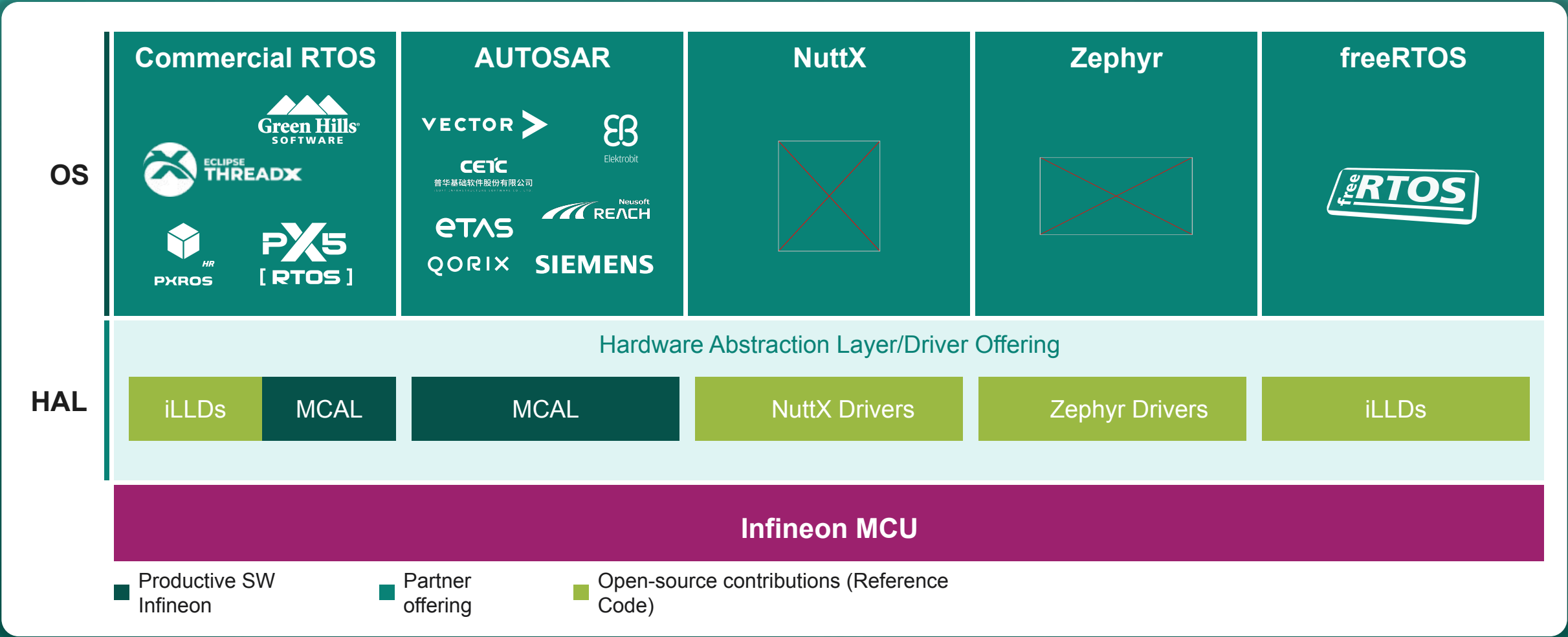
Holistic customer journey

Infiniteon and ecosystem software enabling the customer journey from evaluation to productive development

