CircInWater

TerraCrawler

Project Partner: I-AM Innovation Center B.V.
Country: the Netherlands
Industrial ecosystem: Agrifood
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~ NaiadNet: Spectral Sensing for Intelligent Water Monitoring ~

Within a 12-month timeline, this project aims to conceive the NaiadNet Sensor, a low-cost, AI-powered solution to address real-time monitoring of total phosphorous (TP) levels in diverse water bodies. Capitalizing on recent strides in semiconductor technology, we are employing visible-near-infrared spectroscopy to detect TP, a key contributor to water eutrophication.

The project entails a series of key activities beginning with the redesigning of the sensor hardware by moving from high-end sensors to the targeted semiconductors. Simultaneously, we will work on the development and training of AI / machine learning algorithms that will drive the sensor's AI capabilities. This tandem workstream of hardware and AI training culminates in the creation of a prototype.

The prototype will then be rigorously tested in various real-world environments under different conditions to assess its performance, reliability, and sensitivity to changes in TP levels. Post-validation, the sensor will be primed for potential integration into our future NaiadNet ICT platform.

The development of the NaiadNet Sensor underlines TC's commitment to innovating solutions for proactive water management. This cost-effective, AI-powered sensor not only supports environmental sustainability goals but also bolsters TC's water quality improvement services by providing real-time TP data. The sensor's integration with TC's services enables more efficient resource usage and helps gain customer trust by demonstrating reliable results.

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