VISION

LISBON. One of the most smart, competitive, innovative and creative cities of Europe

City challenges

- Decrease of resident population in the city area from 800 000 inhabitants in the 80´s to 550 000 today;
- Increase in population in the metropolitan area to 2 800 000 inhabitants in 2011;
- Mass use of individual automobile;
- In 1981 public transport was the main means of transport in home to work or school trips with a 67% share (the automobile had a 14% share). Nowadays the automobile has 48% and public transport 34%;
- Since 2009 the public transport system of the city lowered it´s offer in 19%;

City challenges

- Load caused by EV charging on the electric distribution grid;
- Illegal occupation of EV parking/charging spots by internal combustion cars;
- Lack of a “sharing” vehicle culture by the population;
- Data integration and single management platform for the city infrastructure;
- Regulations;
- Migrating the portuguese pilot E-Mobility program to a more flexible model;
- Making the TCO of a EV more competitive;

Lisbon: Challenges and Opportunities

2014 → 2030

- Ageing Society
- Urban Rehabilitation
- Employment and Employability
- Reshaping Economic Profile
- Promoting Knowledge and Innovation
- Business Friendly
- Smart City

BUILDING SMART CITIES TOGETHER

SHARINGCITIES

What's Sharing Cities?

An introduction to the vision, the objectives, the approach and the work packages of this complex programme

Rui Bochmann Franco

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TEN AUDACIOUS GOALS

1. Aggregate demand and deploy smart city solutions

89 cities engaged and
50 cities using products

2. Deliver common and replicable innovative models

10 replicable solutions

3. Attract external investment

€500 million in external investment

4. Accelerate take-up of smart city solutions

identify three business models that prove the acceleration of uptake (e.g. refurbishment, smart lamp posts)

5. Pilot energy efficient districts

reduce energy bills by €600,000 per annum for 15,000 district residents

6. Shift thinking irreversibly to local renewable energy sources

100 cities engaged and
50 cities using products

7. Promote new models of e-mobility

make at least 10% of local citizens choose electric over fossil fuel vehicles

8. Successfully engage with citizens

Prove the active participation of at least half of the 15,000 locals affected by the building renovations

