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JIAP, Montevideo, Uruguay

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FIWARE: An Open Standard Platform for Future Internet applications



Driven by implementation

Yes WE'RE OPEN

 **FIWARE**
OPEN APIs FOR OPEN MINDS



Sustainability ensured

FIWARE: Why is an open standard platform required?

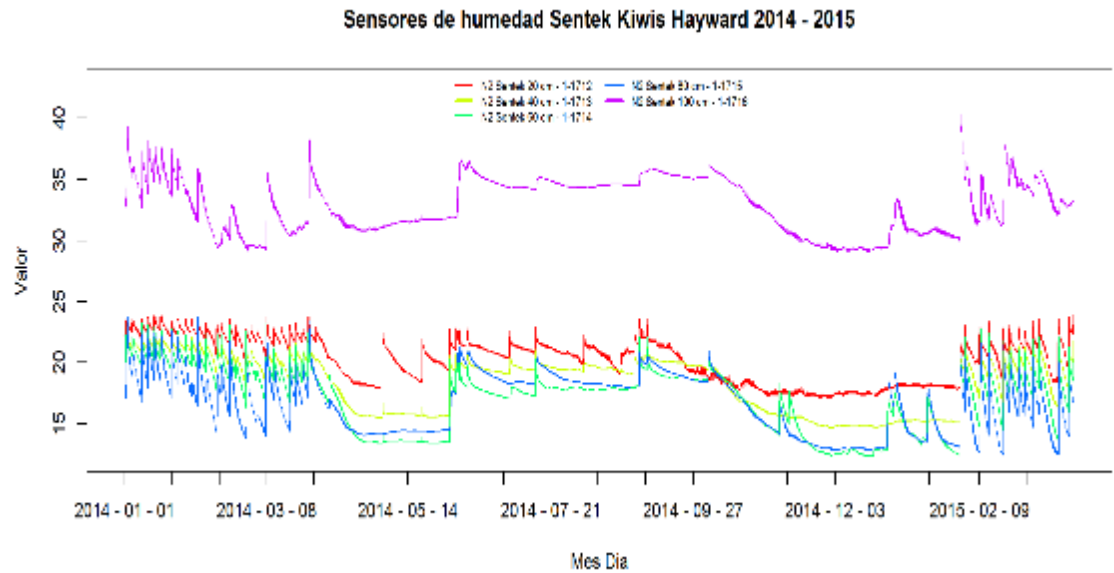
- **Avoid vendor lock-in:**
 - Standard Southbound APIs for sensor providers
 - Standard Northbound APIs offered to applications
 - Portability across platform providers
 - Interoperability of apps on top of different providers
- **Larger community of developers** (*critical mass, economies of scale*)
 - True innovation
 - More competition, leading to cost savings
- **Not any standard is enough**
 - Modularity
 - Allow different business models
 - Integration with standard open data platform
 - Non-intrusive (smooth integration with legacies)



Ej 1: Control de riego

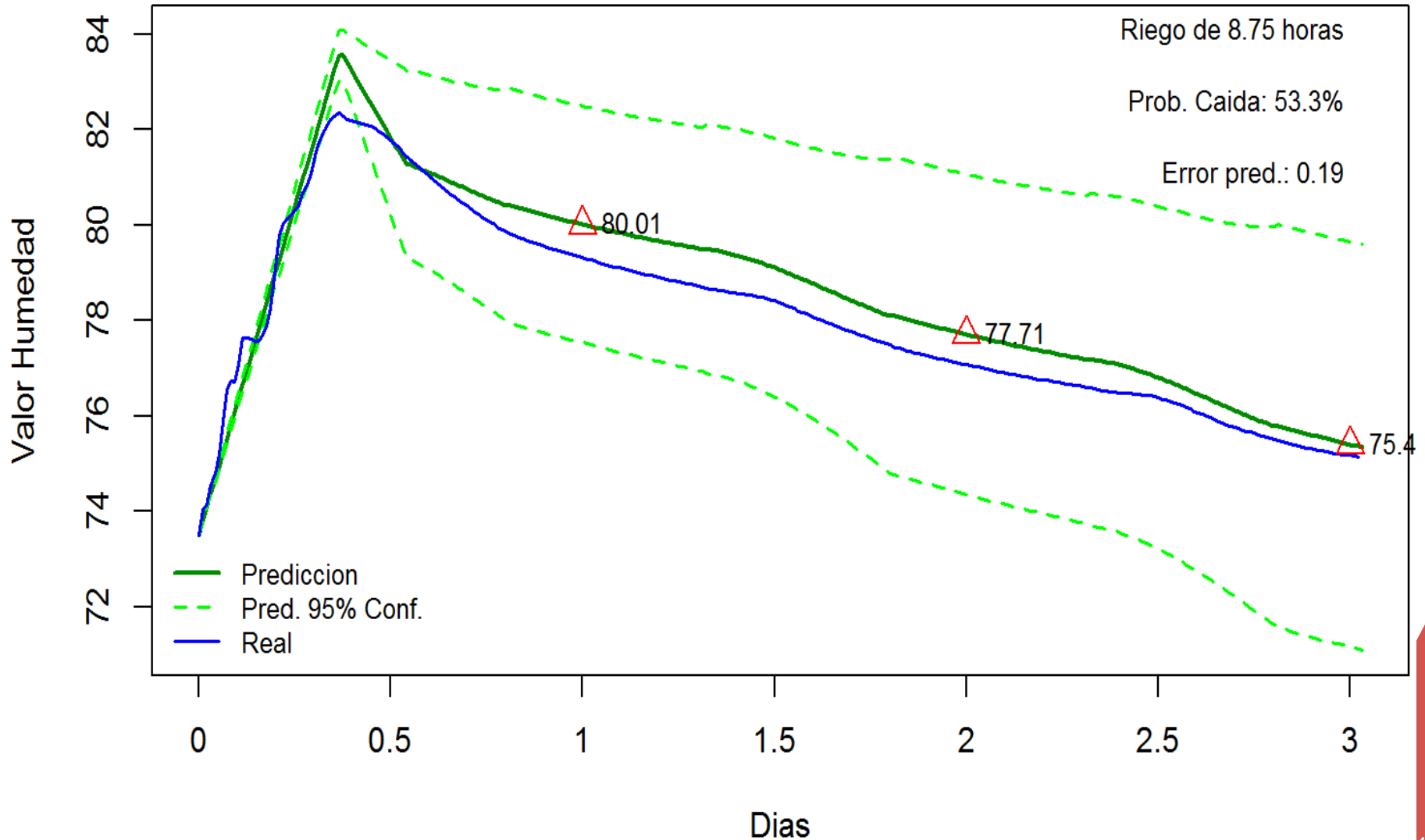


Sensor humedad y estación meteorológica



Datos meteorológicos: humedad, temperatura, radiación solar y velocidad del viento.

