

**Private Public Partnership Project (PPP)**

Large-scale Integrated Project (IP)



#### **D.42.6 Smart Cities Marketing Plan**

**Project acronym:** FI-Core

**Project full title:** Future Internet - Core

**Contract No.:** 632893

**Strategic Objective:** FI.ICT-2011.1.7 Technology foundation: Future Internet Core Platform

**Project Document Number:** ICT-2013-FI-632893-WP42-D.42.6

**Project Document Date:** 2017-01-02

**Deliverable Type and Security:** PU

**Author:** Pablo Honrubia – Head of FIWARE Press Office – OgilvyOne Worldwide S.A. (OG1)

**Contributors:** None

# 1 Scope of the Document

This document describes the different works, steps and activities carried out to develop a consistent approach towards the creation of a standard architecture for Smart Cities based on the FIWARE platform.

The collaboration with TM Forum, a NPO which gathers relevant players in different fields, including key telecom operators, has been instrumental in the development of a common architecture. An outline of TM Forum as a key partner for FIWARE is explained in Section 2.

Section 3 covers the agreement between FIWARE and TM Forum going into details on the solution adopted and the importance of standardisation for a market like Smart Cities.

In Section 4 a retrospective look to the most important activities performed in 2016 is given, including the key events attended jointly by TM Forum and FIWARE and the coordinated communication activities around the initiative.

Finally a mid-term strategy is outlined in Section 5 as part of the sustainability and exploitation plan of FIWARE beyond 2016, which is expected to be adopted and developed by the recently created FIWARE Foundation.

## 2 TM Forum as a key partner for FIWARE

TM Forum ([www.tmforum.org](http://www.tmforum.org)) defines itself as the global association for digital businesses. Gathering hundreds of members from different industries and sectors (telecom, financial, healthcare, cities and municipalities among others), its primary objective is to promote and nurture collaboration among members to co-create, prototype, deliver and **monetize** new digital services to be offered to its members' large customer base.

“By our members, for our members”. This is the mantra of TM Forum, which is articulated by a three-way strategic direction:

- Connecting the right people, by facilitating networking between senior C-level business and IT representatives of TM Forum members to foster collaboration.
- Accelerating innovation and R&D, by the rapid co-creation of viable prototypes that demonstrate new services.
- Providing the blueprint for digital success, by driving adoption of the new co-created services and standards by the industry, ensuring long-term sustainability across the digital age.

FIWARE is very much aligned with some of the TM Forum ruling principles. As a matter of fact, FIWARE's motto, Open APIs for Open Minds, fits exactly with:

- The collaborative approach to the development of ready-to-use prototypes based in the use of vendor-agnostic APIs.
- The development of meaningful partnerships across different industries and stakeholders, running all along the value chain to ensure end-to-end suitability of FIWARE based solutions.
- The driven-by-adoption philosophy, with special emphasis on the success stories which build credibility around platforms, standards and solutions for the society.

From a technical point-of-view FIWARE and TM Forum also convey into the same principles. The combination of the Open Source APIs from both companies will result into the definition of a Smart City API Reference Architecture that aims to be the de-facto standard to be adopted by cities, fostering the interoperability and portability of the solution between them.

Finally, TM Forum provides a tool to measure the maturity level of a city in terms of its deployment of Smart Services. Currently, most cities claimed to be Smart, but the reality is that in general, they have deployed independent vertical solutions to solve certain problems or provide certain services. Parking, Traffic, Lighting are some examples of these.

The TM Forum Smart City Maturity and Bench mark Model monitors the progress of a given city to become a Smart City as a whole. Some steps in this process are:

- Level One: Joint exploitation of data coming from different sources to improve the services.
- Level Two: Incorporation of citizens as viewers of the data and sources of additional data.
- Level Three: Publication of some of the Data in an Open Data Portal to be used by 3<sup>rd</sup> Parties to offer additional services.

- Level Four: Incorporation of 3<sup>rd</sup> Parties as data suppliers to enrich the common big data framework.
- Level Five: Incorporation of players who want to sell their data for others to offers high value services (Economy of DATA).

The ultimate goal is, then, to enable the Economy of Data in cities. Monetizing the data will represent an ambitious but attractive hook for all stakeholders to look into. This, combined with the Economies of Scale that interoperability and portability bring, directs into the creation of a Digital Single Market for Cities.

