SPAIN

Investment opportunities

Smart Cities
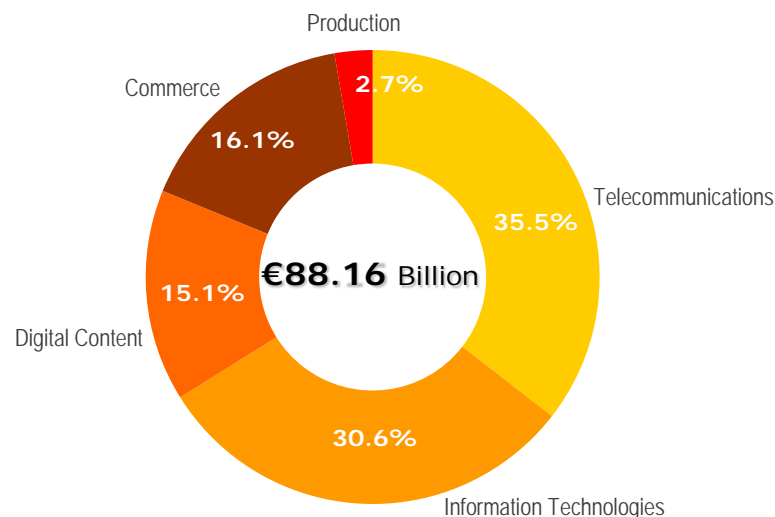
Smart City Expo World Congress

Kyoto 2015

I. ICT Sector in Spain

❖ Spain is one of the most important **ICT market by volume** in Europe: **€88,164 Million**.

❖ There are near **30,000 ICT companies**, including digital content, operating in Spain. The sector is currently [1] employing almost **400,000 workers**.

❖ The **gross added value** at market prices represents the **4.7% of GDP** in **2013**.

Spain ICT Sector Turnover 2013

- Production — 2.7%
- Telecommunications — 35.5%
- Information Technologies — 30.6%
- Digital Content — 15.1%
- Commerce — 16.1%

€88.16 Billion

- Spanish companies are **present** and **recognized** in major international markets...

- Spain is a leader in **advanced technologies**:

  - **Spanish software for landing** is worldwide renowned and used

  - **Major events**/Complex, distributed international delivery

  - **High-Tech** and **Defense** Industry

  - **Smart cities, Telecommunications**, **Utilities**, **Energy, Banking**...

Leading **ICT multinational companies** are already successfully located in Spain, taking advantage of Spain's benefits:

Software Vendors
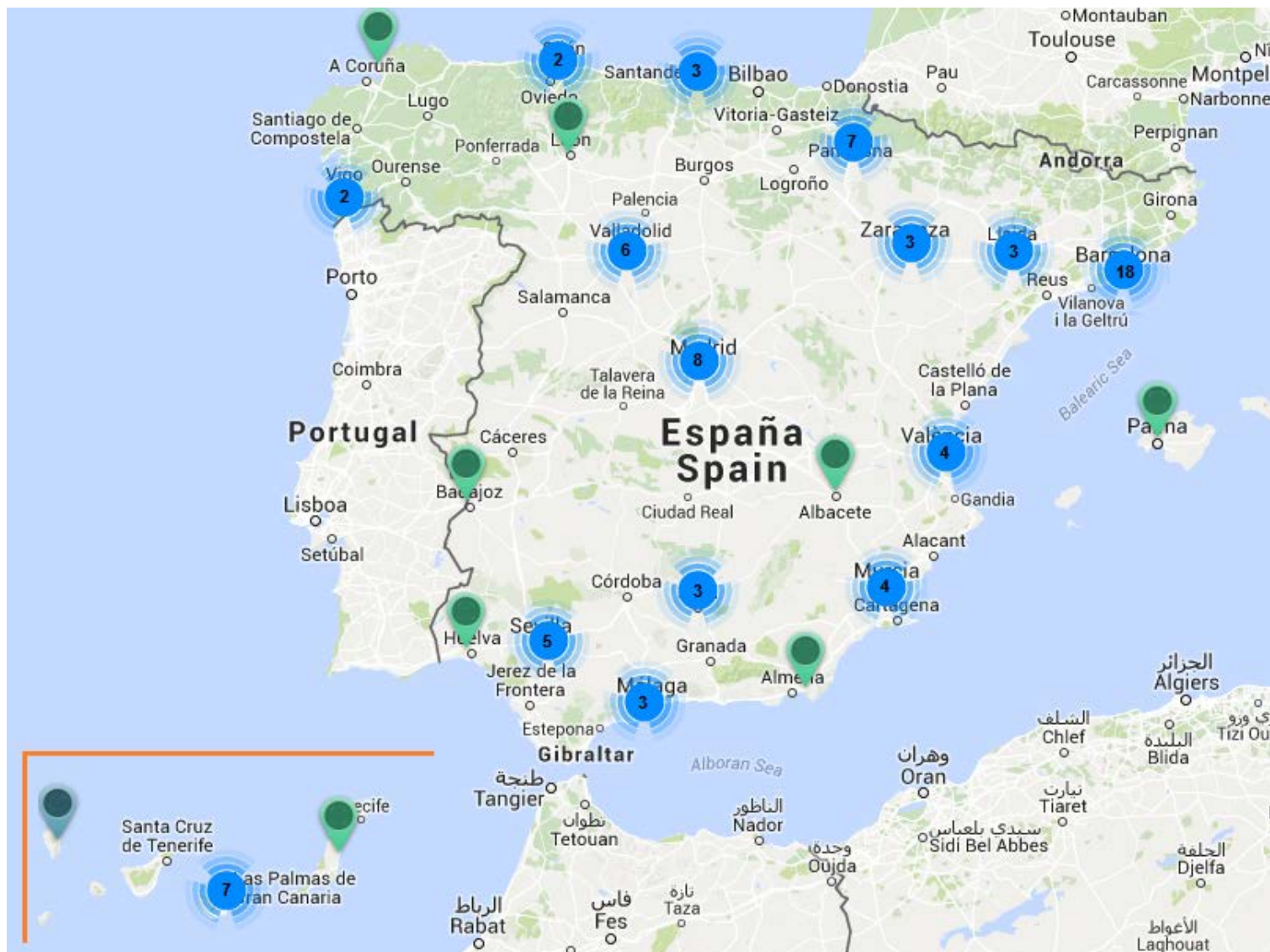

Hardware Vendors

Telecom equipment vendors

Service Providers

ICT Services and Consulting Companies

81 Science and Technology Parks throughout Spain

Government Support: Digital Agenda for Spain (2015 -2020)

More than **2.4 Billion Euros** allocated by the government to fulfil the Digital Agenda, assuming the Digital Agenda for Europe in 2020.

It contains 106 lines of action structured around **6 main objectives**:

Encourage the deployment of ultra-fast networks

- 30 Mbps for 100% citizens in 2015
- At least 50% households 100 Mbps in 2020

✓ **Promote an improved user experience and promote appropriate service conditions**
✓ **Encourage the deployment of ultra-fast broadband networks, optimizing the use of radio spectrum and improve the experience for broadband users**

Develop the digital economy

- At least 50% citizens buy on-line in 2015
- 33% of SMEs make online purchases or sales

✓ **Promoting the developmet of e-commerce**
✓ **Promoting an innovative industry of digital content**
✓ **Increasing public-private partnerships and identify and maximize the opportunities that are presented in this new scenario**

Improve e-government and digital public services

- Increasing effectiveness and efficiency in public Administrations
- More than 50% citizen use e-government and more than 25% complete forms online in 2015

✓ **Bringing the Administration to citizens and businesses**
✓ **Increasing the levels of use of eGovernment**
✓ **Rationalize and optimize the use of ICT in public administration**

Building confidence in the digital

- Establishment of capabilities for monitoring and diagnosis of digital trust permanent

