

# DIGITAL INNOVATION CHALLENGE

LOS RETOS DE LA INNOVACIÓN DIGITAL



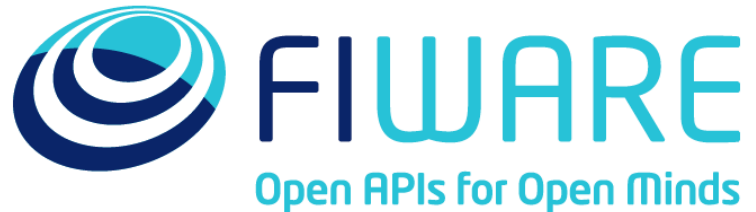
## FIWARE: Open Source Platform for our Smart Digital Future

Angeles Tejado

FIWARE Foundation Marketing Manager



# Breaking the Mould: a new model for EU Innovation Programmes



Fully in line with the objectives of the **Digital Single Market Strategy**, **FIWARE** is ensuring **portability**, **interoperability** and **openness** of services across Europe. It will contribute notably to the **Digitization of European Industry**.

*“A European Success Story”*

Digital Single Market  
FIWARE ACCELERATOR PROGRAMME - 30 March 2017

*“Open platforms are fully in line with the Digital Single Market objective, and will act as a key driver for the Digitalization of the European Industry”*

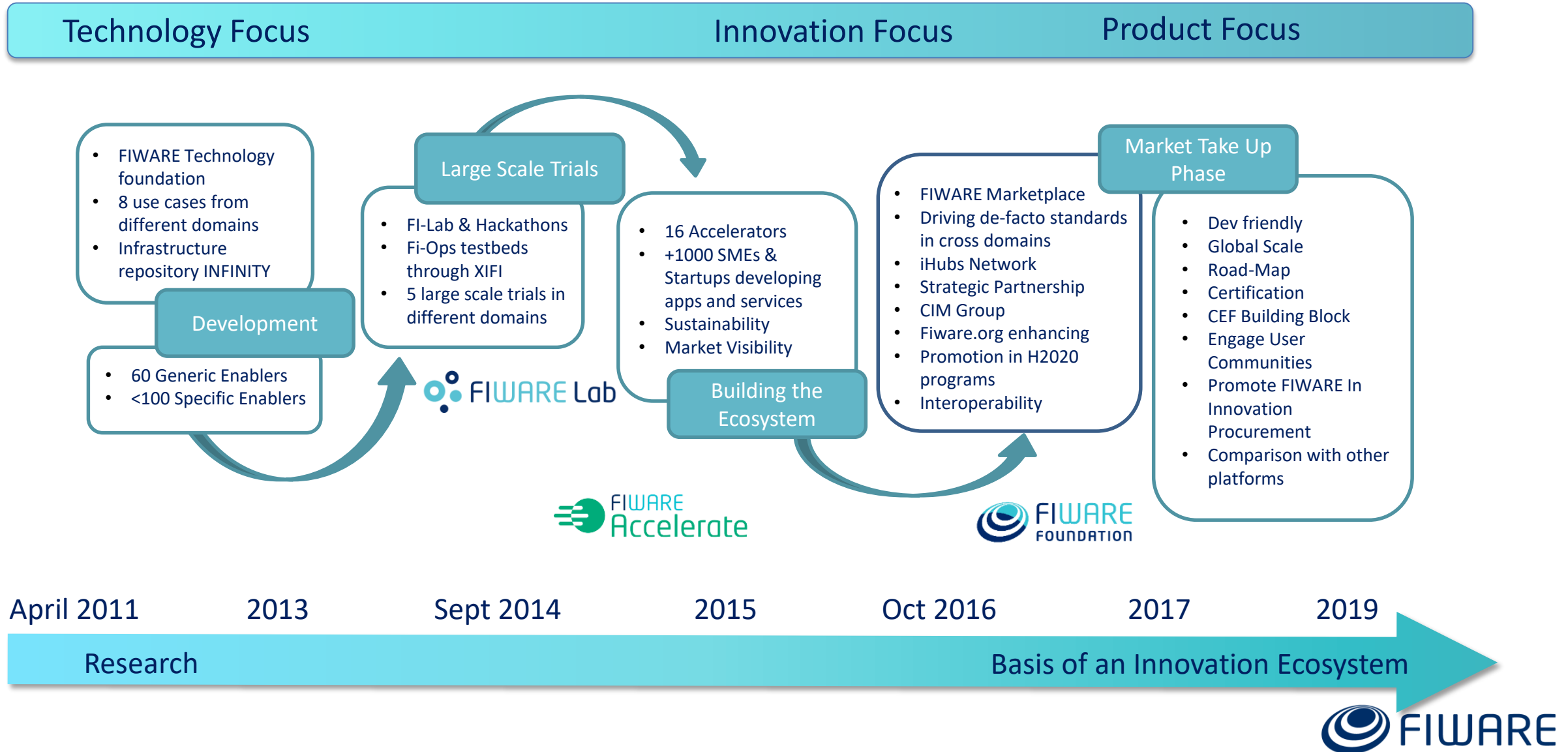
Günther H. Oettinger  
Closing Plenary session - Net Futures 2016

*“I am really pleased to see that our investment in the FI-PPP paid off so well. The creation of the foundation confirms industry's commitment to FIWARE's future and openness. I expect the FIWARE community to contribute to the Commission's work to build a Digital Single Market”*

Roberto Viola  
Director General DG CONNECT



# FIWARE moves on: from research to those digital services you will love





# FIWARE Pillars



Open Source Technology

FIWARE is a curated framework of Open Source Platform Components to accelerate the development of Smart Solutions

Fundraising  
Contributions  
Community



Community Growth  
and Commercial Adoption

Actively promotes the FIWARE adoption, supports the community providing shared resources and validates the FIWARE technologies

Empower Promotes Augment Protect Validate

Membership  
Collaboration



Community:  
Our Alpha Audience



FIWARE EVANGELIST PROGRAM  
FIWARE TECH EXPERT PROGRAM



Powered by  
 **FIWARE**  
Marketplace



Members  
**+250**

Market Uptake  
End Users



Ecosystem:  
Global Strategy

Partners & Key Stakeholders



 **GitHub +8.000 users**

- Independent Software Vendors and Systems Integrators
- Scientific community and networks of ICT technologies
- Universities and research centers
- Technology parks, Incubators
- ICT industry, SMEs and Industrial associations and networks
- National & regional authorities and policy makers
- EU technology platforms' representatives
- Other transnational consortia.

