



STMicroelectronics Automotive MCU Technical Day 意法半导体汽车微控制器技术日

ETAS Embedded SW and Embedded Security Solutions

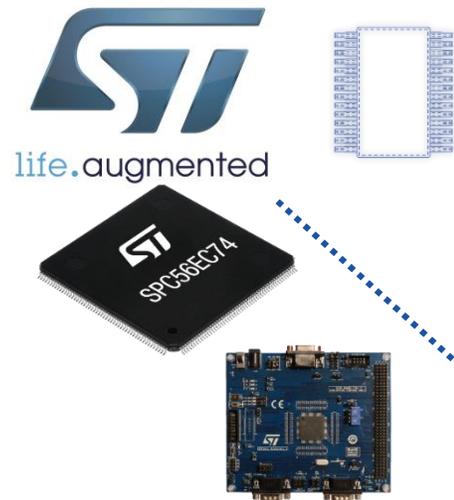
2017年ST汽车MCU技术日
2017年6月6日，上海
2017年6月8日，深圳
2017年6月13日，北京



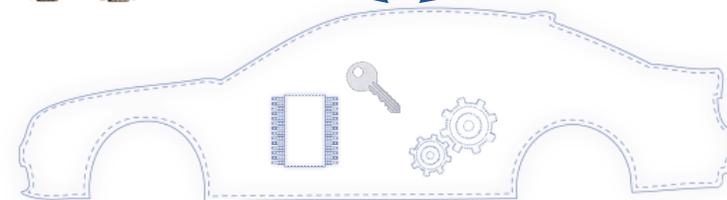


ETAS

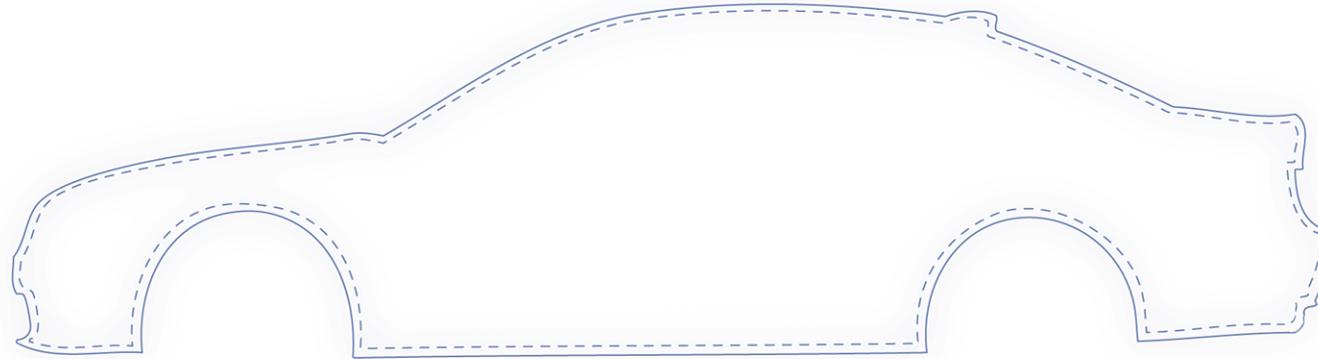
Core Business:
HW components
(correlated with Embedded SW)



Core Business:
Embedded SW tools and components
Security and safety engineering & consulting



Customer benefit: System solutions
Secure, safe, AUTOSAR-conform computing platforms and infrastructures



Basic Software and Tools (SW licenses)