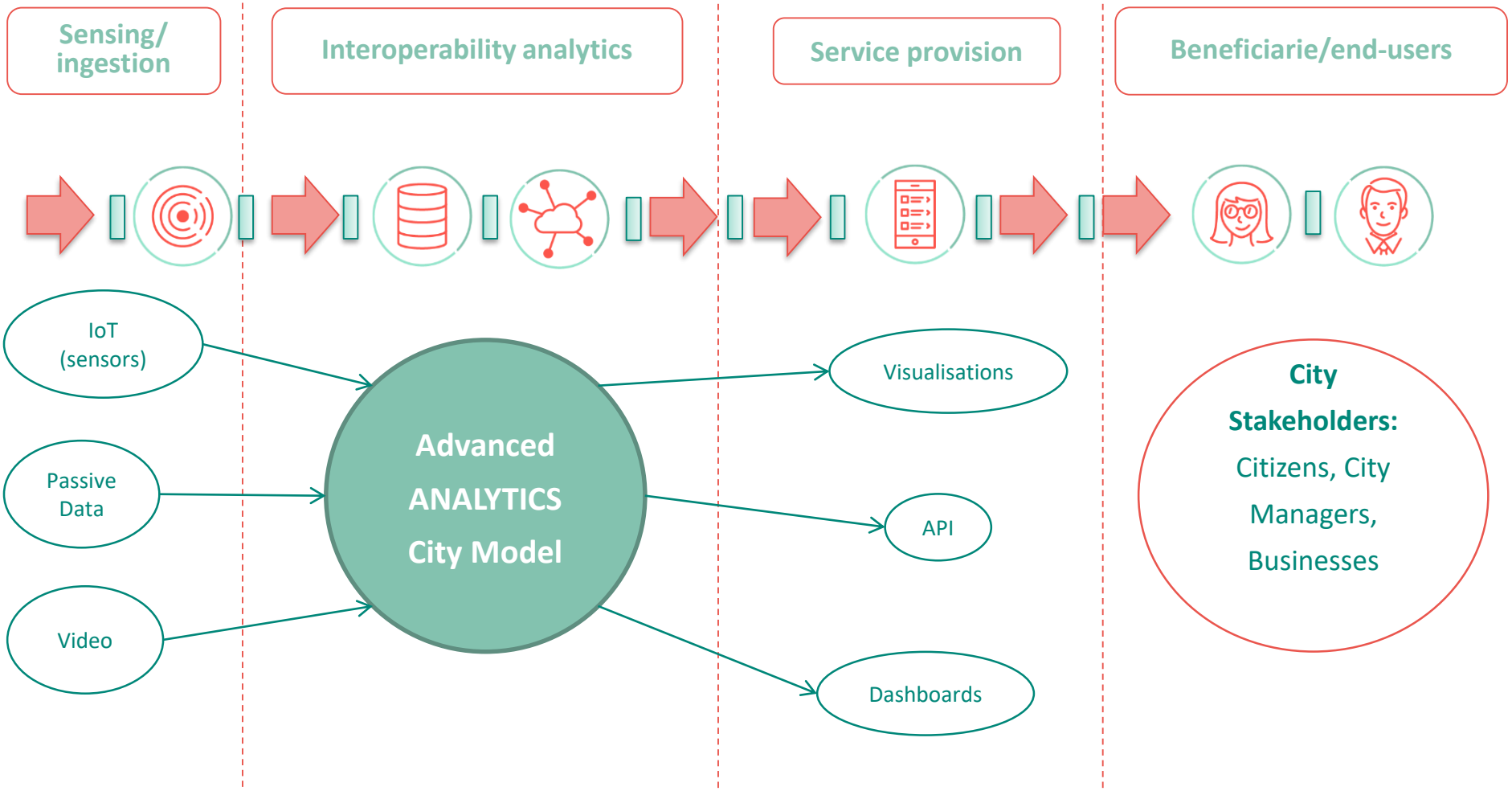
9. Exploit city data to maximum effect

Demonstrate the real value of city data for users, including SMEs and startups. Achieve a twofold increase in datastore use by 2020

10. Foster innovation at local level, promote the creation of new businesses and jobs

Create at least 100 jobs in three districts

USP Functionality

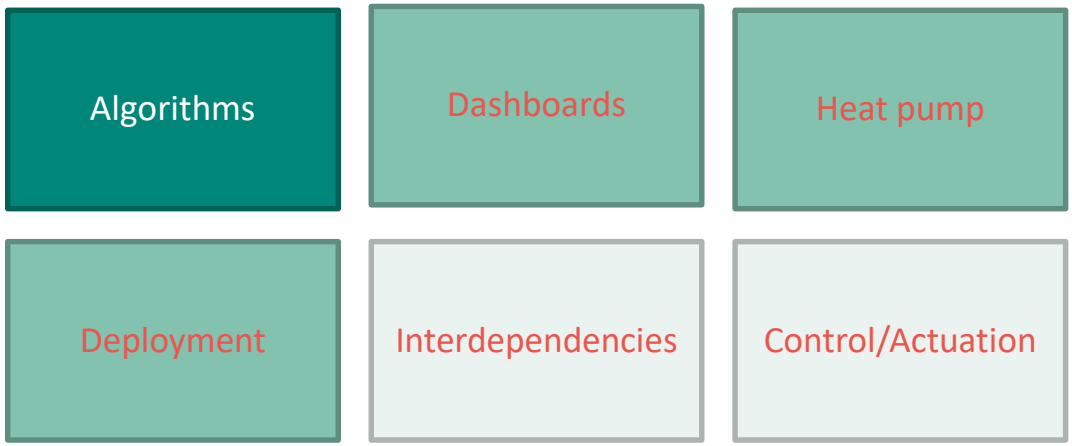


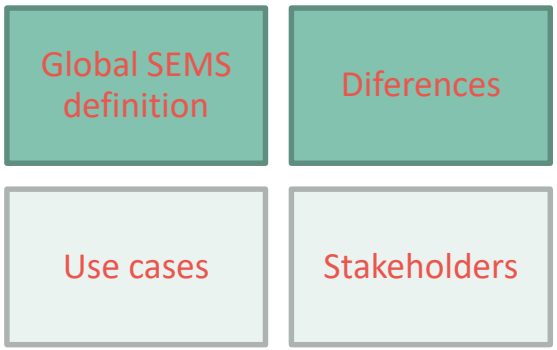
Sustainable Energy Management Systems

- Put in place a sustainable energy mangement system (SEMS) that integrates and optimises energy (e.g. demand and supply) from all sources in the districts (interfacing with city wide systems). Provide a means that supports citizens in being incentivised to get informed and understand their energy consumption with the aim of becoming more efficient with their use and reduce their bills.

