Link and Evangelize the FI-PPP from Europe to the world for the benefit of FI research and innovation and to the European industry business

D2.1.2: Plan for engaging FI stakeholders (v2.0)

Revision: v1.2

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Abstract	This deliverable presents the final plan of FI-LINKS for engaging Future Internet stakeholders at international and European level
Keywords	Engagement, International and European Stakeholders, Work Plan

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Disclaimer

EXECUTIVE SUMMARY

The FI-LINKS Deliverable 2.1.2 is the revised version of the plan for engaging Future Internet stakeholders into roadmapping activities and "evangelization" and adoption of FIWARE, both at European regions and at international level[2]. It is focusing on the objectives and engagement activities that need to be performed during Year 2 of the FI-LINKS project, taking into account the lessons learnt and conclusions from the activities performed during Year 1 of the project, as highlighted in Deliverable 2.2.1 "Report on FI stakeholders' engagement and use of FI-PPP technology (v1.0)".

The objectives of the engagement activities have been revised with respect to the original ones, as highlighted below:

Original objective described in D2.1.1	Revised objective for Year 2 of the project
The main objective of FI-LINKS with **highly developed countries** outside Europe is to **find the most efficient means to interact to the mutual advantage of both the EU/FIWARE and of the country**. In addition, FI-LINKS is also looking at **creating a common understanding and cross evaluate / validate our efforts in Future Internet** in general at worldwide level.	The original objective is still valid, however considering the unexpected results achieved in North America, an additional objective is to have FIWARE adopted in one or two cities or by one or two organisations that could then be the showcase for FIWARE in the USA and/or in Canada.
The main objective of FI-LINKS towards **emerging economies** is to **encourage the set-up and deployment of FIWARE nodes and help mobilize the local ecosystem towards the adoption of the FIWARE technology** (e.g. through the set-up of FIWARE ecosystems including all relevant players such as public authorities, ICT clusters, accelerators, etc.).	The original objective is still valid.
FI-LINKS is proposing an initiative to **set up "FIWARE Regions"**, under the form of a **"FIWARE Regions Programme"**. The main objective would be to **ensure the set-up and sustainability of a FIWARE ecosystem in selected European Regions through public and private investment at regional and local level beyond the current funding from the EC for the FI-PPP.** FIWARE Regions could then have more opportunities to access the regional funds available for innovation from the EU, including but not limited to Smart Specialisation Strategy related funds.	The objective for Year 2 shall be to have at least 2 to 3 "FIWARE Regions" formally labelled.
With highly developed countries: identify the most relevant organisations and contact persons to liaise with, mostly via the experts involved in the FI-LINKS Advisory Board but also taking advantage of forthcoming meetings and workshops where representatives from international countries coordinate or participate (e.g. bilateral workshops); and keep discussing with them about the most efficient means of interacting with the objectives of either seeing FIWARE adopted in those countries or sharing best practices among communities.	With highly developed countries: continue to engage with relevant international experts especially in North America, and maybe in Japan or other countries if an opportunity arises. Continue to monitor relevant events and take advantage of upcoming events to promote and expand FIWARE. For North America: we shall also continue to explore opportunities for promoting FIWARE in this region. Interaction with SAVI in Canada and GENI in the USA (via iMinds in Belgium) shall be pursued to demonstrate potential integration of FIWARE with those platforms. We shall also grab

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[2] A first version of this deliverable was released as Deliverable 2.1.1.

Original objective described in D2.1.1	Revised objective for Year 2 of the project
	potential opportunities for promoting FIWARE in other developed countries if they present themselves.
With Latin America: pursue contacts with Chile via the expert involved in the FI-LINKS Advisory Board and other LatAm representatives.	With Latin America: FI-LINKS shall focus our effort on a few Latin American countries which show more potential and where FI-LINKS/FIWARE Mundus can have an added value e.g. Chile, Columbia and Uruguay.
With Africa: involve existing ecosystems moving around the ICT universities, particularly in Ivory Coast and Senegal. At policy level, establish contacts with the Ministry of Education and Ministry of Digital economy in those countries. Investigate opportunities in other African countries e.g. via the IST Africa 2015 conference	With Africa: FI-LINKS shall focus our effort on a few African countries that showed interest i.e. Mauritius and Senegal, and also Tunisia and Ghana.
At European regions level: meet and then select the regions where there is interest to become "FIWARE Regions" and where the regional players have the ability to set-up a full FIWARE ecosystem. In addition, evangelization about FIWARE shall continue towards other European regions	At European regions level: In order to achieve the FI-LINKS objective to have at least 2 or 3 formally labelled "FIWARE Region", the consortium will focus its efforts on a limited set of regions which have shown interest and have progressed throughout the defined process i.e. Berlin, Brittany, Helsinki, Luxembourg, and PACA –while still exploring opportunities with other regions showing willingness to move on. FI-LINKS shall continue to coordinate with I3H and the "innovation hubs", and better liaise and coordinate with the A16 projects and the Open & Agile Smart Cities initiative.

