

# **ASSIST-IoT H2020 Project**

Newsletter Issue 6 February - April 2022



European Commission Horizon 2020 European Union funding for Research & Innovation

## **ISSUE HIGHLIGHTS**

The sixth issue of ASSIST-IoT newsletter presents the project activities during February - April 2022 period. This specific issue focuses on the ASSIST-IoT Open Call, the communication and the dissemination activities of the project, the project deliverables (recent and upcoming) and the interaction with the NGIoT association.

**ASSIST-IoT** trimester activities in numbers:

- > ASSIST-IoT Iot Week Workshop Presentation
- > 2 Technical Reports
- > 2 AIOTI Reports
- > ASSIST-IoT Research Gate
- > 4 Presentations
- > 3 NGIoT Activities
- > Open Call Statistics
- > 14 Submitted deliverables
- > Upcoming deliverables
- ➢ 3<sup>rd</sup> GA Meeting



Newsletter





The research conducted under ASSIST-IoT project has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement No 957258

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IoT Week

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## ASSIST-IoT workshop at IoT Week 2022

ASSIST-IoT project organises a workshop to be held during IoTWeek 2022 (20-23 June, Dublin, Ireland entitled: "The ASSIST-IoT approach to NGIoT architecture design and implementation", IoT Week 2022, Tuesday 21 June 2022, Dublin, Ireland. In this session, experts of the project will present relevant outcomes of ASSIST-IoT, in particular: design principles of the reference architecture and definition of the concept of encapsulated enablers.

### **TOPICS TO BE PRESENTED**

- Introduction of ASSIST-IoT as the reference architecture for the NGIoT.
- Design and implementation of a smart orchestrator for deploying enablers in NGIoT environments.
- Secure data sharing schemes for IoT by coupling XACML & Distributed Ledgers.
- ASSIST-IoT functionalities for securely tracking assets in terminal yard.
- Consuming real-time data in Mixed Reality application through a distributed data broker: A case study on large construction site.

### AGENDA AND SPEAKERS

- Moderator: Dr. Alejandro Fornés (UPV)
- Introduction of ASSIST-IoT and moderation Alejandro Fornés (UPV)
- "Design and implementation of a smart orchestrator for deploying enablers in NGIoT environments" Ignacio Lacalle (UPV)
- "Formally secure data sharing schemes for IoT by coupling XACML & Distributed Ledgers" Georgios Stavropoulos (CERTH)
- "ASSIST-IoT functionalities for securely tracking assets in terminal yard" Eduardo Garro
- "Consuming real-time data in Mixed Reality application through distributed data broker" Fotios Konstantinidis (ICCS)



You may learn more about the event here: <u>https://iotweek.org/</u> & <u>https://sites.grenadine.co/sites/iot/en/iotweek-2022/schedule/7624/The%20ASSIST-</u>IoT%20approach%20to%20NGIoT%20architecture%20design%20and%20implementation

## Communication and Dissemination Activities

### **Technical Report #8**

ASSIST-IoT Technical Report #8, entitled "ASSIST-IoT: A Reference Architecture for Next Generation Internet of Things", by: ASSIST-IoT partners Alejandro Fornés-Leal, Ignacio Lacalle, Carlos E. Palau, Paweł Szmeja and Maria Ganzha, has been published and is available at: <u>https://assist-iot.eu/publications/</u>

### **Technical Report #9**

ASSIST-IoT Technical Report #9, entitled "Evolution of MANO towards the Cloud-Native Paradigm for the Edge Computing", by: ASIST-IoT partners Alejandro Fornés-Leal, Ignacio Lacalle, Rafael Vaño, Carlos E. Palau, Fernando Boronat, Maria Ganzha and Marcin Paprzycki, has been published and is available at: https://assist-iot.eu/publications/

### "High Priority Edge Computing Standardisation Gaps and Relevant SDOs" AIOTI Report

The AIOTI report entitled "High Priority Edge Computing Standardisation Gaps and Relevant SDOs" is available. This report introduces an approach for the definition and identification of key edge computing and/or combination of IoT/IIoT, edge computing and cloud computing gaps in several initiatives. Based on the prioritisation of these gaps, the deliverable starts to address the work done within the relevant SDOs that need to cooperate in order to solve these gaps. You may access it and read the ASSIST-IoT contributions here: <u>https://aioti.eu/aioti-wg-standardisationreport-high-priority-edge-computing-standardisation-gaps-andrelevant-sdos/</u>