AUTOSAR turn key solutions

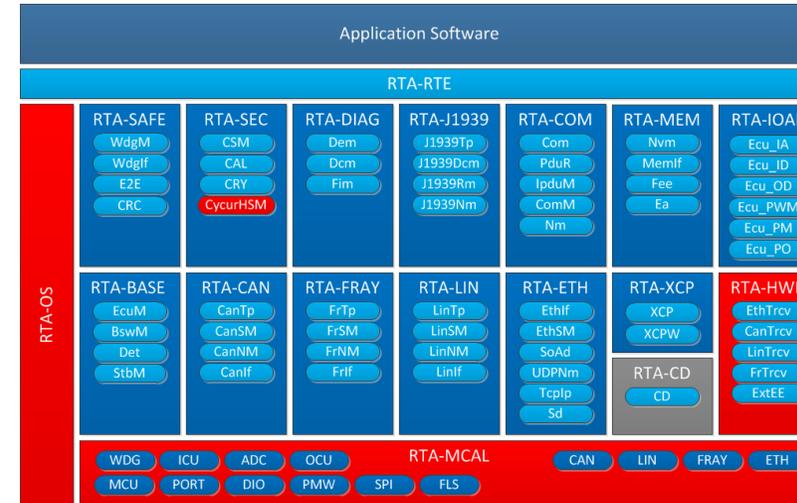
Embedded SW Engineering Services

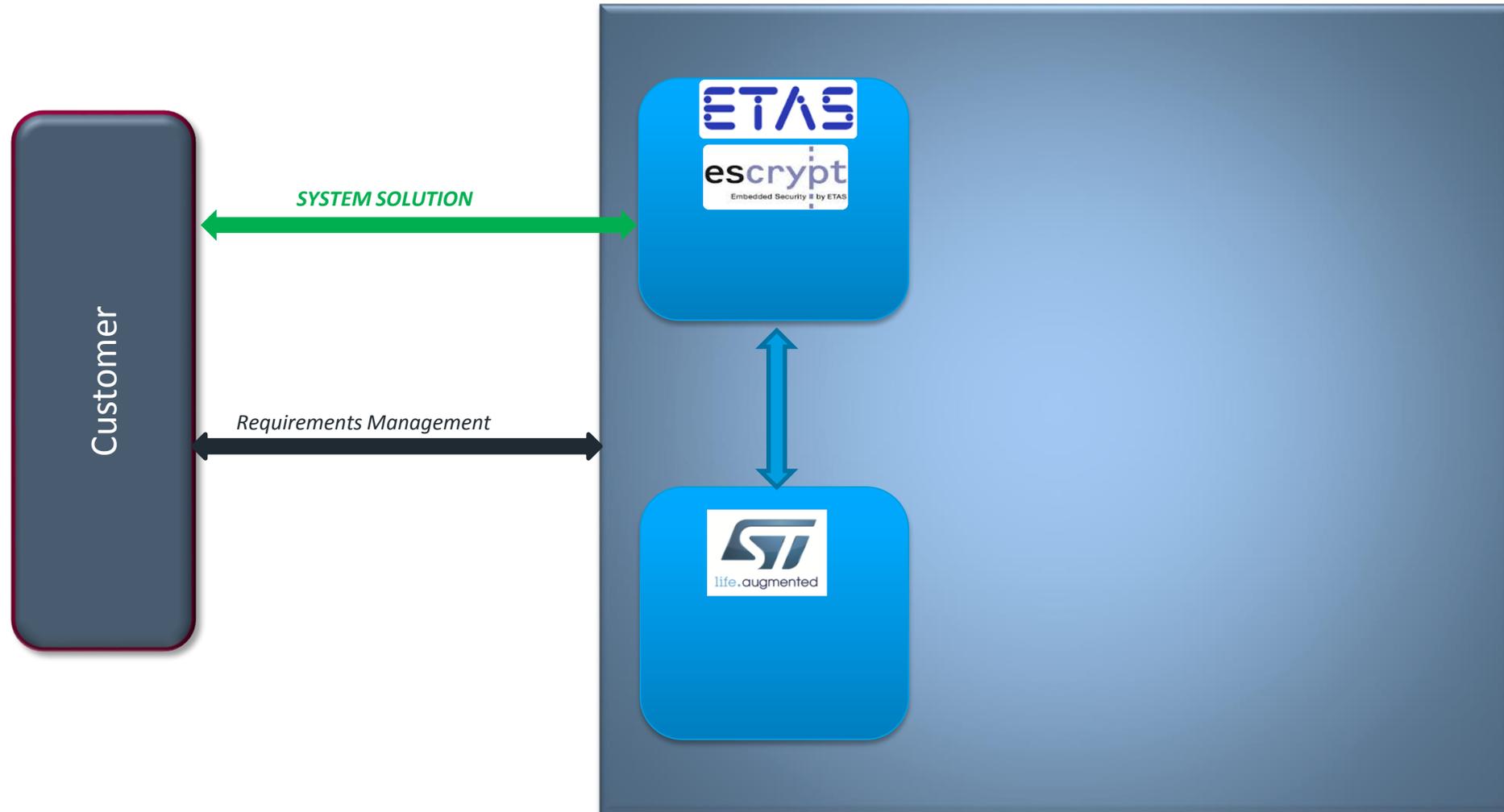
Customer-specific embedded software development (high quality and cost-effective)

