Telco strategy for Smart Cities

4th Conference:
Cidades inteligentes - cidades do futuro

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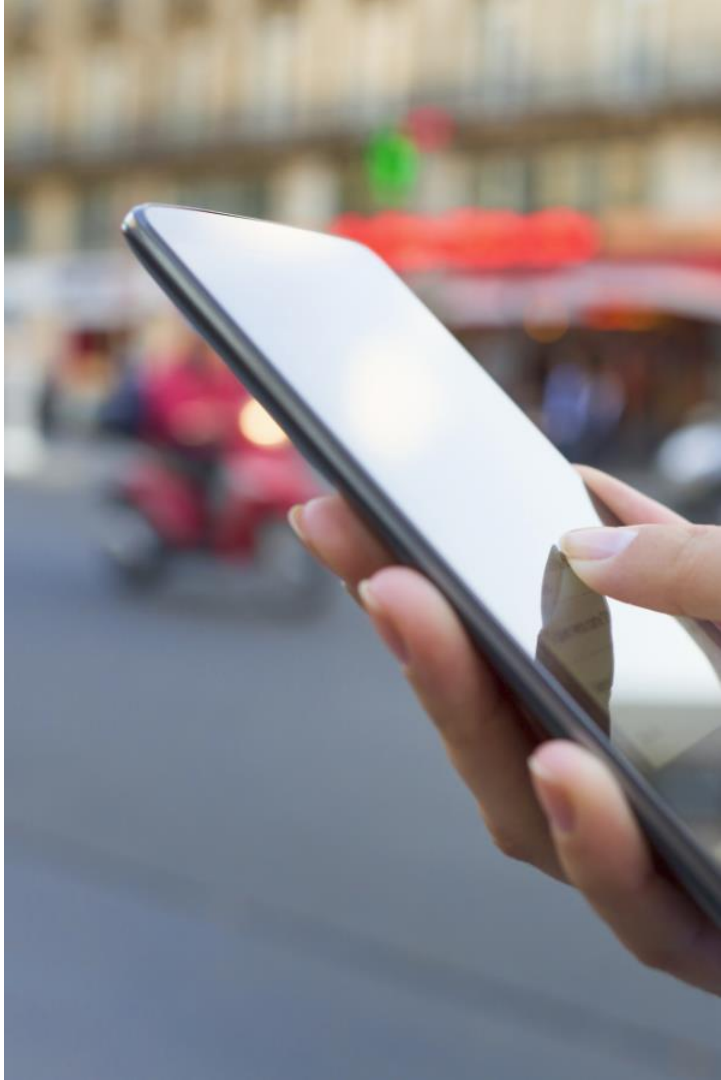
Intelligent cities, cities with future

- Cities share problems and ambitions: common solutions must be found to have an effective control of the urban space.
- The usage of information and communication technologies allows a better management of cities.
- The real time knowledge of the city dynamics requires IoT information gathered from smart objects with communication capabilities.
- Smart Cities can use IoT information to build optimize processes and reduce costs while opening the doors to new markets.



IoT for new business in Smart Cities

- The global Smart Cities market will be up to $1.4 trillion by 2020.

  Grand View Research

- Telcos must become key players in Smart Cities market in order to leverage new businesses in vertical domains that are typically out of their scope.