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ABBREVIATIONS

AB	(FI-LINKS Future Internet) Advisory Board
DoW	Description of Work
EC	European Commission
EU	European Union
FI	Future Internet
FI-PPP	Future Internet Public-Private Partnership (of the European Union)
SAVI	Smart Applications on Virtual Infrastructures
SME	Small and Medium Enterprises
WP	Work Package

1 INTRODUCTION

The first objectives of the "Future Internet engagement" activities of the FI-LINKS project, as described in Deliverable 2.1.1, were twofold:

- Identify and start engaging the relevant stakeholders and players at European regional level and in countries beyond Europe with the aim to evaluate the establishment of the appropriate interaction with those regions and countries in terms of sustainable adoption of the FIWARE technology;

- Support the Future Internet roadmapping activities performed in the Work Package 1 (WP1).

As detailed in deliverable 2.2.1, those objectives have been fulfilled with a number of geographical areas, both in Europe and beyond. This document presents a plan to achieve more quantifiable objectives with respect to stakeholders' engagement during Year 2 of the FI-LINKS project.

Section 2 describes the objectives to be achieved until the end of the project, taking into account the conclusions and lessons learnt from the activities performed during Year 1.

Section 3 provides further details on the various stakeholders to be engaged during Year 2.

Note: this deliverable is released one month later than the date originally planned in the DoW. This was done on purpose in order to take into account the latest information and outcomes from meetings that were held in May 2015, making the plan more accurate.

2 MAIN OBJECTIVES OF THE FI ENGAGEMENT

2.1 Overall objectives of the FI engagement

The original objectives of the "FI engagement" were described in the FI-LINKS DoW as follow:

> *"The evangelization of FI-PPP to SMEs and web-entrepreneurs in Europe requires the endorsement and collaboration of different actors, going from the regional ecosystems, to the European and the international ones. These ecosystems will facilitate the exchange of knowledge and best practices between the FI-PPP and the extended FI community. To achieve its goals, FI-LINKS will establish a number of worldwide and local links around the FI-PPP to support the research and innovation around the Future Internet. Primary actors in the FI global picture will support FI-LINKS activities, a provide relations with relevant innovation and research activities in US, Japan, Canada, Latin America, as well as other countries if deemed relevant during the course of the project. Industries member of FI-LINKS consortium are FI-PPP leading actors and will support the engagement with EU enterprises.*
>
> *Regional actors will be involved through the Coalition for Action (CfA) ICT Regio initiative with the focus on FI-PPP. At the time of writing, the CfA includes contributions from 14 regions: Brittany (FR), Helsinki (FIN), Liguria (IT), Saarland (DE), Lombardia (IT), Valencian (SP), Trentino (IT), Euskadi (SP), Piedmont (IT), Catalunia (SP), PACA (FR), Baden-Wurttemberg (DE), Paris-IdF (FR) and Puglia (IT).*
>
> *Engagement will be crucial to support impact on communities through the identification potential adopters of FI-PPP technology. The consortium already identified interest by Chile and Guatemala in that respect."*

During the first months of the FI-LINKS project, some adjustments were made to those original objectives, as described in deliverable 2.1.1. Those objectives are again revised in order to take into account the outcomes of the activities performed during Year 1 of the project, as follows:

Deliverable 2.1.1	Objective for Year 2 of FI-LINKS
At international level, it was decided on the one hand to select first a few experts that could be part of the roadmapping activities of FI-LINKS WP1 within the "FI-LINKS Future Internet Advisory Board"; and on the other hand to concentrate on a few countries which would complement the internationalization activities already engaged by FIWARE, focusing primarily on Mexico and Brazil. More details are provided in section 2.2.	At the international level, focus will be on the geographical areas and countries that have shown most interest in adopting FIWARE, i.e. Chile, Columbia and Uruguay in Latin America; Senegal and Mauritius, as well as Tunisia and Ghana in Africa; and the USA and Canada. More details are provided in section 2.2.
At European regional level, it was agreed upon within the consortium and also with the EC to focus on a few selected regions that could become examples of deployment of FIWARE platform and set-up of a FIWARE ecosystem. The consortium decided to call those regions "FIWARE Regions". More details are provided in section 2.3.	At the European regional level, focus will be on a limited set of regions which have shown interest and have progressed throughout the defined process, i.e. Berlin, Brittany, Helsinki, Luxembourg, and PACA – while still exploring opportunities with other regions showing willingness to move on. FI-LINKS shall continue to coordinate with I3H and the "innovation hubs", and better liaise and coordinate with the A16 projects and the Open & Agile Smart Cities initiative. More details are provided in section 2.3.

2.2 International engagement

The original objectives of the "FI engagement" at international level were described in the FI-LINKS DoW as follow:

> *FI-LINKS will engage the relevant stakeholders in the global context to foster a larger impact of FI-PPP. FI-LINKS will aim at engaging relevant players in US, Canada, Japan, Brazil, LatAm for roadmapping activities to bootstrap the community building actions foreseen in the project. In addition FI-LINKS will target inclusion of stakeholders from other potential adoption markets such as Latin America including especially Brazil and Mexico,*

in addition to Chile and Guatemala (as well as other countries if deemed relevant during the course of the project).

