nexT gEneRation sMart INterconnectEd IoT

Fact Sheet

Project Information

TERMINET

Grant agreement ID: 957406

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

DOI
10.3030/957406

Total cost
€ 7 998 285

Start date
1 November 2020

EU contribution
€ 7 998 285

End date
31 October 2023

Coordinated by
PANEPISTIMIO DYTIKIS
MAKEDONIAS
Greece

Project description

Making it simple to connect devices

Tens of billions of devices are connected to the Internet of Things (IoT), and the number of connections is growing every second. Information is being constantly sent and received from one smart device to another. Based on cutting-edge technologies such as software-defined networking (SDN), multiple-access edge computing, and virtualisation for next-generation IoT, the EU-funded TERMINET project will develop a novel next-generation reference architecture. Its main aim is to simplify the connection of a vast number of different devices through a flexible SDN-enabled middleware layer. To improve supply chain processes, the project will design an IoT-
driven decentralised and distributed blockchain framework within manufacturing. TERMINET’s approach will be tested in real-life situations such as energy, smart buildings, smart farming, healthcare and manufacturing.

**Objective**

The vision of TERMINET is to provide a novel next generation reference architecture based on cutting-edge technologies such as SDN, multiple-access edge computing, and virtualisation for next generation IoT, while introducing new, intelligent IoT devices for low-latency, market-oriented use cases. TERMINET’s primary intention is to bring (more efficient and accurate) decisions to the point of interest to better serve the final user targeting at applying distributed AI at the edge by using accelerated hardware and sophisticated software to support local AI model training using federated learning. Our solution aspires to reduce the complexity of the connecting vast number of heterogeneous devices through a flexible SDN-enabled middleware layer. It also aims to design, develop, and integrate novel, intelligent IoT devices such as smart glasses, haptic devices, energy harvesting modules, smart animal monitoring collars, AR/VR environments, and autonomous drones, to support new market-oriented use cases. Great expectation of the proposal is to foster AR/VR contextual computing by demonstrating applicable results in realistic use cases by using cutting-edge IoT-enabled AR/VR applications. By designing and implementing an IoT-driven decentralised and distributed blockchain framework within manufacturing, TERMINET aims to support maintenance and supply chain optimisation. Our solution intends to apply a vertical security by design methodology by meeting the privacy-preserving and trust requirements of the NG-IoT architecture. To foster standardisation activities for the IoT ecosystem, TERMINET will provide novel disruptive business models. For the evaluation of its wide applicability, TERMINET will validate and demonstrate six proof-of-concept, realistic use cases in compelling IoT domains such as the energy, smart buildings, smart farming, healthcare, and manufacturing.

**Fields of science**

- **natural sciences**  
- **computer and information sciences**  
- **internet**  
- **internet of things**
- **social sciences**  
- **economics and business**  
- **business and management**  
- **business models**
- **engineering and technology**  
- **materials engineering**
- **engineering and technology**  
- **electrical engineering, electronic engineering, information engineering**
- **electronic engineering**  
- **robotics**  
- **autonomous robots**  
- **drones**
- **natural sciences**  
- **biological sciences**  
- **ecology**  
- **ecosystems**

**Programme(s)**
Topic(s)

ICT-56-2020 - Next Generation Internet of Things

Call for proposal

H2020-ICT-2018-20

See other projects for this call

Sub call

H2020-ICT-2020-1

Funding Scheme

RIA - Research and Innovation action

Coordinator

PANEPISTIMIO DYTIKIS MAKEDONIAS

Net EU contribution

€ 881 250,00

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Parko Agiou Dimitriou 1
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Region

Γρεβενά > Δυτική Μακεδονία > Βόρεια Ελλάδα

Activity type

Higher or Secondary Education Establishments

Links

Contact the organisation  Website  Participation in EU R&I programmes  HORIZON collaboration network
Participants (26)

