



Energy IN TIME WORKSHOP



European Research Conference: Buildings
Europäische Forschungskonferenz: Gebäude



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ACCIONA

Energy IN TIME- Simulation based control for Energy Efficiency building operation and maintenance



This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 608981.



World Sustainable Energy Days
1 - 3 March 2017, Wels/Austria

Project Facts

- Project Acronym: Energy IN TIME
- Grant Agreement No: 608981
- Call identifier: FP7-2013-NMP-ENV-EeB
- Coordinator: Belén Gómez-Uribarri ACCIONA
- EU Officer in charge: Carlos Saraiva-Martins
- Project Technical Advisor: Dimitrios Karadimas
- Start Date. 1/10/2013
- End Date. 30/09/2017
- Duration: 48 months
- Project Budget: 7.728.961,60 €
- EU Contribution: 5.099.973,00 €



Energy IN TIME Consortium



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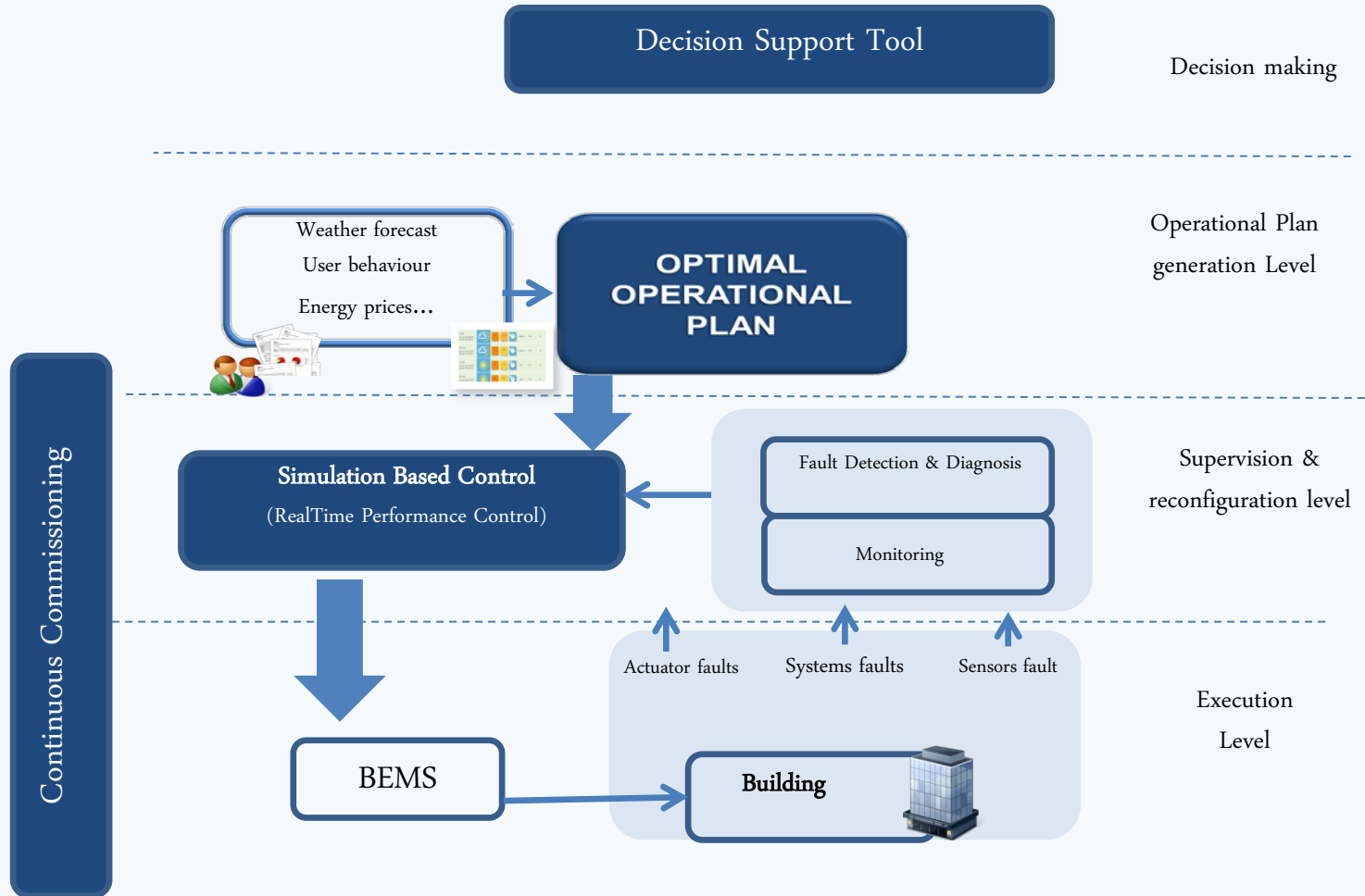