The objectives include:

- *Identify and engage the relevant stakeholders and players in the third countries with a flexible approach to countries when deemed relevant during the course of the project.*

- *Support the roadmapping activities performed in WP1.*

- *Promote the wider adoption of the FI-PPP technology.*

- *Support the adoption of the technology developed in the FI-PPP beyond Europe.*

- *Import good practices from other FI players worldwide that could be beneficial to the FI-PPP and to European players.*

- *Export European FI-PPP good practices into other countries for a mutual benefit.*

2.2.1 Objectives with respect to countries where "interaction" is foreseen

The set objective with respect to highly developed countries at the beginning of the projects was "*to find the most efficient means to interact to the mutual advantage of both the EU/FIWARE and of the country. In addition, FI-LINKS is also looking at creating a common understanding and cross evaluate / validate our efforts in Future Internet in general at worldwide level.*" It was decided to involve in the Advisory Board experts from the USA, Canada, Japan and Korea as a way to reach this objective.

In the first version of D2.1.2, it was also mentioned that "*the FIWARE technology cannot just be 'sold' or a FIWARE node set up in those countries, which have their own advanced technology and hence are reluctant to 'just adopt' European technology. Therefore EU experts should discuss on an equal footing with the other countries, at technical, business, industrial and political level, for such an interaction to happen in conditions that will be acceptable to both sides – eventually leading to a probable mutual exchange of technology.*"

However, as stated in deliverable D2.2.1, some unexpected opportunities to promote FIWARE and possibly have the technology adopted in the USA in particular arose during Year 1 of the project. This does not mean that authorities or organisations from the USA or Canada may "just adopt" FIWARE, but this opens up a potentially new way of interacting at various levels. This is detailed in the following paragraphs.

2.2.1.1 Rationale for FIWARE adoption in the USA

The original objective of FI-LINKS in the USA was mostly to interact and engage with relevant people and organisations. However, the context of the "Global City Teams Challenge"[3] and the openness of NIST[4], the National Institute for Science and Technology, and of US Ignite[5], to work on a global solution in particular with respect to smart cities issues, are opening up opportunities that were not anticipated at the beginning of the project.

In this respect, there are several directions on which FI-LINKS, under the FIWARE Mundus brand and in strong cooperation with the other FIWARE stakeholders and in particular FI-Core and the main industrial players involved, should investigate during Year 2 of the project:

- Pursue direct opportunities with cities, counties and private or public organisations in the USA. Many

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[3] **https://www.us-ignite.org/globalcityteams/**

[4] **http://www.nist.gov/**

[5] **https://www.us-ignite.org/**

contacts have been made thanks to the first participation of FIWARE in the US Ignite Applications Summit in March 2015 and moreover in the Global City Teams Challenge Exhibition and workshop in June 2015, and a proactive approach shall be followed in order to respond to the interest shown by city representatives, private organisations and universities. A "FIWARE Convention" is already being prepared to be held by mid-July 2015, with the main objective to attract at least one or two organisations that could before the first "FIWARE showcases" in the USA.

- Interact with the NIST and US Ignite in order to promote FIWARE concept and architecture in the upcoming NIST "Global City Teams Challenge 2016" programme and in the "NIST Smart Cities Framework" being prepared by NIST.

- Investigate with iMinds how FIWARE could be "integrated" or "set up" on top of a GENI rack[6], making it possible then to deploy FIWARE Generic Enablers on all other GENI racks in the USA.

Another objective, once again not anticipated at the beginning of the project, is to work in closer relation with the FIWARE accelerators. Indeed some of them are interested in supporting their start-ups and SMEs open up an international market for the applications developed using FIWARE. This is certainly a good way to promote FIWARE, i.e. to show that there are actually applications already being marketed and deployed.

One important issue is not to forget that the original idea that the USA would not "just adopt" FIWARE is almost certainly still true. Even if some cities or organisations may be willing to set up some FIWARE GEs and even a FIWARE node, the US context is different from Europe and FIWARE shall adapt its strategy to respond to the requirements from such "customers". In particular, some cities have already expressed interest in the ability of FIWARE to attract and mobilize an innovation ecosystem; the US start-up and entrepreneur ecosystem in the USA being quite different than in Europe, specific needs will need to be taken into account. Besides, FIWARE would need to be supported locally so that assistance and services could be provided in the most efficient manner. In other words, a smart and dedicated implementation of FIWARE is required in the USA. The "FIWARE Convention" planned in July may prove to be the first step in the right direction.

This is even more so important when interacting with NIST and US Ignite. The notion of "global solution" is being promoted by NIST, and FIWARE can be one of the possible solutions but certainly not the only one which will be considered. Here as well a smart approach is required, positioning FIWARE as one of the constituencies e.g. of a "global smart city platform" in conjunction with other such platforms or set of services.

2.2.1.2   Rationale for FIWARE adoption in Canada

The discussion with Canadian representatives has so far focused a lot on the potential interaction and integration between FIWARE and the Canadian platform SAVI (Smart Applications on Virtual Infrastructures), developed under the leadership of University of Toronto[7]. Although there were also exchanges with other Canadian stakeholders including large companies such as Ericsson and national Clusters and programmes such as Prompt or Ontario Center of Excellence, the work has mostly started with University of Toronto.

The objective for Year 2 of FI-LINKS in Canada is twofold:

- Continue to work with University of Toronto in order to set up a pilot / demonstrator of FIWARE / SAVI to show the feasibility and the interest to use this as a "foundation for smart cities platforms", as suggested by Prof. Alberto Leon-Garcia from University of Toronto. The objective is to have a first pilot / demonstrator ready by October 2015.

