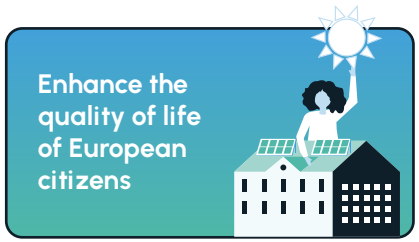
NEXT-GENERATION INTEGRATED ENERGY SERVICES FOR CITIZEN ENERGY COMMUNITIES

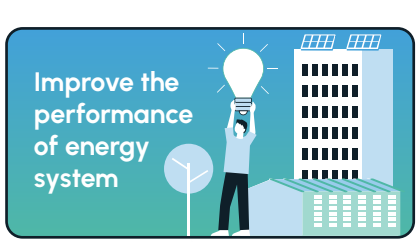
https://neonproject.eu/

This project has received funding from the European Union's H2020 programme under Grant Agreement No. 101033700.

what is NEON?

NEON project aims to deliver the next-generation integrated energy services for Energy Communities to:





NEON will exploit building energy efficiency, renewable energy generation and storage, and demand flexibility to increase energy savings, reduce CO2 emissions, and provide cost savings.

For these services to become a reality, NEON intends to engage grid stakeholders, service providers and final consumers to team up and co-create.

Under the context introduced by Directive (EU) 2019/944, the concept of Citizen Energy Communities (CECs) will be leveraged to set the legal and business foundations to enable faster uptake of the proposed services, and facilitate European communities, both residential and nonresidential, in becoming energy efficient.

NEON Challenges

Challenge 1

Energy efficiency services for multi-measure building efficiency improvement.

Challenge 2

Optimal scheduling of the energy use to improved self-sufficiency.

Challenge 3

Advanced building control for optimal operation of heating/ cooling systems, lighting, smart appliances, etc.

Challenge 4

Demand response services for grid flexibility improvement through explicit and implicit mechanisms, such as pay for performance.

Challenge 5

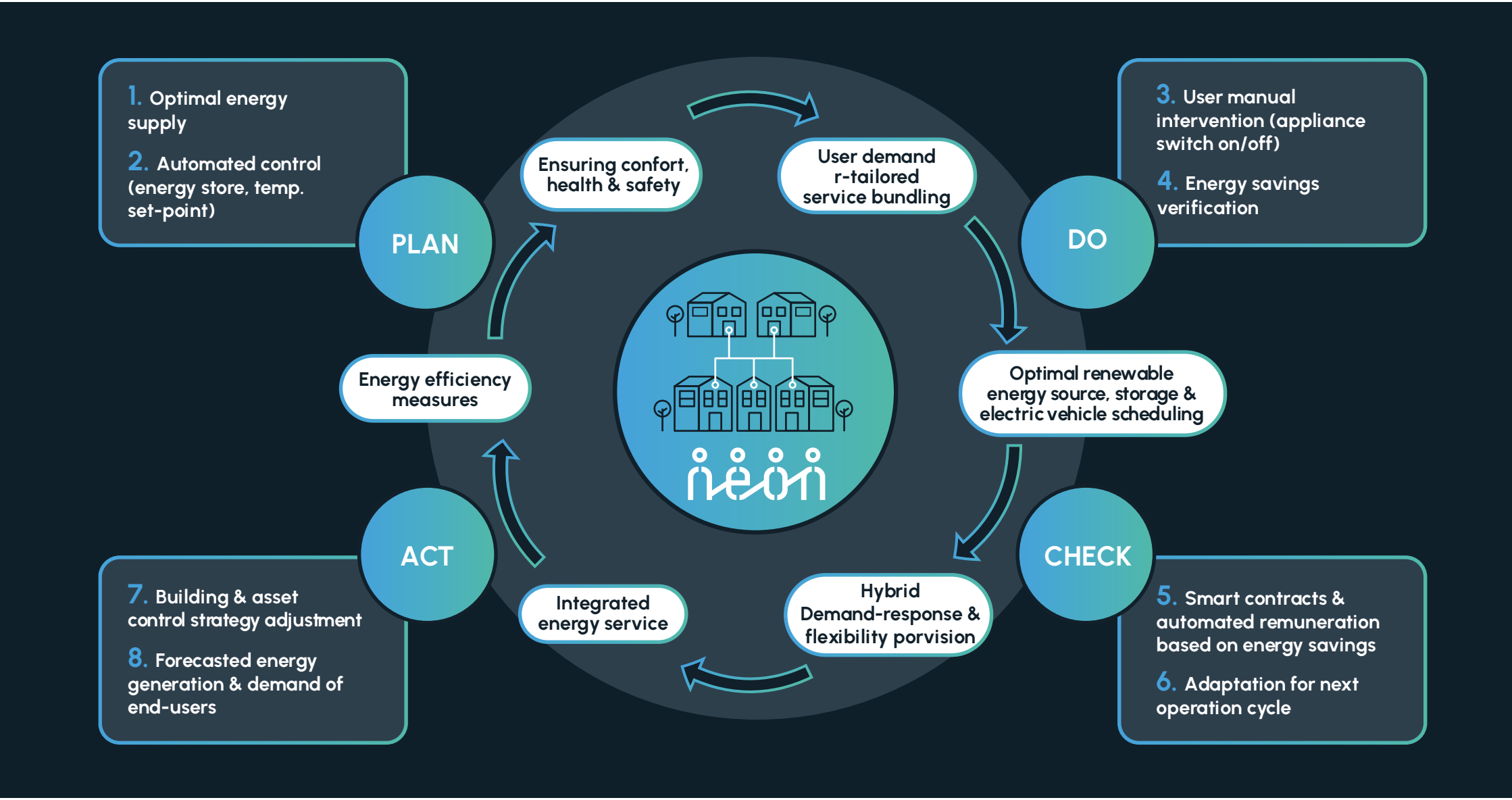
Use-tailored services for ensuring comfort, health (air quality, assisted living services) and safety requirements.