- SEMS:
  - Collates all project data and carries out analytics, pushing to urban sharing platform
  - Provides control and optimisation functions.

- Heat network optimisation
- Building mounted PV
- Building energy management
- Local grid-connected PV Microgrid management
- Forecasting ev/pv (district level)
- Demand Side Response (DSR)
- Integration with the E015 platform





E-Mobility

eV car share

eV Charge

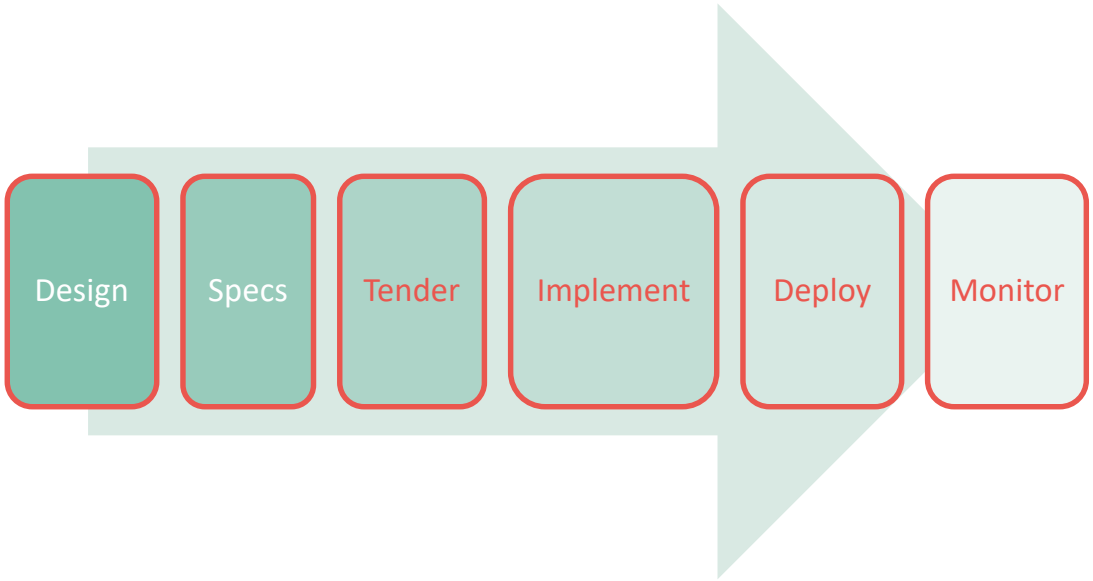
eLogistics

eBikes sharing

Smart parking

To implement novel means to support shift from high to low carbon mobility, through implementing a number of shared eMobility infrastructures and services

- Prediction of availability of mobility mode
- User-based bike reallocation with rewards
- Mobility island / Hub
- Optimization of parking space usage
- Optimization of logistics EV routing



Which features the USP should have?

- Awareness (reporting and alerts)
- Measure the relationship between behaviour, actions and outcome
- Predictive models for pollution
- Predictive models for energy
- Prescriptive models and actions
- Optimization algorithms and predictive models for demand
- Predictive (or prescriptive) models for demand
- Measure the relationship between whether and others and energy costs
- Reporting (short term) and measure the relationship between air quality and health (long term)

PORTUGUESE ELECTRIC MOBILITY PROGRAM
MOBI.E MODEL PRINCIPLES

MOBI.E
ELECTRIC MOBILITY

- **FOCUS ON THE USER** / CITIZEN
- FAIR, ADVANTAGEOUS AND **COMPETITIVE PRICING** WHEN COMPARED TO ICE VEHICLE
- **UNIVERSAL ACCESS** OPEN TO EVERY MANUFACTURER, UTILITY, PRIVATE OPERATOR
- **INTEGRATION** OF INFORMATION, ENERGY AND FINANCIAL FLUXES
- ATTRACTION OF **PRIVATE INVESTORS**
- TRULY **NATIONAL SCALE**, ANTICIPATING MASSIFICATION OF ELECTRIC VEHICLES.

