

CREATE the Next Generation IoT eXperience for the Future

Navigating IoT Architectures and Standards Days



19-21 February 2020, DG Connect, European Commission, Brussels
Avenue de Beaulieu 25 (Room BU25 0/S1), 1160 Brussels, Belgium

Co-organised and supported by:



and the following coordination and support actions



CREATE-IoT



The successful development and deployment of IoT solutions relies on multi-dimensional IoT reference architectures that address the different functional layers, the cross-cutting functions and system properties. These include the requirements for data and device security, device discovery, provisioning and management, data normalization, analytics, and services.

The IoT reference architectures are key for standardization, as they define guidelines that can be used when planning the implementation of IoT systems in order to address the complexity of IoT solutions and ensure trustworthy, secure, scalable, interoperable IoT deployments.

The event will include keynotes, plenary and expert workshop sessions bringing answers to what has been achieved and what remains to be done by the IoT and DEI Large-Scale Pilots Programme funded under Horizon 2020.

With the help of the coordination and support actions CREATE-IoT, NGIoT and OPEN-DEI these projects are expected to team up together in order to have significant contributions to piloting European platforms, Data ecosystems, standardisation and pre-normative activities.

Attendance is free and registration is mandatory. Registration site: <https://ec.europa.eu/digital-single-market/events/cf/navigating-iot-architectures-and-standards-days/register.cfm>

Registration allows to select specific days:

Wednesday 19th February: ETSI STF547 Public Dissemination Workshop

Thursday 20th February: IoT & DEI Large Scale Pilots Workshop

Friday 21st February: EC-AIOTI workshop: Breaking down the silos for IoT & DEI Standardisation

Program Wednesday 19 February 2020

On the first day of the workshop, the work will be centred around the outcome of the ETSI Specialist Task Force (STF) 547, The content of the presentations will address the work done, the lesson learned and the main guidelines for IoT systems development.

The STF 547, funded by the European Commission and supported by ETSI, has been launched with the intention to address some of the important issues that the development and the adoption of IoT standards is facing, in particular in the area of privacy, security, semantic interoperability and the availability of standardised platforms.

The workshop will be an opportunity to discuss - and challenge - the guidelines and recommendations that STF 547 has developed in 7 Technical Reports (including Teaching Material on privacy and security).

TR 103 591 [Privacy study report - Standards Landscape and best practices](#)

TR 103 533 [Security study report - Standards Landscape and best practices](#)

TR 103 534-1 Teaching material - [Part 1: IoT Security](#) with [Teaching material](#)

TR 103 534-2 Teaching material - [Part 2: IoT Privacy](#) with [Teaching material](#)

TR 103 535 [Guidelines for using semantic interoperability in the industry](#)

TR 103 536 [Strategic / technical approach on how to achieve interoperability /interworking of existing standardized IoT Platforms](#)

TR 103 537 [Plugtests™ preparation on Semantic Interoperability](#)

How can privacy regulation be supported by standards? Is there anything specific to IoT regarding security? How to enable a wider adoption of semantic interoperability in various industry sectors? Are there available standardised platforms that can reduce the role of proprietary platforms in the development of new IoT systems? These are of few of the questions that the discussion will address.

Each session is planned to be very interactive. The work of the STF will be quickly presented and followed by an extensive Q&A session with some panellists and, more importantly, with the audience. In particular, the results of the STF will make ample room for the presentation of a set of guidelines that may be subject to feedback, and also to the identification of further work.

Workshop Program 19 February 2020

08:30-09:00	Registration – Venue: Avenue de Beaulieu 25, 1160 Brussels, Belgium
Meeting Room: BU25 0/S1	
09:00-09:30	<i>Welcome and Introductions, NN, DG CONNECT EC, Belgium, CREATE-IoT</i>
Session 1: Security - Q&A – Panel Discussions Session	
09:30-10:45	<i>IoT security: what is specific to IoT and what is not?</i> Moderator: S. Cadzow
10:45-11:15	Coffee/Tea Break
Session 2: Privacy - Q&A – Panel Discussions Session	
11:15-12:30	<i>How to take account the new regulation and what is needed from standardisation?</i> Moderator: H-J. Arendshorst
12:30-13:30	Networking Lunch
Meeting Room: BU25 0/S1	
Session 3: Semantic Interoperability - Q&A – Panel Discussions Session	
13:30-14:45	<i>What is needed to reduce the roadblocks to a wide adoption of semantic interoperability by the industry, beyond the academics?</i> Moderators: M. Wetterwald, K. Drira
Session 4: Platform Interoperability - Q&A – Panel Discussions Session	
14:45-16:00	<i>Are IoT platforms meant to be largely proprietary or is there room for standardised platforms in support of greater interoperability?</i> Moderator: E. Darmois
16:00-16:30	Coffee/Tea Break
16:30-17:30	Summary/Wrap-up and closing. <i>Are the guidelines suggested by STF 547 in-line with the findings of the audience (and if not why)? What needs to be subject to follow-up in IoT standardisation?</i>
17:30	Closing

