

Challenge

Suez set Inflowmatix the challenge of demonstrating our **InflowSys™** platform against the following four objectives:

- Monitor the dynamic hydraulic behaviour of the Verneuil sur Seine and Vernouillet network via high frequency pressure measurements (128 S/s).
- Apply analytics to characterise observed pressure variations using Cumulative Pressure Induced Stress (**CPIS™**) modelling and calculate covariates for pipe deterioration modelling.
- Evaluate potential enhancements to PREVOIR™ using the monitoring technology and **CPIS™** related covariates and analytics provided by Inflowmatix.
- Gather preliminary insights through this initial case study and provide data for a conference paper to be presented at Lesam - 17 June 2017.

During the trial there were no device failures and a number of devices were retained in the network.

Solution

Following consultation with Suez, Inflowmatix performed a series of due diligence activities in order to maximise the accuracy of the agreed outcomes. This included measuring the accurate elevation of the assets where devices were deployed to enable and build a clearer and more accurate hydraulic model.

Post due diligence and planning, the **InflowSys™** solution was deployed; a leading data analytics suite to monitor high frequency transient sources and dynamic pressure variability additionally measuring the Cumulative Pressure Induced Stress (**CPIS™**) within a water network.

Solution deployment took place over a 5 week period in two phases and included deployments of 54 deployments using 27 **InflowSense™** devices. During the trial there were no device failures and a number of devices were retained in the network.

Results

The **InflowSys™** technology was successfully deployed ahead of schedule and achieved the following:

- Data summarised and correlated with burst rates.
- **CPIS™** index creation of Transient cycle counts across the pipe network. The metric enabled a quantitative characterisation of the steady and unsteady-state pipe hydraulics and the impact on fatigue related pipe failures.
- The gathering of multiple data in-sights including Transient events previously hidden by low frequency data collection (15 minute data).
- Provided Suez with an extra covariate in the PREVOIR™ suite, supporting asset performance prediction and optimisation of asset renewals (and investment).
- Customer satisfaction: Suez were delighted with the outcomes: 'I like to work with people I like, and I like Inflowmatix.'

“ I like to work with people I like and I like Inflowmatix. ”

David DUCCINI
Division Manager – Centre Technique Distribution

INFLOWSYS™

A next generation data analytics suite consisting of; an array of smart devices (sampling at 128 samples/s, 0-20 Bar pressure with 0.1% full scale accuracy), analytics platform and visualisation developed by Inflowmatix.