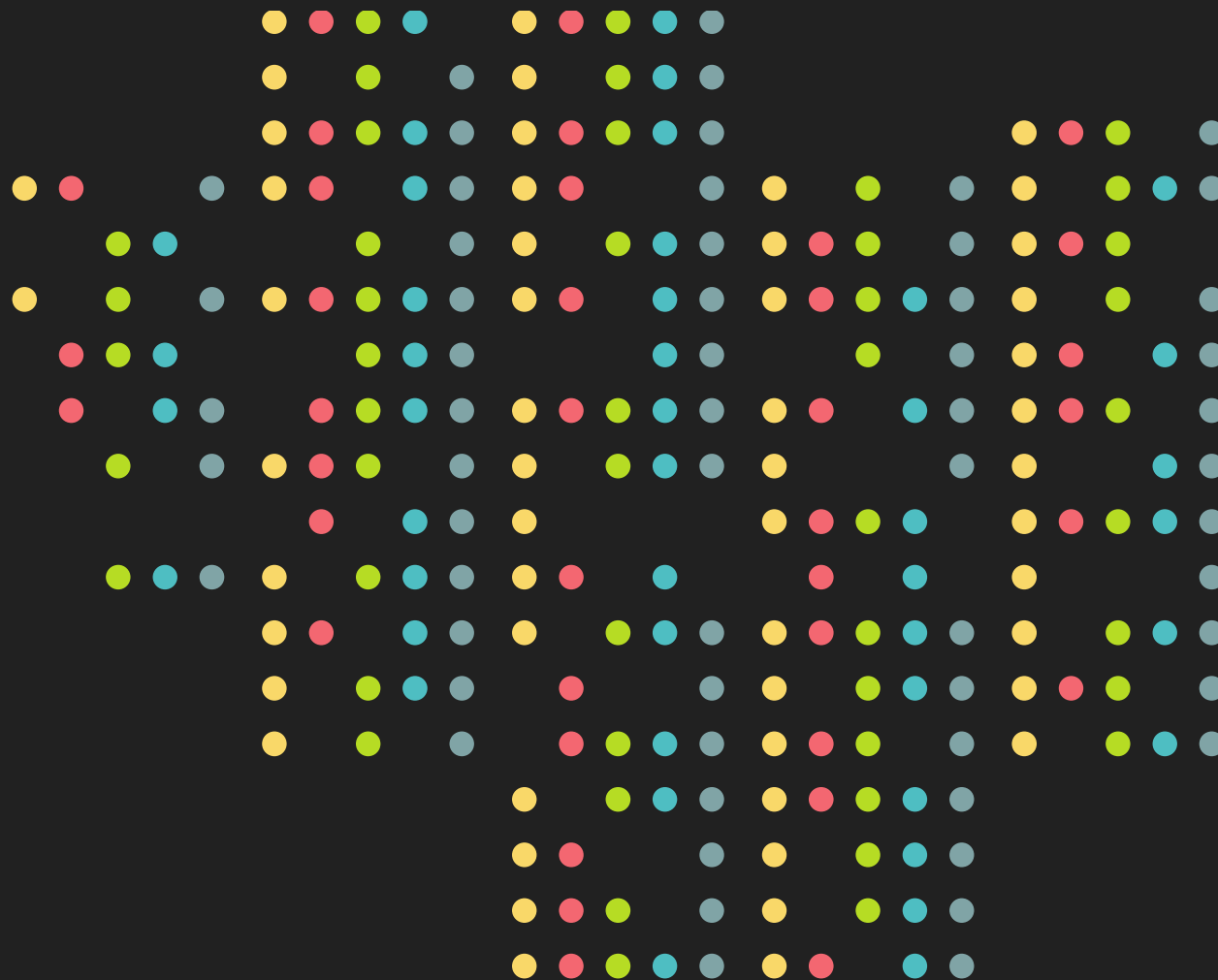# NEW
by EDP & CTG

POCITYF

Leading the smart evolution of historical cities

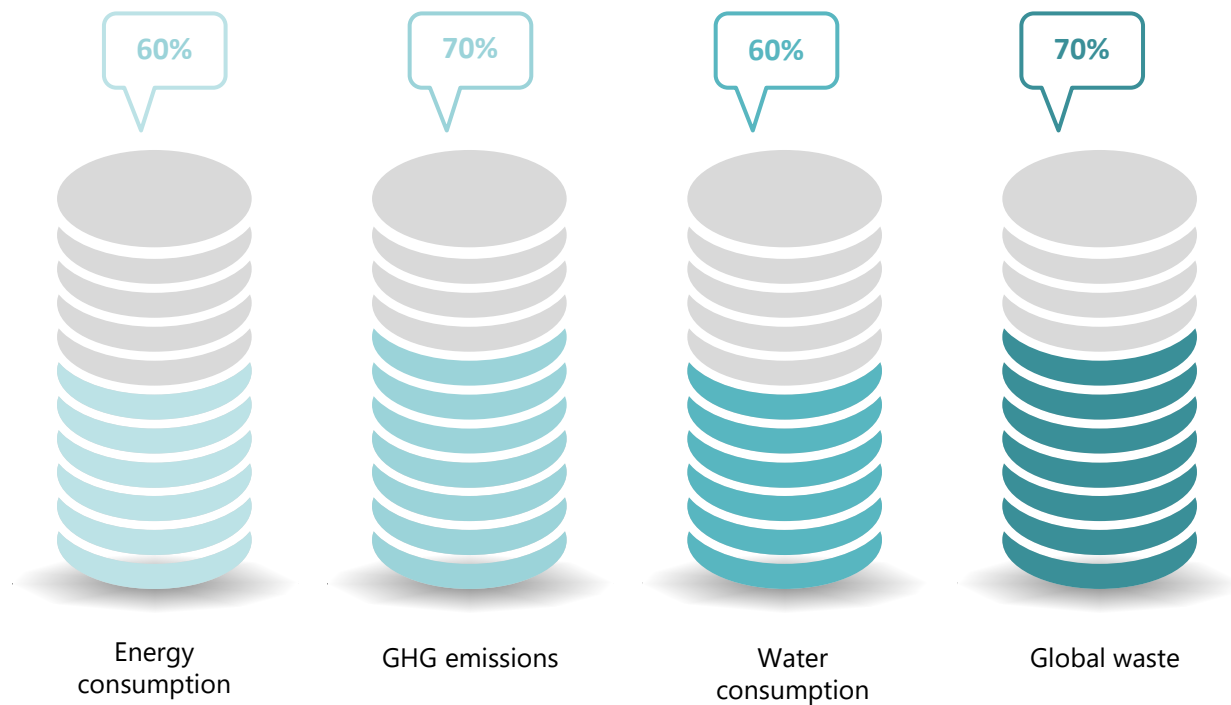Smart Cities Tour 2020, November 11th

