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Digital Life in Latin American Cities:

Shaping Smart Sustainable Cities in LatAm

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The challenge of the cities: to bring the digital experience to the citizens…sustainably

Smart City

Innovative city that uses technology
(advanced infrastructures, platforms and services)
to provide more efficient urban services,

improving the quality of life of citizens,

and developing a new relationship between the government and local companies,

meeting present and future needs of the city in economic, social and environmental terms, guaranteeing sustainability

Digital Transformation @ Cities

Four pillars to sustainable Smart Cities

LEADERSHIP & VISION

Backed by national agendas, executed duly by local governments

TECHNOLOGICAL MODEL

Open, standard, interoperable solutions

FINANCING ALTERNATIVES

Public & Private; new options (savings-share, pay-per-use, data econ.)

REGULATION CHANGES

Driving digitalization, longer contracts, gain-share models

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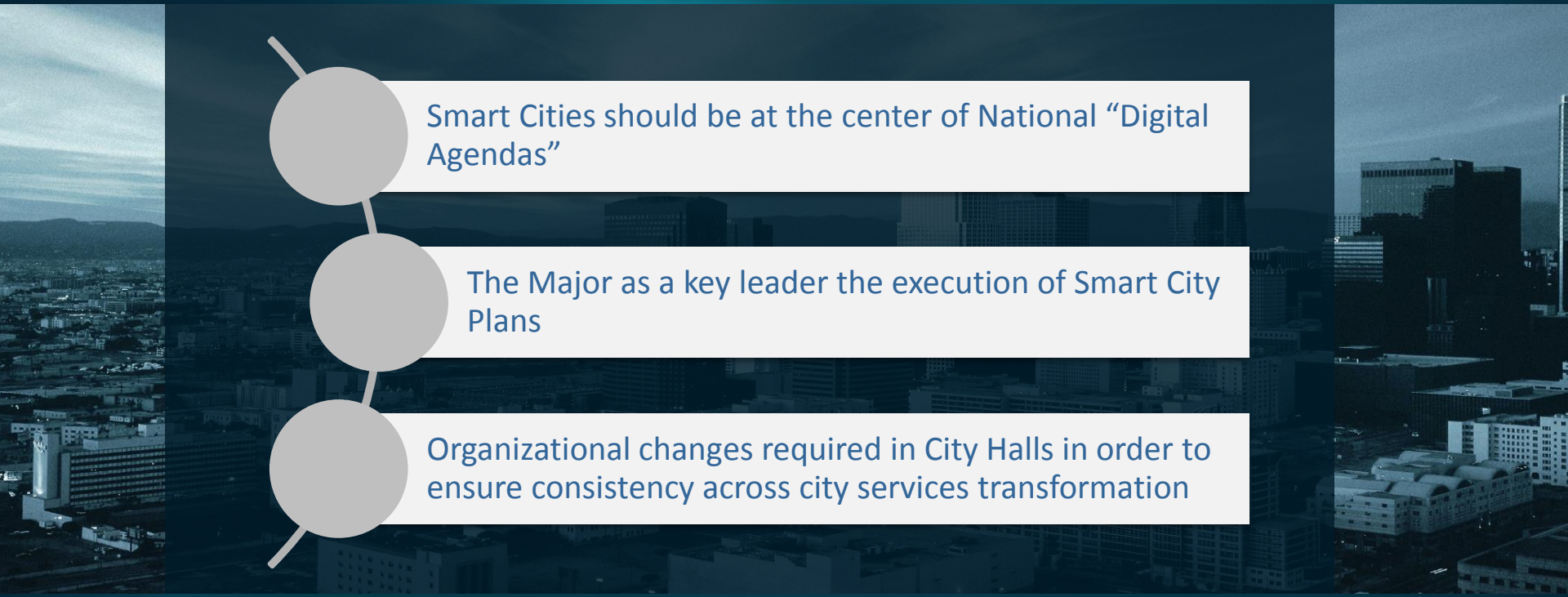
Transforming a vision into a reality requires leadership no matter if we talk of private companies… or about cities



- Smart Cities should be at the center of National “Digital Agendas”
- The Major as a key leader the execution of Smart City Plans
- Organizational changes required in City Halls in order to ensure consistency across city services transformation

An example: “Valencia Ciudad Inteligente”.