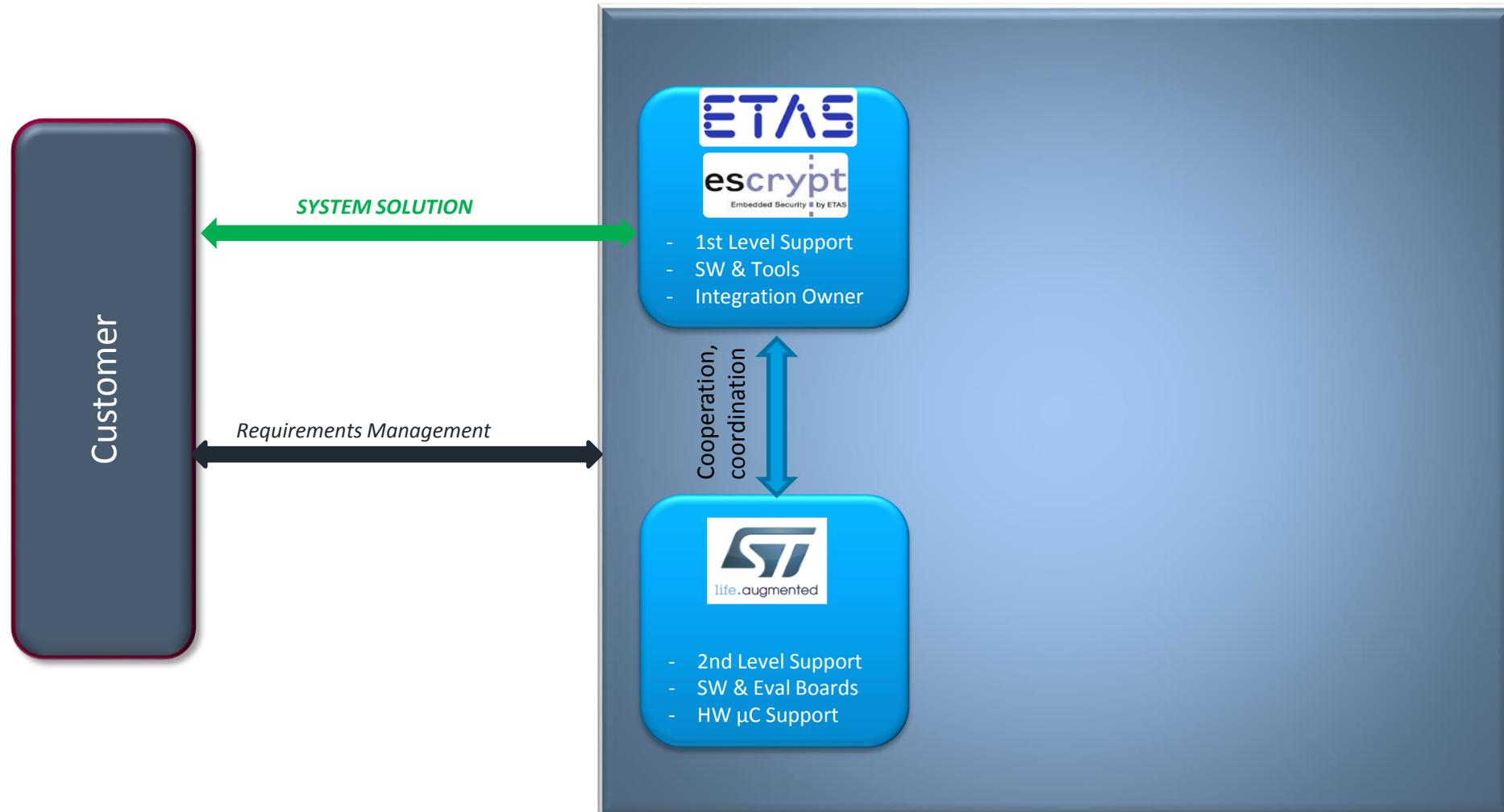
Embedded SW Consulting Services

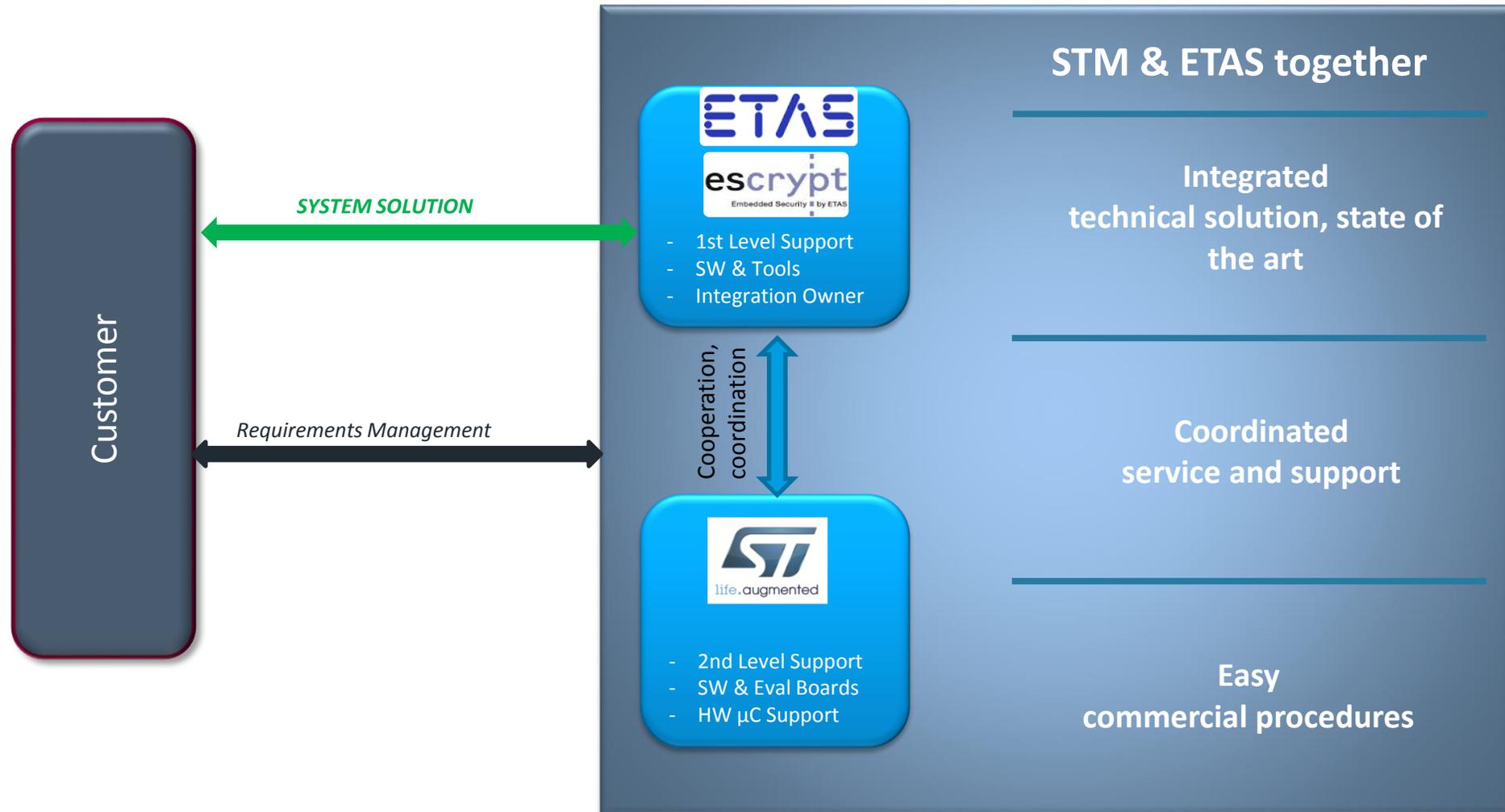
Expert support for development processes towards tomorrow's ECU architectures