✓ **Boost market confidence services**
✓ **Strengthen existing capacities to promote digital trust**
✓ **Promote excellence in the organizations on digital trust**

Encourage R & D & I in the industries of the future

- Double the total annual public spending on research and ICT development, in 2020
- Leverage an equivalent increase in private spending

✓ **Increase the efficiency of public investment in R & D in ICT**
✓ **Encouraging private investment in R & D in ICT**
✓ **Promote R & D in ICT in SMEs**
✓ **Expand the Spanish participation in R & D in ICT in the international arena**

Supporting digital inclusion and ICT training new professionals

- At least 75% citizens (60% for disadvantaged people) access internet regularly in 2015
- Reduce to below 15% the percentage of population that has never used internet

✓ **Promote inclusion and digital literacy**
✓ **Adapt training systems for digital training and ICT training new professionals**

■ Spain offers interesting opportunities in

- ✓ **Smart City**
- ✓ Nearshore Platforms
- ✓ Auxiliary Mobile Phone Services
- ✓ WiMAX
- ✓ VoIP services
- ✓ E-Justice
- ✓ Smart Home
- ✓ E-Security
- ✓ Commercial B2B Interchange Systems
- ✓ Open Source Activities
- ✓ E-Health
- ✓ Digital Entertainment – Video Games
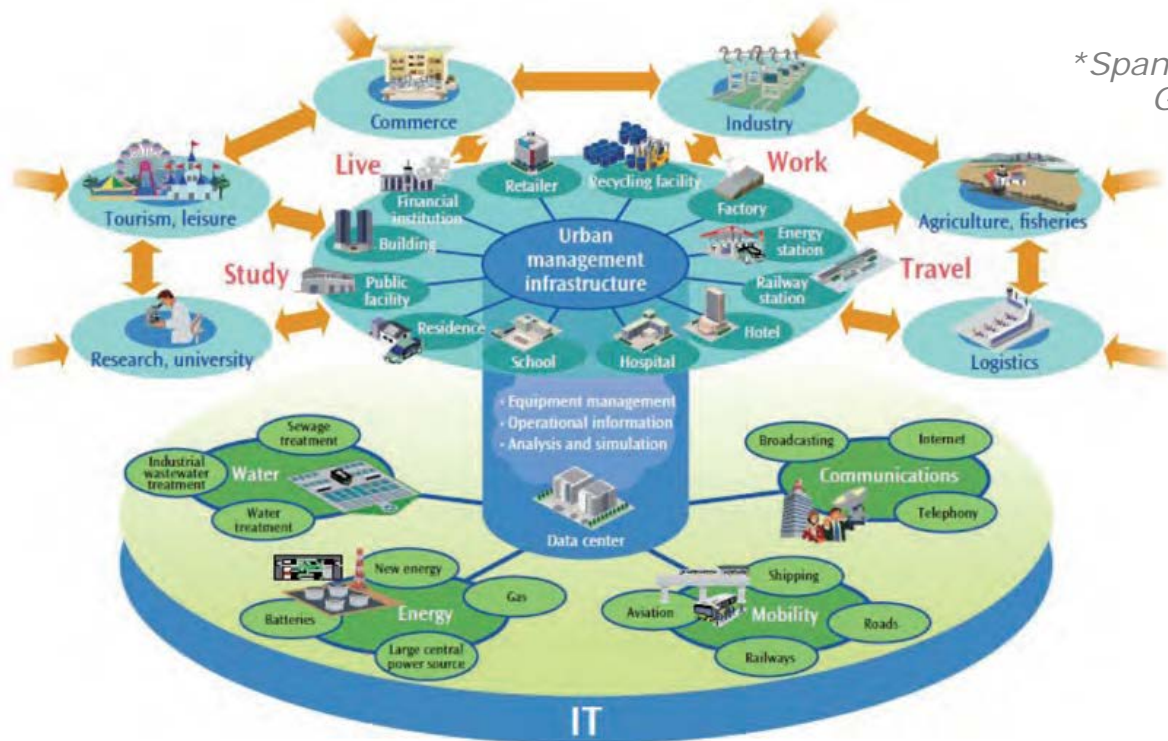- ✓ E-Government
- ✓ Traceability Technologies

