

RQ Box technology secures air conditioning via free cooling in a Data Centre exposed to environmental pollution

"Our decision to use the RQ Box from Alpha M.O.S is based on the quality of references provided within the industry. The pollutant detection technology installed in our Condorcet data centre has no doubt contributed to TelecityGroup's recognition as the 'Best European Data Centre' in 2010."

Nicolas Buono, Director of Operations – TelecityGroup France

The Condorcet Data Centre

- This next-generation data centre located in northern Paris is managed by TelecityGroup, Europe's leading provider of premium network independent data centres
- 3,400 sq. meters (36,000 sq. feet) of IT hosting facilities
- ISO 14001:2004 certified
- Cools the technical facilities using direct free cooling in order to help reduce energy consumption. Fresh air is used to cool computer rooms, decreasing the environmental impact which come with traditional air conditioning systems



Challenge

- To secure the free cooling air conditioning system in order to ensure that potential pollutants from the outside air do not enter any computer room hosting sensitive devices.



Solution

RQ Box solution for odour and gaseous pollutants monitoring, including:

- Two RQ Box electronic noses
 Each analyser, installed in an air intake, controls a cooling device. If excessive pollution is detected, a warning is generated in real time to automatically disable the free cooling system and trigger the traditional air conditioners, which prevents contamination from polluted air.
- Wireless communications system
- RQ Net software for data acquisition and display of results

Results

- **Protection of sensitive equipment and reduction in environmental impact**
 - ⇒ Outside air quality used as a parameter for controlling the air conditioning system
 - ⇒ Immediate response thanks to real-time alerts
 - ⇒ Promotes a more energy-efficient data centre
 - The use of direct free cooling helps reach the target PUE* of 1.5 (PUE for an average data centre is 2.5)
 - Directly reduces CO₂ emissions by 5,000 tons
- **Pollution detection technology matches the Group's requirements**
- **An efficient, reliable combination of the RQ Box and free cooling**
 - ⇒ The RQ Box technology may later be extended to further of the Group's sensitive environments

* PUE (Power Usage Effectiveness): measurement of a data centre's energy efficiency