

How much Cybersecurity is needed?

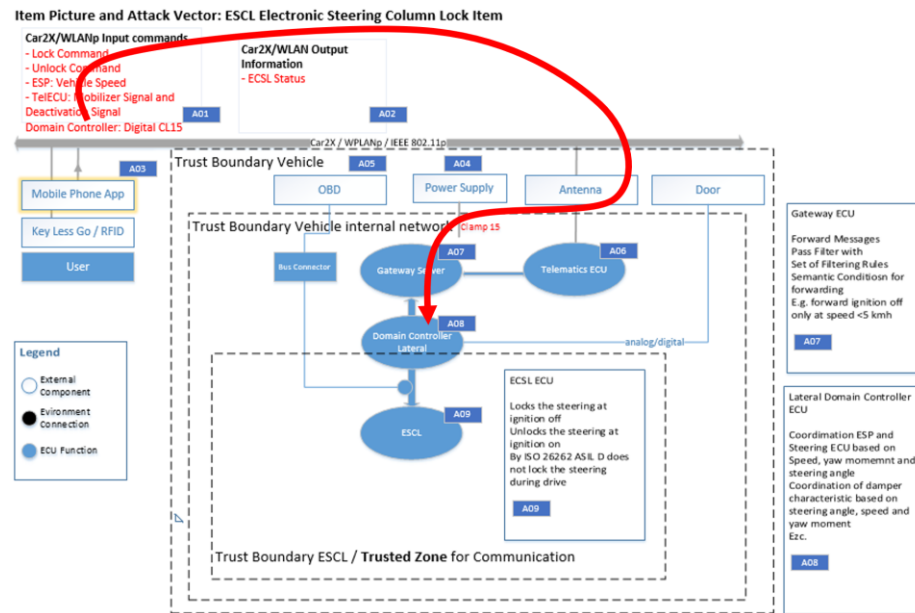
**intacs AT/BG/CZ/HR/HU/SI/RS Regional Event in
Budapest, 14-15.05.2025**

Dr Richard Messnarz, ISCN & EuroSPI GmbH

What we teach?

- How to do a TARA
- What to expect in cybersecurity reqs. (SEC.1) and cybersecurity implementation

