

# NEWS

CASCADE – ICT for Energy Efficient Airports

CASCADE-Newsletter No 5, November 2014

## Newsletter No 5

Welcome to the fifth newsletter of the CASCADE project.

## Final CASCADE months

CASCADE project will end in March 2015. Five months remain with a lot of work and results to be presented.

The consortium will finish all due deliverables and publish all the public outcomes of the project. The technical developments will be finalised, too. We expect further energy savings for the airports.

## CASCADE solution for other airports

CASCADE solution has proved its viability at the two pilot airports. It is now time to transfer the knowledge to other airports. We have received many requests – we are preparing now a replication strategy of the solution at other airports.

## CASCADE solution for hospitals, train stations and other large buildings

The CASCADE solution can of course be replicated to other building types. We will expand the group of customers and include the responsible building managers of hospitals, train stations, large business office buildings etc.

## Work progress

The CASCADE solution is currently being validated at both airport pilots Milan-Malpensa and Rome-Fiumicino. In the last months, the ISO 50001 Energy Action Plan has been customized to both airport energy management teams. Thus, they have the possibility to support auditing processes, define different kind of responsibilities in the organization for the ISO 50001 Plan-Do-Check-Act process, as well as generate different kind of visualizations of the energy data. With this tool, energy conservation actions are formally linked with airport actors and can be followed along the whole decision, implementation and validation process.

Regarding the Fault Detection and Diagnostics side, the targeted systems at airports have been continuously analysed for over six months by the automated Fault Detection and Diagnostics system. Some significant energy saving potentials in the operation of the 12 large air handling units supplying the Terminal 1 with fresh air at the Fiumicino airport have been identified. It was for example discovered that the time schedules of these units could be optimized and harmonized. Also, some of the plants are sometime cooling and heating simultaneously or are operating with drifting sensors. The energy saving potential identified by the CASCADE solution during this first phase have been estimated to about 500 MWh or 70.000 EUR for this airport. At the Malpensa airport, the heating and cooling systems of Satellite A are being currently intensively monitored. Outliers in the district heating energy supply have been identified, which are causing additional unexpected energy consumption.

The CASCADE software solution has been further developed by linking the Energy Action Plan with the Fault Detection and Diagnostics outputs and the ontology middleware layer. Feedbacks from airport teams have been taken into account to deliver e.g. a grouping of alarms and FDD results that enhance the user friendliness of the solution.

## CASCADE at twitter

At [twitter.com/CASCADE\\_ICT](https://twitter.com/CASCADE_ICT) you can follow CASCADE and learn about the project and its latest news. We have a great number of followers - airport experts or knowledge multipliers.

## Next steps

Our next tasks are:

- Implementation of concrete energy conservation measures at airport
- User training on Energy Action Plan
- Finalization of the software prototype
- Elaboration of a replication plan for the knowledge transfer to other airports or buildings
- CASCADE Workshop preparation (March 2015)