



Merging Smart Cities with Smart Water

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Global Water Challenges



Data Explosion

Number & types of sensors deployed

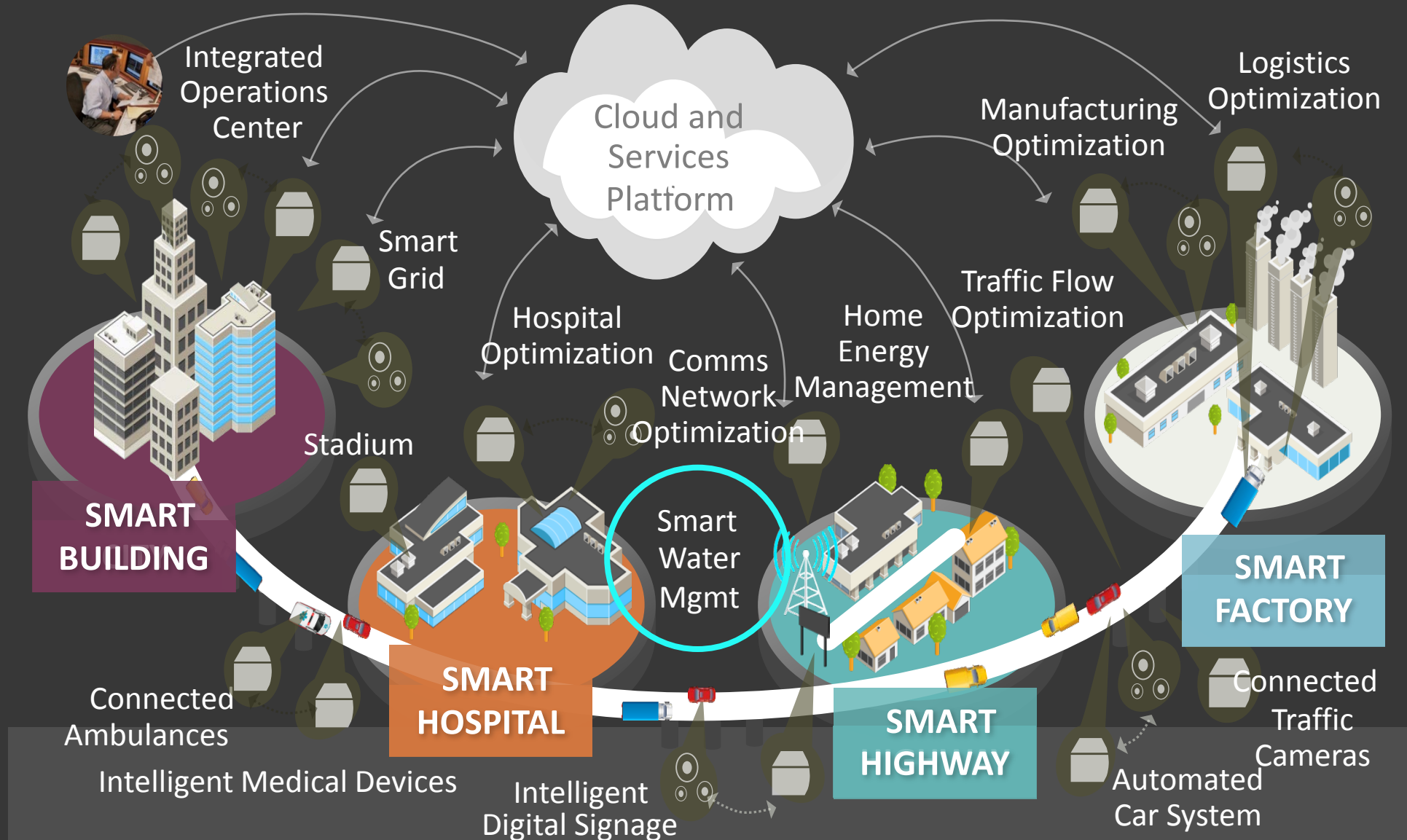
Frequency of data collected

