



CYBERENG



What is CYBERENG? Certified Cybersecurity Engineer and Manager Course

- 2-year (2020-2022/23) Erasmus+ co-funded project
- Project aims to
 - Define needs and training for cybersecurity engineer and manager (needed in Sys&SW&HW development of modern electronic automotive systems, V2X communication)
 - Main outcome is to develop training courses and material for the industry and universities.
 - 2 – 5 days course
 - Including international certificate & Automotive Skills Alliance Digital Skills Badge
 - Course will be included in the university study & offered to industry as well

Partner Organizations

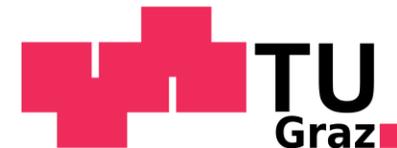
VSB TECHNICAL
UNIVERSITY
OF OSTRAVA

ISCN

International Software Consulting Network



REAL SECURITY



EB Elektrobit

AIT
AUSTRIAN INSTITUTE
OF TECHNOLOGY



Why Cyber Security?

- Project tackles demanded skills and competences for cyber security in automotive domain since the sector is becoming more and more dependent on the software.
- Cyber security and digitalization are among the main driving factors of the automotive industry as well as the transition to the electric vehicles which will require even more software-oriented approach.
- Least but not last – homologation need

Training Courses – Skills Set

Units (U) and Elements (E) of the skill card	Cybersecurity Engineer	Cybersecurity Manager	Cybersecurity Tester
Unit 1 Cybersecurity Management			Out of Scope for CYBERENG
U1.E1 Legal Aspects and Privacy		practitioner	
U1.E2 Organisational Structure		practitioner	
U1.E3 Cybersecurity Planning		practitioner	
Unit 2 Cybersecurity Operation and Maintenance			Out of Scope for CYBERENG
U2.E1 Life Cycle Assessment		expert	
U2.E2 Cybersecurity processes and audits		expert	
U2.E3 Incident Response Management		expert	
U2.E4 Supply Chain Security		expert	
Unit 3 Engineering aspects of cybersecurity			Out of Scope for CYBERENG
U3.E1 System Threat Analysis and Cybersecurity Goals	expert	awareness	
U3.E2 System Design and Vulnerability Analysis	expert	awareness	
U3.E3 Software Design and Vulnerability Analysis	expert	awareness	
U3.E4 Software Detailed Design and Cybersecurity	expert	awareness	
U3.E5 Cybersecure hardware and firmware design	expert	awareness	
Unit 4 Testing aspects of cybersecurity			Out of Scope for CYBERENG
U4.E1 Cybersecurity verification at SW level		awareness	
U4.E2 Cybersecurity verification at HW level		awareness	
U4.E3 Cybersecurity verification at system level		awareness	expert

Training Courses – Skills Set

Units (U) and Elements (E) of the skill card	Cybersecurity Engineer	Cybersecurity Manager	Cybersecurity Tester
Unit 1 Cybersecurity Management			Out of Scope for CYBERENG
U1.E1 Legal Aspects and Privacy		practitioner	
U1.E2 Organisational Structure		practitioner	
U1.E3 Cybersecurity Planning		practitioner	
Unit 2 Cybersecurity Operation and Maintenance			Out of Scope for CYBERENG
U2.E1 Life Cycle Assessment		expert	
U2.E2 Cybersecurity processes and audits		expert	
U2.E3 Incident Response Management		expert	
U2.E4 Supply Chain Security		expert	
Unit 3 Engineering aspects of cybersecurity			
U3.E1 System Threat Analysis and Cybersecurity Goals	expert	awareness	
U3.E2 System Design and Vulnerability Analysis	expert	awareness	
U3.E3 Software Design and Vulnerability Analysis	expert	awareness	
U3.E4 Software Detailed Design and Cybersecurity	expert	awareness	
U3.E5 Cybersecure hardware and firmware design	expert	awareness	
Unit 4 Testing aspects of cybersecurity			
U4.E1 Cybersecurity verification at SW level		awareness	expert
U4.E2 Cybersecurity verification at HW level		awareness	expert
U4.E3 Cybersecurity verification at system level		awareness	expert

