

BUILDING SMART CITIES TOGETHER

SHARINGCITIES



Câmara Municipal
Lisboa

Lisbon Smart City H2020

SHARING CITIES

Pedro Grilo – Câmara Municipal de Lisboa

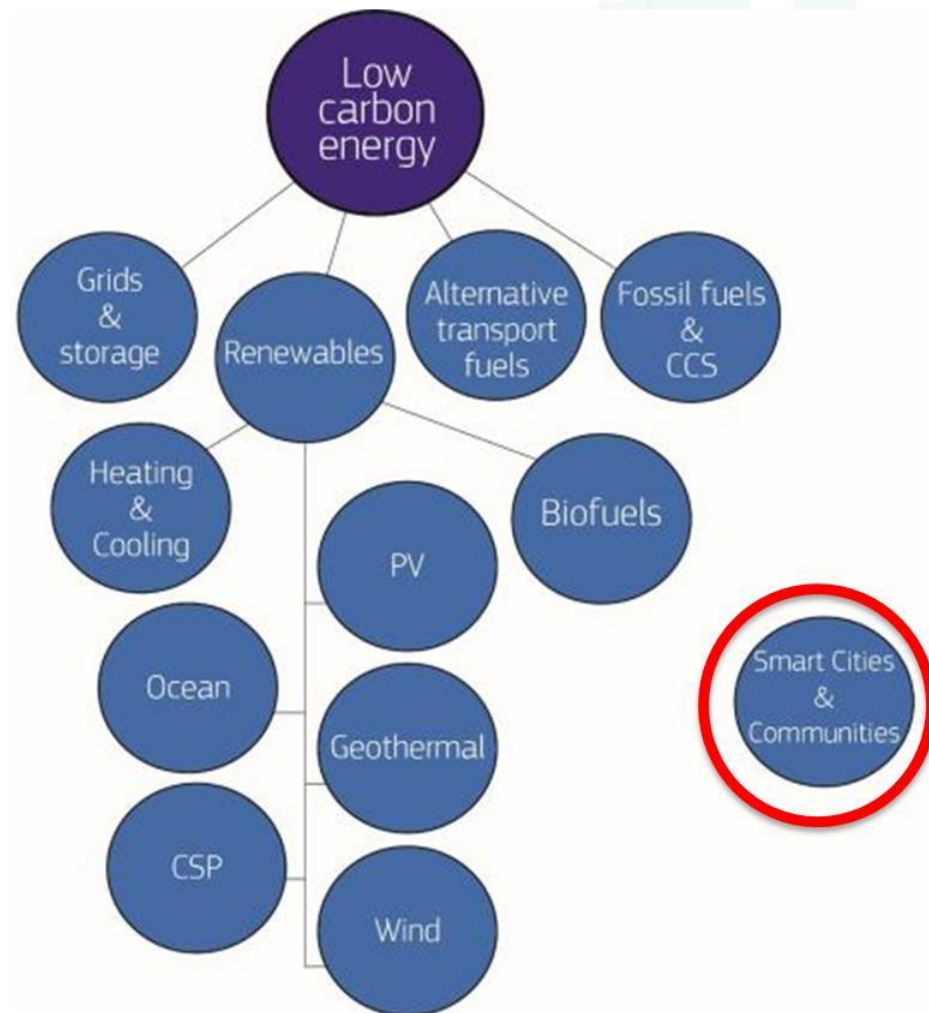


This project has received funding from
the European Union's Horizon 2020
research and innovation programme
under Grant Agreement N° 691895

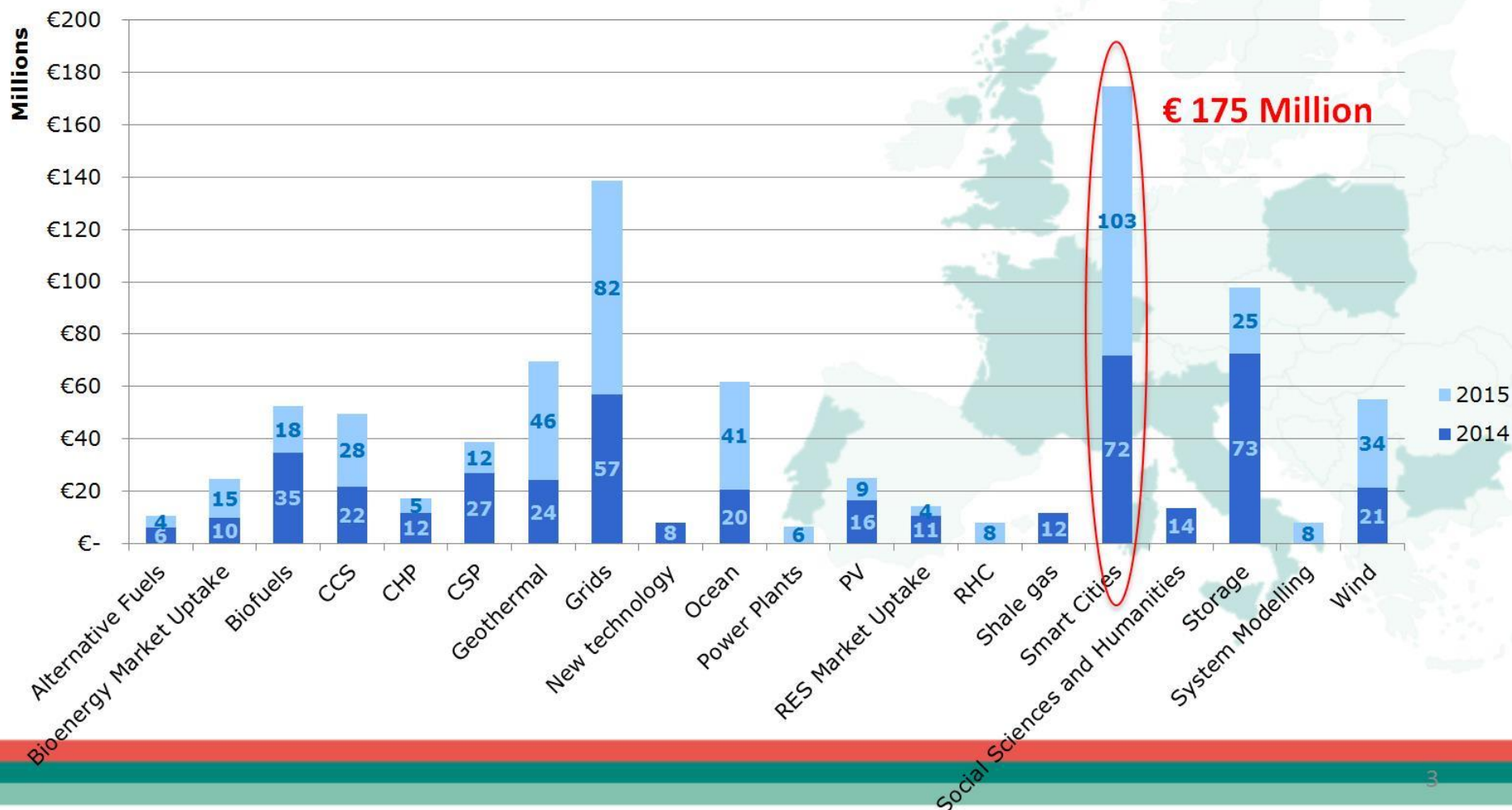


INEA - Secure, clean and efficient energy

- **Research, Innovation, Demonstration**



INEA-Managed H2020 Energy Projects - Budget per Topic Area (113 projects , € 885 Million total)