- Investigate the interest of Canadian public and private organisations to potentially adopt FIWARE, along

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[6] http://groups.geni.net/geni/wiki/GeniRacks

[7] http://www.savinetwork.ca/

with SAVI whenever relevant. A first step into that direction should be to participate in the "Smart City 360° Summit" which will be held in Toronto on 13-15 October[8]. Discussions have started in order to arrange for the participation of FIWARE, especially during the "international day" planned on 15 October.

Here as well, as in the case of the USA, some interactions with the FIWARE accelerators has been started and should continue.

2.2.1.3   Rationale for FIWARE adoption in Japan

Throughout the first year of activities, FI-LINKS strategy concerning Japan has been mainly focused on efforts devoted to exchange best practices between Japanese initiatives and FIWARE Mundus. To this end, two major actions were followed:

- FI-LINKS representatives have attended several workshops on behalf of FIWARE Mundus, promoting the FIWARE Programme, as detailed in FI-LINKS' deliverable D2.2.1.

- With regard to WP1 Roadmapping efforts, the Japanese representative of the Advisory Board depicted the current landscape in this country, detailing the main areas of research and innovation.

Nonetheless, the panorama for Japan is expected to change in the second year of FI-LINKS, adopting a more proactive role. The rationale behind this expected strategy lies in some positive indicators that may reflect the interest in experimenting with the technology from the Japanese side. This situation might lead to a potential node deployment and an ecosystem building.

The H2020 EU-Japan FESTIVAL (FEderated interoperable SmarT ICT services deVelopment And testing pLatforms) Project[9] is an initiative involving some European and Japanese partners to build a common IoT testbed as a result of federating some existing platforms. The main objective of such project is to serve an 'Experimentation as a Service' (EaaS) model for experimenters to test their added value services. '*FESTIVAL will as much as possible make reuse of existing software and hardware available in Europe and in Japan for building such testbeds. Mutually applying European enablers for Japanese testbeds and vice versa (...) have a strong impact in bridging the gap among the aforementioned component technologies*'.

Leveraging on the fact that Engineering is a mutual partner in FESTIVAL and FI-LINKS, and Smart Santander is one of the European platforms enrolled, there is a clear opportunity to establish contacts and foster a FIWARE adoption in this country.

- In a first stage, FIWARE Mundus shall support the promotion of the programme, with a special focus on the technology, within the context of FESTIVAL project.

    It is worth noting that FESTIVAL is enclosed under the FIRE umbrella, which implies that there may be not a commitment from its European partners in promoting FIWARE. Hence, it is the responsibility of FI-LINKS to take over such activity.

- Those Japanese partners interested in getting involved will be able to experiment with the platform by means of the FIWARE Lab resources deployed in Europe.

- Additional activities will be performed to promote the benefits from using the technology locally, especially relevant in the case of Internet of Things (IoT). To that end, meaningful business stories taken from the Acceleration Programme might showcase the potential of the ecosystem in specific vertical domains (e.g. Smart City, eHealth and Transports).

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[8] http://smartcity360.org/2015/toronto/

[9] H2020 EU-Japan FESTIVAL Project. http://www.festival-project.eu/

- The fact that the Japanese platform JOSE (Japan-wide Orchestrated Smart/Sensor Environment)[10] involved in FESTIVAL has certain similarities with the FIWARE Lab, especially in the concept of acting as an open testbed, might ease the deployment of a scalable Japanese FIWARE node.

- On the other hand, FIWARE Mundus would require encouraging a mobilization of the local ecosystem towards the adoption of the FIWARE technology. In order to engage relevant players beyond the FESTIVAL context, FI-LINKS may leverage on the existing contact points made throughout the first year, and eventually extend the list with other meaningful EU-Japan BILAT initiatives (either in FP7 or H2020).

2.2.2 Objectives with respect to countries where "adoption" is foreseen

The objective laid out with emerging countries at the beginning of the projects was "*to encourage the set-up and deployment of FIWARE nodes and help mobilize the local ecosystem towards the adoption of the FIWARE technology (e.g. through the set-up of FIWARE ecosystems including all relevant players such as public authorities, ICT clusters, accelerators, etc.).*" It was decided to focus on some Latin American countries not already addressed e.g. Chile, and on Africa where Orange showed interest. Further to activities performed during Year 1 of the FI-LINKS project and progress made through other FIWARE related projects, the revised engagement objectives for "emerging countries" are laid out in the following paragraphs.

2.2.2.1 Rationale for FIWARE adoption in Chile

As already stated, Latin America has been already a "target" for FIWARE adoption, with Mexico and Brazil at the forefront. Other Latin American countries may be engaged in the near future (see more details in section 4.1.2).

In addition, the recent developments in Chile provided for a favorable context. Chile is the most developed country in Latin America. It is an advanced economy in transition to the first world, which brings opportunities to make strategic ICT investments, both in terms of adoption of technology as much as its economic possibilities.

