

# European Large-Scale Pilots Programme Collaboration Framework

# Overview

Collaboration and interaction



European  
Large-Scale Pilots  
Programme

- ACTIVAGE - Overview activities, collaboration/interaction and AGs priorities (by NUIG)
- AUTOPILOT - Overview activities, collaboration/interaction and AGs priorities (by SINTEF, ISMB/LINK)
- IoF2020 - Overview activities, collaboration/interaction and AGs priorities (by UNP)
- MONICA - Overview activities, collaboration/interaction and AGs priorities (by ISMB/LINK)
- SYNCHRONICITY - Overview activities, collaboration/interaction and AGs priorities (by ATOS, MI)
- U4IoT - Overview activities, collaboration/interaction and AGs priorities (by ANYSOL, SINTEF)



MONICA

SYNCHRONICITY



Funded by the European Commission



# Overview

Collaboration and interaction



European  
Large-Scale Pilots  
Programme



7

**CREATE-IoT** - **C**Ross **f**ertilisation through **A**lignment**T**, **s**ynchronisation and **E**xchanges for **IoT**: Stimulate collaboration between IoT initiatives, by supporting the development and growth of IoT ecosystems based on open technologies and platforms.



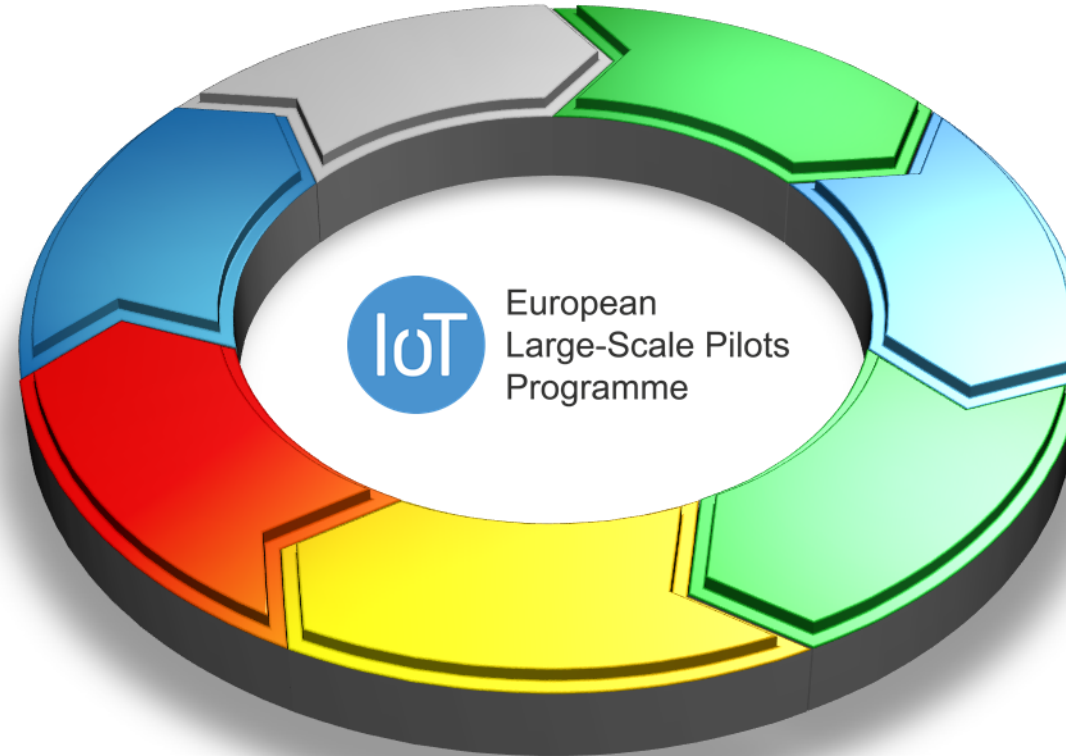
6

**U4IoT** - **U**ser **E**ngagement for **L**arge **S**cale **P**ilots in the **I**nternet of **T**hings: Actively engage end-users and citizens to achieve IoT societal acceptance.

5

**SYNCHRONICITY**

**SYNCHRONICITY** - **D**elivering an **IoT** enabled **D**igital **S**ingle **M**arket for **E**urope and **B**eyond: **S**ingle digital city market for Europe.



[european-iot-pilots.eu](http://european-iot-pilots.eu)

1



**MONICA**

**MONICA** - **M**anagement **O**f **N**etworked **IoT** **W**earables - **V**ery **L**arge **S**cale **D**emonstration of **C**ultural **S**ocietal: Wearable devices containing sensors and actuators for massive scale applications.

2



**ACTIVAGE** - **A**CTivating **I**nno**V**ative **IoT** smart living environments for **AGE**ing well: Active and healthy ageing.

3



**AUTOPILOT**

**AUTOPILOT** - **A**UTOMated driving **P**rogressed by **I**nternet **O**f **T**hings: Automated driving and infrastructure.

4



**IoF2020** - **I**nternet of **F**ood and **F**arm **2020**: Strengthen competitiveness of farming and food chains in Europe.



**MONICA**

**SYNCHRONICITY**



Funded by the European Commission



# IoT LSP Evolution

Collaboration and interaction



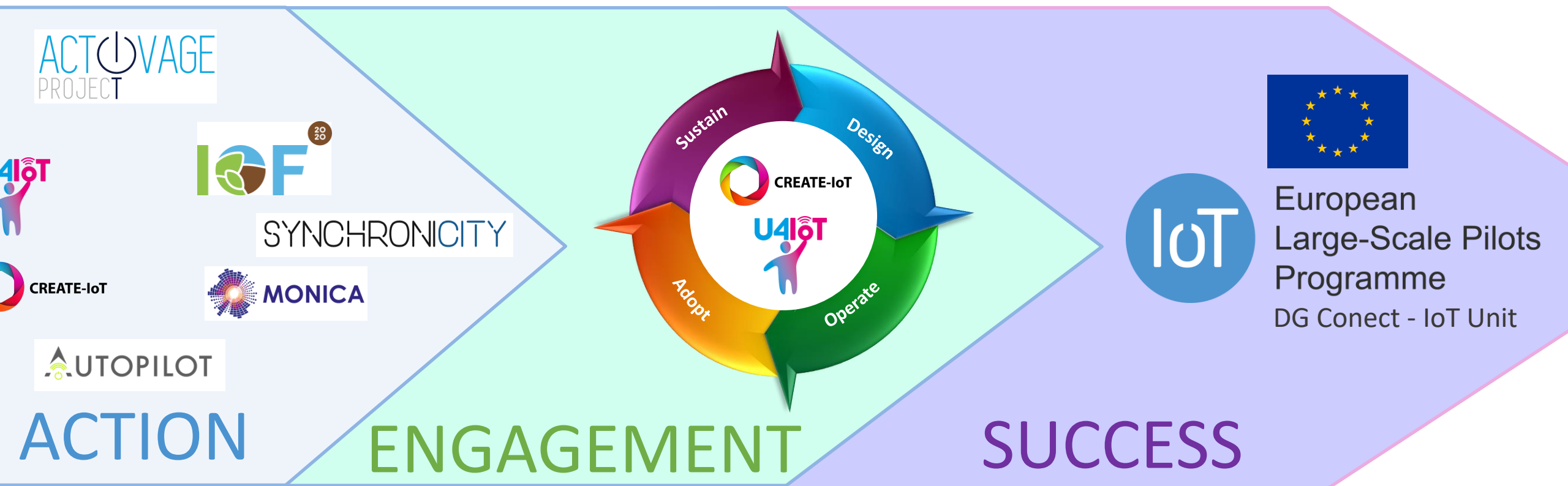
European  
Large-Scale Pilots  
Programme

