ABOUT oPEN Lab

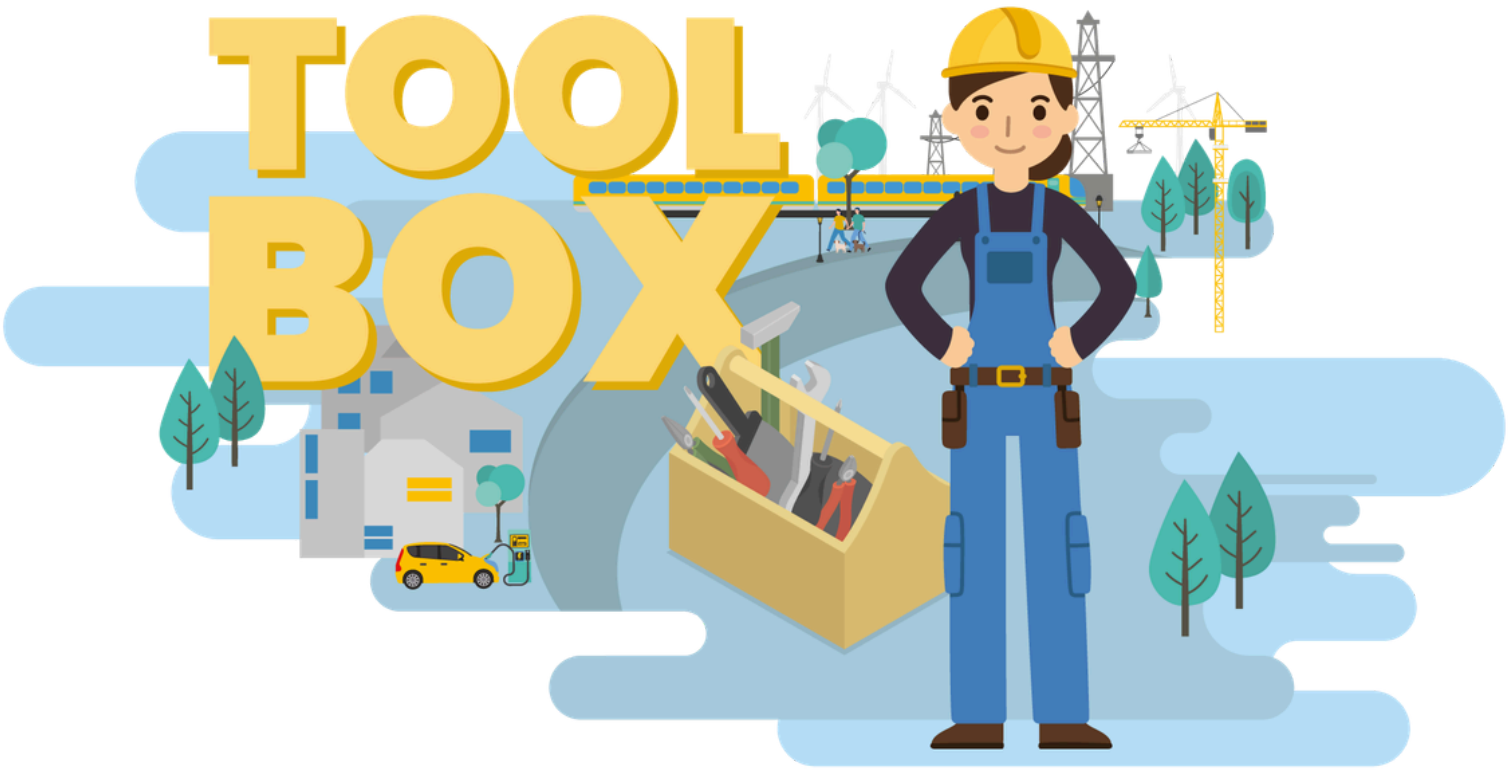
oPEN Lab is transforming neighbourhoods in Tartu, Pamplona, and Genk into Positive Energy Neighbourhoods (PENs) that generate more renewable energy than they consume. Beyond renovation, the project embeds technology, art, culture, and local voices to foster community, pride, and a human-centred energy transition.

LIVING LABS
Tartu, Pamplona, Genk

PARTNERSHIP
32 Partners, from 7 European countries

EU-FUNDING
≈ 19 Mio. €

oPEN Lab
TARTU PAMPLONA GENK
LEADING THE TRANSITION TO POSITIVE ENERGY NEIGHBOURHOODS



The oPEN Lab Toolbox collects best practices and innovative tools from the oPEN Lab project to support the development of Positive Energy Neighborhoods (PENs), which contribute to climate-neutral, resilient, and healthier communities. It provides policymakers and industry with practical insights to guide renovation strategies and a just transition. Users can explore the Toolbox by filtering tools by implementation phase and topic.

Check out the QR Code and learn more:

oPEN LIVING LABS

Tartu, Estonia

The oPEN Living Lab in Tartu is located in Annelinn, a diverse and densely populated district where large-scale renovations and community engagement are taking place.

- As a typically Soviet district, it is characterised by low-quality 5–9 story apartment blocks with limited public space
- Home to a multilingual community (Estonian, Russian, and others)
- Densest area of Tartu that houses about a third of the city's residents

Pamplona, Spain

The oPEN Living Lab in Pamplona is pioneering one of Spain's first Positive Energy Neighbourhoods, showcasing scalable renovation and energy solutions in the Rochapea district.