This situation is recognized by the local administration, which is encouraging R&D centers establishment in the country. Chile's geopolitical stability guarantees to some extent that efforts are sustainable and consistent in time, and also guarantees that initiatives supporting several layers of the economical tissue will receive sustained backup (e. g. actions promoting entrepreneurship)

There is an established academic and research community, looking forward to be involved in transnational initiatives to maximize their impact, which integrates seamlessly in the ecosystem tissue, completing sound ICT innovation clusters.

Currently 20+ people are part of the Future Internet research center in Chile dedicated to FIWARE, and Chile already installed a first version of a node for testing FIWARE.

The contribution to the expansion in Chile, progressed with the opening of a research centre dedicated to FIWARE, is fully in line with the aims of the international expansion of FIWARE. In addition there are important sectors not covered in Europe with FIWARE technologies:

- The mining industry, which requires proved technology and where FIWARE can have a role;

- Very wide land extensions for farming or stockbreeding monitoring.

Exploiting FIWARE developments have been supported by the interest in local training with the enablers,

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[10] JOSE: Large-scale open test-bed. National Institute of Information and Communications Technology. http://www.nict.go.jp/en/nrh/nwgn/jose.html

with hands-on work (in Santiago de Chile).

All of the above make Chile the most "European country" in Latin America, likely to become the "FIWARE spearhead" for expansion into Latin America.

2.2.2.2   Rationale for FIWARE adoption in Africa

The Orange Group operates in several African countries and is interested in setting up such a platform as FIWARE in order to help local developers to create innovative applications thanks to FIWARE enablers provided in IAAS/PAAS mode in particular.

Orange already experimented with a platform called "Emerginov" in Senegal and Ivory Coast.

Emerginov has already helped set up several African communities:

- Emerginov Cameroon - G.E.Kouamou (LIRIMA)

- Emerginov Côte d'Ivoire - F.Youzan (Africaworkers)

- Emerginov Mali - I.Fadiga (Yɛlɛman)

- Emerginov Senegal - C.Tidiane Diop (Sonatel) & L.Ahouansou (MobileSenegal, SenMobile)

- Emerginov Togo - E.Alomatsi (WɔɛLab) & E.Amemassovor (WɔɛLab)

Orange has already installed the Emerginov platform as an open source solution. It is usable by anyone, and the existing ecosystem in sub-Saharan countries (Benin, Cameroon, Mali, Ivory Coast, Senegal, Togo) already exists.

Platforms are already installed in Senegal, in Ivory Coast, in Mauritius and in Botswana and gateways have also been installed in Mali and Madagascar.

Today, more than 400 developers are registered, more than 100 micro applications have been developed, more than 10 hackathons gave been organised.
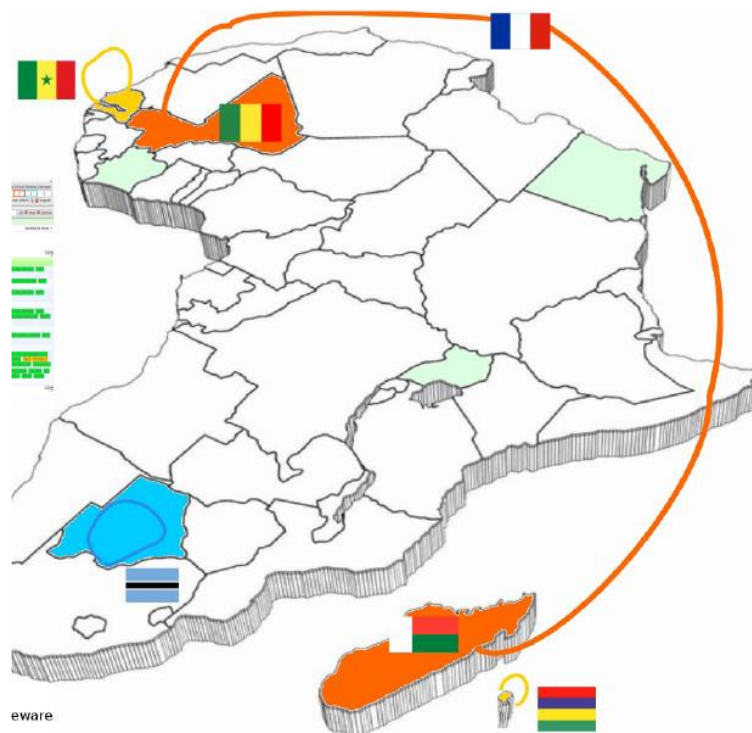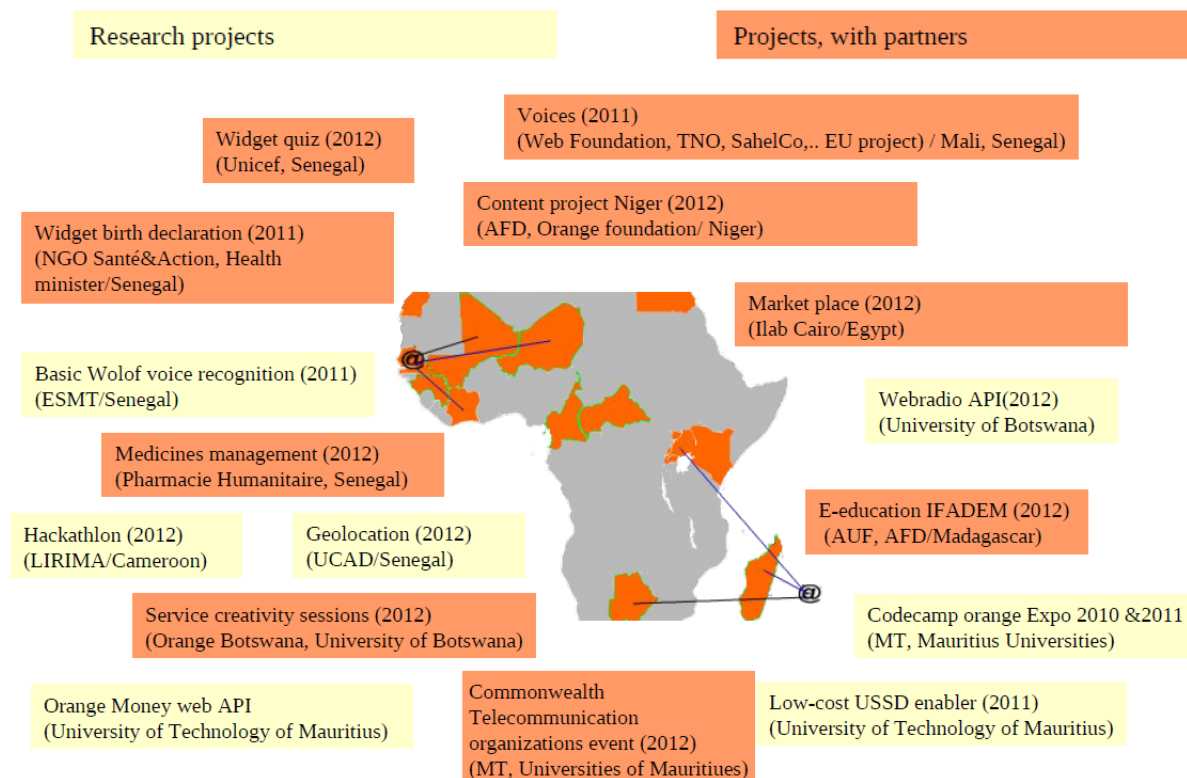
Figure 1: Emerginov in Africa

