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

Source: Cisco
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
What do you see as the water utility’s role in developing “smart cities”?

- Integral part of the process from planning to capital funding and spending: 19
- Advisory/consultative: 7
- Observe and report back to stakeholders/board: 3
- Don’t know: 1
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**

**Leak Detection Case Studies**

- Transmission Main Leak Detection in New Jersey (Echologics)
- Successful Acoustic Monitoring in the UK (Syrinx)
- Permanent Leakage Monitoring Benefits in Germany (Gutermann)
- Installing Flow Meters in Asia (ISOIL)
- Water Savings in Abu Dhabi (Schneider Electric)
- Drying Up Water Leaks in Halifax (OSisoft)

*(SWAN Interactive Tool, Wastewater Network Management Solution) (SWAN Research Portal, Leak Detection)*
SWAN North American Alliance
SWAN NA Alliance – 1st Year Accomplishments

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

SWAN Research Portal: A repository of smart water resources

2nd Webinar on “Boosting Smart Water Policy”

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

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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