Unit 1 Cybersecurity Management

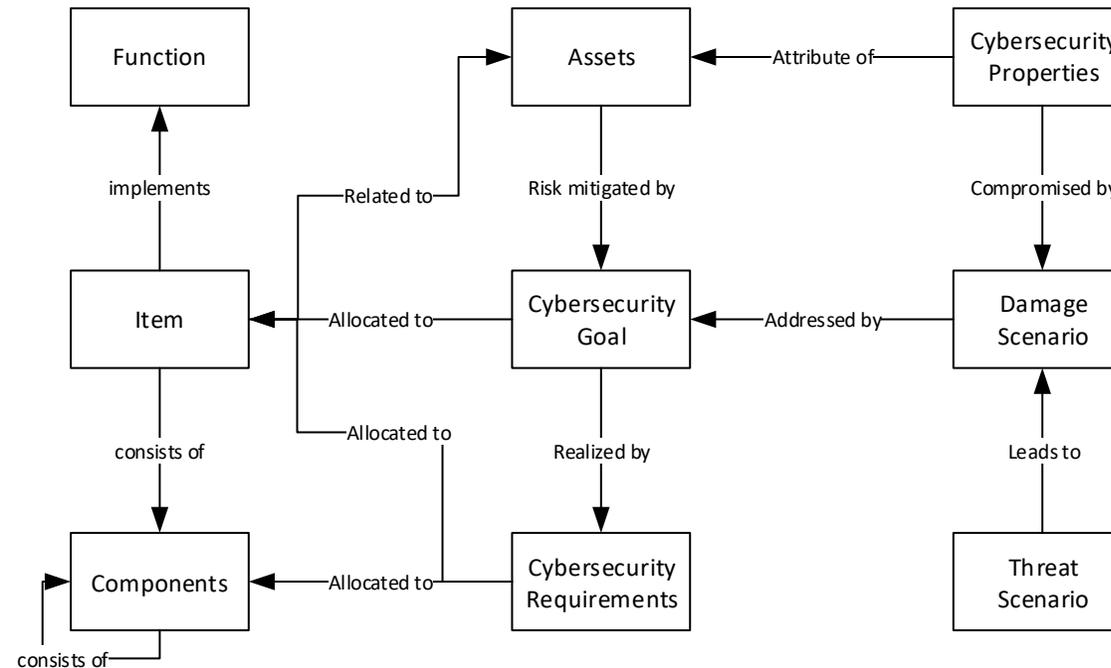
ISO/SAE 21434 – RISK BASED APPROACH

Process starts with definition of an **Item**

Followed by the identification of relevant **Assets**

Based on identified threats potential **damage scenarios** are analyzed

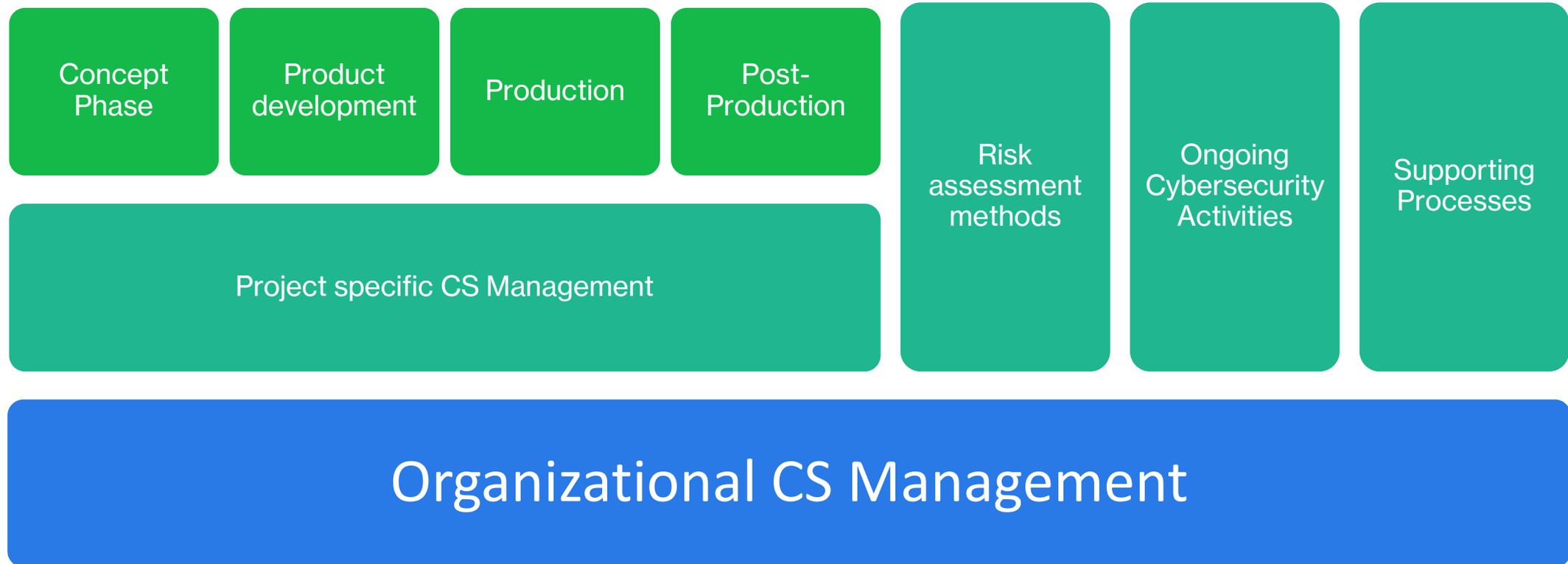
And used to define **Cybersecurity Goals**



