

II International Conference
"Governance among partners in Public Private Partnerships"



PPPs for Urban Transformation

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PPP's FOR URBAN TRANSFORMATION

WHY PPPs FOR SMART CITIES?

CAN PPPs HELP DEVELOP SMART CITIES?

CAN SMART CITIES HELP DEVELOP PPPs?

PPP EXPERIENCES FROM THE BARCELONA MODEL

THE NEED FOR PPPs AND JOINT EFFORTS

The World's Top 100 Economies

Country/City/Company	GDP/Revenues	Country/City/Company	GDP/Revenues	Country/City/Company	GDP/Revenues
1 United States	14,204	35 ExxonMobil	426	69 Chevron	255
2 China	7,903	36 Osaka/Kobe, Japan	417	70 Toronto, Canada	253
3 Japan	4,354	37 Wal-Mart Stores	406	71 Detroit, USA	253
4 India	3,388	38 Colombia	395	72 Peru	245
5 Germany	2,925	39 Mexico City, Mexico	390	73 Portugal	245
6 Russian Federation	2,288	40 Philadelphia, USA	388	74 Chile	242
7 United Kingdom	2,176	41 Sao Paulo, Brazil	388	75 Vietnam	240
8 France	2,112	42 Malaysia	383	76 Seattle, USA	235
9 Brazil	1,976	43 Washington, DC, USA	375	77 Shanghai, China	233
10 Italy	1,840	44 Belgium	369	78 Madrid, Spain	230
11 Mexico	1,541	45 Boston, USA	363	79 Total	223
12 Tokyo, Japan	1,479	46 Buenos Aires, Argentina	362	80 Singapore, Singapore	215
13 Spain	1,456	47 BP	361	81 Sydney, Australia	213
14 New York, USA	1,406	48 Venezuela	357	82 Bangladesh	213
15 Korea, Republic of	1,358	49 Sweden	344	83 Mumbai, India	209
16 Canada	1,213	50 Dallas/Forth Worth, USA	338	84 Rio de Janeiro, Brazil	201
17 Turkey	1,028	51 Ukraine	336	85 Denmark	201
18 Indonesia	907	52 Greece	329	86 Israel	201
19 Iran, Islamic Rep	839	53 Switzerland	324	87 Ireland	197
20 Los Angeles, USA	792	54 Moscow, Russian Federation	321	88 Hungary	194
21 Australia	762	55 Hong Kong, China	320	89 Finland	188
22 Taiwan	710	56 Austria	318	90 General Electric	183
23 Netherlands	671	57 Philippines	317	91 Kazakhstan	177
24 Poland	671	58 Nigeria	315	92 Volkswagen Group	158
25 Saudi Arabia	589	59 Atlanta, USA	304	93 ENI	158
26 Chicago, USA	574	60 Romania	302	94 AXA Group	157
27 Argentina	571	61 San Francisco/Oakland, USA	301	95 Phoenix, USA	156
28 London, UK	565	62 Houston, USA	297	96 Minneapolis, USA	155
29 Paris, France	564	63 Miami, USA	292	97 Sinopec-China Petroleum	154
30 Thailand	519	64 Seoul, South Korea	291	98 San Diego, USA	153
31 South Africa	492	65 Norway	277	99 HSBC Holdings	142
32 Royal Dutch Shell	458	66 Algeria	276	100 Barcelona, Spain	140
33 Egypt, Arab Rep	441	67 Toyota Motor	263		
34 Pakistan	439	68 Czech Republic	257		

