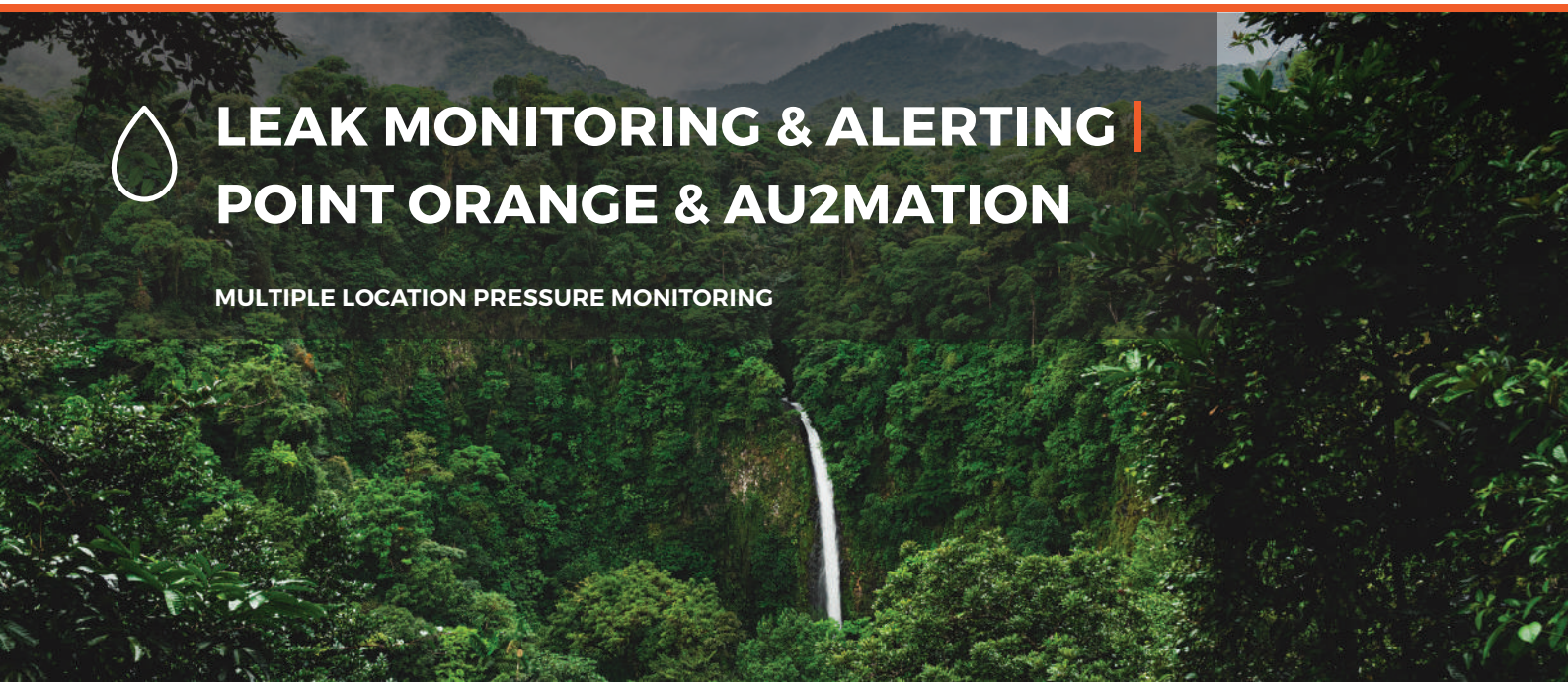
CASE STUDY

HEREDIA PUBLIC SERVICE ENTERPRISE | COSTA RICA

metasphere
make data count



LEAK MONITORING & ALERTING | POINT ORANGE & AU2MATION

MULTIPLE LOCATION PRESSURE MONITORING

BACKGROUND

Heredia Public Service Enterprise (ESPH) found that monitoring for leaks in their water distribution network required considerable manual effort. Crews had to be sent to measure the pressure at 27 different locations, covering a wide geographic area. Given the time taken to perform this task, a leak could easily have been present for some time, causing the loss of expensive, treated water for **ESPH** as well as inconvenience to their customers.

