



Defending the European Energy Infrastructures

Fact Sheet

Project Information

DEFENDER

Grant agreement ID: 740898

[Project website](#)

DOI

[10.3030/740898](https://doi.org/10.3030/740898)

Project closed

EC signature date

25 April 2017

Start date

1 May 2017

End date

31 August 2020

Funded under

Secure societies - Protecting freedom and security of Europe and its citizens

Total cost

€ 8 878 232,14

EU contribution

€ 6 790 837,50

Coordinated by

ENGINEERING - INGEGNERIA
INFORMATICA SPA



Italy

Objective

Critical Energy infrastructures (CEI) protection and security are becoming of utmost importance in our everyday life. However, cyber and system-theoretic approaches fail to provide appropriate security levels to CEIs, since they are often used in isolation and build on incomplete attack models, resulting in silos-like security management fragmented operational policies. To face these challenges, DEFENDER will (i) model CEIs as distributed Cyber-Physical Systems for managing the potential reciprocal effects of cyber and physical threats (ii) deploy a novel security governance model, which leverages on lifecycle assessment for cost-effective security management over the time (iii) bring people at centre stage by empowering them as virtual sensors for

threat detection, as first level emergency responders to attacks, or by considering workforce as potential threats. DEFENDER will adapt, integrate, upscale and validate a number of TRL 4-5 technologies and deploy them within a TRL7 integrated yet adaptable framework for CEI security, resilience and self-healing “by design”, with a view to address, detect, and mitigate cyber-physical threats. To this aim DEFENDER framework will combine a range of devices/technologies for situational awareness (fixed sensors like PMUs, mobile devices like drones and advanced video surveillance) (ii) intelligent processing for cyber-physical threat detection with (iii) a toolbox for incident mitigation and emergency response and (iv) Human-In-The-Loop for managing people interaction with CEI, while leveraging on blockchain technology for peer-to-peer trustworthiness. The effectiveness of DEFENDER will be extensively validated on a CEI lab emulator (RWTH, Germany) and on 4 real life demonstrators (in France, Italy and Slovenia) fully covering the overall energy value chain, ranging from a bulk generation plant (ENGIE SA), to a decentralized RES generation one (BFP), a TSO HV network (ELES), to a DSO network (ASM) and a business prosumer.

Fields of science (EuroSciVoc)

[engineering and technology](#) > [environmental engineering](#) > [energy and fuels](#) > **[renewable energy](#)**

[natural sciences](#) > [computer and information sciences](#) > [computer security](#) > **[cryptography](#)**

[social sciences](#) > [economics and business](#) > [business and management](#) > **[business models](#)**

[engineering and technology](#) > [electrical engineering, electronic engineering, information engineering](#) > [electronic engineering](#) > [robotics](#) > [autonomous robots](#) > **[drones](#)**

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



Programme(s)

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

MAIN PROGRAMME

[H2020-EU.3.7.4. - Improve cyber security](#)

[H2020-EU.3.7.2. - Protect and improve the resilience of critical infrastructures, supply chains and transport modes](#)

Topic(s)

Call for proposal

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

[See other projects for this call](#)

Sub call

CIP-2016-2017-1

Funding Scheme

[IA - Innovation action](#)

Coordinator



ENGINEERING - INGEGNERIA INFORMATICA SPA

Net EU contribution

€ 1 038 579,68

Total cost

€ 1 483 685,26

Address

PIAZZALE DELL'AGRICOLTURA 24

00144 Roma

 **Italy** 

Region

Centro (IT) > Lazio > Roma

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](#) 

Participants (19)



THALES

France

Net EU contribution

€ 580 419,00

Address

4 RUE DE LA VERRERIE
92190 MEUDON

Region

Ile-de-France > Ile-de-France > Hauts-de-Seine

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

€ 829 170,00



SINGULARLOGIC ANONYMI ETAIREIA PLIROFORIAKON SYSTIMATON KAI EFARMOGONPLIROFORIKIS

Greece

Net EU contribution

€ 407 925,00

Address

ACHAIAS 3 & TROIZINIAS
14564 Nea Kifisia

Region

Αττική > Αττική > Βόρειος Τομέας Αθηνών

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
€ 582 750,00



SIEMENS SRL

Romania
Net EU contribution
€ 312 200,00

Address
BDUL PRECIZIEI 24 IMOBIL H3 ETAJ 3-5 SECTOR 6
062204 Bucuresti

Region
Macroregiunea Trei > București-Ilfov > București

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

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

Total cost
€ 446 000,00



INEO ENERGY AND SYSTEMS

France
Net EU contribution
€ 0,00

Address
23 RUE GENERAL VALERIE ANDRE
78140 Velizy Villacoublay

Region
Ile-de-France > Ile-de-France > Yvelines

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

No data



STUDIO TECNICO BFP SOCIETA A RESPONSABILITA LIMITATA

 Italy

Net EU contribution

€ 271 250,00

Address

VIA DEGLI ARREDATORI 8

70026 Modugno 

SME 

Yes

Region

Sud > Puglia > Bari

Activity type

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

Links

[Contact the organisation](#) 

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

[HORIZON collaboration network](#) 