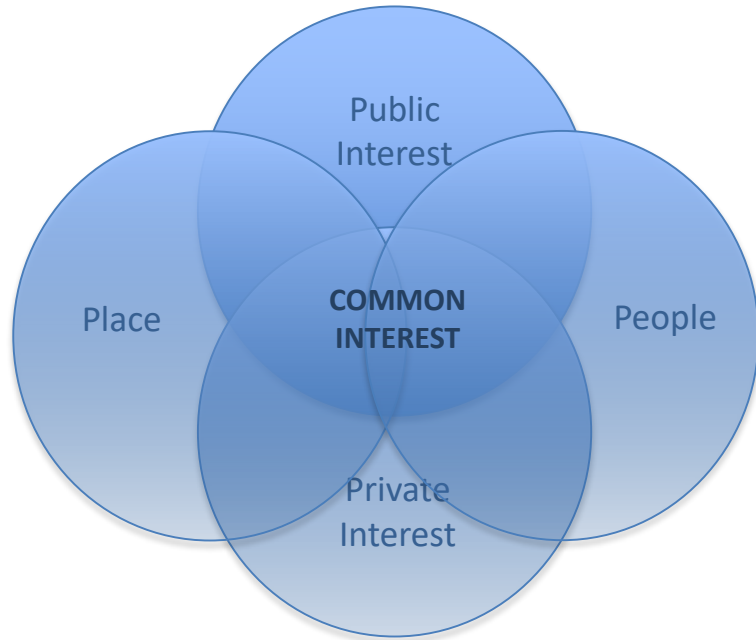
34 cities
13 corporations
53 countries

Data sources: Country data: GDP-PPP from the Development Data Platform time series, World Bank; City data: PricewaterhouseCoopers (PwC). 2009. Which are the largest city economies in the world and how might this change by 2025? Economic Outlook; Companies: Data retrieved from http://www.forbes.com/lists/2008/18/biz_2000global08_The-Global-2000_Rank.html (accessed November, 2009)

Cite as: Hoorweg, D., P. Bhada, M. Freire, C.L. Trejos Gómez, R. Dave. 2010. *Cities and Climate Change: An Urgent Agenda*. World Bank.

GENERATING ADDED VALUE THROUGH PPP's

From PPP to PPPP



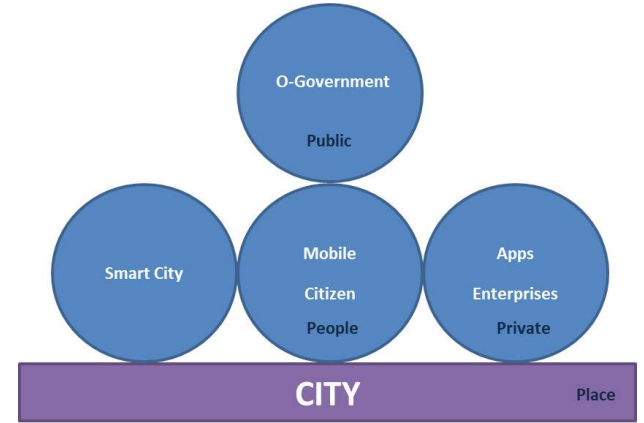
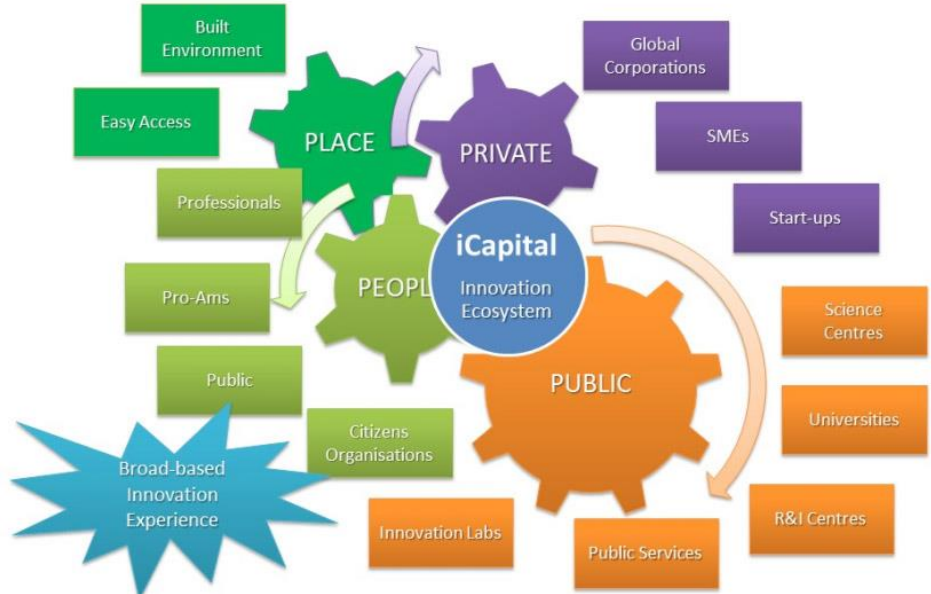
EUROPEAN CAPITAL OF INNOVATION A place to bring ideas to life



