TIC
PCN - Horizon2020

HORIZON 2020
LE PROGRAMME DE RECHERCHE ET D'INNOVATION DE L'UNION EUROPÉENNE

« Smart Cities »

Internet des objets – Internet of Things (IoT)

Paris – 15/10/2015

Claire FERTE

Définition

Wikipedia

L'Internet des objets (IdO ou IoT pour Internet of Things en anglais) représente l'extension d'Internet à des choses et à des lieux du monde physique. Alors qu'Internet ne se prolonge habituellement pas au-delà du monde électronique, l'internet des objets représente les échanges d'informations et de données provenant de dispositifs présents dans le monde réel vers le réseau Internet.

L'internet des objets est considéré comme la troisième évolution de l'Internet, baptisée Web 3.0 (parfois perçu comme la généralisation du Web des objets mais aussi comme celle du Web sémantique) qui fait suite à l'ère du Web social. L'internet des objets est en partie responsable de l'accroissement du volume de données générées sur le réseau, à l'origine du Big Data.

L'internet des objets revêt un caractère universel pour désigner des objets connectés aux usages variés, dans le domaine de la e-santé, de la domotique ou du Quantified Self.

Le contexte européen

- Initiative de la DG CNECT
- IoT est à la croisée d'initiatives plus établies
  - PPP Big Data: gestion et analyse des données générées par les capteurs
  - PPP FI et 5G: réseaux et services (notamment Cloud) permettant la collecte, le stockage et l'échange d'information
  - JTI ECSEL: production des CPS (capteurs, systèmes embarqués…)
- S'appuie sur Alliance for Internet of Things Innovation – AIOTI
- 1ers appels lancés en 2015 dans le programme TIC

Un potentiel France (très) important…

services

Withings
Inspire health

Parrot

JOX

sense

myfox

netatmo

THALES

Atos

LoRa Alliance
Wide Area Networks for IoT

SIGFOX

Alcatel·Lucent

life.augmented

gemalto

composants

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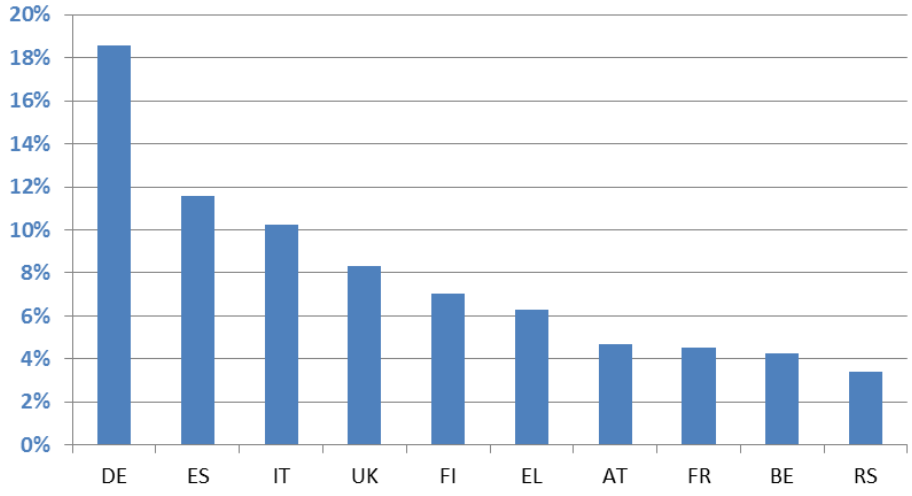
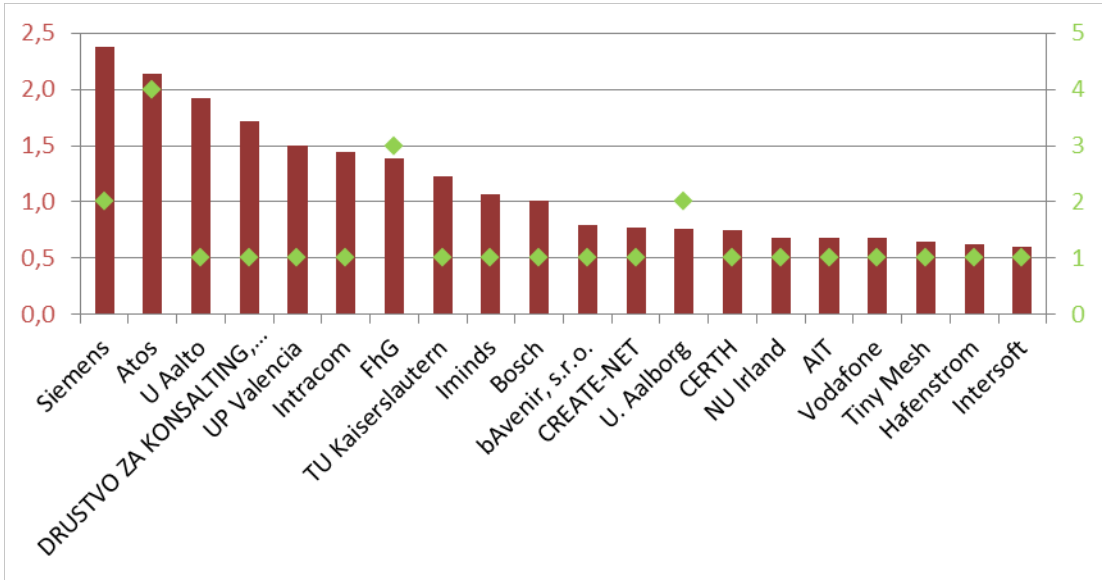
RÉPUBLIQUE FRANÇAISE