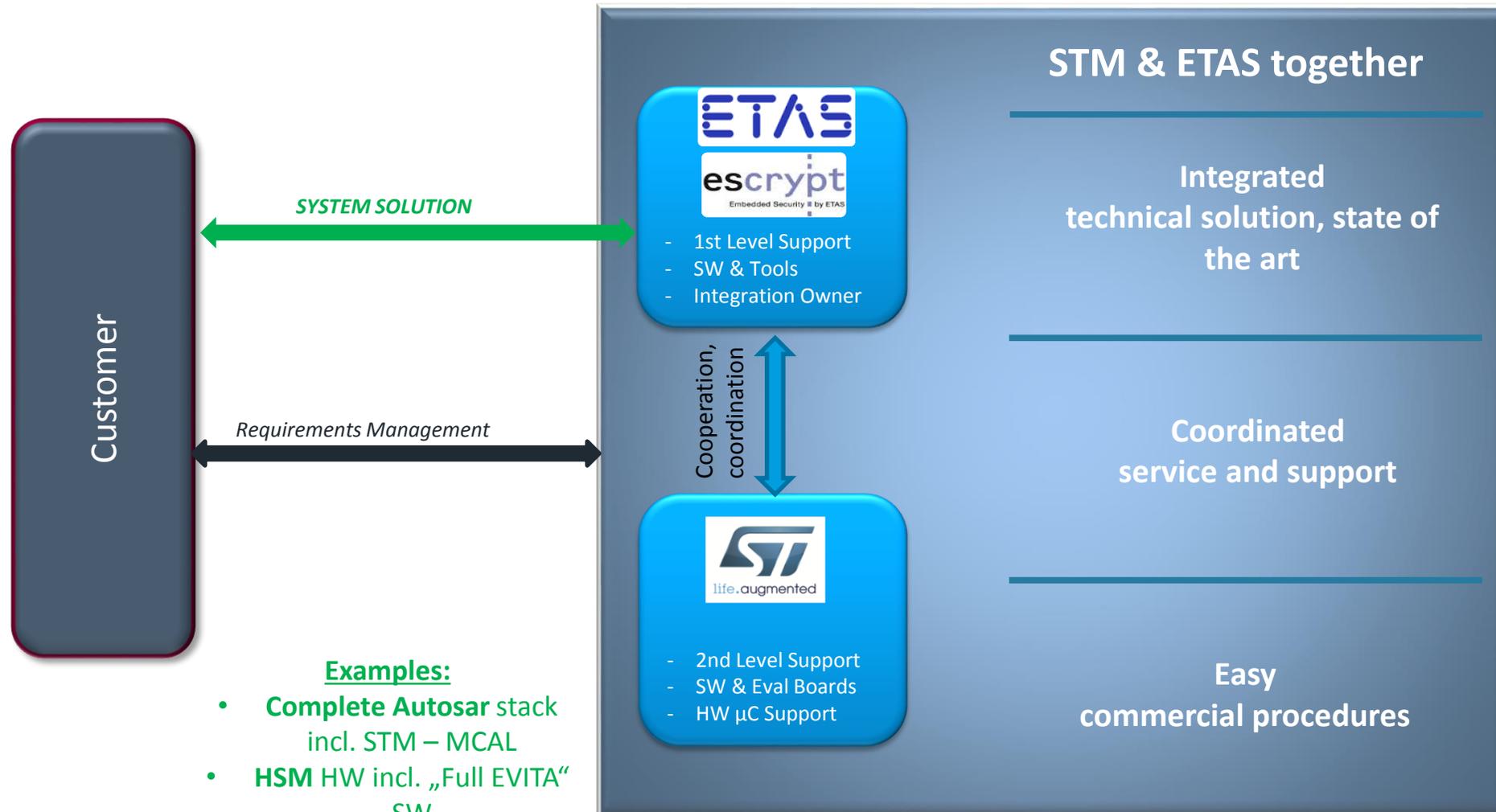
- Complete AUTOSAR stack
 - Support for AUTOSAR 4.x
- Automated configuration
 - Dedicated functionality to support common configuration tasks
- Proven in use components
 - Deployed in over 1 Billion ECUs world-wide
- Complete support for achieving ISO 26262 Compliancy
 - Functional safety qualification package supports a Safety Element out of Context-based approach