1 2 3 4

EARLY STAGE

- Definition of Smart City Strategy
- Definition of city and citizens indicators
- Priority in verticals to optimize
- Adequate Regulatory framework

VERTICAL

- Incorporate IoT technology in vertical services
- Search for efficiency
- Information in vertical silos

CONNECTED

- Integrate information from different vertical services
- Predictive and prescriptive models
- Synergies through a common horizontal platform

ENGINE OF GROWTH

- Information available to the local business fabric
- Enabler of open innovation ecosystem for developers and entrepreneurs
- Transparency and Open Data

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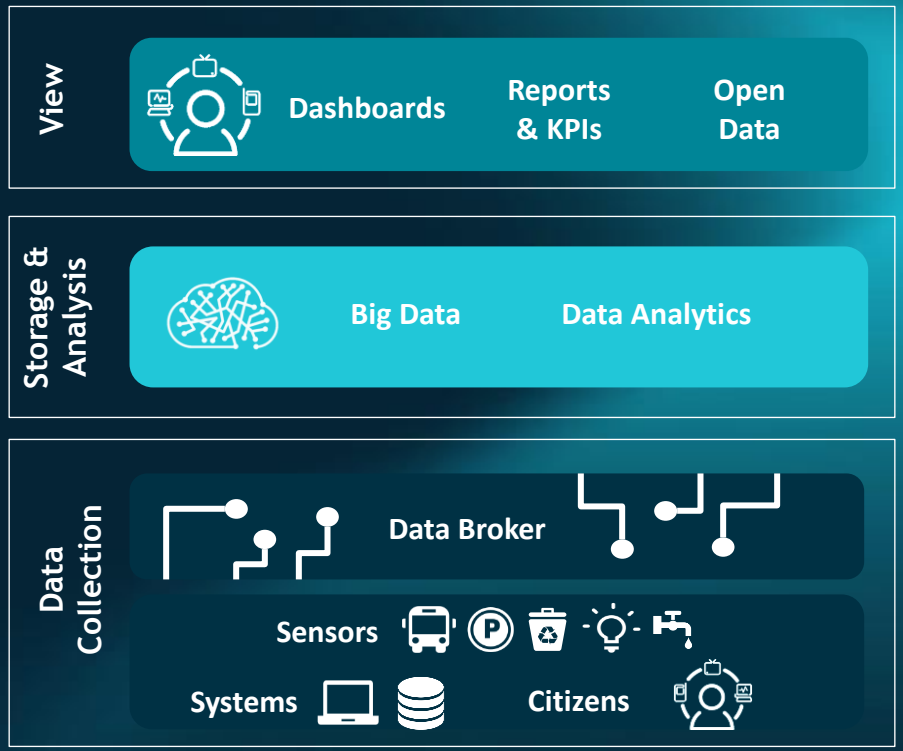
2. Technological Model @ Smart Cities

Open, standards-based, interoperable platforms enable the creation of the entrepreneurial ecosystem required by Smart Cities…



FIWARE

- Open source platform becoming the "de facto" standard adopted by cities.
- Open architecture, open APIs, open source
- 89 cities from 19 countries in Europe, Latin America and Asia-Pacific in the Open and Agile Smart Cities initiative (www.oascities.org)
- Backed by the European Community (300 M€ invested since 2011).
- Key Industry Players as members of the FIWARE Foundation (Orange, Atos, Engineering and Telefonica).

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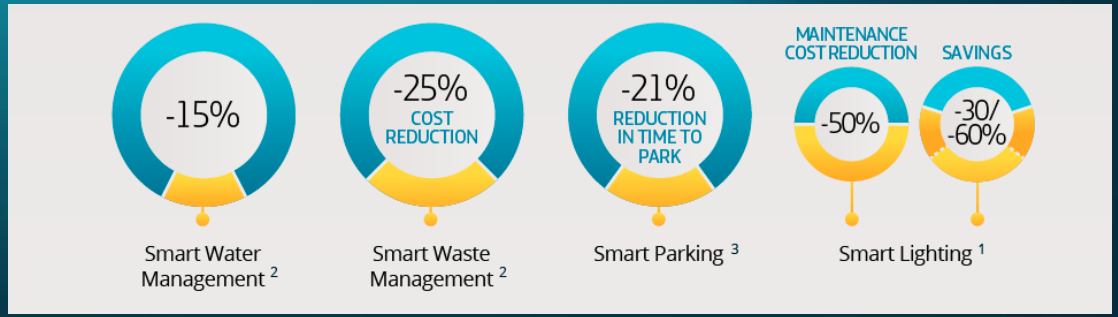
Technological Model @ Smart Cities

…and where vertical services can be re-used amongst cities.