Ej 1: Control de riego



What is FIWARE? An Integrated Package



The Platform

- Provide “Generic Enablers” i.e. software blocks you can use in different ways for your «own» platform
- Common re-usable components to break the silos

The Test Environment

- A sandbox to try and test the Generic Enablers
- Cloud facilities distributed through Europe
- You can get free virtual machines and data storage capacity+ real open data from several Smart Cities



The tools for the FIWARE Lab platforms operators

- Freely available tools to allow data centers to become FIWARE-compliant and to become a federated FIWARE node
- Oriented to FIWARE platform providers



Born in Europe, and born to be global!

- The path to a global Future Internet ecosystem
- Bring FIWARE to your region!



What is the FIWARE Platform?

A Comprehensive Solution for Future Internet Services

Overview

FIWARE is an **open, public and royalty-free architecture** and a set of **open specifications** building upon generic, interoperable and reusable components



- **Generic Enablers (GEs)** offer reusable and commonly shared functions serving multiple areas of use across various sectors. These includes:
 - Cloud hosting
 - Data/Context Management
 - Architecture of Applications
 - Interface to Networks and Devices
 - Security
 - Internet of Things Service Enablement
 - Advanced middleware and web-based user interface
- **Specific Enablers (SEs)** have been developed for domain specific functions

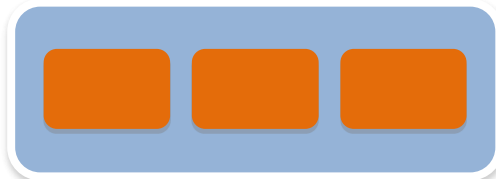


FIWARE's objective is to increase Europe's Information and Communications Technology competitiveness by introducing an innovative infrastructure that enables **cost-effective creation and delivery of versatile digital services**, high quality of service and security guarantees

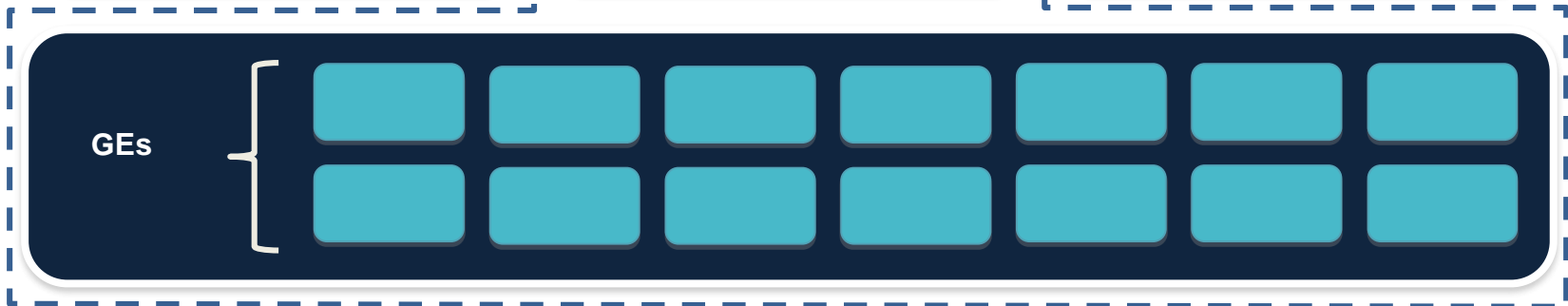
A FIWARE application is based on a set of GEs + SEs
Applications may be developed in various vertical domains



**Some
Vertical
Sectors**



**Domain
specific
enablers**

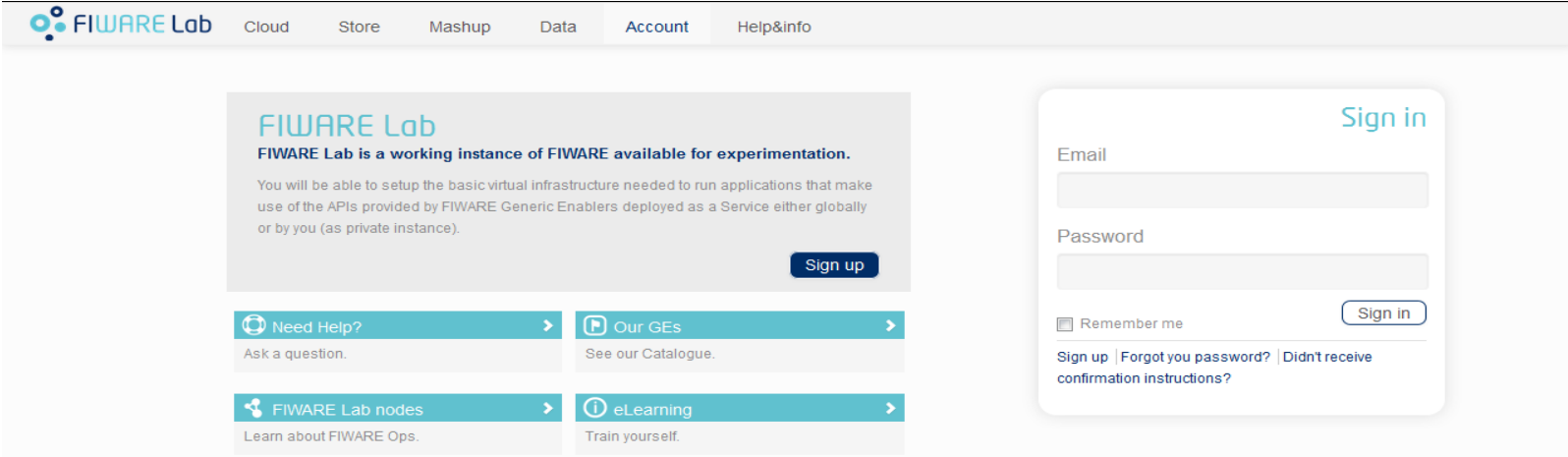


FIWARE

Ej 2: Lobesia Botrana



What is FIWARE Lab?