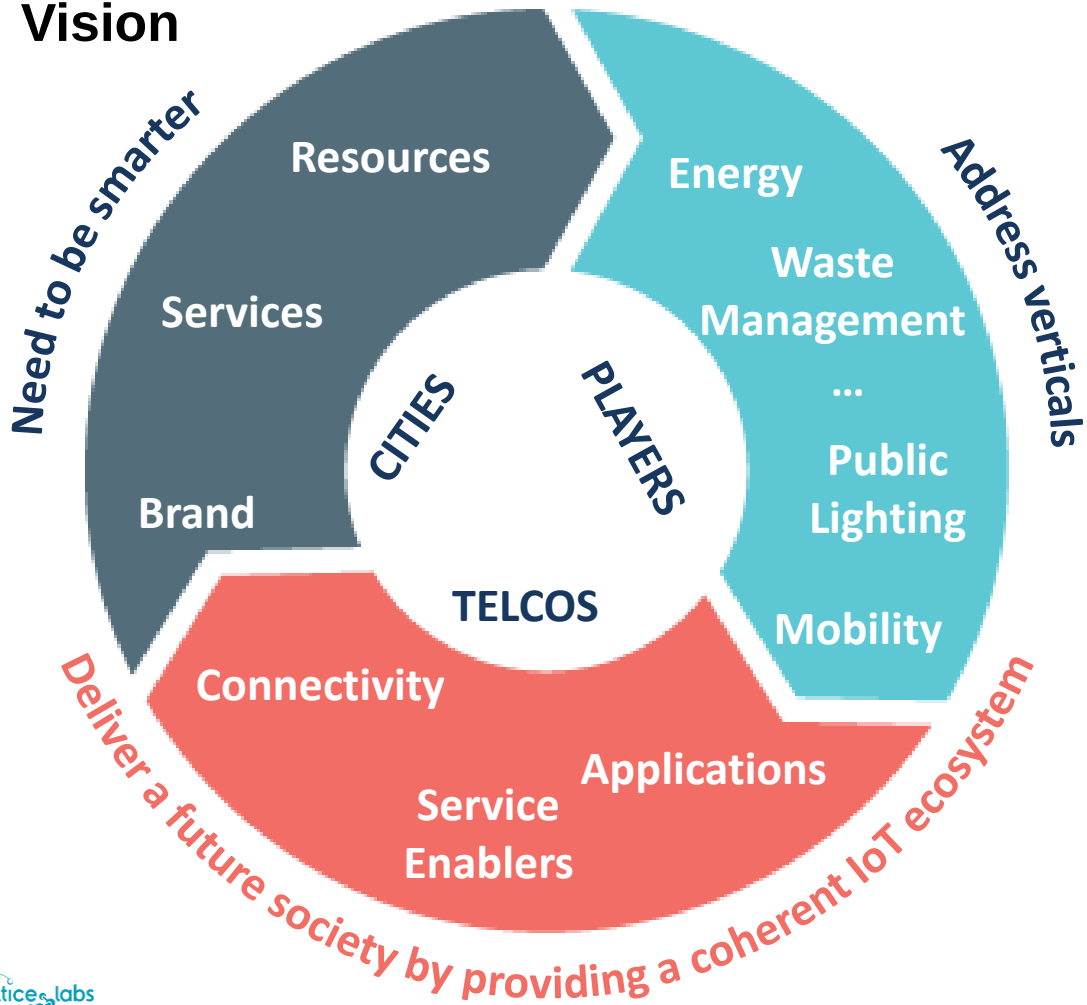
Smart Cities: “effective integration of physical, digital and human systems in the built environment to deliver a sustainable, prosperous and inclusive future for its citizens”

BSI Standards Publication

IoT value chain – technological perspective

- Applications
- Service Enablement
- Managed Connectivity
- Connectivity
- Devices & Gateways