2017

2018

2019

2020



MONICA

SYNCHRONICITY



Funded by the European Commission



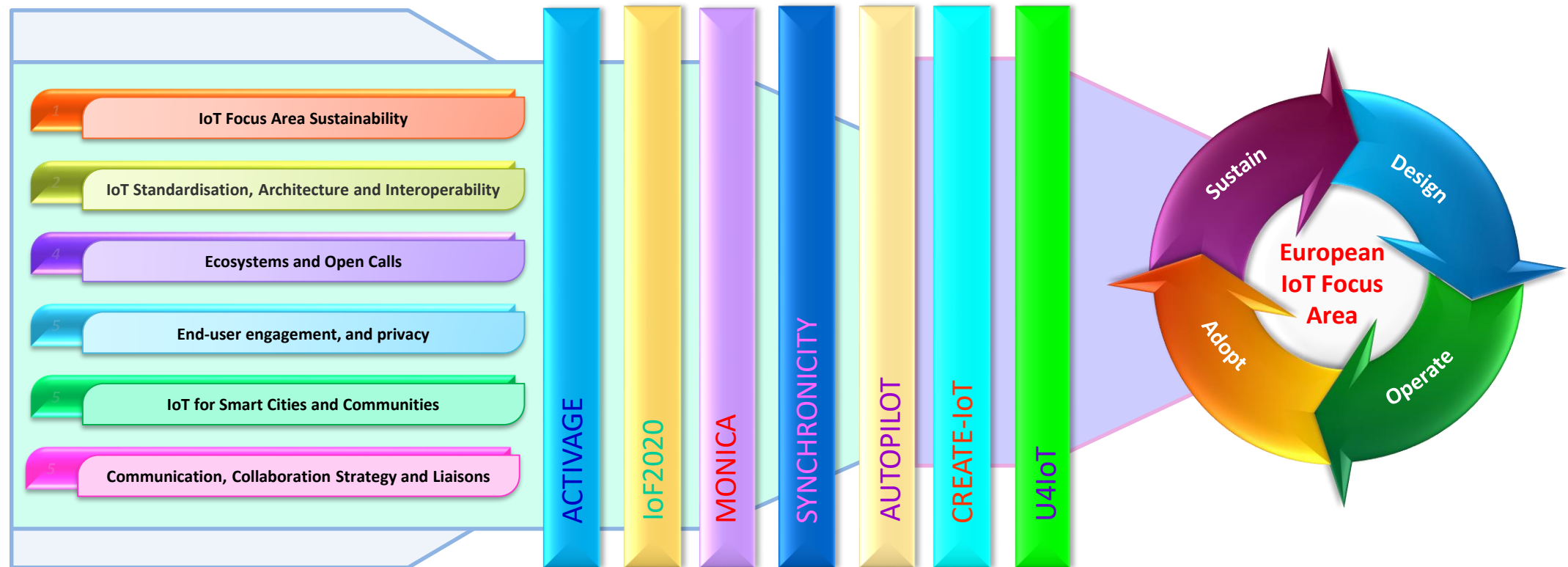
# Overview

Collaboration and interaction



European  
Large-Scale Pilots  
Programme

## • IoT European Large-Scale Pilots Programme Activity Groups



## CREATE-IoT Collaboration Activities

### ACTIVAGE Focus

- The project will deliver the ACTIVAGE IoT Ecosystem Suite (AIOTES).
- A set of Techniques, Tools and Methodologies for interoperability at different layers between heterogeneous IoT Platforms.
- An Open Framework for providing Semantic Interoperability of IoT Platforms for AHA, addressing trustworthiness, privacy, data protection and security.
- KPIs for design, testing and validation across the IoT large-scale pilot projects.
- Business models.
- Best practices.

### ACTIVAGE Outcome

- Pan-European overview of the IoT – Active and Healthy Ageing Deployment Sites (DS) / Geographical Pilots.
- Common KPIs evaluation across DSs.
- AHA Formal Vocabulary in the domain.
- Sustainability and Exploitation Business Models.

### Impact of the Results

- Development of European Active and Healthy Ageing (AHA) IoT-Driven Local to Global ecosystems.
- Replicability towards sustainable deployment sites exploitation businesses in the AHA domain.
- Validation of new IoT technology and innovative using industry and business processes and business models.



# ACTIVAGE

Overview activities - collaboration and interaction

ACTIVAGE  
PROJECT



European  
Large-Scale Pilots  
Programme

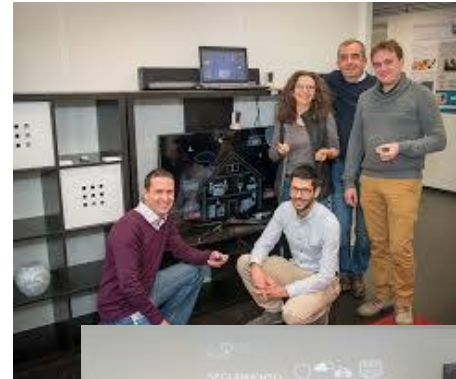
## CREATE-IoT Collaboration Activities



ACTIVAGE published two chapters in the cluster book 2018

ACTIVAGE has its Marketing Team from the coordinator MEDTRONIC but also Plans to use the CREATE-IoT journalist to provide extra visibility to the project.

ACTIVAGE contributes to the IoT Handbook as Wiki page that includes a terminology list of terms related to IoT.



ACTIVAGE  
PROJECT



MONICA

SYNCHRONICITY



Funded by the European Commission



# ACTIVAGE

Overview activities - collaboration and interaction

ACTIVAGE  
PROJECT



European  
Large-Scale Pilots  
Programme

## SME & Stakeholders Workshops

Lisbon (27-28 February 2019).

### ACTIVAGE Sustainability Workshop

Represented Televés, Spain, presented the ACTIVAGE's Galicia pilot and engage in discussions about IoT technology. An Open Panel debate was the main stream.

Open the discussion on the horizontal cooperation and the exchange of ideas among the projects and with the PAs.

### ACTIVAGE SME Engagement Workshop

Activities presented.

The format was a session dedicated for SMEs and Entrepreneurs promoting SMEs engagements through ACTIVAGE open calls.



Participants as part of the Sustainability (above) and SME's (below) Workshops Lisbon (27-28 Feb. 2019).



# ACTIVAGE

Overview activities - collaboration and interaction

## IoT Week 2019 in Denmark

Aarhus (17-21 June 2019). Parallel event(s) organised by all LSPs or by theme

- Sessions
- Workshops
- Open Calls Workshops
- Hackfest Participation
- Exhibition:



## AIOTI Engagement with Activity Groups

Activity groups in which ACTIVAGE partners are/will continue participating

AG01 (KPIs, business models/exploitation)

AG02 (standardisation)

AG04 (open calls, SMEs)

AG05 (user engagement, security GDPR)



## KPIs & Sustainability Metrics – AG01

IoT Focus Area Sustainability

KPIs Definition are some examples of collaborative activities where together CREATE-IoT and ACTIVAGE and other LSPs have collaborated.

A Workshop on exploitation across the LSPs to be organised at IoT Week



## ACTIVAGE Outcome

- ACTIVAGE is focusing on KPIs, sustainability, business models and exploitation.
- Feedback from ACTIVAGE on overall KPIs was presented at the IoT Week in Bilbao, Spain (June 2018)
- A final assessment round is foreseen to decide which KPIs to consider for the whole programme.

## Impact of the Results

- Development of European Active and Healthy Ageing (AHA) IoT-Driven Local to Global ecosystems.
- Replicability towards sustainable deployment sites exploitation businesses in the AHA domain.
- Validation of new IoT technology and innovative using industry and business processes and business models.

### PPPs Event – AG01

IoT Focus Area Sustainability

Events organised with the European Partnerships

(5G, AIOTI, euRobotics, ECSEL, HPC, BDVA, etc.)



### 2019 Open IoT Summer School – AG01

An event organised by CREATE-IoT and ACTIVAGE on September 2019. The **Open** Internet of Things **Summer School** is an international event for different stakeholders involved in the **IoT** ecosystem, such as scientific researchers across Europe and other parts of the world, **open** source communities and developers as well as any large enterprise or entrepreneurs interested in participating.



## eBook IoT market trends and LSPs value proposition – AG01

IoT Focus Area Sustainability

The eBook is prepared by CREATE-IoT.

The eBook gives an overview on market trends at global level with presentation of LSPs in relation to their field of activity.



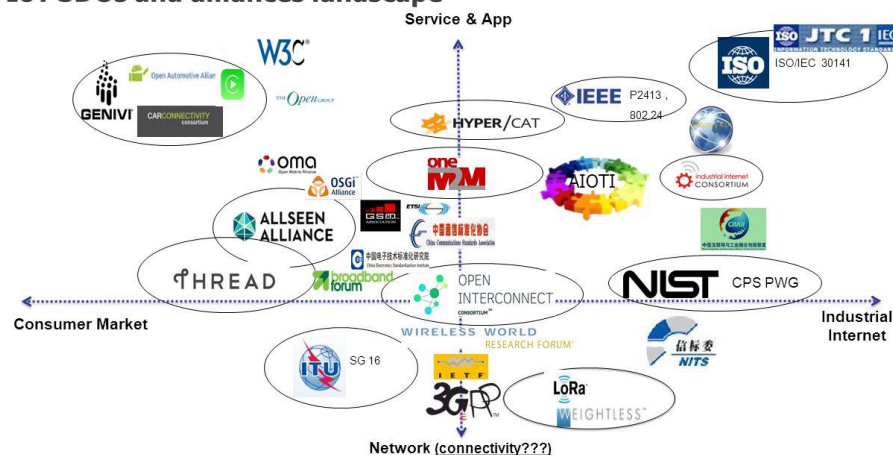


## IoT Standardisation, Architecture and Interoperability – AG02

IoT Standardisation, Architecture and Interoperability

The work on defining the generic Architecture, Use Cases Description and landscape Definition are some examples of collaborative activities CREATE-IoT and ACTIVAGE and other LSPs have collaborated.

IoT SDOs and alliances landscape



Source: Huawei (company names removed) – further discussion is needed on the exact position of each SDO

## ACTIVAGE Outcome

- ACTIVAGE is focusing on Reference Architecture for both local and Global usability and best practices.
- ACTIVAGE overall general architecture adopted aligned with the general architecture.
- Semantic Interoperability Layer as part of AIOTES was adopted and part of the discussed and presented in IoT Week 2018 and IoT Week 2019 as part of AG02.