The screenshot shows the FIWARE Lab website interface. At the top, there is a navigation bar with the FIWARE Lab logo and links for Cloud, Store, Mashup, Data, Account, and Help&info. The main content area features a central box titled "FIWARE Lab" with a sub-heading "FIWARE Lab is a working instance of FIWARE available for experimentation." Below this, there is a paragraph explaining that users can set up basic virtual infrastructure to run applications using FIWARE Generic Enablers. A "Sign up" button is located at the bottom right of this box. To the right of the main content is a "Sign in" form with fields for Email and Password, a "Remember me" checkbox, and a "Sign in" button. Below the main content, there are four menu items: "Need Help?" (Ask a question.), "Our GEs" (See our Catalogue.), "FIWARE Lab nodes" (Learn about FIWARE Ops.), and "eLearning" (Train yourself.).

A sandbox where to test and feel instantiated Generic Enablers



FIWARE Lab is a working instance of FIWARE enabling free experimentation with FIWARE technologies. It is a place where developers and entrepreneurs can meet potential customers, investors and data providers to showcase their applications. **A genuine meeting point for innovation on the Internet.**

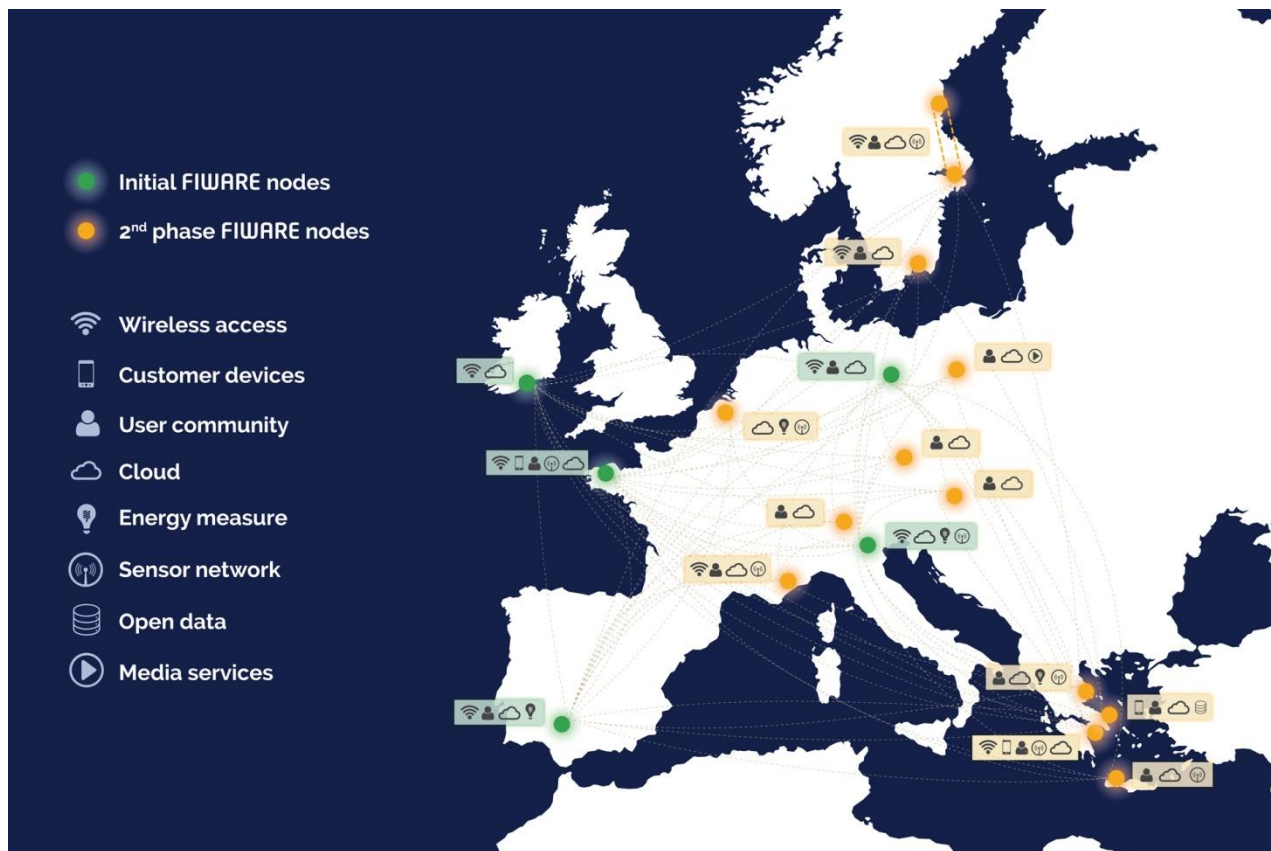
FIWARE Lab nodes expansion

19 FIWARE Lab nodes

- Currently 18 nodes in Europe providing up to 3000+ cores, 16TB+ Ram, 750TB+ HD
- 1 node in Mexico providing 1200+ cores

...and more to follow!

- Discussions with several European regions and with Brazil and Chile already started
- Discussions with other regions and countries with high potential



 **FIWARE Lab**
Spark your imagination

What is FIWARE Ops?



About Blog Events/Coaching ▾ Competitions ▾ Press ▾ FIWARE Accelerate ▾ Help/Contact



What is FIWARE Ops

FIWARE Ops is a collection of tools freely available that eases the deployment, setup and operation of FIWARE instances by Platform Providers. It is designed to help expanding the infrastructure associated to a given FIWARE instance by means of federating additional nodes (data centers) over time and allowing cooperation of multiple Platform Providers. FIWARE Ops is the tool used to build, operate and expand FIWARE Lab.

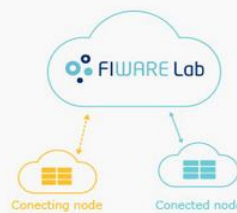
What can you do through FIWARE Ops?