H2020 SCC Portfolio

2014

GROWSMARTER

REMOURBAN

TRIANGULUM

2015

REPLICATE

SHARING CITIES

SMARTENCITY

SMARTER TOGETHER



01 01 2016

Start date



60

Month



28045835

Total cost



24753944

EC funding



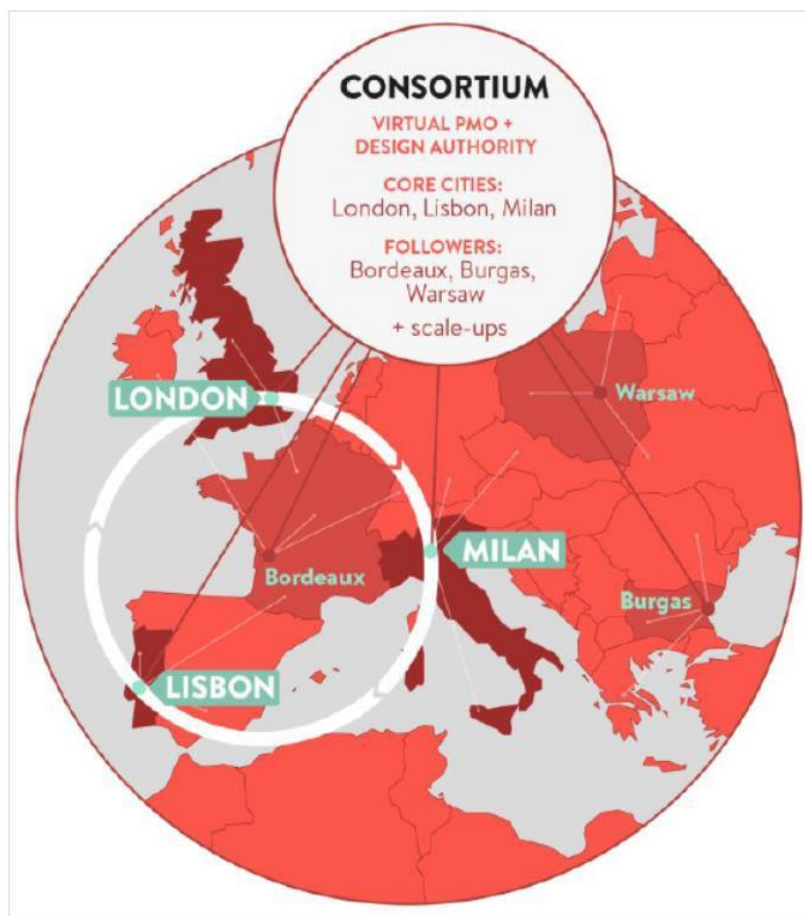
500

million
Expected private capital



100

cities
Scale-up



3 Leader Cities:



3 Fellow Cities:



10 Follower Cities in Portugal:

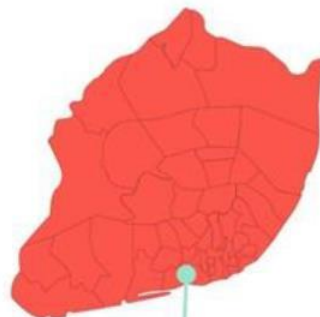
Abrantes Évora Funchal
Loures Matosinhos
Portimão Sines Sintra
Vila Nova de Gaia Viseu



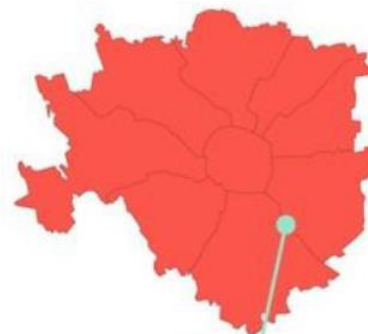
Milano



Greenwich



Downtown Area



Porta Romana

Electric Bicycles	40 bicycles (4 stations)	30 bicycles (2 stations)	150 bicycles (14 stations)
Building Retrofit	25.274 M2	23.217 M2	25.633 M2
EV Charging Points	20 (4 quick charging)	25 (1 quick charging)	60 (20 quick charging)
"Smart Parking"	300 spots	30 spots	125 spots
Carsharing EVs	28 EVs	15 EVs	62 EVs
EV's in fleets	4 EVs	5 EVs	10 EVs
"Smart Lampposts"	400 Lampposts	250 Lampposts	300 Lampposts

Our Ten Audacious Goals



Aggregate demand & achieve wide scale deployment of smart city solutions



Shift the thinking irreversibly to de-carbonised / local renewables



Deliver highly relevant common replicable innovative solutions



Shift the thinking to new models of eMobility in the Districts



Attract quantum external investment



Make real the notion of citizen engagement and participation



Make acceleration in uptake of smart solutions real



Exploit 'city data' to genuinely prove its value

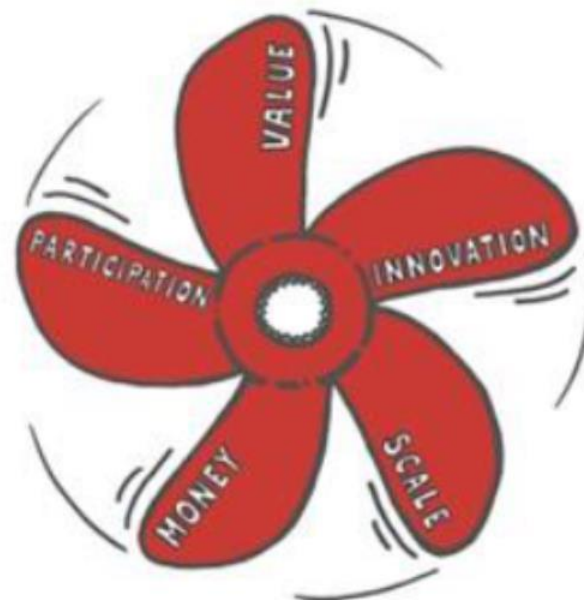


Deliver three role-model low energy efficient Districts



Strengthen local scale-up businesses in (at least) the three cities

Come on the Journey!