Big Data

IoT revolution

A Smart City Digital Overlay

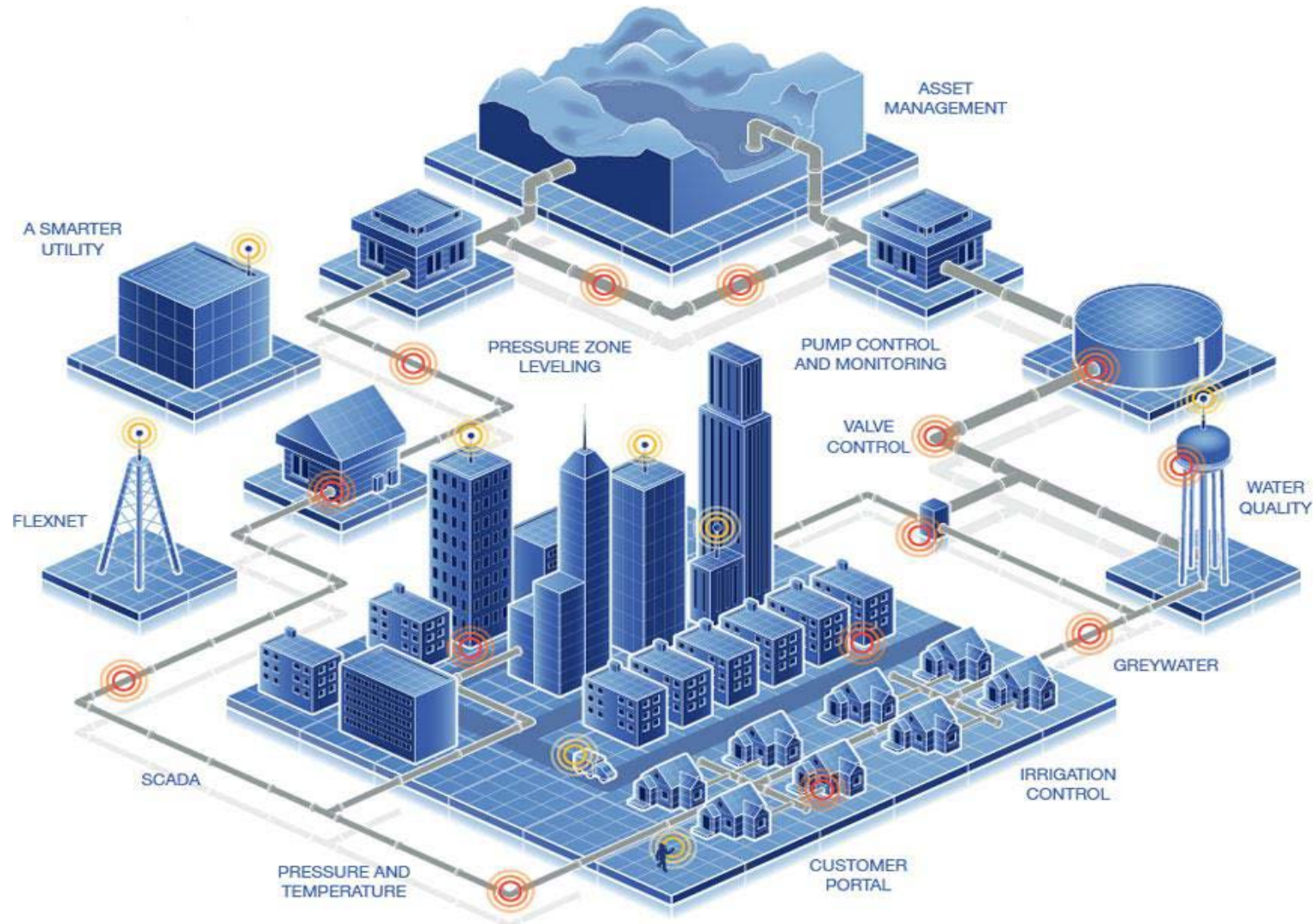
Data volume and complexity require Intelligence / analytics at the edge of the network



What is a Smart Water Network?