Learn about the power of FIWARE Ops tools by looking at how it has been used with the FIWARE Lab



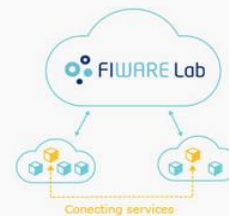
Deploy

Deploy a new FIWARE node



Federate

Federate a FIWARE node to an



Connectivity Management



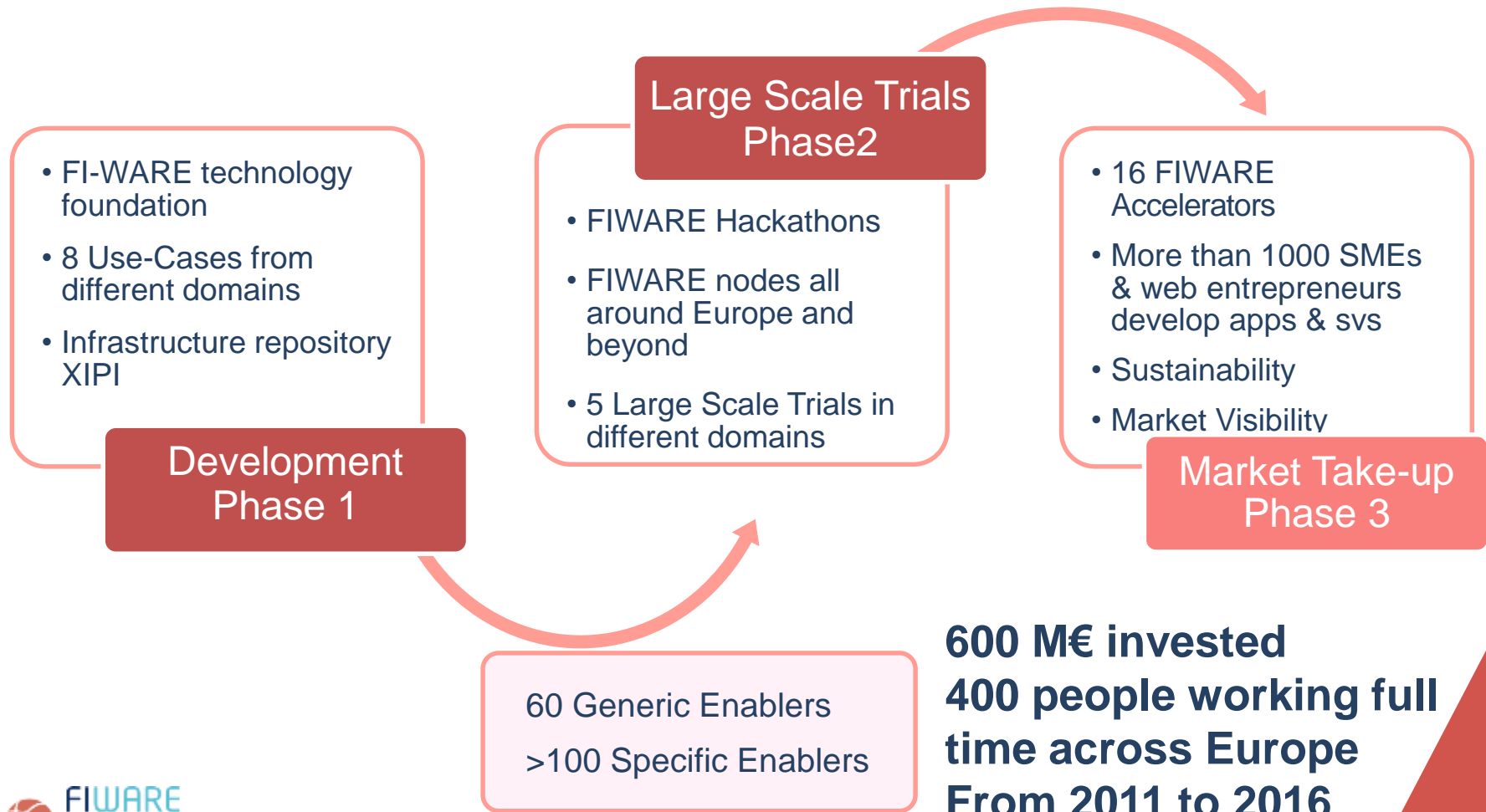
Service Management

FIWARE has entered the Take-up Phase

From Innovation to the Market

Technology Focus

Today
Market Focus



Ej 3: Dinámica de la ciudad

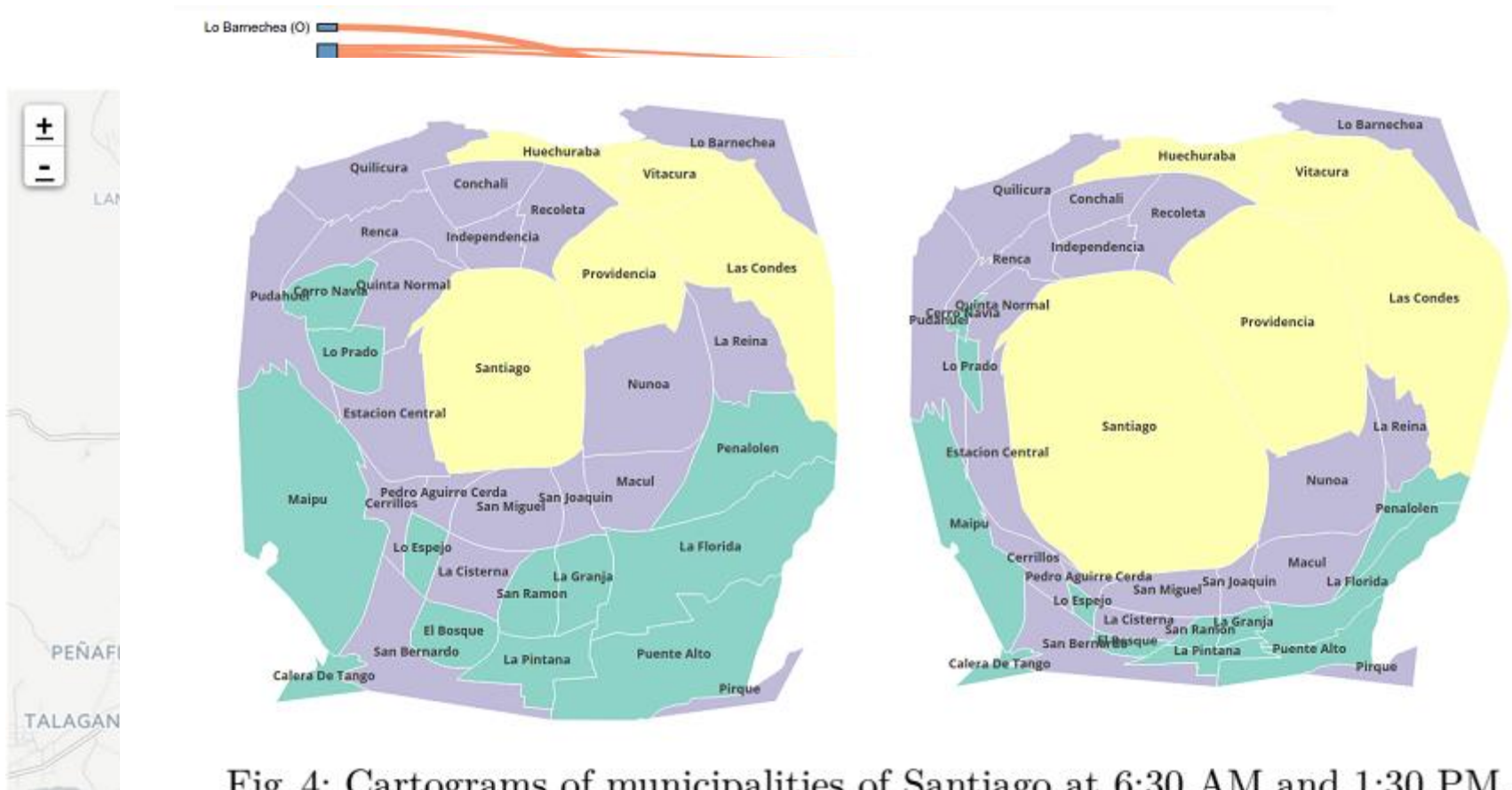
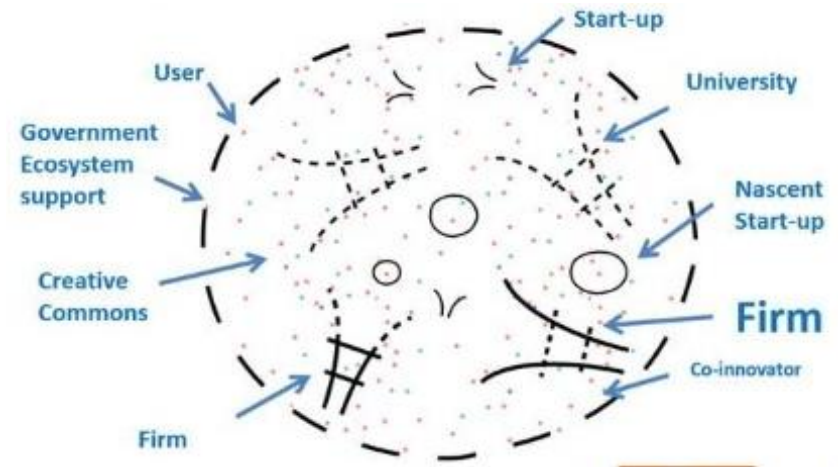


Fig. 4: Cartograms of municipalities of Santiago at 6:30 AM and 1:30 PM.



FIWARE ecosystem and platform: two tied concepts



Open Standard
Platform



Sustainable Open
Innovation Ecosystem



Open Specs and API: opportunities for SMEs

Open Specs: (FREE!)

- Documentation is available
- You can understand the main features of a Generic Enabler – it can be re-use for multiple verticals and associated service platforms
- Your comments are more than welcome!
- Become part of the community and share with us, and with your ecosystem

API: (FREE!)

- For your developers to plug your own software on top of Generic Enablers
- To develop your own instances of Generic Enablers and be compliant & interoperable
- Open or create your platform/services to/for other verticals
- Again, your comments and contributions are more than welcome!

Licence models (for concrete software)

- 70% are now in Open Source => you can contribute to the process!

FIWARE Mundus: The Path to a Global Future Internet Ecosystem

Mobilizing worldwide players and decision makers towards the Future Internet

