



Open Platform An Opportunity

Genova, 26 maggio 2016

Lanfranco Marasso, Ph.D.

Piattaforme, Macchine ed altre “pesantezze”



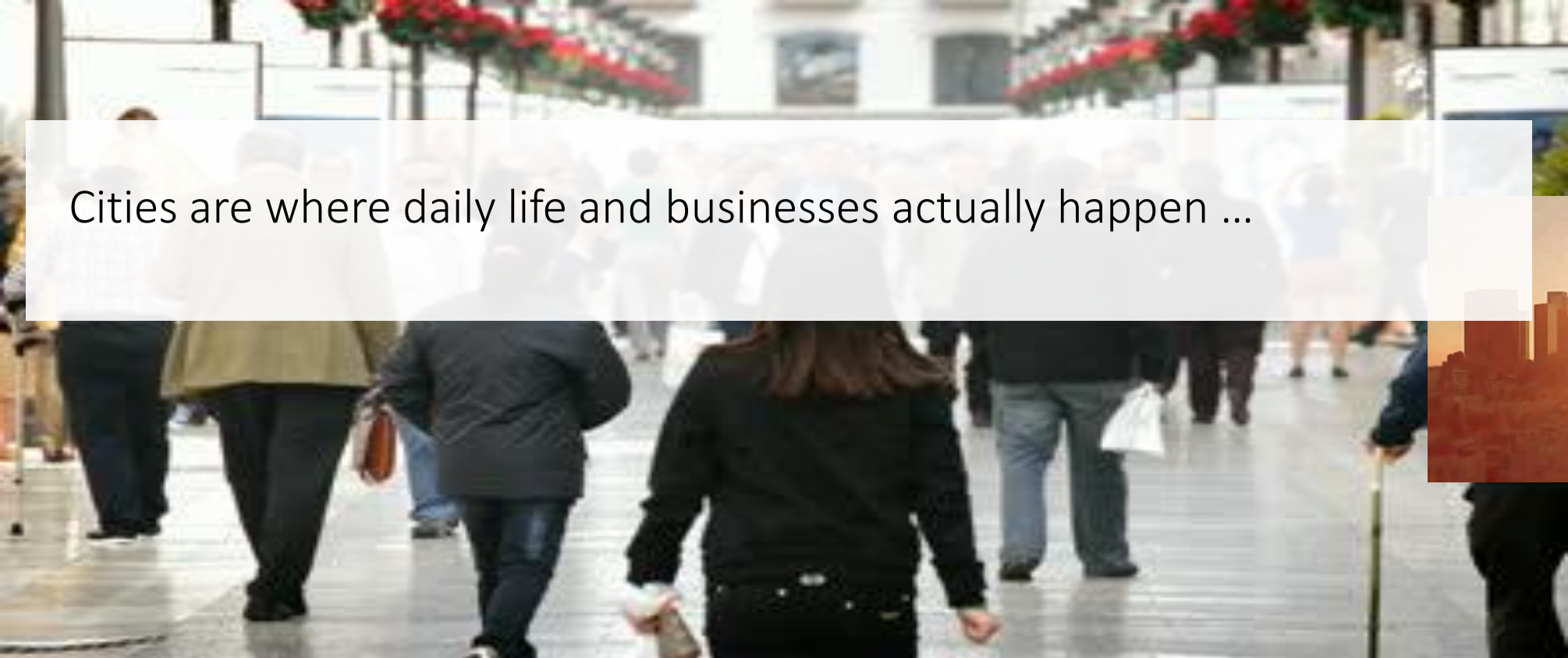
c'è un mondo “leggero” intorno a noi...



NETFLIX

L'opportunità ...

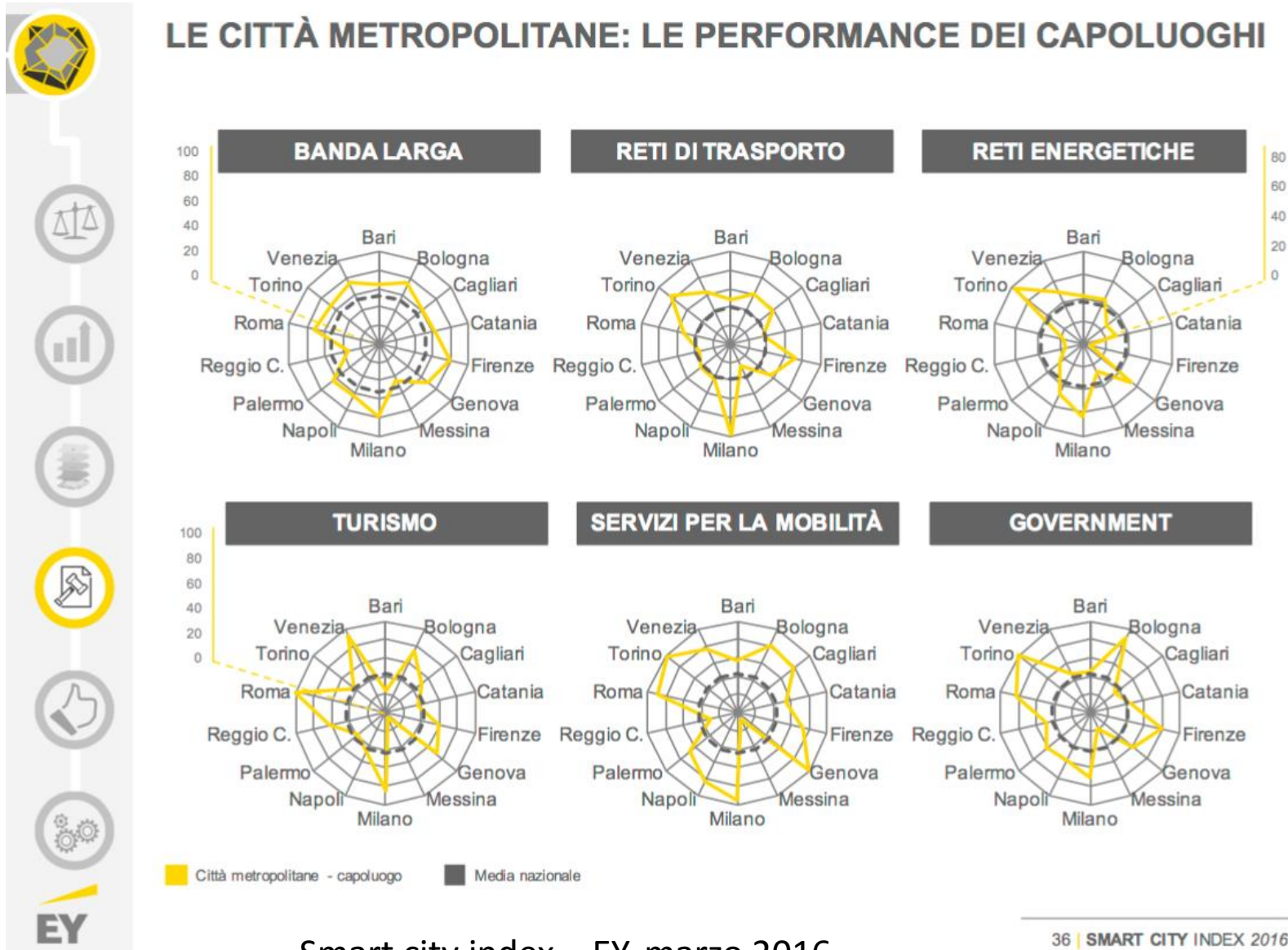




Cities are where daily life and businesses actually happen ...