The FIWARE platform has similar objectives and proposes additional enablers that could complement the existing Emerginov platform. There is a strong opportunity to reuse the communities already involved in Emerginov initiative and also to extend this to other African countries.

Although adoption of FIWARE may be possible as such in some cases, adaptation to the local market may be required to better fit African needs. The recommendations from CAF are relevant and shall apply: *"the CAF advices DG CONNECT to [...] pursue and further develop the international dimension of ICT in Horizon 2020 along the lines of the current work program by [...] giving also consideration to developing countries (Africa, ASEAN) which constitute the markets of the future but also offer unsuspected opportunities to redefine the use of ICT in a context of frugal resources, hence driving innovation"* ([1] page 28). In this sense, Africa could also lead to renewed innovation for FIWARE.

In 2015, the Commission opened a specific call ICT39 to fund projects with African countries. This could prove to be an opportunity to support the establishment of FIWARE ecosystem by offering FIWARE platform to the projects that will be selected in this call, as a concrete case of cooperation between the EU and Africa.

In conclusion, Africa faces rapid urbanisation and as its population continues to grow unabated, more and more people are moving to cities every single day. As urban development continues, cities need to become 'smart cities'. To handle large-scale urbanisation, city officials are under pressure to find new ways to manage complexity, increase efficiency and improve the quality of life for the many citizens living in formal and informal settlements.

According to the output of the conference "SMART Technologies for municipal sustainability" organised by Santander, FMDV and UN in July 2014, a platform dedicated to the smart technologies solutions that allow a better access and management of local financial resources has been created[11]. It seems that Abidjan and Dakar should be candidate for smart cities initiatives.

African countries already have developers' ecosystems well educated to develop application on PASS/IAAS platforms thanks to Emerginov initiative.

There is a strong opportunity to extend the existing ecosystem with FIWARE in order to help Africans to develop new innovative applications answering their needs.

Thanks to the activities performed by FI-LINKS during Year 1, the objectives for Year 2 in Africa could be set as follow:

> If FI-LINKS could help achieve the set up of FIWARE in Tunisia to cover Maghreb, in Senegal to cover West Sub-Saharan African countries, and in Mauritius to cover East Sub-Saharan African countries, it could be a great success.

The architecture is currently being studied in order to define the best options:

- One FIWARE platform in each country;
- One FIWARE platform in Africa (e.g. in Ivory Coast, where the Orange African data centre is located), with gateway/front end in each countries;
- One FIWARE platform in France, with gateway/front end in each country.

According to the output of this study, a SWOT will be established and proposed to local ecosystems mainly at policy level.

Policy is key in Africa, for that reason FI-LINKS will organise meeting with Ministries in order to try and get their support and commitment regarding the preferred scenario.

In line with the discussions started in the various countries, focus should be on four Africa countries:

- **Mauritius** (*National Computer Board*) is already working with Mauritus Telecom on the FIWARE case.

- **Senegal** (*Ministère de l'Enseignement Supérieur et de la Recherche*) sees FIWARE as an accelerator in particular in the area of innovation transfer to the market. A meeting with the Minister is being planned in the summer of 2015 in order to proceed further.

