



FORTHcert Project Update

May 2018

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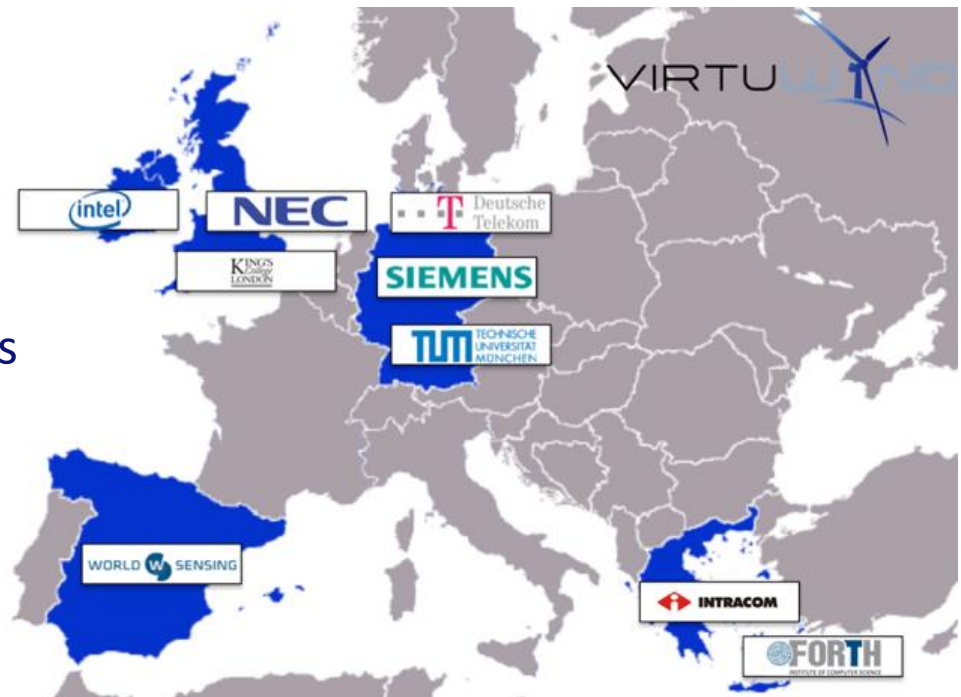
FORTHcert, FORTH-ICS

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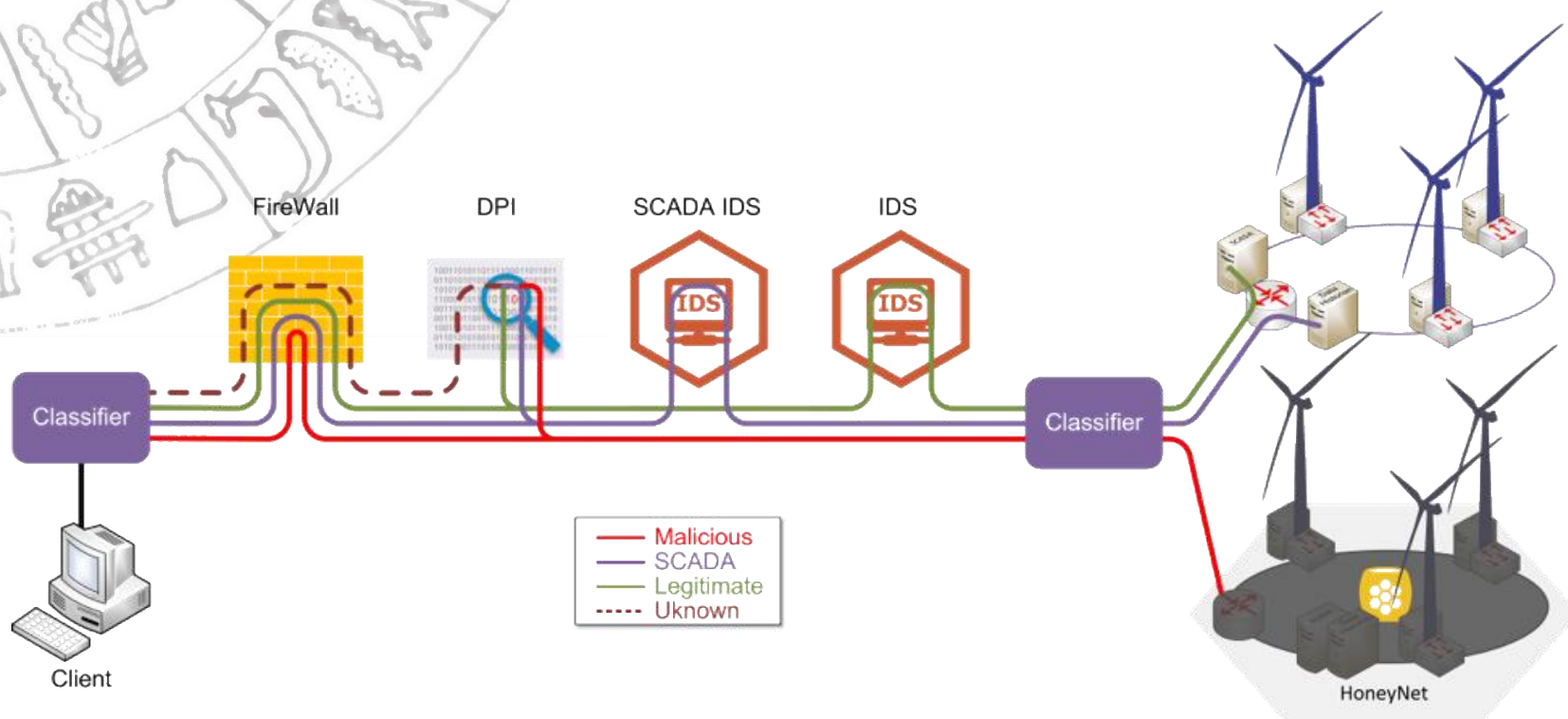
VIRTUWIND