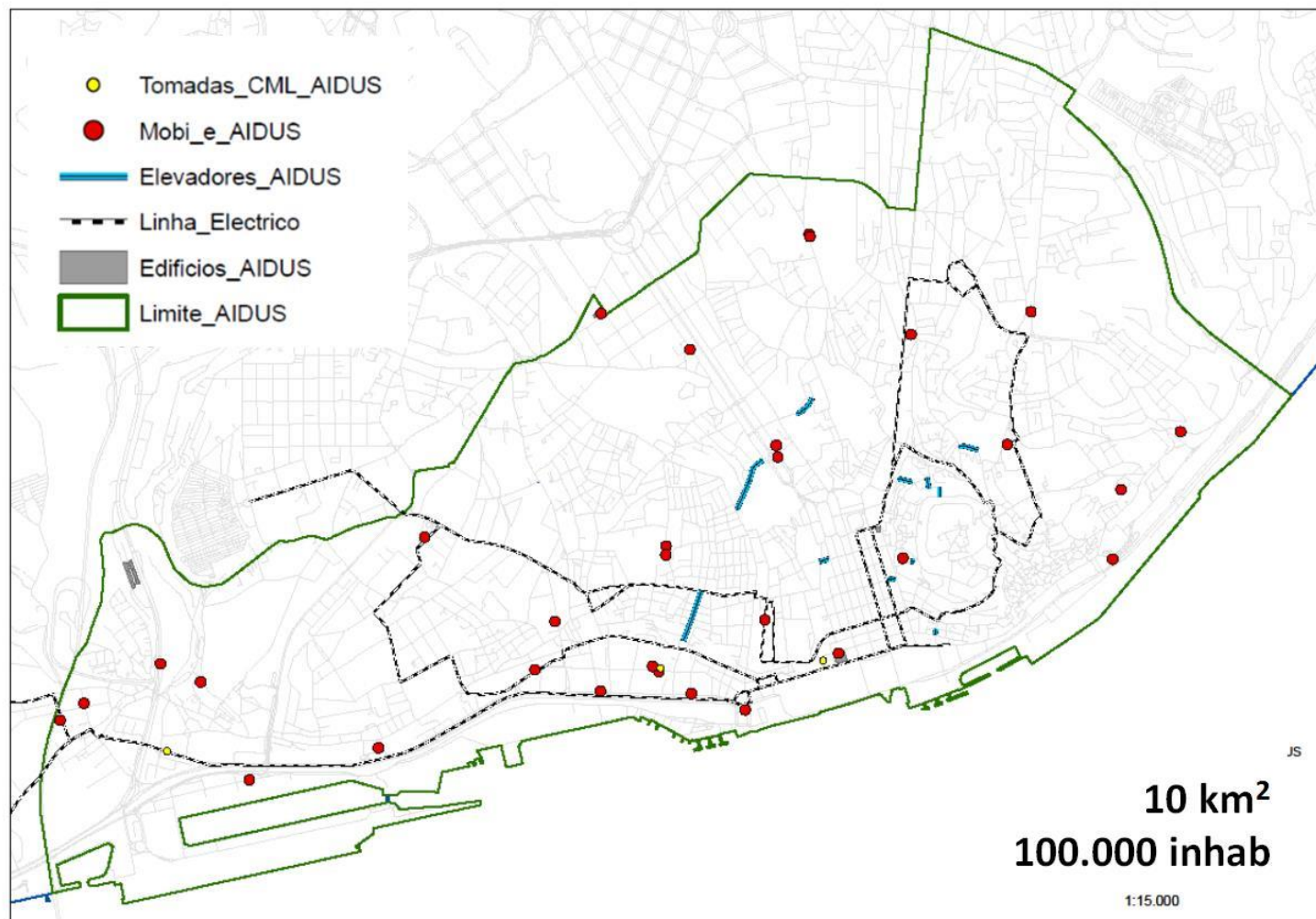
Sharing...

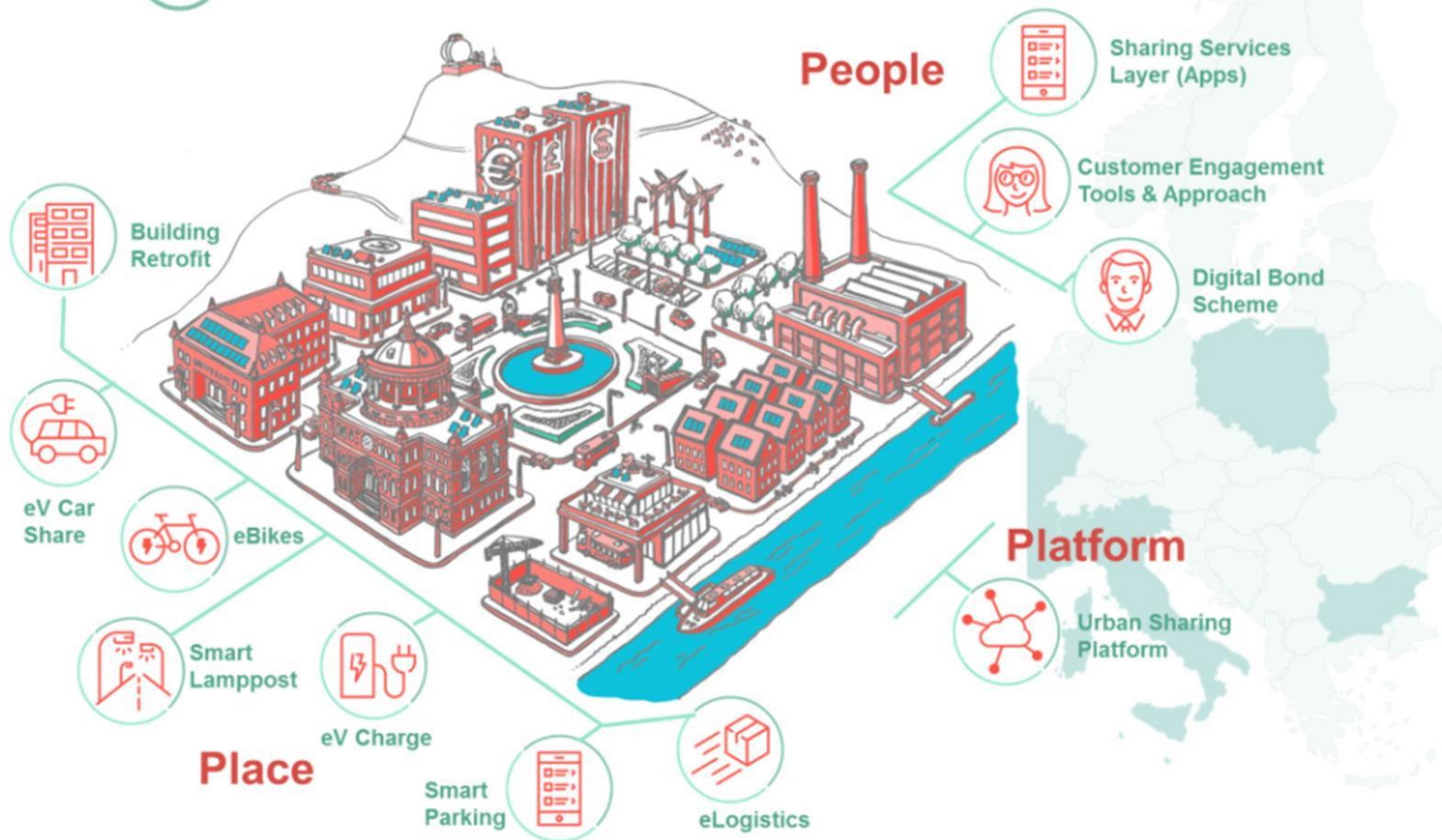
...Accelerating...