GENERATING ADDED VALUE THROUGH PPP's

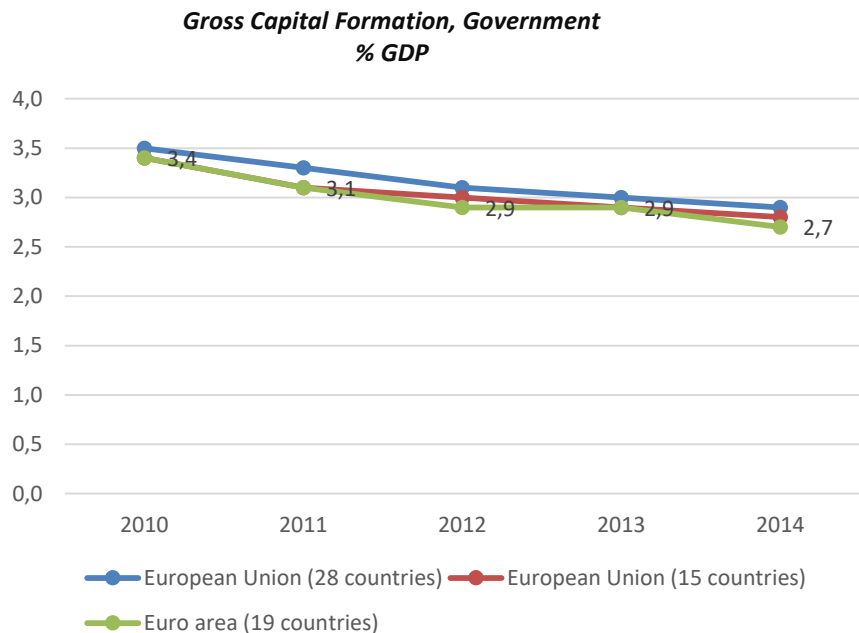


Sustainable Innovation Ecosystem



Barcelona
iCapital 2014-2016

THE NEED FOR PPPs AND JOINT EFFORTS

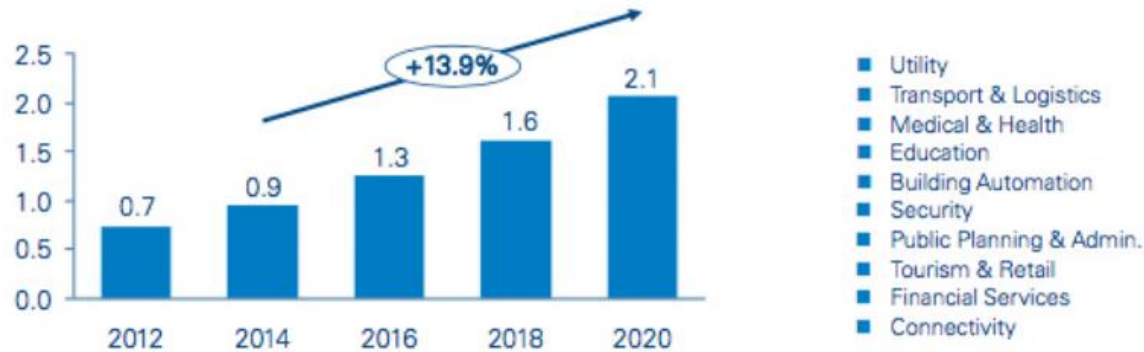


- ↓ Public Budget, investment
- ↑ Welfare state
- ↑ Financial needs

PUBLIC DEBT?
OTHER ASSETS?

