

HORIZON
2020

Compositional security certification for medium- to high-assurance COTS-based systems in environments with emerging threats

Fact Sheet

Project Information

certMILS

Grant agreement ID: 731456

[Project website](#) 

DOI

[10.3030/731456](https://doi.org/10.3030/731456) 

Project closed

EC signature date

27 November 2016

Start date

1 January 2017

End date

30 June 2021

Funded under

INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial technologies - Information and Communication Technologies (ICT)

Total cost

€ 5 516 543,75

EU contribution

€ 3 999 055,63

Coordinated by

TECHNIKON FORSCHUNGS-
UND
PLANUNGSGESELLSCHAFT
MBH



Austria

Objective

certMILS develops a security certification methodology for Cyber-physical systems (CPS). CPS are characterised by safety-critical nature, complexity, connectivity, and open technology. A common downside to CPS complexity and openness is a large attack surface and a high degree of dynamism that may lead to complex failures and

irreparable physical damage. The legitimate fear of security or functional safety vulnerabilities in CPS results in arduous testing and certification processes. Once fielded, many CPS suffer from the motto: never change a running system. certMILS increases the economic efficiency and European competitiveness of CPS development, while demonstrating the effectiveness of safety & security certification of composable systems.

The project employs a security-by-design concept originating from the avionics industry: Multiple Independent Levels of Security (MILS), which targets controlled information flow and resource usage amongst software applications. certMILS reduces certification complexity, promotes re-use, and enables secure updates to CPS throughout its life-cycle by providing certified separation of applications, i.e. if an application within a complex CPS fails or starts acting maliciously, other applications are unaffected.

Security certification of complex systems to medium-high assurance levels is not solved today. The existing monolithic approaches cannot cope with the complexity of modern CPS. certMILS uses ISO/IEC 15408 and IEC 62443 to develop and applies a compositional security certification methodology to complex composable safety-critical systems operating in constantly evolving hostile environments. certMILS core results are standardised in a protection profile. certMILS develops three composable industrial CPS pilots (smart grid, railway, subway), certifies security of critical re-useable components, and ensures security certification for the pilots by certification labs in three EU countries with involvement of the authorities.

Fields of science (EuroSciVoc)

[natural sciences](#) > [computer and information sciences](#) > [software](#) > [software applications](#) > [system software](#) > **[operating systems](#)**

[engineering and technology](#) > [electrical engineering, electronic engineering, information engineering](#) > [electronic engineering](#) > **[control systems](#)**

[engineering and technology](#) > [materials engineering](#) > **[colors](#)**

[social sciences](#) > [sociology](#) > [industrial relations](#) > **[automation](#)**

[natural sciences](#) > [physical sciences](#) > [electromagnetism and electronics](#) > **[semiconductivity](#)**



Programme(s)

[H2020-EU.2.1.1. - INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial technologies - Information and Communication Technologies \(ICT\).](#) MAIN PROGRAMME

[H2020-EU.3.7. - Secure societies - Protecting freedom and security of Europe and its citizens](#)

Topic(s)

[DS-01-2016 - Assurance and Certification for Trustworthy and Secure ICT systems, services and components](#)

Call for proposal

[H2020-DS-2016-2017](#)

[See other projects for this call](#)

Sub call

H2020-DS-LEIT-2016

Funding Scheme

[IA - Innovation action](#)

Coordinator



TECHNIKON FORSCHUNGS- UND PLANUNGSGESELLSCHAFT MBH

Net EU contribution

€ 270 692,65

Total cost

€ 386 703,78

Address

BURGPLATZ 3A

9500 Villach

 **Austria** 

SME 

Yes

Region

Südösterreich > Kärnten > Klagenfurt-Villach

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

Participants (11)



ATSEC INFORMATION SECURITY GMBH

Germany

Net EU contribution

€ 433 650,00

Address

STEINSTRASSE 70
81667 MUENCHEN

SME

Yes

Region

Bayern > Oberbayern > München, Kreisfreie Stadt

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#) [Website](#)
[Participation in EU R&I programmes](#)
[HORIZON collaboration network](#)

Total cost

€ 619 500,00



SCHNEIDER ELECTRIC ESPANA SA

Spain

Net EU contribution

€ 390 250,00

Address

BAC DE RODA 52 EDIF A
08019 Barcelona

Region

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

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Total cost

€ 557 500,00



DEKRA TESTING AND CERTIFICATION SAU

 Spain

Net EU contribution

€ 343 875,00

Address

CALLE SEVERO OCHOA 2 PARQUE TECNOLOGICO CAMPANILLAS
29590 Malaga 

Region

Sur > Andalucía > Málaga

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

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[HORIZON collaboration network](#) 

Total cost

€ 491 250,00



HITACHI RAIL GTS AUSTRIA GMBH

 Austria

Net EU contribution

€ 440 125,00

Address

HANDELSKAI 92
1200 WIEN 

Region
Ostösterreich > Wien > Wien

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links
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[HORIZON collaboration network](#) 

Total cost
€ 628 750,00

 **THIRD-PARTY** 

SYSGO GMBH 

 Germany
Net EU contribution
€ 0,00

Address
AM PFAFFENSTEIN 8
55270 Klein Winternheim 

Region
Rheinland-Pfalz > Rheinhessen-Pfalz > Mainz-Bingen

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links
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[HORIZON collaboration network](#) 

Total cost
No data


UNICONTROLS A.S. 

 Czechia
Net EU contribution

€ 139 769,86

Address

KRENICKA 2257

100 00 Praha 

SME 

Yes

Region

Česko > Praha > Hlavní město Praha

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

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[HORIZON collaboration network](#) 

Total cost

€ 199 671,23



SYSGO SRO

 Czechia

Net EU contribution

€ 501 900,00

Address

ZELENY PRUH 1560/99

140 00 Praha 

Region

Česko > Praha > Hlavní město Praha

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

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[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 717 000,00



UNIVERSITAET ROSTOCK

 Germany

Net EU contribution

€ 458 250,00

Address

UNIVERSITATSPLATZ 1

18055 Rostock 

Region

Mecklenburg-Vorpommern > Mecklenburg-Vorpommern > Rostock, Kreisfreie Stadt

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 458 250,00



ELEKTROTECHNICKY ZKUSEBNI USTAV, SP

 Czechia

Net EU contribution

€ 154 525,00

Address

POD LISEM 129/2, TROJA

182 00 Praha 

SME 

Yes

Region

Česko > Praha > Hlavní město Praha

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

Total cost

€ 220 750,00



SYSGO GMBH

 Germany

Net EU contribution

€ 663 018,13

Address

AM PFAFFENSTEIN 8
55270 Klein Winternheim 

Region

Rheinland-Pfalz > Rheinhessen-Pfalz > Mainz-Bingen

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

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Total cost

€ 947 168,75



Q-MEDIA, S.R.O.

 Czechia

Net EU contribution

€ 202 999,99

Address

POCERNICKA 272/96
108 00 Praha 

Region

Česko > Praha > Hlavní město Praha

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

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Total cost

€ 289 999,99

Last update: 23 August 2022

Permalink: <https://cordis.europa.eu/project/id/731456>

European Union, 2025