

Global technology initiatives in water management

Introduction:

WINT Water Intelligence Technology detects leaks in real-time using artificial intelligence. WINT devices alert maintenance staff about the water leakages and can also shut off the water automatically. The technology is being used in commercial establishments and industrial units where water leaks can cause damage to machinery and adjoining facilities. Some of the examples include Facility management(FM), Hospitality, Enterprises, Data Centres and Mission Critical facilities, during Construction, and Cooling Towers. A device is connected to the water pipeline, which records the digital patterns of water flows in the pipe. Over time, the AI recognises flow patterns and detects anomalies when they arise. The system sends alerts to the facility managers. While this technology is being used for specific commercial purposes, similar approach can be taken up at city-level for leak detection in water supply networks in ULBs.

Objective and rationale:

To prevent damage from water leaks, and to improve sustainability by significantly reducing water consumption.

Implementation Strategy:

The Water Intelligence device connects to a water pipe and records digital patterns of typical water flows through the pipe. WINT uses advanced artificial intelligence (AI) to recognize these patterns over time, such as a toilet flushing or a water faucet flowing in the sink, and to perform real-time water-flow analysis in order to identify anomalies, waste and leaks at their source. If an anomaly is detected, the Water Intelligence device sends an instant alert such as a text or e-mail message — directly to the facilities manager's phone or device telling the FM the exact source of the leak, such as the floor where the leak is being generated and the type of device (e.g., toilet, lavatory sink, pipe etc.). The device then can automatically shut water off to that floor to prevent damage. The WINT approach also offers comprehensive analyses, reports and in-depth information into how much water a given leak would consume and expense over a period of time, allowing sustainability and FM teams to minimize usage and avoid damage.

Replicability and Sustainability:

The technology is not being used at a city-level network infrastructure since the cost-benefit of such large-scale implementation needs to be justified, especially in Indian scenario.

Source: (WINT, 2018), (*The WINT Water Intelligence solution*, 2019)

<https://fmlink.com/articles/wint-ai-powered-leak-detection-water-conservation-system/> (accessed on Oct 20, 2020),

<https://wint.ai/solutions/> (accessed on Oct 20, 2020)