Total cost

€ 387 500,00



ELES DOO OPERATER KOMBINIRANEGA PRENOSNEGA IN DISTRIBUCIJSKEGA ELEKTROENERGETSKEGA OMREZJA

 Slovenia

Net EU contribution

€ 232 050,00

Address

HAJDRIHOVA ULICA 2
1000 Ljubljana 

Region
Slovenija > Zahodna Slovenija > Osrednjeslovenska

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
€ 331 500,00



ASM TERNI SPA

 Italy
Net EU contribution
€ 280 563,50

Address
VIA BRUNO CAPPONI 100
05100 Terni 

Region
Centro (IT) > Umbria > Terni

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

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

Total cost
€ 400 805,00



MINISTERO DELL'INTERNO

 Italy
Net EU contribution

€ 173 250,00

Address

Piazza del Viminale 1
00184 Rome 

Region

Centro (IT) > Lazio > Roma

Activity type

Public bodies (excluding Research Organisations and Secondary or Higher Education Establishments)

Links

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

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

[HORIZON collaboration network](#) 

Total cost

€ 173 250,00



DR FRUCHT SYSTEMS LTD

 Israel

Net EU contribution

€ 660 625,00

Address

KIBUTZ EIN HAMIFRATZ
2412801 Acco 

SME 

Yes

Activity type

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

Links

[Contact the organisation](#) 

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

[HORIZON collaboration network](#) 

Total cost

€ 943 750,00



VENAKA MEDIA LIMITED

 United Kingdom

Net EU contribution

€ 321 125,00

Address

GLEBE MEWS 2
DA15 8GU Sidcup London 

SME 

Yes

Region

London > Outer London — East and North East > Bexley and Greenwich

Activity type

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

Links

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

Total cost

€ 458 750,00



POWER OPERATIONS LIMITED

 United Kingdom

Net EU contribution

€ 291 462,50

Address

1 KINGS AVENUE
N21 3NA LONDON 

SME 

Yes

Region

London > Outer London — East and North East > Enfield

Activity type

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

Links

- [Contact the organisation](#) 
- [Participation in EU R&I programmes](#) 

Total cost

€ 416 375,00



E-LEX - STUDIO LEGALE

 Italy

Net EU contribution

€ 149 450,00

Address

VIA DEI BARBIERI 6

00186 Roma 

SME 

Yes

Region

Centro (IT) > Lazio > Roma

Activity type

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

Links

[Contact the organisation](#) 

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

[HORIZON collaboration network](#) 

Total cost

€ 213 500,00



INSTITUT ZA KORPORATIVNE VARNOSTNE STUDIJE LJUBLJANA

 Slovenia

Net EU contribution

€ 306 250,00

Address

CESTA ANDREJA BITENCA 68

1000 Ljubljana 

Region

Slovenija > Zahodna Slovenija > Osrednjeslovenska

Activity type

Research Organisations

Links

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

Total cost

€ 306 250,00



RHEINISCH-WESTFAELISCHE TECHNISCHE HOCHSCHULE AACHEN

Germany

Net EU contribution

€ 432 000,00

Address

TEMPLERGRABEN 55
52062 Aachen

Region

Nordrhein-Westfalen > Köln > Städteregion Aachen

Activity type

Higher or Secondary Education Establishments

Links

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

Total cost

€ 432 000,00



TECHNOLOGIKO EKPEDEFTIKO IDRIMA STEREAS ELLADAS

Greece

Net EU contribution

€ 130 331,61

Address

3 KLM PALAIAS ETHNIKIS ODOU LAMIAS ATHINON
35100 Lamia

Region

Activity type

Higher or Secondary Education Establishments

Links

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

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

[HORIZON collaboration network](#) 

Total cost

€ 130 331,61



UNINOVA-INSTITUTO DE DESENVOLVIMENTO DE NOVAS TECNOLOGIAS-ASSOCIACAO

 Portugal

Net EU contribution

€ 242 875,00

Address

CAMPUS DA CAPARICA QUINTA DA TORRE
2829-516 Caparica 

Activity type

Research Organisations

Links

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

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

[HORIZON collaboration network](#) 

Total cost

€ 242 875,00



INSTITUT JOZEF STEFAN

 Slovenia

Net EU contribution

€ 473 375,00

Address

Jamova 39
1000 Ljubljana 

Region
Slovenija > Zahodna Slovenija > Osrednjeslovenska

Activity type
Research Organisations

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

Total cost
€ 473 375,00



ENGIE

France
Net EU contribution
€ 324 937,82

Address
1 PLACE SAMUEL DE CHAMPLAIN
92400 Courbevoie

Region
Ile-de-France > Ile-de-France > Hauts-de-Seine

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
€ 464 196,88



ETHNIKO KAI KAPODISTRIAKO PANEPISTIMIO ATHINON

Greece
Net EU contribution
€ 162 168,39

Address

6 CHRISTOU LADA STR

10561 Athina 

Region

Αττική > Αττική > Κεντρικός Τομέας Αθηνών

Activity type

Higher or Secondary Education Establishments

Links

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

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

[HORIZON collaboration network](#) 

Total cost

€ 162 168,39

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Permalink: <https://cordis.europa.eu/project/id/740898>

European Union, 2025