FORMAL METHODS AND CSIRT FOR THE RAILWAY SECTOR

Fact Sheet

Project information

4SECURAIL  
Grant agreement ID: 881775  
Status  
Ongoing project  
Start date  
1 December 2019  
End date  
30 November 2021  

Funded under:  
H2020-EU.3.4.8.2.  
Overall budget:  
€ 549 875  

EU contribution  

€ 549 875  

Coordinated by:  
ARDANUY INGENIERIA SA  
Spain

Project description

Railway signalling subsystem on track

To minimise the time it takes to develop and deliver railway signalling systems, and to reduce high costs for procurement, development and maintenance, formal methods are needed. The EU-funded 4SECURAIL project will address the call for the use of formal methods in the railway environment and support the implementation of a Computer Security Incident Response Team (CSIRT) for railways. Among the project’s overall objectives are the identification of a railway signalling subsystem and evaluation of the cost/benefit ratio and learning curves for adopting the demonstrator in the railway environment. It will also define stakeholder requirements for a European RAIL CSIRT collaborative activity. To ensure all needs are met, the project will test and update the CSIRT collaborative environment.

Objective

"The 4SECURail proposal addresses the Open Call S2R-OC-IP2-2019 "Demonstrator development for the use of Formal Methods in railway environment-Support to implementation of CSIRT to the railway sector." The Open Call takes a two-fold perspective by working, on the one hand, on the Demonstrator for the use of Formal Methods (FM), and on the other hand, on the implementation of Computer Security Incident
Response Team (CSIRT) for Railways.

Work stream 1 "Demonstrator development for the use of Formal Methods in Railway Environment" will provide a demonstrator of state-of-the-art Formal Methods and tools to evaluate the learning curve and to perform a cost/benefit analysis of the adoption of formal methods in railway industry. The following overall objectives will be targeted: 1) The development of the demonstrator; 2) The identification of a railway signalling subsystem, described by means of standard interfaces and 3) The specification and evaluation of the cost/benefit ratio and learning curves for adopting the demonstrator in the railway environment.

Work stream 2 "Support to implementation of CSIRT to the railway sector" will address TD2.11, establishing a CSIRT collaborative environment. The work stream 2 specific objectives are: 1) To define stakeholder requirements for a European Rail CSIRT collaborative activity, 2) To test and validate the draft CSIRT model; 3) To identify relevant platforms to support CSIRT collaboration and, based on requirements and CSIRT model, specify and adapt to meet CSIRT needs and 4) To test and updated the CSIRT collaborative environment so as to ensure meeting user needs.

The 4SECURail proposal answers to both technical topics, adopting common Management and Dissemination with a well-balanced effort.

Field of Science
/natural sciences/computer and information sciences/computer security

Programme(s)
H2020-EU.3.4.8.2. - Innovation Programme 2: Advanced traffic management and control systems

Topic(s)
S2R-OC-IP2-01-2019 - Demonstrator development for the use of Formal Methods in railway environment and Support to implementation of CSIRT to the railway sector

Call for proposal
H2020-S2RJU-OC-2019

See other projects for this call

Funding Scheme
Shift2Rail-RIA - Research and Innovation action

Coordinator
### ARDANUY INGENIERIA SA
- **Address**: Avda De Europa 34 Edif B 28023 Madrid, Spain
- **Activity type**: Private for-profit entities (excluding Higher or Secondary Education Establishments)
- **EU Contribution**: € 54 875
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- **Address**: Via Acciaresi Primo 8 00157 Roma, Italy
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- **EU Contribution**: € 65 756,25
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- [Contact the organisation](#)

### CONSIGLIO NAZIONALE DELLE RICERCHE
- **Address**: Piazzale Aldo Moro 7 00185 Roma, Italy
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- **EU Contribution**: € 93 025
- [Website](#)
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### SIRTI - SOCIETA PER AZIONI
- **Address**: Via Stamira Ancona 9 20127 Milano, Italy
- **Activity type**: Private for-profit entities (excluding Higher or Secondary Education Establishments)
- **EU Contribution**: € 85 281,25
- [Contact the organisation](#)
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