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Application Guide

Smarterwater® Manhole Sensor

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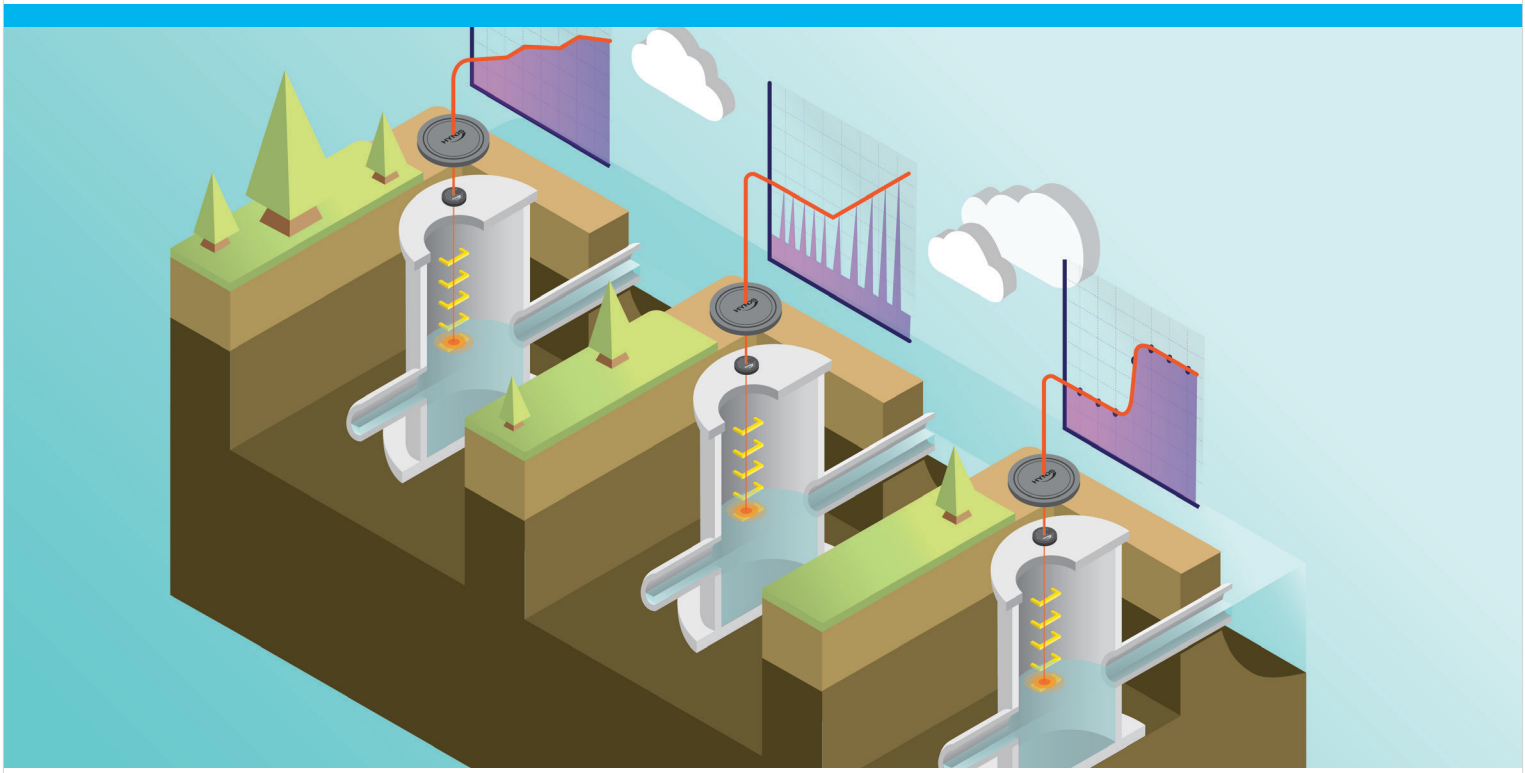

Smarter Networks

Sensor

The Smarter Manhole sensor is a product 100% developed in New Zealand by Hynds Smarterwater to respond to the need for measurement of water in gravity infrastructure so that the various water resources can be managed. Measure to Manage, Measure to Act.

The Smart Manhole Sensor is the first of its kind, being an in-manhole IoT level measurement sensor that does not diminish the effectiveness of the access point. We developed the sensor to discretely fit into the manhole cover itself, automatically measure level and tamper events and transmit them to the asset owner.

Application

IIn most gravity systems the manhole acts as a detention device and provides added capacity to the network. Changes in the individual location for manholes is important as each location is a dynamic system of hydraulic behaviour but built into a larger team of sensors across the entire water network, the information provided allows asset owners to make informed decisions in a live and very dynamic environment.

The risks to people, environment and property can be measured live, and managed live by using the Smarter Manhole sensors, and other integrated devices. Smart networks are built from significant numbers of data points to provide understanding.

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Solution

The manhole itself has an easily calculated capacity. When the Smarter Manhole sensor is applied, the change in capacity of that manhole can be measured. When this process is multiplied 50, 100, or 1000 times, all the use patterns of the network become visible for analysis in the form of big data.

Level, capacity, trend change, progressive blockage volume of the entire network become a complete picture of water capacity, from level measurement. If rainfall, water quality, rain forecasts and other modelling data are added to the analysis, it becomes possible to predict failure before it is critical, divert flows from stressed parts of the network to absorb existing capacity and build a smart city water network.

With less flood, reduction in contamination and overflows, the optimised networks not only become more efficient, but they also become safer and healthier and more environmentally sustainable.