- **Tunisia** (*Ministère de l'Enseignement Supérieur et de la recherche Scientifique*) is willing to evaluate the interest of the local ecosystem for such a platform in Tunisia. A meeting with the Ministry could be organised quickly if the feedback from the ecosystem is fine. Orange has set up a "research lab" in Tunisia for two years with 130 people, who are ready to help.

- **Ghana** (Accra Polytechnic) has planned to come back to FI-LINKS after an internal presentation.

In parallel, Orange will continue internal discussions with Mauritius Telecom (Mauritius), Sonatel (Senegal) and Orange Tunisia (Tunisia) in order to involve them in the possible deployment of FIWARE.

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[11] Cf. http://www.uclg.org/fr/node/22461.

2.2.3   Other countries

The approach to other countries is to leverage on the different organizations which can help FI-LINKS to understand specific relevant opportunities.

One good example is the World Bank Group. Some FI-LINKS representatives had a meeting in Washington in March 2015, where the consortium presented FIWARE to the responsible for ICT and people in charge of Smart Cities in Latin America and ICT in South Asia. The feedback was quite positive and they are in contact with a good number of local consultants and governments, which can help FI-LINKS to spread the FIWARE technology.

Preliminary contacts about possible expansion of the FIWARE Lab via instantiation of new nodes in Singapore and India have been established through participation at the Swiss FIWARE Acceleration workshop held in December 2014 in Winterthur (Switzerland). Even though not in the top priorities list of the ongoing FIWARE Mundus international activities, the plan is to revive the established contacts, respectively with Prof. Pina Marziliano in Singapore and Mr. Tim Thor in India, so as to assess the potential of promoting the adoption of the FIWARE offering also in these countries. The main idea is to provide more detailed information about the FIWARE Mundus activities, the FIWARE technologies and offering with specific focus on Smart Cities' services and applications as a concrete basis to discuss about further interest and next steps.

This could potentially open up interesting cooperation opportunities also beyond the FI-LINKS project lifetime and contribute to enlarge the business horizon for uptake of the FIWARE technologies. Moreover, as international cooperation is a cross-cutting issue in H2020 and a specific call was dedicated to support dialogue with high income countries including Singapore, namely H2020-ICT-38-2015, the consortium believes that promoting the FI-PPP/FIWARE work and offering could contribute to increase the visibility and credibility of the European Innovation offering in Singapore and Eastern countries overall.

For what concerns India, it is important to underline that the possibility to push for the FIWARE offering penetration in this country would contribute not only to open up new business exploitation and international cooperation opportunities for several European partners, but would also contribute to the Digital Agenda's vision to establish "links between the Indian and European flagship initiatives Digital India and the EU's Digital Single Market", as also underlined by Robert Madelin, General Director of the European

Commission department responsible for digital matters in his keynote speech at the Digital India Roundtable (April 2015). This could also possibly contribute to the regular dialogues that the EU maintains under the "India-EU Joint ICT Working Group" and "EU-India ICT Business Dialogue".

The strategy for Year 2 of the project will be to pursue such contacts, as long as they are not preventing the consortium from focusing on the priorities described otherwise in this document.

2.3 European engagement

The original objectives of the "FI engagement" were described in the FI-LINKS DoW as follow:

FI-LINKS will engage the relevant stakeholders in EU regional context to foster a larger impact of FI-PPP. In Europe, FI-LINKS will purse the engagement of the national ICT clusters and other relevant actors who could mobilise developer communities and smart solutions adopters in each country, via the regions included in the Coalition for Action, and other relevant stakeholders identified in FI–LINKS as potential supporters of the FI-PPP.

The proposal laid out for European engagement at the beginning of the project was "to set up 'FIWARE Regions', under the form of a 'FIWARE Regions Programme'. The main objective would be to ensure the set-up and sustainability of a FIWARE ecosystem in selected European Regions through public and private investment at regional and local level beyond the current funding from the EC for the FI-PPP. FIWARE Regions could then have more opportunities to access the regional funds available for innovation from the EU, including but not limited to Smart Specialisation Strategy related funds."

This strategy was developed further (cf. deliverable D3.1.1) and many regions were engaged (cf. deliverable 2.2.1) during Year 1 of the FI-LINKS project.

Priorities for Year 2 are described in the following paragraphs, in order to respond to the recommendations made in D2.2.1:

Conclusions and potential next steps from D2.2.1	Proposed actions for European engagement during Year 2 of FI-LINKS
FI-LINKS shall better define the incentives and the added value for a region to become a "FIWARE Region"; and we shall provide additional support to the regions which have progressed towards step 3 of the process, so that we can lead them to the end of the process and the "FIWARE Region" label during Year 2 of the project.	FI-LINKS will better define, promote and advertise the value of the "FIWARE Region" label, through common work between WP3 and WP4 and also the FIWARE Press Office. A formal label will be granted to at least 2 or 3 regions before the end of the project.
WFI-LINKS shall continue to work with the IIH project and investigate whether other innovation hubs, especially those which have just been selected as an outcome of IIH Call 2, are interested in the FIWARE Regions initiative. The first action was to participate in the IIH Bootcamp held in Vienna on 26-27 May 2015.	FI-LINKS will ensure a stronger interaction with the various services of the EC involved in supporting Regions (e.g. JRC, DG Regio and Urban Planning, Committee of Regions) and a better coordination at FIWARE level not only with IIH but also with the other projects involved with interaction with EC, regions and cities, in particular FI-CORE, CONCORD, the A16 and the "Open & Agile Smart Cities" initiative.

