About syn.ikia

syn.ikia comes from the Greek word συνοικία, which means neighbourhood:

- Syn: means plus
- Ikia: means house

Both words together make: “plus house”, an expression with a two-fold meaning: plus energy house and neighbourhood (more than one house).

Our mission in syn.ikia is to increase the share of sustainable neighbourhoods with surplus renewable energy, resilient and affordable living places and communities in different contexts, climates and markets in Europe.

Over the next four and half years (2020-2024), syn.ikia will pilot four real-life Sustainable Plus Energy Neighbourhoods to demonstrate their functionality to the rest of Europe.

Our demo neighbourhoods

Fondo, Santa Coloma de Gramenet
A new public housing development representing a typical infill project in a dense Mediterranean urban area in Spain.

Ammerud, Oslo
A new development in representing the Subarctic climate in a cooperative dwelling in Norway.

Loopkantsestraat, Uden
The construction of new add-ons to existing social housing units in a typical Marine mid-sized town in the Netherlands.

Gneis, Salzburg
New built and renovation of social housing blocks, apartments and kindergarten in an existing neighbourhood representative of the Continental climate in Austria.

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Sustainable plus energy neighbourhoods

syn.ikia

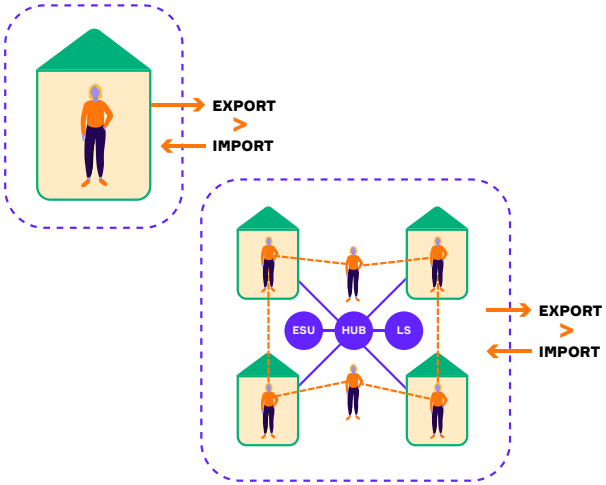
Sustainable plus energy neighbourhoods

Syn.ikia's concept relies on the interplay between novel technologies at the neighbourhood scale, energy efficiency & flexibility of the buildings, good architectural & spatial qualities, sustainable behaviour and citizen engagement.

A **Positive Energy Building** produces at least as much renewable energy as it uses in a year, when accounted at the source. Source energy refers to the primary energy used to generate and deliver energy to the site.

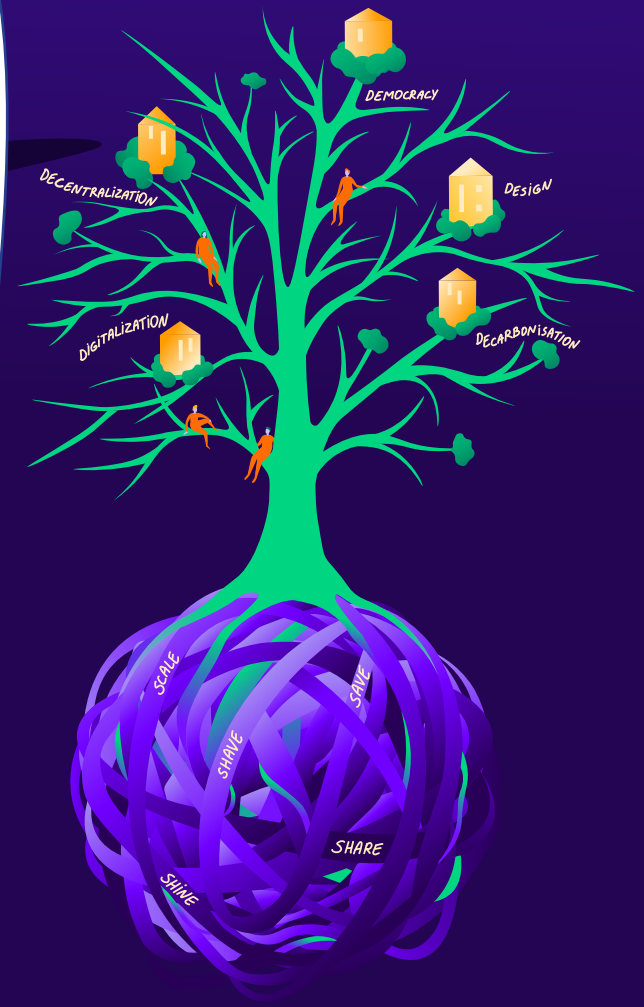
In a **Sustainable Plus Energy Neighbourhood**, the geographical boundary is expanded to the entire site of the neighbourhood and includes Local Storage (LS) and Energy Supply Units (ESU).

Users, buildings and technical systems are all connected via the neighbourhood digital cloud (HUB).



LS: Local Storage / ESU: Energy Supply Units
HUB: Neighbourhood digital cloud

Our strategy and impact



Our 5D focus areas

→ **Decentralisation:** neighbourhoods as flexibility providers that enable more renewable energy sources to enter the grid and allow for flexible management of energy demand and generation

→ **Democracy:** engaged, empowered and conscious users that have access to affordable and high-quality neighbourhoods.

→ **Decarbonisation:** climate neutral, highly energy efficient neighbourhoods with a surplus of energy from renewable sources.

→ **Digitalisation:** big data-based neighbourhoods and smart networks that provide well-managed housing for the citizens.

→ **Design:** integrated energy, architectural and spatial design that improve attractiveness of energy-efficient housing and its market uptake.

Our 5S strategy

↗ **SAVE:** reducing the neighbourhood net energy consumption by using solutions based on a total life cycle cost analysis.

↗ **SHAVE:** facilitating peak shaving through load shifting, control, and storage thus reducing the size of energy supply installations,increasing self-consumption of renewable energy, and reducing the stress on the grid.

↗ **SHARE:** sharing of resources such as energy, infrastructure, and common spaces with neighbours.

↗ **SHINE:** ensuring high quality architecture, creating good indoor and outdoor environments, and solutions that make the occupants and the community proud of their neighbourhood.

↗ **SCALE:** benefitting from large-scale effects of the neighbourhood scale to replicate the solutions at European level.