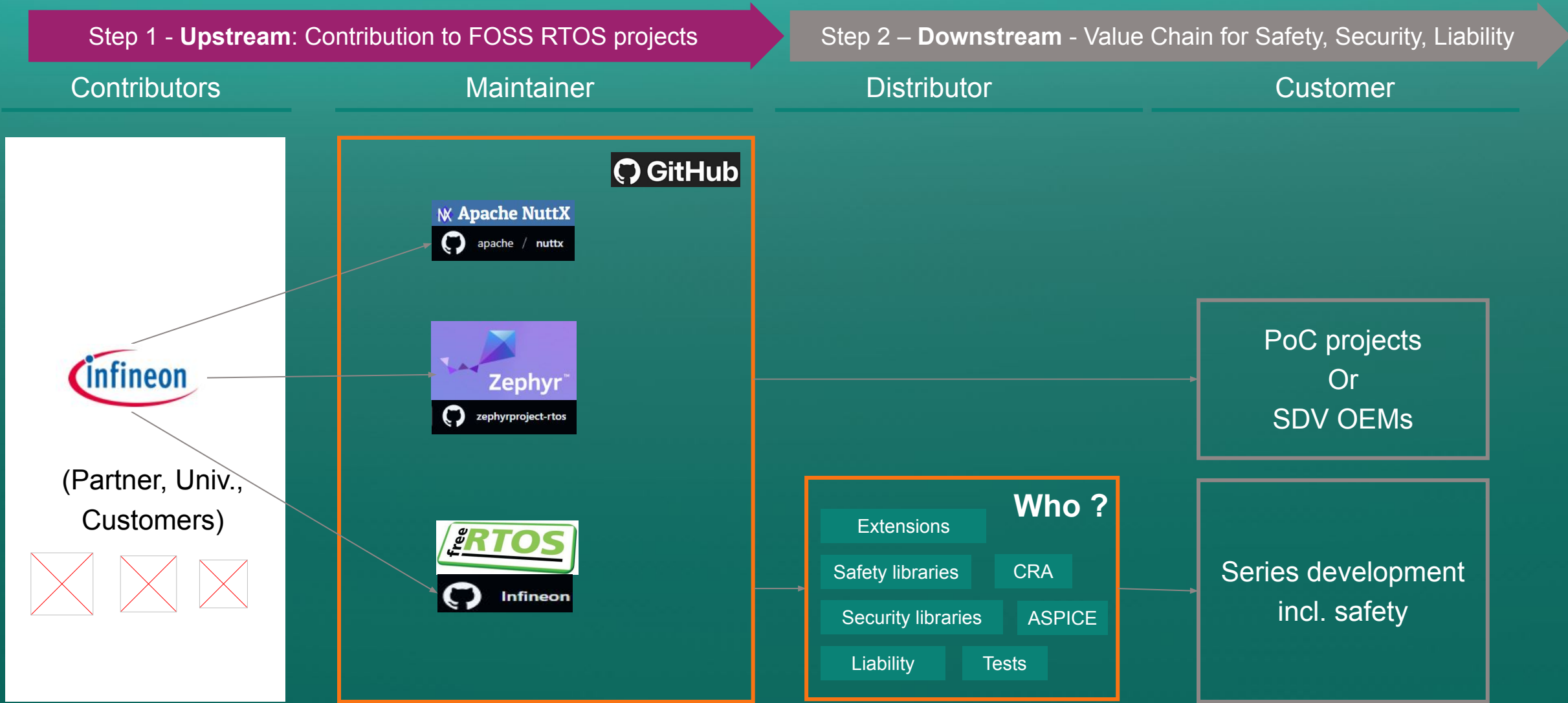
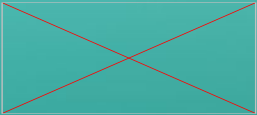


Customer journey

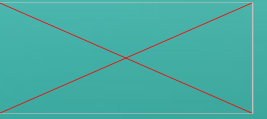
We offer a comprehensive HAL portfolio for our MCUs providing multiple options to our Customers



However, the open-source eco-system needs to find its way into SOP



The Bifurcated Software Ecosystem Problem: Call for Action



- Dual Software Ecosystems:
high-performance platforms and
MCU-based systems
- Industry open-source initiatives focus only
on HPC
- Community initiatives for MCU SW stacks
are fragmented with no established path to
SOP
- AUTOSAR remains the only HAL standard
 - ease of use & open innovation needs
attention



What can this community do to
address these challenges ?