In order to achieve the project's objective to have at least 2 or 3 formally labelled "FIWARE Region", the consortium will focus our effort on a limited set of regions which have shown interest and have progressed throughout the defined process i.e. Berlin, Brittany, Helsinki, Luxembourg, and PACA –while still exploring opportunities with other regions showing willingness to move on.

3 ENGAGEMENT WITH RELEVANT FI COMMUNITIES & ECOSYSTEMS

During Year 1 of the project, FI-LINKS established a list of experts and organisations that are relevant to support engagement at European and international level. Some of those experts were invited in the FI-LINKS Future Internet Advisory Board; and many organisations were contacted.

The current document does not include the full list of people and organisations that were included in Deliverable 2.1.1. The following paragraphs focuses on what is planned for Year 2.

3.1 FI-LINKS Future Internet Advisory Board

The FI-LINKS project has set up a "FI-LINKS Future Internet Advisory Board". The role of the Advisory Board members is to participate in the FI-LINKS Future Internet roadmapping activities, and to ensure promotion and mutual know-how transfer to/from specific European regions and 3rd countries not directly involved in the FI-LINKS consortium, of the FI-PPP initiatives and related Future Internet innovation activities worldwide.

Although the primary goal of the Advisory Board experts engaged in stage 1 was to support the Future Internet roadmapping activities performed within the context ofWP1, some of them have been quite much willing to help in the "evangelisation" of FIWARE, in particular Glenn Ricart from US Ignite and Alberto Leon-Garcia from University of Toronto. The work with those individuals continues outside the Advisory Board in Year 2 of the project, in line with the objectives and activities already described with respect to the USA and Canada.

Stage 2 of the Advisory Board is exclusively focusing on supporting the roadmapping activities. At this stage, it is not foreseen to engage more such experts for engagement activities during Year 2 of the project, but this option remains open in case it may be required, both at the international and at the European level.

3.2 Relevant international projects and initiatives

The following projects and initiatives were identified as good sources of interaction towards the achievements of the FI-LINKS objectives at international level:

- **Latin America**: the **CONECTA2020** project (http://www.conecta2020.eu/) is an INCO project trying to strengthen interaction between Europe and LatAm via Technology Platforms.

- **Japan:** The Japan-EU Partnership in Innovation, Science and Technology (**JEUPISTE**) project is engaged in several activities to reinforce Europe-Japan cooperation in different areas of interest through support to policy dialogues, deployment of bilateral information services, organisation of networking events focusing on specific technologies and/or societal challenges, operation of help desk services and contribution to the development of human resources for collaborative projects. The **FESTIVAL** project is working on EU-Japan cooperation in terms of test beds.

- **Africa**: there are several INCO support actions targeting at least partially Africa, that could be of interest to FI-LINKS and FIWARE expansion:
  - **MOSAIC** (http://www.mosaic-med.eu/index.php/en/) has the objective to setup Technology platforms in several Mediterranean countries.
  - **Med-Dialogue** (http://www.med-dialogue.eu/) is identifying the Strategic ICT Priorities and is developing ICT policy recommendation for ICT Research and Innovation for the Mediterranean Partner Countries,
  - **ClusMed** (http://clusmed.eu/) is mapping the National ICT Regulations in 5 Mediterranean Countries (Algeria, Egypt, Lebanon, Morocco, Tunisia) and benchmarking them with European countries status, experiences and best practices,
  - **IST-Africa** (http://www.ist-africa.org/home/) is an INCO project organising Participatory Training Workshops in Partner Countries focused on Living Labs (supporting Research, Innovation and

Entrepreneurship) and opportunities for International Research Cooperation including Horizon 2020.

Interactions were held during Year 1 of the project with CONECTA2020, JEUPISTE and FESTIVAL, MOSAIC and IST-Africa. Such interactions are also foreseen in Year 2, as well as a continuing interaction with the Unit in charge of those projects at DG CNECT.

3.3   Relevant European projects

The following projects and initiatives were identified as good source of interaction towards our objectives at regional level:

- **eDIGIREGION** (http://www.edigiregion.eu) is essentially focused on implementing the ICT Research aspects of The European Digital Agenda in the regions through collaboration between triple helix stakeholders (gov. research and industry). They will be developing Joint Action Plans based on each region's smart specialisations in the ICT area.

- **The European Cluster Observatory** (http://www.clusterobservatory.eu) is financed under the Competitiveness and Innovation Framework programme (CIP) which aims to encourage the competitiveness of European enterprises. The main purpose of the project is to share best practices between clusters in order to promote innovation.

Contacts took place with both projects during Year 1 of FI-LINKS. FI-LINKS shall receive a copy of the assessment made by eDIGIREGION of the most relevant innovation ecosystems throughout the world in the coming weeks, and then the consortium will assess whether further interaction with that project is required during Year 2.