

ELIPSE MOBILE CLOUD OPTIMIZES THE DECISION-MAKING PROCESS AT CESAMA, ALLOWS MONITORING WATER AND WASTEWATER SYSTEM VIA MOBILE

Elipse Software's new solution provides Elipse Mobile Server in the cloud as service, simplifies Elipse Mobile's installation and operation to monitor process data

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Needs

Cesama (Companhia de Saneamento Municipal) is the company responsible for managing and executing the water and wastewater systems in Juiz de Fora, a city in Southeast Brazil just 105 miles from Rio de Janeiro and 160 miles from Belo Horizonte, the capital city of the State. Currently, Cesama provides treated water to approximately 95% of the city's population (around 540,000 people), almost the same number of inhabitants served with wastewater collection by the company in Juiz de Fora (534 thousand).

Ensuring health and better quality of living to as many people as possible is one of Cesama's main tenets. Another one is developing actions to contribute to the environment's preservation, especially water resources available in Juiz de Fora (the priority is to clean Paraibuna river).

Since 2001, Cesama has adopted [Elipse Software](#)'s solutions for automating their systems. This working relationship started thanks to Sérgio Queiroz de Almeida, who was then a student getting his master's degree at Juiz de Fora Federal University, and is now Cesama's automation and telecommunications manager.



Cesama's Operational Control Center

In that year, Cesama was in talks with the University to evaluate the best automation system in the market. From there, Queiroz was invited to write his master’s thesis about the subject, since he had already completed an undergraduate research on automation. Elipse SCADA was the software chosen by the student then; after that, it would be put into practice, which would originate the company’s automation system.

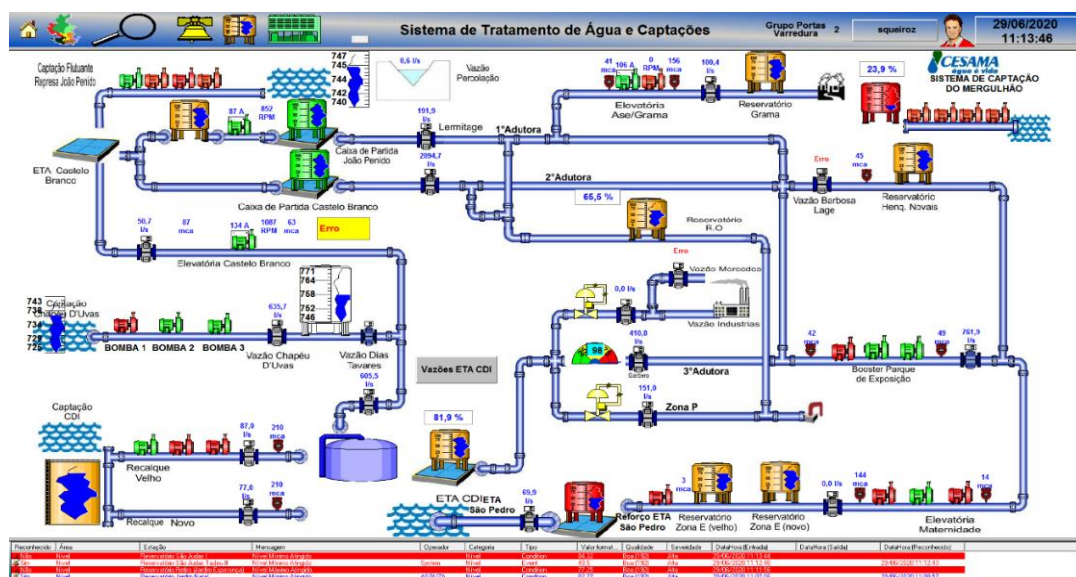
“Cesama’s automation system feels like my child, since I was the one that implemented it in 2001, and for the past 19 years I have been following the several updates added to the system, “ says the manager.

In 2010, Cesama opted for substituting Elipse SCADA with [Elipse E3](#) and then integrate all the operational areas via its Operational Control Center (OCC). And in order to better monitor its water capture, treatment, and distribution system, the company decided, in the beginning of 2020, to also use Elipse’s newest product, [Elipse Mobile Cloud](#).