Early Majority

# What, Why, Who

## FIWARE

A curated framework of open source platform components which can be integrated together and with third components to ease development of smart solutions in multiple sectors

## FIWARE Mission

Drive the definition of public, royalty-free and implementation-driven standards laying the foundation for an open, sustainable and innovation-driven ecosystem bringing opportunities for all

## FIWARE Community

Those engaged in achieving the FIWARE Mission, contributing to the technology or the development of the ecosystem, making it sustainable over time

## FIWARE Foundation Strategic Focus Areas

Growth of the FIWARE Ecosystem

Industrialization of the Technology

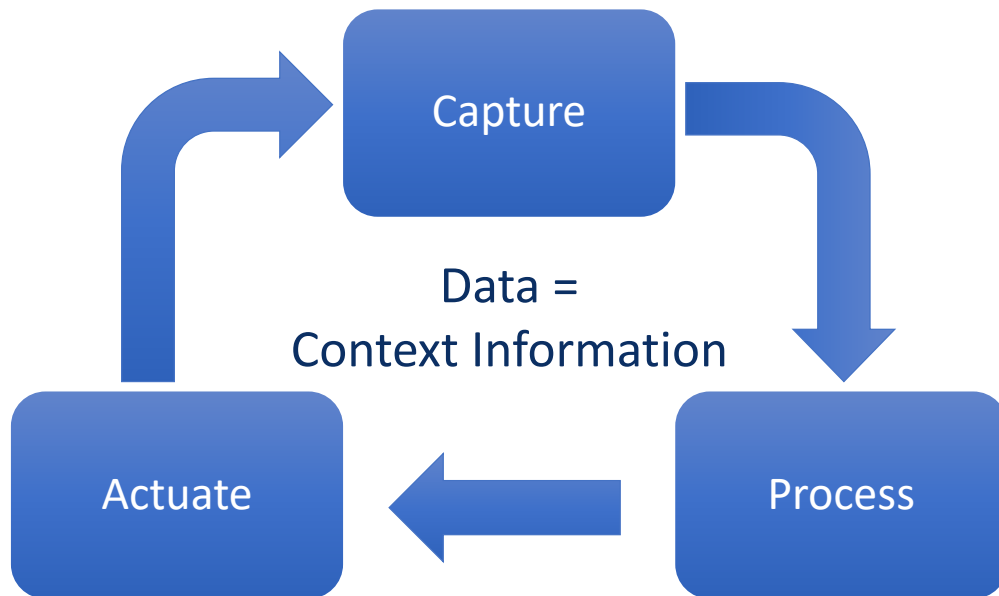
Industry Segment Strategy

Globalization Strategy

Driven by a growth oriented community, value add driven Foundation and thought leadership

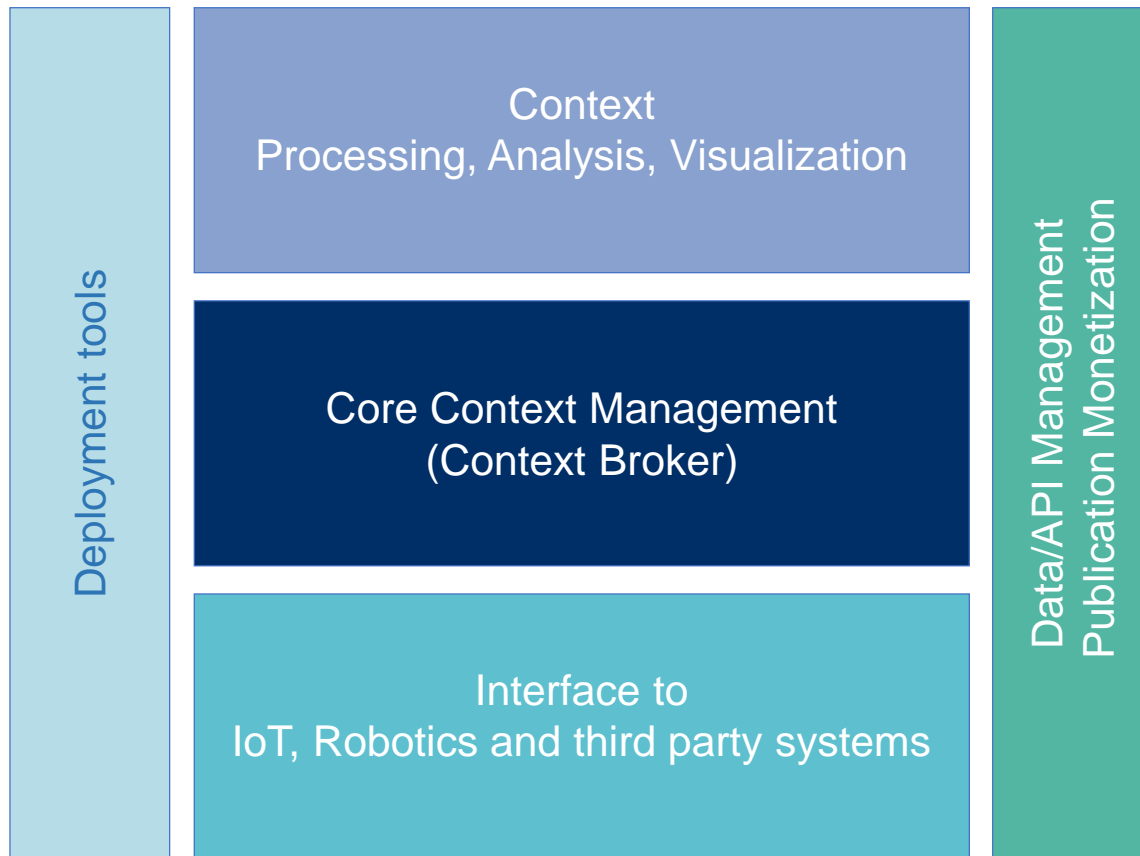
# FIWARE: The Open Source platform of choice for building smart solutions

Smart Solutions gather data from many different sources (including but not limited to IoT) to build a “picture” of the real world and then process and analyze that information in order to implement the desired intelligent behavior (which may imply changing the real world)