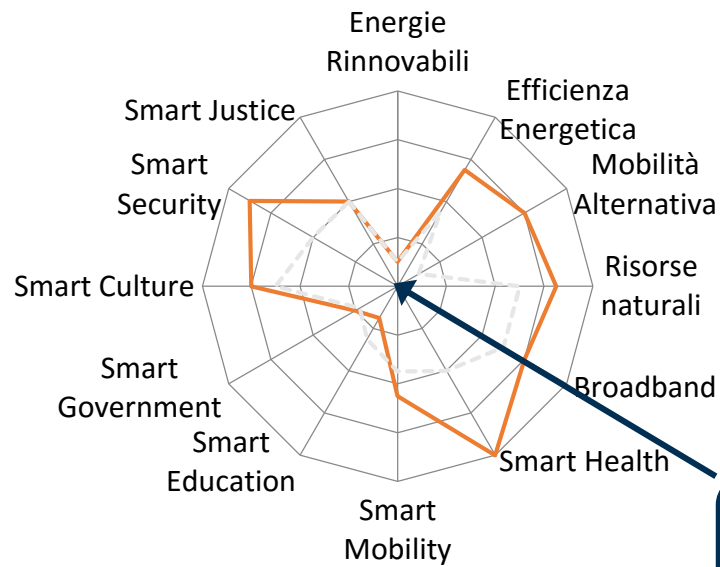
Smart Cities are not simply about more efficient municipality services but **transforming Cities into the ICT “platform” enabling economy growth and well-being through innovation**



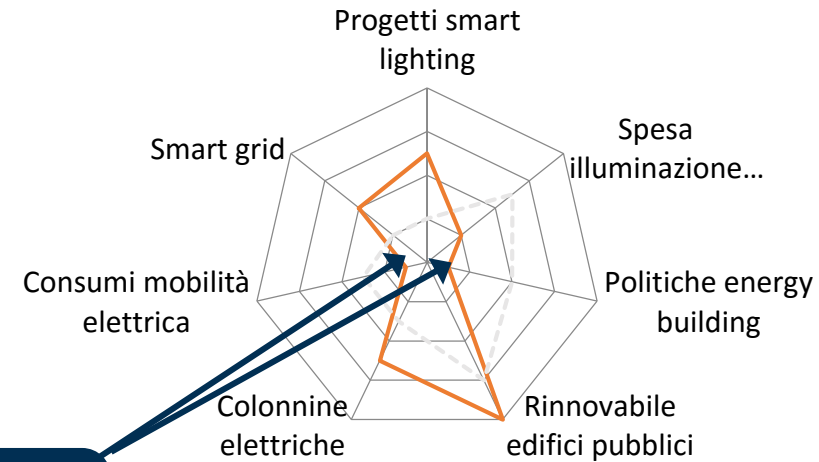
Un'altra lettura del territorio

- L'analisi dei punteggi raggiunti negli indicatori mostra (a livello complessivo e nelle singole aree tematiche) i punti di forza e **di debolezza delle città**.

Indice Totale (ranking città 'X', dettaglio tematico)



Tematica Energia (ranking città 'X', dettaglio di alcuni indicatori)



Ad es. la città "X" dovrà investire nelle energie rinnovabili e in questo ambito particolare sulla mobilità elettrica ed energy building:

Le città metropolitane: occasione di nuovi servizi con nuovi modelli

LE CITTÀ METROPOLITANE

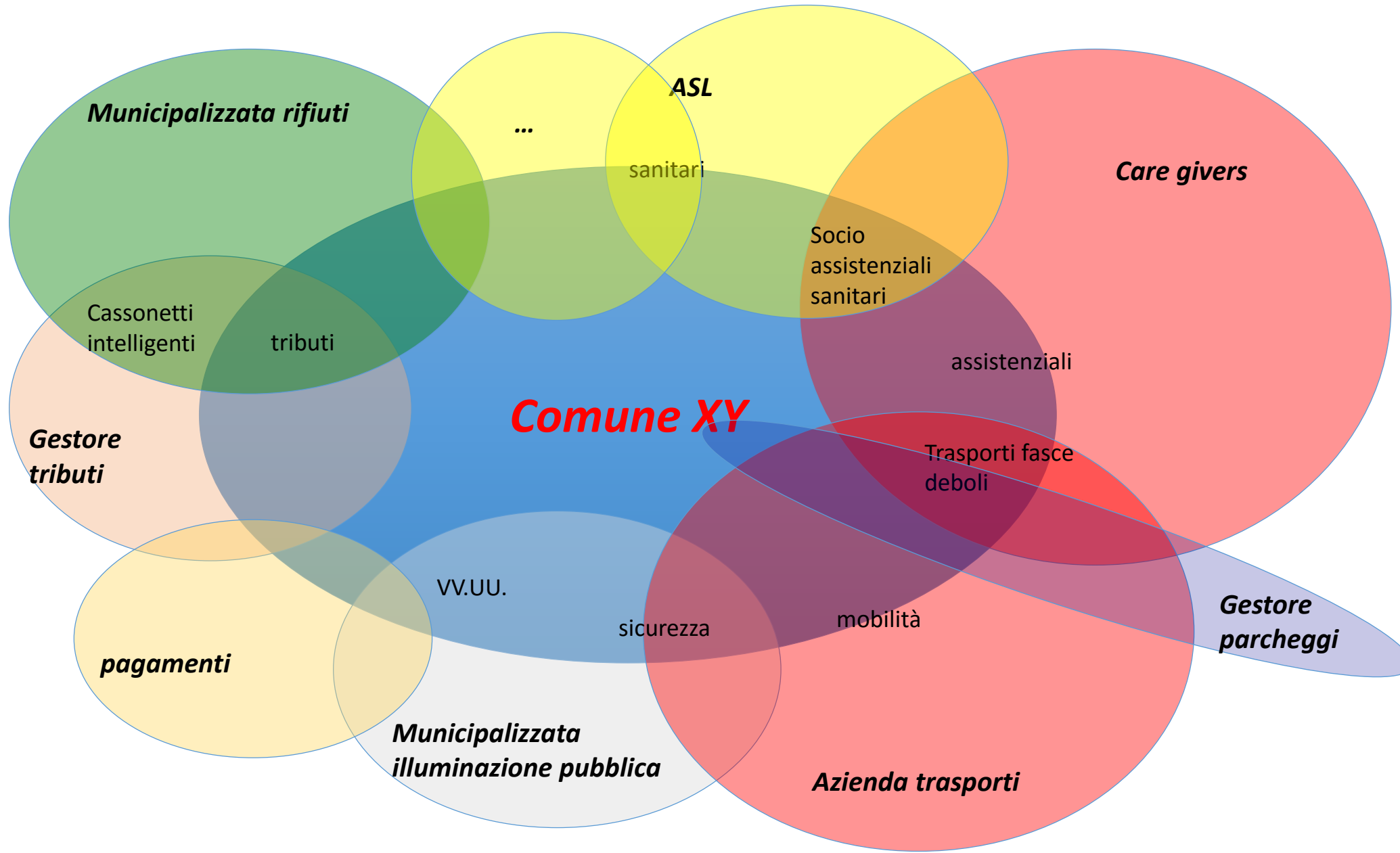


Città metropolitana	Numero di comuni nell'area metropolitana	Popolazione comune capoluogo	Popolazione città metropolitana	Incremento	Superficie comune capoluogo (Kmq)	Superficie area metropolitana	Incremento
Bari	41	315.933	1.247.303	x 3,9	117	3.863	x 32,9
Bologna	56	371.337	976.243	x 2,6	141	3.702	x 26,3
Cagliari	71	149.883	550.580	x 3,7	85	4.570	x 53,8
Catania	58	293.902	1.078.766	x 3,7	183	3.574	x 19,5
Firenze	42	358.079	973.145	x 2,7	102	3.514	x 34,3
Genova	67	586.180	855.834	x 1,5	240	1.834	x 7,6
Messina	108	243.262	649.824	x 2,7	214	3.266	x 15,3
Milano	134	1.242.123	3.038.420	x 2,4	182	1.576	x 8,7
Napoli	92	962.003	3.054.956	x 3,2	119	1.179	x 9,9
Palermo	82	657.561	1.243.585	x 1,9	161	5.009	x 31,2
Reggio Calabria	97	180.817	550.967	x 3	239	3.210	x 13,4
Roma	121	2.617.175	3.997.465	x 1,5	1.287	5.363	x 4,2
Torino	315	872.367	2.247.780	x 2,6	130	6.827	x 52,5
Venezia	44	261.362	846.962	x 3,2	416	2.473	x 5,9
Totale	1.328	9.111.984	21.311.830	x 2,3	3.616	49.960	x 13,8