FIWARE: born in Europe, but to become global!

- FIWARE Regions and innovation hubs are being kicked off all around Europe and beyond
- FIWARE goals, vision & strategy is being embraced in several regions all over the world, e.g., Mexico, Brazil, Chile...



FIWARE Mundus: Cooperation opportunities in Europe and beyond

Selecting and setting up FIWARE Regions and local innovation hubs

- Set up a **sustainable FIWARE ecosystem** together with the decision makers and the players of the innovation ecosystem in **FIWARE regions**
- Support decision makers i.e. local and regional authorities, innovation agencies, industry clusters, accelerators, incubators, etc. to mobilize the innovation ecosystem (SMEs, start-ups, web entrepreneurs) so as to develop new products, solutions, applications around FIWARE
- In Europe, help regional ecosystems access European funds for innovation, in particular in relation with the Smart Specialization Strategy; and support local selected **innovation hubs**

International cooperation

- Setting up new FIWARE Lab nodes and FIWARE innovation ecosystems around the globe
- Cooperating in terms of exchanging knowledge about FIWARE and its usage
- Sharing best practices and research directions in the Future Internet

Ej 4: Estimación de la producción



FIWARE Mundus: Approach to European Regions



Pre-selected “FIWARE Regions”

Innovation Hubs selected via open calls

FIWARE Mundus: Regional Engagement in Europe

First step: validate stage 1 to 3 i.e. willingness, ecosystem, node with pre-selected regions