II. Smart Cities in Spain
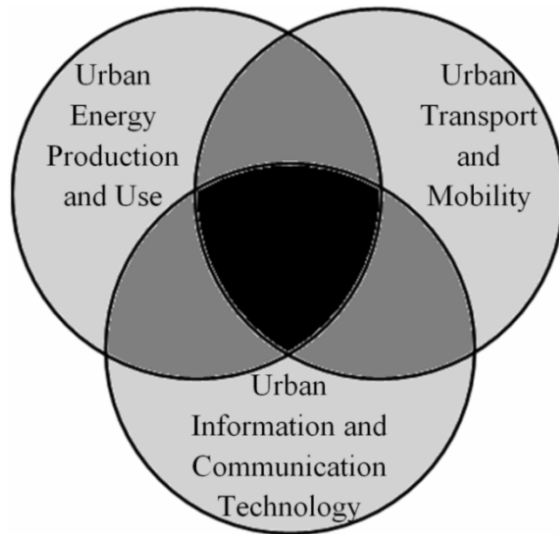
Smart City is an holistic view applying ICT:

➤ To improve life quality and inhabitants accessibility.

➤ To ensure sustainable economic, social and environmental development in continuous improvement.

*Spanish definition proposed by the Technical Group for Standardization 178 of AENOR

Spain is among the EU countries with the highest number of Smart Cities

Spain is among the countries with most **Smart Governance projects**, along with France, Germany, Sweden and the United Kingdom; and **Smart Mobility initiatives**, along with Hungary, Romania and Italy.

The highest absolute number of Smart Cities are found in the **UK**, **Spain** and **Italy**.

Source: European Parliament's Committee on Industry, Research and Energy. Mapping Smart Cities in the EU. January 2014.

Competitive advantages of Spain for Smart Cities

Government support through the Digital Agenda for Spain:

>2,400 M€ to promote digital economy and society

>150 M€ National Plan of Smart Cities

Growing coverage of super-fast broadband networks:

>60% coverage of 100 Mbps access networks

>75% coverage of 4G/LTE networks

Competitive advantages of Spain for Smart Cities

Enhanced smart city governance:

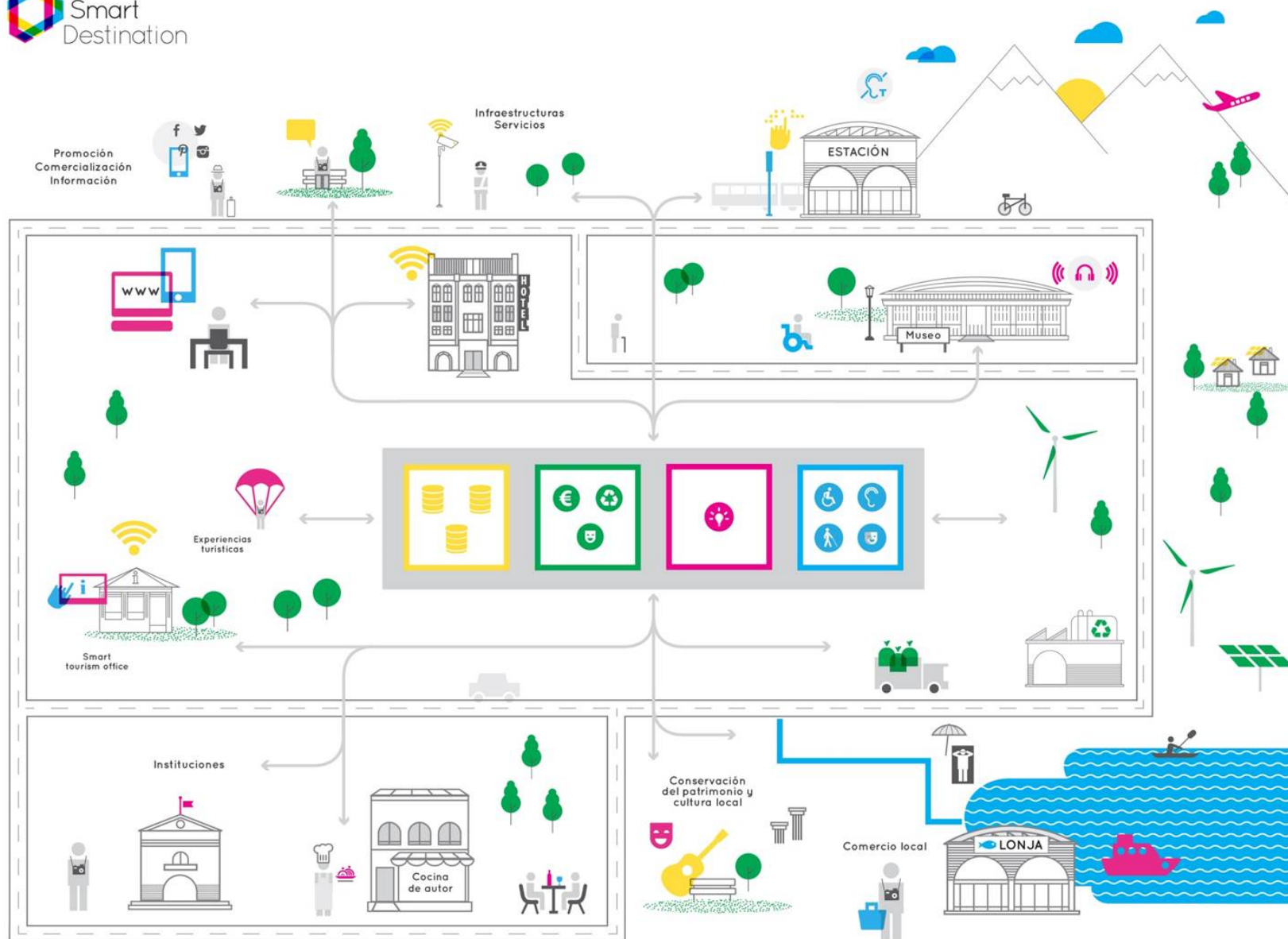**60 cities joined the Spanish Network of Smart Cities**