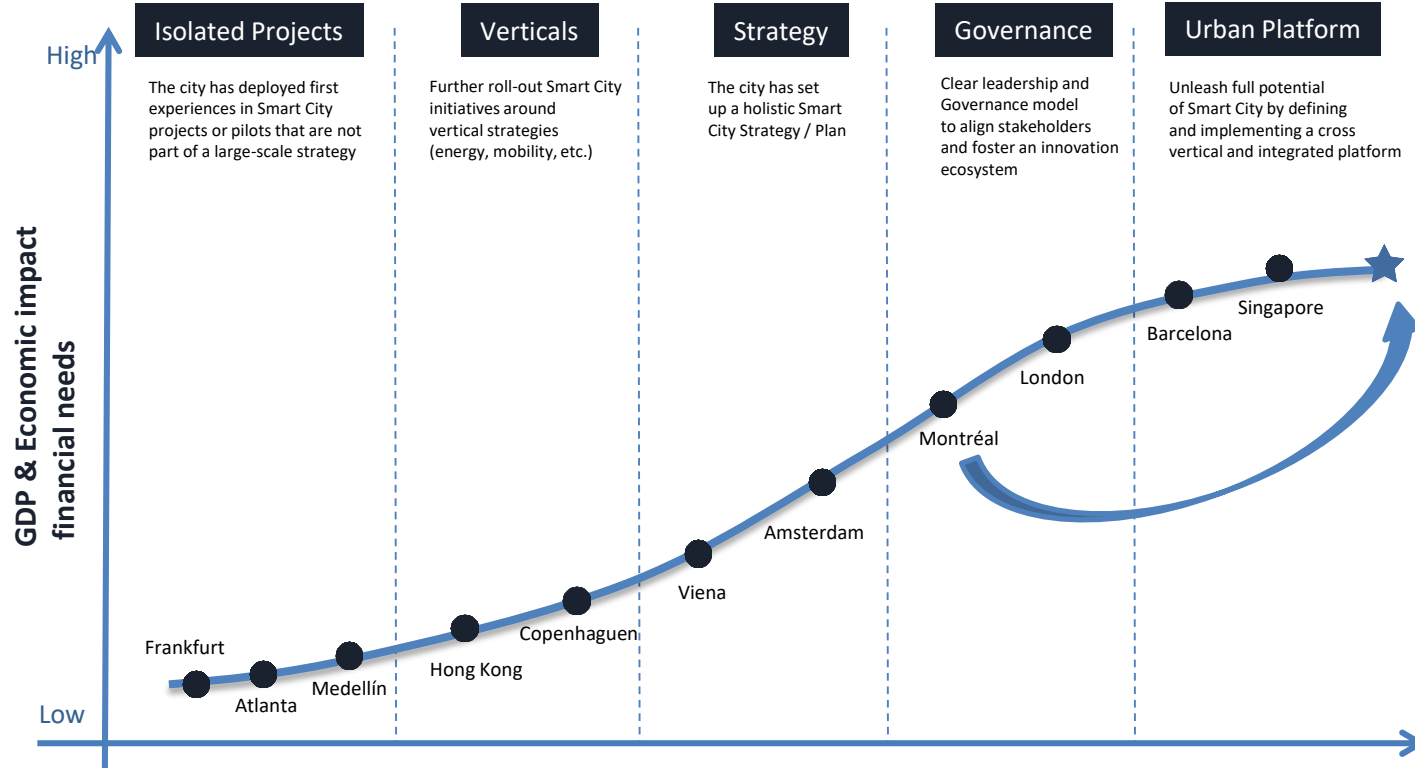
THE NEED FOR PPPs AND JOINT EFFORTS

Global Smart City revenues In trillion USD



- ↑ Market opportunities and
- ↑ Potential growth
- ↑ Required investment
- ↑ Higher risk
- ↑ Greater initial investments (technology)

THE NEED FOR PPPs AND JOINT EFFORTS



HOW CAN CITIES PROMOTE PPP'S?

SETTING UP A LONG TERM VISION

A long term ambitious vision is highly valuable.

It must address the question *what do we want to become, as a city, in 20 or 30 years' time?*

BARCELONA

“To become a self-sufficient city of productive neighborhoods at human speed, inside a hyper-connected zero emissions Metropolitan Area”

STOCKHOLM

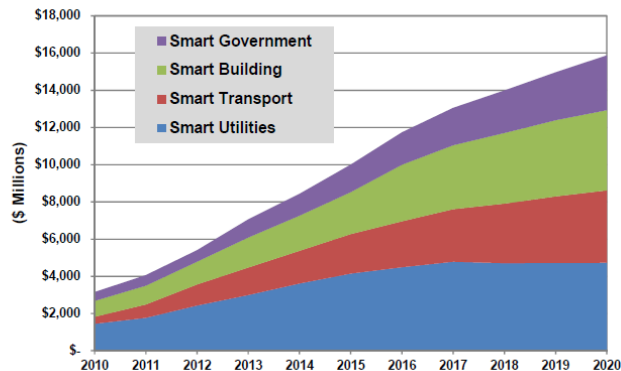
“In 2030, Stockholm will be a versatile city, offering top-class education and business opportunities, alongside unspoiled nature at your doorstep - a unique combination that will continue to attract visitors from around the world”

HOW CAN CITIES PROMOTE PPP'S?