Around 100 persons have gathered in Évora in October 2019, to reply to one question...

How to make cities more sustainable?

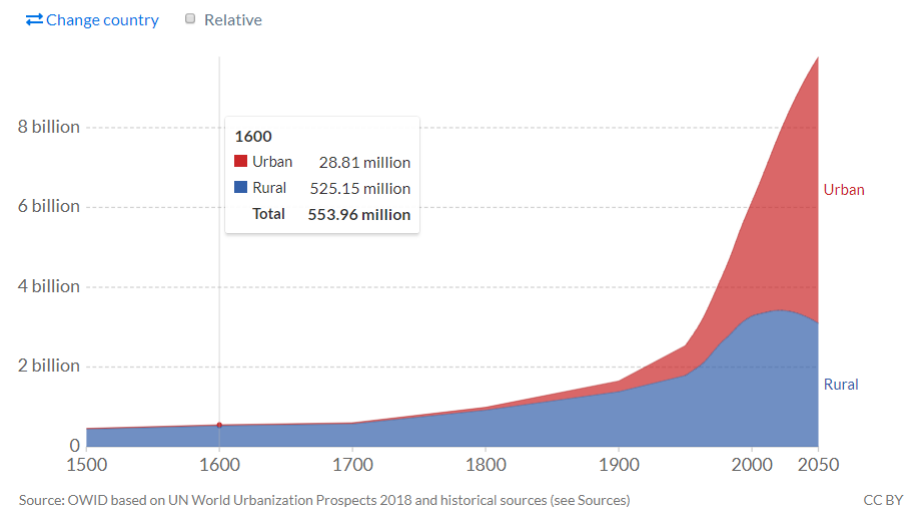# Cities are pivotal to a successful energy transition