It focuses on deep energy renovation of two San Pedro apartment blocks and a building at La Compasión Escolapios School, creating an interconnected PEN with strong social engagement.

At the forefront of urban energy innovation, it demonstrates integrated operational strategies for coordinated management of photovoltaics, heat pumps, and lithium batteries, as well as industrialised renovation methods and digitalisation to ensure full life-cycle sustainability.

Photo credit: María Azkarate

Genk, Belgium

The oPEN Living Lab in Genk is transforming the suburban neighbourhood of Waterschei into a Positive Energy Neighbourhood through large-scale retrofits and social innovation.

- Combines a historic miners' district (1920s) with the newer "Nieuw Texas" social housing area (1990s, 85% social housing ownership)
- Unique setting near former mines enables real-life demonstration of advanced renovation technologies and processes
- Focus on energy-efficient retrofits and innovative building services, applied collectively to rental and private dwellings

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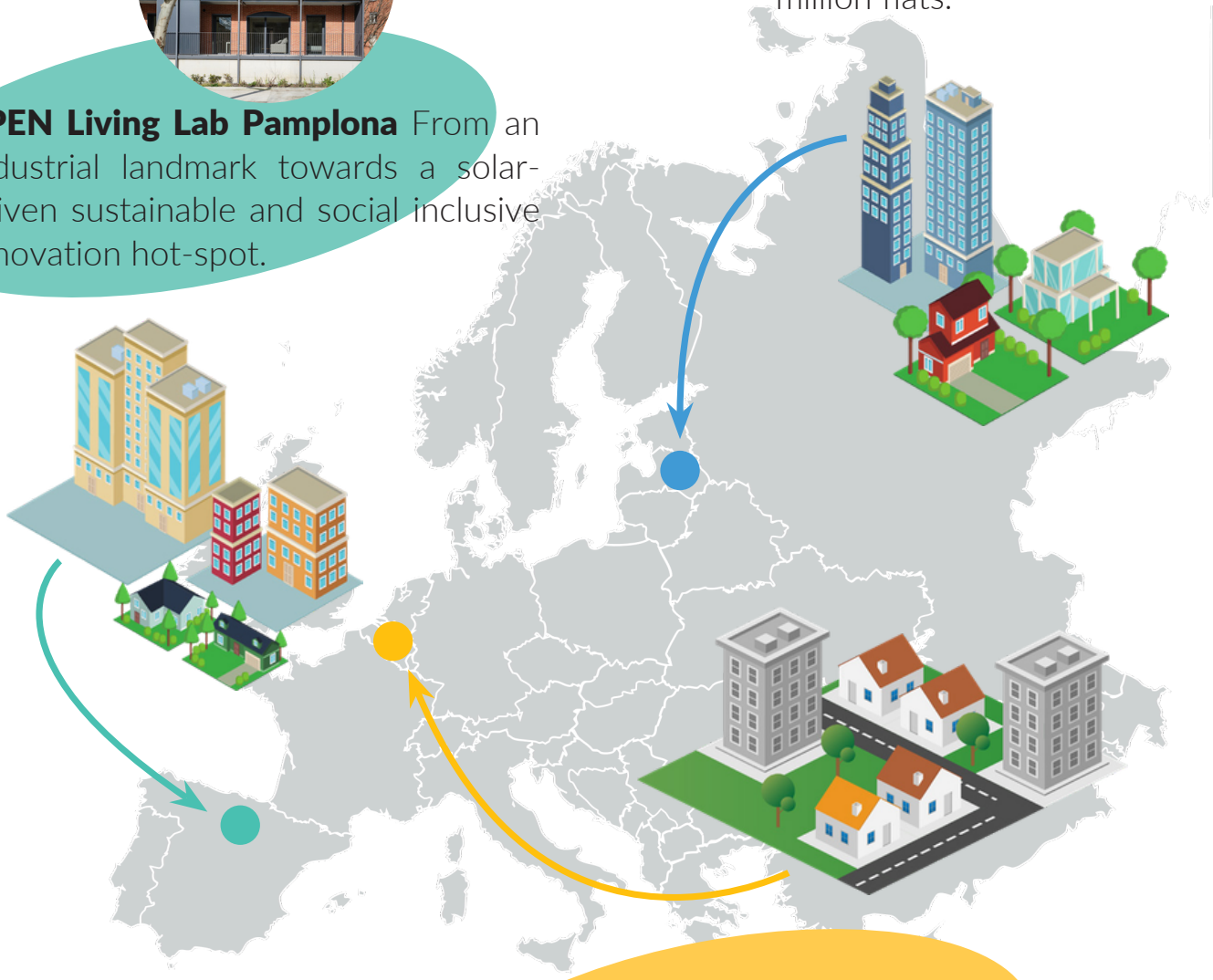
oPEN LIVING LABS

oPEN Living Lab Tartu From a historical Soviet cultural heritage to a Positive Energy Neighbourhood project representative of 50 million flats.

oPEN Living Lab Pamplona From an industrial landmark towards a solar-driven sustainable and social inclusive innovation hot-spot.



oPEN Living Lab Genk From coal to a positive energy future, a green transition of a former mining town.

Photo credit Pamplona: María Azkarate

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