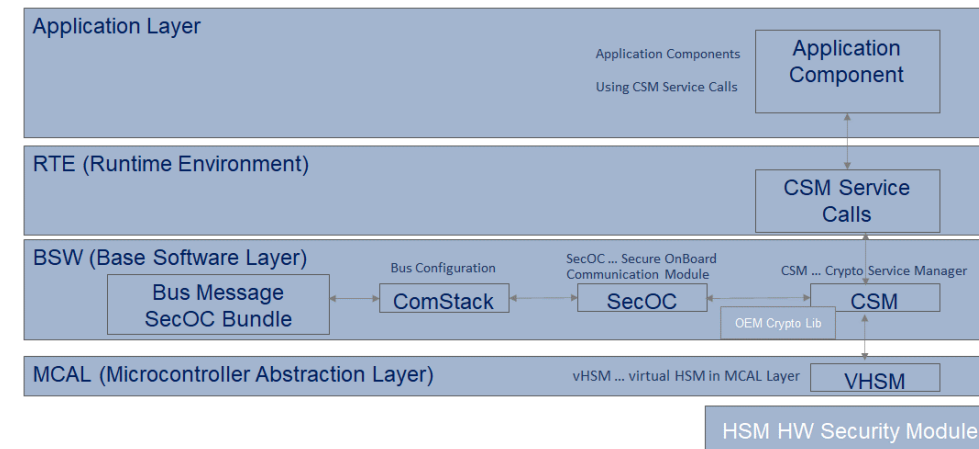
Attack Vector



Tara ratings

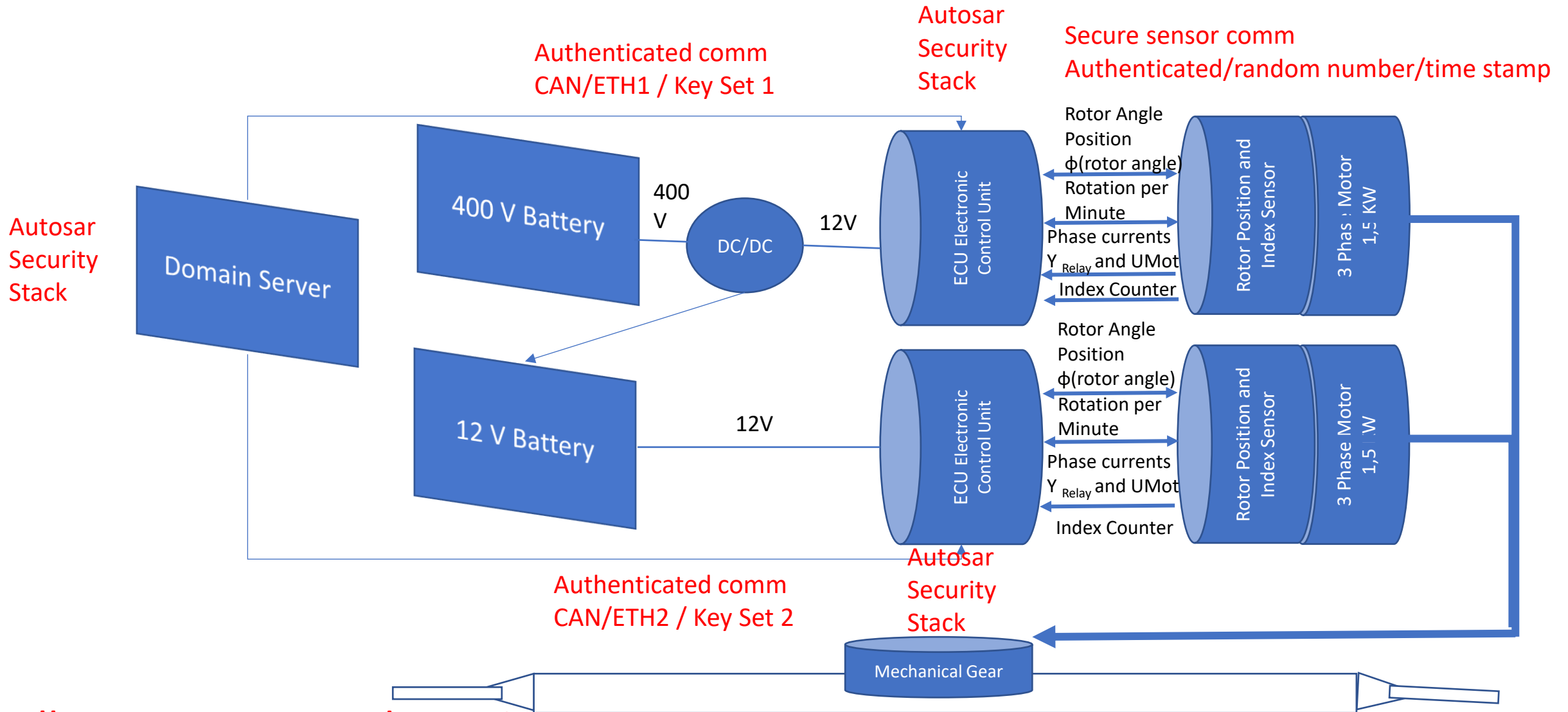
asset	cybersecurity property	adverse consequence (damage scenario for road user)	STRIDE attack type	threat scenario	attack path analysis	attack potential-based approach attributes					Attack feasibility value
						Elapsed time	Specialist Expertise	Knowledge of the item	Window of opportunity	equipment	
in case of lock command, the electric motor moves a bolt to a locking position of the steering column (if validation conditions are valid)	authentication	physical inconvenience due to unexpected locking of the steering column while driving caused by a spoofed (valid) message	spoofing	Spoofed lock command, lead to moving the bolt at a locking position at unintended time	AP a	≤ 1 month	Proficient	Confidential information	Easy	Specialised	Medium
	integrity	physical inconvenience due to unexpected locking (motor moves a bolt to a locking position without intended lock command) of the steering column while driving caused by a tampered function (e.g. via SW or configuration data)	tampering	Tampered function (e.g. via SW or configuration data), lead to moving the bolt at a locking position at unintended time	AP b	≤ 1 week	Proficient	Confidential information	Moderate	Specialised	Medium
	non-repudiation	physical inconvenience due to unexpected locking while driving caused by a re-played (authenticated and 'valid') message	repudiation	Replayed lock command, lead to moving the bolt at a locking position at unintended time	AP c	≤ 6 months	Expert	Strictly confidential information	Moderate	Specialised	Very low
	confidentiality	not applicable: no impact on road user seen if any information of function (implementation) is disclosed	information disclosure								
	availability	vehicle cannot be locked due to non-availability of locking function (motor will not moves the bolt to a locking position) caused by denial-of-function	denial of service	Denial of function, lead to not moving the bolt at a locking position	AP d	≤ 1 day	Layman	Public information	Easy	Standard	High
	authorization	not applicable: no authorization of lock command implemented, no role concept realized	elevation of privilege								