60%

70%

60%

70%

Energy consumption

GHG emissions

Water consumption

Global waste

Source: UN – The New Urban Agenda III

Urban and rural population projected to 2050, World, 1500 to 2050

Total urban and rural population, given as estimates to 2016, and UN projections to 2050. Projections are based on the UN World Urbanization Prospects and its median fertility scenario.

Our World in Data

⇄ Change country   ☐ Relative

1600		
Urban	28.81 million	
Rural	525.15 million	
Total	**553.96 million**	

8 billion

6 billion

4 billion

2 billion

0

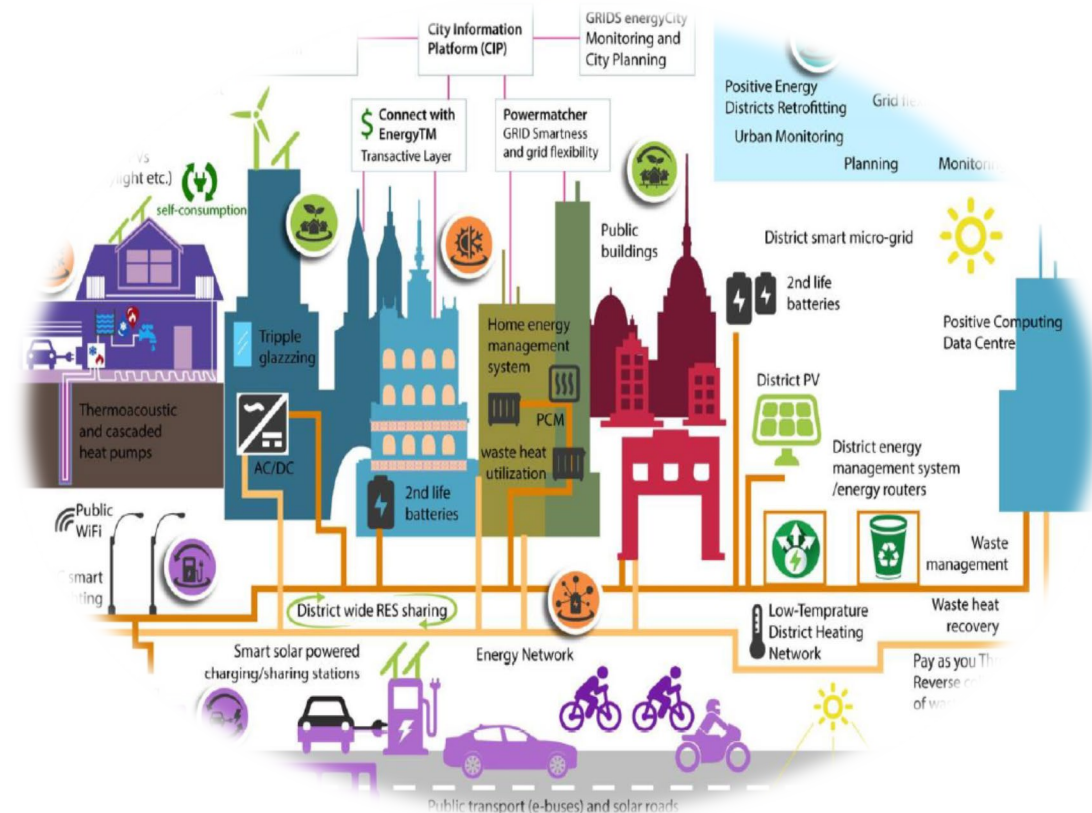1500   1600   1700   1800   1900   2000   2050