Training Courses – Skills Set

Units (U) and Elements (E) of the skill card	Cybersecurity Engineer	Cybersecurity Manager	Cybersecurity Tester
Unit 1 Cybersecurity Management			CYBERENG
U1.E1 Legal Aspects and Privacy		practitioner	
U1.E2 Organisational Structure		practitioner	
U1.E3 Cybersecurity Planning		practitioner	
Unit 2 Cybersecurity Operation and Maintenance			Out of Scope for CYBERENG
U2.E1 Life Cycle Assessment		expert	
U2.E2 Cybersecurity processes and audits		expert	
U2.E3 Incident Response Management		expert	
U2.E4 Supply Chain Security		expert	
Unit 3 Engineering aspects of cybersecurity			Out of Scope for CYBERENG
U3.E1 System Threat Analysis and Cybersecurity Goals	expert	awareness	
U3.E2 System Design and Vulnerability Analysis	expert	awareness	
U3.E3 Software Design and Vulnerability Analysis	expert	awareness	
U3.E4 Software Detailed Design and Cybersecurity	expert	awareness	
U3.E5 Cybersecure hardware and firmware design	expert	awareness	
Unit 4 Testing aspects of cybersecurity			expert
U4.E1 Cybersecurity verification at SW level		awareness	
U4.E2 Cybersecurity verification at HW level		awareness	
U4.E3 Cybersecurity verification at system level		awareness	expert