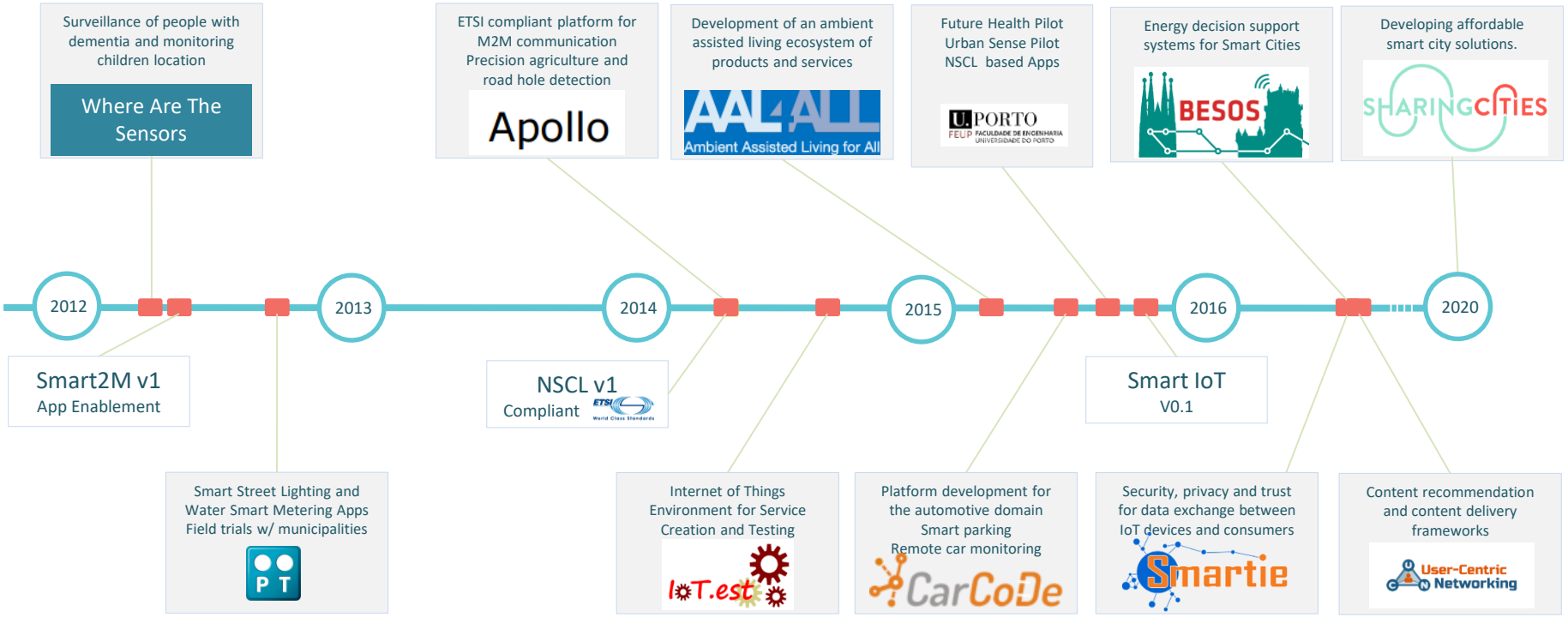
Vision


Need to be smarter
Resources
Services
Brand
Address verticals
Energy
Waste Management
...
Public Lighting
Mobility
CITIES
PLAYERS
TELCOS
Connectivity
Service Enablers
Applications
Deliver a future society by providing a coherent IoT ecosystem