Smart Water Networks Today





Case Study: Karnataka Water Board (KWB) City of Hubballi Dharwad, India

Background

- Hubballi Dharwad selected as one of India's 100 Smart Cities
- KWB is state-owned, serves a pop. of 4 million citizens and has a pipe network length of 600 km
- In 2010, KWB faced **53% NRW**, among the highest in the country

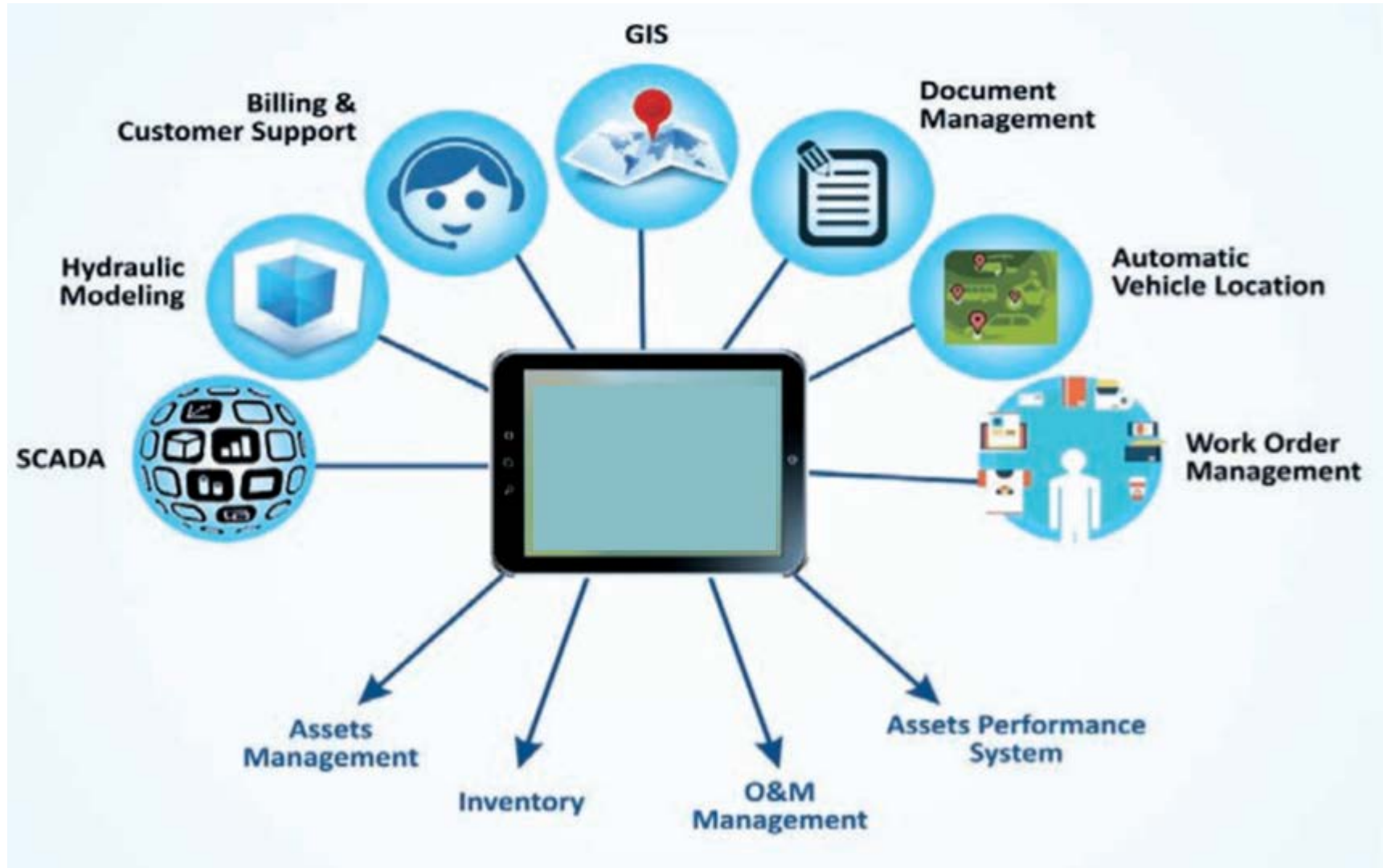


Solution: Integrated Information System Management

- Implemented GAIA's CITY SONIC software
- Included the following modules:
 - a) Billing and Customer Information System
 - b) GIS and Network Asset Management
 - c) Operation and Maintenance Management system
 - d) Network Analysis
 - e) Demand Management System and Asset Management
 - f) Finance Management System