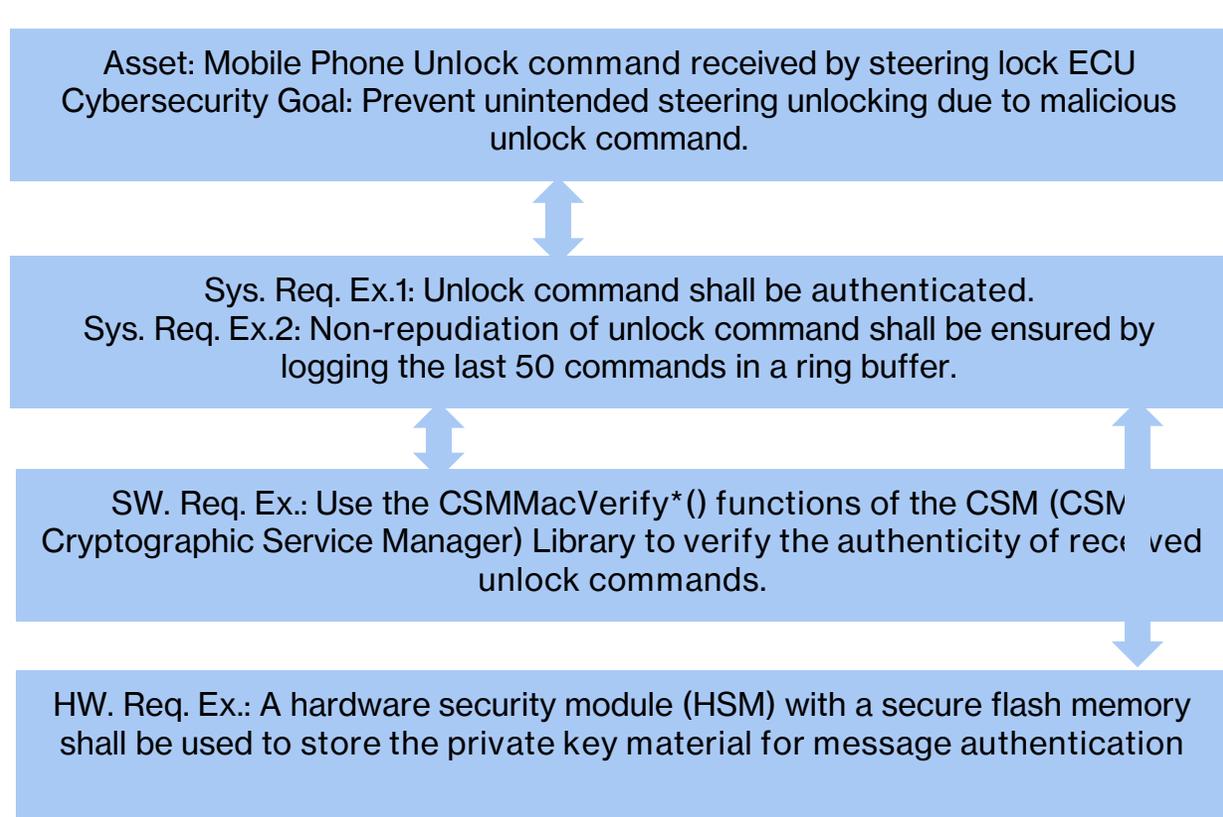
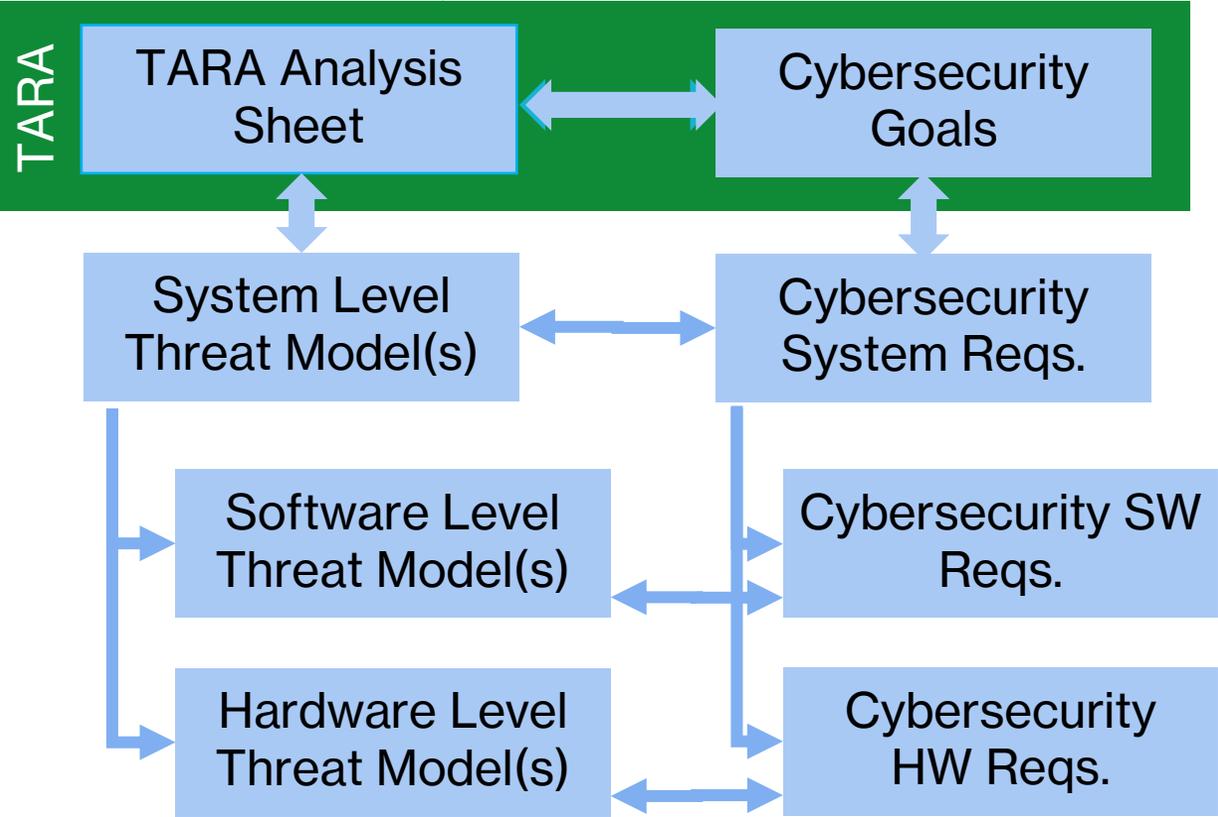
Unit 2 Cybersecurity Operation and Maintenance



