

## Challenge

The City of Paris faces significant challenges in monitoring groundwater levels during flood events. The complex geology of Paris, including its underground and former quarries, heightens the risk of ground collapse.

## Solution

To address these issues, 300 remote measurement stations were installed beneath keyholes in the pavement around the city. These stations measure water level and temperature complemented by advanced data analysis software for remote access to site conditions.

## Benefits

The stations in the network were installed unobtrusively, requiring no civil work, by utilizing existing pavement traps. The system now enables data analysis, sharing, and automatic reporting during times of crises.

## All-In-One Monitoring Solution

Initial communication tests with the OTT ecoLog 1000, water level logger and telemetry solutions, were conducted within boreholes, ensuring successful data transmission with closed keyholes.

A two-year qualification period followed the delivery of a few test units, to ensure the technology would work for the whole city. Once validated, a tender was issued for the supply and installation of 250 ecoLog monitoring stations, including Hydromet Cloud data management software.

After four years, an additional tender was release to expand the network, necessitating a more advanced software solution for data storage, analysis, web sharing, and automatic reporting. Aquarius software, featuring Time-Series and WebPortal, was implemented, allowing the City of Paris to grant specific access to dashboards providing key partners access to critical data ensuring preparedness for when the next event occurs.



Installation of an ecoLog 1000 monitoring station in the pavement outside of the Givenchy store in Paris.

## From Sensor to Software:



GPRS



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