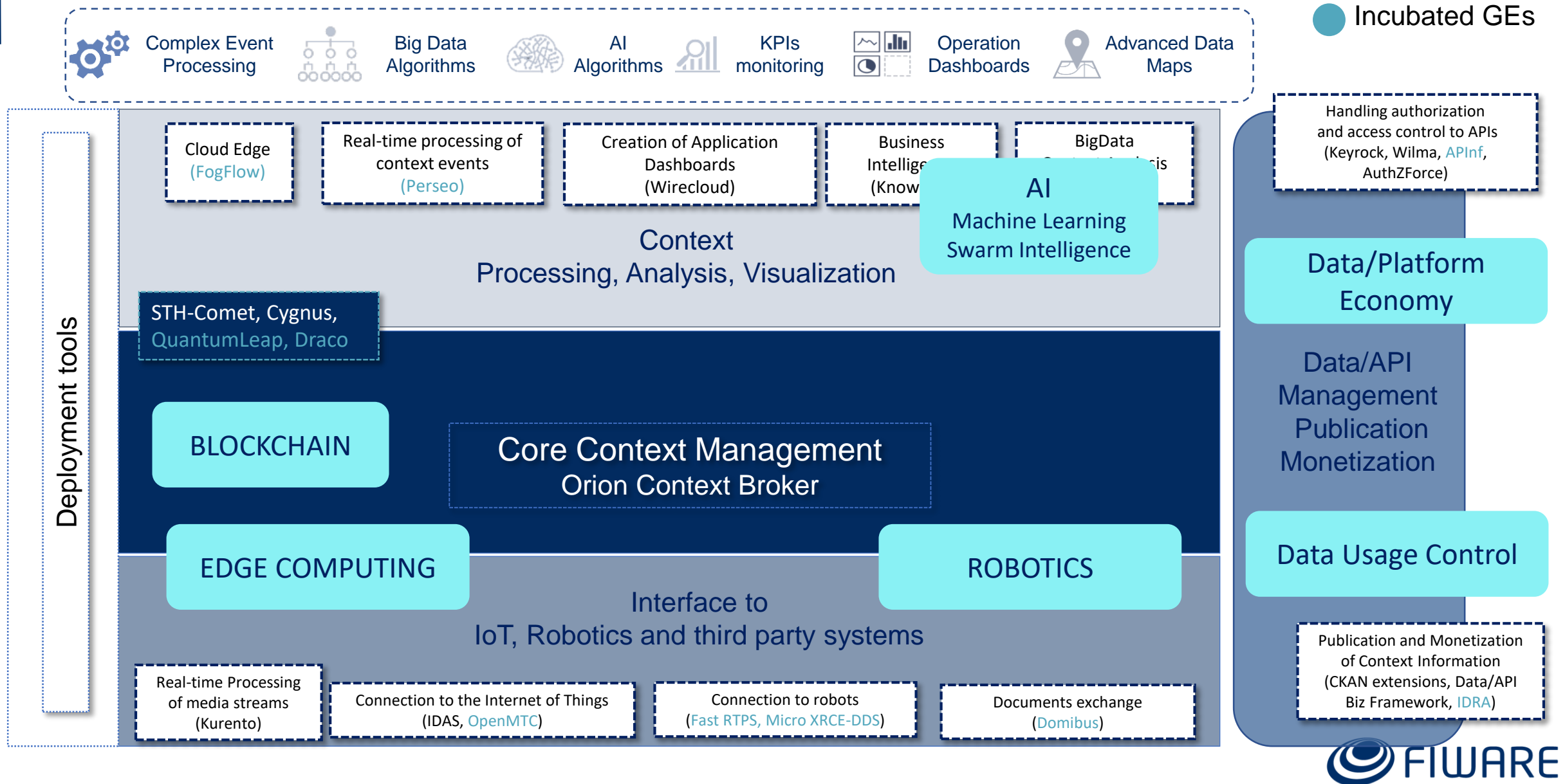
CONTEXT  
MATTERS

# FIWARE Platform Architecture overview



- FIWARE components can be assembled together and with other 3<sup>rd</sup>-party platform components to accelerate the development of Smart Solutions
- The core and only mandatory component of any “Powered by FIWARE” platform or solution is the FIWARE Orion Context Broker
- FIWARE is not about take it all or nothing: you are not forced to use complementary FIWARE components but other 3<sup>rd</sup>-party platform components to design the hybrid platform of your choice

# FIWARE Platform Architecture overview





# Driving de-facto standards: cross domains



ETSI created Jan 2017 a new Industry Specification Group on cross-sector Context Information Management (ISG CIM) for smart cities applications and beyond.

FIWARE NGSIv2 was the starting point for the CIM API to be specified: NGSI-LD

FIWARE Context Broker to support NGSI-LD in the future



The FIWARE Context Broker Technology has been selected as a new CEF (Connecting Europe Facility) Building Block

Enabling public and private sector solutions regarding publication of right-time data

The European Data portal will evolve to incorporate ability to publish right-time Open Data



The Fast RTPS technology, integrated as Generic Enabler of FIWARE has been adopted as default communication middleware in ROS2

The FIWARE Community is working towards providing a Fast RTPS interface of the FIWARE Context Broker

# Opportunities, Vision and Mission

## Next Generation of Data Driven Smart Solutions

## Opportunities

- ✓ Combining the Internet of Things (IoT) with context Information Management, Social Media and Big Data services on the cloud
- ✓ Information coming from different sources must be accessible in real time breaking down boundaries between domains
- ✓ Companies can collaborate to accelerate development of Smart Solutions and materialization of technologies and products which bring support to Data Usage Control
- ✓ Data governance framework that ensures data portability for citizens
- ✓ Open and Commercial Data enabling multi-sided markets
- ✓ Freedom of choice, full data sovereignty and new Data Economy

The Open Source Platform technology for our smart digital future

## Vision

- ✓ Digital is transforming daily life of people and businesses
- ✓ Connected, Digitized and automated things.
- ✓ IoT impacting all stages of economy and social life.
- ✓ Increasing amounts of data that should be meaningful in order to drive smart decisions
- ✓ Context data which describes what is going on, who is involved, where, when, why should be shared and managed seamlessly and with total security.
- ✓ There is the need of a universal standard to manage context information
- ✓ Different technologies must be integrated with the real-world, enabling and supporting the digital transformation of products, processes and businesses
- ✓ Right-time Data processing

Technology  
Community  
Ecosystem

## Mission

to build up an open sustainable ecosystem around public, royalty-free and implementation - driven software platform standards that will ease the development of New Smart Applications in multiples sectors