Point Orange RTU installed on telephone pole

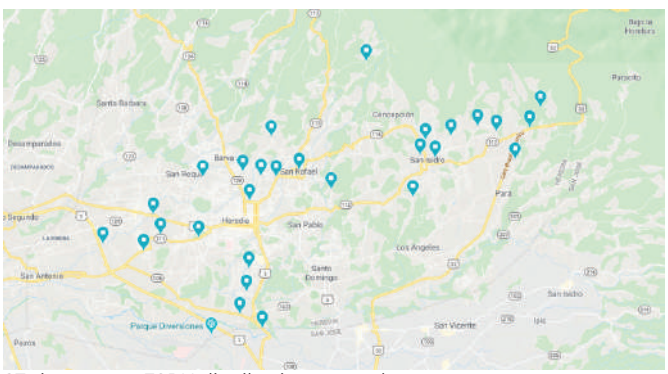
STAKEHOLDER

ESPH is a private water utility through public concession, in Heredia Province, Costa Rica. **ESPH** serves 50,000 users and delivers 15.5 million cubic metres per year, the average use per family being 1,000 litres per day.

Systems Integrator Soluciones en Automatizacion Industrial S.A. (SOATI) provides automation solutions to industry, providing excellence in quality, service and response time, with a commitment to continuous improvement and highly-trained personnel in the production processes of their clients.

BUSINESS NEEDS

ESPH needed to minimise the manual effort required to monitor for, and dramatically reduce, the time to detect leaks. **SOATI** offered a solution from **AU2MATION** which was based on the **Metasphere Point Orange** remote telemetry unit (RTU). This device, battery-powered and including a built-in cellular modem, was deployed at each of the 27 locations previously monitored manually.



27 sites across ESPH distribution network

THE METASPHERE SOLUTION

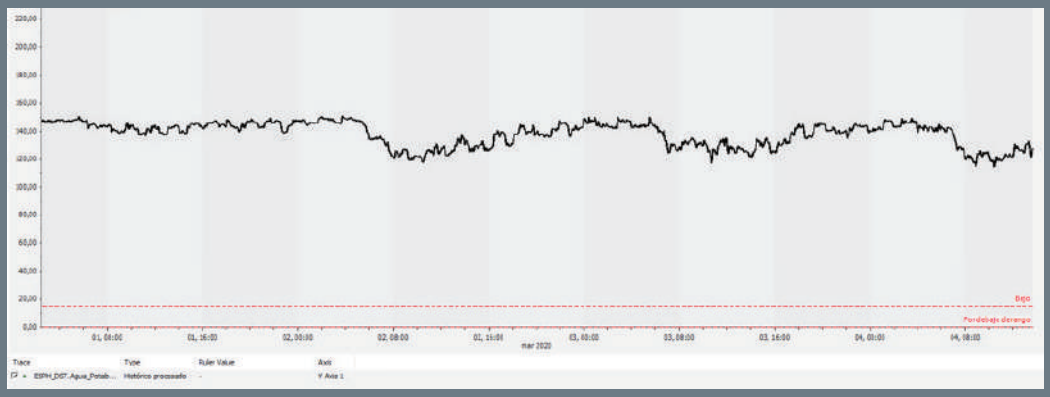
The **Point Orange** RTU monitors a pressure sensor at each site, recording pressure data continuously, meaning **ESPH** can view a historic record at any time, to identify particular behaviours. **Point Orange** sends an alarm to **ESPH** on detection of a low-pressure event, signifying a potential leak. Three additional alarm levels are available, should **ESPH** wish to monitor other conditions. **Point Orange** also monitors its own battery voltage and can generate an alarm in the case of low battery, allowing time for **ESPH** to visit the site to replace the battery. Battery replacement is a simple task, performed on site in a few minutes.

Point Orange is a self-contained RTU with internal battery pack, IP68 unit enclosure, either a 4G (NB-IoT/ CaT-M1) or tri-band 3G modem, and quad band GSM/GPRS fallback, auto-switching internal and external antenna options, software configurable AI, CI, DI, Modbus and SDI-12 communication options, integrated submersion sensor, local diagnostic points and intelligent alarm reporting. It communicates with **Metasphere**'s Master Control System, DNP3/ WITS DNP3 Masters or FTPS servers.

Point Orange RTU communicates with **ESPH**'s SCADA system over **ESPH**'s private gateway on the public cellular network, using the open standard DNP3 protocol.

BENEFITS

ESPH is experiencing the benefits of the solution in terms of reduced effort and a more timely response to leaks in the network, improving their customer service, with historic records of water pressure now available (example below). Cellular technology avoids the need for aerial mounting and alignment, and battery power removes the need to provide an external power supply for the RTU or pressure sensor.



FIND OUT MORE!

If you would like to monitor for leaks and get alerts, get in touch to find out how **Point Colour** RTUs transform your operation.

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