# valencia ciudad inteligente

Valencia smart strategy

Smart city Concept

1st ASCIMER Workshop

AJUNTAMENT DE VALÈNCIA

Valencia

- 800.000 inhabitants

- Located in the center of the Mediterranean Corridor

- 95 min away from the capital of Spain by high speed rail

- 1st Spanish port in container traffic

- 3rd Spanish city with the highest economic activity

- 5+ million sqm of green areas

- 6.3 sqm green areas per inhabitant

Spain

Barcelona

Madrid

Valencia
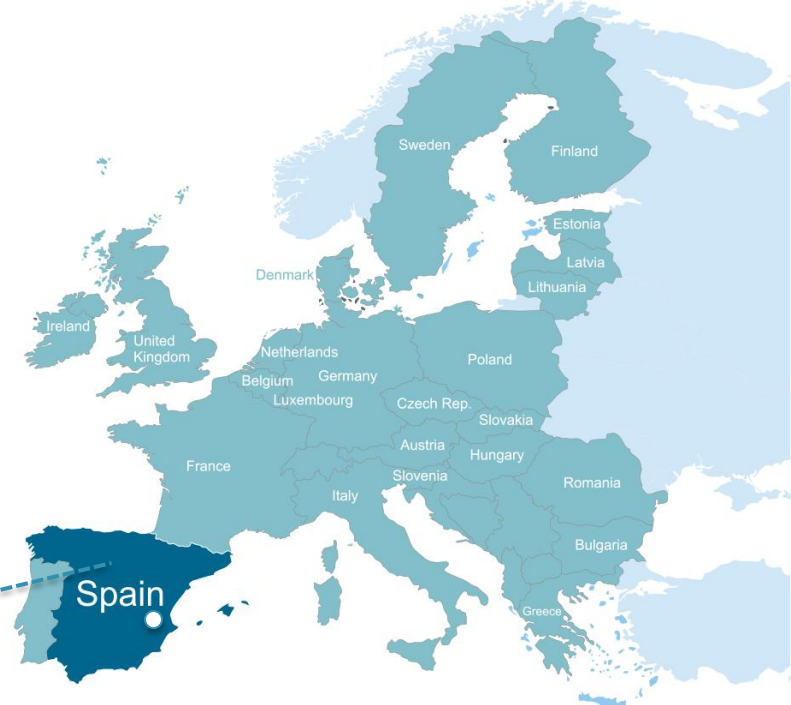
- 33.9 million sqm of industrial land

- 170.000 companies

- 5th European city in international events

- 200 cruises and an average of 2,354 passengers per year

- 300 sunny days per year

- 19.5 km sea shores

- 18.7º C average temperature

- Destination of 3,200 Erasmus students

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Conceptual framework of the Valencian Strategy

Strategy City of Valencia

Local Agreement for Innovation

Valencia Smart City

Focused on its citizens' quality of life

Innovative

Socially, economically and environmentally sustainable

Liveable

estrategia **valencia** 2020

Job creation and a city to invest in

Last generation infrastructures

International and singular

Well-connected

Smart growth: based on knowledge and innovation economy.
Sustainable growth: effective use of resources, greener and more competitive.
Inclusive growth: high level of employment, delivering social and territorial cohesion.

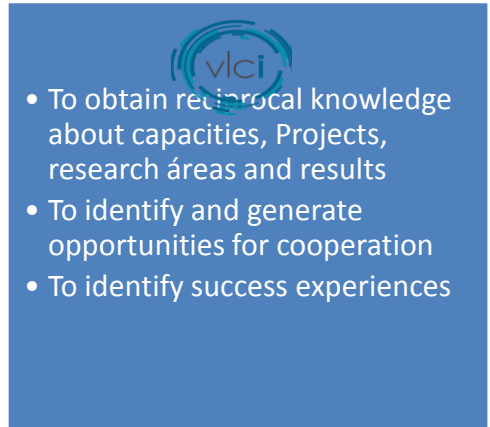# Local Partnership for Innovation: Relational Governance at the Smart City

What is it? What does it aim?

✓ Unique Strategy shared to foster R+D+i, talent and entrepreneurship at Valencia through joint responsibility and reciprocal knowledge.

✓ Platform for coordinated and joint work.

✓ It gathers key agents from R+D+i and entrepreneurship local ecosystem: public and private universities, Business organisations, research and technological institutes, investors, Public Administration.

✓ It directs key agents' efforts and action towards common objectives through commitment.

Objetivos GT 4

- To obtain reciprocal knowledge about capacities, Projects, research áreas and results
- To identify and generate opportunities for cooperation
- To identify success experiences

¿How?