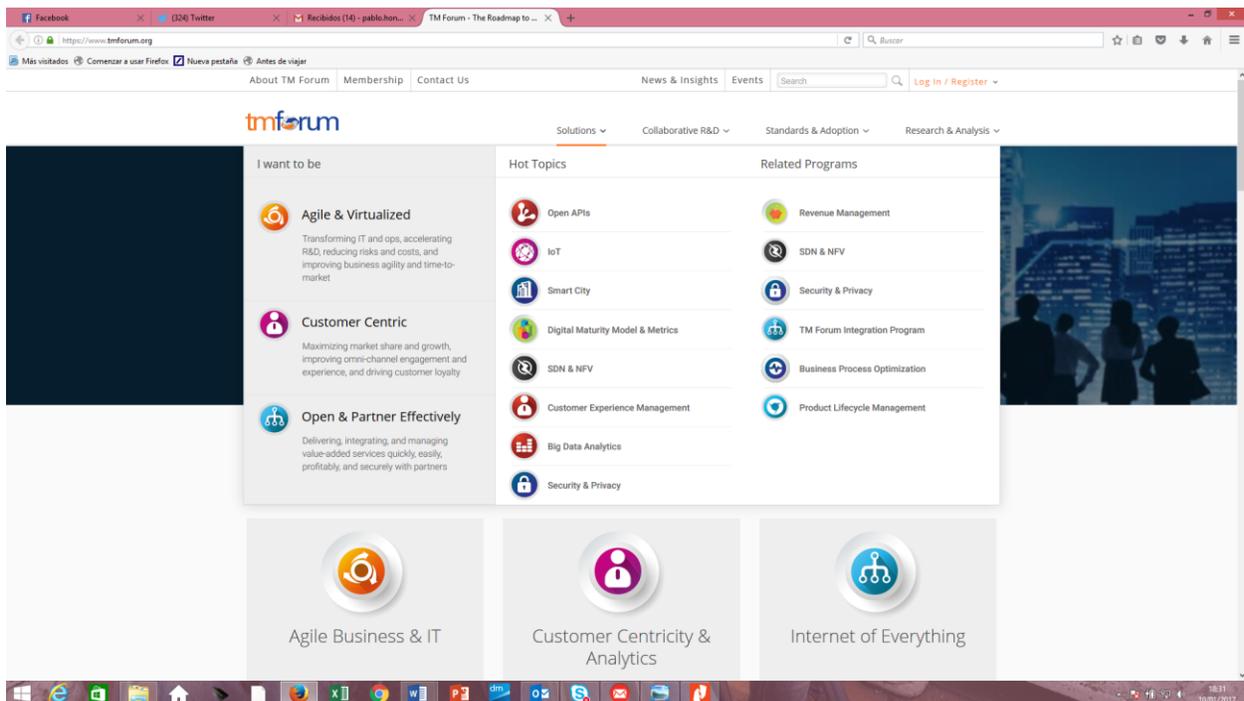


Fig.1: The TM Forum Website Home Page

### 3 TM Forum and FIWARE Joint Collaboration Program (JCP)

As expressed in the previous section, the definition of a common framework and a common data reference model is the key element to be able to create, at city level, a unique set of data coming from different systems and solutions that could be exploited and analysed by the city using Big Data, Analytics Tools, Complex Event Processing and Dashboard Presentation Tools.

The actors on this Program are:

- FIWARE, which will provide its NGSI APIs, a collection of REST-based software components to access city contextual real time information.
- TM Forum, which will provide the REST-based Open APIs developed by TM Forum members, part of the TM Forum Smart City API Reference Architecture. On top of that TM Forum will provide its Maturity and Benchmark Model explained in Section 2 and the Smart City Platform Reference Architecture.
- Large Platform Providers / Software Integrators, which potentially provides to Cities the common platform to analyse and exploit the data coming from the different sources.
- Solution Providers, which develop specific apps, products or services aimed to act in a specific area (vertical) of the city, such as utility companies, specialized software providers, local partners etc.
- The Cities themselves, as individual entities as well as in associations such as the OASC (Open and Agile Smart Cities Initiative).