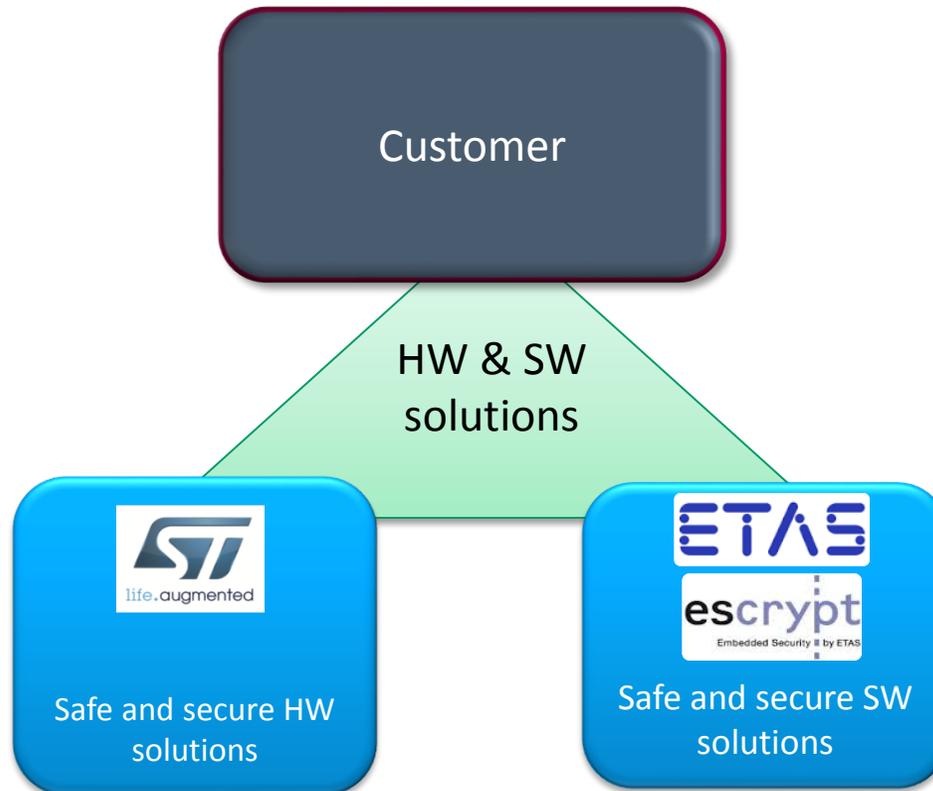










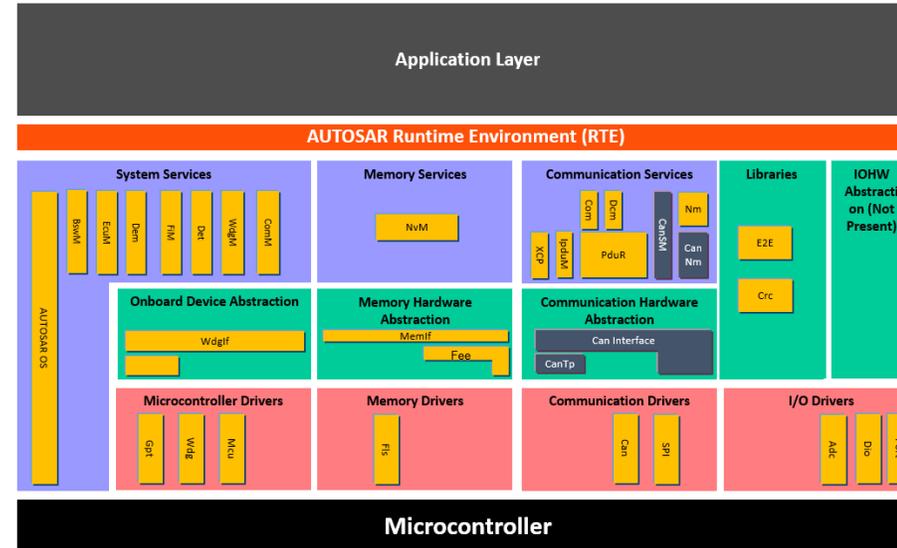


- Automotive Microcontroller system solutions
- Pre-integrated solution, validated on silicon
- Safety & Security
- Consulting / Engineering / Integration

Starter Kit Includes

– Software

- Example application
- RTA-RTE
- RTA-A2L
- RTA-OS
- RTA-SAFE
- RTA-DIAG
- RTA-COM
- RTA-MEM
- RTA-BASE
- RTA-CAN
- RTA-XCP
- MCAL
- ISOLAR-A



Execution environment

- Targeted for:
 - Specified Development board *or*
 - Virtual ECU
- **Training**
 - One week on-site training for up to 6 engineers

RTA Starter Kit – Microcontroller-specific Package

RTA-BSW Package	Scope of configuration
RTA-RTE	Sample application software with software components using RTA-BSW services
RTA-A2L	Generate A2L file for measurement and calibration.
RTA-OS	Operating system configuration
RTA-BASE	Standard start-up/shutdown process configuration
RTA-COM	Com stack configuration includes CAN signals, NM supported, CanTP supported
RTA-CAN	
RTA-MEM	NVM blocks configured using internal flash
RTA-DIAG	Sample UDS and DTC configuration
RTA-SAFE	Wdg: alive supervision configuration E2E: sample configuration
RTA-XCP	Sample configuration for measurement and calibration
MCAL	MCAL integration and testing. Configuration

RTA Starter Kit on
SPC58NE84 & Green Hills

- Include
 - Six month evaluation license
 - Full source RTA-BSW configuration files
 - Full source code for all RTA-BSW modules (excluding OS)
 - Full source code for example application
 - Product documentation

Embedded Security

Security Governance

Security-processes, Security-organisation, trainings, competency development



Security Engineering
Analysis & concepts



Security Software
Licenses, implementation & maintenance