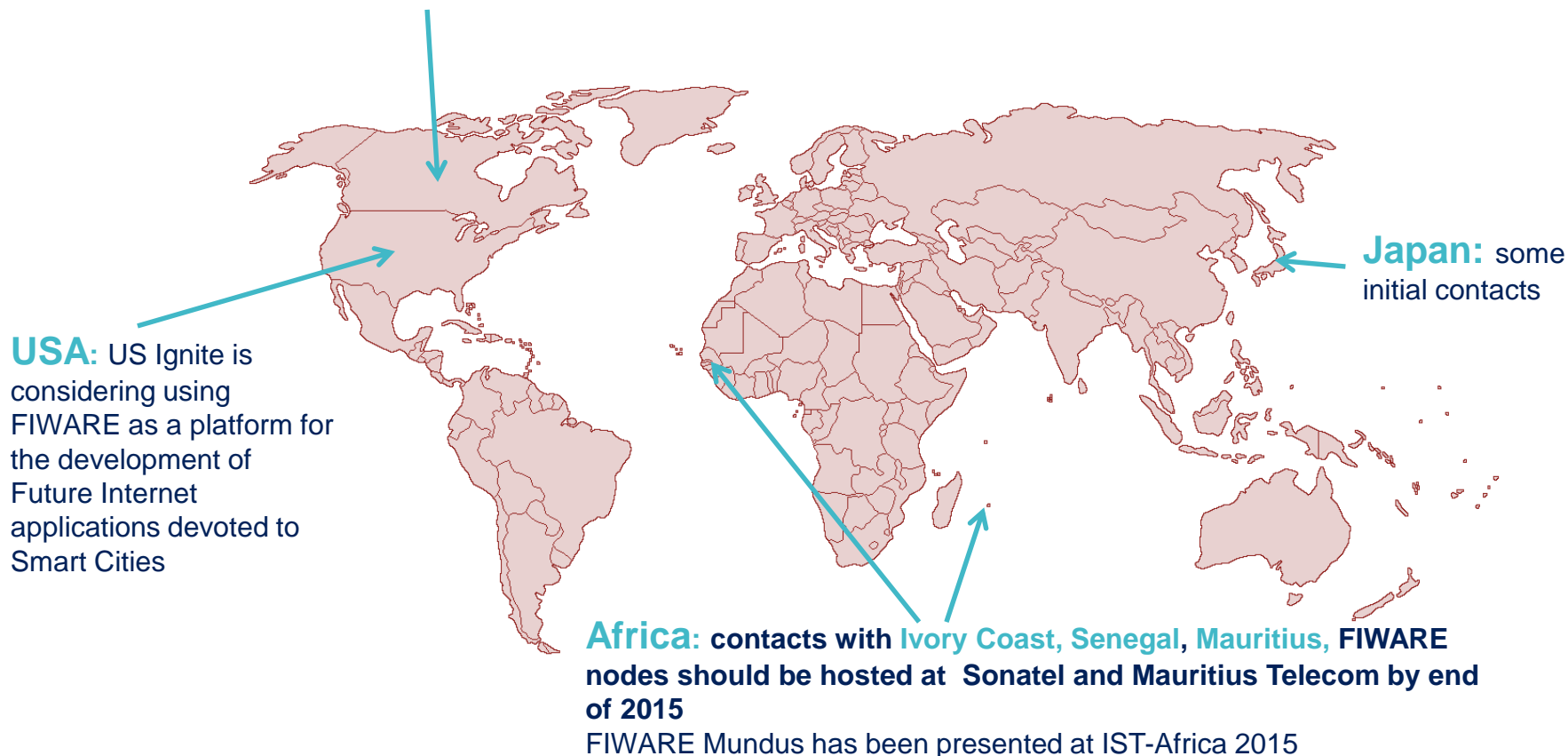
- First meetings already held with many European Regions
- A few regions have already completed the first stage and will soon engage into second stage e.g. Helsinki (Finland), Brittany (France), Berlin (Germany), Luxembourg...

...and prepare second stage to become a FIWARE Region

- Interaction with JRC / S3 for the Smart Specialization Strategy initiative at EU level
- Interaction with European Cluster Observatory, eDIGIREGION
- Interaction set up with FIWARE and the innovation hubs (I3H)
- Interaction with Vanguard Initiative (Asturias, Baden-Wurttemberg, Catalonia, Basque, Lombardy, ...)
- Interaction with the European Commission in order to analyse the possibility to use the structural funds
- Interaction with Open&Agile Smart City initiative (Defining city SDKs based on FIWARE plus standard data models defined using “driven by implementation approach”)

FIWARE Mundus: International Engagement (1/2)

Canada: considering using FIWARE along with the Canadian SAVi as potential foundations for Smart City Platforms



- **Rest of the World:** preliminary contacts with Korea, Singapore, India
- **In addition → Interaction with other projects:** JEUISTE, FESTIVAL (Japan); CONECTA2020 (Latin America), CHOICE (China)

FIWARE Mundus: International Engagement (2/2) - *Latin America*

First contacts with **Uruguay** and **Peru**

- Progress with Peruvian authorities who are willing to hold further meetings around FIWARE
- Uruguayan representatives expressed their intention to connect to the Mexican node

Other LatAm countries

- Initial contacts have been made with Costa Rica, Panama, Nicaragua, and Colombia
- Interest from Argentina



First international activities kicked off in **Mexico**

- Public authorities engaged and involved
- Setup of a FIWARE node in Mexico is a reality (1200+ cores by Q1 2015)
- Action plan in place: promotion of FIWARE within funding programmes targeted to startups/entrepreneurs in Mexico, identification of Mexican cities which will publish their open data and APIs on the FIWARE Lab

Initial activities with **Chile** and **Brazil**

- Progress with authorities and an R&D center devoted to Future Internet and FIWARE in Chile
- Contacts with authorities in Brazil

Success Stories? Get inspiration!



Building Streaming Media Applications with FI-WAR...

41 visualizaciones Hace 1 mes



Creating Interactive 3D Applications and Shared...

20 visualizaciones Hace 1 mes



The FI-Content use case project - Social and...

14 visualizaciones Hace 1 mes



Naevatec (Kurento Generic Enabler) - Interview with...

23 visualizaciones Hace 1 mes



Magic Box Interview with Javier Herrero at CeBIT...

27 visualizaciones Hace 1 mes



Thorsten Sandfuchs (SAP) interview at CeBIT 2014

22 visualizaciones Hace 1 mes



FI-WARE Business Framework by Thorsten...

24 visualizaciones Hace 1 mes



Connecting to the Internet of Things (IoT) with FI...

23 visualizaciones Hace 1 mes



Connecting to the Internet of Things (IoT) with FI...

12 visualizaciones Hace 1 mes



FI-WARE and FI-Content in the EU Future Internet...

33 visualizaciones Hace 1 mes



Magic Box & FI-WARE, Javier Herrero at CeBIT...

15 visualizaciones Hace 1 mes



CeBIT Future Talks 2014

15 visualizaciones Hace 1 mes



SmartTaxi: The Value for a Developer - FI-WARE in...

119 visualizaciones Hace 2 meses



FI-LAB: A guide to the most exciting Future Internet...

133 visualizaciones Hace 2 meses



FI-OPS: access from everywhere in Europe by...

20 visualizaciones Hace 2 meses



Questions?

More information at: <http://www.fiware.org/mundus/>

Contact us at: fiware-mundus-req@lists.fi-ware.org

The Future Internet is waiting for you!