GAIA City Sonic Platform

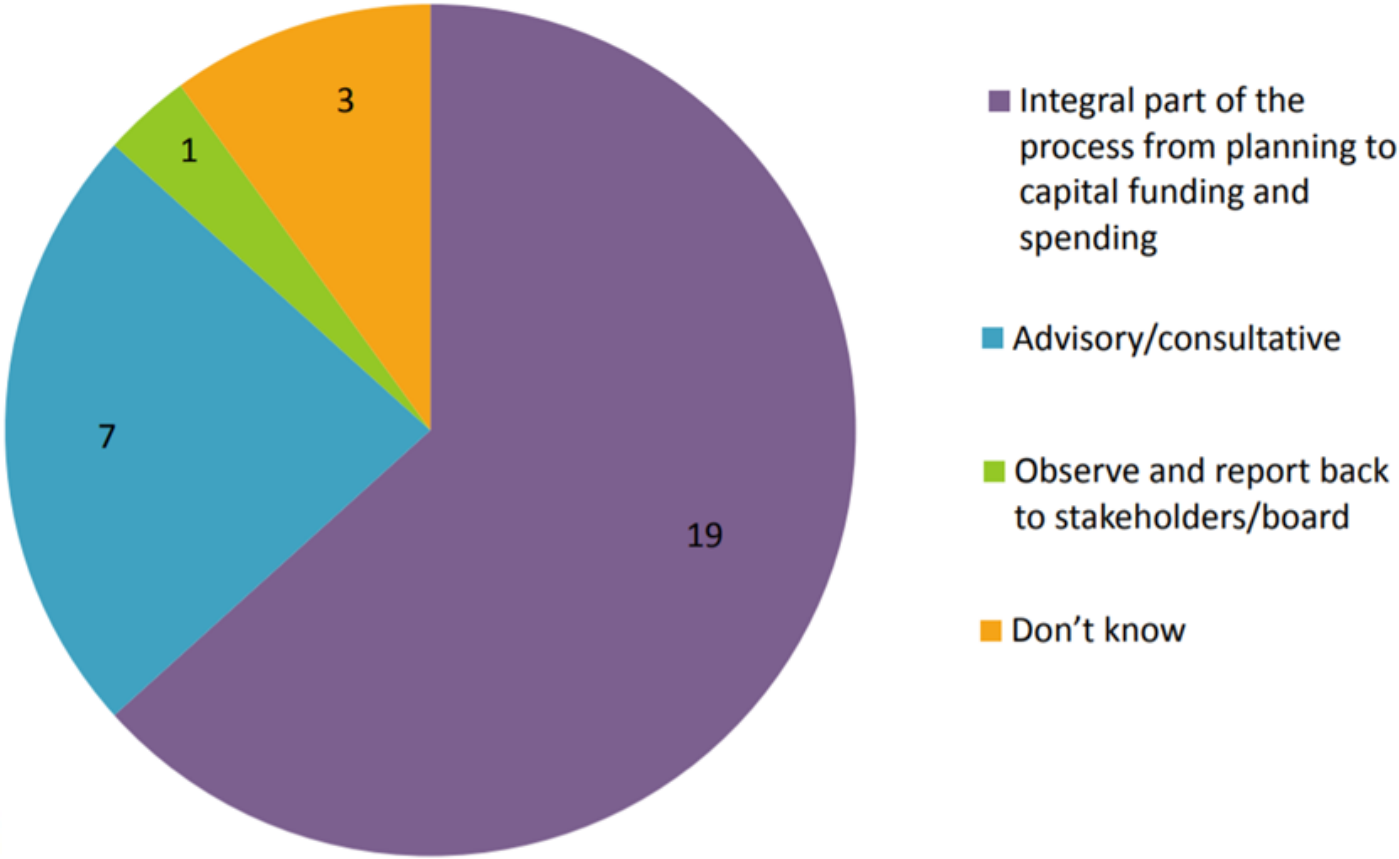


Results

- By 2015, reduced NRW to **28%**
 - Tracked illegal connections, introduced mobile citizen app
- Revenue collection increased by more than **250%**
 - New billing system streamlined operations

Water Utility Interest in Smart Cities

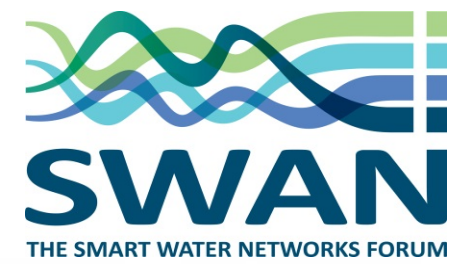
What do you see as the water utility's role in developing "smart cities"?