eMob eV Charge


eMob eV Charge
P
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MOBIE
MOBIE
51-JZ-53
CITROËN C-ZERO


ÖRBITA
emel
mais mobilidade
melhor cidade
Câmara Municipal
lisboa
eMob eBikes
MOBILIDADE SUSTENTÁVEL | BIKE SHARING

SHARINGCITIES

Ciclovias em Lisboa

eMob eBikes

SHARINGCITIES

eMob Smart Park

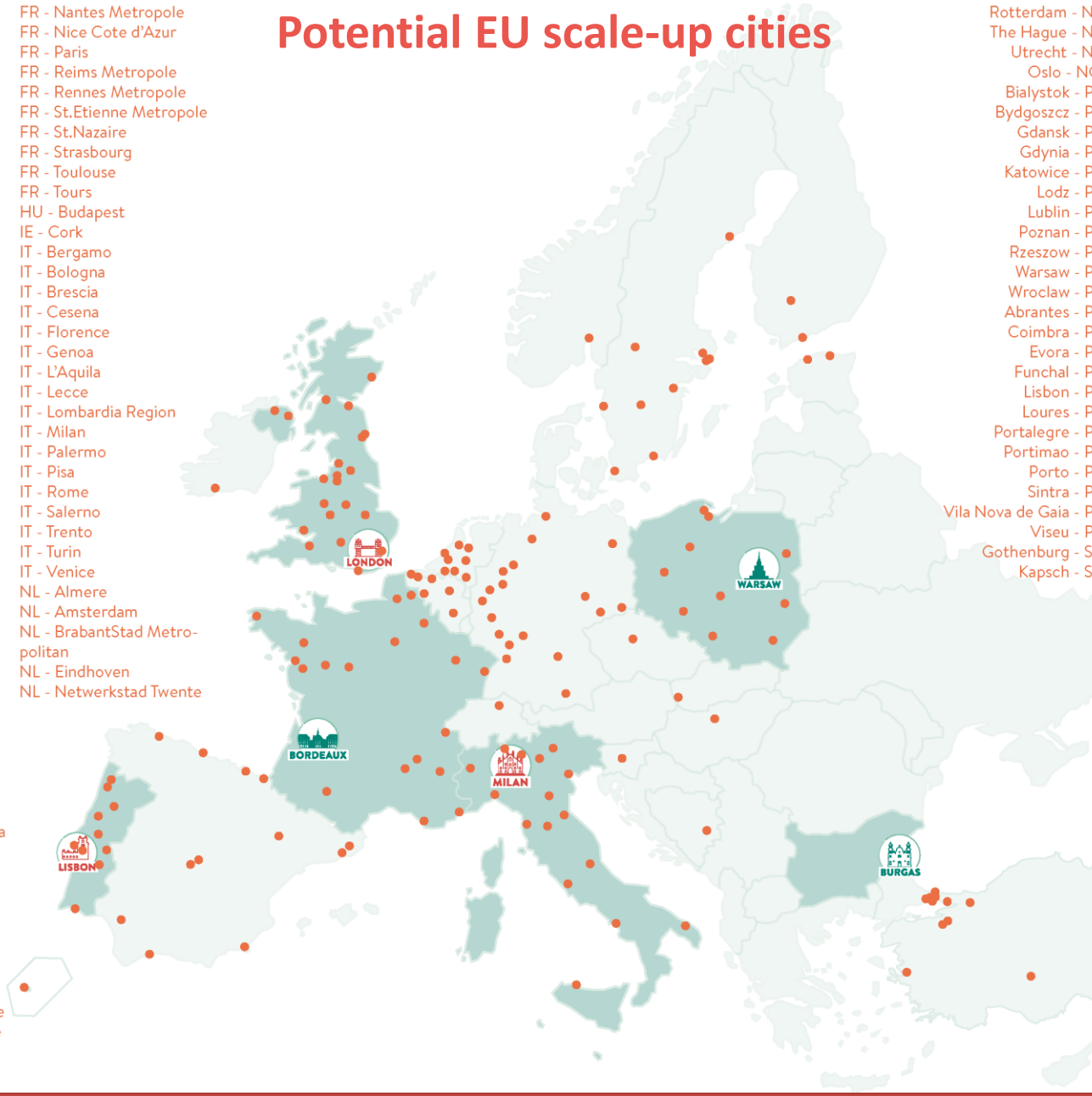
SHARINGCITIES

eMob eV Share

eMob eLogistics

Potential EU scale-up cities

BA - Sarajevo
BE - Antwerp
BE - Brussels Region & City
BE - Charleroi
BE - Ghent
BE - Kortrijk
BE - Ostende
BG - Burgas
CH - Geneva
CH - Zurich
CZ - Prague
DE - Berlin
DE - Bonn
DE - Bremen
DE - Chemnitz
DE - Cologne
DE - Dortmund
DE - Dresden
DE - Dusseldorf
DE - Essen
DE - Frankfurt
DE - Hagen
DE - Hamburg
DE - Karlsruhe
DE - Leipzig
DE - Mannheim
DE - Munich
DE - Munster
DE - Nuremberg
EE - Rakvere
EE - Tallinn
ES - Barcelona
ES - Bilbao
ES - Fuenlabrada
ES - Gijon
ES - Madrid
ES - Malaga
ES - Murcia
ES - Santander
ES - Saint Sebastian
ES - Seville
ES - Terrassa Metropolitan Area
ES - Zaragoza
FI - Espoo
FI - Tampere
FR - Amiens Metropole
FR - Angers Loire Metropole
FR - Bordeaux
FR - Brest Metropole Oceane
FR - Grand Nancy
FR - Grenoble Alpes Metropole
FR - Lille Communaute Urbane
FR - Lyon
FR - Marseille
FR - Nantes Metropole
FR - Nice Cote d'Azur
FR - Paris
FR - Reims Metropole
FR - Rennes Metropole
FR - St.Etienne Metropole
FR - St.Nazaire
FR - Strasbourg
FR - Toulouse
FR - Tours
HU - Budapest
