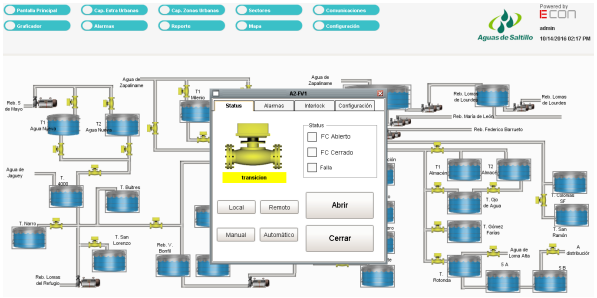
Case Study

Water Agency Welcomes the Future with Ignition

Aguas de Saltillo Develops Cost-Effective Applications



Ignition allows Aguas de Saltillo to see much more data than it could before.

While many water/waste water facilities stick with outdated supervisory control and data acquisition (SCADA) systems, Aguas de Saltillo in Mexico is taking a different path and accelerating toward Industry 4.0 — and is seeing numerous benefits.

Aguas de Saltillo provides drinking water and waste water services to residential, commercial, and industrial customers in Saltillo, Mexico. Saltillo is the capital and largest city of the state of Coahuila. With 725,000 residents, Saltillo is the 19th-largest metro area in Mexico.

Aguas de Saltillo is a public-private partnership between the City of Saltillo and SUEZ Environnement, a Paris-based company. SUEZ Environnement provides water optimization services in water networks, engineering, equipment, operations, and maintenance. It has more than 300,000 industrial and business customers around the world.

Aguas de Saltillo always seeks the best technologies to improve efficiency at its facilities. It's been using Ignition by Inductive Automation® for three years. Ignition is an industrial application platform with fully integrated tools for building solutions in human-machine interface (HMI), SCADA, and the Industrial Internet of Things (IIoT).

Aguas likes Ignition for numerous reasons. "With Ignition, it's very easy to develop new projects," said Juan Diego Bravo, process engineer for Aguas de Saltillo. "It's also easy to launch new clients. And it's a very open system, so it can communicate very easily with all the devices on the market. Ignition interacts very well with the SQL database. The other systems on the market don't have these capabilities."

Big Opportunities, Little Cost

Another benefit, Bravo said, is that Ignition is less expensive than the other systems. "When I was first looking into Ignition, I was surprised at how inexpensive it is, considering all the things it can do," Bravo said.

Aguas wanted to add more tags and devices, but that would have cost additional money with its previous SCADA system. With Ignition, the number of licenses is unlimited — at no additional cost — so Aguas can focus on getting the work done, instead of spending time figuring out how to pay for it. "Now, we can expand our system as much as we want," Bravo said.

"Ignition is not just SCADA. It's a platform for Industry 4.0. It's much more than SCADA, and that's what we need today."

– Juan Diego Bravo
Process Engineer, Aguas de Saltillo

Ignition has removed the economic and technological barriers to growth for Aguas. And it's helping the utility create its solutions of the future. "Ignition is not just SCADA," said Bravo. "It's a platform for Industry 4.0. It's much more than SCADA, and that's what we need today."

Bravo was extremely impressed with the speed with which he could implement Ignition. He also likes the fast development capabilities, the ability to monitor systems with mobile devices, and the alarm features. "And above all, the flawless and reliable behavior since we started working with it," he said.

Aguas uses Ignition for three key projects:

SCADA for Production — Aguas de Saltillo depends on Ignition for SCADA with its production and distribution of water. Ignition helps monitor and control wells, tank levels, valves, and more. Ignition provides production reports, flow rates, uptime statistics, volume numbers, and many other types of information. It's valuable data that Aguas simply couldn't see before.

"With the older SCADA, we were unable to launch multiple clients and work with a SQL Server database," Bravo said. "We were looking for a way to do reports. How much water we produce every day, how much energy we consume, how much time we spend working on the wells — we now have all this information. We use it for our maintenance program, and for greater efficiency."

Water Meter Testing — Aguas is writing scripts and algorithms on Ignition to help analyze data that's gathered while testing water meters. The test results help Aguas decide which meters to purchase, where they should be placed, and how to get more efficiency out of the meter system. Aguas can print PDFs of test results. Employees can view charts, graphs, and other data displays. The huge amounts of data enable better decision-making. "We are getting a lot of information about our process that's crucial for a water company to have," said Bravo.

Greater Efficiency with Geo-SCADA — Aguas is using Ignition to improve the efficiency of more than 200 District Metered Areas (DMAs) in the region. While the project isn't completed yet, it's an ambitious venture that is expected to pay big dividends. Ignition will be integrated with a geographic information system (GIS) to provide an extremely efficient way to manage all the DMAs.

On the GIS maps, Aguas will use color-coding to indicate various levels of efficiency. The new system will help determine the location of problems, and will eventually be integrated into the maintenance application as well. It will show alarms, tendencies, and behaviors in all 200-plus DMAs.

Aguas has plans to do even more with Ignition in the future. "The more we know about the software, the more we use it," said Bravo. "It's a very good platform — not just to build SCADA systems, but also to build applications that help you process all the information you have."

Scope of Projects:

8 databases (MySQL and Microsoft SQL Server)

6,500 tags (although Ignition enables an unlimited number of tags)

1,845 alarms

248 screens

More than 120 PLCs connected to the SCADA system

25 clients