

Positive Energy Districts and Neighborhoods for sustainable urbanization

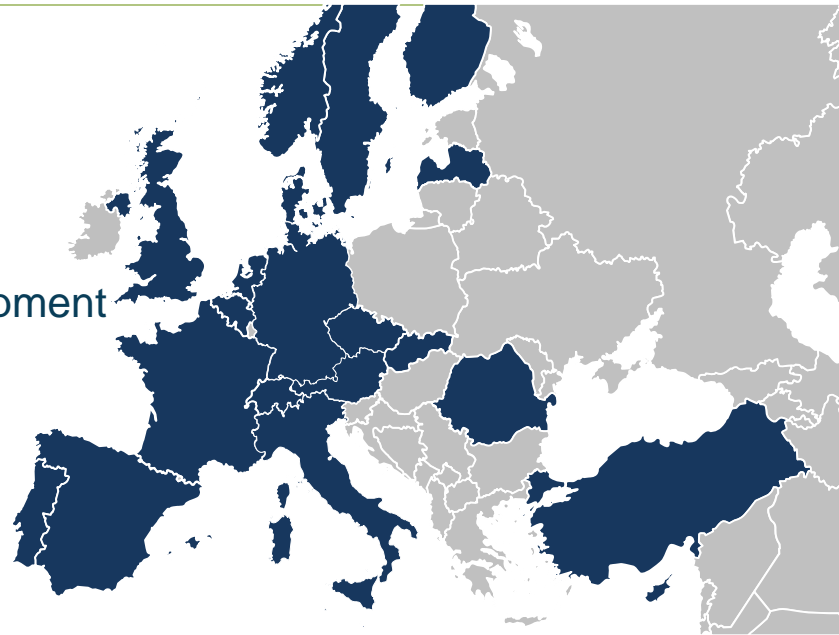
The PED Programme

- **Hans-Günther Schwarz**, Action Chair of the SET-Plan Action on Positive Energy Districts
- **Christoph Gollner**, SET Plan Action 3.2 PED Programme Manager, JPI Urban Europe, Austrian Research Promotion Agency
- Q&A



The PED Programme

- The **SET Plan** aims to accelerate the development and deployment of low-carbon technologies.
- **SET Plan Action 3.2 on “Smart Cities and Communities”**, supported by 19 countries



→ **PED Programme; JPI Urban Europe mandated with the programme management**



Ambition of the PED Programme

“Enhance capacities of cities, industry and research to make Europe a global role model and market leader

- in technology integration for and large scale implementation of **Positive Energy Districts** taking into account aspects of inclusiveness
- with the aim **by 2025** to have at least **100 successful Positive Energy Districts** synergistically connected to the energy system in Europe and
- with a strong export of related technologies.”

- transnational, intergovernmental initiative for R&I support, planning, large-scale implementation and replication of PEDs
- holistic approach towards sustainable, liveable neighbourhoods including technology, spatial, regulatory, financial, legal, social and economic perspectives