**Cross Over Into the Mainstream**

## Drivers

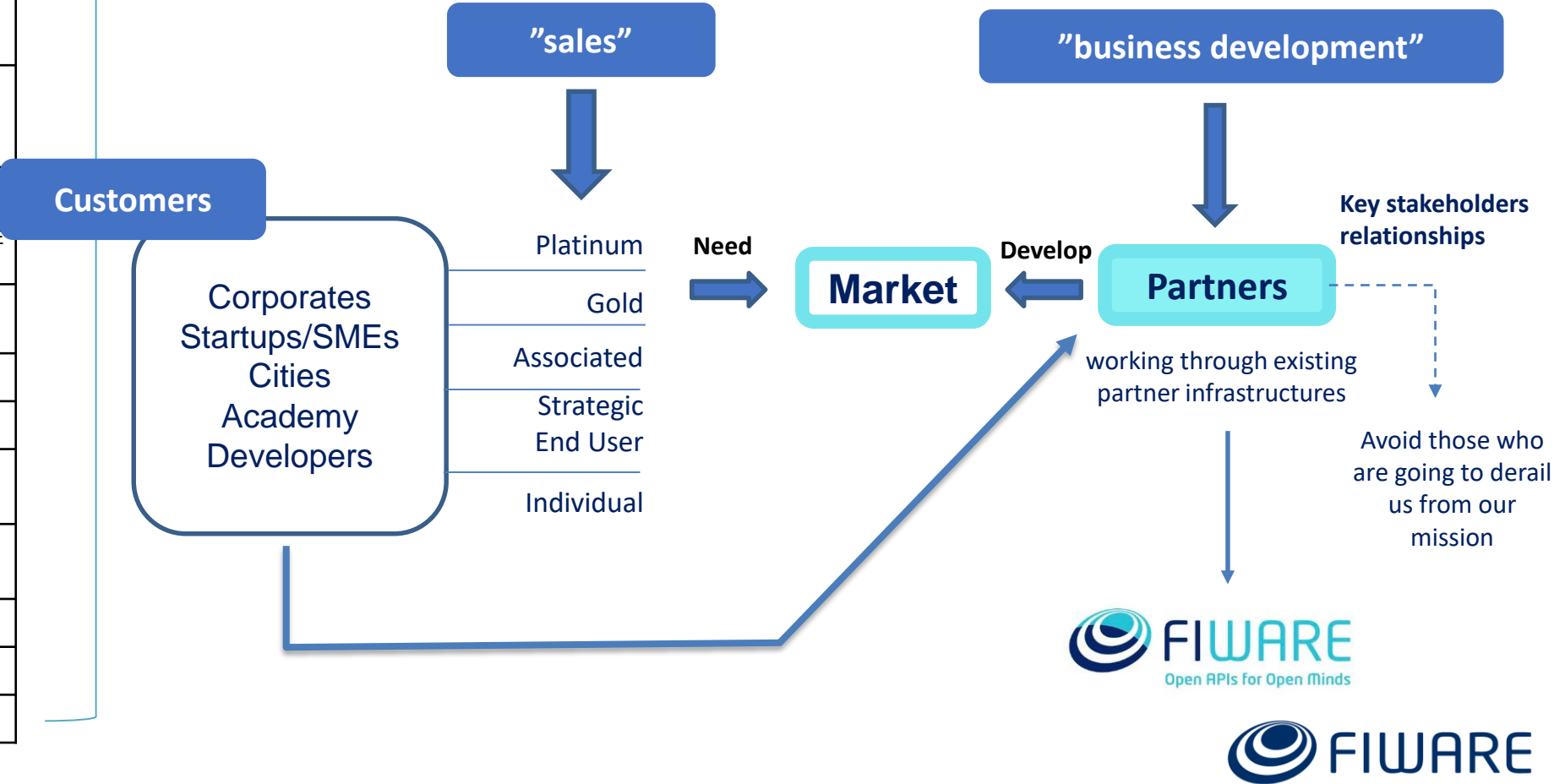
DIGITAL SINGLE MARKET STRATEGY  
Digitizing European Industry  
Public Procurement Programs  
....

# Business Development – Membership recruitment



Connecting similar business to similar goals

1.- FIWARE Users	
1.1	The Public Sector & EC
1.2	Enterprises
1.3	Solution Integrators (Large Companies & SMEs)
1.4	Application and Solution Providers
2.- Independent Software Vendors and Systems / Solution Integrators (Large and SMEs)	
3.- Start-Ups & SMEs	
3.1	Potential Powered by FIWARE Solutions
3.2	Potential FIWARE Ready Device Manufacturers
3.3	Potential FIWARE "RedHats"
4.- Developers	
5.-Universities, R&D and Technology Centres	
6.-International organisations, associations and networks	
6.- KOLs	
8.- Consultants	
9.- Accelerators & Investors	



# Global and Trusted Initiative

## Major global organizations supporting FIWARE in Smart Cities



Defined the standard for Context Information Management: NGSI-LD which is based on FIWARE NGSI



The member states of the **EC** have selected the FIWARE Context Broker technology, implementing the FIWARE NGSI API (CEF)



**C4IR** Smart City project maximizing the humanitarian and beneficial uses of data, protecting privacy and developing practical rules and agile regulatory models that allow for innovation.



Supports interoperability and portability of solutions across cities as well as the convergence of architectural design efforts which are currently underway.



Helping cities to become more resilient to the physical, social and economic challenges of the 21st century.



