



BACSOFT CASE STUDY

CAÑA BRAVA



ABOUT CAÑA BRAVA

Caña Brava, a member of the Romero Group, consists of three companies dedicated exclusively to the production of ethanol. Caña Brava owns over 9,500 hectares of sugar cane fields that are cultivated and irrigated through a modern drip system that carries water from the Chira River, in the Piura region of Peru. Its production capacity exceeds 370 thousand liters of ethanol per day, based on grinding 4,300 tons of cane.

The company handles planting and harvesting of the sugar cane, milling and industrial production of ethanol, and generation of electricity from the bagasse. Through these activities, Caña Brava has contributed to the development of the region in many ways, providing more than 1,500 jobs and boosting the local economy. The company has modernized and transformed the desert, installed 59 thousand kilometers of irrigation tubing, reduced water usage by 60%, mechanized harvests, controlled pests, generated electrical power, and much more.

THE CHALLENGE REMOTE MONITORING AND CONTROL OF PUMPING STATIONS

Caña Brava's operations are highly sophisticated. Automated drip irrigation systems are at the heart of their desert-climate agriculture. There are several pumping sites with multiple pumps. The water is pumped out of the ground into a reservoir and from there, it is drawn for agriculture. While the pumping equipment is state of the art, it is all operated manually, on-site.

Caña Brava's management did not have an up-to-the-minute picture about both the operational status of the pumps and the water levels at the reservoirs. If a reservoir overflows because of excess pumping, extensive damage can result, so managers needed a web and mobile monitoring application that they could access any time, in addition to real-time alerts. Looking ahead into the future, they also saw a need for remote control of the pumps from a central control room.

PARTNERING FOR SUCCESS

Telefonica's M2M group, which provides a variety of services for Caña Brava, introduced the company to Bacsoft. As a first step, the company decided to focus on remote monitoring and alerts, which would be provided in parallel to their current on-site, manual operation. They chose their largest site for the pilot, which includes 20 pumps.



"CAÑA BRAVA IS AN IMPORTANT CLIENT IN OUR PORTFOLIO. THE FAST RESULTS AND THE CONTINUED FLEXIBILITY OF THE BACSOFT SOLUTION HAVE STRENGTHENED OUR RELATIONSHIP WITH CAÑA BRAVA."

Javier Hunter, Agro Technology Product Manager, Telefonica Peru

THE SOLUTION BACSOFT IOT PLATFORM

Bacsoft used their comprehensive Internet of Things platform to provide remote visibility for Caña Brava's pumps. The platform includes:

M2M Communications

The Bacsoft Smart Communications Controller were installed at the site and connected to all 20 pumps. The versatile Smart Controllers were able to interface with their equipment without changes, enabling Caña Brava to continue their existing operation in parallel.

IoT Cloud

The Bacsoft IoT Cloud handles all aspects of communications, application execution, data storage, security and auditing in a high-availability cloud platform. For Caña Brava, all of the pump and reservoir data is sent to the cloud, where it is stored and processed for the applications.

Bacsoft Application Builder

With the Application Builder, Bacsoft quickly created a web console application that provides remote visibility into the operation of the pumps. Caña Brava will be able to expand the console to include remote control as well as additional analysis and real-time SMS alerts.

The cellular infrastructure is provided by Telefonica's M2M solution, which offers unique data roaming capabilities that enable wells at different sites to connect through different networks to provide the best possible service.

CONTINUOUS VISIBILITY AND MANAGEMENT

Now Caña Brava's management enjoys continuous visibility into the pumping operation from their laptops and tablets.



Because of the success of the pilot, Caña Brava plans to connect additional equipment adjacent to the pumping sites including the flow meters, water level monitors, temperature sensors and vibration sensors.

With Bacsoft, it is very simple to expand the installation with the plug-and-play controller. Using the Application Builder, they can easily configure the new equipment and add additional widgets to the web application for managers.

At the same time, they are planning to roll out the solution to additional pumping sites.

"I NOW HAVE COMPLETE CONTROL OVER WHAT IS HAPPENING IN THE FIELD AT ALL TIMES. THIS VISIBILITY CONTRIBUTES TO BETTER DECISION MAKING AND FASTER INCIDENT RESPONSE – AND IS PREVENTING RESERVOIR OVERFLOW."

Manager of Regional Operations and Maintenance,
Irrigation Department, Caña Brava

BACSOFT BENEFITS FOR CAÑA BRAVA

- REMOTE VISIBILITY FOR COMPANY MANAGEMENT FOR BETTER DECISION MAKING
- RESERVOIR OVERFLOW PREVENTION
- FASTER INCIDENT RESPONSE THROUGH REAL TIME ALERTS
- OPTIMIZATION OF PUMP USAGE
- LONGER PUMP LIFE AND HIGHER LIFETIME CAPACITY
- SAVINGS IN ENERGY AND WATER, PUMPS WORK ONLY WHEN NEEDED
- GRADUAL TRANSITION, LEVERAGING LEGACY EQUIPMENT AND PROCESSES
- OPTIMIZATION OF PROCESSES THROUGH ANALYSIS OF CLOUD DATA

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