SWAN's Role

The Smart Water Hub

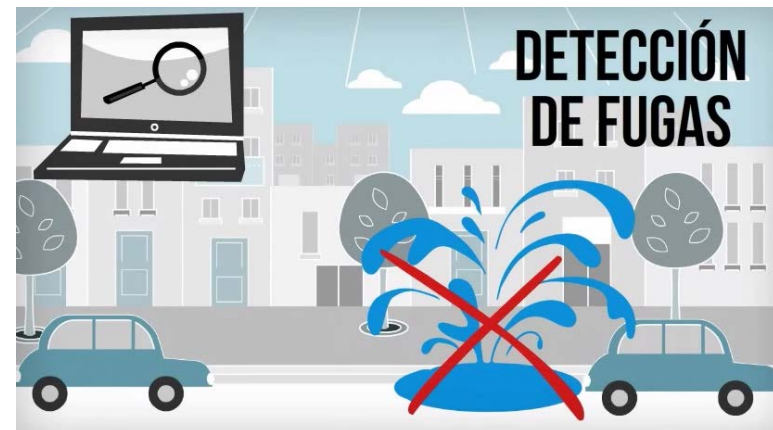
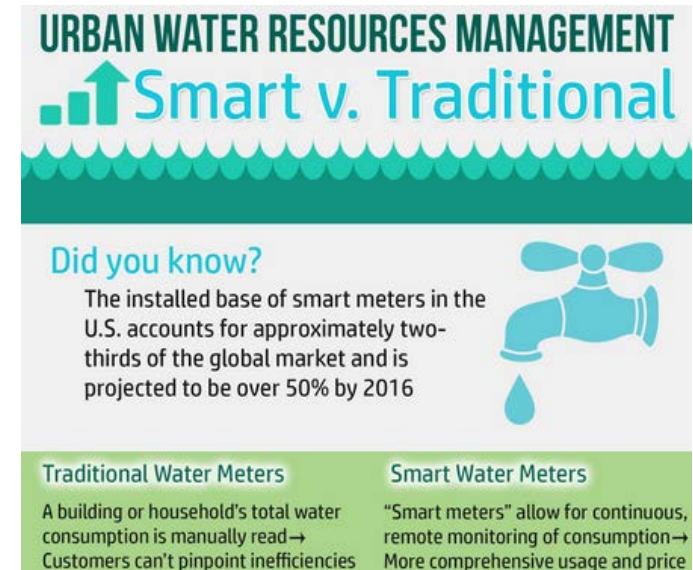


Educational Awareness

SWAN infographic: “Smart v. Traditional Urban Water Resources Management”