Osservatorio
Nazionale
Smart City

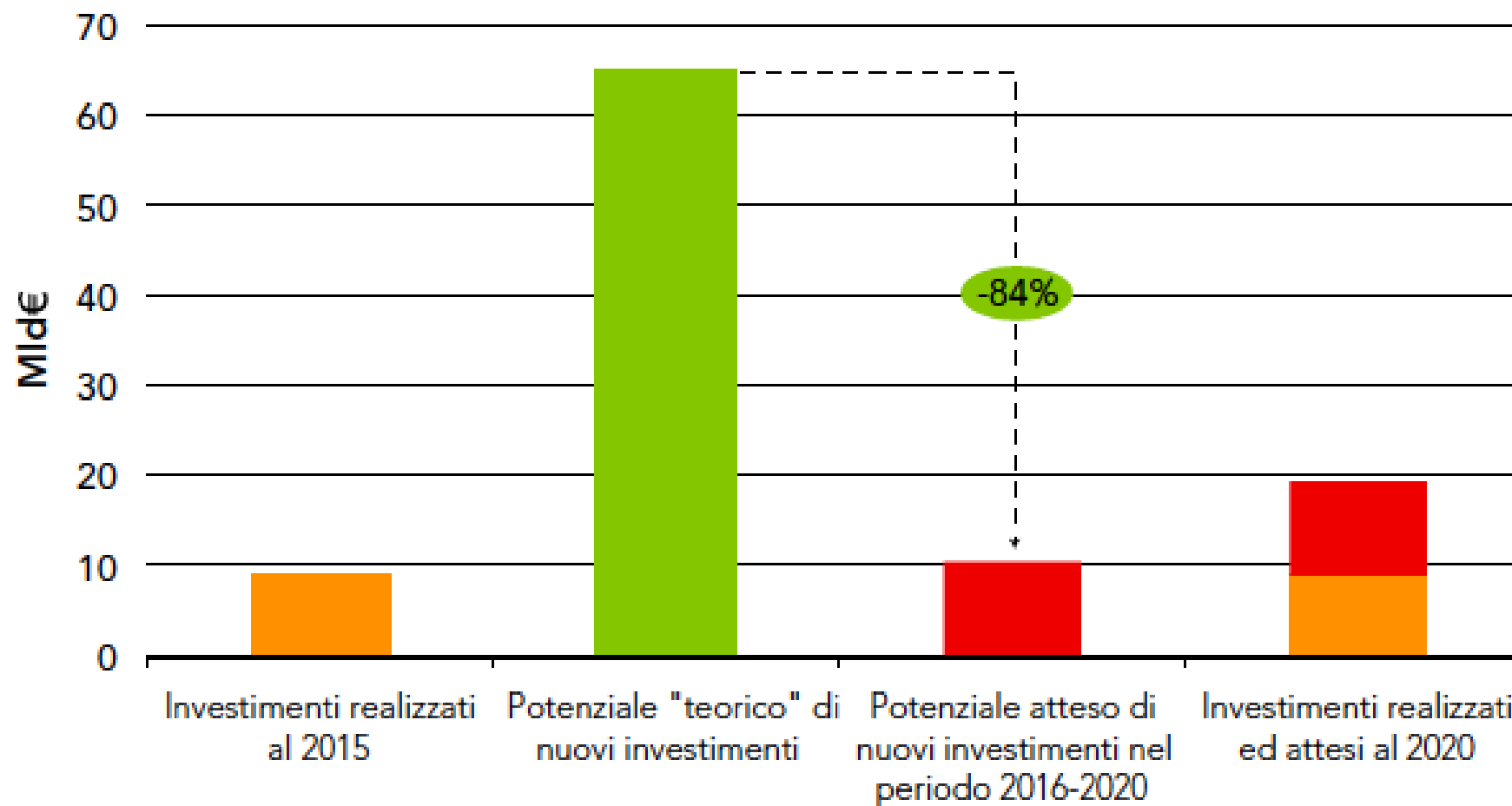
La scala metropolitana...



Le possibilità concrete

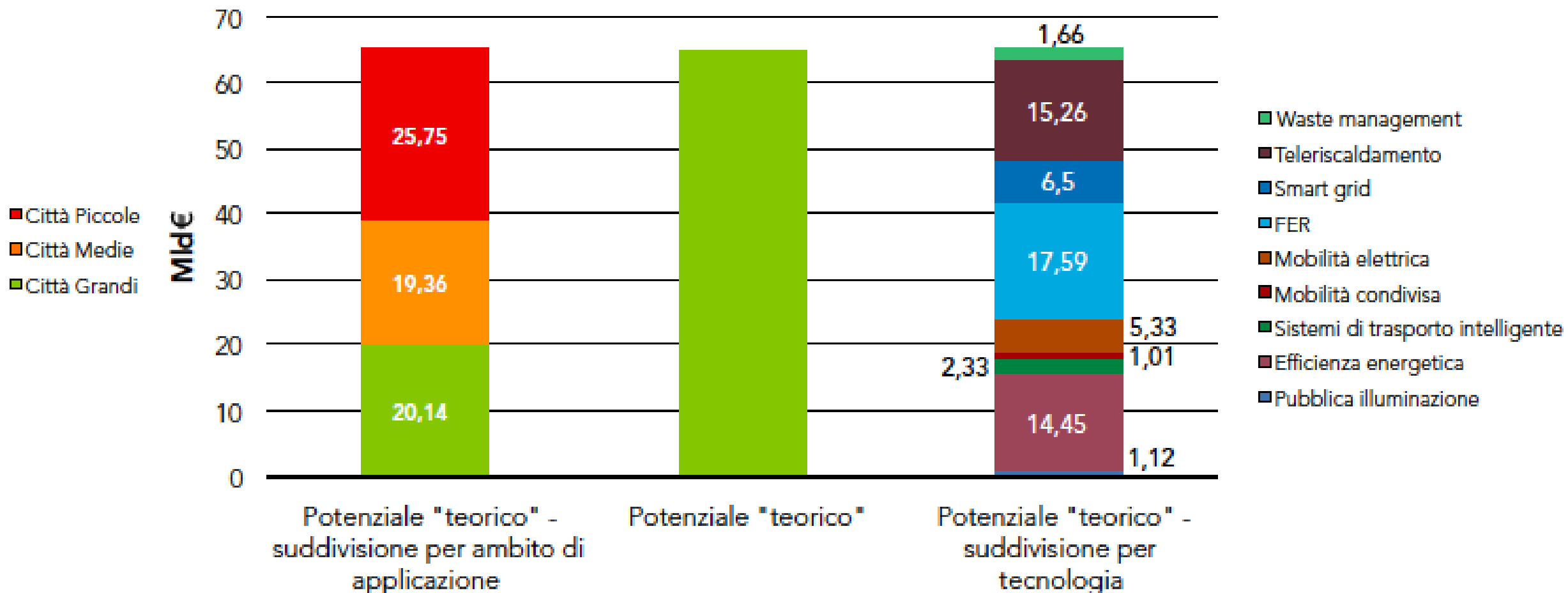


Potenziale mercato italiano



Smart city report – Politecnico di Milano, ottobre 2015

Distribuzione potenziale mercato italiano



Nuovi modelli si impongono



Rassegna stampa recente



Giovedì 17 Marzo 2016

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DDL MADIA

Riforma PA, ec

Tutte le modifiche al
Cdm del 20 gennaio.
ogni ente
di Federica Meta



Deputati e Organi Lavori Documenti Comunicazione Conoscere la Camera Europa

Stai consultando: Camera dei deputati > Documenti > Temi dell'attività parlamentare