+120 cities, 25 different countries putting the market needs first and giving the demand side a very strong voice to de-risk investments and manage political, governance and finance challenges.



curated framework of Open Source Platform Components to accelerate the development of Smart Solutions. Universal Standards for Context Data Management. +200 members



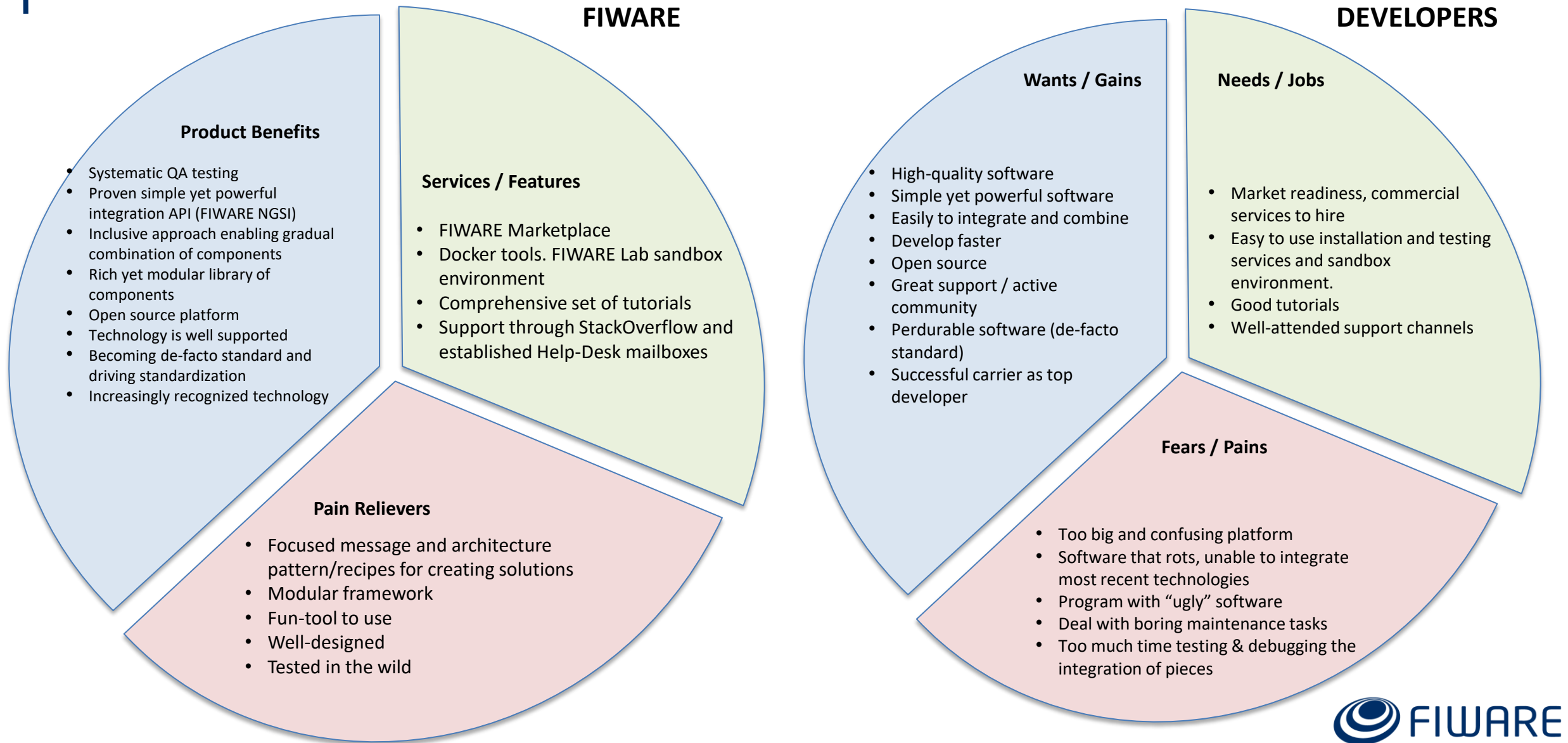
50 technology and service neutral business operations APIs and data models (70 countries) . Open Digital Architecture: open digital systems - common component boundaries

TM Forum and the FIWARE Foundation started a Joint Collaboration Program supported by OASC together with several so-called front-runner cities from around the world to define common data models for smart cities.

- ✓ **minimum common set of open platform technologies**
- ✓ **service neutral business operations APIs and data models**
- ✓ **essential common non-functional reusable components that enable portability, scalability and avoid vendor lock-in**
- ✓ **ensure services across different ecosystem contexts can be built leveraging reusable components**
- ✓ **interoperability and portability of solutions across cities**
- ✓ **sustainable global market**
- ✓ **interoperable and replicable smart city solutions**
- ✓ **transformation of cities into platforms for the Data Economy.**
- ✓ **right-time access to context data which is at the core of any smart solution.**



# Developers Value Proposition





# FIWARE Technology Added Value

based on specific needs of a wide range of ICT developers adopting FIWARE that can work in companies developing products for different markets

*FIWARE solutions are contributing to facilitate the use of IoT platforms in the sector of Smart Cities (as an example), thanks to the community and ecosystem contributing to create that standardisations, supporting the development and deployment of a numerous smart solution facilitating their entrance into the market, and encouraging partnerships.*

Market analysis shows:

## FRAGMENTED MARKET

**LACK OF STANDARDIZATION > MAINSTREAM TECHNOLOGIES VENDOR LOCK-IN**  
**NO SINGLE CONSOLIDATED STANDARD – WIDE RANGE OF SPECIFICATIONS**  
**ABSENCE OF COLLABORATION IN VERTICAL MARKETS**  
**HETEROGENEOUS TECHNOLOGIES AND PROTOCOLS**



## FREEDOM OF CHOICE CONTEXT MANAGEMENT

single convergence point for gathering data based on the  
NGSI evolved standard  
**DATA ECONOMY CONCEPTS**  
**STANDARDS / INTEROPERABILITY**  
**MODULAR FRAMEWORK**