- ✓ Efficiency
- ✓ Quality of life
- ✓ Governance
- ✓ Growth



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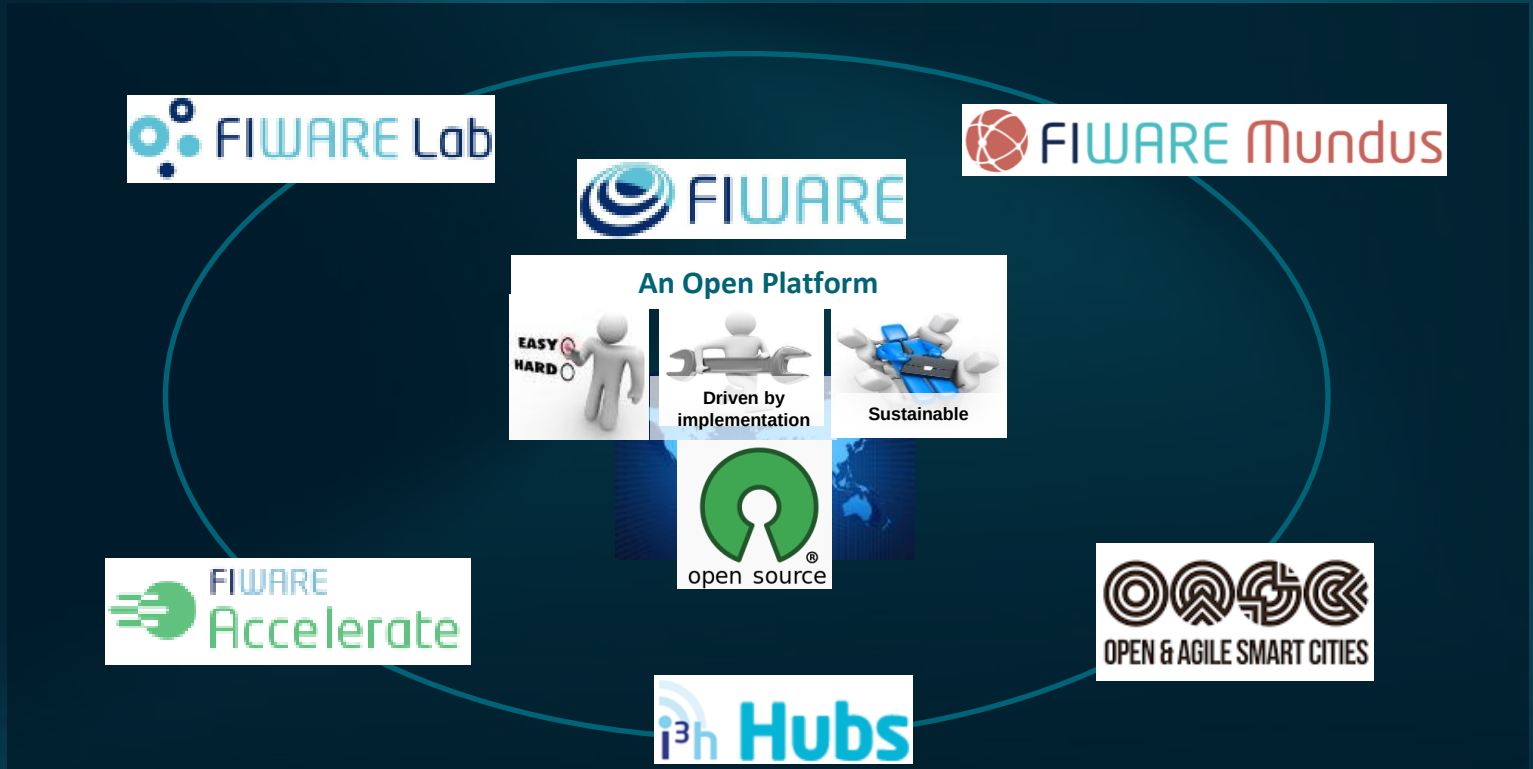
More than just a technology: an ecosystem



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Financing alternatives @ Smart Cities

An example: Street lighting. Establishing options.