## Impact of the Results

- European Active and Healthy Ageing (AHA) Vocabulary.
- Best practices for the European AHA Ecosystem towards large adoption and usability.
- Validation of IoT technology for AHA and development of innovative use cases and solutions.





## W3C Workshop on Web Standardization for Graph Data

Creating Bridges: RDF, Property Graph and SQL – AG02

IoT Standardisation, Architecture and Interoperability

Monday 4th March to Wednesday 6th March 2019, Berlin, Germany

Martin Serrano (NUIG) and Dave Raggett (W3C) co-chaired a session at the **W3C workshop on Web Standardisation for Graph Data**, a two days W3C standardisation event in Berlin hosted by neo4J to discuss the future of Data Graphs in the semantic web community, around 100 attendees with 23+ presenters addressed different aspects on graph data.

At the same workshop on day two a focused session on **Temporal, Spatial and Streaming Data** was co-chaired by Martin and Ingo Simonis (OGC) where 20+ participants discussed the importance on Geo-Spatial Data particularly with live data streams coming from IoT and AI. An open Debate was directed towards identifying the common elements across the different approaches on Graph Data and how Geo Spatial and Temporal aspects are common elements in graph data.



## W3C Workshop on Web Standardization for Graph Data

Creating Bridges: RDF, Property Graph and SQL – AG02

IoT Standardisation, Architecture and Interoperability

Monday 4<sup>th</sup> March to Wednesday 6<sup>th</sup> March 2019, Berlin, Germany



W3C Workshop on  
Web Standardisation  
for Graph Data  
Chairs and co-chairs  
Berlin (4-6 March 2019).

W3C Workshop on  
Web Standardisation  
for Graph Data Temporal  
Spatial and Streaming  
Data Session Berlin (4-6  
March 2019).

### LSPs to the 3D IoT architecture – AG02

IoT Standardisation, Architecture and Interoperability

Workshop on standardisation activities and interoperability for mapping specific use cases organised by ETSI.

### Workshop on Standardisation for Interoperability – AG02

A workshop on standardisation activities and interoperability during IoT week organised together with AIOTI WG03 to present results of the LSPs use cases mapping & the interaction with AIOTI (WG03). ACTIVAGE participation and contribution of ACTIVAGE.



### ISO Meeting - AG02

IoT Standardisation, Architecture and Interoperability

ISO meeting in August where the IoT LSPs standardisation activities and interoperability will be presented (ETSI)



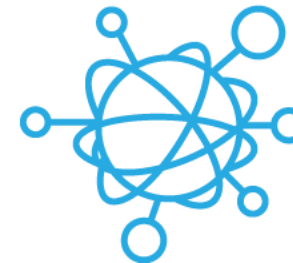
International  
Organization for  
Standardization

### Standardisation and Interoperability Workshop AG02

IoT Standardisation, Architecture and Interoperability

Final workshop in October as part of the IoT summit 2019 dedicated to LSPs (Palma de Mallorca at the new conference center). The IoT Summit could include several meetings in October in Mallorca:

- Projects Meetings
- IoT FA Conference
- Workshop on Standards
- Workshop on IoT Policy
- Future: Digital Europe, Horizon Europe....  
with regional, national and EC authorities



European  
Large  
Scale  
Pilots

**LSP SUMMIT**

Palma de Mallorca, Spain

**GLOBAL 2019**



# ACTIVAGE

## Collaboration Outcomes

ACTIVAGE  
PROJECT



European  
Large-Scale Pilots  
Programme

### Semantic Engineering



#### World Wide Web Community

- Semantic Sensor Networks (SSN-XG)
- Linked Data / Open Data
- Enable user to configure, deploy, use IoT based services



### Internet Connected Objects



- European Telecommunications Standards Institute
- CEN / CENELEC



### Machine to Machine Communications



- oneM2M Community Industrial Groups
- Linked Data and Semantic Annotation (SSN-XG)
- Information Exchange and Interoperability





### ACTIVAGE involved in the part related to Open Calls and SMEs (AG04)

End-user engagement, and privacy

ACTIVAGE last open call 1 has been will be promoted via the common portal.



### ACTIVAGE Outcome

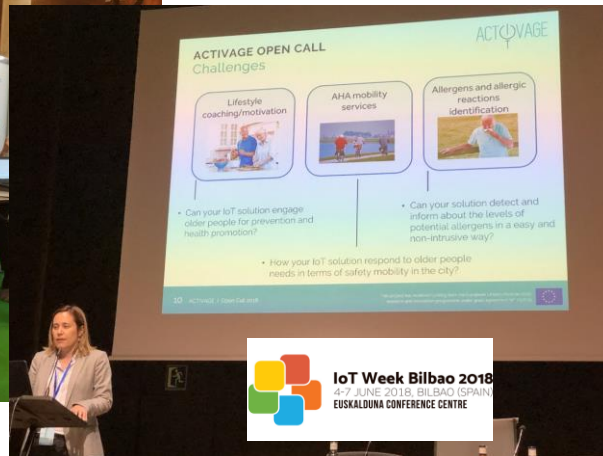
- ACTIVAGE open call 1 have been promoted and evaluated during 2018-2019 and Open Call 2 is ongoing.
- ACTIVAGE dissemination channels have been defined including CREATE-IoT channels.
- The Open Call 1 has been announced trough a focus session at IoT Week 2018.

### Impact of the Results

- Engagement with SME, Entrepreneurs and linkage with the different stakeholders in the Deployment Sites.
- Reachability to larger communities, particularly SME through the CREATE-IoT events.
- Expansion of the IoT ecosystem and opening of the economic opportunities for SMEs and Industries.

## ACTIVAGE involved in the part related to Open Calls and SMEs (AG04)

End-user engagement, and privacy



### 2° OPEN CALL AIMS

- We want to extend the foot print of ACTIVAGE current 9 DSs to **3 new DSs in the EU**
- We want the New DSs (NDSs) will proactively
  - **set up full ACTIVAGE IoT for AHA Ecosystem.**
  - **integrate their legacy AHA services** plus AHA services imported from DSs, including first OC applications, and
  - **perform a one year trial** or till end of project, incorporating a sound number of senior people and caregivers users.
- We want that NDSs engage into the the new born European IoT for AHA Ecosystem community and help in the propagation of ACTIVAGE values worldwide.

**0.6 MILLION EURO AVAILABLE!**

3 ACTIVAGE | 2° OPEN CALL | 2019

ACTIVAGE

- **Second Open Call** to be launched in March 2019 is addressed to cities and regions in the EU that are willing and committed to Set Up ACTIVAGE IoT for AHA ecosystem framework and services in their local domain and commit the contribution in the evaluation and evidence creation process of ACTIVAGE project.

### ACTIVAGE involved in the part related to GDPR – AG05

IoT for Smart Cities and Communities

ACTIVAGE white paper on GDPR presented.

Archimede Solutions (CREATE-IoT)

STMicroelectronics (ACTIVAGE)



### ACTIVAGE Outcome

- ACTIVAGE is identifying the DPIA for each Deployment Site (DS) for technology compliance.
- The lifecycle of the used data in each DS is crucial for defining business models and exploitation plans.
- A final risk assessment is foreseen to decide which Privacy Data technology will be consider for the whole project.

### Impact of the Results

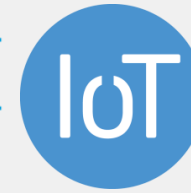
- Alignment and sharing experiences on GDPR compliance across the different domains involved in the different LSP.
- A paper published on IoT book 2019 where privacy and security about ACTIVAGE approach based on the workshop hosted at IoT Week 2019.



# ACTIVAGE

## Collaboration Outcomes

ACTIVAGE  
PROJECT



European  
Large-Scale Pilots  
Programme

### CREATE-IoT and ACTIVAGE – Summary

- Collaboration:
- Programme brochure
- Video interviews
- Programme video
- ICT 2018 pitch at the expo
- Lisbon 2019 Galicia Pilot, Spain
- IoT Catalogue ACTIVAGE Version
- AHA Reference Vocabulary
- AIOTI Relations  
WG01, WG03, WG04 and WG05
- KPIs
- eBook
- IoT Standardisation and Interoperability
- White paper on GDPR
- Plans for publishing a chapter on ACTIVAGE in the cluster book
- Plans to use the journalist to provide extra visibility to the project.

