Phoenix Environnement

Reduction of Water Losses in Administrative Areas

Abidjan, Côte d'Ivoire

Consortium:	Phoenix Environnement
Funding source:	FASEP financing
Implementation period:	Two years

Project Details

Background

Administrative facilities (universities, military camps, hospitals, etc.) account for 20% of water consumption in Côte d'Ivoire and are affected by very significant water losses (60-70%).

ONEP (Office National de l'Eau Potable) selected Félix Houphouët-Boigny University (FHB) as a pilot site for the deployment of hydrophone-based leak detection equipment to improve the management of the drinking water supply system. The objectives were to:

- Reduce water losses and lower the water bill paid by the Ivorian State for Félix Houphouët-Boigny University (FHB),
- improve operational performance in water distribution and ensure better asset management for public institutions,
- and finally, demonstrate the technical and economic relevance of these technologies compared with those generally used in public institutions in Abidjan.

Objective

The project aims to reduce leaks, improve drinking water network management and decrease water consumption within administrative entities in Côte d'Ivoire.

Contract

Phoenix Environnement carried out the following activities:

- An engineering study phase, including GIS structuring, network sectorisation, hydraulic modelling and leak detection.
- A supply and installation phase for equipment, with the deployment of hydraulic equipment in partnership with Groupe Claire: continuous flow and pressure monitoring using BLUE data loggers, leak detection and pre-localisation using SENSE hydrophones, and downstream building consumption control using WAYVE smart valves.
- A works phase covering equipment installation and targeted leak repairs.

A training component was delivered to disseminate best practices for installation, data operation and diagnostics.

The hydraulic and economic assessment of our intervention confirmed the relevance of the approach.

Expected Impacts

The project's business model is based on a significant initial investment, followed by gradual but sustainable benefits through water loss reduction and operating cost control. This strategy enables a rapid return on investment (ROI) and a positive net present value from the first years of operation.