*¡¡Muchas
GRACIAS!!*

<http://www.fiware.org/mundus/>
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Future Internet Accelerator : Now!

80 Millions Euros to be distributed across Europe 2015-16

A massive opportunity for all European SMEs and start-ups that need help during the first stages of business development



Direct funding
(grant)



Mentoring



Coaching

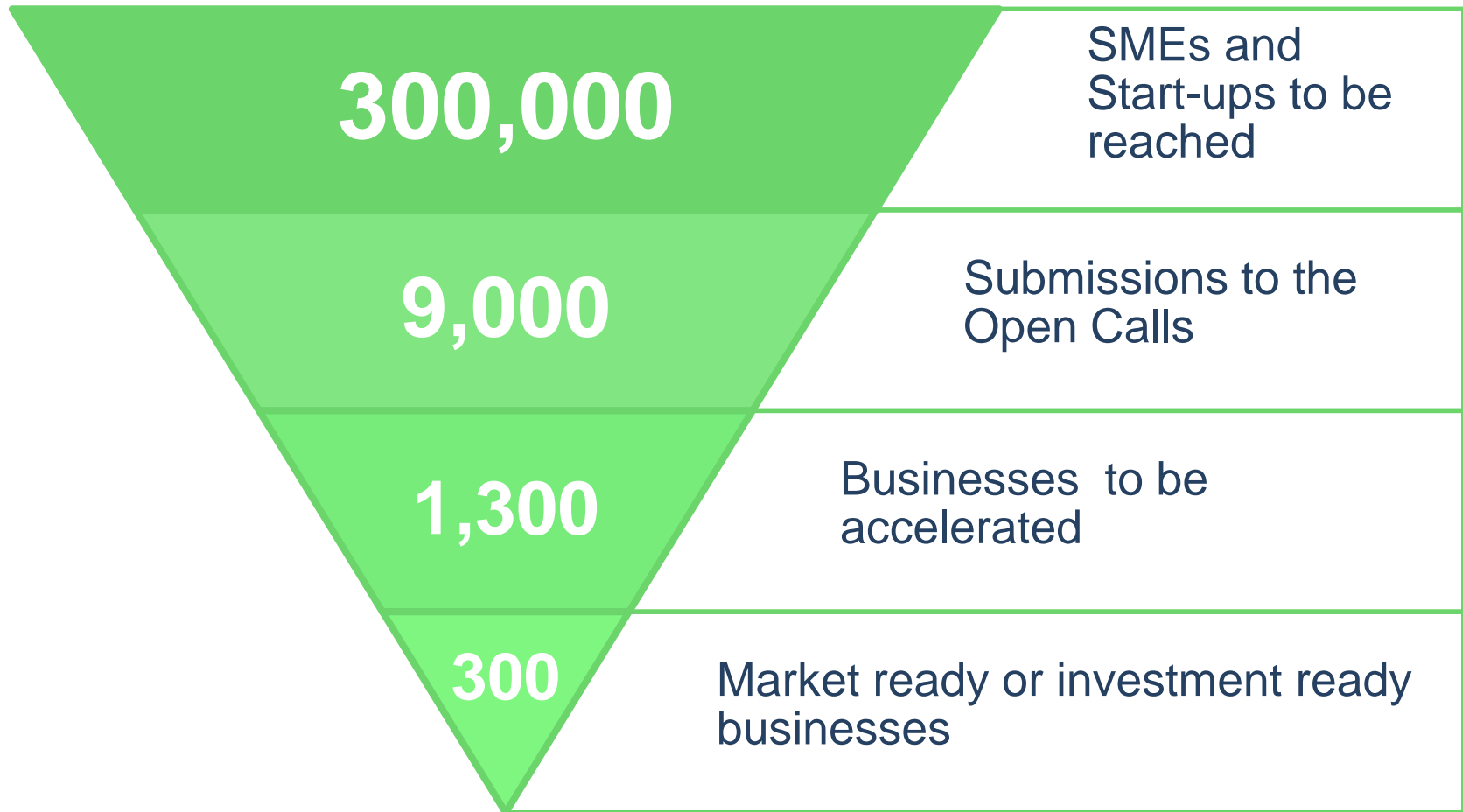


Support

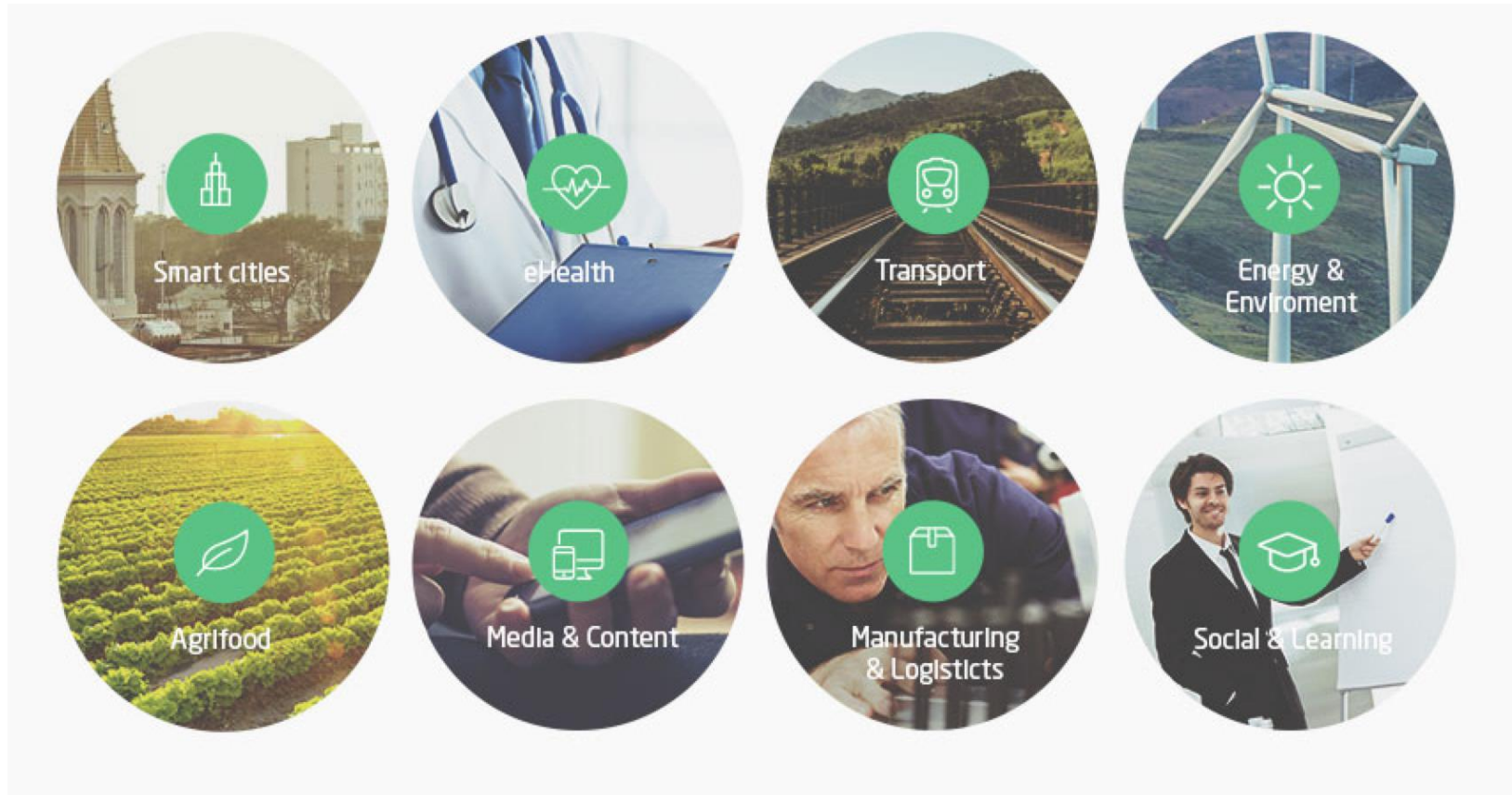


Networking

Future Internet Accelerator : Objectives



Sectors covered by the 16 Accelerators



Future Internet Accelerator: First Results



7 ACCELERATORS

finished their

★ **1ST** OPEN CALL ★

with

1.842 applications submitted

From

36
COUNTRIES

COUNTRIES BY PARTICIPATION



FIWARE Mundus: Regional Engagement - *The Process (1/2)*

1

Identify the **key regional policy and business organisations** and check their interest in setting up a **sustainable FIWARE ecosystem** with potential regional funding

2

