



Auto-DAN Fact Sheet



What is it?

Auto-DAN is an ambitious project funded by the H2020 programme that will exploit the evolution of IoT and emerging technologies to capture data and create solutions that will enable the self-optimisation of the building's energy consumption.



What will it do?

- Create a flexible smart hardware infrastructure that can be applied to all small-to-medium sized buildings
- Develop an interoperable software architecture that can provide all the analytical capabilities needed to self-assess and self-optimize buildings in the EU
- Deliver Augmented Intelligence (Aul) solutions to enable buildings and their users to become self-optimizing
- Create a live self-energy assessment method that incorporates operational monitoring, appliance/system performance and smart capabilities that will improve the accuracy of current energy assessment procedures
- Accelerate investment in sustainable energy by EU companies and their clients

Key Elements



Smart Metering Infrastructure

Innovative on-site electricity meters will measure data from the buildings and disaggregate the measured data to the appliance level with integrated current profiling.



IoT Equipment & Smart Appliances

Smart Equipment to enhance and upgrade the smart capabilities of appliances, as well as smart plugs to upgrade existing appliances into smart appliances with control capability.



Interoperable Software Architecture

To ensure seamless integration of new hardware components as well as facilitate seamless data sharing across platforms.



Digital Occupancy Model

A "Level 1" simulation tool that will model the performance of appliances, as well as explore demand response actions & propose cost saving operational actions.



Digital Twin

A detailed virtual representation of the building that will perform detailed analysis of the building performance, track KPIs, forecast building energy consumption and provide feedback to improve the performance of the building.



Self-Energy Assessment Framework

Automated calculation of KPIs (eg, SRI) to determine "real-time" performance of appliances with their energy performance certificates, integrating data from the building & improving the smartness of the building.



Augmented Intelligence Dashboards

Intelligent user interface dashboards that provide the building occupant with recommendation on how to interact with their building to optimize the energy performance and reduce energy cost.



Home Management System

Leveraging the output of the Digital Occupancy Model, this platform will implement a demand response trading platform for the buildings.



Demonstration Sites

To guide the development and integration of the self-optimisation and self-assessment capabilities into the Auto-DAN solution, an agile story-mapping approach will define the main user stories (use cases) relevant for the stakeholders and ensure that the final solution meets the needs of the demonstration sites that is representative of the wider EU building sector.

In total, Auto-DAN will be validated in 6 primary demonstration sites, located in 3 EU countries and ranging from single family dwellings, to student and social accommodation and commercial sites.

O Cualann Cohousing Alliance

Dublin Ireland



This pilot comprises a housing cooperative providing 20 A Rated houses in north Dublin.

Delta Ecopolis

Milan, Italy



Three residential buildings that were constructed in the late 1960s and are served by a central thermal plant.

Residencia Camino de Santiago

Burgos, Spain



Constructed in 2000, this student residence provides approximately 160 accommodations to students at the University of Burgos.

Greenogue & Aerodrome Business Park

Dublin Ireland



A business park in south Dublin that contains commercial buildings that have been adapted over time to serve multiple uses.

Palazzo Terragni

Lissone, Italy



The historic Palazzo Terragni primarily functions as an office building, while also being used as a space for art and theatre shows.

VideBURGOS Foundation

Burgos Spain



This pilot site comprises social housing units and is located in close proximity to the University of Burgos.

The Team



Auto-DAN

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