Security Architecture (Autosar)



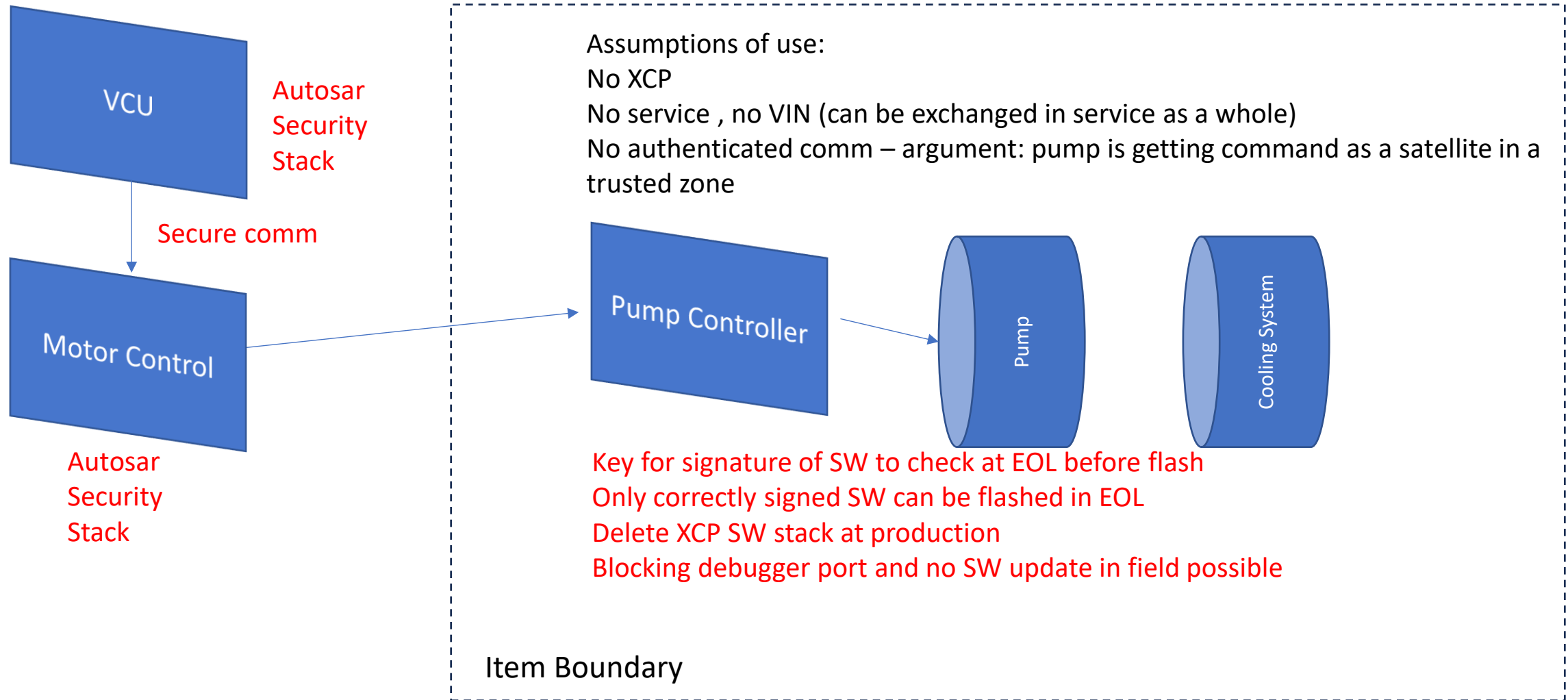
What are scenarios the assessors will be confronted with in reality?

