

Smart Water Starts with the Why

Four global experts offer smart water insights for 2019

BY AMIR CAHN



What are some of the biggest global challenges, trends, and opportunities for the smart water sector in 2019? To answer these questions, the Smart Water Networks Forum (SWAN) spoke with four industry experts from Australia, North America, the UK, and India.

From a utility CEO perspective, it starts with the why. "You need to spend time talking about smart water and what it means," explained George Theo, CEO of Unitywater and chairman of the SWAN Asia-Pacific Alliance. "The more time you spend understanding how people can adapt to and use smart water outcomes, the less the resistance when the time comes to roll out smart water initiatives. While people could be a barrier because it requires change to 'the way we do things around here,' your people can also be your greatest advocate to removing barriers." Theo acknowledged that, of course, there will be challenges with technology, software and platforms, "but they will all pale into insignificance if you don't have the people on board to embrace the change to deliver the benefits."

GLOBAL SMART WATER CHALLENGES

In India, there is a simple lack of understanding. According to Kailash Shirodkar, founder and CEO of *Smart Water & Waste World* and lead partner with the SWAN India Alliance,

"The concept of a 'smart utility' is still in its infancy [in India] and while there are a lot of academic discussions on the topic, no major utility has made any significant initiative towards its adoption/realization." He noted that another barrier relates to the lack of making the business case surrounding the transition to a smart utility, as most utilities are not profitable. "Also, since most utilities are government-driven," he added, "priority is often concentrated toward populist and citizen-driven schemes."

Meanwhile in the UK, Regional Optimization Manager of Anglian Water and Chairman of the SWAN European Utility Alliance Andy Smith views immaturity of the supply chain as a primary obstacle. "There are so many offerings at present, several of which overlap, emphasizing the need for a period of consolidation/integration that can only be driven by suppliers collaborating and fully understanding the challenges faced by water utilities," he said, adding that there is also still a great deal of uncertainty about the potential risks in terms of cybersecurity as well as a skills gap. "We traditionally have been hard engineering focused, with low staff turnover — this has resulted in a lack of recruitment in terms of digital and analytics' capabilities."

In North America, Gary Wong, global water industry principal with OSIsoft and chairman of the SWAN North American

Alliance, stresses a lack of collaboration as an overarching barrier. “We still face a highly fragmented industry with little collaboration between utilities, technology providers, and investors,” he said.

CULTURAL TRENDS

Smith acknowledged that, traditionally, UK utilities have a history of being reactive rather than proactive in terms of problem solving, “seeing ourselves as being almost the fifth emergency service.” But he believes this is changing. “[There’s] a real focus on outcomes, in terms of customer, resilience and sustainability, which is leading to collaboration of all stakeholders across the sector,” he said.

In North America, Wong concurred, “The culture needs to change and we’re seeing innovation and leadership embracing digital and new technologies that drive efficiencies.”

DATA MANAGEMENT TRENDS

According to Wong, “The data doesn’t lie, so having ease of access to real-time data with context is critical for people to take action and make smarter decisions.”

Theo stressed data integration as a key trend. “Identifying what data you need to capture and how it is to be used to improve decision making is the key trend that will emerge,” he said. “How can you monetize the data and therefore develop new products and services for your customers to make their engagement with a utility easier and hassle free? How can you use the data converted to information to lead to better customer insights and solutions, asset management decisions, and environmental outcomes?”

Smith noted a focus on the value of data science and smart water management. “We have been leveraging emerging technologies such as AI, Big Data, and Digital Twins to drive informed decision making. This brings the additional challenges of how utilities manage the quality, quantity, alignment and processing of these data sets to maximize the benefits that can be delivered in terms of additional insights to the industry.”

2019 OPPORTUNITIES

The key, according to Theo, is building understanding. “We need to be crystal clear about the problem we want to solve and why we want to solve it. Understanding the why is extremely important in that it will galvanize an organization behind the smart water aspirations and focus the energy, intellect, passion and commitment of our people to achieving our goals through smart water initiatives. If your people are on board from across the organization, then you have a very good chance of rolling out solutions that will work for all.”

With India’s planned 100 smart cities, there is a significant opportunity for a smart utility as these cities grapple to squeeze efficiencies from their water infrastructure. “The water infra-

structure already exists in these cities,” Shirodkar stated, “but a lack of proper planning has meant that the non-revenue water and losses are quite high.” These cities, he suggested, would form the first wave for the adoption of smart technologies. “Key among those would be: smart metering, using IoT for better and more efficient management of operations, and GIS-driven hydraulic modeling for better network design,” he said.

Another opportunity is to alter the technology procurement process for utilities. For instance, Anglian Water’s “Shop Window” is a physical and virtual test bed where the utility can collaboratively work with its supply chain to pilot new ideas, technologies and processes to learn how to solve current and future challenges. “Our willingness and track record in collaborating with suppliers to support the development of their offerings has enabled solutions to be developed, that are fully integrated to deliver multiple outcomes,” explained Smith.

SWAN’S ROLE

SWAN’s goal is to share global knowledge to achieve sustainable growth in the smart water and wastewater sectors. Now is a critical time for different water stakeholders to communicate effectively. Global water challenges will continue to grow, requiring long-term planning and dedicated leadership. The technology solutions are there, with more and more cities witnessing the benefits of creating smart, resilient cities. However, there needs to be greater collaboration. SWAN invites global water sector leaders to take an active role in accelerating the smart water sector by participating in a SWAN regional Alliance:

- SWAN Asia-Pacific Alliance:
www.swan-forum.com/swan-apac-alliance
- SWAN North American Alliance:
www.swan-forum.com/swan-na-alliance
- SWAN European Utility Alliance:
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- SWAN India Alliance:
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It’s time to reinvent our water future. **WW**

Author’s Note: Join leading water industry stakeholders to discuss our water future at the SWAN 9th Annual Conference, to be held May 15-16, 2019, in Miami. To learn more, visit www.swan-2019.com.

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