ETHNIKO KENTRO EREVNAS KAI TECHNOLOGIKIS ANAPTYXIS
Greece
Net EU contribution
€ 401,562.50
Address
Charilaou Thermi Road 6 Km
57001 Thermi Thessaloniki
Region
Θεσσαλονίκη > Κεντρική Μακεδονία > Βόρεια Ελλάδα
Activity type
Research Organisations
Links
Contact the organisation  Website  Participation in EU R&I programmes
HORIZON collaboration network
Other funding
€ 0,00

KAROLINSKA INSTITUTET
Sweden
Net EU contribution
€ 199,687.50
Address
Nobels Vag 5
17177 Stockholm
Region
Östra Sverige > Stockholm > Stockholms län
Activity type
Higher or Secondary Education Establishments
DIMOSIA EPICHEIRISI ILEKTRISMOU ANONYMI ETAIREIA

Greece

Net EU contribution

€ 171,875,00

Address

Chalkokondyli Street 30
104 32 Athina

Region

Κεντρικός Τομέας Αθηνών > Αττική > Αττική

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

Other funding

€ 0,00

ARISTOTELIO PANEPISTIMIO THESSALONIKIS

Greece

Net EU contribution

€ 239,375,00

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546 36 Thessaloniki

Region

Θεσσαλονίκη > Κεντρική Μακεδονία > Βόρεια Ελλάδα

Activity type
Higher or Secondary Education Establishments

Links
Contact the organisation Website Participation in EU R&I programmes HORIZON collaboration network

Other funding
€ 0,00

SCHNEIDER ELECTRIC ESPANA SA
Spain
Net EU contribution
€ 196 875,00

Address
Bac De Roda 52 Edif A
08019 Barcelona

Region
Este > Cataluña > Barcelona

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

Links
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Other funding
€ 0,00

FUTURE INTELLIGENCE LTD
United Kingdom
Net EU contribution
€ 336 562,50

Address
Regent Street 207 3rd Floor
W1B 3HH London

SME
Yes
London > Inner London — West > Westminster

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

Other funding
€ 0,00

ERICSSON TELECOMUNICAZIONI SPA
Italy
Net EU contribution
€ 410 625,00

Address
Via Anagnina 203
00118 Roma

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

Other funding
€ 0,00

INNOVATION SPRINT
Belgium
Net EU contribution
€ 216 875,00

Address
Rue Clos Chapelle aux champs 30 Bte 1 330
AMERICAN FARM SCHOOL POST SECONDARY EDUCATIONAL AND TRAINING ASSOCIATION

Greece

Net EU contribution

€ 167,937,50

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Marinou Antypa 54 23
57001 Thessaloniki

Region

Θεσσαλονίκη > Κεντρική Μακεδονία > Βόρεια Ελλάδα

Activity type

Higher or Secondary Education Establishments

Links

Contact the organisation
Participation in EU R&I programmes
HORIZON collaboration network

Other funding

€ 0,00
NETCOMPANY-INTRASOFT SA

Luxembourg

Net EU contribution

€ 407 500,00

Address

Rue Nicolas Bove 2b
1253 Luxembourg

Region

Luxembourg > Luxembourg > Luxembourg

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

Other funding

€ 0,00

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WELLNESS TELECOM SL

Spain

Net EU contribution

€ 469 375,00

Address

Calle Gregor J. Mendel 6 Planta 1 Edificio Da Vinc
41092 Sevilla

Region

Andalucía > Sevilla

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

Other funding

€ 0,00
SIDROCO HOLDINGS LIMITED

Cyprus

Net EU contribution

€ 277 500,00

Address

Petraki Giallourou 22
1077 Nicosia

SME

Yes

Region

Κύπρος > Κύπρος > Κύπρος

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

Other funding

€ 0,00

---

GIOUMPITEK MELETI SCHEDIASMOS YLOPOIIISI KAI POLISI ERGON PLIROFORIKIS ETAIREIA PERIORISMESENIS EFTHYNIS

Greece

Net EU contribution

€ 418 125,00

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Mithridatou 36-38
11632 Athina