2018

2019

2020



SME &  
Stakeholders  
Workshop

Standardization Workshops and ISO Event

ETSI-CREATE-IoT  
Events  
&

ACTIVAGE Open Call

IoT Week 2019  
Sessions

Open IoT  
Summer  
School

CREATE-IoT  
ACTIVAGE LSP  
Summit 2019

IoT Catalog for European Large Scale Pilots - ACTIVAGE

ACTIVAGE GDPR white paper



ACTIVAGE  
PROJECT



MONICA

SYNCHRONICITY



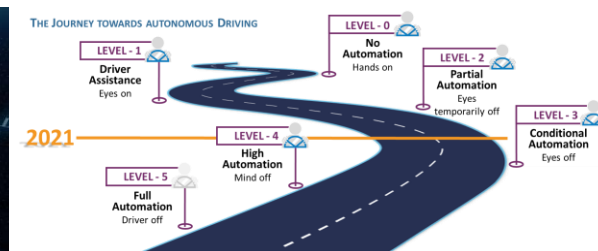
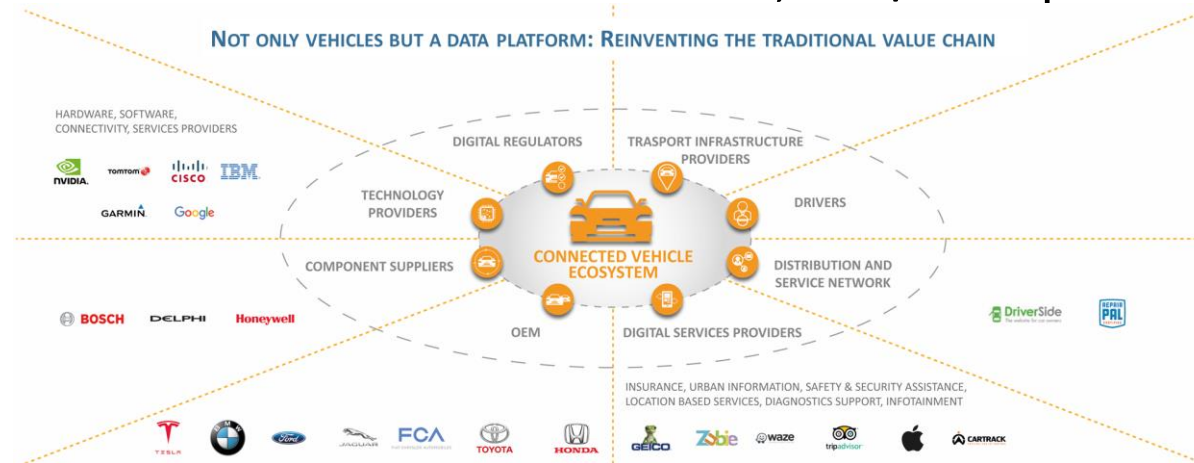
Funded by the European Commission



# AUTOPILOT

Overview activities - collaboration and interaction

- eBook – IoT European Large-Scale Pilots Programme
  - MAKING the DIFFERENCE in Europe
- AUTOPILOT – contributes to the focus area of connected vehicles through feedback and comments and provides one-two slides about the AUTOPILOT value proposition for the connected vehicles focus area, and/or impacts.





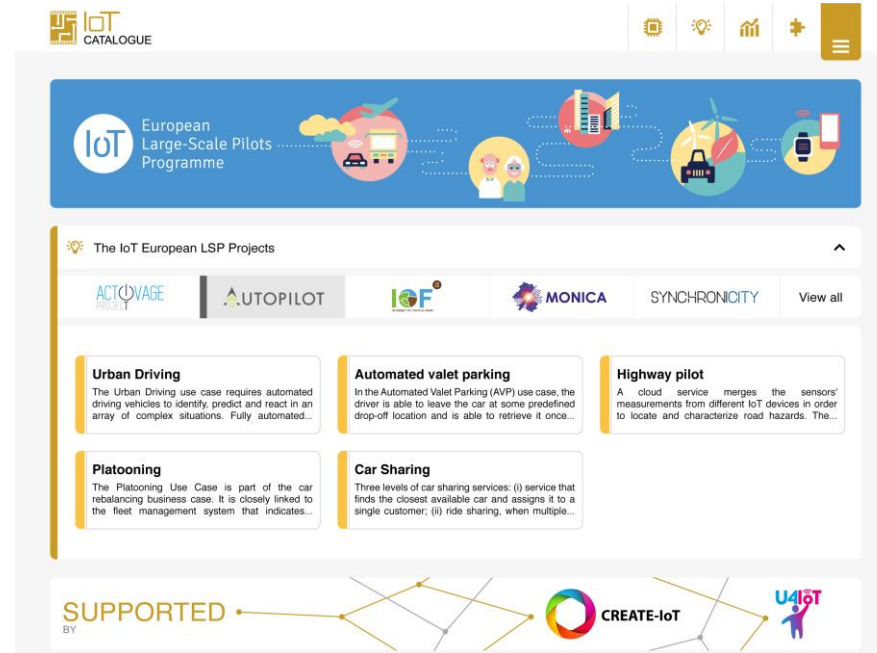
# AUTOPILOT

Overview activities - collaboration and interaction



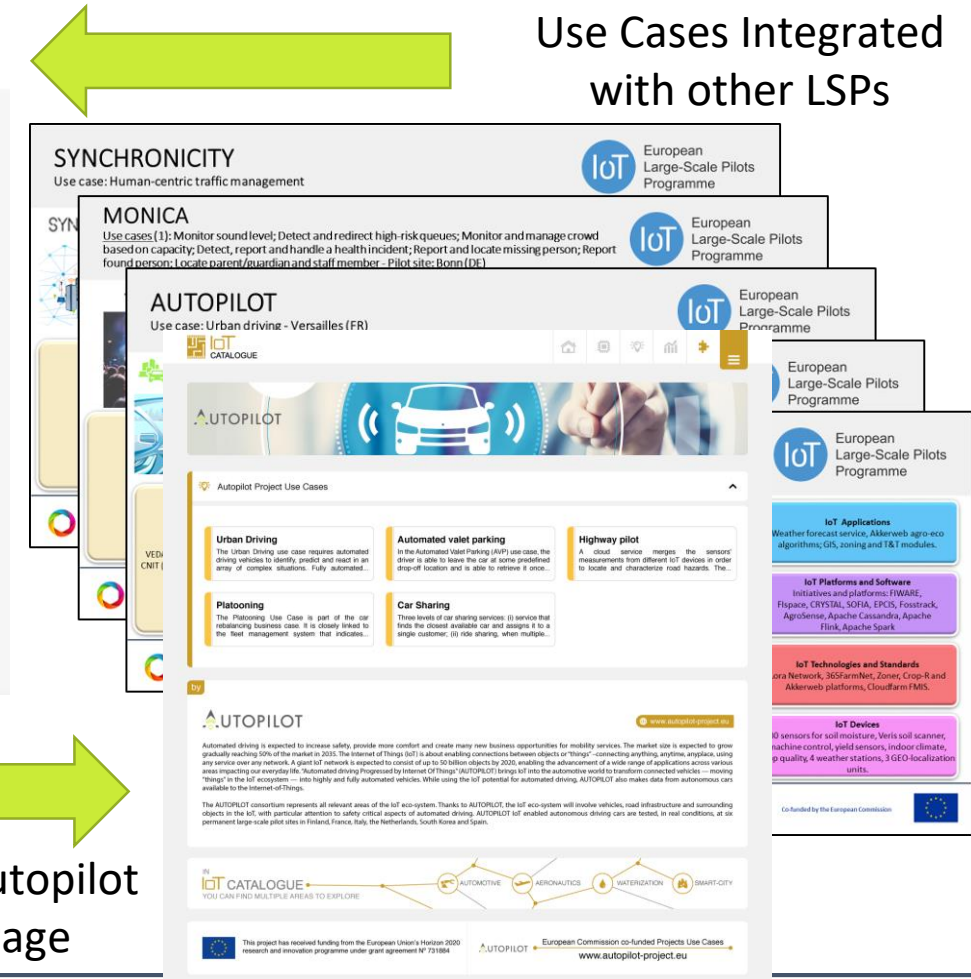
European  
Large-Scale Pilots  
Programme

- Automated Valet Parking
- Highway Pilot
- Platooning
- Urban Driving
- Real-Time Car Sharing Services
- Deployment sites
- Value Proposition
- Functions, standardisation



- Platforms
- Manufactures
- Products/Components

Dedicated Autopilot  
Landing Page



Funded by the European Commission



# AUTOPILOT

Overview activities - collaboration and interaction



- ICT 2018 – Presentation and pitch at the expo
- Lisbon 2019 – CTAG, Vigo Pilot, Spain
- IoT Policy Framework for autonomous vehicles applications and overview of legislation related to autonomous driving (selected countries from Europe and other continents.)
- Plans for publishing a chapter on AUTOPILOT in the cluster book
- Plans to use the journalist to provide extra visibility to the project (to be aligned with TSYS).
- IoT Handbook as Wiki page that includes a terminology list of terms related to IoT.