…mais un succès extrêmement mitigé au 1er appel



131 propositions
1769 participations
918 M€ demandés (vs. 51 M€ disponibles)
73,3 M€ demandés par FR

9 projets retenus
122 participations
53,5 M€ alloués dont **2,4 M€ à FR!!**



Sa structure

6 CHALLENGES

- A new generation of components and systems
- Advanced Computing and Cloud Computing
- Future Internet
- Content
- Robotics and autonomous systems
- ICT Key Enabling Technologies

Cross cutting activities

-Factory of the Future
-Internet of Things
-Cross K[illegible] Topic

-Digita[illegible]urity
-Food [illegible]ity

Horizontal activities

-Innovation and entrepreneurship support
-Responsibility and Creativity

International cooperation

International
UE Brazil
UE Japan
UE Korea

DRAFT

SME **ODI - FTI**

Internet of Things Focus Area

IoT Focus Area Calls

IoT Direct Focus Area Calls

- IoT-01-2016: Large Scale Pilots (IA)
- IoT-02-2016: IoT Horizontal activities (CSA)
- IoT-03-2017: R&I on IoT integration and platforms (RIA)

IoT International Cooperation

- ICT-37-2016: CHINA: Collaboration on Future Internet (CSA)
- EUJ-02-2016: Japan: IoT/Cloud/Big Data platforms in social application contexts (RIA)
- EUK-02-2016: South Korea: IoT joint research (RIA)
- EUB-02-2017: Brazil: IoT Pilots (RIA)

IoT-01-2016: Large Scale Pilots

Specific Challenge:

Foster the deployment of IoT solutions in Europe through integration of advanced IoT technologies across the value chain, demonstration of multiple IoT applications at scale and in a usage context, and as close as possible to operational conditions. As the Internet of Things value chains are also of a global nature.

Scope:

Pilots are targeted, goal driven initiatives that will propose IoT approaches to specific real-life industrial/societal challenges. Pilots are autonomous entities that involve stakeholders from supply side to demand side, and contain all the technological and innovation elements, the tasks related to the use, application and deployment as well as the development, testing and integration activities

Expected Impact:

Pilots are expected to have a high impact on citizens, both in the public and private spheres, industry, businesses and public services. **Key performance indicators should be identified** to measure progress on citizen benefits, economic growth, jobs creation, environment protection, productivity gains, etc., and shall go Pilots' impact should go beyond involved partners

IoT-01-2016: Large Scale Pilots

Specific features

- Involve all value-chain actors
- Address business model validation & standardisation
- Address user validation and acceptability
- Up-scaling of open platforms like FI-Ware, CRYSTAL, UniversAAL

Key Performance Indicators:

- Ensure the longer-term evolution of the Internet of Things
- Critical Mass, leadership
- Rich portfolio of technologies and tools
- To guarantee the sustainability of the approach

IoT-01-2016: Large Scale Pilots

Pilot areas:

- Pilot 1: Smart living environments for ageing well (EU contr. up to 20 MEUR)
- Pilot 2: Smart Farming and Food Security (EU contr. up to 30 MEUR)
- Pilot 3: Wearables for smart ecosystems (EU contr. up to 15MEUR)
- Pilot 4: Reference zones in EU cities (EU contr. up to 15MEUR)
- Pilot 5: Autonomous vehicles in a connected environment (EU contr. up to 20 MEUR)

IoT-01-2016: Pilot 4: Reference zones in EU cities – Innovation actions

Pilot scope:

Building on the past results and achievements in some cities in Europe, a **large scale pilot will cover a series of cities** to operate as reference zones for showcasing and experimenting **new citizen-centred IoT services**.

This includes advanced solutions for traditional services' provisioning e.g. **water management** but also solutions that are at the edge of authorised business practices or regulation (ex: sharing of electricity, autonomous vehicles) and thus require dedicated testing zones.

Whenever applicable, pilots will provide evidence of access to city areas where legal contexts are adapted to the demonstration requirements (i.e. 'reference zones').