#### 3.1 Goals of the JCP

The JCP will:

- Actively promote the ADOPTION of FIWARE and TM Forum APIs as the de-facto standard by cities by:
  - o Use FIWARE APIs as the interface to manage and get near real-time access to context information in the city.
  - o Use TM Forum APIs as the interface for interoperability and portability of application across cities and for digital partnering within the Ecosystem.
- Support collaboration between the cities and their technology partners to define the information model aligning with both FIWARE and TM Forum APIs.
- Develop pilots in different cities where the models explained above could be demonstrated and tested.
- Help organisations like OASC to implement the Economy of Data principles in Cities.

As mentioned before, the ultimate goal is to build and enable a Global Digital Single Market for Cities.

### 3.2 Joint Standardisation Efforts

Both TM Forum and FIWARE are organisations following a driven-by-adoption approach. This philosophy intends to position a given technology and/or a given solution as the market de-facto standard by fostering its adoption by key players. This adoption will result into a cascade of follow-up companies (cities in our case) embracing the solution to be compatible with the reference trend in its field.

However, this process could take quite long, especially when it involves convincing public institutions and the investment of public money. Public tenders need to be technology agnostic and cannot impose the use of a given solution, even if it is considered as a standard by most of the relevant stakeholders.

To overcome this, and in parallel to the activities aimed at the adoption of the FIWARE and TM Forum reference architecture by cities, a joint work is being done by FIWARE and TM Forum with different initiatives and standardisation bodies to ease the promotion and adoption of the solution depicted in the JCP by all the actors within the Ecosystem.

Some of these initiatives and bodies are:

- The Open and Agile Smart Cities Initiative (OASC)
- The IEC/ISO JCT1
- The IES-City Framework Coalition, driven by NIST
- The ITU-T SG20

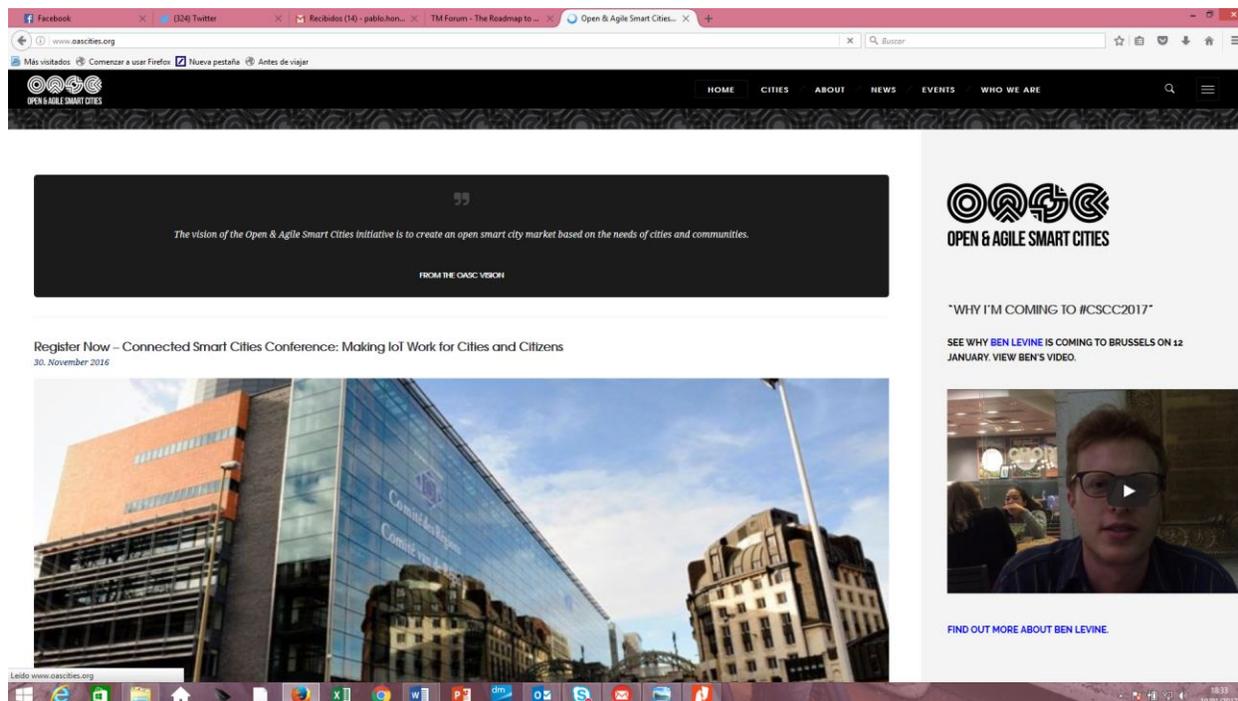


Fig.2: The OASC website home page ([www.oascities.org](http://www.oascities.org))

## 4 Activities under the JCP

FIWARE and TM Forum started this collaboration back in February 2016, with a kick-off meeting in Lisbon to articulate the first steps and set up a calendar for joint activities in 2016.