Program Thursday 20 February 2020

On the second day the work will be centred around the handover of common activities from the IoT LSP cluster to the DEI LSP Cluster, enabling to capitalise on the experience built-up and ensure continuation of work on the gaps identified in the new projects cluster and the AIOTI working groups. After three years of intense activity the IoT European Large-Scale Pilots Programme projects launched in 2017 will presenting highlights, best practices and the standardisation activities, and the new DEI Large-Scale Pilots projects launched in 2019 will be introduced. The new projects are addressing the Agri-Food sector, Energy, Health and Care and Smart Manufacturing. Parallel break-out session will be organised on topics of common interest in order to identify and organise common work teams for the coming year.

Program 20 February 2020

09:00-09:30	Registration – Venue: Avenue de Beaulieu 25, 1160 Brussels, Belgium
09:30-09:45	<i>Setting the Scene, Franck Boissière EC E4 DG CONNECT</i>
Session 1 - European Large-Scale Pilots Projects - Presentations, panel and discussions	
09:45-10:45	<ul style="list-style-type: none"> IoT European Large-Scale Pilots Programme Projects: <i>ACTIVAGE, AUTOPILOT, IoF2020, MONICA, SYNCHRONICITY, CREATE-IoT, NGIoT, OPEN-DEI</i> <i>Entering the Scene - DEI Large-Scale Pilots Projects - Factories of the Future</i> <i>Pitch presentations – Synergy, Platoon, BD4OPEM, Platone, Interconnect Coordinate</i> <i>Moderator: Peter Wintlev-Jensen EC E4 DG CONNECT</i>
10:45-11:15	Coffee/Tea Break
Session 2 –Large-Scale Pilots Showcase – World café-type themes	
11:15-12:45	<ul style="list-style-type: none"> Building an ecosystem, leverage open calls Room BU25 0/S2 (Moderator: Olavi Luotonen, EC) Main deliverables: Call package IoF2020 SYNCHRONCITY and ACTIVAGE, open calls statistics, idea of club of SMEs. Ways to share, document, promote huge number of use cases Room BU25 0/S1 (Moderator: Rolf Riemenschneider, EC) Main deliverables: Booklet IoF2020, AUTOPILOT, Communication, showcasing strategy IoT Week IoT Interoperability architectures, AIOTI, standardisation organisations Room BU25 0/S5 (Moderator: Franck Boissière, EC) Main achievements: MIMS, work with ETSI CIM, ITU, G20, JTC1-AG8 Key pitches: SYNCHRONICITY, AUTOPILOT Innovation support: CREATE-IoT – Brochures, market landscape Room BU25 0/S1 (Moderator: Jan Komarek, EC) White paper on GDPR, IERC cluster books, Security approach, KPIs LSPs, eBook, IoT Handbook, IoT Policy Framework, Wiki, use case mapping. Key pitches: CREATE-IoT, ACTIVAGE
12:45-13:45	Networking Lunch
13:45-14:00	<i>Setting the Scene, Rolf Riemenschneider, EC E4 DG CONNECT, Meeting Room: BU25 0/S1</i>
Session 3 – Parallel Sessions	
14:00-15:30	<ul style="list-style-type: none"> IoT Data Space, sharing, conceptual reference model Room BU25 0/S1 (Moderator: Rolf Riemenschneider, EC) IoT Data lakes, platforms, economics of data-driven services and marketplaces Room BU25 0/S1 (Moderator: Jan Komarek, EC) IoT Security, privacy policy framework (GDPR, planned data strategy) – Room BU25 0/S2 (Moderator: Peter-Wintlev Jensen, Salvatore Scalzo, EC) Navigating the future of IoT Technologies/Applications towards edge computing– Room BU25 0/S5 (Moderator: Franck Boissière, EC)
15:30-16:00	Coffee/Tea Break
Plenary Session	
16:00-16:45	<i>Reporting from the Sessions – Take away, Highlights. Short presentations from moderators (2 slides)</i>
16:45-17:00	<i>Looking back and aiming forward. Main take away. Future actions. Rolf Riemenschneider, EC</i>
17:00-19:00	Networking Session – Cocktails