...Sustaining

Sharing Cities in Lisbon












	Citizen Engagement	Collaborative activities - Co-creation of sharing services and interfaces – District bond. Active citizen/dweller/driver/user participation for increased use of solutions.
	Building Retrofit	Quinta do Cabrinha (15000 units), 2 private residential buildings (3000 units), 1 municipal service building (5300 units) – 23 000 m2
	Sustainable Energy Management Serv.	SEMS - Real-time demand response and energy optimisation, PV production, building energy management system, eV smart charging - control and data visualisation.
	Shared eMobility	
	eV Car Sharing	65 eVs (62 new + 3 existing)
	eBike Sharing	At least 30 eBikes + 2 charging stations
	EV Charging	36 new charging points (in buildings) + 1 fast charging point + 60 existig charging points
	Smart Parking	30 smart parking sensors
	eLogistics	80 eLogistics vehicles (52 new + 28 existing) + 2 eBUS (new)
	Smart Lamp Posts	250 (light automation / wifi / environmetal sensors + ...)
	Urban Sharing Platform	Development of a common open standard reference architecture and urban sharing platform for exploitation beyond the core cities «designed by three, mean for many»





Sharing Cities in Lisbon



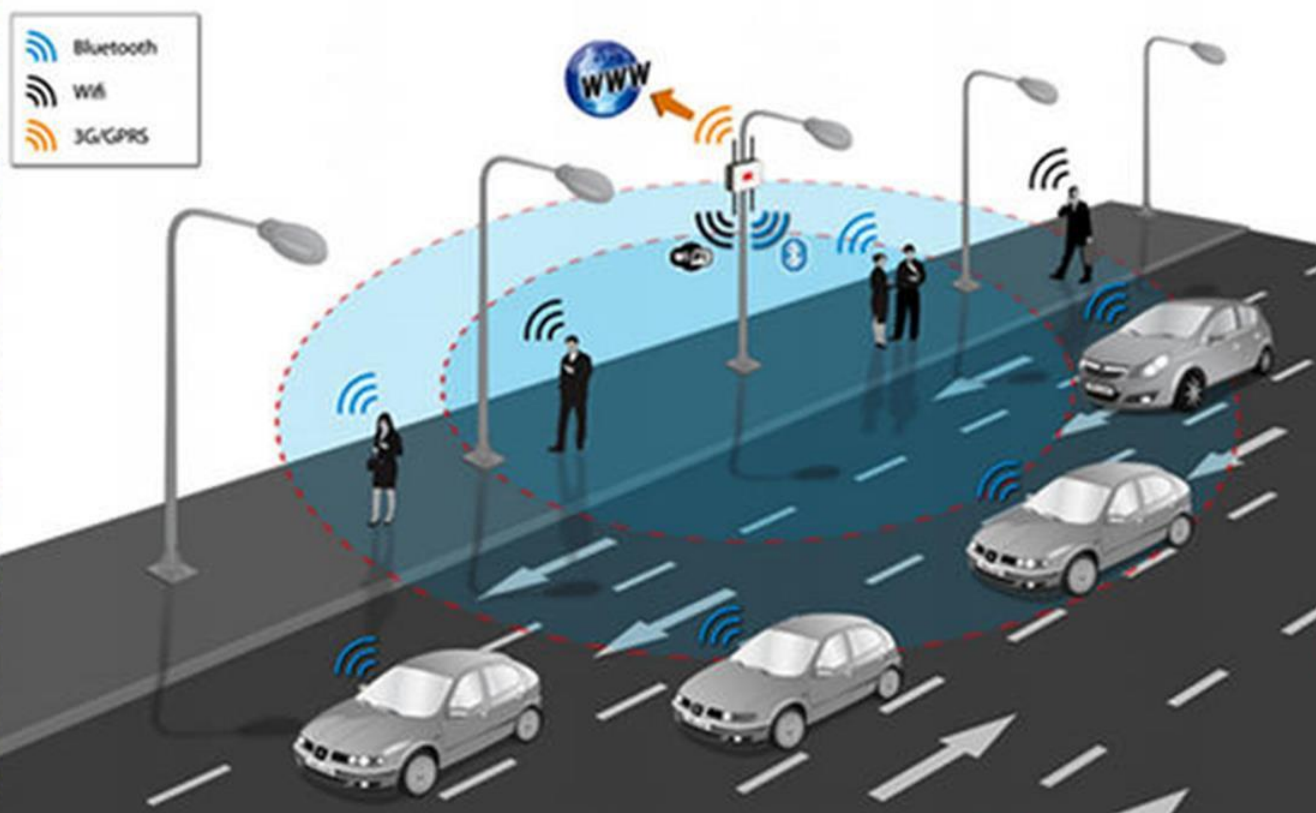
		London	Lisbon	Milan	Bordeaux	Burgas	Warsaw
	Citizen Engagement	Implement	Implement	Implement	Co-design	Validate	
	Building Retrofit	Implement	Implement	Implement	Validate	Validate	Implement
	Energy Management	Implement	Implement	Implement	Implement	Co-design	Validate
	eMobility	Implement	Implement	Implement	Co-design	Implement	Validate
	EV Car Sharing	Implement	Implement	Implement	↑	Co-design	Validate
	eBikes	Implement	Implement	Implement		Implement	Validate
	EV Charging	Implement	Implement	Implement		Implement	Implement
	Smart Parking	Implement	Implement	Implement		Implement	Implement
	EV Logistics	Implement	Implement	Implement		Co-design	
	Smart Lamp Posts	Implement	Implement	Implement	Implement	Implement	Validate
	Urban Platform	Implement	Implement	Implement	Validate	Validate	
Key:		Implement			Co-design		Validate