Security Testing
Evaluation, Testing & Certification



Security Operations
Production & operation

Successful projects with major OEMs and Tier1 since 2004

USA – Europe - Asia

- ❑ ESCRYPT's CycurHSM product is a security firmware that supports the ST SPC58 microcontrollers and provides a highly optimized set of security functions to make full use of the embedded HSM technology.
- ❑ CycurHSM is a complete software stack adapted to the HSM implementation of the SPC58. CycurHSM provides the technology for fulfilling requirements regarding a flexible HSM firmware that provides open and standardized interfaces (e.g. AUTOSAR CSM) to HSM-enhanced security applications.
- ❑ The ST and ESCRYPT partnership provides a hardware enhanced security solution for automotive applications. The joint offering significantly reduces development and integration costs by providing a ready-to-use turnkey solution.





- Autosar BSW (v 3.2, 4.0, 4.2):
 - can be ported on **any ST μ C**
 - **Chorus** based starter kit ready → See demo
 - Several **Chorus** opportunities on ETAS-side
- **RTA-OS**: PowerPC **SPC56x, SPC57x and SPC58x, STV0991 ARM**

- **Architecture and Safety Consulting** (for all ST μ C)
- **Embedded SW / Complex driver development** (for all ST μ C)



- HSM Firmware CycurHSM (up to „full Evita“):
 - can be ported on **any ST μ C** (except **1-M** – higher effort)
 - **Eiger** and **Chorus** ports available
- Cryptographic library CycurLIB (SW) (for all ST μ C)
- Key Management SW CycurKEYS for backend (for all ST μ C)

- **Security Consulting** (for all ST μ C)
- **Tier 1 – specific Security engineering** (for all ST μ C)

Thank you

Please feel free to ask any questions

DRIVING EMBEDDED EXCELLENCE	
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