

# Case Study

## Industrial Energy Efficiency



Sector:  Industry  Large Buildings  Infrastructures  Retailing / Services

Subsector: Data Centers Year: 2017

Client: IP Telecom / Schneider Implementation (months): 3

Location: Portugal (Porto, Viseu, Lisbon) Performance Contract (years): N/A

Type of Contract: Energy Audit

### Project description:

EWEN performed together with Schneider, audits to 3 Data Centers of IP Telecom (the national infrastructure company), being responsible for auditing the cooling system.

EWEN's DCTP (Data Center Thermal Profiler) especially developed for Data Centers, was used extensively to determine the thermal profiles and ventilation rates. EWEN's DCTP which consists of HW and SW, provides both 2D and 3D visualization of the thermal profiles at rack inlet and outlet, as well as the ventilation rates from the raised floor louvres.



Note: For confidentiality reasons, the images shown above are from a fictitious Data Center.

### Project results:

The audit to the 3 Data Centers provided:

- a) A number of efficiency measures to be recommended, to improve the Data Center's PUE (energy KPI  $\gg$   $PUE = \text{Total Energy consumption} / \text{IT Power}$ );
- b) Measure and quantify the degree of compliance of ASHRAE's recommended envelopes for environmental conditions inside the Data Center (presenting the measured values on a Psychrometric Chart);
- c) Measure environmental conditions for different operating scenarios (such as part of the HVAC system unavailable);