



# CosmoCaixa

Designing an educational exhibition to bring visitors into the world of meteorology through a set of interactive experiments that help to understand how to measure and forecast weather.

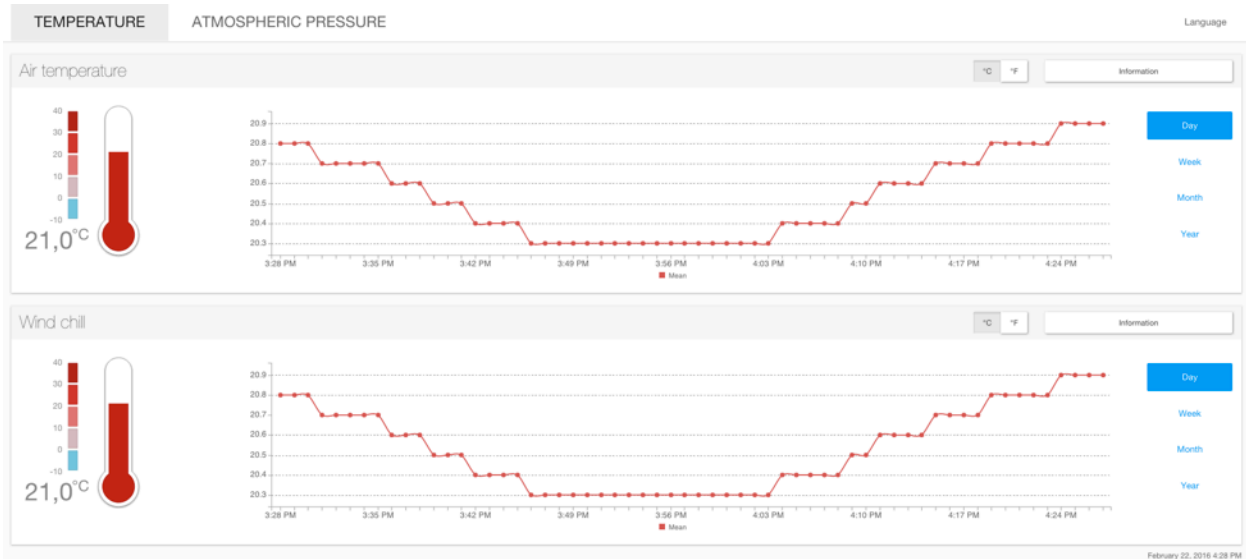
## The Challenge

CosmoCaixa is a major science museum located in Barcelona. The museum features a wide variety of permanent and temporary exhibitions about nature, science and space. CosmoCaixa also has a planetarium and several interactive exhibitions for visitors of all ages.

The challenge was to design a fully interactive exhibition consisting in different weather experiments that showcase in a fun and engaging way how wind, temperature, humidity, rain and solar and UV radiation are measured.

## The Solution

The experiments consist of weather sensors that visitors can interact with to learn how they work. Each experiment is connected to an analog panel meter that reflects the changes as they occur, and is also accompanied by a touch screen monitor that shows real-time weather data from the station located on the CosmoCaixa rooftop, as well as visual and textual explanations about each specific variable. All the weather data of the station is stored in a Weathercloud meteOS server, which features a stylish browser-based user interface.



Weathercloud meteOS is a rack-mounted server providing real-time weather monitoring and data storage.

## Overview

Weathercloud meteOS is an extremely robust Linux-based server that efficiently combines sensor data retrieval with accurate real-time weather monitoring and SQL data storage.

The server can be fitted with unlimited sensors of any type, and is fully customizable to suit even the most demanding requirements.



## Built-in Features

- Fully customizable and expandable system.
- Wide range of compatible sensors and protocols.
- Clean and stylish browser-based user interface.
- Responsive design for easy mobile monitoring.
- Automatic data transfer to FTP server and email.
- Quick data export to most spreadsheet formats.
- Low noise and power consumption.

## Optional Features

- Configurable warnings and alarms.
- Open database for remote data extraction.
- METAR, SPECI and SYNOP ready.
- RAID-ready for local backups and data protection.
- Cloud service for remote data backups.
- Local touch screen and rack keyboard.
- Dual power supply for critical applications.