

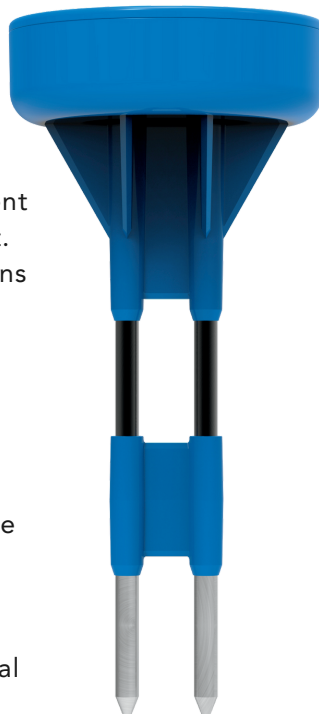
## CASE STUDY WATER GOVERNANCE

### Smart Technology for Green Infrastructure

#### Soil moisture management for flood resilience & urban green

One of the biggest challenges facing cities and urban centers is risk management for flooding and stormwater management. To counter this, cities have invested billions of dollars in green infrastructure systems and subsurface storm water systems, camouflaged by urban green, to prevent damages from heavy rainfall or flooding.

Like many other public service systems, Green Infrastructure facilities often require some form of maintenance. Marcus Quigley, CEO and Founder of Ecolucid, deals primarily in supporting green infrastructure maintenance and operational decisions.



#### HIGHLIGHTS

Supporting water runoff management & flood resilience for municipalities and the EPA

#### PARTNER

Ecolucid

#### DATA INTEGRATOR

Green Infrastructure Consultancy & Water Resource Engineering

#### CONNECTIVITY

Senet

*"Imagine spending several billion dollars of public investment for Green Infrastructure systems, and half of which are not functioning properly. It's like driving down a highway and half of the lanes are closes, all the time."*

*Marcus Quigley, CEO & Founder, Ecolucid*

Ecolucid offers consultancy by monitoring green infrastructure facilities, and alerting municipalities when green infrastructure facilities are at risk of malfunctioning or require maintenance checks.

*"We work with the Sensoterra's open API to nimbly build custom services around Sensoterra soil moisture data."*

By utilizing Sensoterra calibrated for soil moisture data, Ecolucid further analyses this data with weather, rainfall, and other data to offer real-time insights into what's happening at Green Infrastructure facilities around a city.

*"We build the dashboards and directly adjust, based on Sensoterra data to plot what's happening in real-time to give the customers what they need."*

By combining rainfall and soil moisture data, Ecolucid is offering predictive modelling based on data correlation.



#### ABOUT SENSOTERRA

Sensoterra, established in 2015, with its headquarters in Houten, The Netherlands, develops water management solutions for agriculture & horticulture, smart city management, and water governance. Sensoterra has more than 12,000 sensors in the ground globally, and generates hundreds of thousands of data points for smart water management, daily.

*"For example, if we know it has rained recently, and we see a healthy drainage pattern and soil moisture decrease over time, we can conclude that this Green Infrastructure facility is working properly."*

Similarly, if soil moisture levels are not decreasing, that acts as an indicator that drainage functionally is worsening, and that action needs to be taken.

#### Washington D.C. Case

A pilot was deployed in D.C. across a variety of Green Infrastructure facilities, to test the technology and determine Sensoterra's applicability within an urban environment.

*"We were able to identify the usefulness and understand the functionality of the tested Green Infrastructure sites."*

With the success of the DC pilot, further roll out of Sensoterra sensors will be conducted in the continuation of the project.

#### Strategic partnership

According to Quigley, Sensoterra solves a big challenge in IoT, multiple sensor data integration in complex urban environments.

*"The idea of hammering in a sensor and walking away as the full installation is really exemplary and is a standard that all IoT sensors should be held to."*

This is especially relevant for Green Infrastructure sites, as it's not enough for a sensor to be just low-cost, it must be maintenance free. If workers must return to a sensor just for maintenance checks, that increases the costs of the sensor significantly.

*"This is why we've focused on Sensoterra as a partner."*



*"Sensoterra solves what I think is the biggest challenge in IoT"*  
Marcus Quigley, Ecolucid

#### ABOUT ECOLUCID

We provide water resources, environmental strategy, innovation, and engineering consulting to private and public clients.  
[www.ecolucid.com](http://www.ecolucid.com)

#### IN PROUD PARTNERSHIP WITH