Sharing Cities in Lisbon





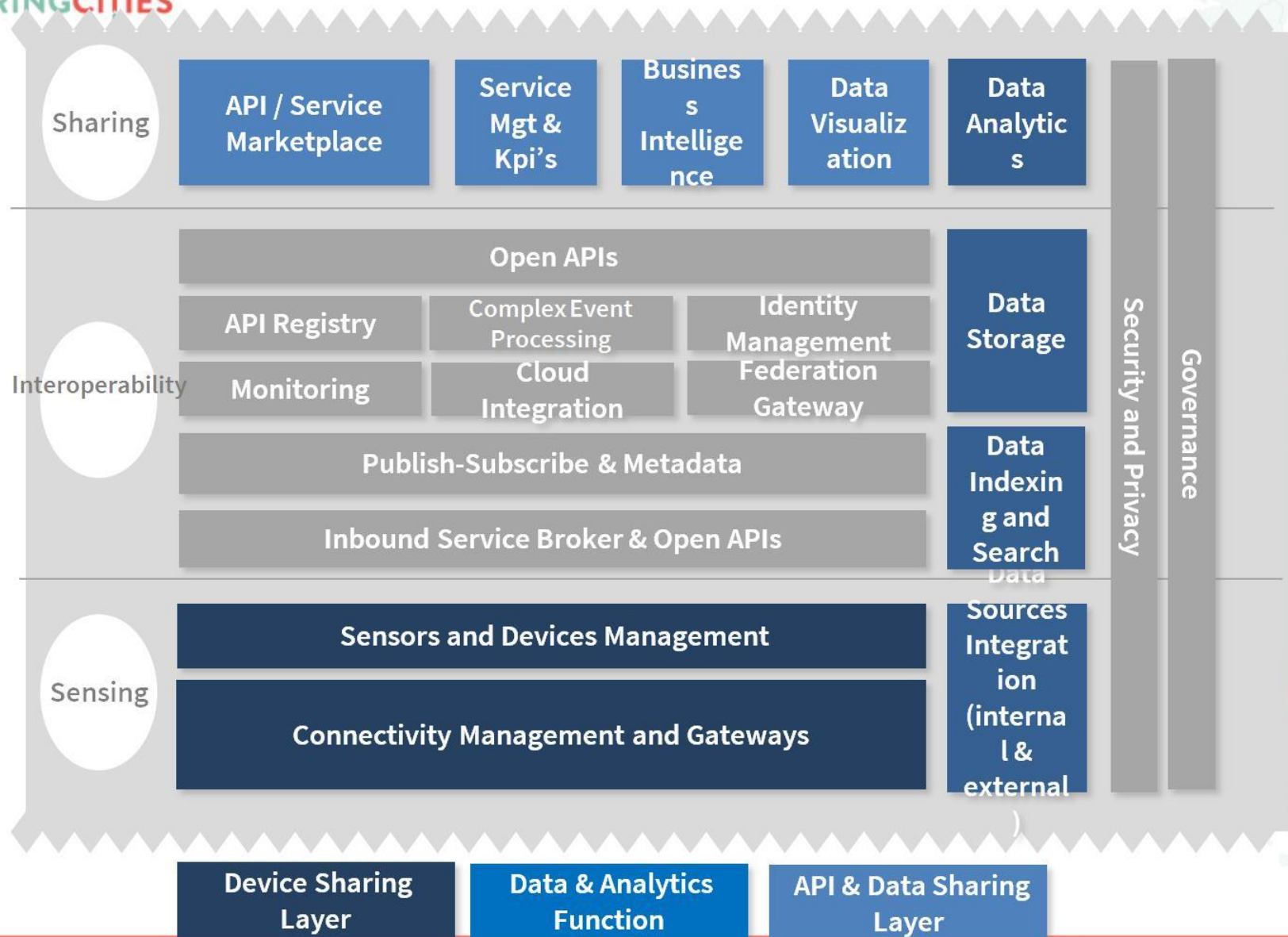








Urban Sharing Platform –Shared Capabilities



Sharing Cities in Lisbon



Building retrofit

Actions

- Social Housing Buildings (Quinta do Cabrinha);
- 2 Residential Private Buildings;
- 1 Municipal Service Building (Paços do Concelho) ;

Partners



Sharing Cities in Lisbon



Actions

- 114 new eVehicles in partner fleets and project systems;
- 36 new charging points + 1 fast charging station;
- 30 smart parking sensors;
- at least 30 eBikes + 2 eBike Stations;

Partners



Sharing Cities in Lisbon



Smart Lamppost



Energy Management

Actions

- Implementation and maintenance of a online interoperable Sustainable Energy Management System (SEMS), a Building Energy Management System (BEMS) & a Home Energy Management System (HEMS);
- Humble Smart Lamppost - 100 light automation sensors + 250 wifi sensors + 10 environmental sensors (AQ + noise);

Partners



Sharing Cities in Lisbon

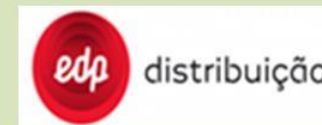


Urban sharing
Platform

Actions

- Open Standard reference architecture platform;
- Urban Sharing Platform (USP), “designed by three cities, built for many”;
- Integration of building control systems, energy management systems, eMobility, sensing, smart lampposts;