Program Friday 21 February 2020

The workshop focuses on how AIOTI addresses the upcoming challenge for digitizing European industry and what are the approaches on standardization to promote open, active collaborations and IoT/IIoT as enabler for platform developments and marketplaces in the industrial sectors. Moreover, challenges like gaps in IoT standardization and IoT enabled data marketplaces will also be discussed. In particular, the focus will be on:

- Session 1: Digital transformation: What are the standardization, regulation and policy needs for the successful realization of the digital transformation in Europe, considering among others 5G deployments?
- Session 2: IoT-enabled Data marketplaces: transformative journey from building infrastructure to the local enablement of cross-domain marketplaces is underway across many domains and geographies; What are the standardization, regulation and policy needs associated with these IoT-enabled Data marketplaces?
- Session 3: Breaking down the technology silos and how the AIOTI approach can address the horizontal harmonization. This session will focus on the work that has been done by AIOTI on current gaps in IoT standardisation and will discuss the opportunities and barriers on leveraging technologies like 5G, IoT/IIoT, AI, robotics, cloud and edge computing and as well automation and required standards, governance, policy and rules to address the horizontal harmonization.

Workshop Program 21 February 2020

08:30-09:15	Registration – Venue: Avenue de Beaulieu 25, 1160 Brussels, Belgium
Meeting Room: BU25 0/S1	
09:15-09:30	<i>High-level introduction and keynote message, Nikolaos Isaris –Head of Unit (acting) IoT Unit E4, EC DG CONNECT</i>
Session 1: Digital transformation - Q&A – Panel and Discussions	
09:30-10:55	<ul style="list-style-type: none"> • Johannes Nitschke, 5G ACIA, Siemens • Ana García, BDVA/AI-PPP • Henning Banthien, Plattform-i40 (TBC) • François Fischer, AIOTI WG Smart Mobility • Marco Carugi, Telecom supply • Peter Thoene, John Deere, Vertical Industry demand side • Ricardo Vitorino – Ubiwhere, Industry supply side <p><i>Moderators: Antonio Conte EC DG GROW</i></p>
10:55-11:15	Coffee/Tea Break
Session 2: IoT- Enabled data marketplaces - Q&A – Panel and Discussions	
11:15-13:00	<ul style="list-style-type: none"> • Silvia Castellvi IDSA, GAIA-X • George Saleh, Nokia • Chris Decubber, EFFRA. Vertical Industry, Manufacturing • Oscar Lazaro, INNOVALIA Manufacturing • Tom de Block, AIOTI <p><i>Moderators: Franck Boissière, EC DG CONNECT, Sergio Gusmeroli, Open DEI</i></p>
13:00-14:00	Networking Lunch
Meeting Room: BU25 0/S1	
Session 3: Horizontal harmonization -AIOTI solutions on breaking down the technology silos - Panel and Discussions	
14:00-15:30	<ul style="list-style-type: none"> • Dave Raggett W3C, IoT semantic interoperability • Michelle Wetterwald, AIOTI, Standardisation Gaps • Marco Carugi, AIOTI High Level Architecture • Ovidiu Vermesan, AIOTI IoT Research • Franck Boissière, EC DG CONNECT, IoT Standardisation Activities Overview • Patrick Guillemin, ETSI • Francesca Poggiali, GS1 <p><i>Moderator: Wael Omar EL HASSAN EL RIFAI, AIOTI</i></p>
15:30-16:00	<i>Summary/Wrap-up and closing. Rolf Riemenschneider, EC E4 DG CONNECT</i>
16:00	Closing

IoT European Large-Scale Pilots Programme Projects



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[ACTIVAGE](#) - ACTIVATING INNOVATIVE IoT SMART LIVING ENVIRONMENTS FOR AGEING WELL - is building the first European interoperable and open IoT ecosystem enabling the deployment, at large scale, of a wide range of Active and Healthy Ageing IoT based solutions and services. To achieve this, ACTIVAGE is integrating thousands of devices to collect and analyse older adults' environmental and lifestyle information, identify their needs, and provide customized solutions, ensuring users' data privacy and security.