Temi dell'attività parlamentare

- Speciale provvedimenti
- Tematiche
- Documentazione inizio Legislatura

Ordine del giorno generale

Proposte di modificazione al Regolamento

Speciale Provvedimenti

Ambiente, infrastrutture e politiche abitative

Contratti pubblici, infrastrutture, edilizia e politiche abitative
Deleghe in materia di appalti pubblici e concessioni

informazioni aggiornate a lunedì, 1 febbraio 2016

La legge 28 gennaio 2016, n. 11 delega il Governo ad attuare la nuova disciplina europea in materia di appalti pubblici e concessioni e a procedere a un complessivo riordino delle normative riguardanti i contratti pubblici di lavori, servizi e forniture.

domenica24 casa24 moda24 food24 motori24 job24 stream24 viaggi24 salute24 shopping24 radio24 + altri



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HOME ITALIA MONDO NORME & TRIBUTI FINANZA & MERCATI IMPRESA & TERRITORI NOVA24 TECH PLUS24 RISPARMIO

Notizie ► Attualità

Sharing economy: ecco la proposta di legge per «legalizzare» Airbnb & Co.

di Biagio Simonetta 2 marzo 2016

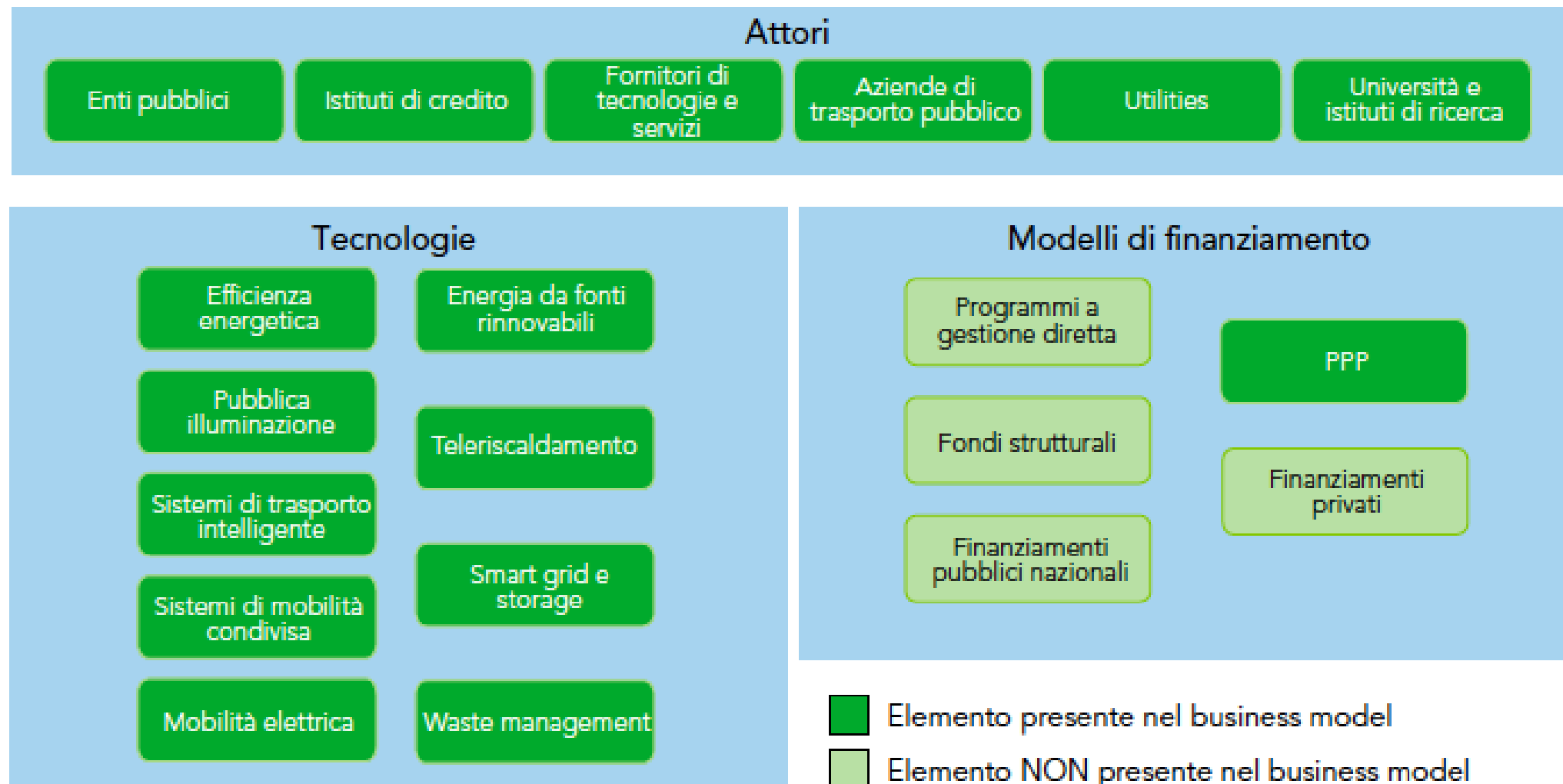
Tweet My24 A A



Le discussioni sulla sharing economy sono eterne, quasi da tifo calcistico. L'uberizzazione dei servizi fa paura all'economia tradizionale, e spesso si inceppa in beghe legali infinite (Uber è proprio uno di questi casi, con il servizio Pop che in Italia è bloccato dal maggio del 2015). Per questo un quadro normativo aggiornato, in grado di tenere in considerazione i cambiamenti che le piattaforme online stanno apportando giorno dopo giorno, sembra una necessità.

Pacchetto direttive UE appalti pubblici

Tutti gli attori coinvolti...



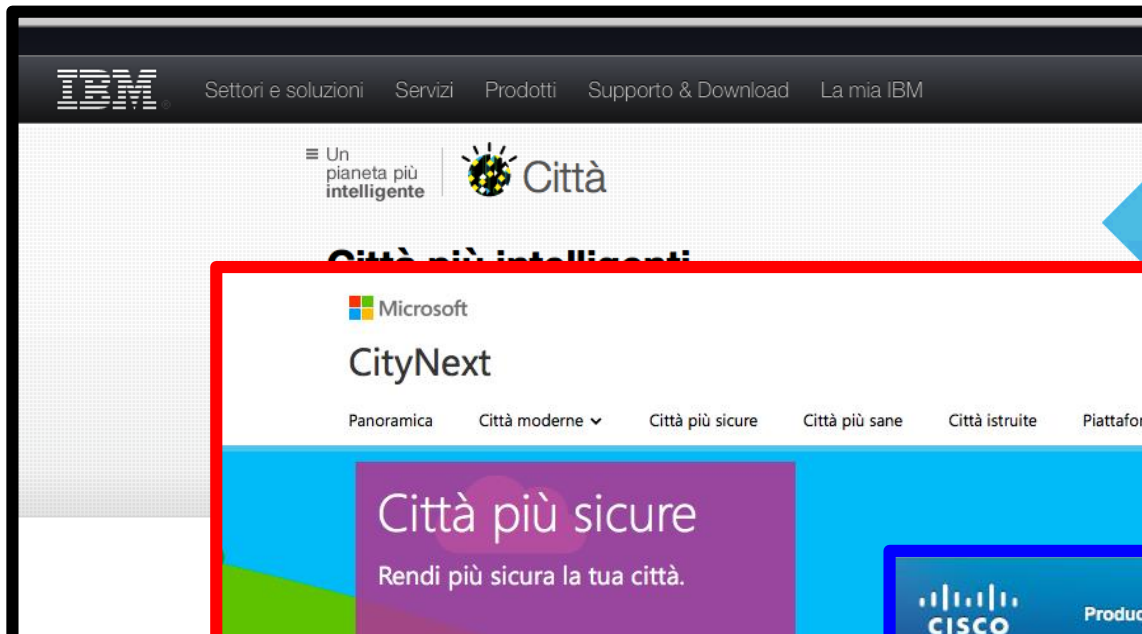
City as a Service



Cosa fanno i “fornitori di IT”?



