

# WATER MONITORING

## Monitor Water Eutrophication



**INDUSTRY:** Environment

**YEAR:** 2014-2015

### THE CHALLENGE

Monitor water eutrophication in lakes and closed water basins to ensure the good functioning of re-oxygenation devices.

### THE SOLUTION

Stetel cooperated with the University of Pisa to develop a local system hosted on board of a floating device/buoy. Data from all controlled components was collected in the back-end and analysed to determine if the system was working correctly. Alarms were sent to the back-end in case of malfunction.

The device:

- Interfaces Solar Power system, probes and actuators for the re-oxygenation of water;
- Sends an alarm to the back end when a malfunction is detected.

### TECHNICAL SHEET

- Application developed on Raspberry PI architecture;
- Interface with local Power supply, system probes and actuator;
- Communication between devices through Mashed network based on ad-hoc WiFi technology;
- Communication to Back-end via GSM;
- Single master device enabling communication between site and back end;
- Back-end functions: monitoring, reporting, alarming, device management, software distribution and upgrades.

### THE RESULTS

35% improvement in Water re-oxygenation.



Stetel is an Italian company developing mobile apps and software enabling the Internet of Things and Rich Communications.