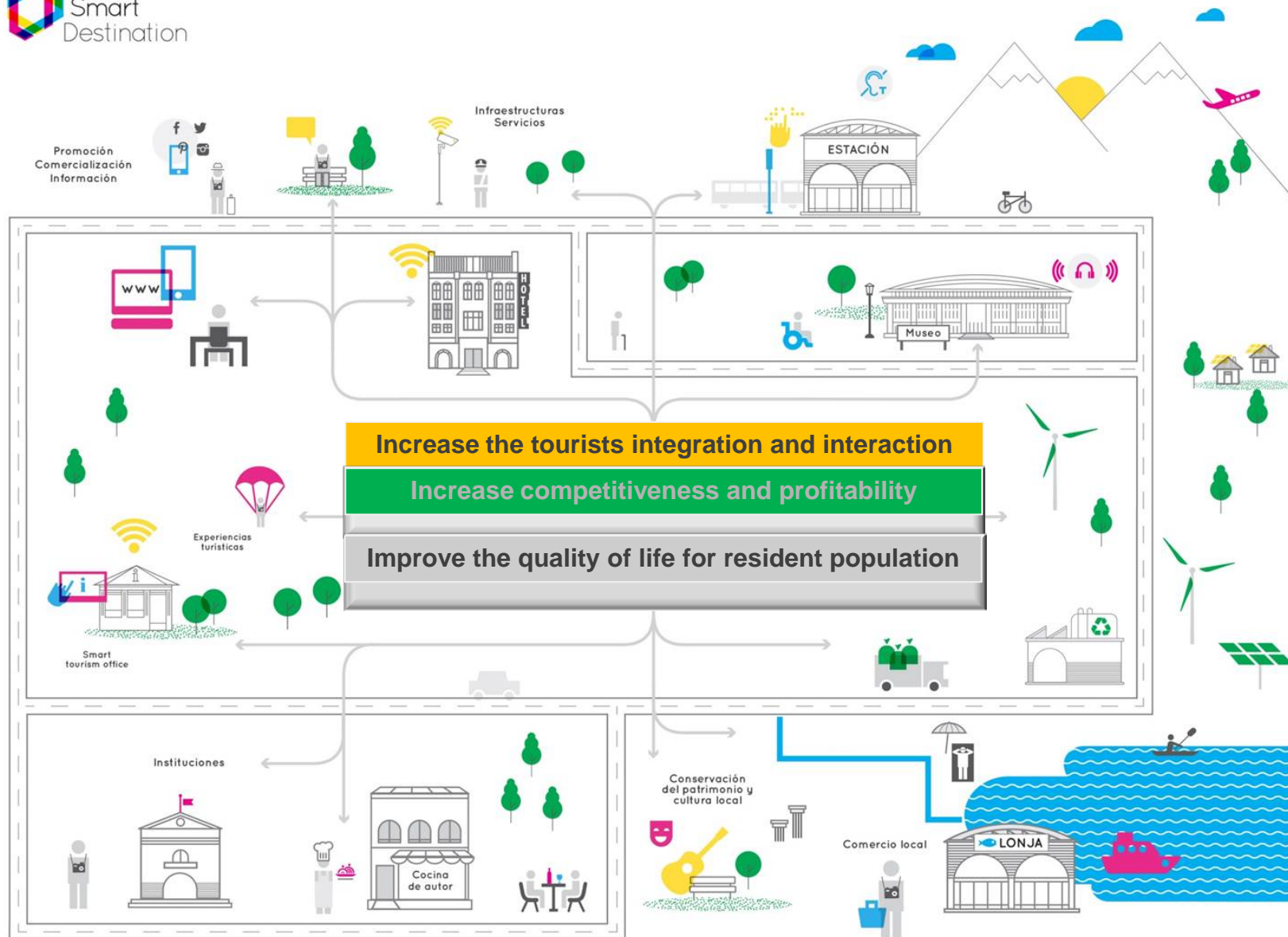
Industry alliances around smart cities