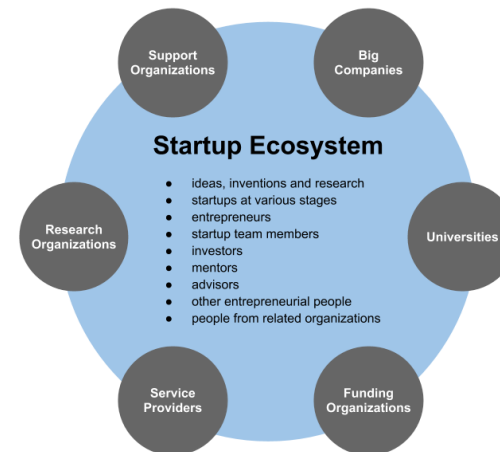
INDUSTRY PARTNERSHIPS & ECOSYSTEM

- ✓ Developing standards
- ✓ Scaling solutions
- ✓ Gaining critical mass: one solution, specific tuning
- ✓ Generating new markets: industry opportunities worldwide

Smart City Smart Infrastructure Investment by Industry, World Markets: 2010-2020



(Source: Pike Research)



- ✓ Creating ecosystems
- ✓ Developing economic tissue and growth: economy and competitiveness
- ✓ Opportunities: jobs, talent, FDI, new companies, start-ups

HOW CAN CITIES PROMOTE PPP'S?

HOLISTIC STRATEGY

Generic Smart City
Program Canvas



Barcelona Smart City
Program Canvas

1	Telecommunications networks		12	Citizenship	
2	Urban Platform		13	Open Government	
3	Smart Data		14	Barcelona in the pocket	
4	Smart Light		15	Smart Garbage Collection	
5	Energy self-sufficiency		16	Smart Regulation	
6	Smart Water		17	Smart Innovation	
7	Smart Mobility		18	Health and Social Services	
8	Renaturation		19	Education	
9	Urban Transformation		20	Smart Tourist Destination	
10	Smart Furnishings		21	Infrastructure and Logistics	
11	Urban Resilience		22	Leisure and Culture	

* Example for Barcelona.

HOW CAN CITIES PROMOTE PPP'S?

IMPACT EVALUATION, ROI AND ROS

Assessing the return on investments and on environment

Defining KPI's



85M € impact on GDP (Barcelona, 2014)



1,870 jobs created as result of the Smart City program



53.7M € municipal investment



0.53 € of additional private sector investment for each 1€ Municipal investment



Saving **9,700 tons of CO2** and **600,000 liters of water** per year.



* Example Barcelona, 2014.