## • Activity Group

1

IoT Focus Area Sustainability

### • AUTOPILOT Focus

- Autonomous vehicles and IoT technologies assessment and optimisation
- Validation of methodologies
- Market position paper
- Best practices
- Business models
- KPIs for design, testing and validation across the IoT large-scale pilot projects

### • AUTOPILOT Outcome

- Pan-European overview of the IoT – autonomous vehicles demonstration sites/pilots
- Common KPIs evaluation
- Market position paper
- Identify the sustainability models used, link with users and MS's initiatives

### • Impact of the Results

- Development of secure and sustainable European IoT ecosystems
- Replicability towards operational deployment exploration
- Validation of new industry and business processes and innovative business models



- The current analysis seem to demonstrate that AUTOPILOT KPI work focus strongly on the **evaluation of the direct project activities**: efficiency of technologies and deployment methodologies. The project address the evaluation of the **project impacts** in the final phase of the development.
- AUTOPILOT KPIs categories
  - Technology Development
  - Ecosystem strategy and engagement
  - Marketplace and business impacts
  - Policy and governance impacts
  - Technology deployment and infrastructure
  - Ecosystem openness and external collaboration
  - Societal and economic impacts
  - Community support and stakeholders' inclusion



## • Activity Group

2

IoT Standardisation, Architecture and Interoperability

### • AUTOPILOT Focus

- Best practices for mapping of pilot architecture approaches.
- Interoperability and standards approaches at technical and semantic levels.
- Architectures that may be reused across multiple use cases and enable interoperability across those.
- Significant and measurable contribution to standards or pre-normative activities in the pilots' areas.
- Interoperability and integration testing on open IoT platforms.

### • AUTOPILOT Outcome

- Validation of the most promising standards and provide a proper gap identification.
- Measurable contribution to standards or pre-normative activities in the pilots' area.
- Identify reference implementation of promising IoT standards.
- Consolidate results obtained through standardization and pre-normative activities performed by the IoT LSPs projects.

### • Impact of the Results

- Measurable contribution to standards or pre-normative activities in the pilots' areas of action.
- Implementation of open platforms and validation of IoT architectures standards.
- Interoperability properties used across the IoT LSPs.
- Validation in usage context of most promising standards and gap identification.



# AUTOPILOT

AGs priorities



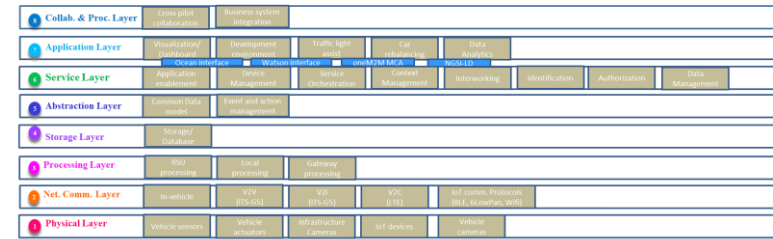
European  
Large-Scale Pilots  
Programme

## Objectives:

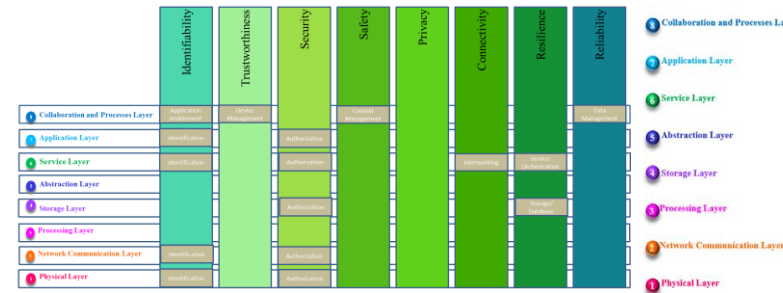
- Ensure that the model deals with
  - All the functional aspects, in particular “cross layers”
  - More than the functional aspects
- Explain how it can be mapped on other reference architectures

## Main aspects

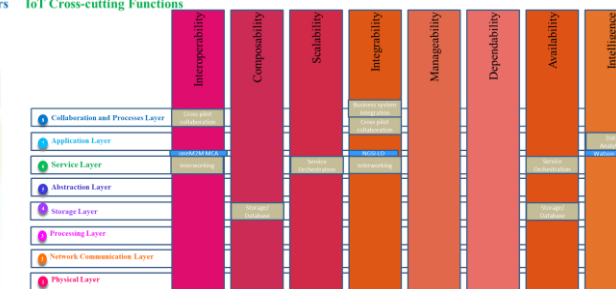
- A three dimensional model
  - Layers
  - Cross-cutting functions
  - Properties
- Addressing explicitly some expected properties of the system



IoT Architectural Layers



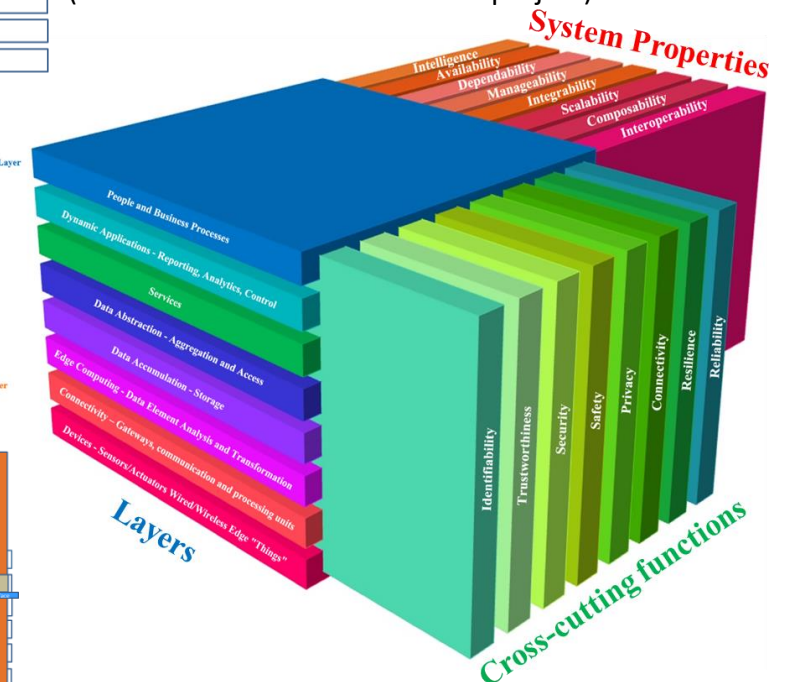
IoT Architectural Layers



IoT Architectural Layers

IoT System Properties

AIOTI IoT Relation and Impact on 5G - Release 2.0  
March 2019, AIOTI WG03 – IoT Standardisation -  
AUTOPILOT use cases, ETSI G5 versus LTE-V2X  
(based on EC H2020 AUTOPILOT project)



Mapping the use case in Versailles,

- Activity Group

5

Privacy and End-user Engagement

- **AUTOPILOT Focus**

- Stakeholders acceptance validation, (addressing privacy, security, vulnerability, liability).
- Policy framework
- Privacy issues and how these can be tackled in an efficient manner in view of the upcoming new regulations (e.g. the emission of information by smart vehicles through the analysis of Data).
- GDPR

- **AUTOPILOT Outcome**

- Discuss and adopt the use of an IoT policy framework (i.e. privacy, security, safety, societal, ethical aspects and legal issues) in a coordinated and consolidated manner across the IoT activities and pilots.
- Present a framework to focus on data protection, security, safety, liability and net neutrality with a cross-domain IoT approach as part of the Digital Single Market strategy.

- GDPR paper and common White paper with the other LSPs.

- **Impact of the Results**

- User acceptance validation, addressing privacy, security, vulnerability, liability, identification of user needs, concerns and expectations of the IoT solutions.
- Validation of key characteristics such as security and privacy.
- Efficient information sharing across the programme stakeholders for horizontal issues of common interests such as trust, security, privacy, legal issues.

## • Activity Group

8

### Communication, Collaboration Strategy and Liaisons

#### • AUTOPILOT Focus

- Design and implement the communications strategy to coordinate and support the IoT European LSPs Programme.
- Common web portal, events, branding, awareness, press/PR plans, web strategies and marketing plans.
- The communication strategy is aligned with the strategies of IoT European LSPs Programme projects
- The communication, collaboration strategy and liaisons activity group is preparing this strategy to provide and effective communications with the goal to:
  - Support IoT European LSPs Programme to achieve the overall objectives and impacts.
  - Engage effectively with all stakeholders and various ecosystems.
  - Demonstrate the success of the work performed by the projects and partners.
  - Ensure that people, public authorities, regional and national representatives understand what the programme does and can follow the progress.
  - Change behaviour and perceptions where necessary.