Opportunities for smart tourism:

> 60 million visitors per year

1st place in the World Economic Forum's global Travel & Tourism Competitiveness Index 2015 due to our cultural resources, infrastructure and adaptation to digital consumption habits

Smart Destinations:
Success Case

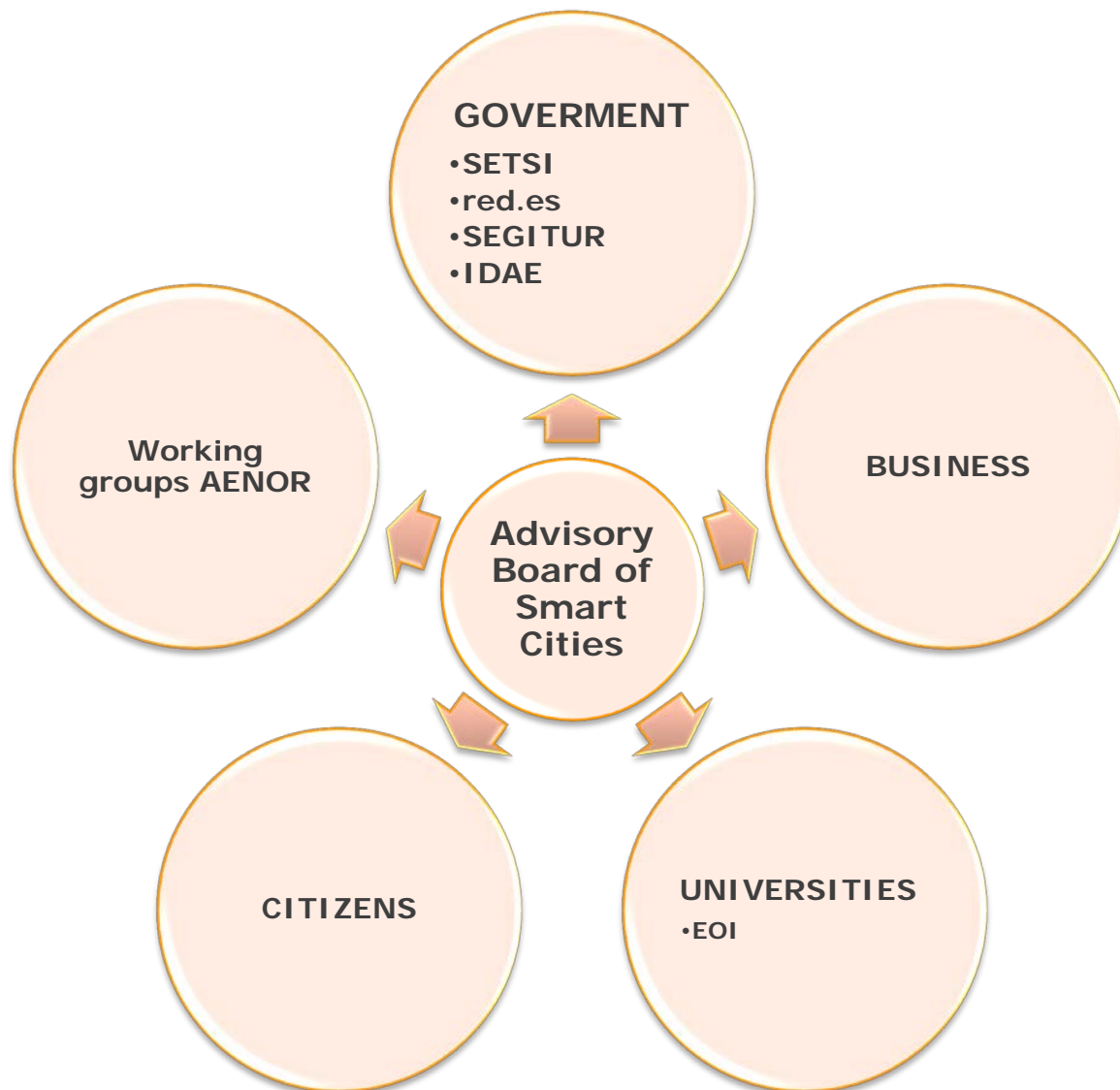- ❖ Diagnostic Report & Action Plan
- ❖ Free WIFI Network and WIMAX Network
- ❖ Sensor System: flows and tourism shopping
- ❖ Apps for the destination
- ❖ Training for businessmen, entrepreneurs and citizens
- ❖ Funding

Background of the Plan

February 2013

Digital Agenda for Spain

July 2014

Agenda for Strengthening the Industrial Sector

March 2015

National Plan of Smart Cities

Boosting Governance Framework

GOVERMENT
- SETSI
- red.es
- SEGITUR
- IDAE

Working groups AENOR

Advisory Board of Smart Cities

BUSINESS

CITIZENS

UNIVERSITIES
- EOI

Key measures

Aid program for smart city projects & smart tourist destinations

53 M€

Loans, public private collaboration & innovative public acquisition

65.5 M€

Studies, white paper and advisory council to promote smart city governance

Innovative catapults, R&D support and industry promotion

13 M€

Promotion of standards and interoperability trials

4.5M€

Source: www.agendadigital.gob.es

Achieving following specific objectives:

Increase ICT contribution to GDP industrial sector.

Improving effectiveness and efficiency of local authorities for providing public services by using ICT.

Advancing in Smart Cities systems governance.