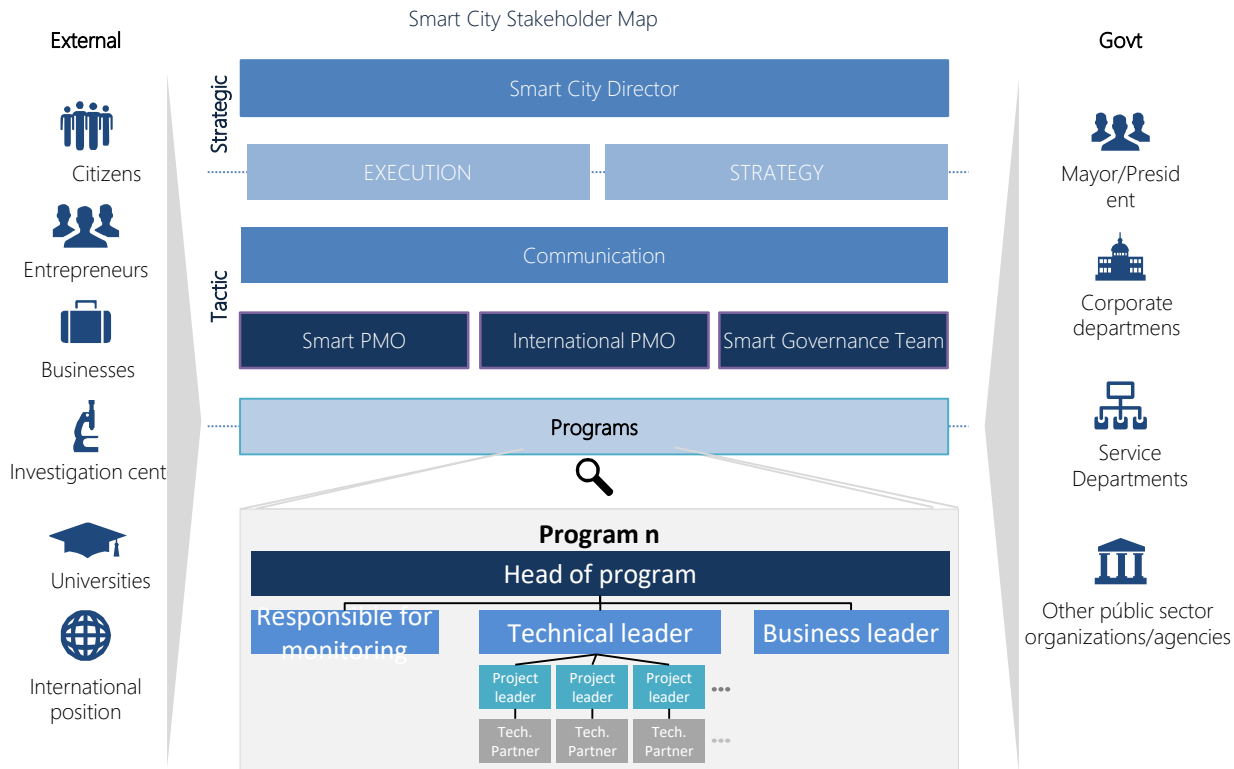
HOW CAN CITIES PROMOTE PPP's?

INTERNATIONAL POSITIONING



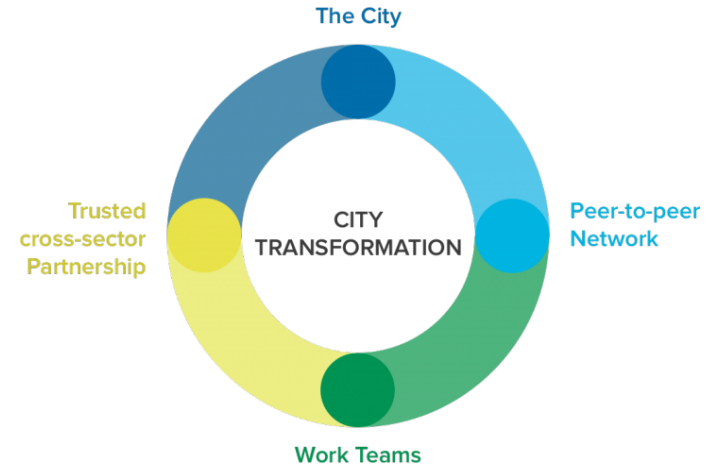
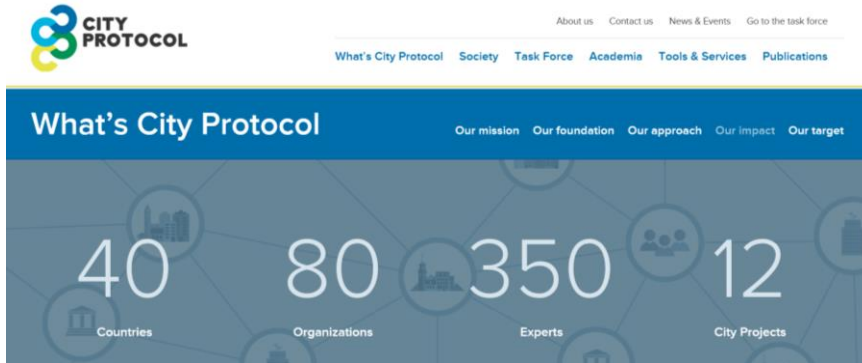
HOW CAN CITIES PROMOTE PPP'S?