Partners



Sharing Cities in Lisbon



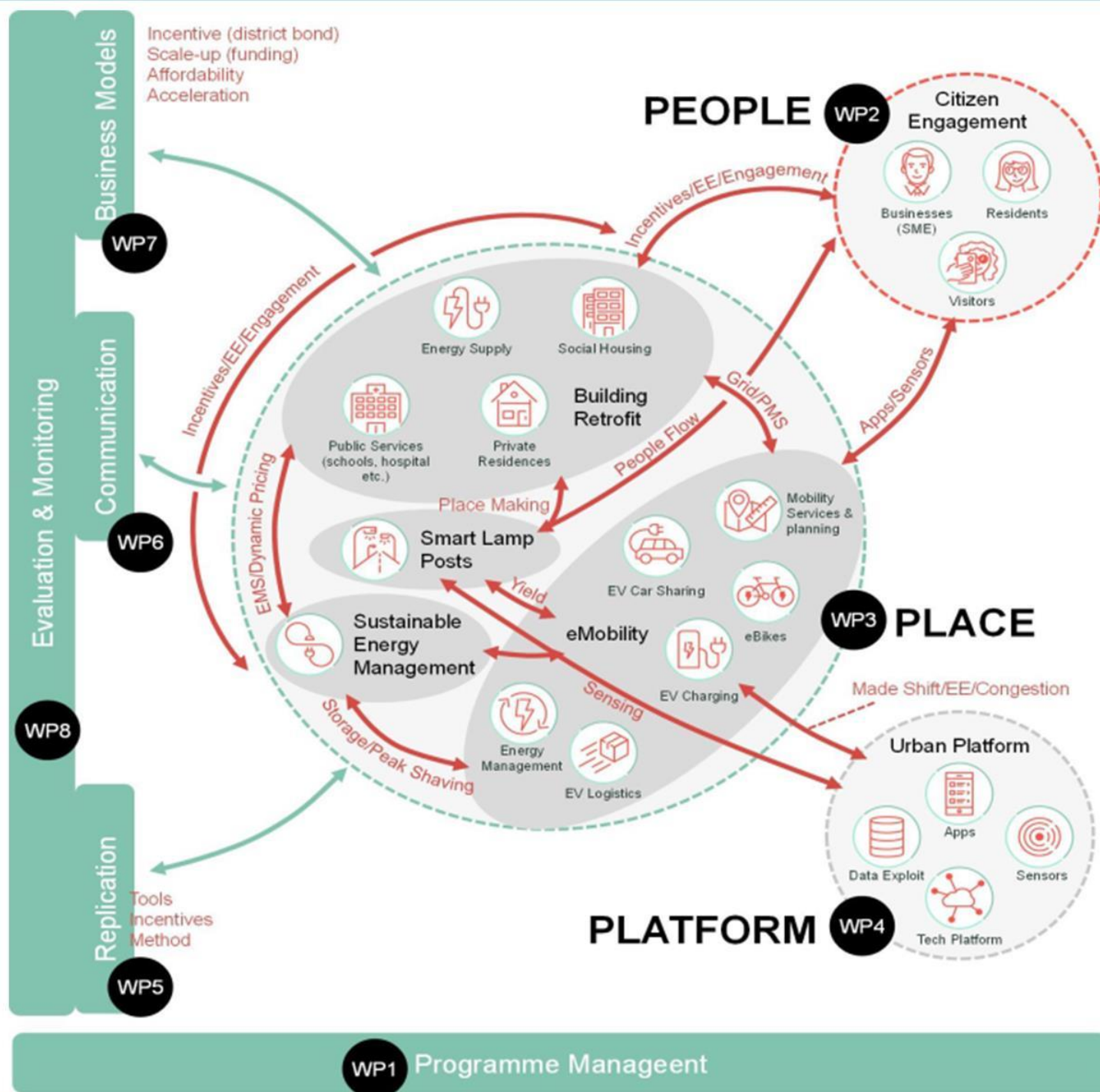
Citizen
Engagement

Actions

- Co-creation & co-design of digital services and interfaces by and for citizens and companies;
- Call for Ideas, App Contests, acceleration events and mentoring;
- Design of incentives schemes based on London's "District Bond";
- Integration of public participation existing specific initiatives;
- Digital Show Room & public free WiFi access;
- Workshops, conferences, public participation events;

