



SmartCap

Leakage reduction drive

Technology: SmartCap

Location: South Florida, US

Drinking water systems in the United States currently lose at least six billion gallons of water every day. According to figures from the American Society of Civil Engineers there is a water main break every two minutes.

Utilities are building their resilience, shifting from reactive to data-led proactive decision making and integrating smart water technologies into their drinking water infrastructure systems.

THE CHALLENGE

Orbis successfully supported a South Florida water utility in its non-revenue water reduction drive, demonstrating the capability of its innovative SmartCap real-time detection technology by quickly pinpointing two previously undetected leaks.

The pilot project saw the installation of six standard SmartCap devices as part of proactive efforts to reduce leakage on the water network. The client was given access to Orbis' simple-to-use cloud-based Streamline Portal, which it was able to check regularly to identify warnings for potential leaks.

The project focused on two different locations – a busy residential suburb and an industrial area, with three SmartCaps deployed across each.

CASE STUDY

LEAKS DETECTED WITHIN THREE DAYS



SMARTCAP FEATURES:

- Easy onsite deployment
- Auto-pairing feature
- Replaceable battery
- CAT M1 cellular connectivity
- Suitable for monitoring distribution pipes – 12" or less – from hydrants
- Above-ground installation eliminates signal concerns
- Suitable for wet and dry barrel hydrants
- Can upgrade legacy standpipes and hydrants

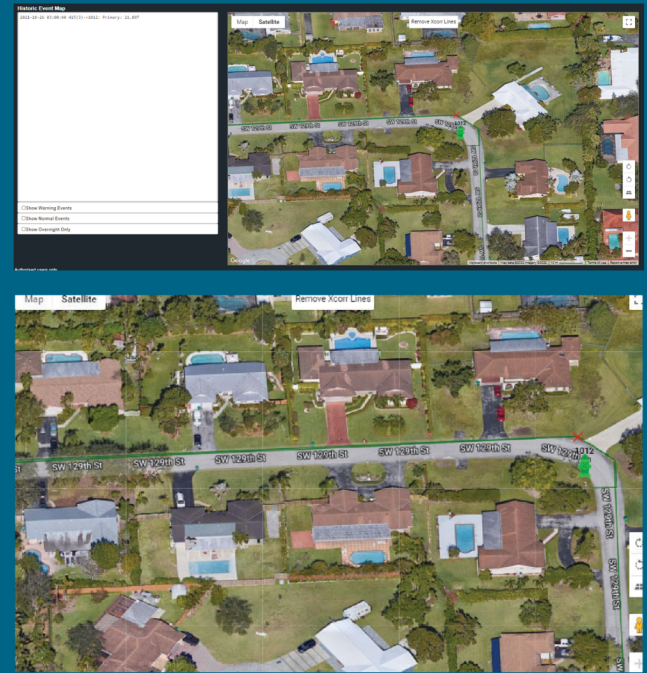


THE OUTCOME

In the residential area, the technology verified and pinpointed the location of a suspected but unconfirmed leak. In the industrial area, a previously undetected leak was identified. In both locations, the leaks were identified and confirmed in less than three days.

This short timeframe and pinpoint accuracy enabled the utility's repair teams to quickly locate and repair the leaks on their distribution mains. Had the SmartCaps not been deployed, the water may have continued to run, very likely leading to a significant and costly water main break, infrastructure damage and community disruption over time.

A fast and easy installation process and the technology's auto-pairing function made the SmartCap particularly suitable for both busy locations. Due to these successful outcomes, the customer is working toward expanding this program.



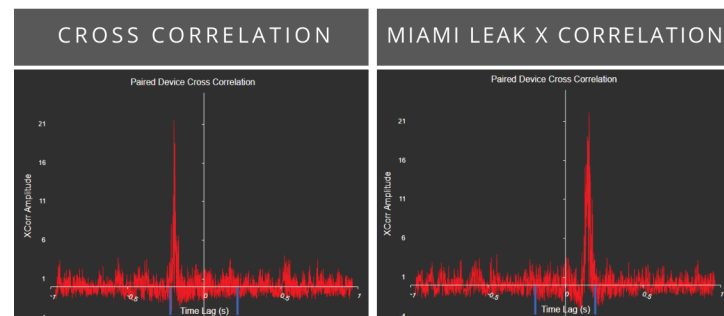
THE TECHNOLOGY

The Orbis SmartCap is an intelligent fire hydrant and pipe monitoring device that enables remote leak detection by providing real-time data from a multi-sensor. Packaged into a fire hydrant cap, the device can convert any fire hydrant into a smart-enabled asset simply by replacing the pumper nozzle cap.

The ease at which the devices can be installed onsite makes them ideal for deployment in busy locations.

Data received by the sensor is automatically uploaded to the user-friendly Streamline Portal. The dedicated portal collates the array of pipe and flow conditions, along with GPS location information, and uses algorithmic models to create scheduled reports and alerts which can be accessed by operators.

This actionable intelligence enables utilities and municipalities to manage their water network efficiently.



COST SAVINGS

The remote monitoring capability meant no labor resource was required onsite to detect the leaks. However, the biggest savings undoubtedly came from the prevention of future water losses and by eliminating the risk of major infrastructure damage and the costly legal claims that can result from a water main break.

Orbis Intelligent Systems is committed to delivering smart technologies that support utilities and municipalities in the critical job of delivering safe and reliable water services.