I grandi piattaforme generiche, i piccoli verticali (APP) iper specialistici



IBM Settore e soluzioni Servizi Prodotti Supporto & Download La mia IBM

Un pianeta più intelligente

Città

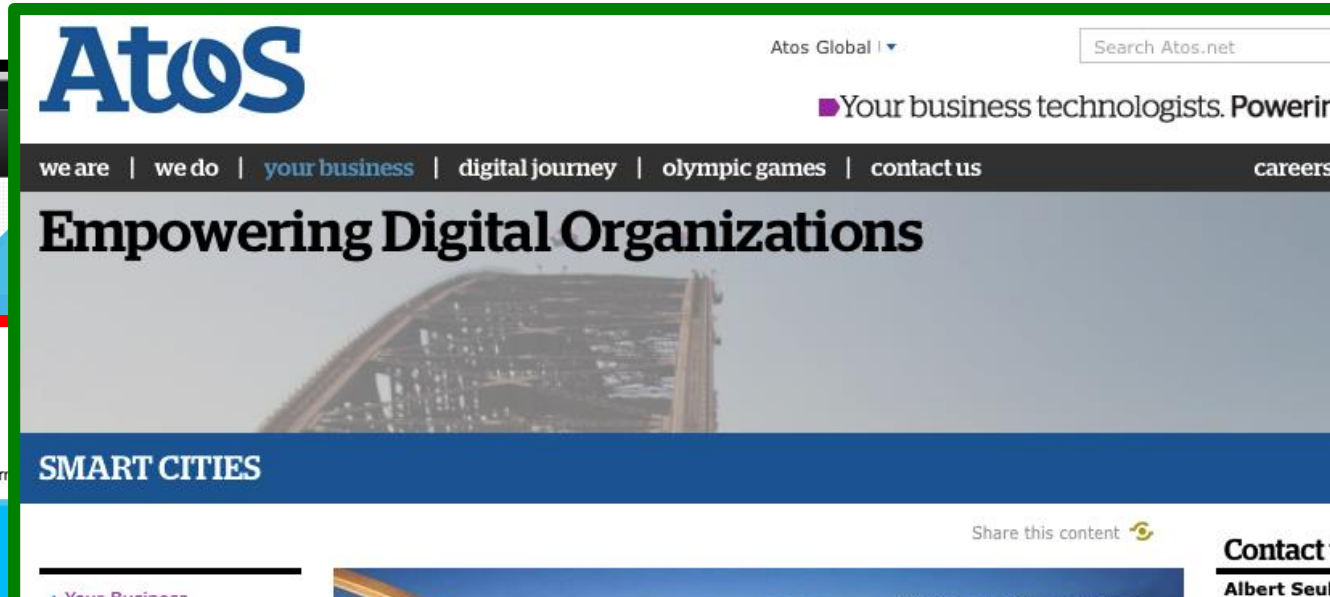
Città più intelligenti

Microsoft

CityNext

Panoramica Città moderne Città più sicure Città più sane Città istruite Piattaforme

Città più sicure
Rendi più sicura la tua città.



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Empowering Digital Organizations

SMART CITIES



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Industries > Public Sector > National and Local Government > City Platform


Oracle's Smart City Platform Solution

Empowering Citizens. Engaging Business. Connecting Departments.

Provides a modular solution set for transformation, including technologies and applications that consolidate IT infrastructures, support current and future systems, and improve service delivery.

Brochure (PDF)
Solution Brief (PDF)

City Service	Citizen Empowerment
City Operation	Business Productivity
City Infrastructure	Sustainable City



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Smart+Connected Communities

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Hamburg Gets Smarter

Hamburg uses the Internet of Everything to connect traffic, parking, lighting, and more. (3:28 min)

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Internet of Things
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Addressing the Challenges of a Changing World

As world populations migrate to urban areas, cities are faced with new challenges.



Contact

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Head of Global
in Cities

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Cosa chiede il mercato?

competenze **cross domain**

competenze specifiche (**sia tecnologiche ma SOPRATTUTTO di dominio**)

posizionarsi **in modo “distintivo”**:

No vendor lock-in →

dare valore a standard open source ed in particolare a FIWARE: standard, open, interoperabile, replicabile, scalabile, ...

No city lock-in →

dare valore a OASC: open APIs, common data sets, condivisione, riuso, ...



FIWARE

Una straordinaria opportunità





“To build an open sustainable ecosystem around public, royalty-free and implementation-driven software platform standards that will ease the development of new Smart Applications in multiple sectors.”

FIWARE is the open platform standard behind those future digital services you will love. It will be free, forever.

FIWARE: una lunga storia...

2009/10

- Inception of the “**Future Internet Public-Private Partnership**” (FI-PPP) by the European Commission and European industry



2011/12

- Development of the **generic software components** a.k.a. “Generic Enablers” by leading European industry and research organizations
- **Proof of concept in a few sectors** (smart cities, mobility, energy, environment, logistics, media & content, security)



2013/14

- Development of the generic components continues: **FIWARE catalog** becomes available
- **FIWARE nodes are set up**: FIWARE Lab and FIWARE Ops become available
- **Specific components** become available, **specific applications** are developed based on the FIWARE components in various sectors (smart cities, health, transport, energy and environment, agriculture, media & content, manufacturing, logistics, education)



The EC is making a strong bet on FIWARE

Neelie Kroes launched FIWARE LAB at Campus Party Europe in London (Sept 2013)

- › ***“... to make innovative technologies available for all...”***
- › ***“... Smart cities are a great example...”***
- › ***“... Led by industry, this is a major investment in generic technology...”***

She also made a reference to FIWARE Lab at the launch of the EIP on Smart Cities and Communities (Sept 2013)

- › ***“... That's something that you can turn into real results, real jobs, and real innovation...”***
- › ***“... European platforms helping European innovation in European cities...”***



... una storia che continua...

2014/15

- **Launch of FIWARE Accelerate:** start-ups and SMEs start developing applications and solutions based on FIWARE
- **First real scale test for FIWARE:** training and support become available
- **FIWARE expands beyond Europe:** a FIWARE node is made available in Mexico



2015

- An **open source community** is created around FIWARE components
- FIWARE plays a key role in the **Open & Agile Smart Cities Initiative**
- First **commercial FIWARE instances/nodes** become available
- FIWARE Lab nodes in **Brazil**, a FIWARE ecosystem is built in **Chile**; first FIWARE-based demo in Canada with University of Toronto and SAVI; FIWARE is a **Partner of GCTC2016**



≈ 200

Leading European
organizations

(industry, SMEs, research institutes and universities)
from 27 countries, including Telefonica, Orange,
Atos, Engineering, IBM and many others

≈ 460 M€
R&D
investment

89

Cities
(19 countries)
involved
(Open & Agile Smart Cities)

19

FIWARE
Lab Nodes

> 900

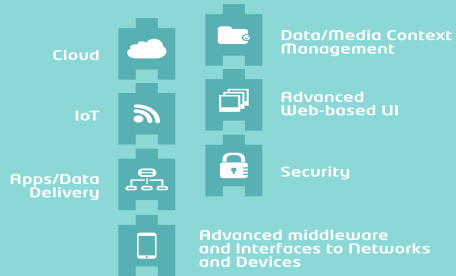
SMEs and
Start-Ups
(FIWARE Accelerate)

WHAT DOES FIWARE OFFER?

1

GENERIC ENABLERS

FIWARE assembles a set of building blocks that ease creation of smart Internet Applications. These blocks are called Generic Enablers and are ready available and ready to use. They offer reusable and common shared functions serving multiple use cases in various sectors



A set of **open source modular software components** that can be used, combined and/or integrated with other third party software to provide innovative solutions

Focus on your added value and re-use what is already available!



