



# Replication Cluster kick-off event

Bolzano, 27th May 2015



**Torres Vedras**  
.....  
Câmara Municipal

**Carlos Figueiredo**  
TORRES VEDRAS – PORTUGAL

# Territorial Context

## Location and Demography:

West Region of Portugal

40 Km north from Lisbon

407 Km<sup>2</sup>; 80.000 inhab.



## Climate:

The strong Atlantic influence provides mild temperatures, both in summer and winter

Torres Vedras has an average of 2479 hours/year of clear sky and 145kcal/cm<sup>2</sup>.year of solar radiation.



# RES Potential

## Wave energy

**20 km of coastal areas (Quality Coast destination)**

**Wave potential evaluated in 20MW per km of coast.** This means that the 20 km available could in theory supply about 50% of the total needs of the region.



## Wind energy

There are 9 large wind parks adding up to 112MW installed and producing of 332 GWh, representing 100,5% of the total of electricity consumption in the region.



## Photovoltaic

The PV plants counts 328 installations adding up to 1.1MW, responsible for an estimated production of 1760 MWh, which represent 0.11% of the total energy consumption.



# Profile of the City



## Characterization:

20.000 inhabitants

Important regional center

City with a rich cultural heritage (Roman and Arabic presence)

Historic Centre well preserved



## Main Constraints:

Very low energy efficiency buildings

Very low efficiency street lighting

Predominance of fossil fuel in vehicles (GGE effects)

Low resilience to climate change effects such as urban floods

# Ambition and Strategy

## Objectives:

To implement innovative, smart and EE solutions both in buildings as in public lighting system and electricity distribution grid

To improve the performance of the city in urban cooling and heating matters

To provide technical knowledge to private owners and residents to support their effort to improve EE of their buildings

To implement sustainable mobility solutions (electric vehicles, pedestrian and cycling routes)

To implement climate adaptation solutions in the design of the city in order to reduce flood impacts



# Plans, programs and strategies in progress



**Torres ao Centro**

Integrated Operation of Urban Regeneration



**Agostinhas**

Public System of Urban Bikes



**Mobi.E**

Electric Mobility System



**EEC**

Environmental Educational Center



**RENER**

Portuguese Network of Smart Cities



**SIGE**

Integrated System of Parking Management



**EcoUrbe**

Pilot project of RES solutions in an urban context



Mayors commitment to reduce 20% CO2 until 2020



SUMP – Sustainable Urban Mobility Plan



Municipal Strategy for Climate Change Adaptation

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# Main Challenges to Reach Objectives

## **Economic challenges:**

- Sources of funding
- Cost-effectiveness innovative/experimental solutions

## **Cultural and lifestyle habits:**

- People habits concerning mobility
- Consumption habits concerning energy savings

## **Technological challenges:**

- Availability and fiability of the solutions
- Cost of maintenance and technical knowledge required

## **Local basis adjustments**

- Level of adequacy between proposal solutions and the specific characteristics of the urban system of Torres Vedras
- (In)existence of local technical support for some of the potential innovative solutions

# Expectations

To know and to learn with the demonstrator cities experiments, as well as the other cities involved in the project

To receive training and technical support from the Replication Cluster

To evaluate the similarities and differences between these cities and Torres Vedras, in order to define the potential level of adequacy of the proposal solutions

To identify the main domains of action from the urban regeneration point of view

To be part of a European project, in which all the cities involved can contribute with their own experience to find better common solutions





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**OBRIGADO | THANK YOU | GRAZIE**