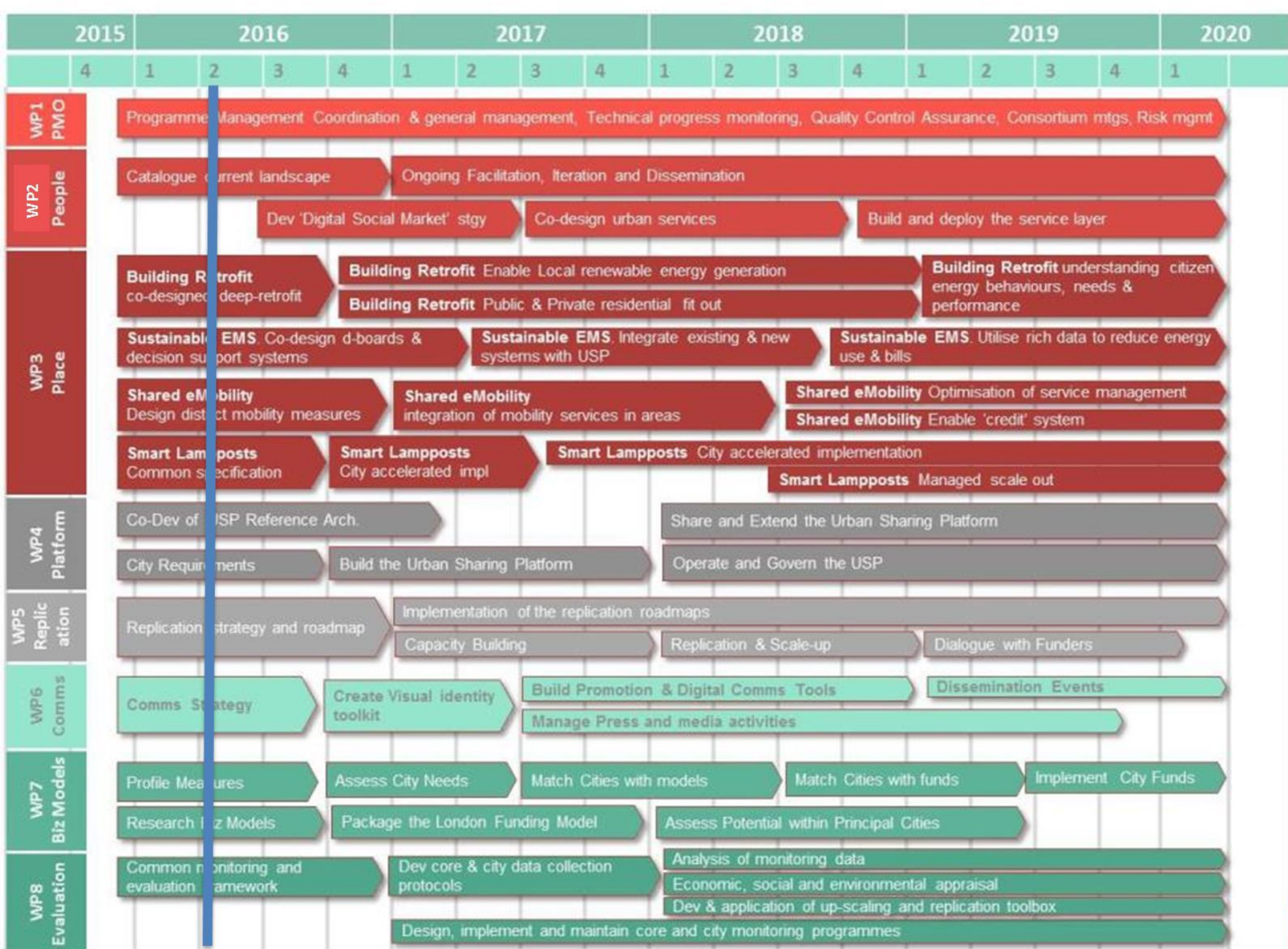
Partners





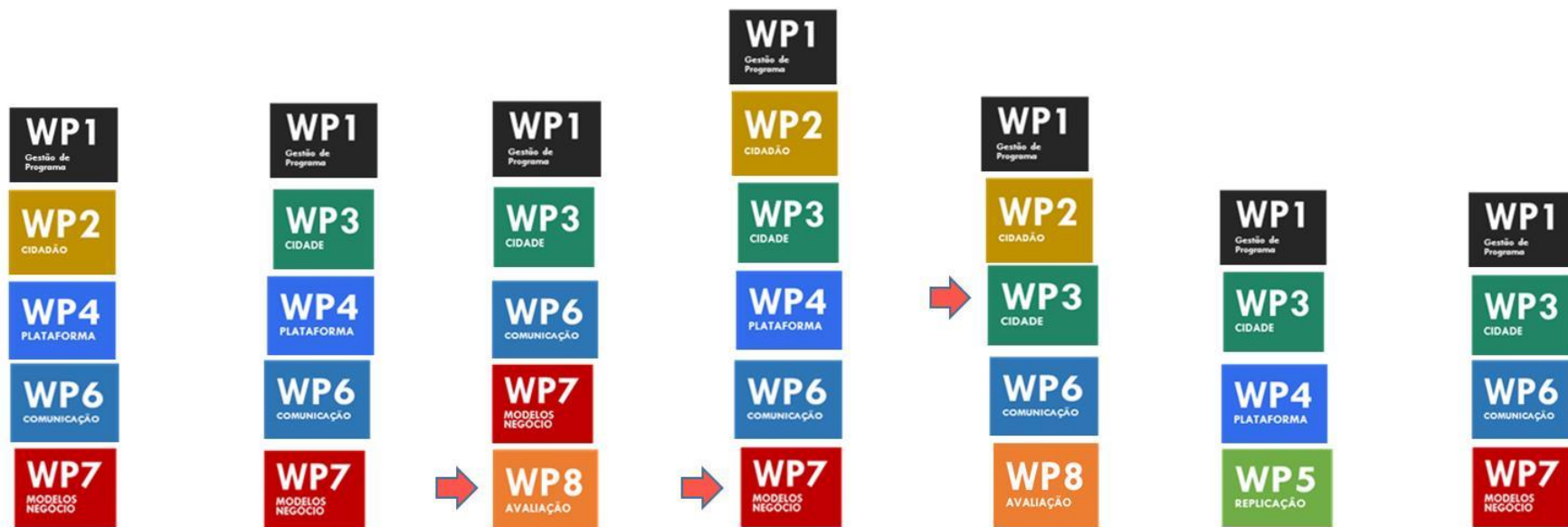
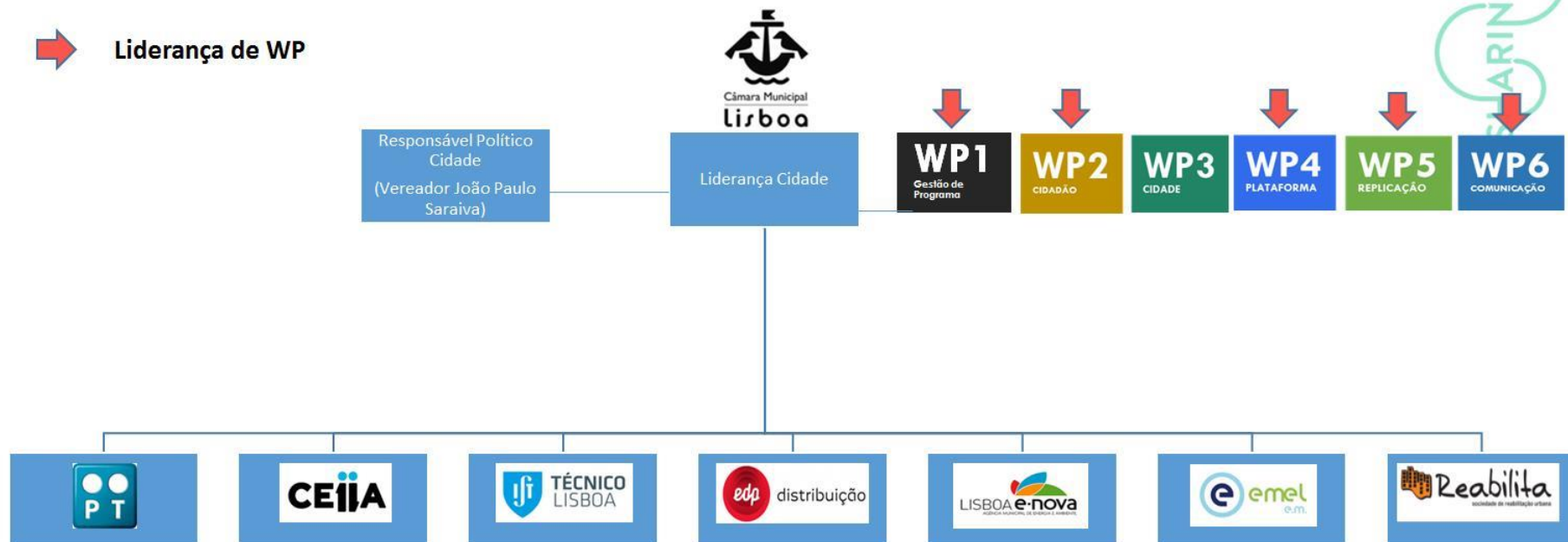
Expected results

- **Energy consumption reduction;**
 - **CO2 emission reduction +** NO_x, PM, O₃, noise monitoring & reduction;
 - **Cost reduction** in energy and mobility;
 - **Increase of eV fleets and eV charging infra-structure.**
-
- **Citizen engagement** & innovation in citizen engagement – co-design, co-creation, district bond;
 - **Awareness raising** for sustainability and behaviour change;
 - **Open data** for information and public use (application development).
-
- **Urban Sharing Platform**, aligned with the Lisbon Smart Cities Strategy, integrated with COIL, Smart Open Lisboa, MOBI-E and all the other innovation and smart cities Lisbon projects;
 - Increase of Lisbon capacity of providing **real-time information** and system **remote and integrated control**;
 - Increase Lisbon **economy dynamics**;
 - Monitoring through management **indicators and KPI**;
 - Contribute for the creation of a Lisbon **urban innovation eco-system**.