Examples of what we see 1 – maximum case HAD3-5 steering



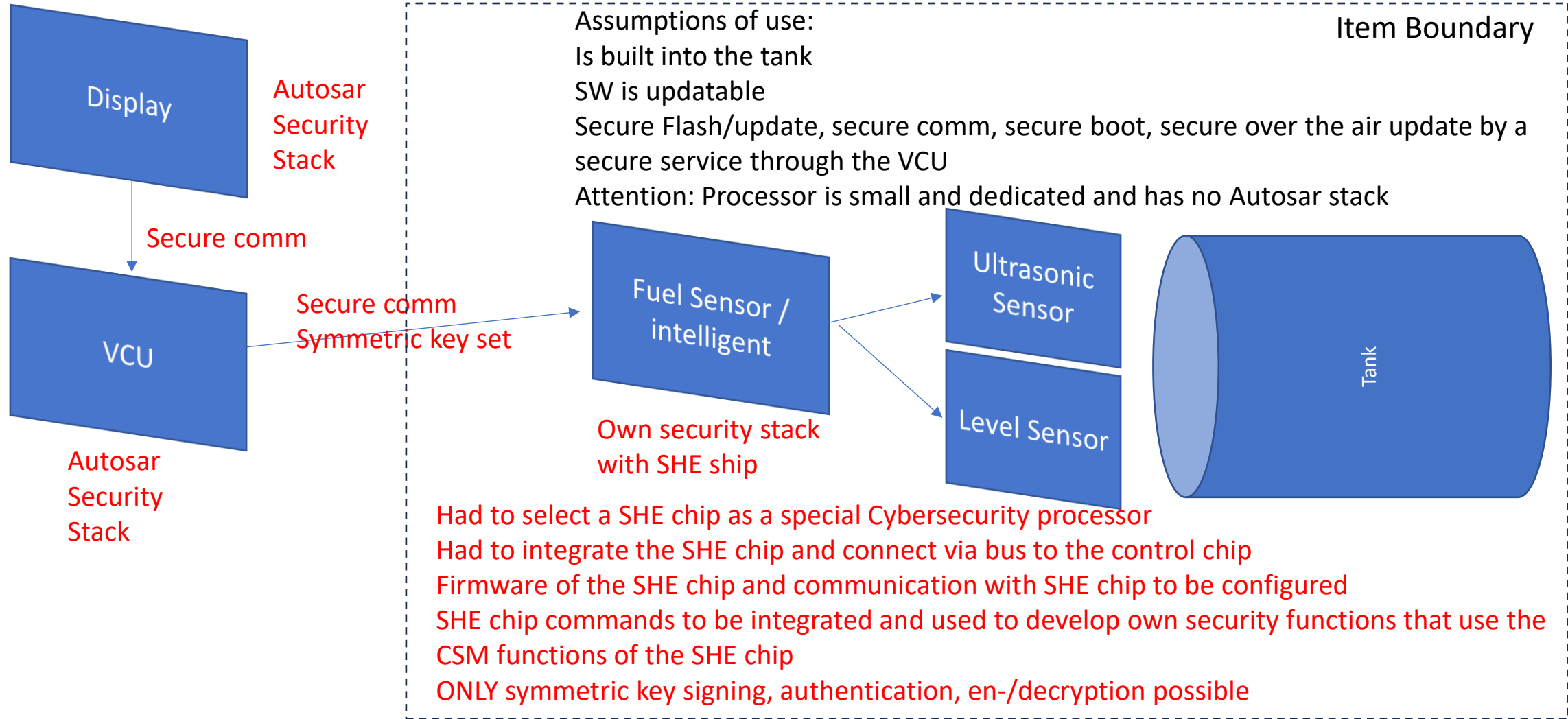
Full EVITA set up and 100%
Fits with ASPICE for CS training

Examples of what we see 2 – minimum case – cooling pump



Depending on the item boundary the solutions deviate from the ideal world (scaling necessary and understanding by assessors required)

Examples of what we see 3 – Technical case – Fuel Sensor



Depending on the item boundary the solutions deviate from the ideal world (scaling necessary and understanding by assessors required)

Key Takeaways

- To assess MAN.7, SEC.1 and SEC.2 an architectural understanding of the cybersecurity item, the boundaries and the potential attack vectors in an overview is helpful
 - Conclusion: Ask for a starting session where this is presented to you
- Do not use just the Autosar framework (which we teach in the ASPICE for Cybersecurity course) as a basis
 - Conclusion: Ask for the cybersecurity stack that was adapted to the item boundaries. Then go for the BPs.
- Can you do a ASPICE for CS assessment without technical background
 - Conclusion: only if you spend some time to learn about typical cybersecurity architectures before the assessment.
- Is there a difference between an ASPICE for cybersecurity assessment and an ISO 21434 assessment
 - Answer: yes, see explaining next slide.