Federation and interoperability between platforms may be considered as appropriate, as well as the ability to integrate data from different service providers.

The number of users involved and duration of pilot services should be sufficient to ensure statistical significance in impact analysis, **with a minimum of 4 pilot sites in 4 countries.**

IoT-01-2016: Pilot 4: Reference zones in EU cities (cont'd)

Authorised business practices or regulation

Demonstration requirements (i.e. reference zones)

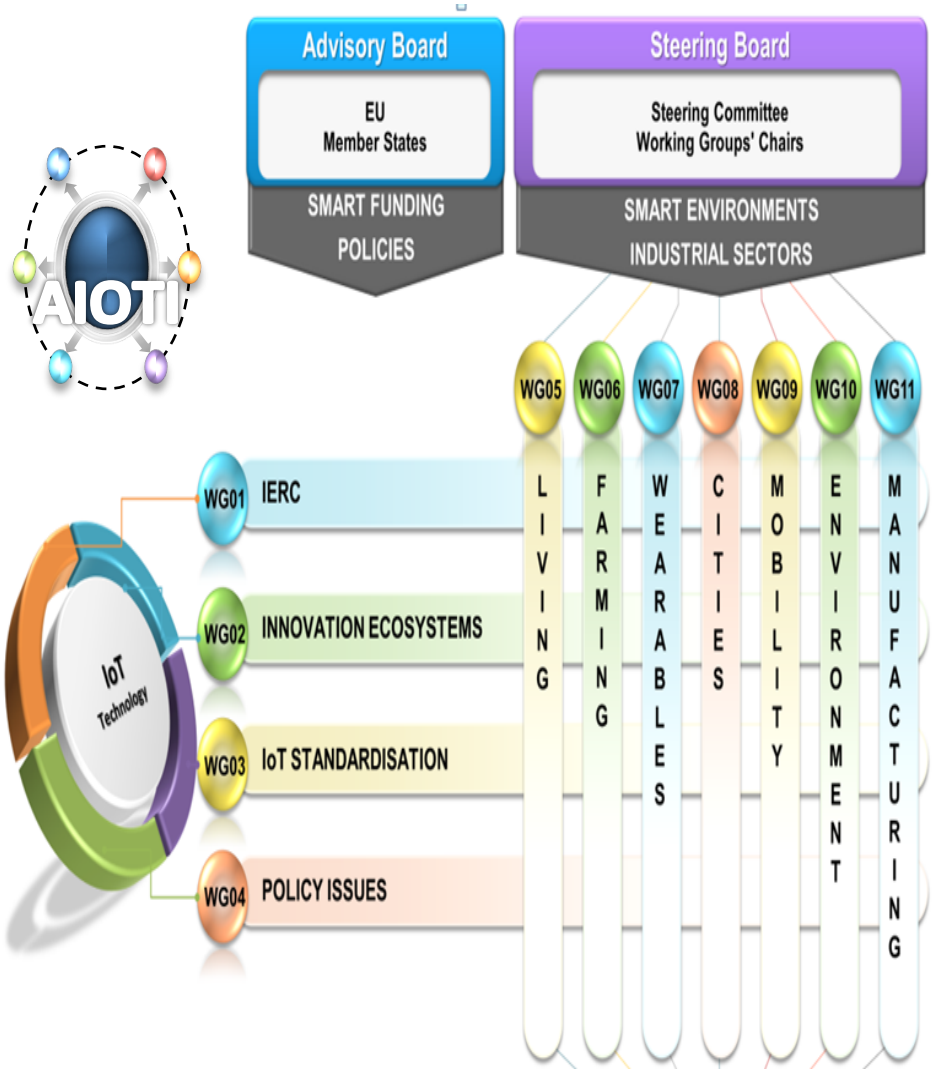
New citizen-centered IoT services

Creativity hubs

Citizens' acceptability and endorsement

Policy cooperation: the IoT Large Scale Pilots link to AIOTI – Alliance Internet of Things Innovation

- Initiated by the EC in March 2015 the European Commission for working closely with all stakeholders and actors of the Internet of Things.
- Building an IoT innovation ecosystems across the value chain / across silos
- Put IoT on the map and link to PPPs, JTI, and national initiatives
- Advancing IoT convergence across verticals for standardisation/ interoperability
- Provide Recommendations for the implementation of LSPs
- Discuss with industry to provide guidance for IoT in the DSM
- Get conencted on www.AIOTI.eu



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Contacts

IOT Focus Area – Topic Coordinator(s):

- Rolf.Riemenschneider@ec.Europa.eu,
- Peter.Friess@ec.Europa.eu,
- Werner.Steinhoegl@ec.Europa.eu

Pilot-specific:

- Pilot 4: Olavi.Luotonen@ec.Europa.eu

Events:

http://ec.europa.eu/digital-agenda/en/internet-things