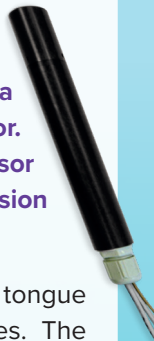


## The LOTUS solutions

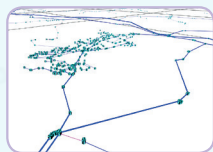
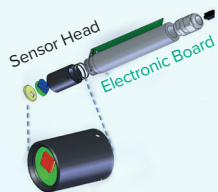


The LOTUS solutions are based on a multiparameter water quality nanosensor. Once deployed in the field in India, the sensor will be used to provide tailor-made decision support for a range of applications.

The LOTUS sensor leverages an electronic tongue based on functionalised carbon nanotubes. The chemical sensor array is packaged with different casings and connectivity solutions to match the diversity of the Indian context.

LOTUS will develop software tools that:

- Collect and process measurements and data
- Offer high quality visualisation of data and results
- Connect to other important tools (e.g. EPANET) for smart water management
- Can be used for strategic and operational purposes



Example of data visualisation

## The LOTUS sensor is unique !



It is less expensive



It can link to online platforms to support data visualisation



It consumes less energy



It measures multiple parameters



It transmits in real time



It is 10 times smaller

## About the LOTUS project

- **Start date:** 1<sup>st</sup> February 2019
- **Duration:** 48 months
- **Budget:** 3,69 million €
- **Aim:** Co-creation of innovative low-cost technology for India's water quality challenges

## 22 partners in Europe and India



For more information, please visit our website:  
[www.lotus-india.eu](http://www.lotus-india.eu)



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Low-cost innovative Technology for water quality monitoring and water resources management for Urban and rural water Systems in India



## The background

India must address serious challenges regarding the quality of water: among other issues, only 30% of the population has access to treated drinking water and more than 37 million Indians per year suffer from waterborne diseases.

## The objective

The LOTUS project aims at co-creating, co-designing and co-developing an innovative multi-parameter sensor and tailor-made decision support tools for water management. These solutions will provide high tech reliability on a 24/7 basis in real-life applications and will be manufactured in India for India.

## The approach

LOTUS will develop and test in several use cases both, solutions for early detection of water quality problems and decision support for countermeasures and optimal management of drinking and irrigation water systems.



### Irrigation System Management

Monitoring water quality for irrigation systems which will enable more efficient use of water and fertilizer.



### Tanker-based Water Distribution System

Enabling guaranteed low-cost 24/7 delivery of safe drinking water without further purification, making end point purification unnecessary.



### City Water System Management

Improving water supply in the Guwahati metropolitan area through the provision of safe drinking water supply, without need for further local treatment.



### Monitoring and Control of Wastewater Treatment

Improving monitoring and control of conventional and algal-based wastewater treatment plants by online sensors which will lead to less energy consumption and better effluent water quality.



### Groundwater and River Water Monitoring System

Enabling cost-efficient groundwater and river water monitoring to provide warnings and better understand the flows of water and of pollutants.