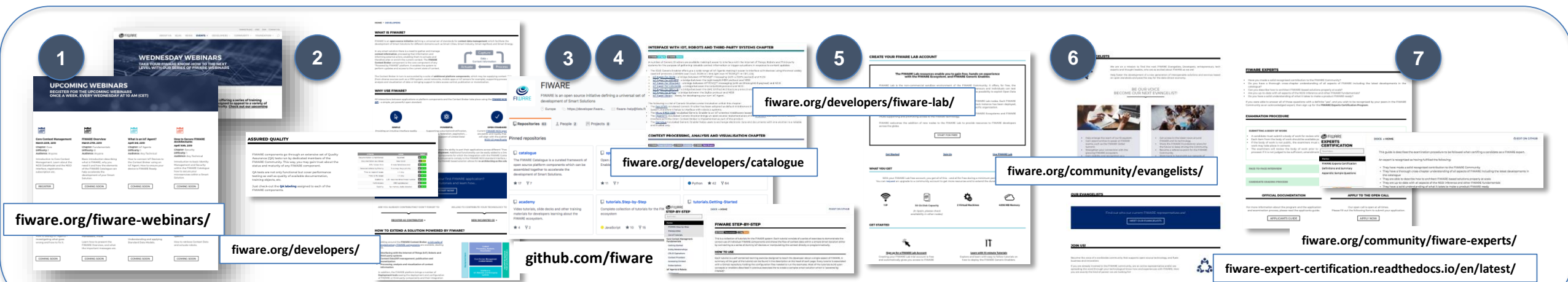
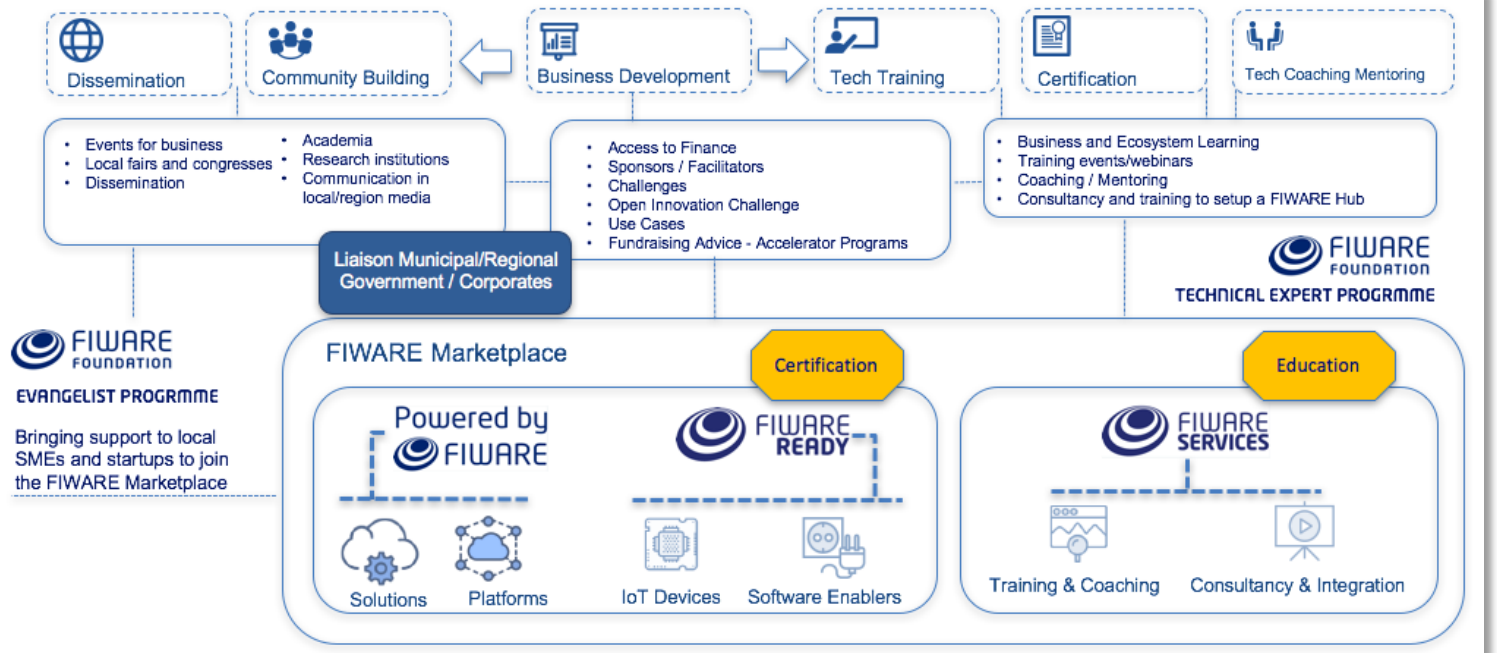
# How we deliver value?

