POCITYF

How to overcome regulatory and social acceptance-related barriers of heritage sites against Smart Cities solutions' deployment?

Sustainable Places | 27 Oct 2020

This project has received funding from the European Union's Horizon 2020 research and Innovation programme under grant agreement N° 864400.

POCITYF in a Nutshell

• OBJECTIVES

To create, demonstrate and deliver **a set of Positive Energy Blocks(PEB)** with a **strong emphasis on cultural and historical protected areas**

- Combining PEB with grid flexibility, e-mobility, ICT technologies and citizen engagement strategies, while respecting the urban cultural heritage
- Engaging city administrators, planners, universities and citizens in a coordinated effort to model the future development of European cities.

• KEY FACTS

- 46 partners from 13 European Countries
- Budget: 22.5 M€
- 5 years' project
  - Kick-off: October 1st, 2019
  - End: September 30th, 2024
- Lighthouse cities: Alkmaar (NL) and Évora (PT)
- Fellow cities: Bari (IT), Celje (SLO), Granada (SP), Hvidovre (DN), Ioannina (GR) and Ujpest (HUN)

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POCITYF – 4 Transition Tracks: solutions' repository

Storage solutions and energy management P2P for network flexibility

- Batteries 2nd life (batteries from used car modules)
- Advanced energy management Systems
- Markets P2P

Citizen-driven innovation in co-creating smart city solutions

- Social Innovation Mechanisms for Citizen Engagement
- Interpretative Centre
- Interoperable, Modular and Interconnected Ecosystem
- New apps

Innovative solutions for buildings and Positive Energy Blocks

- Integration of Renewable Sources of Energy
- Energy efficiency measures
- Remodeling of Building (Retrofit)
- Circular Economy

e-Mobility and MaaS

- Smart charging
- V2G
- Shared mobility service

Évora

Smart City in the context of a World Heritage Site

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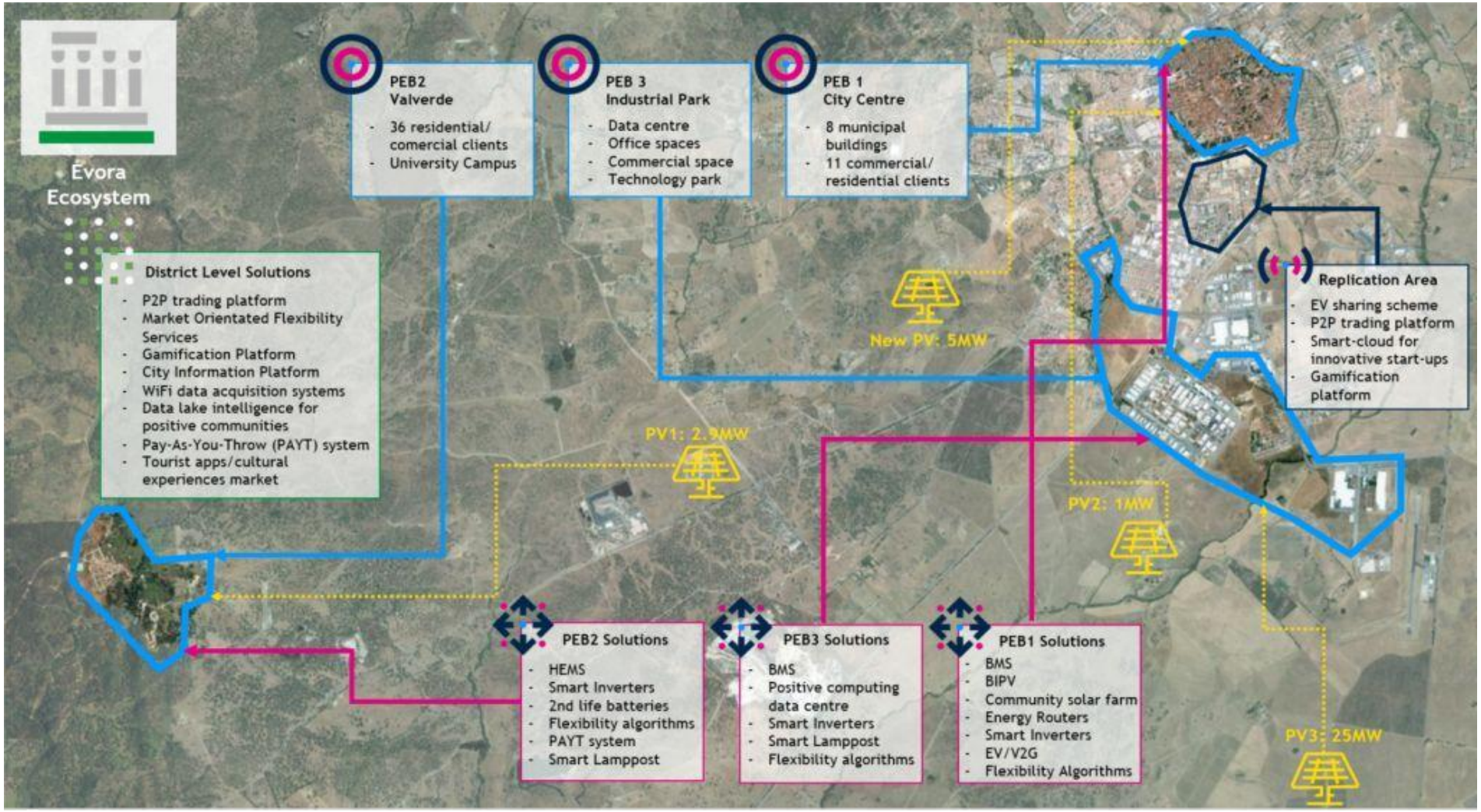
Évora LH Ecosystem



