



ENERGY EFFICIENCY IN BUILDINGS

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Making Buildings Smart

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INTELLIGENT ENERGY EFFICIENCY

The main goal of this project is to develop expert intelligence tools to be incorporated in commercial energy management platforms for proactive energy management and optimization of energy savings. To this end, three (3) fuzzy logic powered tools will be deployed to be incorporated in well-known SaaS platforms used for energy management to further improve decision making related to smart fault detection and diagnostics as well as intelligent predictive maintenance of basic equipment. The first tool, the so-called **expertFDD analyzer**, will be a core fault detection and diagnostics tool related to common building equipment, such as HVACs, lighting, machines, PV plants, pumps, etc., enhancing ongoing monitoring-based commissioning of building systems to save energy and extend equipment life. The second tool, the so-called **HVAC system optimizer**, will be based on a fuzzy inference engine for optimizing HVAC system operation in order to increase comfort, reduce energy costs and shift peak demand. The third tool, the so-called **maintenance expert**, will be a cost-effective maintenance tool to predict future maintenance needs on basic building equipment with the view of further optimizing its operation across time.