## Technology + Community

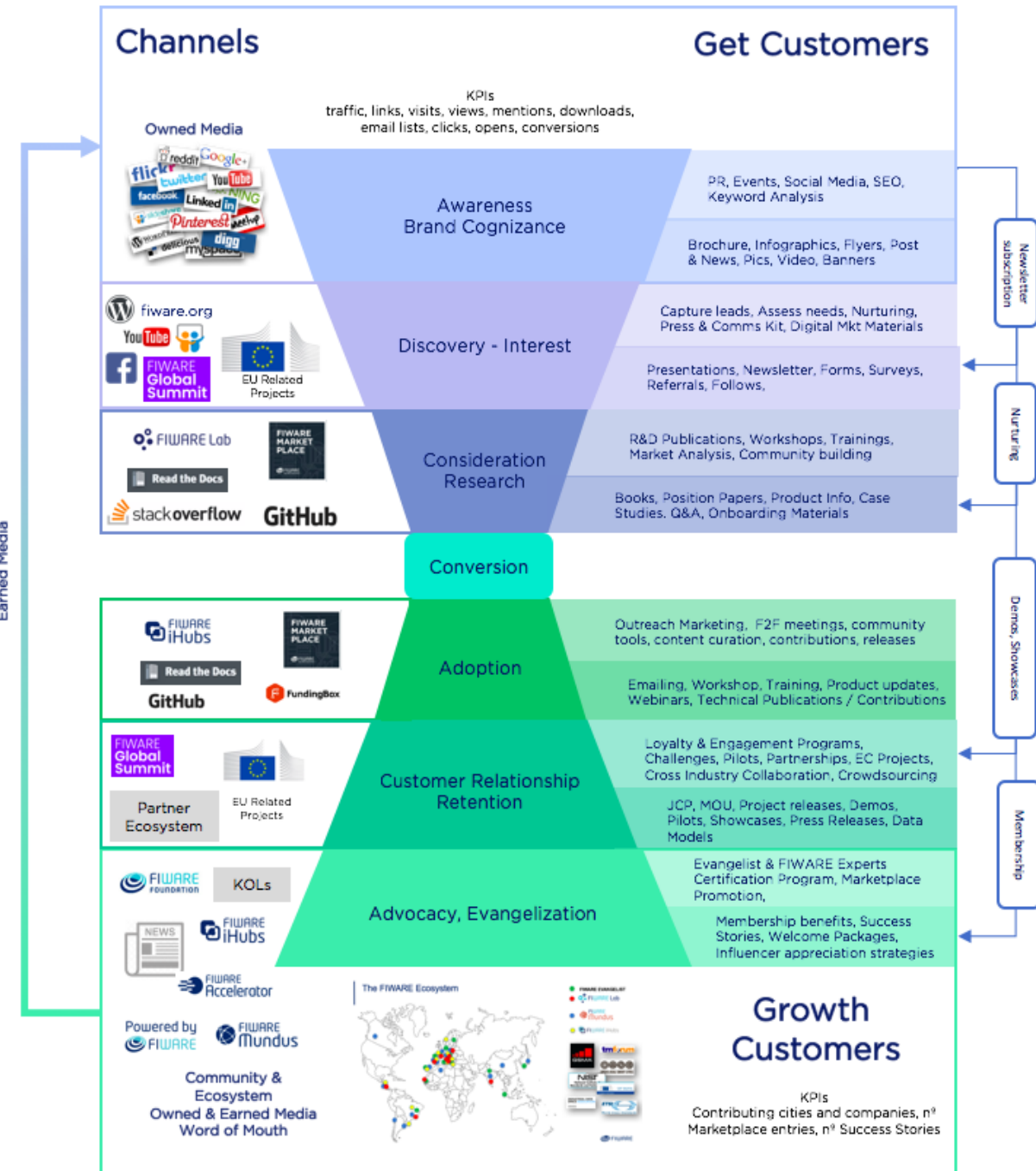
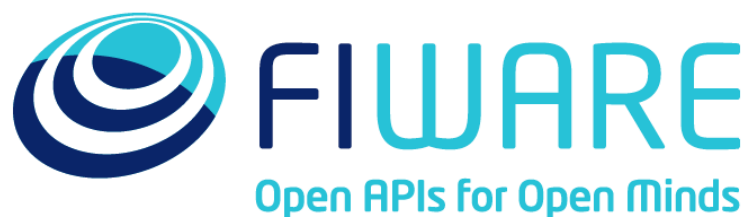
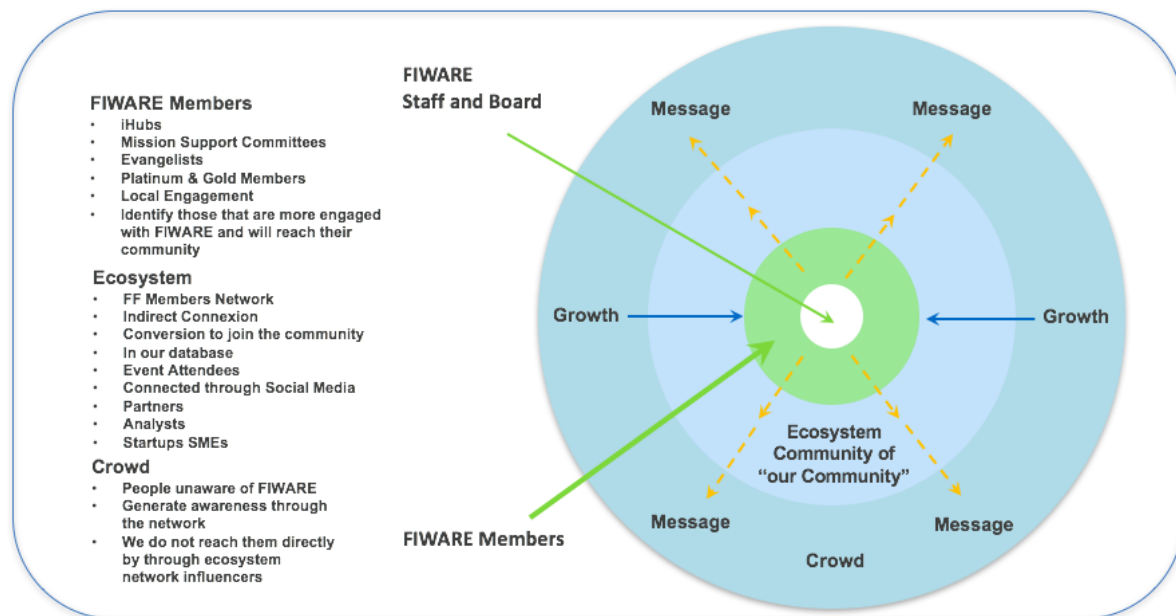
Global strategy to support a growing ecosystem around FIWARE Technology and empower the members of the community:

- Supporting the FIWARE iHubs network and sustainability models developed by the MSCs
- Set-up of the FIWARE Evangelist Programme
- Set-up of the FIWARE Technical Experts Programme
- Updates on the documentation for developers with easy step-by-step tutorials that can be used by the Evangelists and Tech Experts Community.