#### • AUTOPILOT Outcome

- Communication media, internal/ external stakeholders (e.g. brochures, factsheet, videos).
- Harmonised branding IoT European LSPs Programme (pptx, posters, roll-ups)
- List of relevant events, events participation (coordination).
- IoT European LSPs Programme Portal (integrated webspace).
- Publications, newsletters, magazines, etc.
- IoT European LSPs Programme Presentations

#### • Impact of the Results

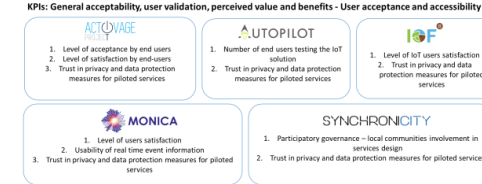
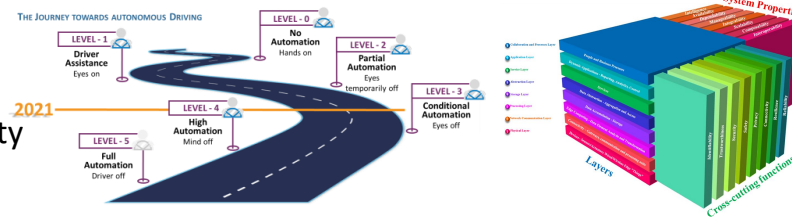
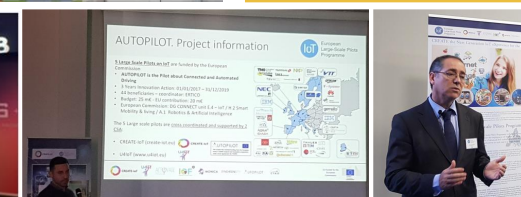
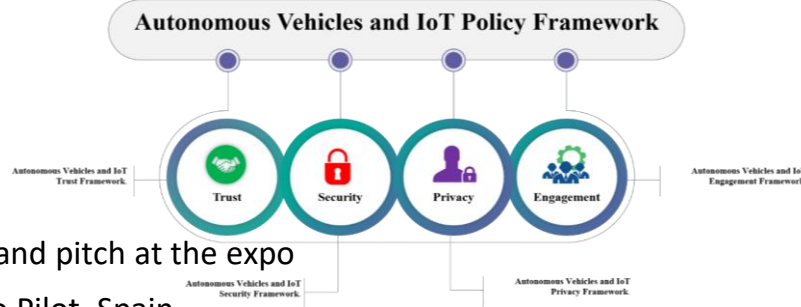
- Provide a coherent communication strategy for efficient information sharing across the programme stakeholders to ensure efficient and innovative IoT take-up in Europe.
- Creation of opportunities for entrepreneurs by promoting new market openings.
- Promotion of the IoT developments, consolidation of the EU IoT community and strengthening of the role of EU on the global IoT scene.

# AUTOPILOT

## Collaboration Outcomes



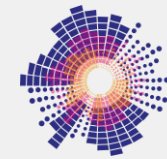
- Collaboration:
- Programme brochure
- Video interviews
- Programme video
- ICT 2018 – Presentation and pitch at the expo
- Lisbon 2019 – CTAG, Vigo Pilot, Spain
- IoT Catalogue/Explorer
- IoT Policy Framework for autonomous vehicles applications
- AIOTI IoT Relation and Impact on 5G - Release 2.0 March 2019, AIOTI WG03 – IoT Standardisation
  - AUTOPILOT use cases, ETSI G5 versus LTE-V2X (based on EC H2020 AUTOPILOT project)
- KPIs
- eBook
- IoT Standardisation and Interoperability
- White paper GDPR
- Plans for publishing a chapter on AUTOPILOT in the cluster book
- Plans to use the journalist to provide extra visibility to the project (to be aligned with TSYS).
- IoT Handbook as Wiki page that includes a terminology list of terms related to IoT.





# MONICA

Overview activities - collaboration and interaction

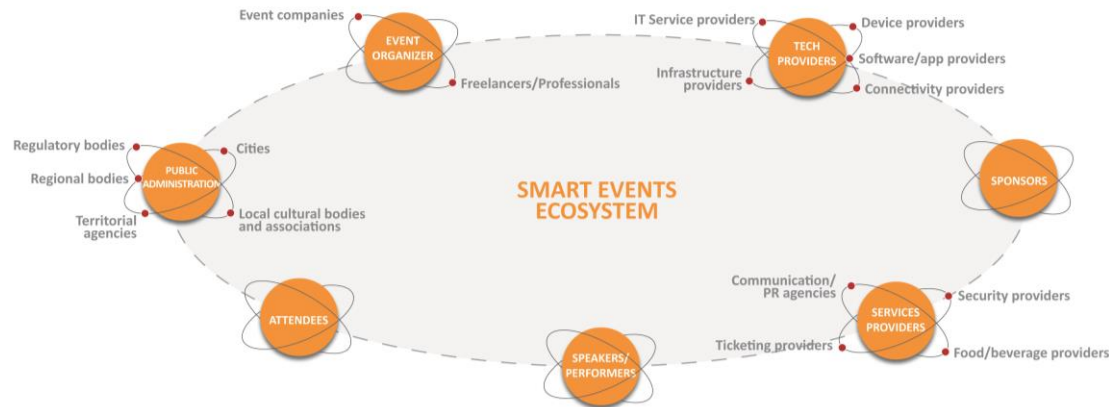


MONICA



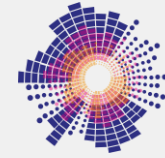
European  
Large-Scale Pilots  
Programme

- eBook – IoT European Large-Scale Pilots Programme
  - MAKING the DIFFERENCE in Europe
- MONICA – contributes to the focus area of Wearables in the Entertainment and Security Market through feedback and comments and provides content slides about the value proposition for the Wearables in the Entertainment and Security Market.



# MONICA

Overview activities - collaboration and interaction



MONICA



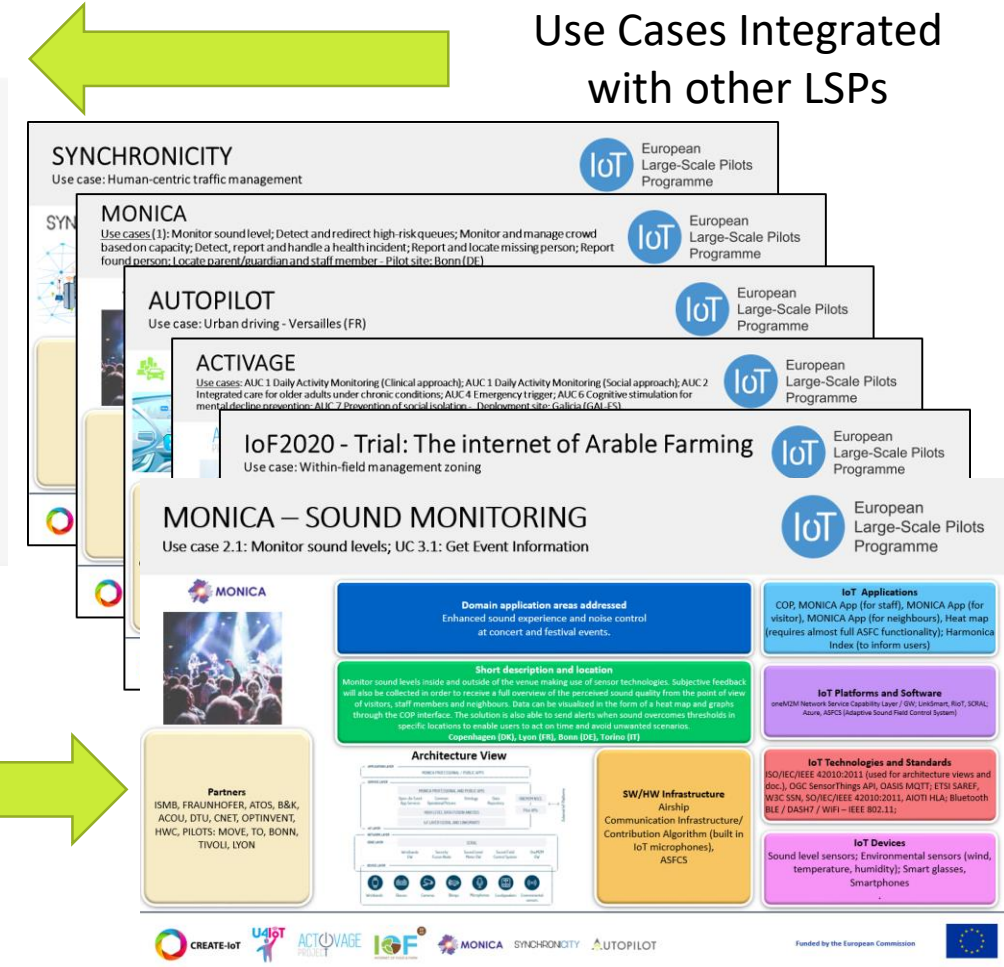
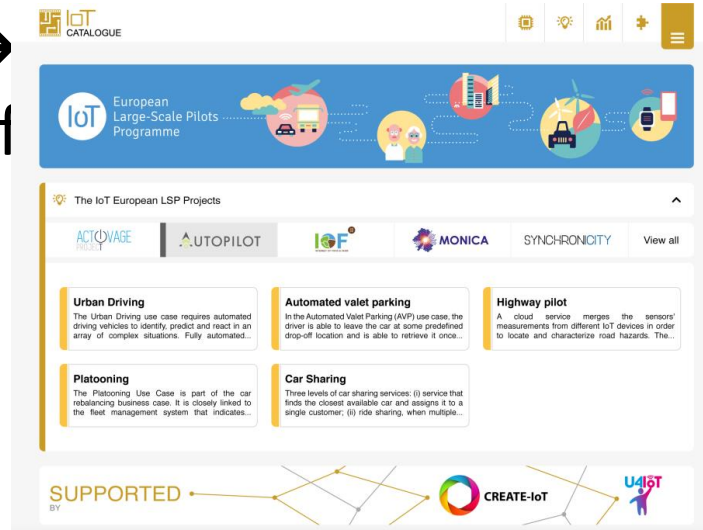
European  
Large-Scale Pilots  
Programme

IoT-Catalogue/explorer →  
Providing and overview of  
use-cases within the LSPs

– now including IoF2020 and AUTOPILOT  
[UNPARALLEL]

MONICA to give information regarding the pilot site  
content and provide feedbacks [FIT]

- Deployment sites
- Value Proposition
- Functions, standardisation



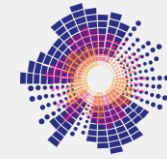
MONICA

SYNCHRONICITY



Funded by the European Commission





## ***Communication and exploitation activities***

*both internal and external to the projects*



CREATE-IoT



MONICA

- External events – e.g. IoT Week
- Exploitation activities | actions/measures that the CSA projects may implement in order to help LSPs strengthen/improve some sustainability aspects in their pilots/projects.