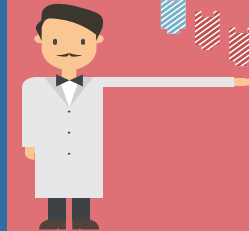
An integrated **lab environment** to make sure that your application or solution is **replicable** and **scalable**

And also...
Training and support; and **specific tools** to operate physical nodes hosting FIWARE

FIWARE Lab

2

The FIWARE Lab is an example of FIWARE instance available as a free experimentation environment where developers can build their applications using available FIWARE GEni instances, or dedicated instances they can deploy on their own. It not only allows them to experiment with FIWARE technologies, but test and showcase their applications with real data and users, making it easier to catch the attention of potential customers and investors.



4

FIWARE Academy

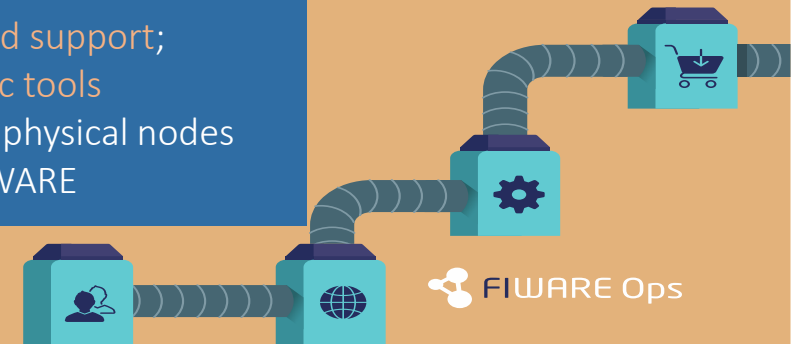
The FIWARE eLearning Platform is a good place to start. Here you will find **webcasts, tutorials and other training material** about FIWARE Generic Enablers.

But FIWARE is only the first step to the future of your project, we need you to join us and be part of the new digital revolution that is coming! Welcome to FIWARE, welcome to progress.






FIWARE Operations

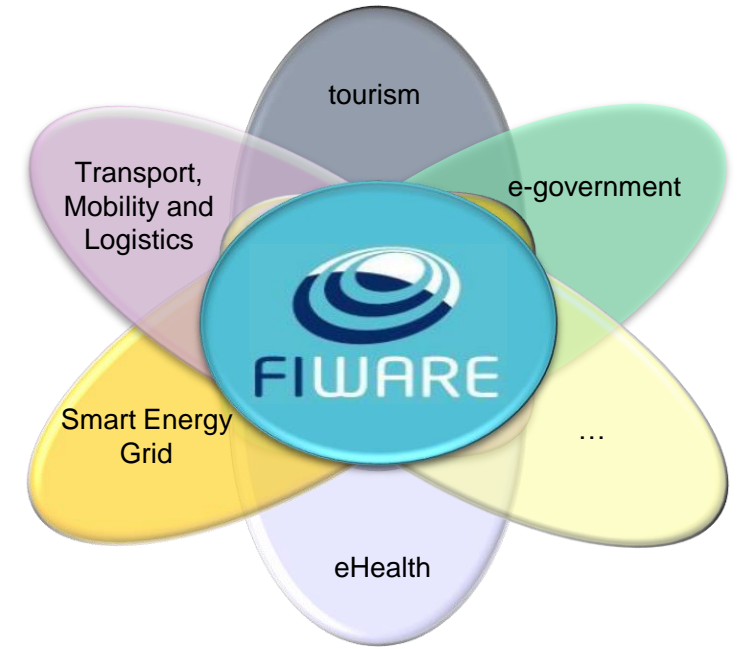
3

FIWARE Ops is the suite of tools that will ease creation and operation of FIWARE instances based on the federation of FIWARE nodes. It has been used to build and to support the expansion of the FIWARE Lab worldwide.

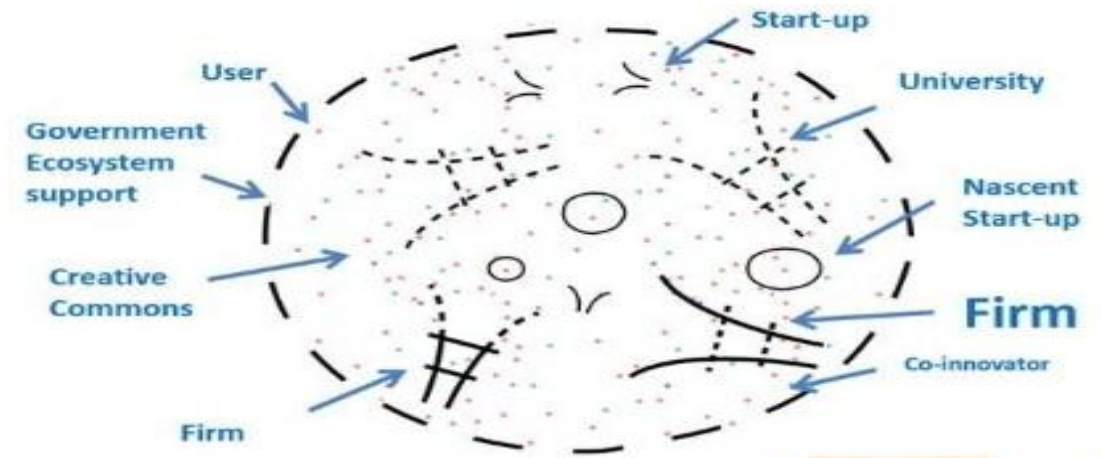


FIWARE: 5 main pillars

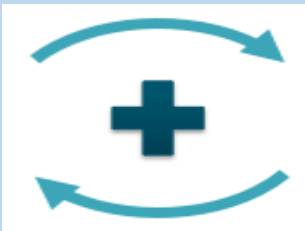
- Goal: capture opportunities derived from the new wave of digitalization of life and businesses
- Strategy: Build an ecosystem that will work as catalyst for capturing the opportunities. Lead standardization in Smart Cities and IoT (Internet of Things)
- Pillars:
 -  **FIWARE** : a generic, open standard platform which serve the needs of developers in multiple domains
 -  **FIWARE Lab** : a meeting point where innovation takes place, an opportunities can be incubated
 -  **FIWARE Accelerate** : a program that funds developers and entrepreneurs, and ignites roll-out of the ecosystem
 -  **FIWARE Ops** : the suite of tools easing deployment and operation of FIWARE instance nodes
 -  **FIWARE Mundus** : reach a global footprint, opening to regions that share the same vision and ambition



FIWARE: piattaforma ed ecosistema



ICT Platform
(APIs, data models)