✓ Developing Projects and activities around 4 Operative Objectives:

➢ Objective 1: To foster city talent and knowledge by attracting new ideas and opportunities for research and innovation

➢ Objective 2: To foster the development of institutional and business innovation

➢ Objective 3: To allocate Valencia at international scene for research and innovation

➢ **Objective 4: Valencia Smart City: APV, CEEI, CEU-CH, CEV, CPI-UPV, CSIC, ESIC, PCUV, REDIT**

Participation

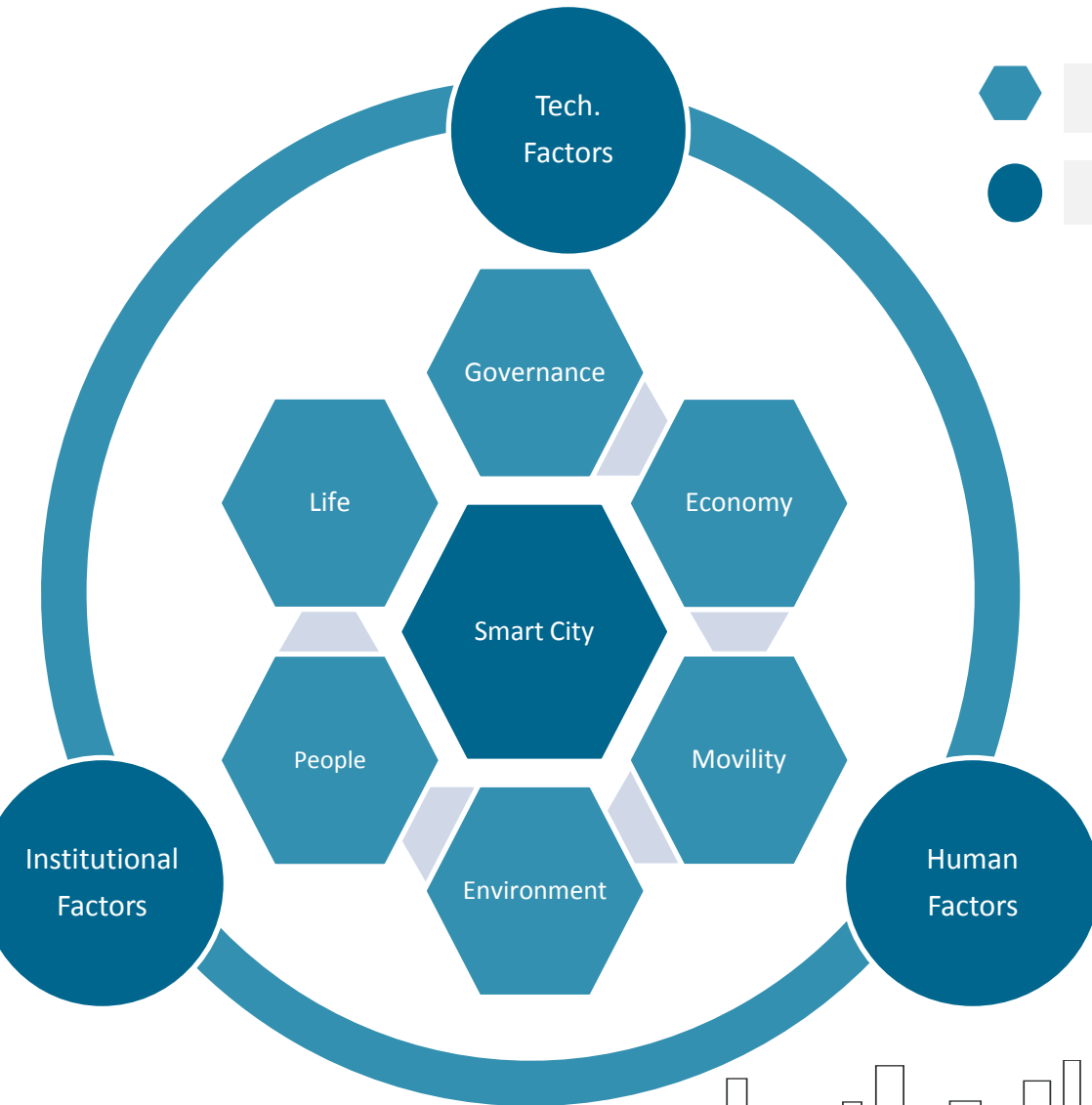- Institutional Commission
- Expert Group
- 4 Working Groups (one for Objetive)
- WG Objetive 4 Valencia Smart City