AUTOPILOT

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[AUTOPILOT](#) - AUTOMATED DRIVING PROGRESSED BY INTERNET OF THINGS – is developing an IoT connected vehicle platform and IoT architecture based on the existing and forthcoming standards, as well as open source and vendor solutions. The IoT ecosystem accommodates vehicles, road infrastructure and connected IoT objects, with particular attention to safety critical aspects of automated driving. The project develops a range of services combining autonomous driving and IoT, such as car sharing, autonomous valet parking, and better digital maps for autonomous vehicles.



CREATE-IoT

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[CREATE-IoT](#) - CROSS FERTILISATION THROUGH ALIGNMENT, SYNCHRONISATION AND EXCHANGES FOR IoT - CREATE-IoT's stimulate collaboration between IoT initiatives, foster the take up of IoT in Europe and support the development and growth of IoT ecosystems based on open technologies and platforms. The work focuses on synchronisation and alignment on strategic and operational terms through frequent, multi-directional exchanges between the various activities under the IoT Focus Areas and the road-mapping with international initiatives.



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[IoF2020](#) - INTERNET OF FOOD AND FARM 2020 - is dedicated to accelerating the uptake of IoT technologies in the European farming and food chains and ultimately strengthening their competitiveness and sustainability. How? By demonstrating, together with end-users, the use of IoT in different use-cases spread throughout Europe, and focusing on 5 areas: dairy, meat, arable crops, fruits and vegetables. IoF2020 is designed to generate maximum impact right from the outset and in the long-run, bringing closer together and integrating the supply and demand sides of IoT technologies in the agri-food sector.



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[MONICA](#) - MANAGEMENT OF NETWORKED IoT WEARABLES – VERY LARGE-SCALE DEMONSTRATION OF CULTURAL AND SOCIETAL APPLICATIONS - is a large-scale demonstration of how cities can use existing and new IoT solutions to meet sound, noise and security challenges at big open-air cultural and sports events, which attract and affect many people. Innovations include the establishment of sound zones at outdoor concerts for noise mitigation as well as security measures improving crowd information and management.

SYNCHRONICITY

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[SynchroniCity](#) - DELIVERING AN IoT-ENABLED DIGITAL SINGLE MARKET FOR EUROPE AND BEYOND - brings together partners with worldwide outreach. The project represents the first attempt to deliver a digital single market for IoT-enabled urban services in Europe and beyond. With an already emerging foundation, based on OASC Minimal Interoperability Mechanism (MIMs), SynchroniCity will establish a reference architecture model for the envisioned IoT-enabled city marketplace with identified interoperability points and interfaces and data models for different verticals.



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[U4IoT](#) - USER ENGAGEMENT FOR LARGE SCALE PILOTS IN THE INTERNET OF THINGS - combines complementary Responsible Research and Innovation – Social Sciences and Humanities (RRI-SSH) expertise encompassing social and economic sciences, communication, crowdsourcing, living labs, co-creative workshops, meetups, and personal data protection to actively engage end-users and citizens in the large-scale pilots. U4IoT encompasses the whole lifecycle of end-user engagement in LSPs. Privacy-friendly crowdsourcing and survey tools enable to monitor the end-user perception and acceptance of IoT applications.

Co-organised and supported by:



Alliance for Internet of Things Innovation (AIOTI) is the multi-stakeholder platform for stimulating IoT Innovation in Europe, bringing together small and large companies, start-ups and scale-ups, academia, policy makers and end-users and representatives of society in an end-to-end approach. We work with partners in a global context. We strive to leverage, share and promote best practices in the IoT ecosystems, be a one-stop point of information on all relevant aspects of IoT Innovation to its members while proactively addressing key issues and roadblocks for economic growth, acceptance and adoption of IoT Innovation in society.

We are looking forward to seeing you in Brussels!



To promote and foster the take-up of IoT in Europe and to enable the emergence of an economically sustainable IoT ecosystem, the IoT European Large-Scale Pilots Programme projects are seeking to involve the IoT community across the value chain, from supply side to demand side.

Welcome to the IoT European Large-Scale Pilots Programme

A vibrant research, innovation, development and deployment IoT ecosystem across Europe!