- Call: H2020-ICT-2014-2
- Topic: ICT-14-2014
- Type of action: IA
- Proposal number: 671648
- Consortium
 - 9 members from 5 countries
 - 5 large industry partners
 - 3 research institutions
 - 1 SME
- Budget
 - €4,874,902
- Duration
 - 3 years
 - Project Kicked off on July 2015



- Realize industrial-grade QoS for intra-domain SDN solution
- Guarantee inter-domain QoS for SDN based multi-operator ecosystem
- Reduce time and cost for service provisioning and network maintenance
- Assure security-by-design for the SDN and NFV ecosystem
- Field trial of intra- and inter-domain SDN and NFV prototype
- Collaborate with related 5G-PPP projects and contribute to relevant standards

Service Function Chaining



MANO Driven SFC-Enabled Reactive Security
for Industrial 5G Networks



CYBER Security InSURance — A Framework for Liability Based Trust

<http://www.cybersure.eu>

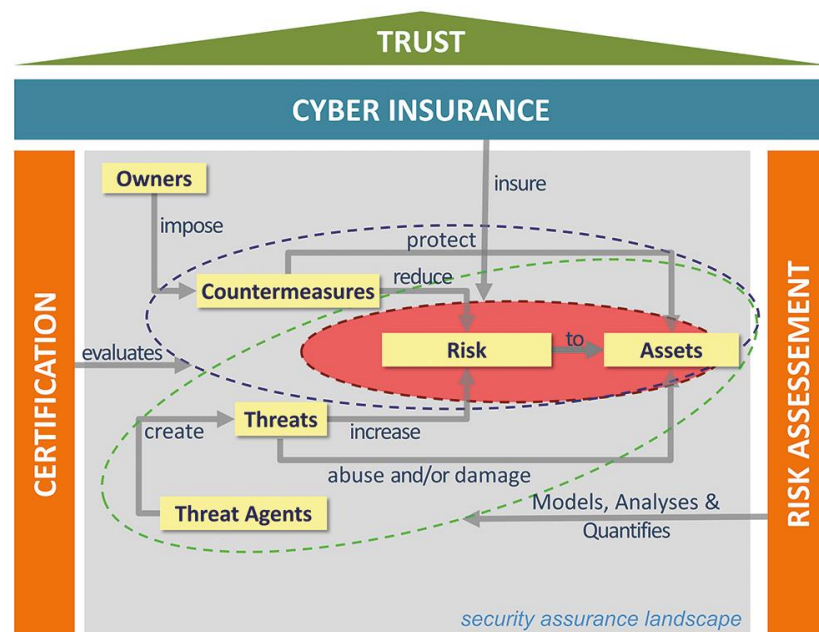
Call: H2020-MSCA-RISE-2016

GA number: 734815

Budget: €1,647,000

Duration: 4 years

Consortium: 3 industrial and 3 academic partners





Objectives

- Collaboration and Knowledge Exchange between the researchers