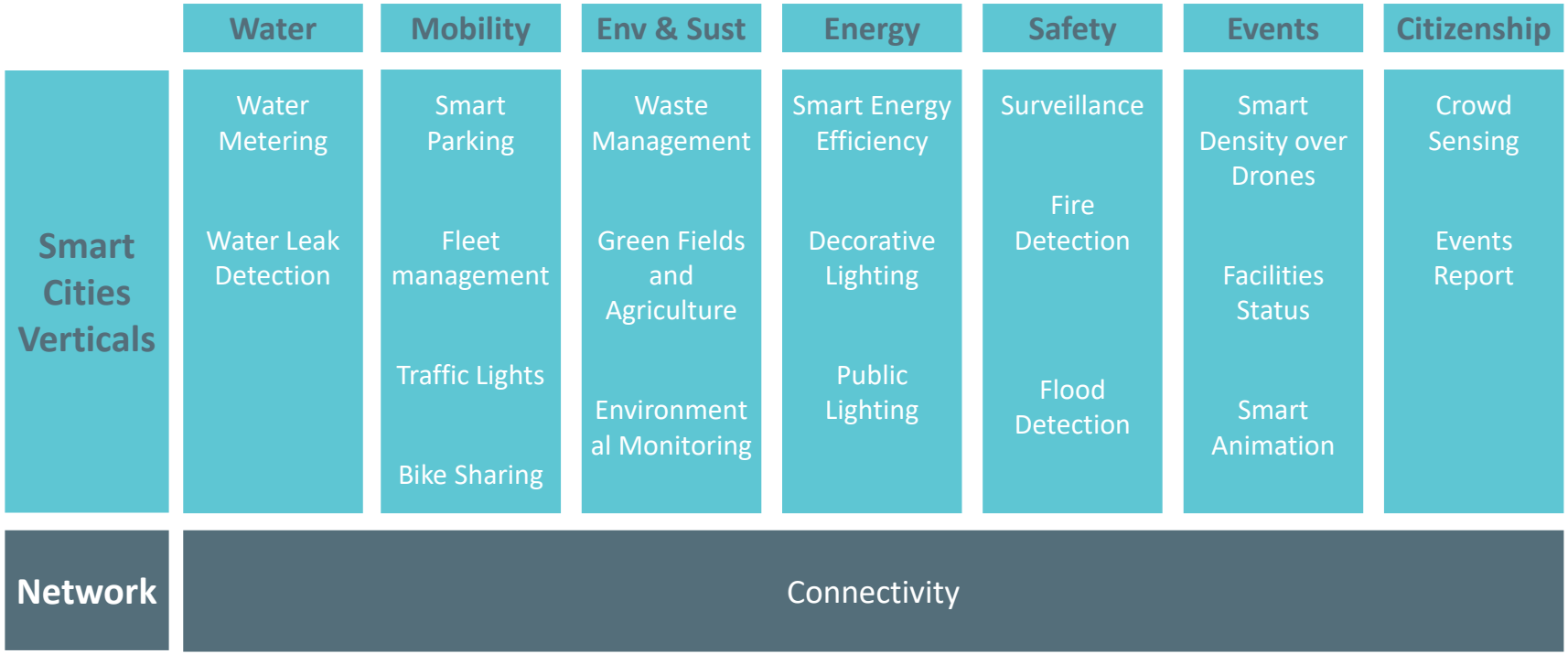
Strategy

- Telcos need to assume a long-term strategic position to successfully address the Smart Cities opportunity:
    - Promotion of an ecosystem of technological partners, fostering the creation of innovative services in order to rapidly answer to future society demands.
    - Creation of an IoT Framework for Smart Cities tailored to stimulate the creation of new businesses, bringing new opportunities for Telcos to create value and generate higher revenues, moving up in the value chain.

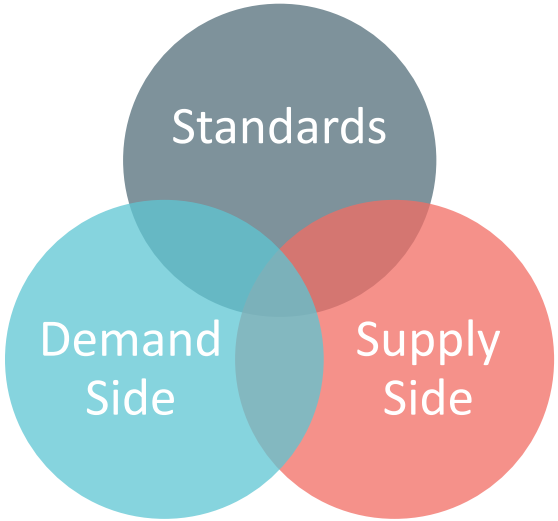
Building an ecosystem of partners



Addressing verticals for Smart Cities



Urban platforms to break verticals



The European Innovation Partnership (EIP) launched the “Urban Platform” initiative seeking to accelerate the adoption of urban platforms across EU cities

