



REAL-TIME OPTIMIZATION SOFTWARE FOR WATER DISTRIBUTION NETWORKS



COMPANY

SCUBIC's mission is to help water utilities on the digitalization of their processes and on the transition to Industry 4.0. SCUBIC develops smart management solutions that enable utilities to reduce their energy costs, the carbon footprint, and to increase the sustainability of water sources.

SCUBIC was commissioned by the municipal company INOVA, SA, responsible for the management of the water supply network of the city of Cantanhede, to develop a system capable of reducing the water distribution costs.

The platform was installed on Olhos da Fervença water treatment plant, which distributes water for 40.000 inhabitants with an annual consumption of 4.600.000 m³ (1.200.000.000 Gallons).



Source: <https://www.inova-em.pt/tags/abastecimento>

With the main purpose of reducing costs with water distribution, SCUBIC developed a platform that centralizes the different data sources (SCADA, Telemetry, Sensors), and together with artificial intelligence algorithms can predict the future (24h) water consumption. This information is then grouped in the optimization module with the daily energy prices and with the self-production capability (solar panels), to find the lowest cost operation, which is displayed on our user-friendly dashboard.



Demand
Observations



Artificial
intelligence



Forecast



Simulation



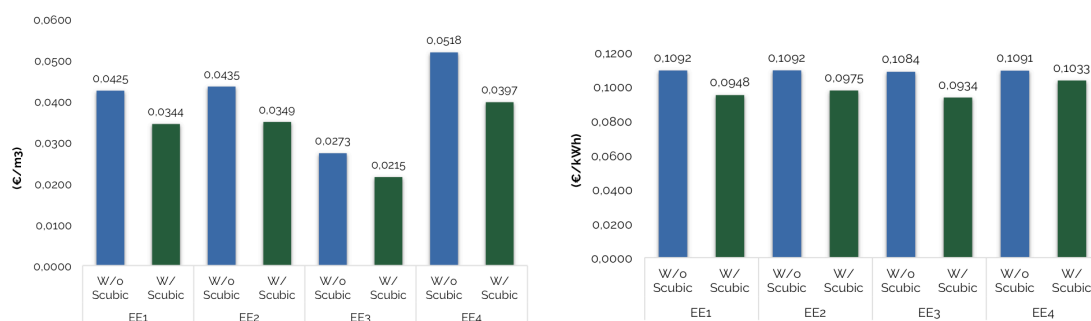
Optimization



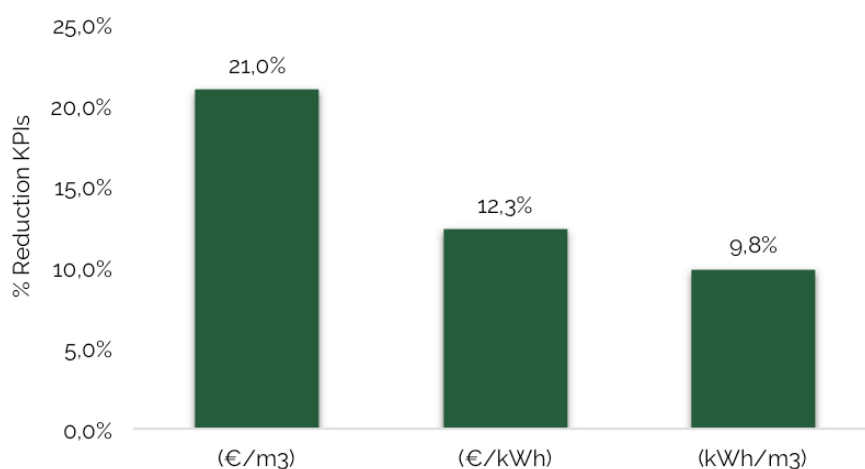
Operational
Management

RESULTS

The real-time optimization capabilities of SCUBIC platform made possible to streamline the operation and reduce the costs related to the water distribution. In the following charts, it is represented the evolution of the specific costs of production ($\text{€}/\text{m}^3$) and the specific costs of energy ($\text{€}/\text{kWh}$), for 4 locations, before and after SCUBIC.



As can be concluded, with the digitalization of the water distribution and with the help of advanced analytical solutions, it was possible to reduce costs by 21%.



"Implementing SCUBIC translated in a significant reduction in energy costs, result of a daily process that manages in an intelligent way one of the main charges associated with the water supply system of the municipality of Cantanhede. This is part of the corporate strategy of INOVA-EM of incorporating in its value chain the most innovative technologies, aiming at improving the companies performance."

Nuno Laranjo
CFO at INOVA-EM

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**LET'S OPTIMIZE YOUR
WATER DISTRIBUTION NETWORK!!**