Why Energy IN TIME?

- Buildings energy demand and consumption is influenced by internal and external factors:
 - Design
 - Construction materials
 - Climate
 - Users behaviour
- These factors are considered at the building **design** and **planning** stage
- During daily operation those factors can **change**



Energy IN TIME Approach



Energy IN TIME Pilots

AIRPORT



Location: FARO (PORTUGAL)

41.000 m²

Built 1989 (2001 last refurbishment)

Energy source -> electricity.

Technical Management and Smart Metering System.

Open spaces with big flows of people at certain times of the day



Energy IN TIME Pilots

Offices and Test Labs



Location: BUCAREST (ROMANIA)

17.384 m²

Built: 1982

Energy Source -> Solar Energy

-> District heating 90%

PLC for Monitoring and Control

Closed and distributed spaces with constant flows of people
and scheduled occupancy.



Energy IN TIME Pilots

Commercial and Office



Location: HELSINKI (FINLAND)

38.190 m²

Built: 1999

Energy Source -> District heating

ABB and Schneider SCADA.

Open spaces and distributed spaces with varied flows of people
and scheduled occupancy



Energy IN TIME Pilots

HOTEL



Location: LEVI-LAPLAND (FINLAND)

42.500 m²

Built: 2010

Energy source -> District Heating

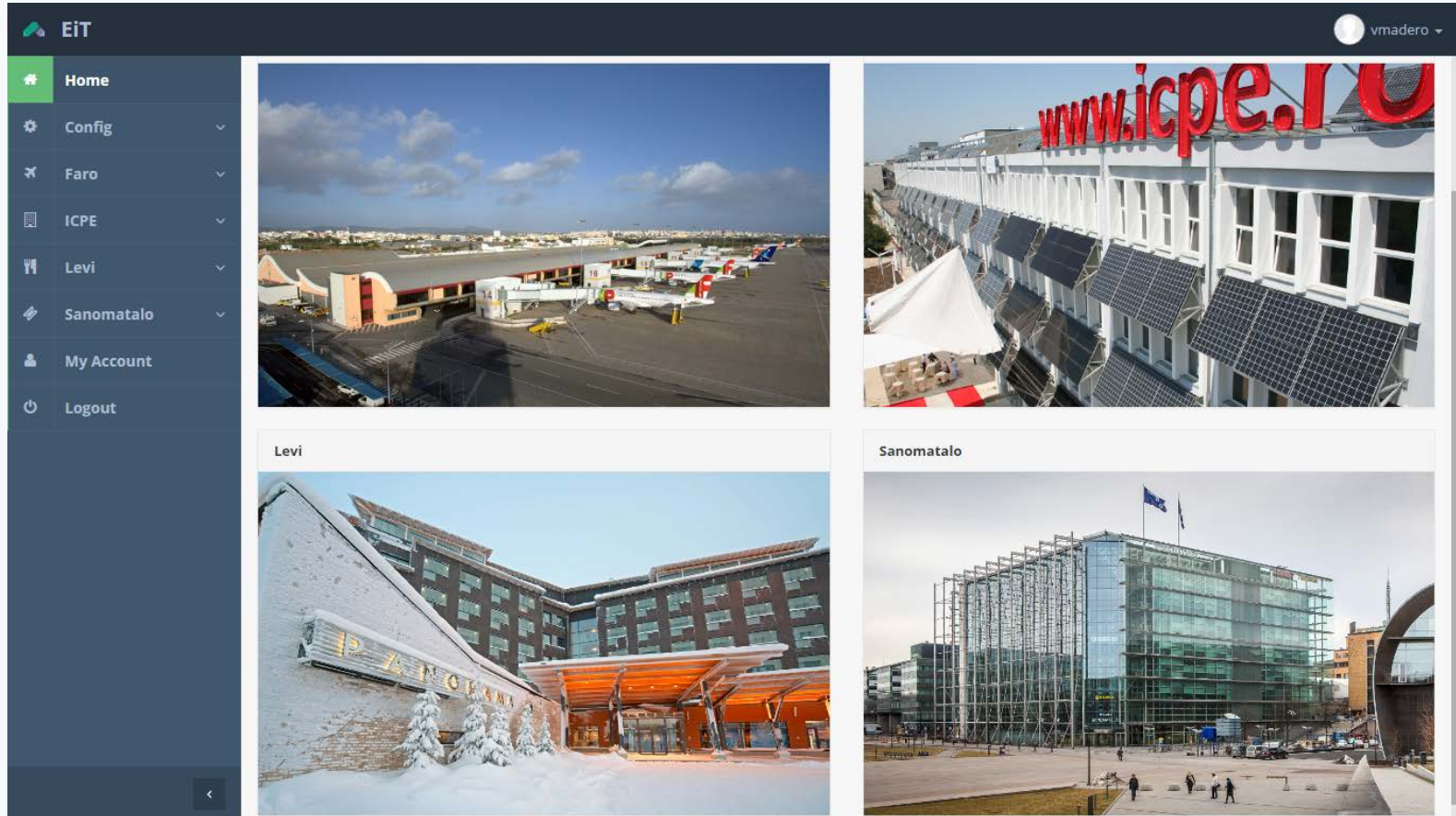
Building Automation System with external network Operational
Plans distributed in four independent spaces areas.



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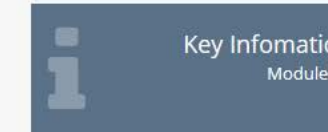
Energy IN TIME- Centralised Remote Control



- Home
- Config
- Faro**
- Data acquisition
- Energy modeling
- BIM
- Key information
- Data repository
- Control modules
- Cont. commissioning
- Fault detection
- Predict. maintenance
- Data exploitation
- Decision support



Modules

 <p>Data Acquisition Module 01</p> <p>GO TO THE MODULE ></p>	 <p>Energy Modeling Module 02</p> <p>GO TO THE MODULE ></p>	 <p>BIM Module 03</p> <p>GO TO THE MODULE ></p>	 <p>Key Information Module 04</p> <p>GO TO THE MODULE ></p>
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EiT