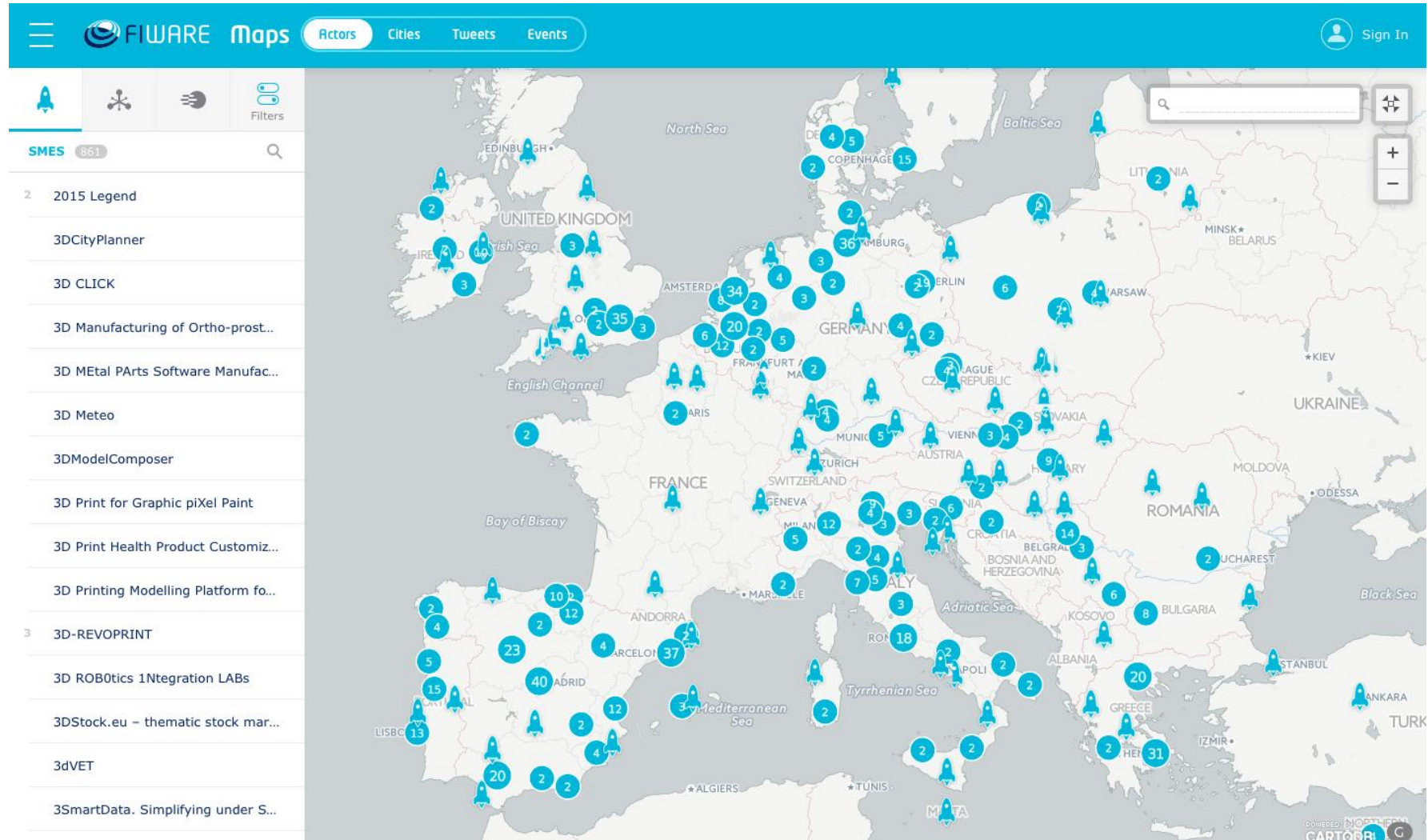
Digital ecosystem

FIWARE Community = all people who support FIWARE (users, developers, industry, accelerators, iHubs, OASC, startups & SMEs, cities,...)

FIWARE Open Source Community = persons who develop the FIWARE technologies



Ecosistema FIWARE: il mondo delle imprese (le imprese nel mondo)



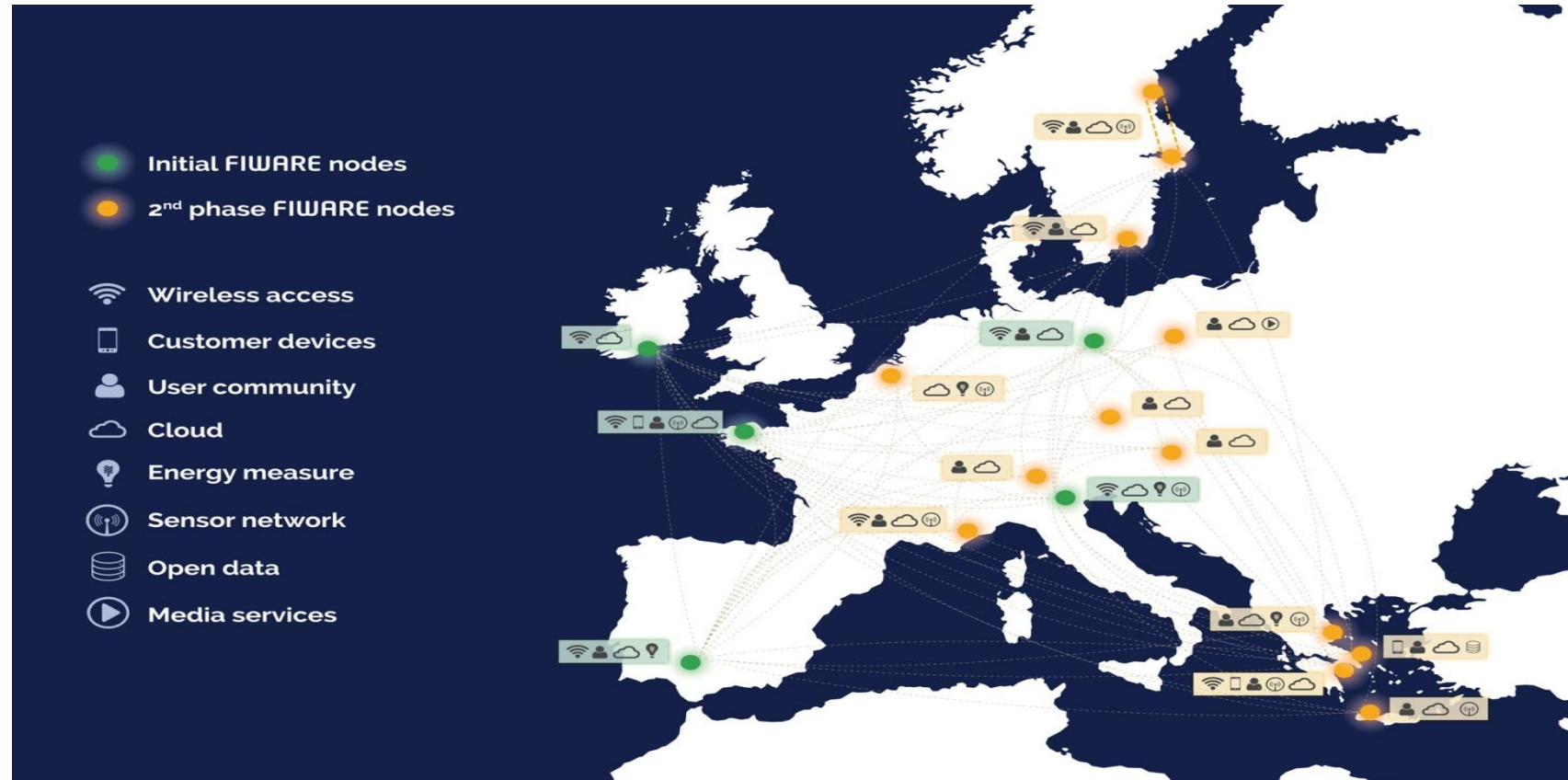
FIWARE Lab nodes

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 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 & Cities 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: International Engagement (1/2) - *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

