

HORIZON 2020 WP 2016-17

IoT-03-2017
**R&I on IoT integration
and platforms**

INTERNET OF THINGS
FOCUS AREA

Internet of Things

As enabler of a future hyper-connected society, the Internet of Things is **set of sensors, actuators, smart objects, data communications and interface technologies** that allow **information to be collected, tracked and processed** across local and global network infrastructures.



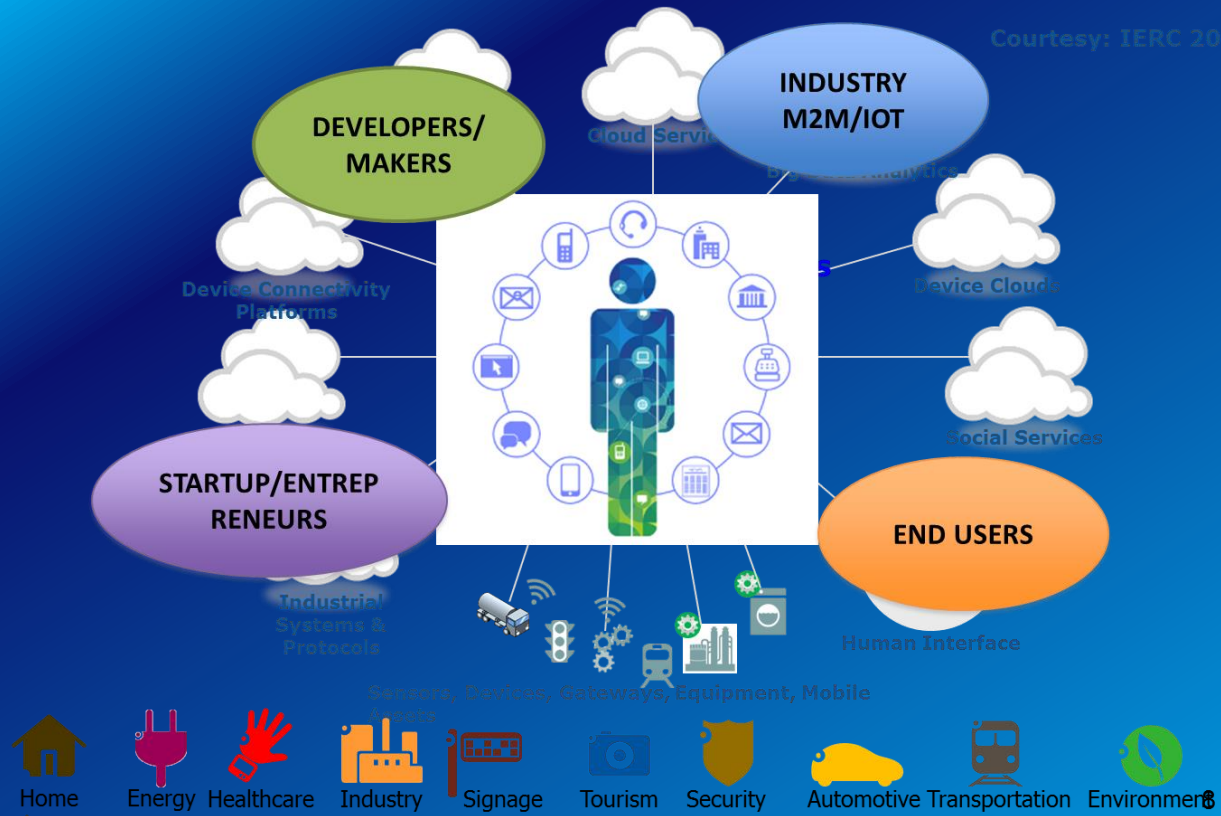
Internet of Things Focus Area

- **Fostering the take-up of IoT** in Europe and enabling the emergence of IoT ecosystems supported by open technologies and platforms.
- **Coordination body** to ensure an efficient interplay of the various elements of the IoT-FA and liaise with relevant initiatives at EU, Member States and international levels
- Research and innovation effort in specific IoT topics will ensure the **longer-term evolution** of the Internet of Things
- **Link with IoT 1 and IoT 2 (IoT Large Scale Pilots)**