### FIWARE iHubs: Activities



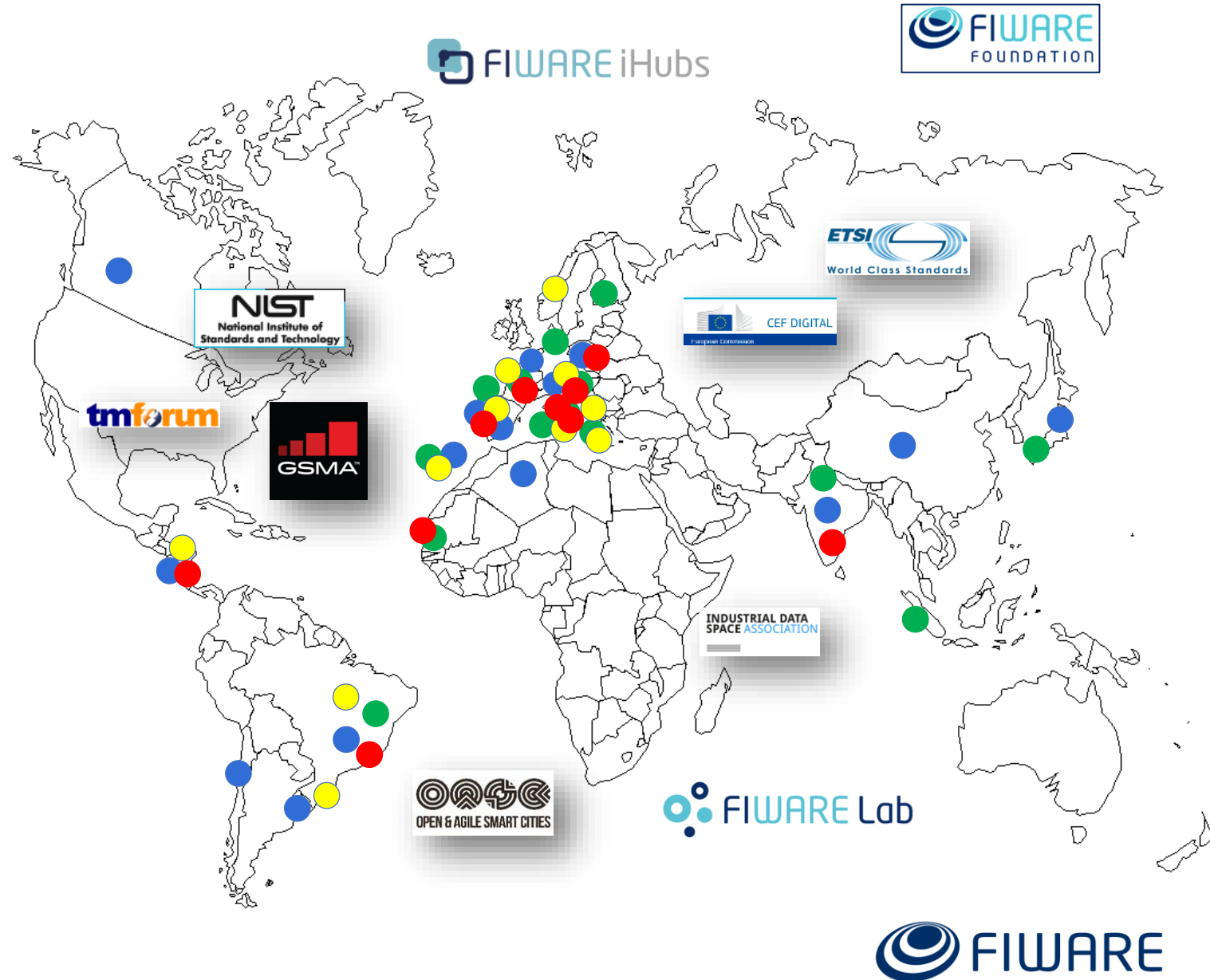
# Community Building



# The FIWARE Ecosystem

**42** FIWARE EVANGELIST  
**136** Powered by FIWARE  
**11** FIWARE iHubs  
**+200** Members FIWARE Foundation  
**14** Federated Nodes  
**+139** Cities  
**32** Countries  
**+8000** Users

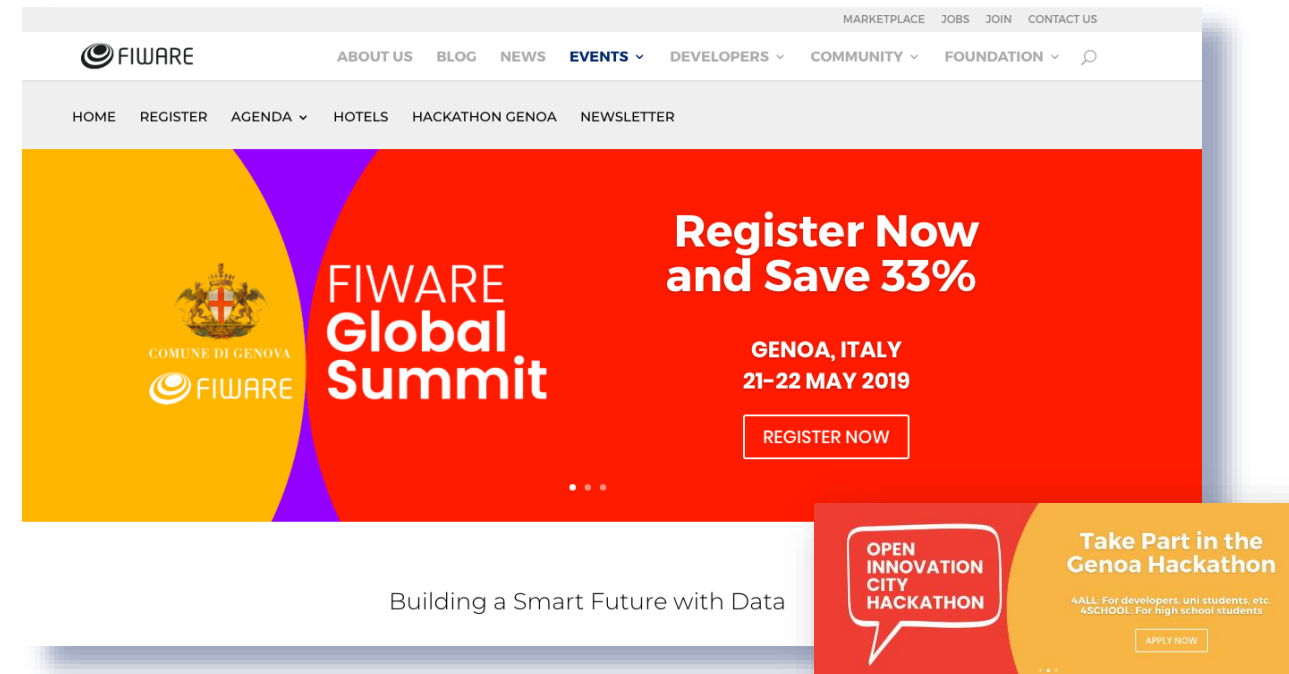
PLATINUM	GOLD	GOD SEU	ASSOCIATE



# Join Us!

- Code: <https://github.com/Fiware>
- Documentation:  
[https://forge.fiware.org/plugins/mediawiki/wiki/fiware/index.php/Welcome to the FIWARE Wiki](https://forge.fiware.org/plugins/mediawiki/wiki/fiware/index.php/Welcome_to_the_FIWARE_Wiki)
- Mail Lists:
  - <https://lists.fiware.org/listinfo>
  - [fiware-general-help@lists.fiware.org](mailto:fiware-general-help@lists.fiware.org)
  - [fiware-tech-help@lists.fiware.org](mailto:fiware-tech-help@lists.fiware.org)
  - [fiware-lab-help@lists.fiware.org](mailto:fiware-lab-help@lists.fiware.org)
  - <https://stackoverflow.com/search?q=fiware-orion>
- Twitter: <https://twitter.com/fiware>
- LinkedIn: <https://www.linkedin.com/company/fi-ware/>
- YouTube: <https://www.youtube.com/user/FIWARE>
- LinkedIn Group  
<https://www.linkedin.com/groups/4239932>
- Spaces: <http://spaces.fiware.org/>

## fiware.org/summit





Thank you!

<http://fiware.org>

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