BRAZIL, 2014

Deployed by: OPTIMALE

TaKaDu Deployment Case Study

AEGEA: Aguas Guariroba

Improvement in network performance and visibility from day one

AEGEA reports immediate results from the TaKaDu network and data audit completed upon deployment, which revealed long-standing problems.

TaKaDu pipeline coverage:

- 3,500 km
- 94 district metered areas (DMAs) including 15 pressure metered areas

Existing Network Instrumentation:

- 98 flow meters
- 132 pressure loggers
- 50 large consumer meters

Data collection:

- Samples are collected every minute equaling to 1,440 times per day and the data is sent to the SCADA in near real-time
- All meters in the SCADA work this way including pressure, flow, and reservoir water level meters
- Field data is stored in a SCADA system
- The utility sees the benefit from additional investments in telemetry and is working towards this goal

Organizational Shift — From Reactive to Proactive

Prior to TaKaDu's deployment in AEGEA's concessionaire Aguas Guariroba in Campo Grande in March 2014, water network monitoring and management was done on a somewhat limited basis with the utility team deferring to the status quo of relying on customer calls or field teams to start managing an event. This approach changed significantly with the introduction of TaKaDu and the deployment of new work processes which motivated the utility team to learn and utilize the solution and triggered a cultural change to be more proactive when it comes to managing problems in the network.

For example, prior to TaKaDu, supply changes were made with a limited amount of information regarding service interruptions, sometimes severely affecting customer service and satisfaction.

The Aguas Guariroba team now takes a range of information into account, with the knowledge that TaKaDu will raise an alert if there is a supply problem. The most important change has been a better understanding of the network, specifically, the ability to correctly measure a variety of network characteristics and make decisions based on a number of data points.

Maximizing assets ROI

Improved customer service

Higher data availability

Improved network visibility

Real-time awareness to inefficiencies

Network Audit Insights — Immediate Impact for Improved Operations

In the first weeks of TaKaDu's deployment, many continuous network problems were uncovered that would have otherwise gone undetected.

Upon deployment and as part of an automated network audit, TaKaDu alerted on a number of previously unidentified malfunctions of network equipment including pressure relief valves (PRVs), faulty meters, and pumps. These issues were revealed as a result of the audit and otherwise would have gone undetected indefinitely.

One month after deployment, all data and relevant network components were aligned, providing the operators with full network visibility and allowing them to gain the full value of their investment in network assets.

TaKaDu provides utilities with initial network visibility upon deployment, continually tracking trends and patterns on a daily basis. With TaKaDu, the utility can get the best value from its assets by transforming raw data into valuable operations and management information.

Ongoing Monitoring — Direct Impact on Performance and Service

Meters

Prior to TaKaDu, it was a challenge to identify faulty meters. However, upon deployment, TaKaDu alerted on a number of meters that were either broken or had communication problems. **Identifying and categorizing meter issues in real-time helps to support the utility's goals of improving data quality.**

Pumps

EXAMPLE TaKaDu raised an event alerting the utility team of a pressure drop in a DMA 60 km away from the city. The operator identified a malfunction in one of the pumps and sent a field team to repair it, solving the malfunction in less than 5 hours. This particular district has 4,000 habitants and they would have experienced a supply interruption if the malfunction had not been alerted on, identified as a serious problem warranting immediate attention, and repaired in a timely manner.

With TaKaDu, pumps are managed more efficiently preventing energy waste and supply interruptions because network analysts know when a pump is working continuously or, if there's a problematic pattern, fixing it as needed.

PRVs

EXAMPLE — Immediately after launch, TaKaDu alerted on a malfunctioning PRV. The problem started at approximately 8am when TaKaDu generated an event, alerting the operators that there was an issue. The field team was sent to the site and confirmed that the PRV was stuck. Immediate resolution to the problem avoided a supply interruption to over 1,500 customers.

When PRVs fail, the effects on the network can be extremely detrimental, leading to either higher or lower network pressures. Low pressures can result in disruptions to customer supplies and higher pressures can lead to bursts. With increasing demand on utilities to offer more reliable service and increased asset life, pressure management is a critical solution in delivering these and other serviceability requirements.

Prior to TaKaDu, Aguas Guariroba's operational teams would not be alerted to PRV failures immediately, only being informed by their customers when the asset failure had resulted in network disruption. The team now sees this problem before supply is affected or bursts occur, enabling it to respond proactively.

TaKaDu's automated ongoing monitoring has a direct impact on customer service and satisfaction, preventing supply interruptions.

TaKaDu

TaKaDu is a leader in Integrated Water Network Management, empowering utilities to efficiently manage their networks by optimizing tactical and strategic decisions. TaKaDu's patented technology utilizes raw data from multiple sources, analyzing it to produce and prioritize network insights which enable data-driven decision-making across utility functions and departments. The solution transforms the way water networks operate, ultimately helping utilities reduce water loss, shorten repair cycles, and improve customer service.