Urban

Rural

CC BY

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POCITYF – *Leading the smart evolution of heritage sites ...*

Deliver a set of **Positive Energy Blocks**

Emphasis on **cultural and historical protected areas:** *inclusiveness, sustainability and resilience*

Improve, in a **sustainable and citizen-driven manner**, *citizens'* **wellbeing**.

... in 8 cities across Europe

❖ 46 partners
❖ 13 European countries
❖ **Led by EDP NEW**

Focus on historical cities

❖ Legal barriers

❖ Replication potential

❖ New life to historic centres:

❖ <u>Budget</u>: 22,5M€

❖ <u>Grant</u>: 20M€

❖ **5 years' project**

Lighthouse cities

Évora   Alkmaar

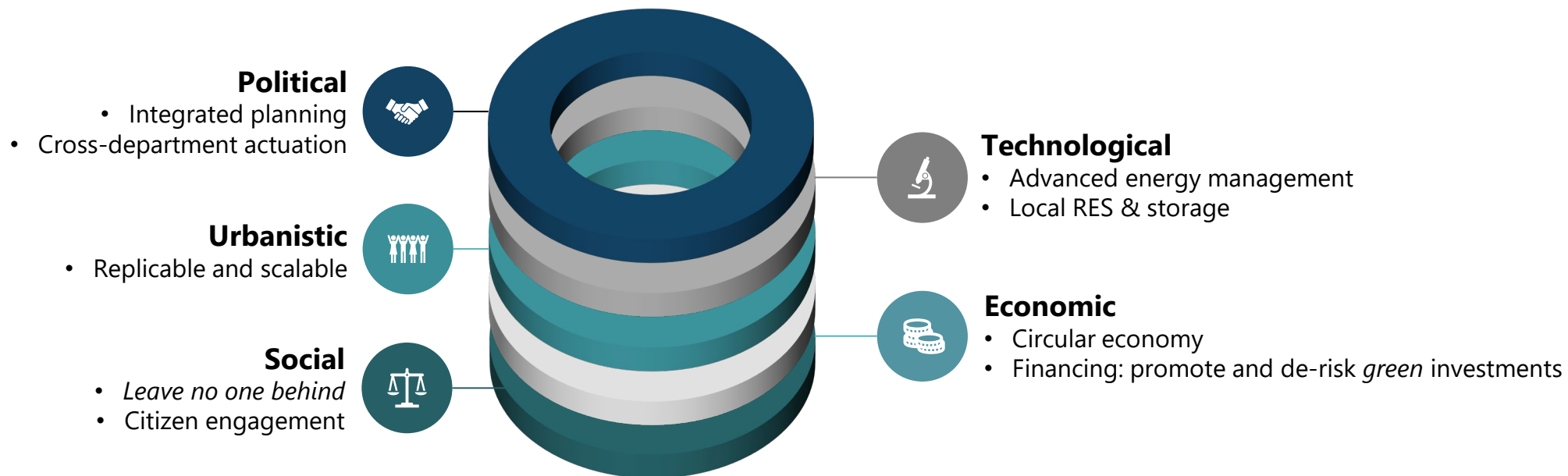**Fellow cities**

Bari   Celje   Granada

Hvidovre   Ioannina   Ujpest

Positive Energy Blocks: *an integrated and multidisciplinary concept...*

Political
- Integrated planning
- Cross-department actuation

Urbanistic
- Replicable and scalable

Social
- *Leave no one behind*
- Citizen engagement

Technological
- Advanced energy management
- Local RES & storage

Economic
- Circular economy
- Financing: promote and de-risk *green* investments

Évora Lighthouse City ecosystem

- ❖ <u>PEB1</u>: Évora city centre
- ❖ <u>PEB2</u>: Valverde
- ❖ <u>PEB3</u>: Industrial/commercial area