GOVERNANCE & ALIGNING EFFORTS



CITIES ARE IN COMPETITION... OR COLLABORATION?

City Protocol



- ✓ collaboration and knowledge sharing
- ✓ evaluation and accreditation of standards
- ✓ A 'city language' and the **City Anatomy**.
- ✓ repository of documents describing projects, policies and recommended practices
- ✓ A network and/or platform for education and knowledge sharing among all members

CITIES ARE IN COMPETITION... OR COLLABORATION?

European Innovation Partnership on Smart Cities

1 Smart Cities and Community a European Innovation Partnership

How to make our cities smarter?

The Partnership integrates the **ICT**, **energy** and **transport** sectors. It aims to apply innovative solutions to tackle issues such as **congestion**; **air pollution**; **high energy costs** and to achieve **better mobility**; **cleaner urban environment**; **energy efficiency**.



congestion



air pollution



high energy costs



better mobility



cleaner urban environment

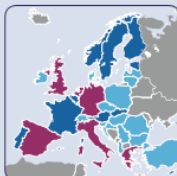


energy efficiency

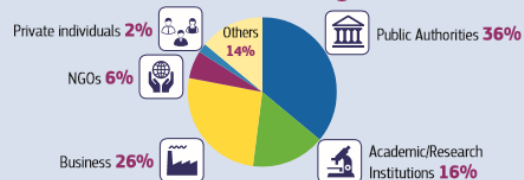
2 Meet our Partners

In 2014,
370 commitments
around smart city
projects & solutions
were submitted by more than
3 000 partners.

The lead organisations come
from **31 countries**.



Classification of lead organisations



3 Some of the areas we are working on



Urban Mobility



Open Data



Business Models



Finance & Procurement



Policy & Regulation



Metrics & Performance Indicators



Integrated Energy, Transport & Communication Networks



Energy Efficiency & Low carbon Solutions

CITIES ARE IN COMPETITION... OR COLLABORATION?

UNECE CoE PPP for Cities



PPP for CITIES

Specialist Centre on PPP in Smart and Sustainable Cities

  **IESE**
Business School
University of Navarra

Public-Private Sector
Research Center

Main Partner

 **Ajuntament de Barcelona**  **BIT**
BARCELONA
INSTITUTE OF
TECHNOLOGY

PPP EXPERIENCE IN BARCELONA SMART CITY

PPP limitations:

- REGULATIONS: LAWS AND PUBLIC PROCUREMENT
- CONTROL MECHANISMS
- DIFFICULTY TO MEASURE RETURNS (ROI + ROS, impact evaluation)



Barcelona + companies + universities

PPP EXPERIENCE IN BARCELONA SMART CITY

Barcelona Urban Lab: "applying" Smart Cities



Barcelona Urban Lab

Barcelona Activa | Ajuntament de Barcelona

The graphic features a stylized city skyline and a bicycle on a textured background. Logos for Barcelona Activa and the Ajuntament de Barcelona are at the bottom.

Implementation of 12 outdoor public street lighting points



Sensors for containers



Noise Sensors



Occupancy sensors in parking spaces



Implementation of 12 outdoor public street lighting points



Pilot program to read gas, electricity and water meters telematically



Sustainability mobility project



Traffic lights adapted for the blind at all crossings in 22@Barcelona



Traffic control cameras



Fibre optics in homes



Bicycle lanes



CAN PPPs HELP DEVELOP SMART CITIES?

Really, PPPs and new BUSINESS MODELS are key to transforming the city

- ✓ Overcome public sector financial constraints
- ✓ Risk sharing
- ✓ Results-oriented and ROI + ROS
- ✓ Generate new MARKETS. Not just new products or services

Our vision & mission for international markets

Helping in Transformation of Government & Territories & Cities through...

Modernization
Efficiency
Smart (intelligent)
Sustainability
Innovation

“We want to become the MESSI for Government & Cities transformation, to built a better world”



DOXA
INNOVA & SMART

A stylized dark blue triangle logo consisting of three thick, parallel lines forming a triangular shape. The lines are slightly offset from each other, creating a sense of depth and movement. The top line is the longest, the bottom line is the shortest, and the right side line is the longest, meeting the top and bottom lines at their ends.