Architecture-driven, Multi-concern and Seamless Assurance and Certification of Cyber-Physical Systems

Fact Sheet

Project Information

AMASS
Grant agreement ID: 692474

Project website

Status
Closed project

Start date
1 April 2016
End date
31 March 2019

Funded under
H2020-EU.2.1.1.7.

Overall budget
€ 20 274 885,08

EU contribution
€ 6 178 242,90

Coordinated by
FUNDACION TECNALIA
RESEARCH & INNOVATION
Spain

Objective

Embedded systems have significantly increased in technical complexity towards open, interconnected systems. This has exacerbated the problem of ensuring dependability in the presence of human, environmental and technological risks. The rise of complex Cyber-Physical Systems (CPS) has led to many initiatives to promote reuse and automation of labor-intensive activities. Two large-scale projects are OPENCOSS and SafeCer, which dealt with assurance and certification of software-intensive critical systems using incremental and model-based approaches.

OPENCOSS defined a Common Certification Language (CCL), unifying concepts from different industries to build a harmonized approach to reduce time and cost overheads, via facilitating the reuse of certification assets. SafeCer developed safety-oriented process lines, a component model, contract-based verification techniques, and process/product-based model-driven safety certification for compositional assurance and certification of CPS.
AMASS will create and consolidate a de-facto European-wide assurance and certification open tool platform, ecosystem and self-sustainable community spanning the largest CPS vertical markets. We will start by combining and evolving the OPENCOSS and SafeCer technological solutions towards end-user validated tools, and will enhance and perform further research into new areas not covered by those projects. The ultimate aim is to lower certification costs in face of rapidly changing product features and market needs. This will be achieved by establishing a novel holistic and reuse-oriented approach for architecture-driven assurance (fully compatible with standards e.g. AUTOSAR and IMA), multi-concern assurance (compliance demonstration, impact analyses, and compositional assurance of security and safety aspects), and for seamless interoperability between assurance/certification and engineering activities along with third-party activities (external assessments, supplier assurance).

Field of science

/soc.sci./economics and business/business and management/commerce
/social sciences/sociology/industrial relations/automation
/humanities/languages and literature/languages - general

Programme(s)

Topic(s)

Call for proposal

H2020-ECSEL-2015-1-RIA-two-stage

Funding Scheme

ECSEL-RIA - ECSEL Research and Innovation Action

Coordinator

FUNDACION TECNALIA RESEARCH & INNOVATION

Address
Parque Científico Y Tecnológico De Gipuzkoa
Paseo Mikeletegi 2
20009 Donostia/san Sebastian

Activity type
Research Organisations

EU contribution
€ 577 268,94
Participants (31)

HONEYWELL INTERNATIONAL SRO
Czechia
EU contribution
€ 183 361,56
Address
V Parku 2325/16 Chodov
148 00 Praha
Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

SCHNEIDER ELECTRIC ESPANA SA
Spain
EU contribution
€ 199 843,75
Address
Bac De Roda 52 Edif A
08019 Barcelona
Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

ANSYS MEDINI TECHNOLOGIES AG
Germany
EU contribution
€ 215 623,44
Address
Dessauer Strasse 28 29
10963 Berlin
Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)
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<td>€ 321 395</td>
<td>Giefinggasse 4 1210 Wien</td>
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FONDAZIONE BRUNO KESSLER
Italy
EU contribution
€ 201 088,50
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Via Santa Croce 77
38122 Trento
Website
Activity type
Research Organisations
Contact the organisation

TECHNOLABS srl
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EXPLEO GERMANY GMBH
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EU contribution
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GMV AEROSPACE AND DEFENCE SA
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EU contribution
€ 83 281,25
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28760 Tres Cantos
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Activity type
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RINA SERVICES SPA
Italy
EU contribution
€ 15,625
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16128 Genoa
Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)
Website
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THALES ALENIA SPACE ESPANA, SA
Spain
EU contribution
€ 239,250
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Calle Einstein 7
28760 Tres Cantos - Madrid
Activity type
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UNIVERSIDAD CARLOS III DE MADRID
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EU contribution
€ 252,047,50
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Website
Contact the organisation

RAPITA SYSTEMS LIMITED
United Kingdom
EU contribution
€ 167,578,13
Address
Atlas House Osbaldwick Link
Activity type
Private for-profit entities
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VIRTUAL VEHICLE RESEARCH GMBH
Austria
EU contribution
€ 217 100
Address
Inffeldgasse 21 A
8010 Graz
Activity type
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Website
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ALLIANCE POUR LES TECHNOLOGIES DE L'INFORMATIQUE
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Activity type
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COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES
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CLEARSY SAS
France
France
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€ 173 503,88
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Sweden
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LANGE RESEARCH AIRCRAFT GMBH
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RISE RESEARCH INSTITUTES OF SWEDEN AB

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Activity type
Research Organisations

Comentor AB

Sweden

EU contribution
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Private for-profit entities
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Secondary Education
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KNOWLEDGE CENTRIC SOLUTIONS SL

Spain

EU contribution
€ 237 040,20

Address
Calle Margarita Salas 16
Parque Tecnologico Legate
28919 Leganes Madrid

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

ALSTOM TRANSPORT SA

France

EU contribution
€ 205 706,25

Address
48 Rue Albert Dhalone

Activity type
Private for-profit entities
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