SET Plan Action 3.2 PED Programme Implementation Plan

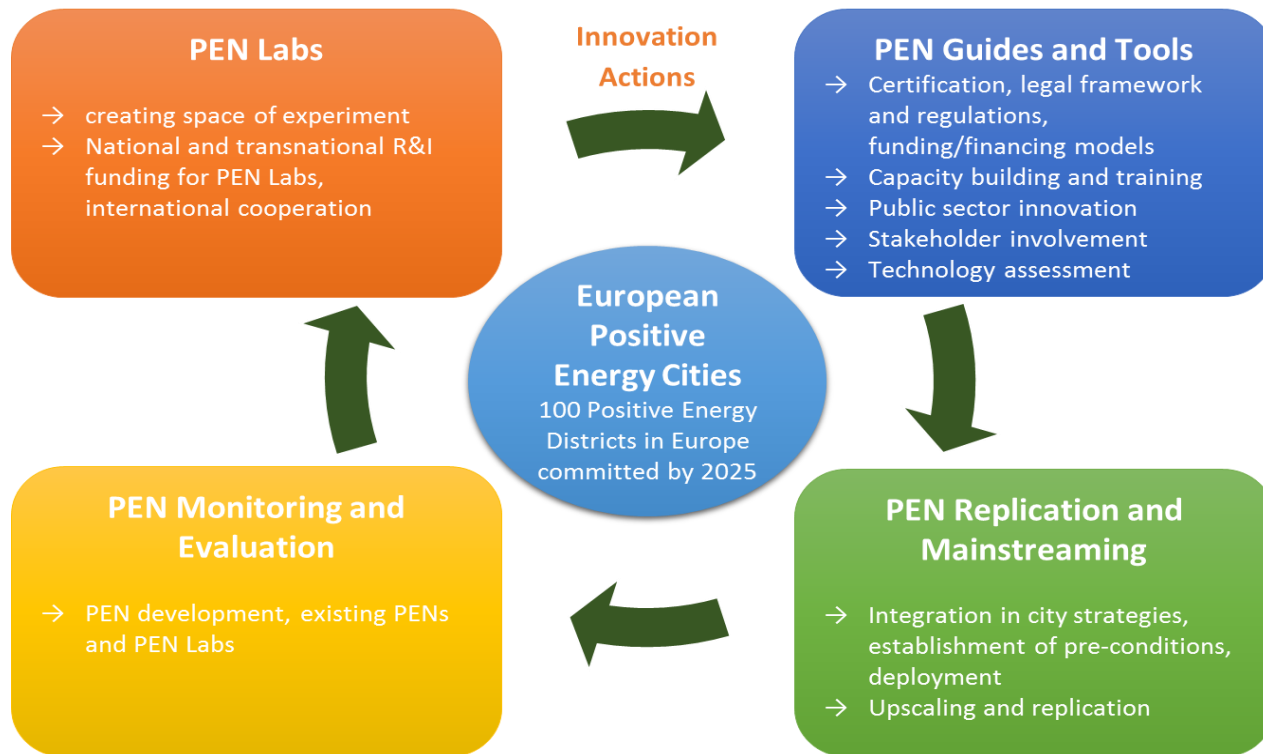
Towards Positive Energy Districts

“Urban neighborhood with annual net zero energy import and net zero CO₂ emissions working towards a surplus production of renewable energy, integrated in an urban and regional energy system”

- urban and regional energy system, driven by renewable energy
- energy efficiency
- optimised flexibility
- built environment – sustainable production and consumption – mobility
- advanced materials, local RES
- affordable living for the inhabitants



SET Plan Action 3.2 PED Programme Implementation Plan



The City as an „Energy Sponge“





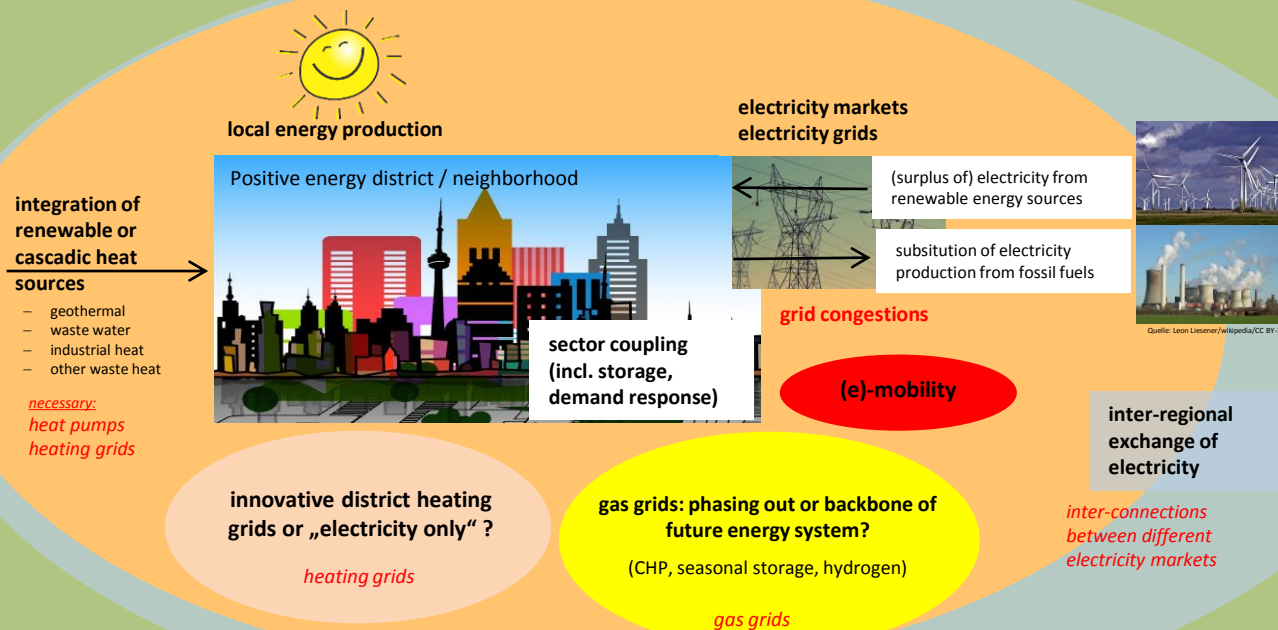
The Role and Function of PEDs within the Energy System

Rather than getting stuck in technical details, an assessment of the feasibility of PEDs should focus on their role and function within the regional energy system:

- Optimised energy efficiency
- On-site generation of renewable energy
- Flexible energy consumption
 - demand-side management
 - consumption on demand
- Storage options
 - electricity storage
 - thermal storage (heating, cooling)
 - thermal mass activation (heating, cooling): buildings mass, geothermal, water boilers
 - latency of heating/cooling cycles
 - power to gas



Positive Energy Districts - Integral Part of an Integrated Regional Energy System



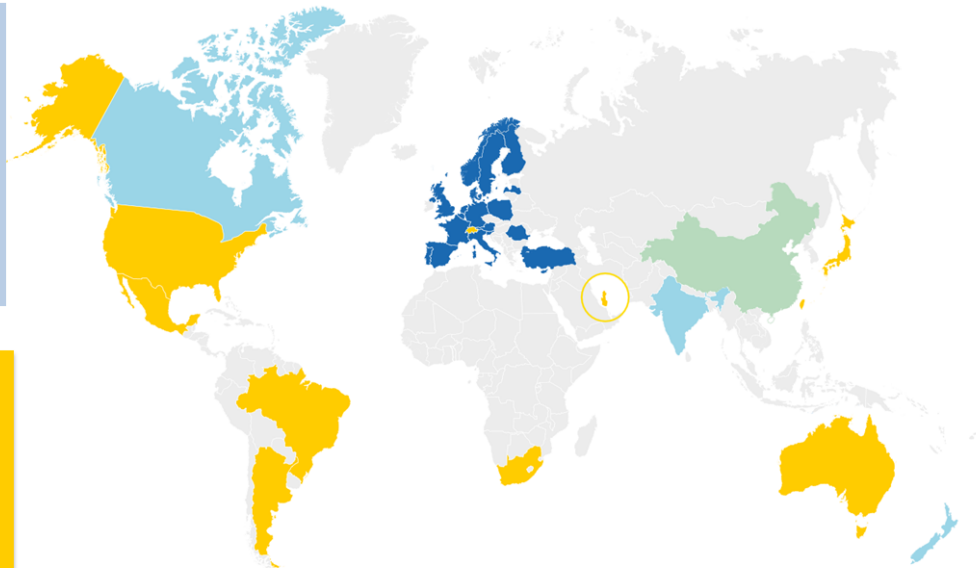


JPI Urban Europe – Facts & Figures

- 20 European countries participating
- ~ 100 million Euro public investment for joint calls
- 80+ projects funded
- 25+ European funding agencies cooperating
- Cooperation schemes with Belmont Forum and China established

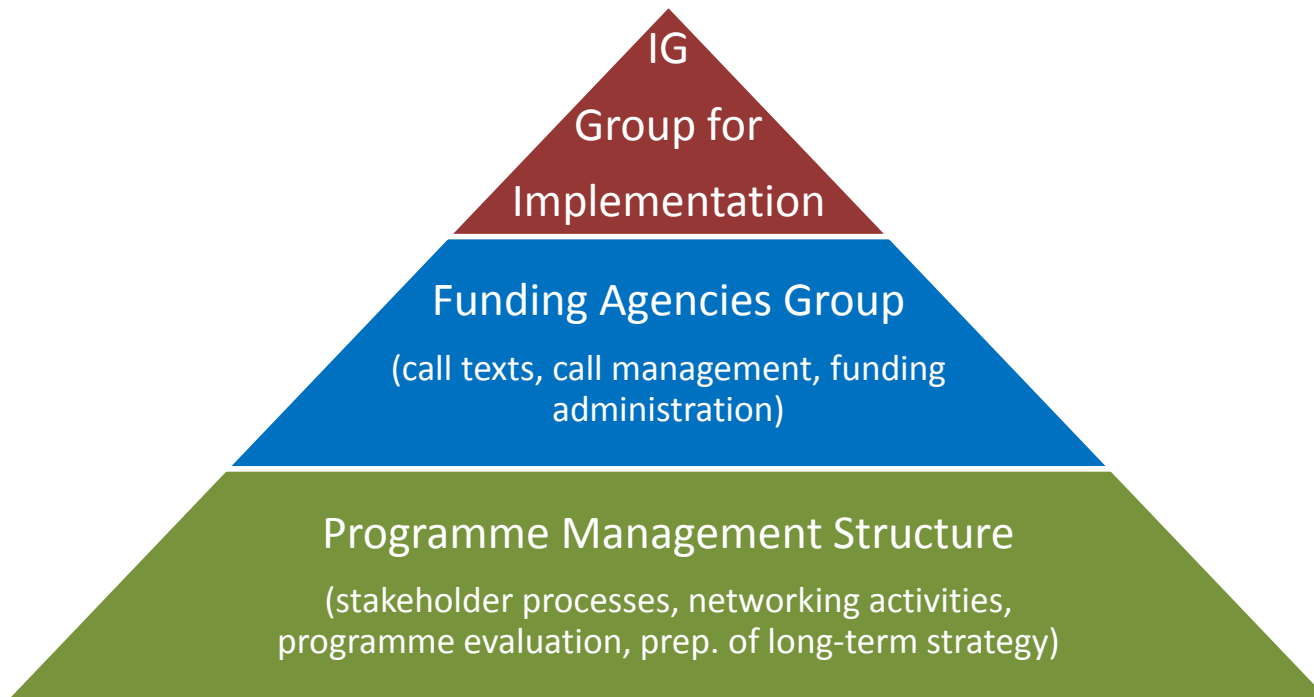
Vision of JPI Urban Europe

...to be the European platform to create and make available knowledge and robust evidence for sustainable urban development



