

Successful testing of the LOTUS sensor in Paris !



On June 8th 2022, LOTUS partners were invited to SenseCity at the outskirt of Paris for the demo testing of the LOTUS sensor.

SenseCity is a research facility operated by Uni Eiffel, located in the Cité Descartes Campus in the East Paris area. The facility reproduces a city's complex infrastructure under controlled and monitored environmental conditions. It contains a road, three houses and utilities, including a drinking water loop.

Two LOTUS sensors have been installed in the water loop to be continuously tested in real-life conditions and showed good response to active chlorine, with accuracy that is relevant for forthcoming applications in water distribution networks in India.

During the demonstration, chlorine was added to the network and then the whole team was then able to observe the response in real time in the sensor control room.



Nevertheless, scientific challenges remain. The first one concerns the stability of the sensors: how long can they stay operational in drink water? During the demo, one of the sensors left for one year in the pipe still showed strong response to chlorine, but the stability of the response needs to be quantified and confirmed over larger batches of devices.

The second one is the electronic noise: the sensor's raw outputs are very noisy in field conditions and require significant data processing. This noise is not critical for active chlorine but hinders the development of other parameters such as pH.

The last challenge is calibration, i.e. how to convert the raw outputs into chemical information: at this stage all sensors are calibrated one by one and manually. To enable mass production of sensors, the LOTUS team needs to come up with protocols for automated sensor calibrations.

Research and innovation is not a straight path but the LOTUS project has successfully achieved a major milestone. Collaboration is continuing for more promising results to come.

STAY TUNED!



www.lotus-india.eu



[@lotus_indiaEU](https://twitter.com/lotus_indiaEU)



[@lotus-eu-india](https://www.linkedin.com/company/lotus-eu-india)

LOTUS Consortium Members