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What does that mean for Cybersecurity Assessors

Key Takeaways

ASPICE for CS Assessment

- Assessors from INTACS
- Processes implemented in the project
- Cybersecurity work products samples selected and checked
 - TARA, CS concept, CS implementation, CS verification, CS validation
- Coverage of CS requirements checked
- Capability Levels

Cybersecurity Project Assessment
Cybersecurity Product Assessment

Cybersecurity ISO Assessment

- Experts with proven expert or researcher profile in cybersecurity recommended
- Complete work products checked (e.g. would identify missing attack vectors, would know about HSM chip and processor details and weaknesses etc.)
- Confirmation review statements of the CS work products
- Deviation report

Can be combined only if the assessors also have this CS expert/research profile and do WP checks

Cybersecurity workshop at EuroSPI event



Workshop Community: Best Practices in Design of Systems Applying Functional Safety and Cybersecurity

- 2024 - Best Practices in Design of Systems Applying Functional Safety and Cybersecurity
- 2023 - Best Practices in Design of Systems Applying Functional Safety and Cybersecurity
- 2022 - Best Practices in Design of Systems Applying Functional Safety and Cybersecurity
- 2020 - Best Practices in Design of Systems Applying Functional Safety and Cybersecurity
- 2019 - Best Practices in Design of Systems Applying Functional Safety and Cybersecurity
- 2018 - Best Practices in Design of Systems Applying Functional Safety and Cybersecurity
- 2017 - Best Practices in Design of Systems Applying Functional Safety, Cybersecurity, and How Much Agile is Possible
- 2016 - Cyber Security and Functional Safety in Cyber-Physical Systems

Newsflash *Early Registration till 9th August 2025*

Workshop: Functional Safety and Cybersecurity

Workshop-Moderators



Alexander Much, Elektrobit,
Germany



Miklos Biro, SCCH, Austria



Richard Messnarz, ISCN
GmbH, Austria

Definition of Functional Safety and Cybersecurity

Implementing Functional Safety and Cybersecurity of electronic systems requires a broad spectrum of skills for a thorough understanding of domain specific standards and technological advances, engineering of complex functions and countermeasures against unintended behavior both due failures and security attacks with balanced architecture decisions, usage and misuse profiles. Automotive and Medical domain scenarios will be presented and discussed. Also contributions and discussions will be included concerning "How much agile is possible in safe and cyber secure systems and software development?".

32nd EuroSPI Conference

EuroSPI² 2025 (17 - 19 September 2025) will have 10 international thematic workshop streams supported by thematic topic communities and the ICSSP (International System and Software Process Association) conference will take place as a co-located partner event. Each thematic stream integrates both, research sessions and industry / applied science sessions. The thematic streams will be a mix of pitch talks provoking discussions, full presentations and panel discussions which will focus on specific questions of interest.

EuroSPI 2025
Riga, Latvia & online



Thanks

Thank you for cooperating with ISCN.



1. ISCN is INTACS certified training provider for Automotive SPICE assessor courses
2. ISCN is certified by VDA to hold provisional and competent ASPICE assessor courses
3. ISCN moderates the German task force SOQRATES (<https://soqrates.eurospi.net>) since 2003 where >20 Tier 1 collaborate on ASPICE, Safety and Security.
4. ISCN organises the EuroSPI conference since 1994 where e.g. VW is organising a workshop community, and VW, Rheinmetall AG, EB, MAGNA, Cariad, VALEO, AVL held key notes. <http://www.eurospi.net>
5. EuroSPI certificates are issued by EuroSPI Certificates & Services GmbH (www.eurospi.net) in cooperation with DRIVES and the Automotive Skills Alliance (ASA). The ASA was founded by the EU Blueprint Project Drives and ALBATTIS with support from the European Automobile Manufacturers' Association (ACEA). <https://www.eurospi.net>. ISCN is founding member.

Thanks

Thank you for cooperating with EuroSPI Certificates GmbH.



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2. Certification – Exam system and certificates
3. EuroSPI Conference Series
4. Assessment Tool – ISO 330xx based