AIOTI WG Standardisation Report High Priority Edge Computing Standardisation Gaps and Relevant SDOs

### "Computing Continuum Scenarios, Requirements and Optical Communication enablers" AIOTI Report

The AIOTI report entitled "Computing Continuum Scenarios, Requirements and Optical Communication enablers" is available. This report introduces Computing Continuum use cases, requirements and KPIs on communication infrastructures, IoT and edge computing platforms. Compared to many current activities the computing continuum enable a more flexible allocation of compute and communication resources and workload placement. Many novel applications require rather stringent KPIs since IoT is more and more mission critical. The new system requirements include strong security, very high bandwidth, very low delay, and very high reliability. Depending on the use case and deployment scenario, various technology enablers are currently under standardization, including the F5G optical network architecture, novel approaches to compute, and securing networking and compute.

You may access it and read all ASSIST-IoT contributions here: https://aioti.eu/aioti-wg-standardisation-report-high-priority-edgecomputing-standardisation-gaps-and-relevant-sdos/

### **ASSIST-IoT ResearchGate Account**

**ASSIST-IoT project** is available in **ResearchGate platform**! Find us and read our publications. You may learn more here: https://www.researchgate.net/project/ASSIST-IoT



AIOTI WG Standardisation Report Computing Continuum Scenarios, Requirements and Optical Communication enablers

#### ASSIST-IoT

Project

Marcin Paprzycki ◆ Maria Ganzha ◆ Maria Ganzha ◆ Katarzyna Wasielewska Show all 11 collaborators Goal ASSIST-IoT is a EU H2020 ICT-56-2020 funded research project which aims at design, implementation and validation of an open, decemtralized reference architecture, associated enablers, services and tools, to assist human-centric applications in multiple verticals ASSIST-IoT will design, implement and validate, in a realistic, measurable, and replicable way, a unified innovative multi-plane (semi-)autonomous decentralized edge-cloud reference architecture, supplemented by cross-cutting digital enablers. The architecture will support continuous integration and long-term sustainability of domain-agonstic, intercopreable, esit\*-capable, intelligent, distributed, scalable, secure and trustworthy IoT ecosystems.

Lab: <u>Maria Ganzha's Lab</u>

### Presentations

ASSIST-IoT partner Iordanis Papoutsoglou (CERTH) participated in the NGIoT Training: "Decentralizing IoT Intelligence using Distributed Ledger Technologies" on February 7th and presented the "DLT-enabled security for IoT infrastructures". In this presentation he shared some useful details about the ASSIST-IoT architecture and the open call. You may learn more about the event here: <u>https://www.ngiot.eu/event/ngiot-training-decentralizing-iotintelligence-using-distributed-ledger-</u> technologies/?fbclid=IwAR0TZdtbSpL0sbm0rdgcv41APRZPzlam QAIHAT7L3r9RMNp\_esGTbI56N30

ASSIST-IoT partner Wiesław Pawłowski (SRIPAS and University of Gdańsk) gave a plenary talk entitled "Semantic interoperability for IoT", during the 6th International Conference and Workshops on Recent Advances and Innovations in Engineering - ICRAIE 2021 . You may learn more here: https://icraie2021.wixsite.com/icraie2021.

ASSIST-IoT partner Ignacio Lacalle Úbeda (Universitat Politècnica de València UPV) presented the ASSIST-IoT conference paper "Evolution of MANO towards the Cloud-Native Paradigm for the Edge Computing" during the ICACIT 2022 conference on Saturday 12 March 2022.

Ignacio Lacalle Úbeda (Universitat Politècnica de València UPV) presented on February 11th in the **Open Call Workshop** organized by ASSIST-IoT all the details about the ASSIST-IoT Open Call funding opportunity. Briefly he presented the pilots of the ASSIST-IoT 1st **Open Call**. Special thanks to the **Next Generation Internet of Things (NGIOT)**. for making it happen and to all the participants.