SME

Yes

Region

Κεντρικός Τομέας Αθηνών > Αττική > Αττική

Activity type

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

Links

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INCITES CONSULTING SA

Luxembourg

Net EU contribution

€ 230 000,00

Address

130 Route D’arlon
8008 Strassen

SME

Yes

Region

Luxembourg > Luxembourg > Luxembourg

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

Other funding

€ 0,00

EIGHT BELLS LTD

Cyprus

Net EU contribution

€ 261 875,00

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Agias Paraskevis 23 Strovolos
2002 Nicosia

SME

Yes
MAKEDONIKI VIOMIHANIA GALAKTOS ANONIMOS ETERIA (MEVGAL SA)

Greece

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€ 103 125,00

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Koyfalia

57100 Koyfalia, Thessaloniki

Region

Θεσσαλονίκη > Κεντρική Μακεδονία > Βόρεια Ελλάδα

Activity type

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

Links

Contact the organisation

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HORIZON collaboration network

Other funding

€ 0,00

ALMA MATER STUDIORUM - UNIVERSITA DI BOLOGNA

Italy

Net EU contribution

€ 252 500,00

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Via Zamboni 33
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Nord-Est > Emilia-Romagna > Bologna
Activity type
Higher or Secondary Education Establishments
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Participation in EU R&I programmes  
HORIZON collaboration network
Other funding
€ 0,00

LOGOS RICERCA E INNOVAZIONE
Italy
Net EU contribution
€ 256 875,00
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Via Bonaventura Berlinghieri 24
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Region
Centro (IT) > Toscana > Firenze
Activity type
Research Organisations
Links
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Participation in EU R&I programmes  
HORIZON collaboration network
Other funding
€ 0,00

FUNDACION TECNALIA RESEARCH & INNOVATION
Spain
Net EU contribution
€ 287 750,00
Address
Parque Cientifico Y Tecnologico De Bizkaia Astondo Bidea Edificio 700
48160 Derio (Bizkaia)

Region
Noreste > País Vasco > Bizkaia

Activity type
Research Organisations

Links
Contact the organisation • Website
Participation in EU R&I programmes
HORIZON collaboration network

Other funding
€ 0,00

---

GEIE ERCIM

France
Net EU contribution
€ 250 000,00

Address
Route Des Lucioles 2004 Sophia Antipolis
06410 Biot

SME
Yes

Region
Provence-Alpes-Côte d'Azur > Provence-Alpes-Côte d'Azur > Alpes-Maritimes

Activity type
Other

Links
Contact the organisation • Website
Participation in EU R&I programmes
HORIZON collaboration network

Other funding
€ 0,00

---

NEC LABORATORIES EUROPE GMBH

Germany
Germany

Net EU contribution

€ 445 472,50

Address

Kurfursten-anlage 36
69115 Heidelberg

Region

Baden-Württemberg > Karlsruhe > Heidelberg, Stadtkreis

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

Other funding

€ 0,00

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MARTEL GMBH

Switzerland

Net EU contribution

€ 409 187,50

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Uberlandstrasse 111
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SME

Yes

Region

Schweiz/Suisse/Svizzera > Zürich > Zürich

Activity type

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

Links

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Participation in EU R&I programmes
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Other funding

€ 0,00
OPTINVENT

France

Net EU contribution
€ 245 625,00

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Yes

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Bretagne > Bretagne > Ille-et-Vilaine

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

Links
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Other funding
€ 0,00

FUNDACIO PRIVADA I2CAT, INTERNET I INNOVACIO DIGITAL A CATALUNYA

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€ 263 250,00

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Activity type
Research Organisations

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FONDAZIONE POLICLINICO UNIVERSITARIO AGOSTINO GEMELLI IRCCS

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€ 103,125,00

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Activity type
Research Organisations

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HORIZON collaboration network

Other funding
€ 0,00

ALTERUNA AB

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Net EU contribution
€ 94,375,00

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SME
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Östra Sverige > Stockholm > Stockholms län

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