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

Other LatAm countries

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

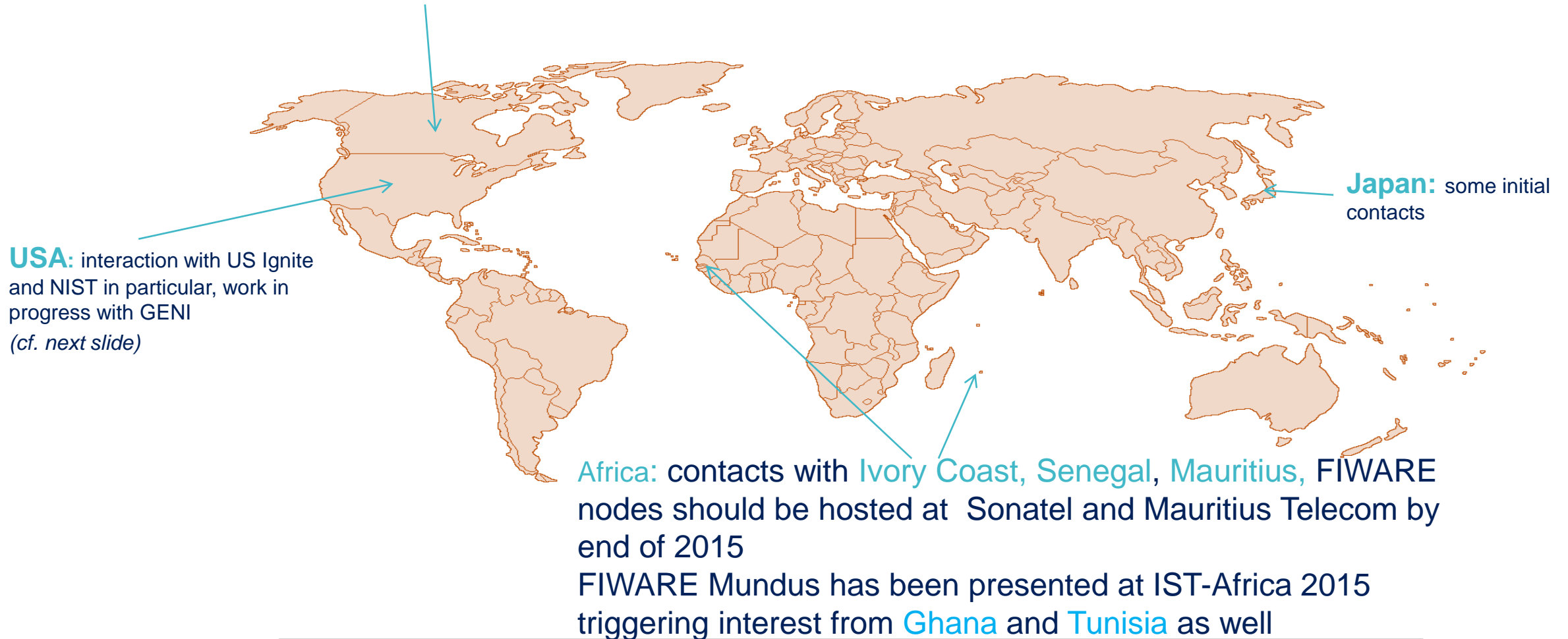
Initial activities with **Chile** and **Brazil**

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



FIWARE Mundus: International Engagement (2/2): Other Countries

Canada: work in progress with the Canadian SAVi platform as potential foundations for Smart City Platforms



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

Ecosistema FIWARE: le città



Common APIs → FIWARE NGSI
Standard Data Models → CitySDK
Open Data Platform / API publication
Approccio Driven by implementation

* www.oasc.org

Open & Agile Smart Cities initiative principles

- **API:** Adoption of a lightweight, open-licence standard API to gather, publish, query and subscribe-to in-time context information describing the state of the city.
- **Data model:** Adoption of a simple initial standard data model required for effective interoperability when exchanging context information.
- **Open Data Platform:** Adoption of a flexible, easily-distributable open data publication platform which any organisation can set up at a low cost if it is not already being used.

Open & Agile Smart Cities initiative principles

- **Approach:** Adoption of a “**driven by implementation**” approach towards experimental consolidation of initial standard data models as well as specification of new standard data models. The goal is that communities and developers can
 - (1) co-create their services based on basic but commonly-defined data models,
 - (2) influence the definition of new models by implementing and experimenting, and
 - (3) help “curate” existing data models.

FIWARE: Why is an open standard platform required for smart cities?

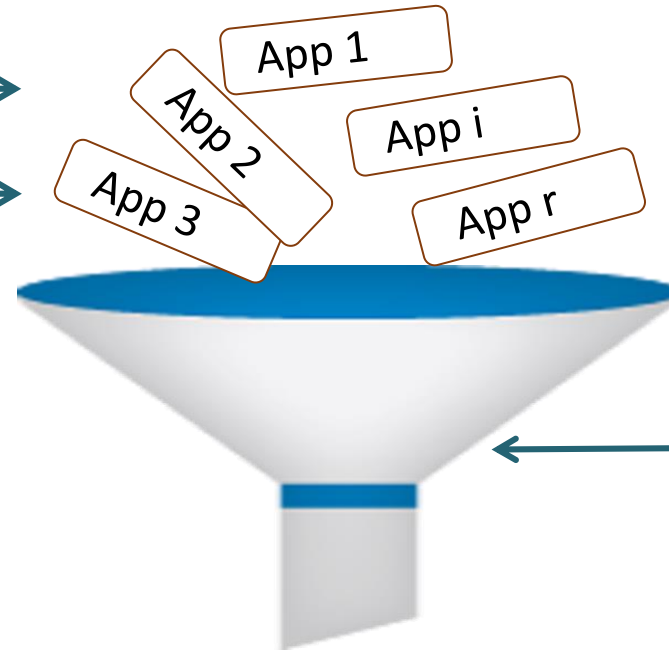
- **Avoid vendor lock-in**
 - Standard Southbound APIs for sensor providers
 - Standard Northbound APIs offered to applications
 - Portability across platform providers
 - Interoperability of apps on top of different providers
- **Engage a larger community of developers**
 - True innovation
 - More competition, leading to cost savings
- **Standard is not enough**
 - Modularity (should not mean “take it all or nothing”)
 - Allow different business models
 - Non-intrusive, should co-exists with city service systems from third parties with their own platform



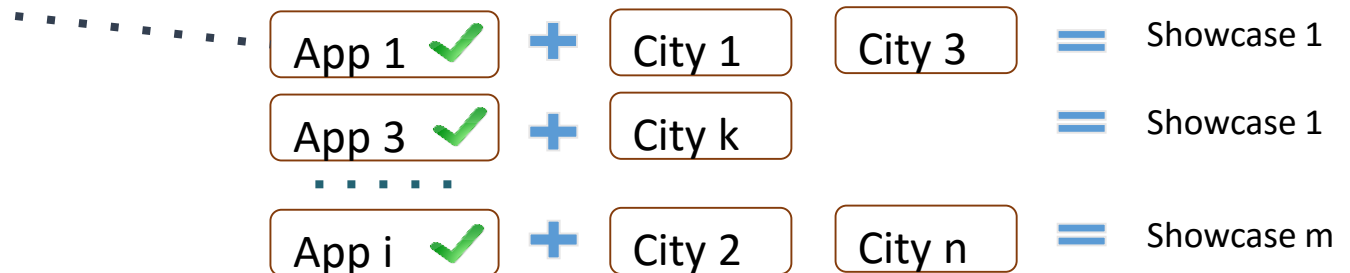
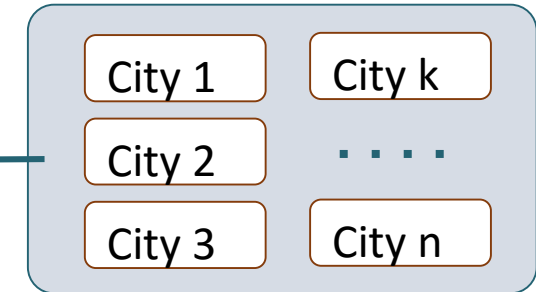
It's time to execute!

FIWARE Accelerator Programme

Other Prototypes or ServiceReady solutions



OASC cities



Transference to Market

Open & Agile Smart Cities (more than 100 cities all around the world - feb 2016)



Ultimo capitolo: la FIWARE Foundation



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Next week... Vienna

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The **FIWARE** Foundation (FF) is a legal independent body providing shared resources to help to achieve the FIWARE Mission by Empowering, Promoting, Augmenting, Protecting, and Validating the FIWARE technologies and the whole Community around them.

Smart Cities, Smart agriculture e Industry4.0

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<http://fiware.org>

<http://lab.fiware.org>

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Grazie per la Vostra attenzione