Alkmaar Lighthouse City ecosystem

- ❖ <u>PEB1</u>: typical urban periphery
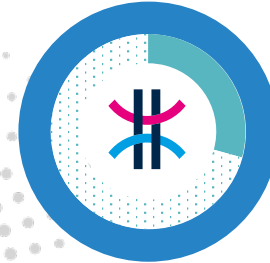
... implemented via 4 groups of solutions

Positive Energy Buildings & Districts

❖ Renewables and energy management

❖ Retrofitting

Flexible infrastructure

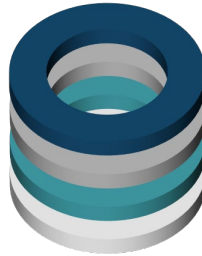❖ Flexible grids & buildings

❖ Sustainable district heating and cooling

Citizen-driven social innovation

❖ Interoperable and interconnected city
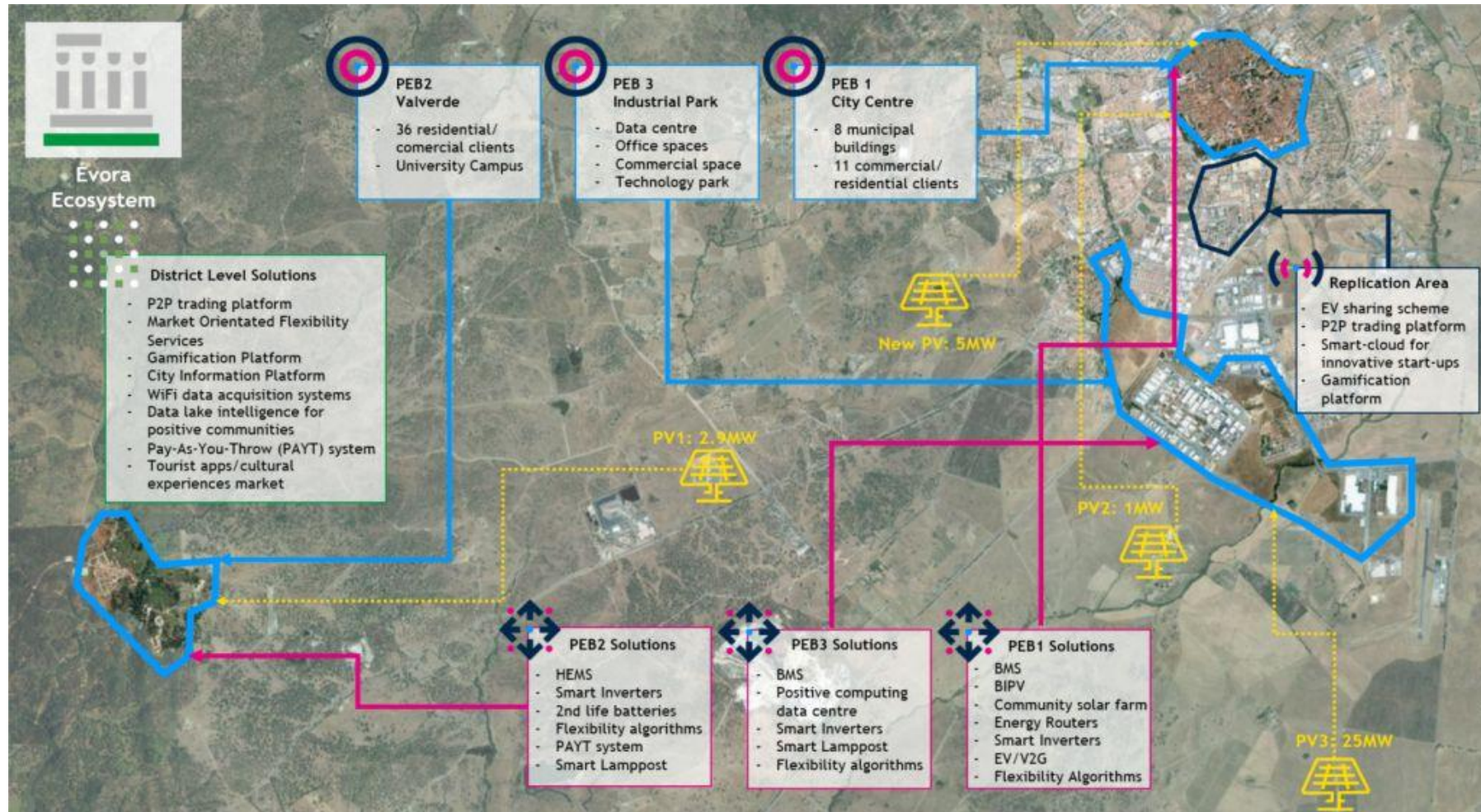
❖ Citizen engagement & co-creation