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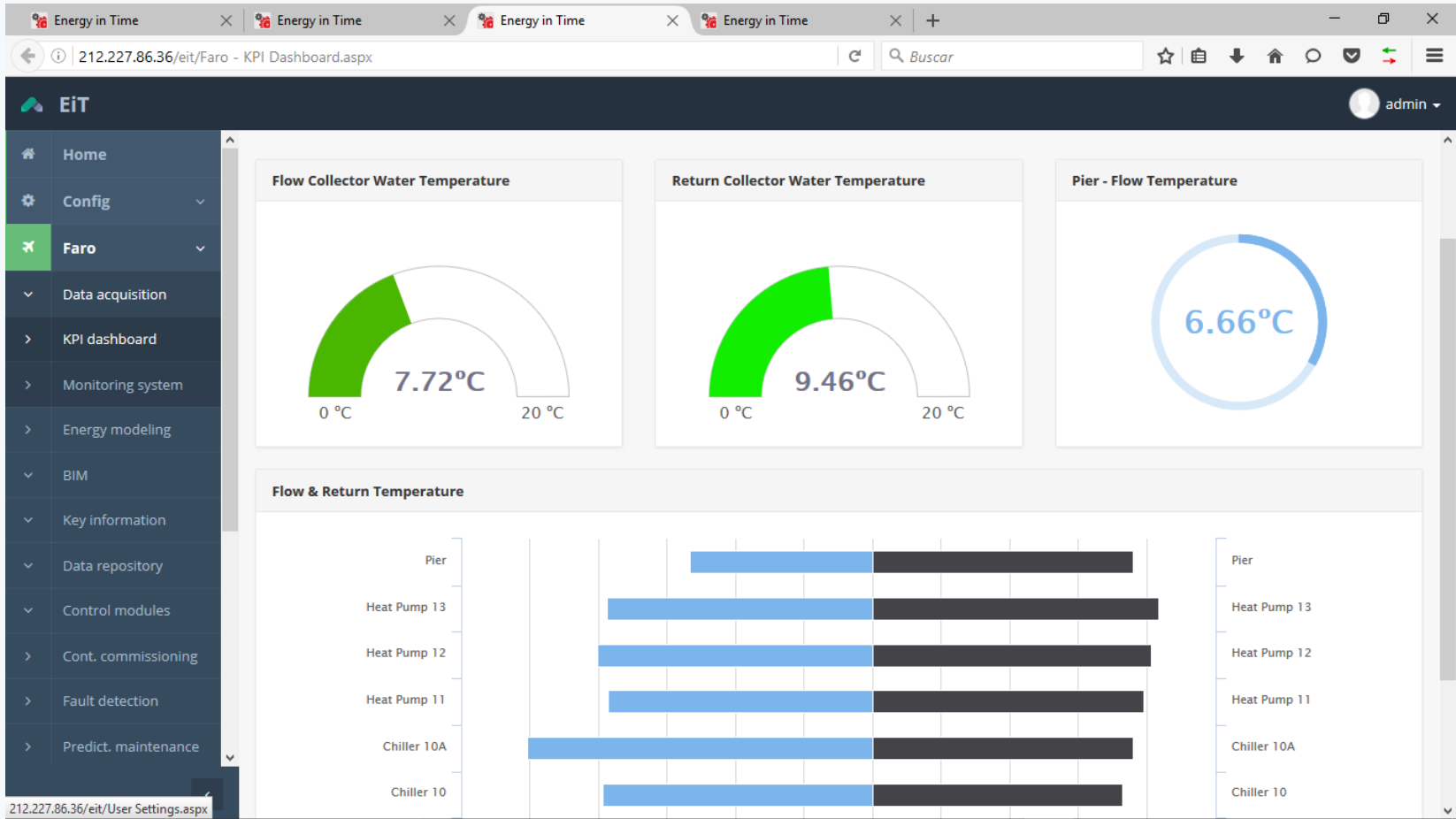
Google **Aeroporto de Faro**

