1

Introduction

Peter Friess[1]

European Commission DG CONNECT, Belgium

The Internet of Things (IoT) has started to flourish excitingly. After having been in the expert corner for many years, new players and partners joined the field and contribute to manifest and extend the IoT. Business interest and novel ideas drive now the deployment. Today we do no longer question what IoT is or not, but more what solutions it can bring and what still needs to be done for a full blossom.

In the European policy context, the creation of a genuine Single Market encompasses the IoT as essential contribution. The European Commission gives indeed a strategic dimension to IoT for the Digital Single Market (DSM), not only in terms of regulatory challenges but also with regards to overcome interoperability issues and fragmented standards, probably one of the most dominant obstacles at the moment. The key objective remains a collaborative, responsible and fully functional IoT.

In the recently published IoT Staff Working Document[2], which has been elaborated based on extensive discussions with the IoT Community, we identify and describe 3 imperative pillars in order to advance IoT in Europe:

1. A single market for the IoT: IoT devices and services (thus including data) must be able to connect seamlessly and on a plug-and-play basis anywhere in the European Union (EU), and scale up without hindering from national borders;
2. A context of thriving IoT Ecosystems: new products and services in selected lead markets such as Industrial IoT, and the existence of

---

[1]The views expressed in this article are purely those of the author and may not, in any circumstances, be interpreted as stating an official position of the European Commission.

[2]https://ec.europa.eu/digital-single-market/en/news/staff-working-document-advancing-internet-things-europe

open platforms across vertical silos, helping developers' communities to innovate and not causing lock-in situations for users;

3. A human-centred IoT: European values must be translated in the design of IoT applications to empower citizens, and driven by high privacy and security standards and notably through a "Trusted IoT" label.

In order to work on these pillars, we launched seven innovation plus two coordination IoT Ecosystem projects in January 2016. They will be joined by a new round of IoT Large Scale Pilots already in January 2017, dealing with IoT scenarios in Assisted Living, Smart Agriculture, Wearables, Smart Cities and Connected Cars. The pilots will be complemented by accompanying measures on standardisation, security and privacy, creativity and art, further research on IoT platforms, and international calls.

Figure 1.1   Interactions within ecosystems.

In line with the ongoing cooperation with the IERC – the IoT European Research Cluster, the European Commission is equally committed to build upon the positive experience and to reinforce the cooperation with AIOTI – the Alliance for IoT Innovation for making Europe a leading IoT region. The Alliance has proven to be an important arena where frequently competing market actors can cooperate in order to improve interoperability issues of common interest and to contribute to the European IoT policy.

Besides the necessary emergence of IoT open platforms including neighbouring technologies, these are the subjects to work on for the next period: core standardisation, principles for appropriate design choices for technical and semantical interoperability, and increase of the trust level in IoT. As these questions do not allow to neglect the international dimension of IoT, we will be strategically interested in maintaining the cooperation with other leading IoT regions.

Looking ahead, we all are now establishing the first building blocks for a future hyper-connected society. Many new fascinating subjects such as smart objects, new interfaces for augmented realities and light forms of Artificial Intelligence will enter into the IoT applications and pave the way. Linked to it we will see many paradigm shifts, from a stronger consideration of environmental aspects and towards the transformation of competition to co-creation.

IoT is the future.