- Develop a framework for creating and managing Cyber Insurance Policies for cyber system by utilizing:
 - SOA continuous certification infrastructure (tools) for cloud services developed by the EU project CUMULUS
 - RM tool created by NIS and enhanced by the NESSOS risk management methodology
 - insurance management tools from Hellas Direct
- Create conditions for improving cyber insurance practice and the trustworthiness of cyber systems and commercializing the use of the CyberSure platform and framework
- Demonstrate the use of the CyberSure framework in real world trials in the areas of e-health and cloud services
- Demonstrate system prototype in an operational environment (TRL-7)



SEM̃TICS

**Smart End-to-end Massive IoT Interoperability,
Connectivity and Security.**

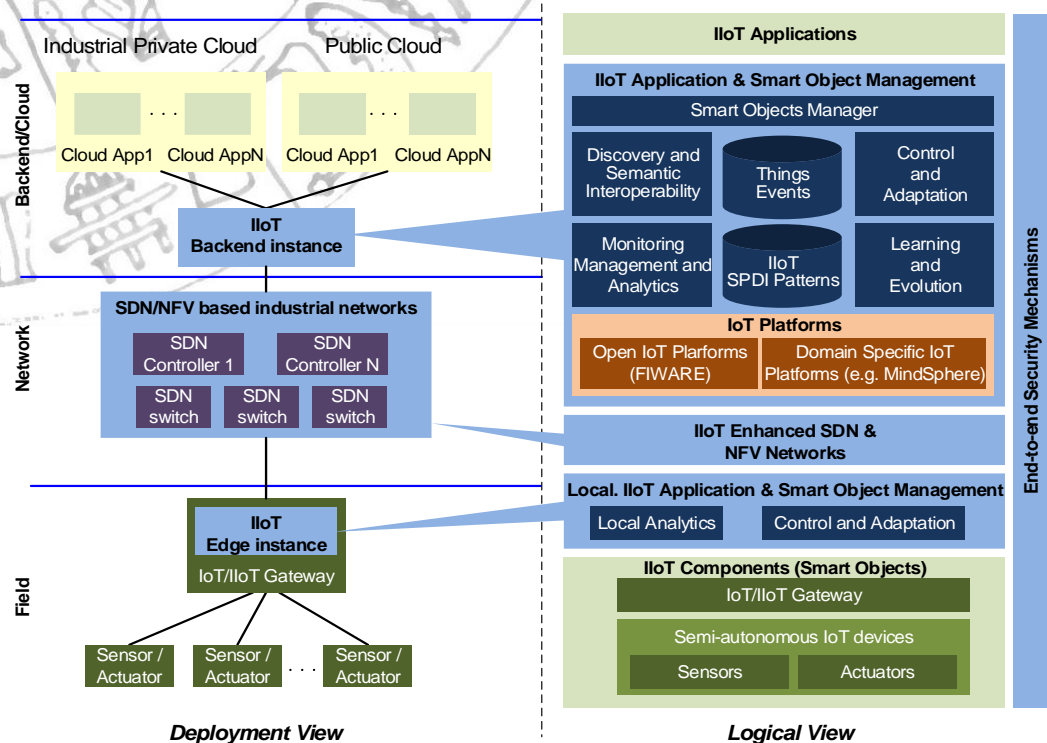
- Type of funding scheme: **Research and Innovation action (RIA)**
- Work programme topic addressed: **H2020-IoT-03-2017 - R&I on IoT integration and platforms**
- Budget: **€4,995,915**
- Consortium: **9 partners**
- Duration: **36 Months**
- Total Score: **14/15**
- Project Number: **780315**

