

## PARTNERS



**City of Amsterdam**  
www.amsterdam.nl

## PROJECT

**EU Programme:**  
Horizon 2020 Innovation Action

**Coordination:**  
City of Amsterdam

**Partners:**  
29 partners, 10 countries

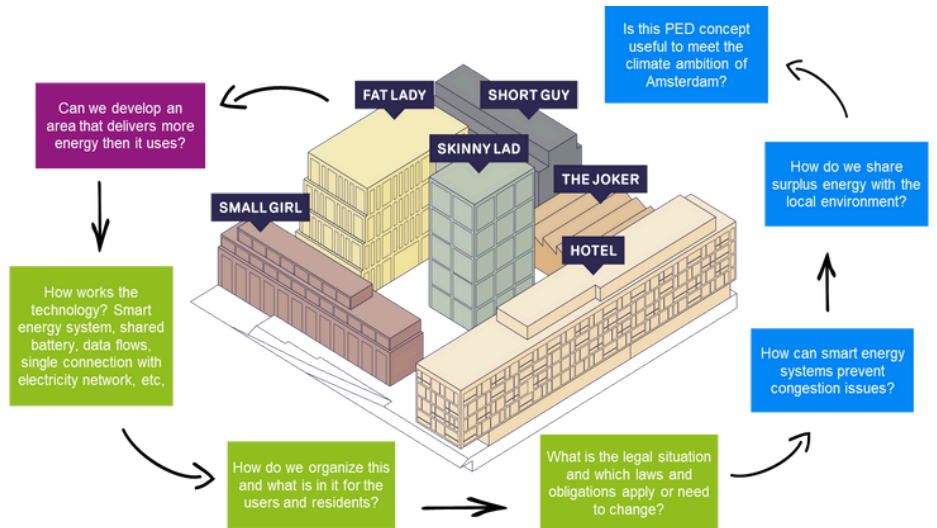
**European grant:**  
19.6 M€

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## PED Design Procedure

### Result in a nutshell

The goal is to upscale the validated PED concept in Amsterdam. With stakeholders and project partners the smart local energy system is tested: creating an energy community, battery use to combat net congestion, financing and sharing energy and data.



### Demonstration site



Ambitious building groups of in total 28 500 m<sup>2</sup> GFA. Two are new build in the ATELIER project (total of 22 000 m<sup>2</sup>):

- Republica: 6 buildings for residential (55 apartments) and commercial use. Including energy community and smart microgrid with 1 MWh battery
- Poppies: one modular wooden construction with 96 prefabricated housing units and common spaces

# Findings & learnings

## Technical findings:

- Additional renewable energy sources (PV and wind) for the Republica buildings were explored. The source locations were situated outside the Republica smart grid and the PED;
- Several new technologies were tested related to battery (management), energy management system, single grid connection and other techniques;
- Data flows: insights on user data ownership, commercially owned data, data privacy and governance;
- Net congestion: due to the high energy-efficiency of the buildings and the amount of flexible assets including the 1 MWh battery, the project can operate with a significantly lower transport capacity.

## Governance findings:

- A pre-set energy community was developed that makes use of multiple flexible assets and develop activities. Learnings are related to the complexity of the pre-set community governance and tasks that are not owned by a dedicated party. This scale energy community is depending on other market parties to operate on the the energy market;
- Working in a network of partners proved to be useful and recommended.

## Legal barriers:

- Group contracts to share transport capacity are not allowed;
- Transfer of responsibility regarding grid use/operation from the DSO to the connected customers;
- Difficulties for being an active market player;
- Congestion management is new.

## Recommendations for future PEDs:

- Tendering procedure: as land-owner the city should set sustainable requirements, for private property Amsterdam is depending on high ambitions of the developer;
- Embed PED knowledge in the organization and share lessons with a structural character;
- Connect the PED concept into the broader integral design method of Amsterdam, which includes a robust data-driven and CO2-conscious approach to public space and area development;
- Show energy users the PED business case and what financing is associated with it.

# Further development

## Potential for further development:

- Integration of lessons of other pilots and developments
- Integration of the PED concept in the city vision 2050 (Roadmap Amsterdam Climate Neutral)
- Develop an organisation strategy to continue with the concept of the smart local energy system
- The concept can support the solution for net congestion in Amsterdam

## Potential areas of applicability:

- New built area's
- Energy projects in ArenaPoort, Amsterdam Harbor, Schiphol Trade Park, and more.