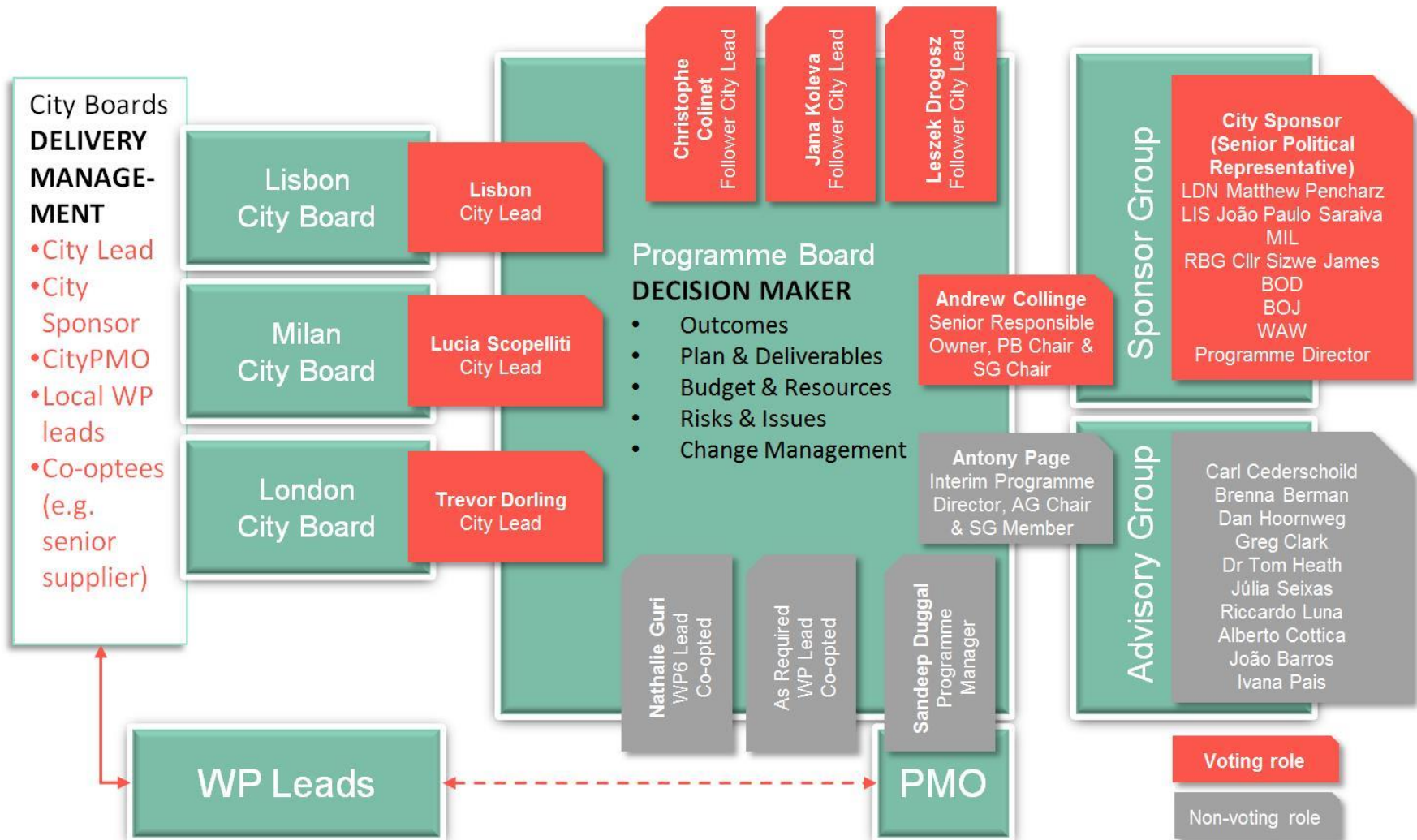


Consórcio Local Lisboa

➔ Liderança de WP



Sharing Cities Programme Governance - summary

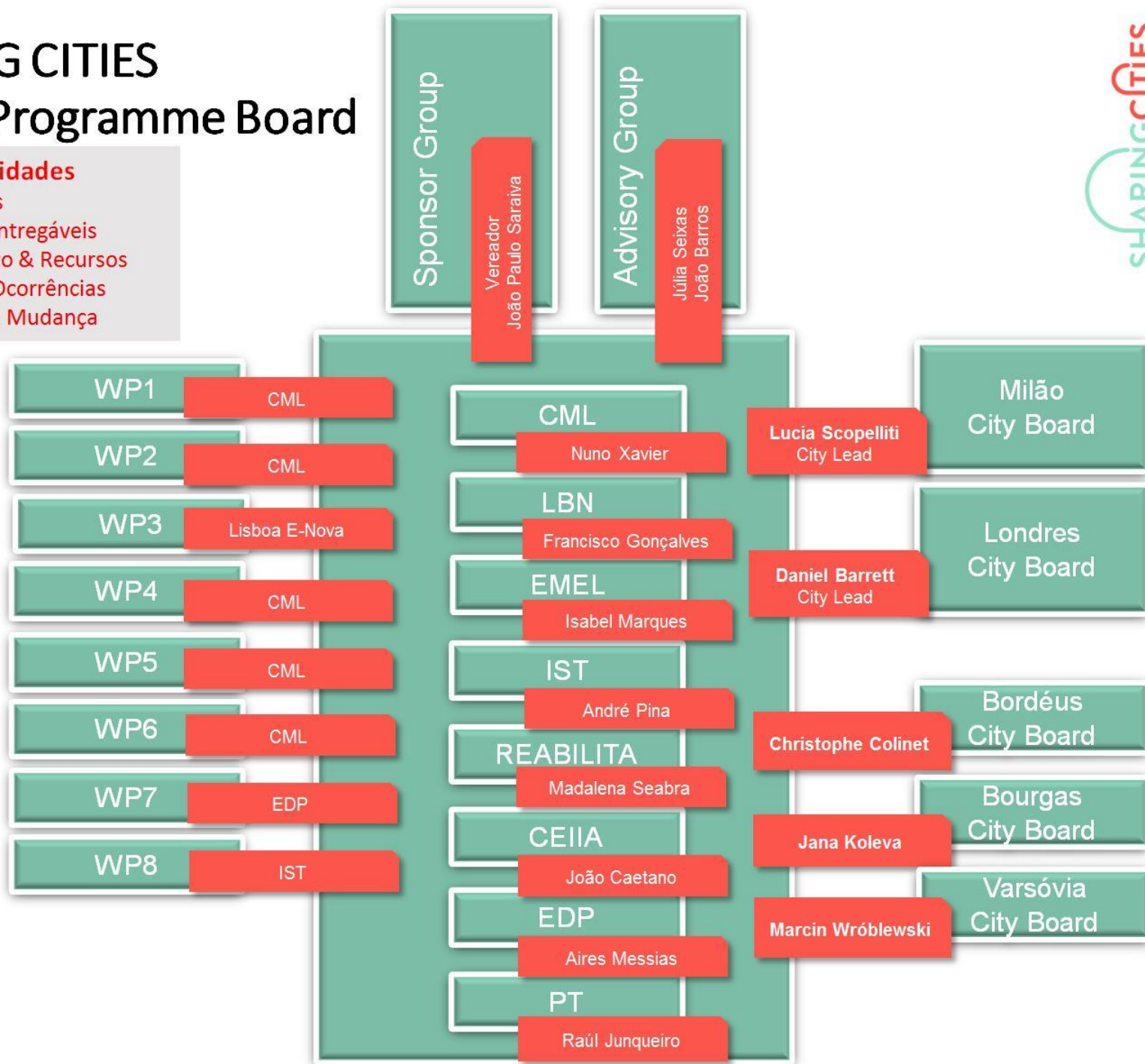


SHARING CITIES

Lisboa Programme Board

Responsabilidades

- Outcomes
- Plano & Entregáveis
- Orçamento & Recursos
- Riscos & Ocorrências
- Gestão da Mudança





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Câmara Municipal

Lisboa

Thank you!