MONICA to liaise expecially with AG08



MONICA to liaise expecially with AG01 LINKS]



- Activity Group

1

IoT Focus Area Sustainability

- **MONICA Focus**

- Sound monitoring and control
- Crowd and capacity monitoring
- Security - Health incidents
- Missing persons/Locate staff members
- Validation of methodologies
- Business models
- KPIs for design, testing and validation across the IoT large-scale pilot projects

- **MONICA Outcome**

- Common KPIs evaluation
- Identification of sustainability models used
- Definition of Scalability and Replicability/Reproducibility enablers

- **Impact of the Results**

- Development of secure and sustainable European IoT ecosystems
- Impact assessment and Validation of business models towards reproducibility of solutions



The project address the evaluation of the **project impacts** in the final phase of the development  
**Impact Assessment and Validation Tool**



## D9.1 - Impact Assessment and Validation Framework

### STRUCTURE OF THE FRAMEWORK

- **Impact type** → Technological Impact
- **Impact measures** → Evidence
- **Methods of assessment** → How measured
- **KPIs**



#### 7.1.2 Technological impact

<i>Impact on IoT technologies &amp; IoT ecosystems</i>		
<i>Evidence</i>	<i>How measured</i>	<i>KPI</i>
Total number of wearable users	Quantitative - count number distributed & interactions made	108000
Number of applications integrating wearables & sensors	Quantitative - count	17
Number of applications running on platform during an event	Quantitative - count of applications developed for & used during event	15
Largest number of simultaneous communications sessions during an event	Quantitative - connection count Input from ISBM / HWC	800
Largest number of interoperability hooks to Smart City platforms	Input from ISBM	4
<i>Impact on standards (measurable contributions)</i>		
<i>Evidence</i>	<i>How measured</i>	<i>KPI</i>
Contribution to ETSI, oneM2M, and radio spectrum regulation	Input from Ring	10
<i>User acceptance validation</i>		
<i>Evidence</i>	<i>How measured</i>	<i>KPI</i>
Number of users/citizens engaged with CAP and social media	Quantitative (click counts) Qualitative (surveys / focus groups)	>5000
Acceptability of data protection, privacy and trust schemes	Qualitative (surveys / focus groups)	>98%

- Activity Group

2

IoT Standardisation, Architecture and Interoperability

- **MONICA Focus**

- Definition of architecture
- Definition of Interoperability and standards approaches at technical and semantic levels.
- Significant and measurable contribution to standards or pre-normative activities in the pilots' areas.
- Interoperability and integration testing on open IoT platforms.

- **MONICA Outcome**

- Contribution in the definition of Reference Architectures (to foster interoperability standardisation)
- Measurable contribution to standards or pre-normative activities in the pilots' area.
- Identify reference implementation of promising IoT standards.
- Consolidate results obtained through standardization and pre-normative activities performed by the IoT LSPs projects.

- **Impact of the Results**

- Implementation of open platforms and validation of IoT architectures standards.
- Interoperability properties used across the IoT LSPs.

- Activity Group

5

Privacy and End-user Engagement

- **MONICA Focus**

- Stakeholders acceptance validation, (addressing privacy, security, vulnerability, liability).
- Policy framework- GDPR Compliancy

- **MONICA Outcome**

- GDPR paper and common White paper with the other LSPs.

- **Impact of the Results**

- User acceptance validation, addressing privacy, security, vulnerability, liability, identification of user needs, concerns and expectations of the IoT solutions.
- Validation of key characteristics such as security and privacy.

## • Activity Group

8

### Communication, Collaboration Strategy and Liaisons

#### • **MONICA Focus**

- Design and implement the communications strategy to coordinate and support the IoT European LSPs Programme.
- Common web portal, events, branding, awareness, press/PR plans, web strategies and marketing plans.
- The communication strategy is aligned with the strategies of IoT European LSPs Programme projects
- The communication, collaboration strategy and liaisons activity group is preparing this strategy to provide and effective communications with the goal to:
  - Support IoT European LSPs Programme to achieve the overall objectives and impacts.
  - Engage effectively with all stakeholders and various ecosystems.
  - Demonstrate the success of the work performed by the projects and partners.
  - Ensure that people, public authorities, regional and national representatives understand what the programme does and can follow the progress.
  - Change behaviour and perceptions where necessary.

#### • **MONICA Outcome**

- Communication media, internal/ external stakeholders (e.g. brochures, factsheet, videos).
- Harmonised branding IoT European LSPs Programme (pptx, posters, roll-ups)
- List of relevant events, events participation (coordination).
- IoT European LSPs Programme Portal (integrated webspace).
- Publications, newsletters, magazines, etc.
- IoT European LSPs Programme Presentations

#### • **Impact of the Results**

- Provide a coherent communication strategy for efficient information sharing across the programme stakeholders to ensure efficient and innovative IoT take-up in Europe.
- Creation of opportunities for entrepreneurs by promoting new market openings.
- Promotion of the IoT developments, consolidation of the EU IoT community and strengthening of the role of EU on the global IoT scene.



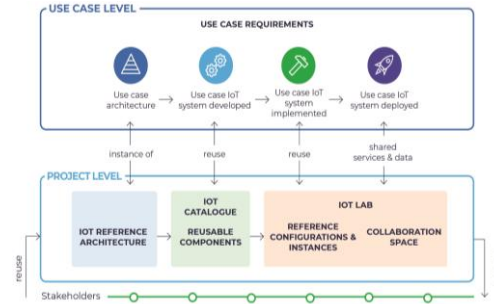
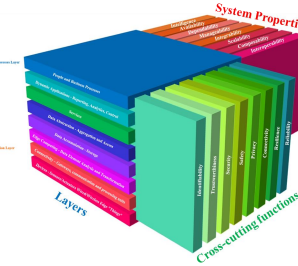
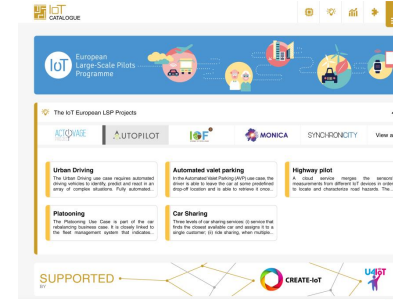
# MONICA

## Collaboration Outcomes



European  
Large-Scale Pilots  
Programme

- Collaboration:
- Dissemination material
  - Pamphlets
  - brochures
  - video
- IoT Week – Presentation and pitch at the expo
- IoT + Data science
- IoT Catalogue/Explorer
- AIOTI IoT Relation and Impact on 5G - Release 2.0 March 2019, AIOTI WG03 – IoT Standardisation
  - MONICA use cases, ETSI, 5GPPP)
- KPIs
- eBook
- IoT Standardisation and Interoperability
- White paper GDPR
- Plans for publishing a chapter on MONICA in the cluster book
- Plans to use the journalist to provide extra visibility to the project.
- IoT Handbook as Wiki page that includes a terminology list of terms related to IoT.



KPIs: General acceptability, user validation, perceived value and benefits - User acceptance and accessibility

<b>ACTOVAGE</b> 1. Level of acceptance by end users 2. Level of satisfaction by end-users 3. Trust in privacy and data protection measures for piloted services	<b>AUTOPILOT</b> 1. Number of end users testing the IoT solution 2. Trust in privacy and data protection measures for piloted services	<b>IOF</b> 1. Level of IoT users satisfaction 2. Trust in privacy and data protection measures for piloted services
<b>MONICA</b> 1. Level of users satisfaction 2. Usability of real time event information 3. Trust in privacy and data protection measures for piloted services	<b>SYNCHRONICITY</b> 1. Participatory governance – local communities involvement in services design 2. Trust in privacy and data protection measures for piloted services	

## IoT Week 2019 (17-21 June, Aarhus)



- Participation to the common LSP booth: shared by the 5 LSPs and 2 CSAs.