Solution

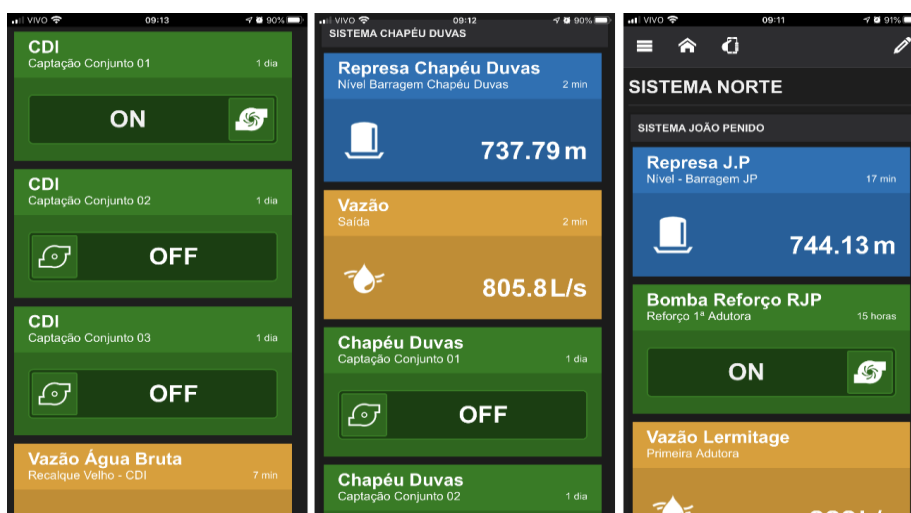
In order to control and supervise its water and wastewater network, Cesama currently employs two solutions by Elipse Software: Elipse E3 and Elipse Mobile Cloud. Via Elipse E3, the company has a comprehensive view of all the processes involving Juiz de Fora’s water and wastewater systems.

With it, it’s possible to monitor water and wastewater’s pressure and flow variables next to electric pumps and boosters, open or close valves (and follow their opening percentual individually), turn pumps on and off, and visualize the reservoir’s levels. The software also allows following all processes that take place at the treatment stations. Additionally, it features an alarms system and allows issuing historic reports.



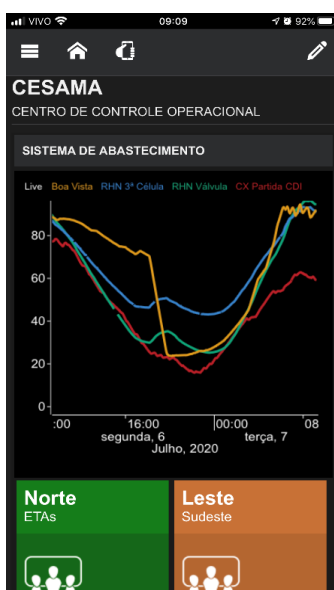
Water treatment and capture system’s control

To monitor, via mobile devices, the pressure and flow variables, as well as the level on the main reservoirs of the capture, treatment, and distribution system, Cesama has connected Elipse E3 to Elipse Mobile Cloud. With their cellphones, managers and other professionals responsible for the water supply system can also follow electric pumps and boosters remotely.



Monitoring flow, pumps, and water level in the reservoirs via three screens from Elipse Mobile Cloud

Elipse Mobile Cloud also allows comparing graphically the level of water observed hourly and daily in the reservoirs. By monitoring this data via celular, Cesama’s directors and managers are able to evaluate the current situation and make decisions more quickly and efficiently.



Graphic control of water levels observed in the reservoirs with Elipse Mobile Cloud

Benefits

“Anticipating issues.” To Sérgio Queiroz de Almeida, this is the main benefit of Elipse Mobile Cloud, since it allows detecting and analyzing the better solutions for fixing issues more quickly and efficiently via mobile devices, regardless of their location.

“With Elipse Mobile Cloud, we can monitor the system even on the move, in order to be able to alert the OCC remotely about any issues in the water supply system,” says Queiroz.

Check out the list below for other important benefits obtained by Cesama with the Elipse solutions:

- Greater energetic efficiency, due to the automation of water and wastewater treatment stations;
- Data management via reports and charts;
- More agility in the decision-making process;
- Maximizing yield and minimizing losses, since installing Elipse Mobile Cloud requires no local server;
- Supervising and controlling all variables and devices in the water and wastewater system;
- Monitoring variables and devices in the water capture, treatment, and distribution system via mobile.

DATASHEET

Client: Cesama - Companhia de Saneamento Municipal

Elipse products used: Elipse E3 and Elipse Cloud Link

Number of copies: 12 (6 Elipse E3 + 6 Elipse Mobile)

Platforms: Windows 10 and Windows Server

Number of I/O points: 5400

I/o drivers: ModBus and Elipse Cloud Link