You may access the full presentation here: https://www.youtube.com/watch?v=n458dxn7xrk













## **ASSIST-IoT and NGIoT Activities**

#### **NGIoT Newsletter Issues:**

March 2022: <u>https://mailchi.mp/8adb5a53f54b/ngiot-newsletter-march2022</u>

The **ASSIST-IoT Open Call workshop** has been officially hosted in the **NGIoT website**. You may find more information about the event and the webinar video here: <u>https://www.ngiot.eu/assist-iot-open-call-info-session/</u>

#### **Next Generation IoT Skills Surveys**

**NGIOT designed four surveys** which aim at identifying the most important and high in-demand technical, development, management and other soft skills for **Internet of Things (IoT) professionals, for users of industrial IoT systems** (including Operator 4.0 skills). You may find more information here: <u>https://www.ngiot.eu/next-generation-iot-skills-surveys/</u>







## **ASSIST-IoT Open Call Statistics**

The 1st ASSIST-IoT Open Call closed on Monday 28th of February 2022. The express of interest was really high and in total 37 open call proposals were submitted.

Notifications on funding or rejections will be sent out to all participants together with any feedback, by May 19th 2022.

More information about the ASSIST-IoT Open Call Statistics here:

https://assist-iot.eu/2022/03/18/assist-iot-open-call-1-statistics/



## ASSIST-IoT

## Submitted Deliverables

**D2.4 Ethics and Privacy Protection Manual v2 [M18]** – The deliverable will formally specify ways in which conformance with ethical and legal guidelines will be ensured, in line with pertinent EU (and local) documents.

**D2.6 Risk Management v2 [M18]** – The deliverable will include the risk policy, forecasted and detected risks and the mitigation measures, including ethical and legal risks.

**D2.9** Advisory Board Minutes – Second Meeting [M18] - Minutes and report of the second meeting with the Advisory Board.

**D3.3 Use Cases Manual & Requirements and Business analysis – Final [M18] –** Use Cases Manual & requirements and Business Analysis

**D4.2 Core Enablers Specification and Implementation [M18]** – Intermediate specification and first version of implementation of components of horizontal planes.

# **D5.3 Traversal Enablers Development Intermediate Version** [M18] – Intermediate software version

**D6.2 Testing and Integration Plan – Initial [M18]** – Includes testing plan, to be followed for all components belonging. The initial release will outline the initial plan, while second version will include plan update and results.

**D6.4 Release and Distribution Plan – Initial [M18] –** Software and documentation release and distribution plan to be followed for all components. First re;ease will provide the plan while second version plan update and results.

**D6.5 Technical and Support Documentation – Initial [M18] –** Includes initial versions of all technical and supporting documentation of components developed in WP3 and WP4.

D7.2 Pilot Scenario Implementation – First Version [M18] – This deliverable will document the three pilots and integrated third parties, addressing the proposed use cases and scenarios

**D8.1 Evaluation Plan [M18] -** Reference document concerning all evaluation aactivities within action; describing in detail how/when/who will accomplish them (KPIs/data gathering methods/time-plan/partners).

**D9.3 Report on Contribution to Standardisation and International Fora – Initial [M18] –** Report on actions undertaken by Consortium, standardization activities and contributions to various international fora

**D9.5 Report on Impact Creation Achievements and Plan for the Second Period [M18]** – Summarises activities of the first half of the project's duration and summarises the revised plan for communication, showcasing, dissemination and exploitation.

**D9.6 Business Models and Marketing Operations – Initial [M18]** – Compiles results of market analysis, implications (e.g., financial, industrial, regulatory, environmental, socioeconomic aspects) and business models to adopt by partners for ASSIST-IoT.

## **Upcoming Deliverables**

**D2.11 First Open Call Report [M18]** – Complete report of all procedural/formal aspects of the first open call procedure.

**D3.7 ASSIST-IOT Architecture Definition – Final [M18] –** Final specification of the ASSIST-IoT technical architecture and its components.



ASSIST-IoT public deliverables are available for downloading at ASSIST-IoT website: <u>https://assist-iot.eu/deliverables/</u>

## ASSIST-Io T 3<sup>rd</sup> GA Meeting

The 3rd ASSIST-IoT virtual (due to the COVID-19 pandemic) plenary meeting started on February and ran for two days (1-2 February). It took place in two parallel tracks, emphasizing in this way the discussion of several technical aspects and tasks while also general aspects were discussed. Also, the 2nd Advisory Board meeting took place in parallel as part of the global track of the plenary.



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Call: H2020-ICT-2020-1 Topic: ICT-56-2020 Type of Action: RIA Duration: 36 Months Start Date: 1 November 2020