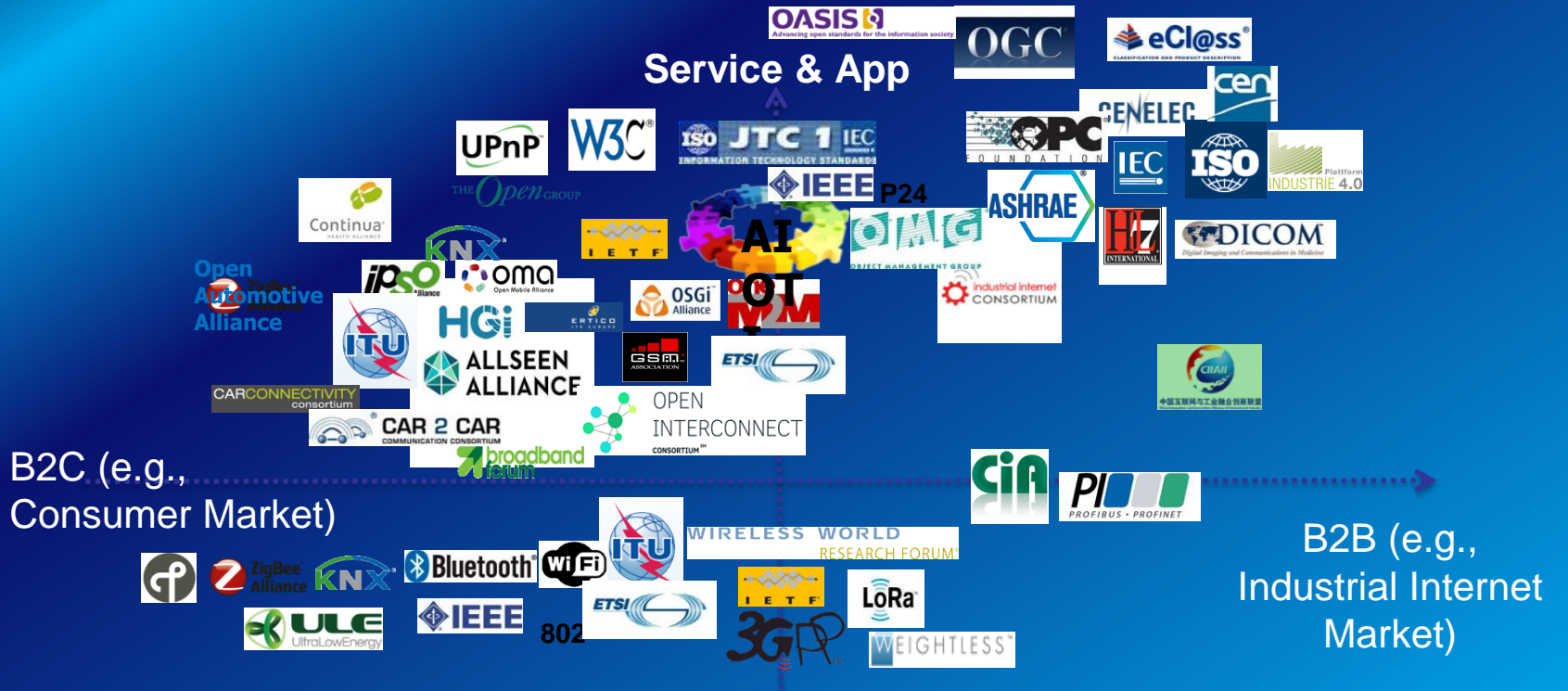
IOT eco system: Devices, Applications and Business model

Courtesy: IERC 2015





World-wide Alliances related to IoT



IoT-03-2017: R&I on IoT integration and platforms

Timeline:

- Call opening: 08th December 2016
- Call deadline: 25th April 2017, 17.00
- Expected starting date: from November 2017

Specific Challenge:

- *Future design of IoT applications will depend crucially on sophisticated platform architectures for smart objects, embedded intelligence, and smart networks.*
- *IoT platforms should be open and easy-to-use to support third party innovation.*
- *Key points for future innovation specifically related to **Actuation and Smart Behaviour**.*

RIA

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Scope:

- **Architectures, concepts, methods and tools**
for open IoT platforms integrating evolving sensing, actuating, energy harvesting, networking and interface technologies.
- **Platforms** should provide connectivity and intelligence, actuation and control features, linkage to modular and ad-hoc cloud services, data analytics and open APIs as well as semantic interoperability across use cases and conflict resolution.
- Platforms should be compatible with existing international developments addressing object identity management, discovery services, virtualisation of objects, devices and infrastructures and trusted IoT approaches.
- **IoT Security and Privacy**
advanced concepts for end-to-end security in highly distributed, heterogeneous and dynamic IoT environments. Approaches include identification and authentication, data protection and prevention against cyber-attacks at the device and system levels.
- **Other proposal characteristics:** To include two or more usage scenarios, verification and testing, and identify the added value of the proposed approach specific to IoT in comparison to generic solutions.

Specific Platform Considerations

- **Semantic Interoperability**
- Modular/adhoc cloud services
- Open APIs, data analytics
- Connectivity and intelligence
- **Sensors/actuation and control**

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Expected impact:

Two or more of the following criteria should be addressed, with success metrics where appropriate.

- Evolution of platform technologies and contribution to scientific progress enabling novel, advanced **semi-autonomous IoT applications**
- Strengthen the industrial EU technological offer of innovative IoT solutions
- Support emergence of an open market of services and innovative businesses
- Increase of IoT usability and user acceptance, notably through strengthened security and user control
- Promote the adoption of EU platforms in European and international context
- Contribution to emerging or future standards and pre-normative activities

THANK YOU

Useful links:

- Internet of Things in DAE:

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

- The Alliance of Internet of Things Innovation AIOTI

<http://www.AIOTI.eu>

- IERC – Internet of Things European Research Cluster

<http://www.internet-of-things-research.eu/>

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