Telco-based urban platform

Smart City Apps

API Management

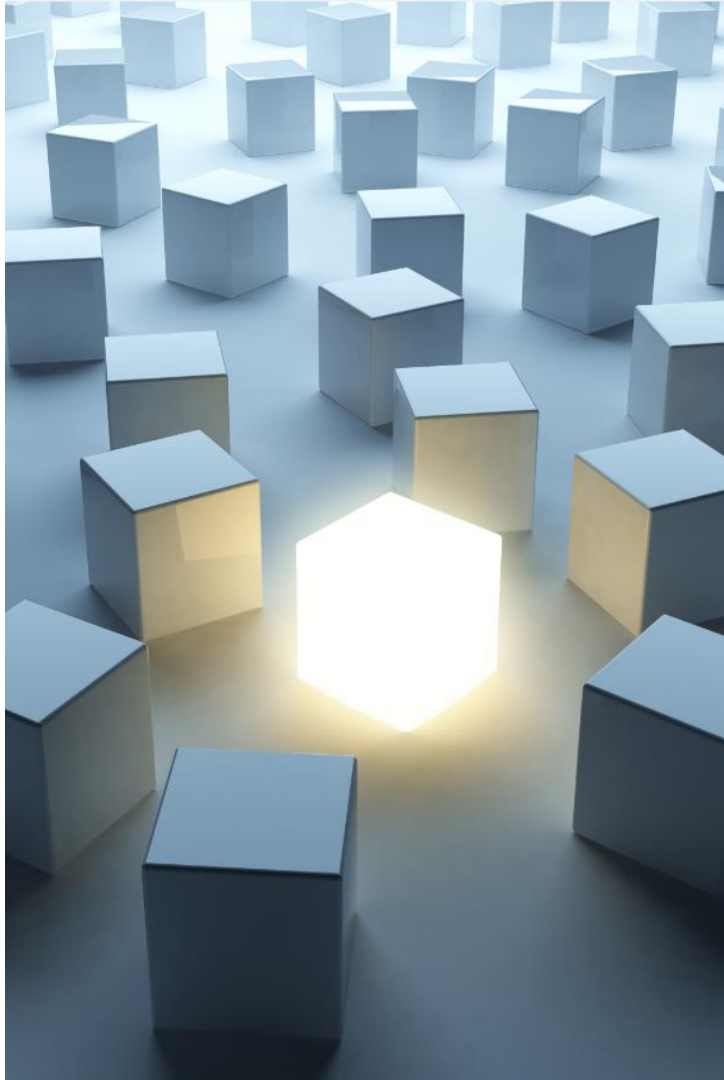
IoT Monetization

App Enablement

Data Mng. & Analytics

Urban Platform

Connectivity



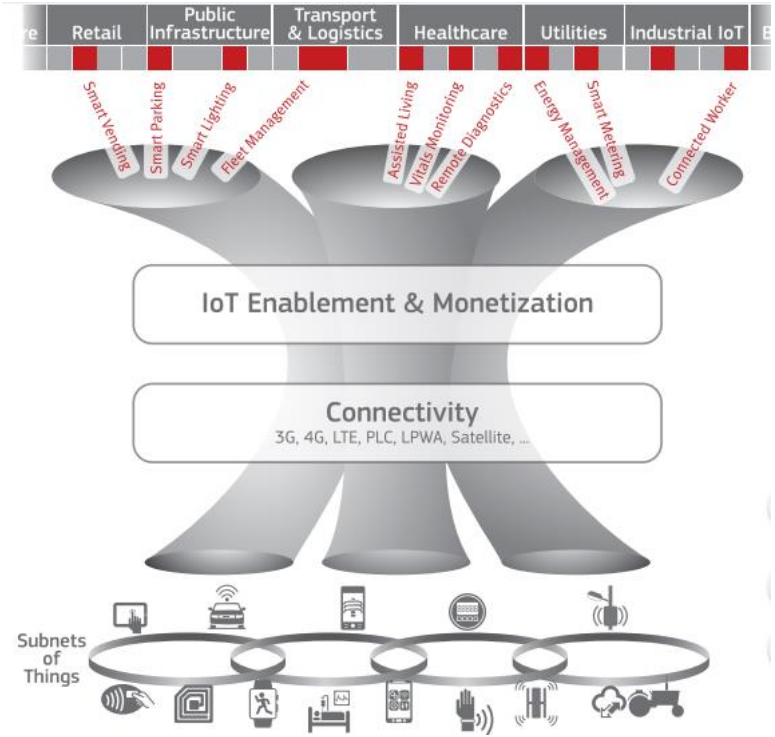
City dashboard

Operational Management Centre

Visualization	Rules Parametrization	Control

- Integrated view of city key performance indicators
- Real-time presentation of information for quick decision making
- Intelligent actuation and automatic notification based on the correlation of vertical events
- Actions with human intervention on verticals

Framework IoT for Smart Cities



Delivering end-to-end services in a hyper-connected world, TM Forum, Nov 2015

City Dashboard

Apps

Operational Management Centre

Open Data

API Management

IoT Monetization

App Enablement

Data Management & Analytics

Urban Platform

Connectivity

Telco challenges

- New business models are required to address new trends.
- Smart city is a scale-based business, there is the need to replicate the solution in other regions.
- Telcos must also deal with region specificities.
- Municipalities tend to promote solutions from local ecosystem.
- The systems of the cities are managed by different entities, coordination is critical.

Telco challenges

- The phenomenon of start-ups forces the change of Telcos mindset (not only the start-ups), there is the need of a fast lane for IoT.
- Proof of concepts are almost mandatory, but needs financing.
- The integration of legacy systems is really a hard task, semantics are required.
- Security & privacy issues must be seriously addressed.
- The differentiation is done at service level, not at a platform side.

Conclusion

- Cities need to become smarter to improve efficiency, reduce costs and increase quality of life.
- Smart Cities can use IoT information to build innovative services fostering the creation of new businesses.
- Telcos must become key players in this new market by enabling the Smart Cities concept:
    - Creating an ecosystem of partners;
    - Building an IoT Framework for Smart Cities.

Smart cities are an opportunity to strengthen the presence of Telcos in municipalities