SIEMENS



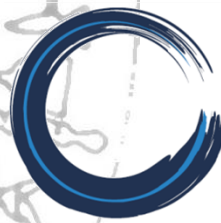
- Development of patterns for orchestration of smart objects and IoT platform enablers with guaranteed security, privacy, dependability and interoperability (SPDI) properties.
- Development of semantic interoperability mechanisms for smart objects, networks and IoT platforms
- Development of dynamically and self-adaptable monitoring mechanisms supporting integrated and predictive monitoring of smart objects in a scalable manner
- Development of core mechanisms for multi-layered embedded intelligence, IoT application adaptation, learning and evolution, and end-to-end security, privacy, accountability and user control
- Development of IoT-aware programmable networking capabilities, based on adaptation and SDN orchestration.
- Development of a reference prototype open architecture, demonstrated and evaluated in both IIoT (renewable energy) and IoT (healthcare), as well as in a horizontal use case bridging the two landscapes (smart sensing), and delivery of the respective open API.
- Promote the adoption of EU technology offerings internationally.

Overall Aim



- Guarantee secure and dependable actuation and semi-autonomic behaviour in IoT/IIoT applications.
- Cross-layer intelligent dynamic adaptation, including heterogeneous smart objects, networks and clouds.
- To address the complexity and scalability needs, SEMIoTICS aims to integrate smart programmable networking and semantic interoperability mechanisms

Envisaged architecture and deployment of SEMIoTICS framework



CIPSEC

Enhancing Critical Infrastructure Protection with Innovative **SEC**urity Framework

- Type of funding scheme: Research and Innovation action (RIA)
- Work programme topic addressed: H2020-DS-2015-1 – The role of ICT in Critical Infrastructure Protection
- Budget: €5,613,788
- Consortium: 13 partners
- Duration: 36 Months
- Project Number: 700378



NETZE



TECHNISCHE
UNIVERSITÄT
DARMSTADT



UNIVERSITAT POLITÈCNICA
DE CATALUNYA
BARCELONATECH





Challenges

- Proposed solutions must be able to collect and process input and data from heterogeneous sources and allow easy integration of external market products.
- CIs are no longer isolated, independent entities, and their security is influenced by multiple factors which sometimes reside outside their borders.
- CIs are complicated systems with multiple departments and components. Each CI has its specific requirements and any proposed solution must be adjusted to its very specific needs and systems.
- CI providers are generally reluctant to cooperate on matters of sharing information about attacks on their systems.
- Cyber-crime and attacks against CIs affect economy and business growth in multiple ways. However, a solution should also promote business activities and alliances, collaborations, access to new markets etc.



Trans-European and Greek CERTs Collaboration

- Funded by: **Connecting Europe Facility** programme
- Call: Telecom Call 2016 (CEF-TC-2016-3)
- Proposals: **14 out of 52** funded receiving €10.8m
- Proposal Code: **2016-EL-IA-0123** (CyberSecurity)
- Consortium: **4 partners** (Greek CERTs)
- Duration: **24 Months**
- Budget: **€998,310** (75% funding)
- Consortium: **NAAEA, GRNET, FORTH, MCIRC**



- Maintain and expand existing, as well as create new, cybersecurity services that will increase preparedness of the CERTs.
- Provide the necessary framework for enabling CERTs to gain access to already deployed cooperation mechanisms.
- Utilize existing Building Blocks as necessary to maximize reusability and also benefit from the multiplicative effect of well-established technologies
- Contribute in the reliability and trustworthiness of the Digital Single Market.
- Engage the relevant actors, both at the national and European levels, for the necessary cooperation.
- Guarantee sustainability of all developed platforms, tools, and training activities, beyond the end of the project.