Conceptual vision for a Smart City

Common Characteristics

Específic Factors

Tech. Factors

Governance

Life

Economy

Smart City

People

Movility

Environment

Institutional Factors

Human Factors

Ciudad Inteligente

It must have a **city strategy** built on a range of **initiatives** dealing with smart cities **features.** These should be developed by specific **projects** and by using city **components**

Estrategy

Iniciatives

Proyects

Source: Mapping Smart Cities in the EU

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Electronic site

- Enquiry and documents upload of 7 million electronic records.
- 95% online procedures through the electronic office.
- Electronic public notice board.
- Tributary Electronic Office.
- Electronic Representation

1ª

Interoperability

With other administrations.
- 360.000 eCertificates
- 400.000 eProcedures

Council without papers

Electronic register.
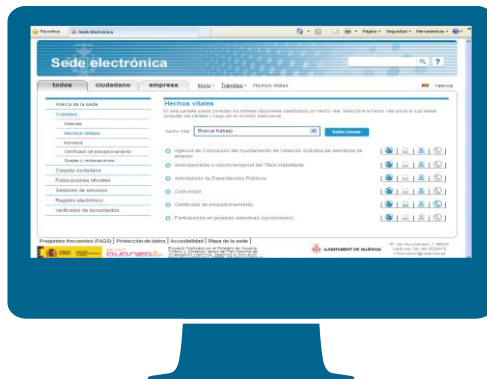Records management.
Governing Bodies.
Briefcase.

Geography Information System

250 data layers.
Integrated maps, street view and BD territory.

Accesibility

Inclusite disabled people have full access to municipal web.

Smart Governance

Fulfilling electronic rights of citizens

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Portal VLC Business: www.valenciabusinesscity.com

Local Innovation Map
Shows up R+D+i agents at Valencia

Smart Economy

Innovation and knowledge economy

Geo-emprende, geographic and business information tool that will provide data of the city and useful information to start a company or a commerce.

Cooperative Networks for the Promotion and Transfer of Technology and Knowledge

InnDEA VALENCIA

VIT SALUD

VIT ENERGÍA

VIT ALIMENTACIÓN

VIT FALLAS

VIT EMPRENDE

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Smart Mobility

Sustainable Urban Mobility Plan for Valencia (PMUS), September 2013.

76,4% displacements within Valencia are sustainably made

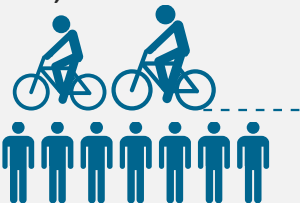**3,900 detectors** to measure traffic intensity

1,100 local **traffic light** management **regulators**

Artificial vision systems for automatic incident detection on underpasses.

Real time traffic status | Information panels, Twitter and phone service.

Public rental of bikes

✓ 2,750 bicycles distributed at 275 stations and 5,500 anchor points.
✓ 110,000 subscribers

Smart administration- Sustainable vehicles

- Electronic management of incidents.

- Operating assistance system.

- Real-time communication within bus fleet.

- 405 biodiesel buses.

- 75 buses with compressed natural gas

Traffic
EMT
Valenbisi

Centre de Gestió de Trànsit

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Smart Environment

Renewable energies, Ecology, Efficiency, Pollution, Water Management, Beaches

8% city growth, four times lower than the provisions of Spanish Land Use Regulations.

8%

60% municipal protection of historical buildings. Around 500 BIC or BRL spaces.

60%

Alert service for people interested in Public Housing.

Street Lighting ▼ Integrated System of public Street lighting

70% of lamps have flow regulator

SMART WATER METERS
60% already renovated (258.000) 430.000 in 2016

SMART-est
Resilient Systems for urban floods

Proyecto **CAT-MED** (Green squares)

Dynamic noise map. Pollen map alert service

Sensors for **early forest fire detection**

Action plans regarding sustainable energy, air quality and noise pollution.

INTEGRAL ADVANCED SYSTEM FOR WATER MANAGEMENT
Control and monitoring information in real time from 1450 km infraestructure network

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Valencia App

App entirely developed by Valencia City Council

- Geo-located and real time information: buses, bikes, monuments, parkings, trash containers...
- City Council applications.
- Customized alerts: Traffic, City, Emergencies.
- Urban Informer. Trouble on the streets.

- Interacting by your position.
- Interactive city maps.
- Access to the electronic office through eCertificate
- RSS alerts.
- Registry Certificate, previous appointment, payment of fees ...
- Municipal information. News, Events, Campaigns.