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Évora

Overcoming Patrimonial Constraints

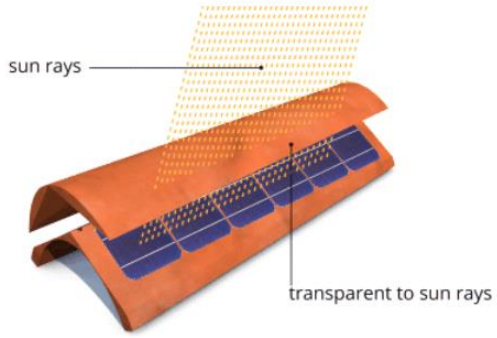
01

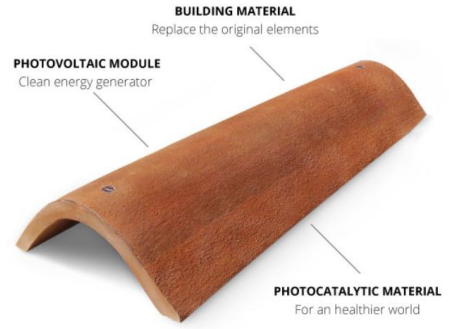
Building Integrated Photovoltaics (BIPV)

8 Municipal buildings will accommodate 5 different solutions of BIPV

- In the Historic Center of Évora, **a World Heritage Site**, all buildings are protected and are subject to very strict rules from Cultural Heritage Administration (DRC) to guarantee the preservation of patrimony value.

- DRC **strict policies** regarding the **buildings' façade and roofs** led to more exhaustive analysis and adjustments regarding the envisioned solutions in the GA





Overcoming Patrimonial Constraints

02

5 MW Community Solar Farm

Allow citizens living in the protected areas to generate and consume renewable energy

- Conceive a strategy capable of deploying the CSF following the new PT legislation on Energy Renewables Communities (CER)
- Guarantee the attractiveness of the CSF business model capable of engaging the different stakeholders from Évora ecosystem

03

RES Generation > Consumption

PEBs premise opens the door to new and creative solutions

- Yearly positive balance, means that the excess of generation in some periods can be shared with other stakeholders
- Buildings can play an important role as a CER

Overcoming Patrimonial Constraints

04

Citizen-Driven Innovation in Co-creating Smart City Solutions

- **Social Innovation Mechanisms towards Citizen Engagement**

  (Digital transformation in Social Innovation // Gamification platform // Tourist apps // Cultural experiences market (mobile app) // …)

- **Open Innovation for Policy Makers and Managers**

  (TIPPING approach // Eco-Acupuncture)

- **Interoperable, Modular and Interconnected City Ecosystem**

  (City Urban Platform // Wi-fi data acquisition systems // Data lake intelligence for positive communities // Smart-cloud for innovative Startups // Data acquisition systems // City Data Hub)

Primarily focus on **improving citizens' quality of life** and increasing city efficiency by **involving citizens in the early development**, design and evaluation phases of the solutions

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Thank you for your kind attention.

João Formiga | EDP NEW

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