Enabling Technologies

NEON demonstrates key enabling technologies for the integrated energy services and business models.

- ICT PLANNING TOOL FOR A HOLISTIC TECHNO-ECONOMIC ANALYSIS OF MULTI-MEASURE ENERGY EFFICIENCY
- DIGITAL CONTROL FOR IMPROVED BUILDING PERFORMANCE
- INTEGRATING ENERGY DISPATCH OPTIMIZER FOR THE INTEGRATED IMPROVEMENT OF ENERGY SUPPLY AND DEMAND
- HYBRID DEMAND RESPONSE (DR) MODEL AS GRID FLEXIBILITY ENABLER
- TAILORED CONSUMER SERVICES FOR THE PROVISION OF NON-ENERGY BENEFITS
- CONTINUOUS EFFICIENCY IMPROVEMENT WITH PREDICTIVE DATA ANALYTICS
- NEON'S ICT PLATFORM WILL PROVIDE SMART GRID DATA INTEGRATION AND INTEROPERABILITY
- ADVANCED PERFORMANCE MEASUREMENT AND VERIFICATION (M&V)
- SMART REMUNERATION LEVERAGING DISTRIBUTED LEDGER TECHNOLOGY (DLT) TO BREAK DATA SILOS AND MOVE FROM CENTRALIZED MANAGEMENT APPROACH
- CROSS-SECTORAL BUSINESS AND CONTRACTING INNOVATIVE MODELS TO BOOST THE IMPLEMENTATION OF RENEWABLE ENERGY SOURCES

How will Neon work?



Pilot Sites

Four Citizen Energy Communities (CECs), will serve as early adopters. They were preselected to provide adequate testbed for identification and showcase of NEON service concepts and business models.

1

MUNICIPALITY OF BERCHIDDA (ITALY)

The Municipality of Berchidda is leading the creation of an Energy Community, involving inhabitants of the city, cork and wine industries, local producers, and prosumers.

2

RESIDENTIAL BLOCKS IN DOMAINE DE LA SOURCE (FRANCE)

The neighbours from 3 different buildings and 25 dwellings located in a famous ski resort in the Alps mountains have teamed up to start an Energy Community.

3

INDUSTRIAL PARK LAS CABEZAS (SPAIN)

Businesses and factories from the industrial park, residents from the city of Villacañas and owners of electrical cars are getting together to codesign their own Energy Community.

4

BUSINESS PARK STAINS CITY (FRANCE)

The office sites of ENGIE Crigen, an energy research center, industry, an innovative training campus for professionals and trades, will be part of the Energy Community of Stains City.

Partners

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appa renovables

FOSS Research Centre for Sustainable Energy

comet Global Innovation

ENGIE

GFM FOTOVOLTAICA

LTP

Forum per la Finanza Sostenibile

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aspo

TRAZA TERRIT ORIO S.L.L .

IMP institute MIHAILO PUPIN

csem

IDAE Instituto para la Diversificación y Ahorro de la Energía

MINISTERIO PARA LA TRANSICIÓN ECOLÓGICA Y EL RETO DEMOGRÁFICO

R2M energy INNOVATIVE NZEB ESCO

LTP

R2M RESEARCH TO MARKET SOLUTION

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