Case study
Tenerife, Canary Islands, Spain

Balsas de Tenerife (BALTEN)

Supply and implementation of a business management system (ERP) for BALTEN

Since it was set up in 1988, the BALTEN public utility has become the main irrigation water utility in Tenerife, supplying more than 90% of the water used for agriculture. It provides its services to around 12,000 users who farm around 4,000 hectares on this Spanish island.

BALTEN manages 21 irrigation water ponds and regulating tanks with a total storage capacity of over 5 hm3, three desalination plants, a pipeline network of 1,500 km, three wells and one underground water gallery. The company is an excellent example of how multiple resources can be managed in an environment characterized by water scarcity, with sources drawing on groundwater, surface water and reclaimed water, which are regulated by tanks and ponds throughout the island.

The challenge

BALTEN aimed to implement a new, modern business management system (ERP) to replace the previous complex software that was used. This project is part of BALTEN's comprehensive Digital Transformation Project, which is an initiative that began in 2023 to improve the hydraulic performance of the irrigation water transportation and distribution systems in Tenerife. The project also included modeling the company's infrastructure at a later stage.

Therefore, the utility needed to modernize its outdated infrastructure and software platforms, thus optimizing its irrigation water transportation system and improving overall performance in irrigation water service.

Unlike other utilities, BALTEN also faced the complex task of establishing service prices. This was a major challenge due to its resource mix, which varies each year as do the costs of each of its water sources (highly dependent on energy prices).

The solution

This project included the implementation of the Xylem Vue Billing and Customer Portal applications. Billing was set to enable BALTEN to parametrize the commercial system processes based on previously determined rules and criteria (e.g., the definition of billable concepts

Program highlights:

- Integrated business decision-support system
- Management of updated and reliable information from different areas
- Easy access and exchange of information between stakeholders
- Enhanced control of water quality issues
- Greater adaptability to water demand at all times
- Cost reduction and time saving

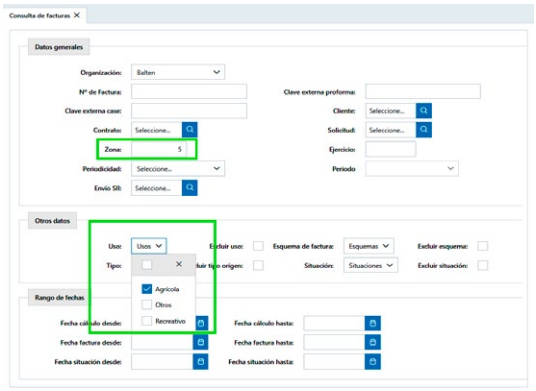
and price rates), whilst Customer Portal enables customers to connect to a virtual office where they can view and manage contract information, thus eliminating the need to travel to a physical office, which may not be located near the irrigation areas.

The connectivity layer of the Xylem Vue platform, also known as Domain Master Data (DMD), was also implemented in BALTEN to enable the ingestion of any current or future signal, variable or device that requires its use and exploitation. This tool facilitates all the processes BALTEN requires, thanks to the optional integration of smart metering, a GIS, and work order tasks to name just a few improvements, replacing a large part of the utility's outdated software.

The results

The project focused on optimizing the utility's management and billing processes to increase its efficiency and revenues, as well as improving customer service, implementing smart metering management, and speeding up decision-making.

The applications implemented are part of the Xylem Vue platform, which means that other Xylem Vue applications can be deployed and interconnected in the future, helping BALTEN overcome other challenges further down the line. These applications have enabled integrated asset management, monitoring of distribution networks' hydraulic and energy variables, irrigation recommendations, customized alarms for users, the implementation of a digital twin, and integration with the water quality control network.



Invoice query by type of contract

> "The option of being able to deploy smart metering in the future makes this tool a core element of the utility's digitalization strategy. Subscriber management has greatly improved thanks to the customer web portal and the same can be said for the fieldwork of the operators through the work order tool".
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> Jesús Rodríguez, Civil Engineer, Water Management and Customer Service Department, BALTEN.

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