

EkoBina

Building Energy Management Platform with Wireless Sensor Network and Demand Forecasting Capabilities

This project has received funding from "1511 Research Technology Development and Innovation Projects in Priority Areas Grant Programme" of the Scientific and Technological Research Council of Turkey.



2017 - 2019



Framework



Coordinator



Duration

Objective

Ekobina project aims to provide environment friendly, energy and cost efficient building energy management with embedded cloud computing capabilities, new generation sensor network and low power communication infrastructure. Ekobina platform can be easily applied to existing and new buildings and can provide a solution that adapts to the conventional sensor and communication infrastructures of buildings. This product will create a scalable system that will stimulate savings, provide feedback on financial and environmental benefits with new generation and adaptable decision making capabilities, at national and global markets.

- to be able to adapt to demand changes caused by user behaviour and climate condition
- to accommodate energy simulation and optimization capabilities for decision support
- to ensure the most appropriate operation conditions and time intervals for the energy system equipment
- to work with "internet of things" and "cloud computing" infrastructure

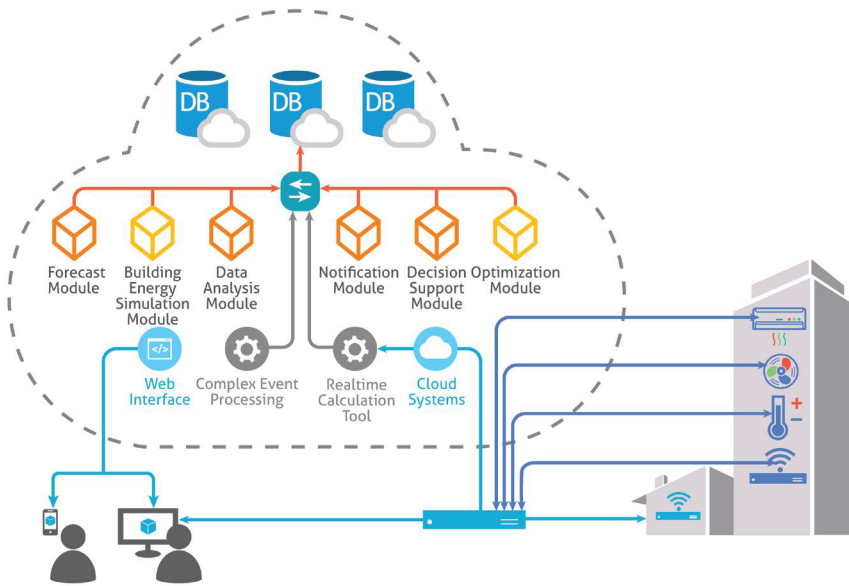
Technologies

- Energy and cost efficient building energy management system
- Wireless indoor sensors
- Low power communication infrastructure
- Decision making support with simulation and forecasting capabilities

Innovative Aspects

The main objective of this project is to develop a national product and service platform (EkoBina) with the following capabilities:

- to be able to process collected data by new generation wireless low power consumption sensor and control network



Impacts

- 10%-50% energy savings in annual primary energy consumption of buildings by integrating energy management system
- Improvement in indoor air quality and thermal comfort
- 10%-50% reduction in carbon emissions caused by buildings
- Ease of use and integration of different hybrid systems

Ekodenge's Role

Project Coordinator

- Development of Ekobina system software
- Integration of the Ekobina software to building infrastructure
- System evaluation and validation

Partners



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