Coordinated by CREATE-IoT and U4IoT Participation to the IoT Security and Privacy booth area Coordinated by CREATE-IoT and U4IoT

- Workshops on IoT Platforms convergence and Standardisation

## **AG01** (KPIs, sustainability, business models and exploitation)

- Contributions to architecture, description of use cases (slide deck), KPIs definition
  - together with other LSPs
  - Feedback from SYNCHRONICITY on overall KPIs were given, now a final assessment round is foreseen to decide which KPIs to consider for the whole programme.
- KPIs for standardisation (pending discussion with AG02 to get feedbacks to ETSI)
- Workshop on exploitation across the LSPs to be organised at IoT Week (IDATE)
- Event with several PPPs (5G, AIOTI, euRobotics, ECSEL, HPC, BDVA, etc.)
  - Topic: strategic directions align the research priorities and present the LSPs outcomes and further challenges.
- eBook IoT market trends and LSPs value proposition.
  - Prepared by CREATE-IoT
  - Overview on market trends at global level including presentations of LSPs in relation to their field of activity.

## AG02 on Standardization

- Workshop on standardisation activities & interoperability
  - Feedback from SYNCHRONICITY needed on a selected use case
- Workshop on standardisation activities and interoperability (IoT Week)
  - Together with AIOTI WG03 (TBD SYNCHRONICITY participation and contribution)
- ISO meeting in August: IoT LSPs standardisation activities and interoperability (ETSI)
- Workshop on standardisation and interoperability: IoT summit for LSPs .
  - Potential hosting for: Partners meeting, IoT FA Conference, Workshop on Standards, Workshop on IoT Policy, Future: Digital Europe, Horizon Europe (regional, national and EC authorities involved)
- Ongoing standardization work at the ITU

## AG04 (OC, SMEs) Open Calls and SMEs



## AG05 on Privacy and Security

- Participation to AG05 activities
- Collaboration on the IoT Security and Privacy Booth
- Collaboration on the White Paper
- Participation to the EC meeting on GDPR

## AG08 and Communication

- Synchronicity is actively engaged in supporting and coordinating AG08
- Developing outreach and dissemination activities, including:
  - Developing education material
  - Contributions to the Springer IoT Handbook
- Close cooperation and synergies with other LSPs
- Joint booth at the ICT 2018 conference

## Workshops

- Very engaged in discussions and panel debates, quite active
- Happy with the event and the discussions on the horizontal cooperation and the exchange of ideas
- Discussions and topics discussed
- Albums available in Facebook & LinkedIn.
- Microsite with information will be available in CREATE-IoT website (pictures, videos, presentations, etc.)

## Wiki page on the LSP web portal with IoT Handbook

- Includes a terminology list of terms related to IoT.
- SYNCHRONICITY partners can contribute to extend the page. <https://european-iot-pilots.eu/resources/iot-european-large-scale-wiki/>

# Collaboration

## Overview activities - collaboration and interaction



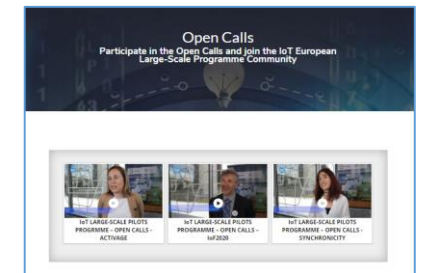
European  
Large-Scale Pilots  
Programme

- CREATE-IoT defined together with U4IoT the mechanisms for cooperation with the LSPs through the activity chains, and a communication strategy for sharing common resources and information for the horizontal activities.
- The collaboration is following the 4 stages:
  - Create awareness (m01-m12) focused on creating awareness and ensure that IoT stakeholders know about the project, its objectives and expected results, through presentations in IoT and the LSP specific conferences and workshops.
  - Increase the programme exposure (m13-m24) focused on cooperation, exchange approaches and best practice in business, technological and know-how arising from the LSP use cases in order to make them more widely known and encourage others to follow, thus increasing the potential impact. Prepare and organize common events.
  - Show results (m25-m34) by focusing on highlighting the external new partners, beneficiaries of cascade funding and industrial followers of the LSP's use of the IoT platforms, standards and approaches and highlight the results and plans for commercial offerings coming out of the LSPs in order to attract the widest possible internal and external audience to evaluate the LSPs results, common platforms and approaches developed. Prepare and organize common events.
  - Valorisation (m34-m36+) for building the bridge to commercial exploitation and financial sustainability.



## CREATE the Next Generation IoT eXperience for the Future Workshops Series:

26-28 February 2019, Lisbon - 17 April 2019, Amsterdam – IoT Week 2019  
12 September 2019, Brussels. 05 November 2019, Brussels,  
29 January 2020, The Hague, 19-21 February 2020, Bruxelles





# Overview

Collaboration and interaction

## Strategy

### Open and Valuable Events and Engagement strategy

External event(s) organised by all LSPs or by theme

- Activities
- Workshops
- Public Sessions
- Open Calls Info Sessions - Hackfest Participation
- Summer Schools
- Exhibitions

Promote LSP's use of the IoT platforms, standards and approaches and highlight the results and plans for commercial offerings coming out of the LSPs in order to attract the widest possible internal and external audience to evaluate the LSPs results, common platforms and approaches developed.



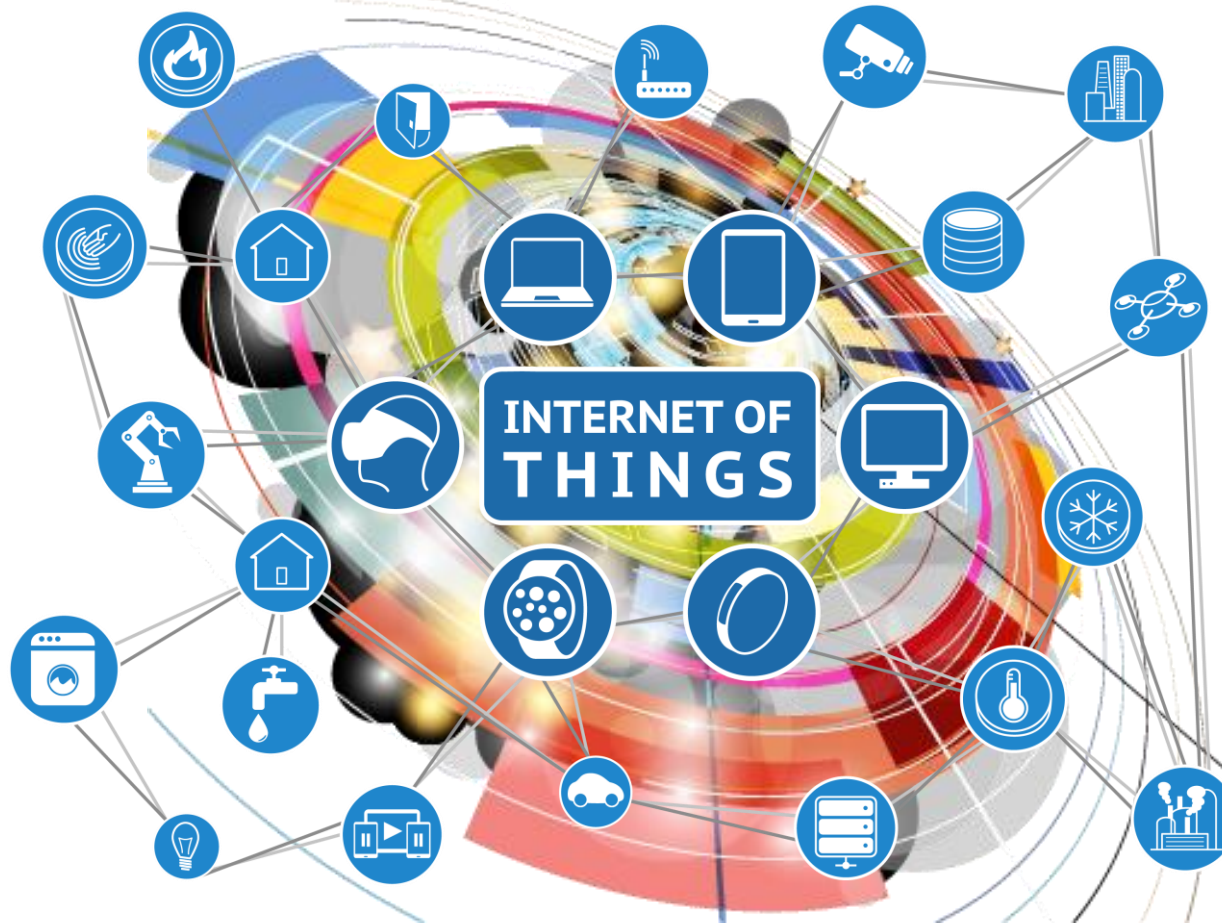
**CREATE-IoT**



# Thank You!



European  
Large-Scale Pilots  
Programme



[www.european-iot-pilots.eu](http://www.european-iot-pilots.eu)

[www.create-iot.eu](http://www.create-iot.eu)



@IOTEULSP



@IoT\_euLSP



@CREATE-IoT



@CreatelIoT\_eu

The CREATE-IoT project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 732929.