domOS

OPERATING SYSTEM FOR SMART SERVICES IN BUILDINGS

Presentation title

Name of the event

Location, date

Presenter name

Partner name

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement **No 894240**.

domOS PROJECT

The European Research & Innovation project **domOS** funded by the Horizon 2020 programme aims at developing and demonstrating an **operating system for smart services in buildings.**

The objectives of the project will be achieved through international cooperation of **11 partners** from 5 **European countries** with overall budget of **5 million EUR**.

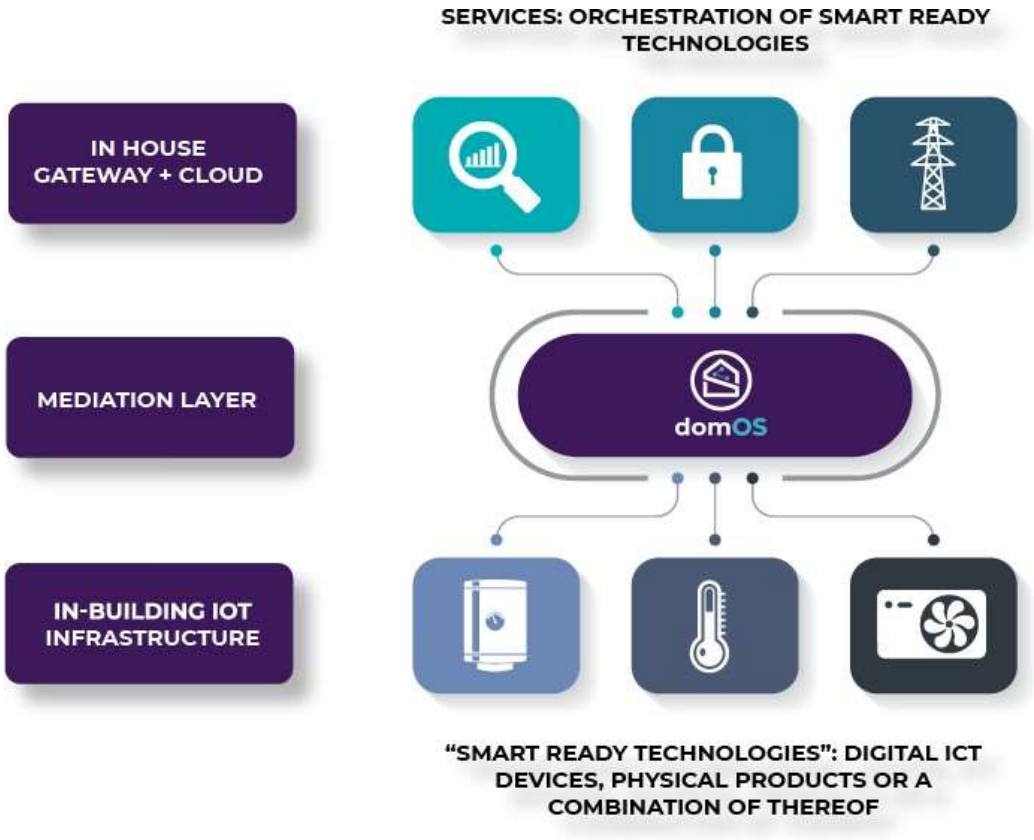
START: **September 1, 2020**
END: **August 31, 2023**
DURATION: **36 months**

domOS CONCEPT

Digitalisation in existing buildings is not as widespread as in other sectors. Consequently, building owners and occupants generally have a **limited understanding of their building as an energy system**.

Improving the energy efficiency of existing buildings can and should be achieved through **deep renovation**.

In comparison, **smart technologies** can increase the **efficiency** and the **flexibility** of buildings in a shorter term and with much less investments.



domOS OBJECTIVES

Design an open, secure, multi-service Internet of Things (IoT) ecosystem for smart buildings:

Any application for visualisation, energy optimisation, home automatisation can access any field data, if authorisation is granted, independently of the local communication network technology.

Enable interoperability of data and services for smart buildings through ontologies:

Applications and local communication systems share a common nomenclature (ontology) for field data (e.g. name for “instantaneous power for heat pump”) and building meta-data (“The air-water heat pump is used for domestic hot water preparation and space heating”).

Increase energy performance through smart services:

Smart services make buildings more energy-efficient, more flexible and give more control to occupants and facility operators.

Demonstrate and evaluate smart services deployed on IoT ecosystem compatible IoT frameworks:

Smart services for existing buildings are deployed in several demonstration sites, using different frameworks compatible with the domOS IoT ecosystem specification. Their performance regarding technology, energy, user experience and business is assessed.

DEMONSTRATION SITES

Smart services for existing buildings will be deployed in **five demonstration sites**, using different frameworks compatible with the **domOS IoT ecosystem** specification. Their performance regarding technology, energy, user experience and business will be assessed. The demo sites are located in:

1) **Sion (Switzerland)**
   - **Buildings:** 200 single family houses, 2 multi-family houses
2) **Paris (France)**
   - **Buildings:** 220 households
3) **Aalborg (Denmark)**
   - **Buildings:** 340 households (26 multi-family buildings, 20 single-family houses)
4) **Neuchâtel (Switzerland)**
   - **Buildings:** 1 mixed residential / tertiary building
5) **Skive (Denmark)**
   - **Buildings:** 6 single-family houses with SUNTHERM heat pumps, 6 single-family houses with legacy heat pumps

PARTNERS

Cooperation of **11 partners** from **5 European countries**

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