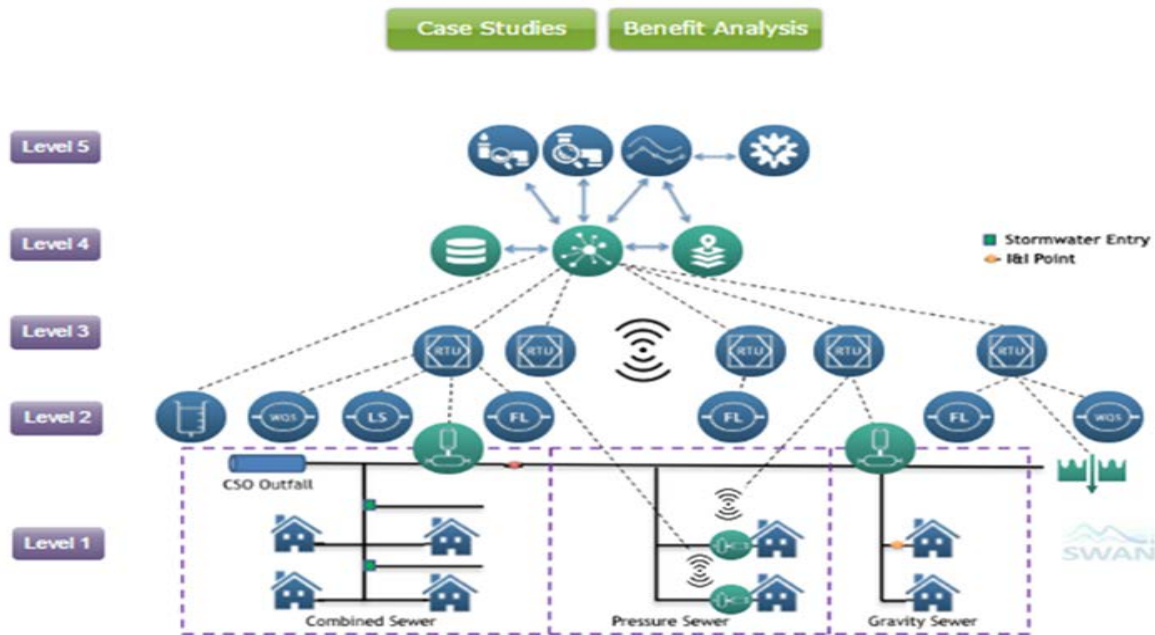
Publications: Journal AWWA, Australian Water Management Review, Journal Water & Sewerage

Animated clips: “The Customer Benefits of Smart Water Networks” in English and Spanish



Member Knowledge Sharing

WASTEWATER NETWORK MANAGEMENT



(SWAN Interactive Tool, Wastewater Network Management Solution)

Leak Detection Case Studies

Transmission Main Leak Detection in New Jersey
(Echologics)

[Click Here](#)

Successful Acoustic Monitoring in the UK (Syrinix)

[Click Here](#)

Permanent Leakage Monitoring Benefits in Germany
(Gutermann)

[Click Here](#)

Installing Flow Meters in Asia (ISOIL)

[Click Here](#)

Water Savings in Abu Dhabi (Schneider Electric)

[Click Here](#)

Drying Up Water Leaks in Halifax (OSIsoft)

[Click Here](#)

(SWAN Research Portal, Leak Detection)

SWAN North American Alliance



SWAN NA Alliance – 1st Year Accomplishments



Nov. 2016



1st Webinar on
“Promoting
a Data-Enabled
Smart Water
Future”

Jan. 2017



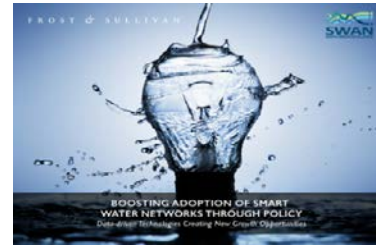
1st Alliance Workshop
with Cleantech San
Diego, attracting over
200 participants

March 2017



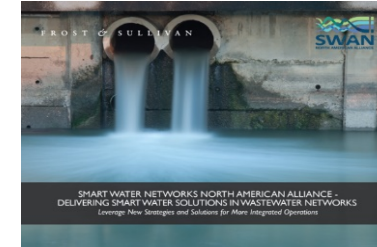
**SWAN Research
Portal:** A repository
of smart water
resources

June 2017



2nd Webinar on
“Boosting Smart
Water Policy”

Sept. 2017



3rd Webinar on
“Delivering Smart
Water Solutions in
Wastewater
Networks”

Nov. 2017




2nd Alliance Workshop
At Uptake in Chicago
focused on digital
solutions to Midwest
water challenges

Join and learn more:

<https://www.swan-forum.com/swan-na-alliance/>





"Smart Water: Meeting Tomorrow's Challenges Today"

SWAN 2018 Conference
May 21-22, Hotel Catalonia Barcelona Plaza

Register & learn more at www.swan2018.com

Key Elements for Success

Visionary Leadership



**Smart
Regulation**



**Public-Private
Partnerships**



**Industry
Collaboration**





Thank You

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