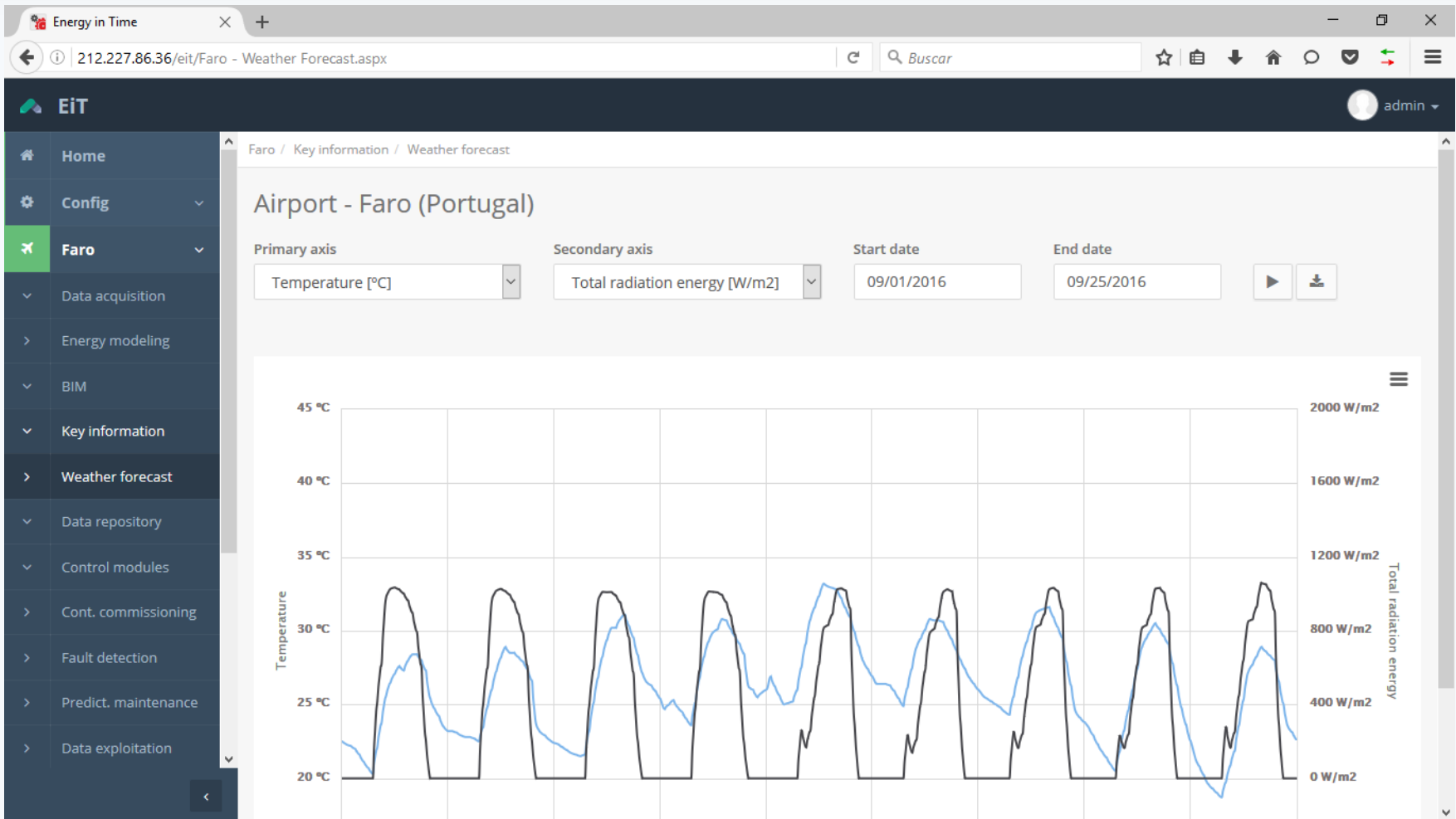
Datos de mapas ©2016 Google Imágenes ©2016, Aerodata International Surveys, Cnes/Spot Image, DigitalGlobe, IGP/DGRF 100 m

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 <p>Data Repository Module 05</p> <p>GO TO THE MODULE ></p>	 <p>Control Modules Modules 06, 07, and 08</p> <p>GO TO THE MODULE ></p>	 <p>Cont. Commissioning Methd. Module 09</p> <p>GO TO THE MODULE ></p>	 <p>Fault Detection and Diagnostics Module 10</p> <p>GO TO THE MODULE ></p>
 <p>Predictive Maintenance Module 11</p> <p>GO TO THE MODULE ></p>	 <p>Energy Data Exploitation Module 12</p> <p>GO TO THE MODULE ></p>	 <p>Decision Support Tool Module 13</p> <p>GO TO THE MODULE ></p>	









Thank you!

www.energyintime.eu

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