Training Courses – Skills Set

Units (U) and Elements (E) of the skill card	Cybersecurity Engineer	Cybersecurity Manager	Cybersecurity Tester
Unit 1 Cybersecurity Management			Out of Scope for CYBERENG
U1.E1 Legal Aspects and Privacy		practitioner	
U1.E2 Organisational Structure		practitioner	
U1.E3 Cybersecurity Planning		practitioner	
Unit 2 Cybersecurity Operation and Maintenance			
U2.E1 Life Cycle Assessment		expert	
U2.E2 Cybersecurity processes and audits		expert	
U2.E3 Incident Response Management		expert	
U2.E4 Supply Chain Security		expert	
Unit 3 Engineering aspects of cybersecurity			
U3.E1 System Threat Analysis and Cybersecurity Goals	expert	awareness	Out of Scope for CYBERENG
U3.E2 System Design and Vulnerability Analysis	expert	awareness	
U3.E3 Software Design and Vulnerability Analysis	expert	awareness	
U3.E4 Software Detailed Design and Cybersecurity	expert	awareness	
U3.E5 Cybersecure hardware and firmware design	expert	awareness	
Unit 4 Testing aspects of cybersecurity			Out of Scope for CYBERENG
U4.E1 Cybersecurity verification at SW level		awareness	
U4.E2 Cybersecurity verification at HW level		awareness	
U4.E3 Cybersecurity verification at system level		awareness	expert

Unit 3 Engineering Aspects of Cybersecurity



Training Courses – Skills Set

Units (U) and Elements (E) of the skill card	Cybersecurity Engineer	Cybersecurity Manager	Cybersecurity Tester
Unit 1 Cybersecurity Management			Out of Scope for CYBERENG
U1.E1 Legal Aspects and Privacy		practitioner	
U1.E2 Organisational Structure		practitioner	
U1.E3 Cybersecurity Planning		practitioner	
Unit 2 Cybersecurity Operation and Maintenance			
U2.E1 Life Cycle Assessment		expert	
U2.E2 Cybersecurity processes and audits		expert	
U2.E3 Incident Response Management		expert	
U2.E4 Supply Chain Security		expert	
Unit 3 Engineering aspects of cybersecurity			
U3.E1 System Threat Analysis and Cybersecurity Goals	expert	awareness	
U3.E2 System Design and Vulnerability Analysis	expert	awareness	
U3.E3 Software Design and Vulnerability Analysis	expert	awareness	
U3.E4 Software Detailed Design and Cybersecurity	expert	awareness	
U3.E5 Cybersecure hardware and firmware design	expert	awareness	
Unit 4 Testing aspects of cybersecurity			
U4.E1 Cybersecurity verification at SW level		awareness	expert
U4.E2 Cybersecurity verification at HW level		awareness	expert
U4.E3 Cybersecurity verification at system level		awareness	expert

Unit 4 Testing Aspects of Cybersecurity

Your car will restart in 13 seconds

Your car needs to restart to finish installing updates. If you've already moved to the side of the road you can restart now. Otherwise, you should close this message and use the remaining time to move to the side of the road.

Restart

Close

How to get involved?

- Actually, the course is having its first baseline - <https://academy.eurospi.net/>
 - needs analysis
 - [Needs Analysis based on the stakeholder survey](#)
 - details of the skills sets:
 - [Skills Browsing Manager](#) & [Skills Browsing Engineer](#)
- CYBERENG Pilot training will be offered Q3 – Q4 2022

You can join other already done courses at <https://learn.drives-compass.eu/>



- 28 MOOC courses available for free
- Developed by the European strategic partnership DRIVES (20 partners from 11 countries, including ACEA, CLEPA, ETRMA)





Thank you

www.project-cybereng.eu