Efficiency criteria in the construction of a data processing center

Data processing center (DPC) for Telefónica at Alcalá de Henares, Madrid.

A DCP is a building destined for computer equipment accommodation for data storage, which main design constraint is the efficiency due to the important consumption demanded by these installations.
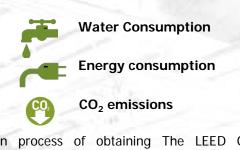
The Project realized covers several actions:

- Design strategy with cold/hot aisle inside the IT room.
- AC equipment low consumption using as much as possible external air for cooling.
- The IT rooms are air-conditioned the 92% of the hours of the year by external direct air and/or adiabatic cooling.

This DCP has one of the best energy consumption ratios in comparison with other similar centers in operation. The **PUE (Power Usage Effectiveness)** is inferior to **1,3** towards the average of 2,2, meaning a total energy saving of 40% and a 75% respecting to manageable
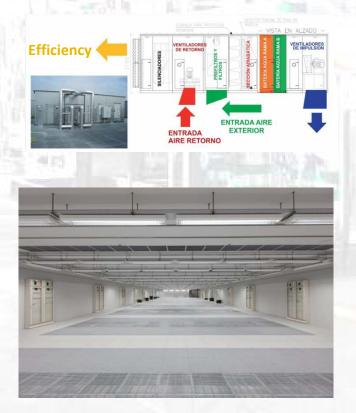
Environmental advantages:

The design, construction and operation obey to the most rigorous sustainability criteria, with important **reductions** of:

Water Consumption

Energy consumption

CO_2 **emissions**

In process of obtaining The LEED Gold certification, awarded by the Green Building Council.

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