Validate the **innovation ecosystem** able to adopt FIWARE to develop innovative applications, products and solutions

3

Identify the structure/organisation able to host and to operate the FIWARE platform i.e. to becoming a **FIWARE Lab node**

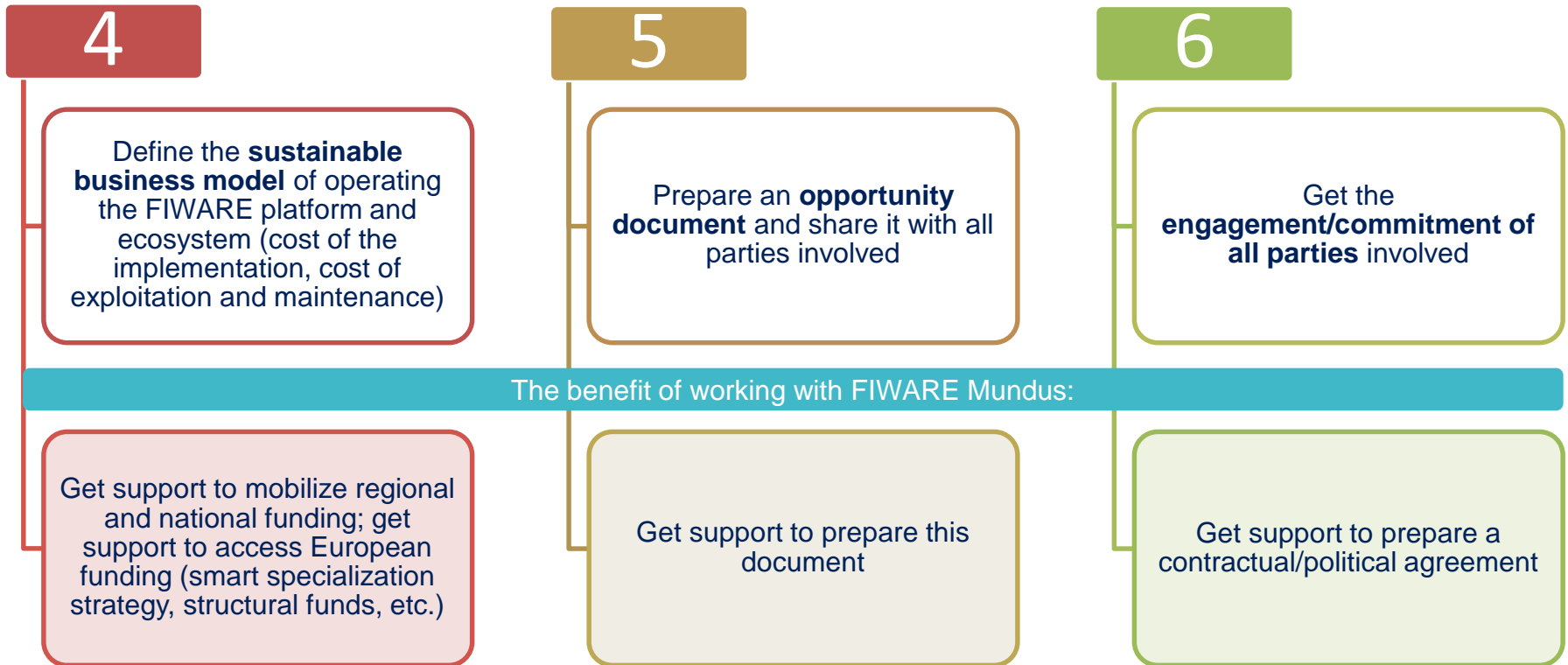
The benefit of working with FIWARE Mundus:

Get support to mobilize regional and national stakeholders using the taxonomy established by FIWARE Mundus

Get support to mobilize all the relevant players i.e. ICT Clusters, accelerators, incubators, industry, research...; get training and support from FIWARE

Get support to identify the relevant existing platforms / test beds through the XiPi portal; get support for training and joining the FIWARE Lab federation of nodes

FIWARE Mundus: Regional Engagement - *The Process* (2/2)



Your region becomes a **FIWARE Region!**

You will get visibility as an innovative region, easier access to European funding, share best practices with other FIWARE Regions...