Promote Smart Cities standardization, regulation and legislation.

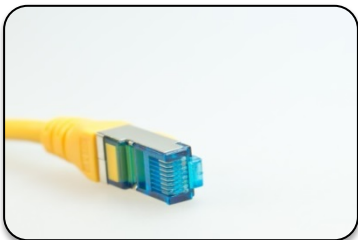## Structure of the Plan

Pillar I:

To allow towns and cities transformation towards a smart city.

Pillar II:

Showing efficiency of ICT in costs reduction, improving citizen satisfaction and creating new business models.

Pillar III:

Development and growth of ICT industry applied to smart cities.

Working groups RECI (Spanish Network of Smart Cities)

Group 1. Social Innovation

Group 2. Energy

smartcity
red española de ciudades inteligentes

Group 3. Environment, Infrastructure and Urban Habitability

Group 4. Urban Mobility

Group 5. Government, Business & Finance

Projects in Spain with Japanese companies (Málaga)

ZEM2ALL – collaborating:

* ❖ **Mitsubishi Corp.**

* ❖ **Mitsubishi Heavy Industries**

* ❖ **Hitachi**

* ❖ **NEDO** (among others).

Zero Emissions Mobility To All.

One of the biggest threats that we face every day is polluting emissions. **Transport, and specially, card and trucks emit 43 % of total emission**.

Reduction of these polluting emissions, so we can considerably increase our wellness and standard of living. Electric mobility, because of no polluting emissions as well as because of it higher efficiency, which is double of a conventional vehicle, means a fundamental part of future mobility.

ZEM2ALL is a movement that acts as a real and definitive test of the functioning of a free emissions mobility. With this initiative can be known the impact and management of the electric mobility resources of the cities of future.

Malaga City, worldwide pioneer in managing smart cities, has an experience of more than 5 years being the scenario of the Smart city Malaga project by Enel/Endesa, what turns it into the best possible showroom for this movement.

It counts with the collaboration of Malaga City Council, who has given all its the support to this project and signed an agreement with NEDO (New Energy and Industrial Technology Development Organization).

The target of the movement is to make easier to Malaga citizens, companies and particulars, access to electric mobility.

The lucky citizens benefit of privileges as cars and charging infrastructure that allow them to be the first adopting electric mobility and enjoy its advantages and services. All together will achieve to make of Malaga the model to be followed by other future sustainable cities.

Projects in Spain with Japanese companies (Santander)

SMART SANTANDER in collaboration with **NEC**

❖ **Smart waste collection solution** for Santander.

❖ The solution **uses sensors that collect real-time data on rubbish and recycling bin levels enabling the cleaning team to optimize collection intervals and routes**.

❖ The new service is expected to reduce vehicle emissions and running costs by eliminating journeys to bins that are virtually empty and result in fewer incidences of overflowing bins.

❖ The just-in-time waste collection service **uses** machine-to-machine (**M2M**) **sensors that record the volume of rubbish in the bins, which is relayed via data collectors, repeaters and the mobile network to the control center**. The city's street sweeping team and citizens will also be able to use the "Cuida Santander" app to report problems with illegal dumping.

Santander has become a research center for Smart Cities and it systems from machine to machine (M2M) communications are by testing, sensors and smart public services.

This has been installed more than 20,000 sensors throughout the city that provide the information necessary to monitor and manage traffic congestion, parking availability and public transport. Street lighting and levels of pollution, garbage collection services or irrigation of parks are also monitored. This information is shared with citizens through an application for smartphones and through the website of the city.

Success case: BARCELONA SMART CITY

Smart city areas where the project are developed:

- ❖ **Public and social services**
- ❖ **Environment**
- ❖ **Mobility**
- ❖ **Companies and business**
- ❖ **Research and Innovation**
- ❖ **Communications**
- ❖ **Infrastructures**
- ❖ **Tourism**
- ❖ **Citizen Cooperation**
- ❖ **International Projects**

ご静聴ありがとうございました

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