eMobility

❖ Smart charging & V2G

❖ Mobility-as-a-Service

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Évora demonstration ecosystem

P2P platform: *sharing economy in the energy domain*

01

P2P Transactive Layer and Rewarding Mechanisms

❖ Direct energy trading between participants

❖ Participants will earn project-specific tokens acquired via sustainable behaviours
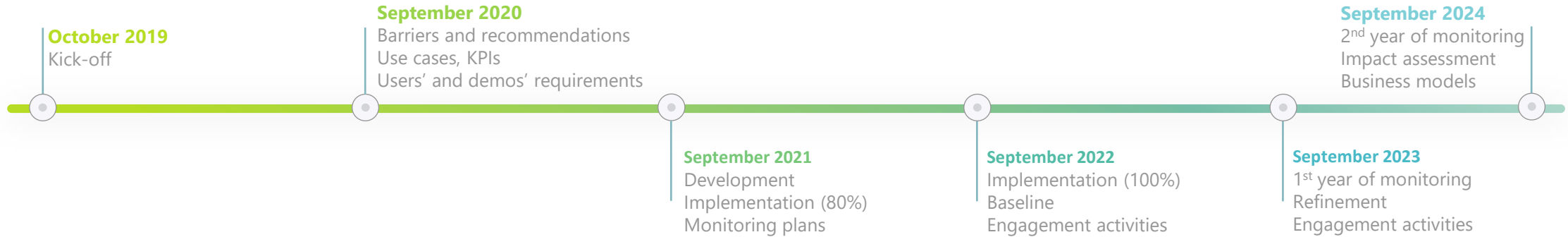
02

Social Innovation – Save and Donate

❖ Citizens' empowerment by allowing them to publish campaigns and donate euros/tokens to alleviate energy poverty

03

Green Economy

❖ Creation of virtual energy wallets, endowing users with the ability to invest in a renewable energy project

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Where are we?

October 2019
Kick-off

September 2020
Barriers and recommendations
Use cases, KPIs
Users' and demos' requirements

September 2021
Development
Implementation (80%)
Monitoring plans

September 2022
Implementation (100%)
Baseline
Engagement activities

September 2023
1st year of monitoring
Refinement
Engagement activities

September 2024
2nd year of monitoring
Impact assessment
Business models

PEBs are new for all and require adaptation from Municipalities, public and private entities …

Tomorrow is too late: involve all stakeholders (public, private, citizens) since day 1…

People follow who they trust: Municipalities, local parishes, social instutions, NGOs have a key role to play

Solutions co-designed with end users / clients as a way to shorten the distance between what technologies and business models can achieve and what clients really want

Regulatory Sand Boxes with the involvement of law makers and regulators to effectively adopt special regimes with smaller administrative burden

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Who do we want POCITYF to be?