Innovation ecosystem. Open Data Website

App Ciudad Valencia as the display of innovative ideas for entrepreneurs interested in providing creativity and talent to the city.

http://www.valencia.es/datosabiertos

Open data

66 **open data sources** (*Business Intelligence*) for developers

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Shared traffic cameras

Real time staff and fleet location. COMDES Network and TETRA Technology

Real time indicators for emergency response

SIRE

SIISE

SPMA

Emergency management system: Vi@libre

Intelligent system for efficient response

Integral information system for emergency support

Advanced support system for control command

Smart Living

Local Police | Fireguard Integrated Security and Emergency Centre

POLICÍA LOCAL VALENCIA

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Tourism

Internal control panel to know the impact of sales.
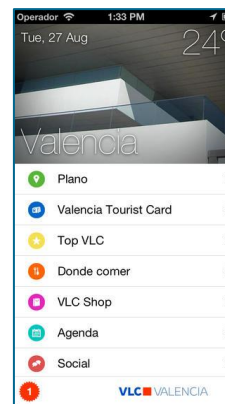
Geo-referenced online restaurant recommendations service

Online platform for restaurants, shops, etc.

APP for booking and ticketing.

VLC VALENCIA

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Acquire and share knowledge and city solutions

Spanish Network for Smart Cities, founder and coordinating city of Working Group 5-Government, Economy and Business

Inn*pulso* - Science and Innovation City Network, member of the board

Smart Cities CTN/178 AENOR, vice chair of the indicators and semantics subcommittee

Euro-Mediterranean Network of Sustainable Cities
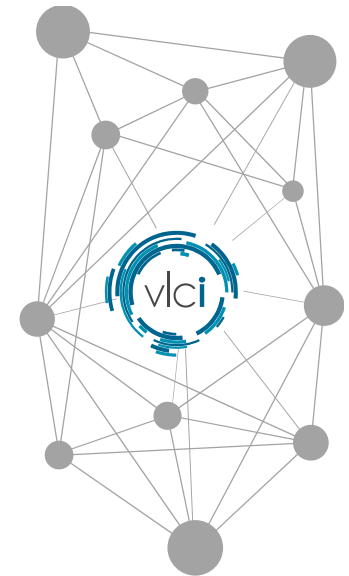
Spanish Network of Climate Cities

Spanish Network of Cities for the Accessibility, REDCA-4ALL

Spanish Healthy Cities Network

Participation in city netwoks

Indicators of information management ▶ **KNOWLEDGE FOR THE CITY**

Three types of indicators ▼

City indicators. Strategic indicators which provide socioeconomic information of the city.

Citizen indicators. Measure citizens' perception and satisfaction with city services.

Municipal services managment indicators. Measure administrative and operating activity of each service.
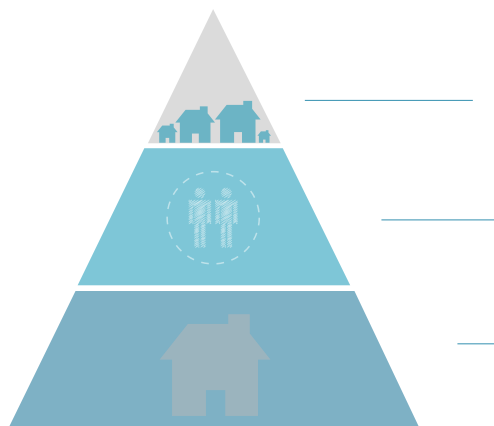
City indicators

Citizen indicators

Municipal services management indicators

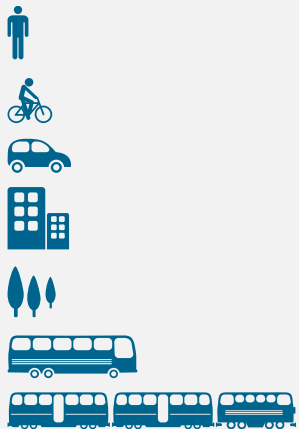Indicators: Essential basis of the VLCi Strategy

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Steps towards a smarter Valencia

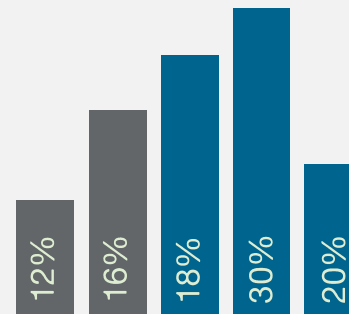| **1**	**2**	**3**	**4**
Definition of a Smart City Strategy	**Prioritization of municipal services to manage**	**Smart City platform and services tender**	**Promote the innovation and use by entrepreneurs**
Evaluation of Smart maturity of municipal services. Definition of Smart strategic objectives. Definition of city and citizens indicators.	Definition of municipal services indicators. Municipal contracts considering their integration to the VLCi Platform.	Definition of indicators control panel (and Balanced Scoreboards) Definition of service levels and use of VLCi Platform.	Enabling the development of new applications and solutions for local businesses.