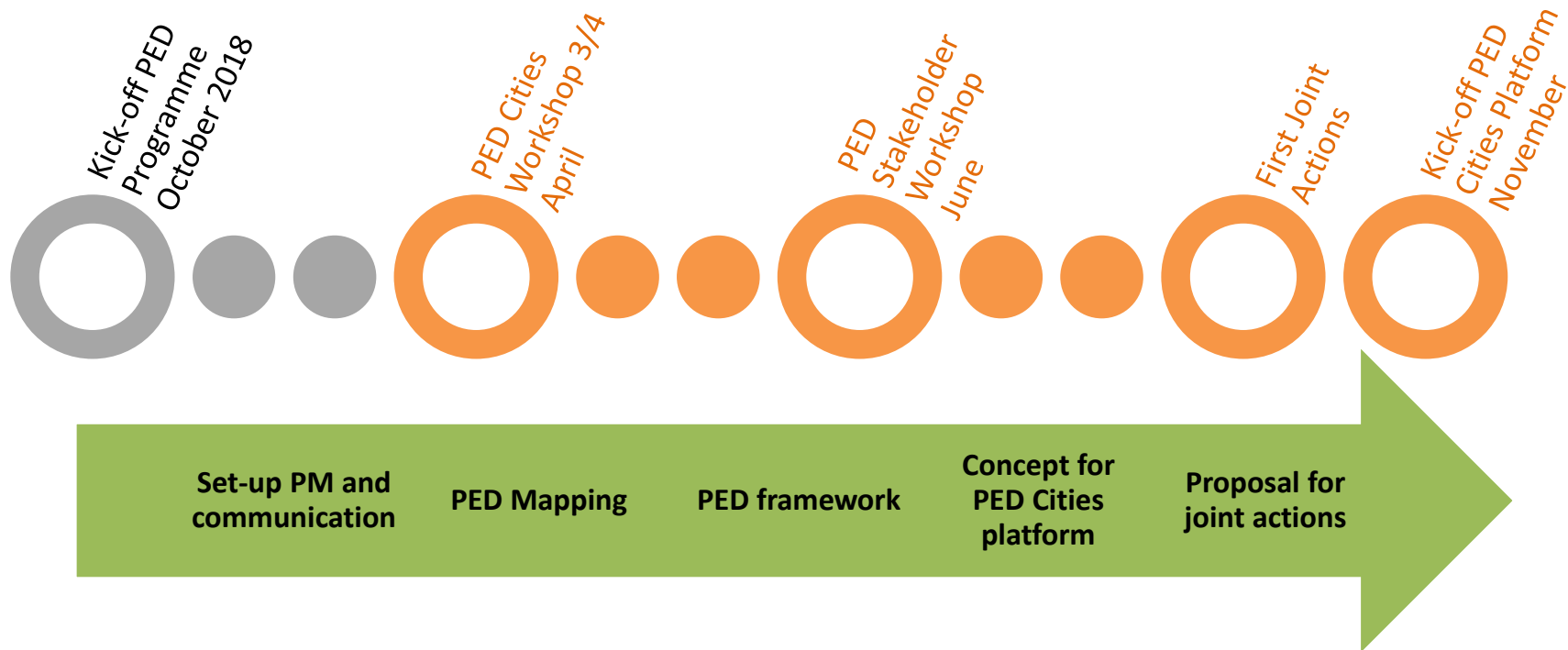


JPI Urban Europe PED Programme Management





Roadmap 2019



PED Programme and the cities

- PED Programme driven by needs of problem owners → picking up cities' experiences and needs
- Exchange of good practice, experiences and visions with other European cities
- Multi-stakeholder platform developing implementation pathways
- PED framework including guidelines, tools references
- Forming of a network of European Positive Energy Cities
- Transnational joint actions for R&I projects, piloting and validating of PED concepts



Thank you!

Hans-Günther Schwarz, Chair of the SET-Plan Action on Positive Energy Districts

hans-guenther.schwarz@bmvit.gv.at

Christoph Gollner, SET Plan Action 3.2 PED Programme Manager

christoph.gollner@ffg.at



<https://setis.ec.europa.eu/>

<https://jpi-urbaneurope.eu/>