In this meeting in Lisbon, between Carl Piva (TM Forum) and Pablo Honrubia (FIWARE), it was decided to start working in developing a reference architecture to be presented as a concept at the TM Forum Live! Event organized by TM Forum in Nice in May 2016.

From this point, several meetings and joint work was done to define the architecture, the reference models for data and services, the interoperability and portability rules, the links with the OASC and other relevant bodies and initiatives etc. All these tasks have been supported by extensive collaborative marketing activities which include:

Presence in relevant events:

- TM Forum Live! In Nice, in which the partnership with FIWARE was presented in a dedicated workshop led by Peter Fatelnig, Deputy Head of Unit, Net Innovation, EC. This workshop was leveraged by the physical presence of the brand in the exhibition area with a stand of 36 square meters where all event delegates were able to know about FIWARE and its partnership with TM Forum around Smart Cities.
- YinChuan Smart Cities Conference: TM Forum invited FIWARE to join them in the largest event in China around Smart Cities, to spread the word about the benefits of a common architecture and establish liaisons with actors beyond EC boundaries.
- Green Cities Conference (October 2016, in Málaga, Spain). Organized by the City of Málaga, and with presence of city representatives from more than 40 countries, both FIWARE and TM Forum were hosted by Telefonica to present the solution in a specialized panel in the plenary auditorium.
- International Open Data Congress (October 2016, Madrid, Spain). Carl Piva and Juanjo Hierro participated in a panel to explain the concepts around the use of Open Data from cities as a driver to get added-value services and products provided by third parties, introducing the concepts and principles of the Economy of Data.
- Smart City Expo World Congress (November 2016, Barcelona, Spain). TM Forum was part of the FIWARE offering as sponsor of the event, including presence in the FIWARE stand and participation in the different speaking slots. Moreover, the official announcement of the Joint Collaboration Program was done during the Congress, taking advantage of the dissemination of the announcement to the specialized Press present in the event and throughout the event official communication channels.
- FIWARE Summit (December 2016, Málaga, Spain). The JCP was presented and discussed in a specific Smart Cities session with the participation of TM Forum representatives.

#### Other Communication Initiatives:

The JCP is a key element for FIWARE to correctly position its offering in the Smart City market. Therefore, it is used as a relevant asset, both by FIWARE and TM Forum, in their respective channels and communication calendars. This includes:

- Synergies between Social Channels, by posting, echoing and mentioning respective posts around the JCP.
- Mutual presence in corporate website, especially in the blog and news sections.
- Cross inclusion in presentations and keynote speaks at different events.



*Fig.3: Carl Piva, VP of TM Forum, at the FIWARE Summit in Málaga, December 2016*

## 5 Mid-term Strategy

As part of the sustainability and exploitation actions for FIWARE, the JCP covers the activities that define a path to the future to be adopted by the recently created FIWARE Foundation.

As a matter of fact a number of activities are envisaged as key elements to be performed in 2017 and 2018 to help in reaching the global objectives explained in Section 3 of this document.

Namely, these are:

- Vision Documents and Marketing Materials: Public Whitepapers on different topics such as
  - o Transition from Open Data to Real-Time Open Data
  - o Transition from Open Data to Economy of Data
  - o Cities as enablers of Cross-Domain and Cross-Border Smart Services.
- Blog Posts and Social Media Dissemination of the Vision documents.
- Reference Documents for Smart Cities, such as the TM Forum Smart City Reference Architecture
- Smart City Workshop Series, sponsored by the hosting city for about 20 participants from other cities and relevant stakeholders such as technology partners.
- Smart City Academy Series, targeting architects, CTOs and software developers, co-located either with a Smart City workshop or with hackathons organized by TM Forum.
- Promotion of FIWARE Lab as an experimentation environment.