12% 16% 18% 30% 20%

Technology vision of VLCi Platform

SaS
- Applications for people
- Offer services to entrepreneurs
- New business models

Analysis
- Monitoring and Control of key indicators.
- Monitoring and Control of Real-time Information
- Monitoring and Control of service levels.

Information
- Transformation-value information.
- Receive all city data.
- Homogeneous repository.

Data
- Filtering and Integration.
- Data from devices.
- Data Internet TCP / IP.
- Interoperability

VLCi Platform ❯ Projects ❯ Indicators

Innovation Ecosystem around VLCi

- **FI-WARE is a "flagship" Project form European Commission (EC) aimed to build on a platform for the devlopment of application at the cloud**
  - ➤ Leaded by Telefónica
  - ➤ Aligned with IoT and SmartCities Platforms.
- **FI-Lab is a deployment of the FI-WARE Platform directed to testing and experimentation**
  - ➤ Entrepreneurs and researchers develop aplications and try them at this environment
  - ➤ Data supliers (e.g., cities) provide with data available for R+D+i.

Applications developed within FI-LAB que environment using FI-WARE standard components can be used at VLCi Platform

Some data generated by VLCi can be introduced at FI-LAB and researchers and entrepreneurs can develop solutions based on real data

Applications

Applications

Data

Data

FI-Lab
Spark your imagination

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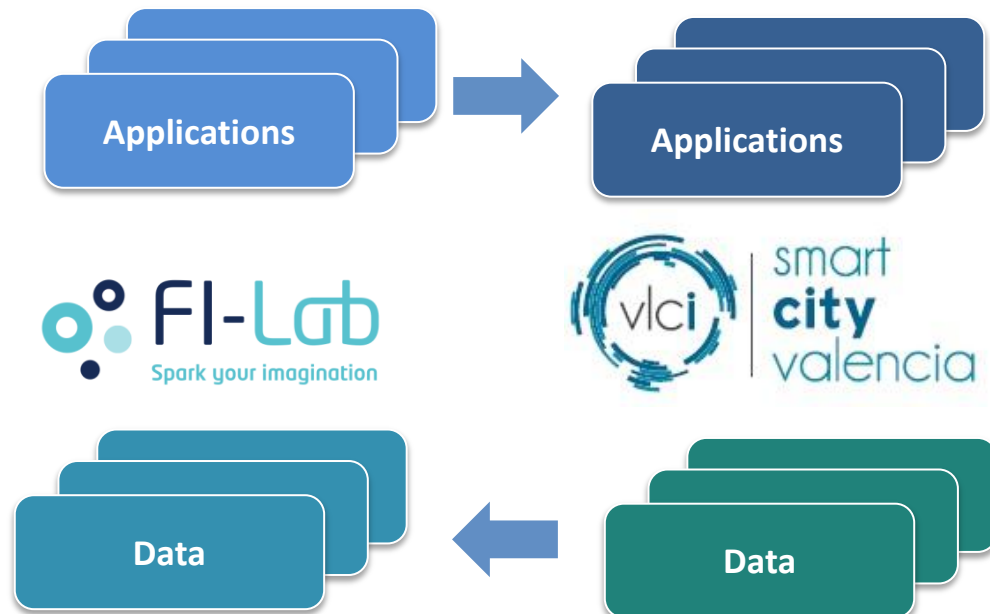
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Smart objectives associated to each functional area of the city

Government and Institutions	Increase of Interoperability	Smart Management of Information from Citizens. Transparency	Consolidation of Electronic Public Services
Economic Dynamism and Employment	Ecosystem for Innovation	Boosting ICT on commercial sector and entrepreneurs	Inteligent destination Visitor experience	Smart management of Employment
Quality of Life	Consolidation of Security and Social Services Information	Smart management of Urban Services	Leisure, Culture and Sport at Citizens service
Sustainability Mobility and Infrastructure	Efficiency infrastructure Energy - Carbon	Environmental Sustainability	Sustainable Urban Mobility

Platform VLCi ➤ Projects ➤ Indicators

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