- Enhancement of partners via new tools, methods and collaborations leading in knowledge advancement and improved Cybersecurity skills
- Societal benefits as a result of newly provided tools and methods, increased security awareness, provision of new technologies and tools, interoperability activities on the EU-level, improvement of quality security services industrywide
- Lead to new business opportunities and overall improvement of the Digital Single Market via the increase of online services security thus enhancing online commerce reliability and trustworthiness
- Enhance partner cooperation and collaboration resulting to immediate and long-term benefits to participating organization's staff with impact not only at a National but also at the EU level



A Framework for Pairing **Circular Economy** and **IoT**:
IoT as an enabler of the Circular Economy &
circularity-by-design as an enabler for IoT

Call: H2020-MSCA-RISE-2017
GA number: 777855

Budget: €1,692,000
Duration: 4 years

Partners



Supported by



Ministry of Digital Affairs
Republic of Poland





Objectives

- IoT as a key enabler for the circular economy: establish a comprehensive framework with IoT as a key enabling and facilitating technology of the circular economy from a business perspective based on circular economy design patterns.
- Circularity as a key enabler for IoT technology: develop an open modular, circular-by-design IoT architecture based on IoT architectural design patterns.
- To integrate an overarching pattern-driven CE-IoT framework covering both business and technical aspects.
- To carry out a comprehensive evaluation of the CE-IoT framework covering business, technical and legal aspects through two demonstrators in the domains of telecommunication and cloud services.
- To create conditions for effectuating circular economy principles through seamless integration with IoT technology and to broaden the use of the CE-IoT framework.



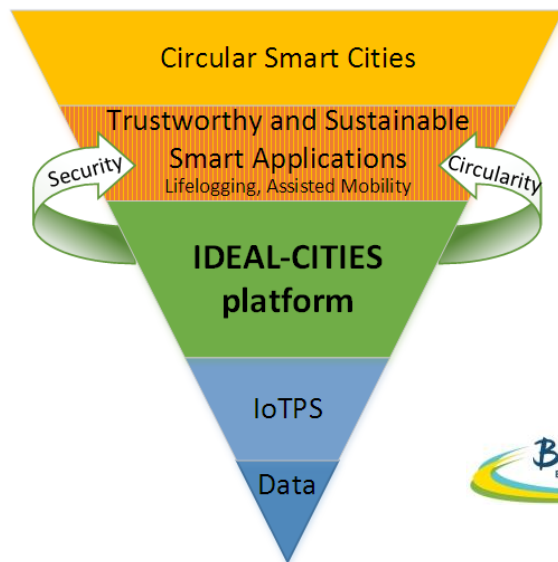
Intelligence-Driven Urban Internet- of-Things Ecosystems for Circular, SAfe and Inclusive Smart CITIES

Call: H2020-MSCA-RISE-2017

GA number: 778229

Budget: €1,611,000

Duration: 4 years



Partners



Supported By





Objectives

- Development of an open modular IDEAL-CITIES platform supporting the development, integration, and operational management of IoTPS applications and exchange of contextualized information utilizing Big Data analytics and Cloud technologies.
- Fostering the adoption of the IDEAL-CITIES platform by the development community by creating a framework for development of compatible IoTPS applications in a verifiably secure, sustainable, and trustworthy manner.
- Contribution to the city's circular economy by optimizing resource utilization and extending the lifecycle of the IoT-enabled devices through intelligent asset management.
- Development of two fully-fledged IoTPS applications with a focus on mobility for the impaired, and citizen safety, based on the IDEAL-CITIES platform.
- Evaluation of the IDEAL-CITIES approach and platform with emphasis on key multi-disciplinary factors underpinning the perception of quality of life, safety and inclusivity of citizens, and evaluation of the effect of the IoTPS applications on these factors.



i-BiDaaS

Industrial-Driven Big Data as a Self-Service Solution

- Type of funding scheme: Research and Innovation action (RIA)
- Work programme topic addressed: H2020-ICT-2016-2017 - Information and Communication Technologies Call
- Budget: €4,997,035
- Consortium: 13 partners
- Duration: 36 Months
- Total Score: 14.5/15
- Project Number: 780787



- Develop, validate, demonstrate, and support, a complete and solid big data solution that can be easily configured and adopted by practitioners.
- Break inter- and intra-sectorial data-silos, create a data market and offer new business opportunities, and support data sharing, exchange, and interoperability.
- Construct a safe environment for methodological big data experimentation, for the development of new products, services, and tools.
- Develop data processing tools and techniques applicable in real-world settings, and demonstrate significant increase of speed of data throughput and access.
- Develop technologies that will increase the efficiency and competitiveness of all EU companies and organizations that need to manage vast and complex amounts of data.



THANK you!