IE - Cork
IT - Bergamo
IT - Bologna
IT - Brescia
IT - Cesena
IT - Florence
IT - Genoa
IT - L'Aquila
IT - Lecce
IT - Lombardia Region
IT - Milan
IT - Palermo
IT - Pisa
IT - Rome
IT - Salerno
IT - Trento
IT - Turin
IT - Venice
NL - Almere
NL - Amsterdam
NL - BrabantStad Metro-politan
NL - Eindhoven
NL - Netwerkstad Twente



Rotterdam - NL
The Hague - NL
Utrecht - NL
Oslo - NO
Bialystok - PL
Bydgoszcz - PL
Gdansk - PL
Gdynia - PL
Katowice - PL
Lodz - PL
Lublin - PL
Poznan - PL
Rzeszow - PL
Warsaw - PL
Wroclaw - PL
Abrantes - PT
Coimbra - PT
Evora - PT
Funchal - PT
Lisbon - PT
Loures - PT
Portalegre - PT
Portimao - PT
Porto - PT
Sintra - PT
Vila Nova de Gaia - PT
Viseu - PT
Gothenburg - SE
Kapsch - SE

Karlstad - SE
Linkoping - SE
Malmo - SE
Nacka - SE
Ronneby - SE
Solna - SE
Stockholm - SE
Umea - SE
Bratislava - SK
Ljubljana - SL
Bakirkoy - TR
Besiktas - TR
Beyoglu - TR
Bursa - TR
Gaziantep - TR
Istanbul - TR
Izmir - TR
Konya - TR
Nilufer - TR
Ozmangazi - TR
Pendik- TR
Sanliurfa - TR
Serdivan - TR
Aberdeen - UK
Belfast - UK
Birmingham - UK
Brighton and Hove - UK
Bristol - UK
Cardiff - UK
Derry - UK
Edinburgh - UK
Glasgow - UK
Huddersfield / Kirklees - UK
Leeds - UK
Liverpool - UK
London - UK
Manchester - UK
Newcastle/Gateshead - UK
Nottingham - UK
Oxford -UK
Peterborough - UK
Preston - UK
Southend - UK
Sunderland - UK
Wolverhampton - UK

Global link scale-up cities

…and now S.Caetano/SP!

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