- Street lighting represents +50% of city budgets, 25% of Public Sector energy consumption, and 3% of total electric power consumption nationwide (on average).
- 91% of Street lights in LATAM are not yet LED
- High investments required: e.g. on a 15.000 light spot projects, 1.000 USD/light spot
- Return on investment over 5 years

Alternative models

CAPEX Model

- One-shot payment for hardware upgrade.
- Recurring Service fee covering operations.

Opex Model

- Recurring monthly fee to repay hardware replacement & operation

ESCO model

- Payment based on total service savings (Energy + Maintenance)

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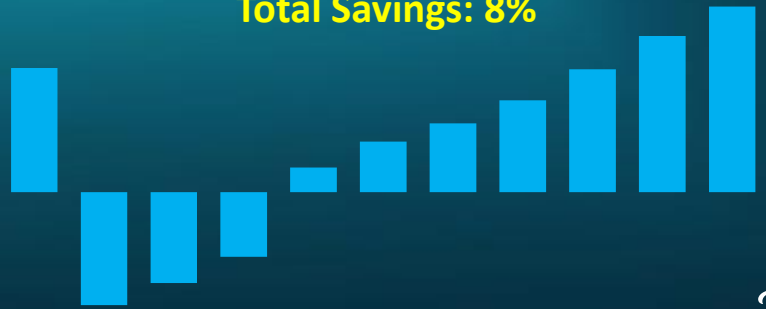
Financing alternatives @ Smart Cities

An example: Street lighting. A customer case.

- Renewal of **15K street lights**: LEDs, sensors, lighting management platform, supervision platform, managed operations center
- One year deployment, **10 years contract**
- Reduced energy **bill by 50%, improved security** (perceived)



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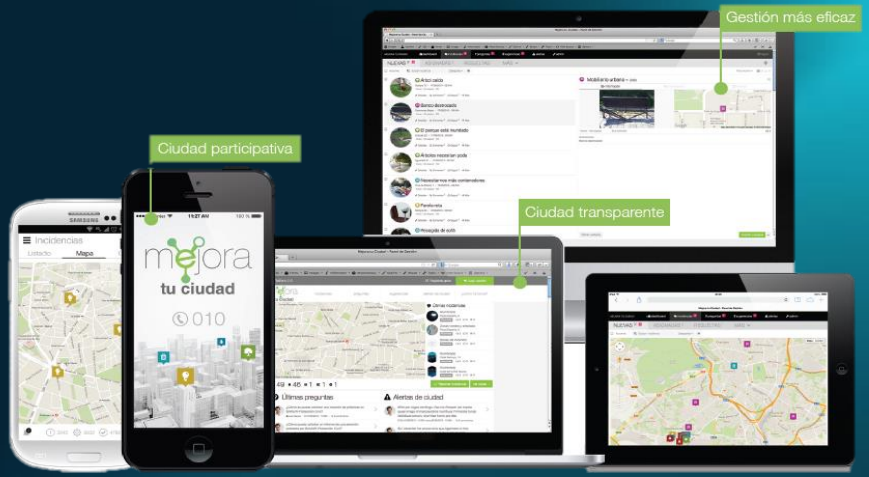
An example: a sucess-based waste management service

A new Waste Management model



- **Telefónica participates** in the project providing its **Smart City platform** to the **Waste Management service operator**
- **15 years contract**, starting Q4 2015
- City Council pays a fixed + a variable fee on the Waste Management Service. **Variable fee based on 25 KPIs**
  - Inspectors manual collection
  - Sensors (>600 waste containers)
  - Incidences Response Time: opened via Citizen APP, Police, etc.
  - Citizen surveys (subjective)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