

Spotlight

Exclusive Interview with Robin Wong

Director (Advanced Infrastructure Analytics), Xylem Inc

PUB: Please tell us about yourself and the organisation that you work in.



Robin : Having the interest in doing work that makes a strong meaningful social impact, I chose to work in the environmental and water sector. I started my career as a civil engineer working on the deep tunnel sewerage system project in Singapore back in 2001. I have been working with Xylem Inc. which is a global water technology company for 16 years.

PUB : Could you share with us about the water sector situation of the markets that you operate in?

Robin : As Director (Advanced Infrastructure Analytics), my current role covers digital water solutions mainly in the South East Asia markets. There is an increasing trend of digitalisation with some utilities being early adopters and leveraging on data and analytics to transform and optimise the way they operate so as to improve the way they manage water. The benefits of digital adoption range from sustainable cuts to non-revenue water losses and the overflow/disruption events in sewers. This thereby ensures

water quality and creates water-energy cost efficiencies. PUB Singapore is leading the way in reinventing water management and accelerating the adoption of digital technologies to tackle issues like water scarcity, resiliency and affordability in view of severe weather patterns from climate change and macro-economic challenges.

PUB : Which issues in particular do you think are most pressing in these markets? What are some of the key water management challenges that you are tackling in your projects with Xylem around the world?

Robin : Water challenges are intensifying due to climate change and infrastructure needs that are badly in need of renewal. Some of the most pressing water challenges are non-revenue water and pipeline asset management. Water and wastewater are one of the most capital-intensive utility services with buried infrastructure accounting for a majority of the asset value of most utilities.

The single biggest line item in a utility's budget is usually capital spending to constructing, renewing or replacing such assets. However, research has shown that as these spending programs are based on limited information on actual condition or criticality, much of this spending is wasted on replacing assets with significant remaining useful life. Non-revenue water (NRW) is becoming increasingly pressing due to water scarcity and climate change where utility managers are searching for proven and cost-effective solutions to identify and address sources of system loss, both real and apparent, in their transmission and distribution networks.



Pure Technologies' SmartBall is a key solution in reducing water loss in previously neglected assets by detecting leaks on large diameter mains, helping utilities locate and repair leaks before they surface. The SmartBall tool is inserted into a pipeline and travels with the water flow for up to twelve hours while collecting information about leaks. It requires only two access points for insertion and extraction, and is tracked throughout the inspection at predetermined fixed locations.

Advancement in digital technologies are enabling better system management, more efficient monitoring and diagnostics as well as more targeted investments. These solutions are poised to make a lasting difference in the lives of the communities they

serve. “Decision Intelligence” a new approach, leverages on the power of data to inform better system-level choices today and make recommendations to improve future operations, maintenance and capital planning. These solutions scan, predict, recommend and prioritise actions and helps utilities make dramatic progress on the problems that matters most to the communities that they serve: water accessibility environmental sustainability, resilience and affordability.



Real-time pipe failure detection. Visenti's LeakView™ system is comprised of multiple pipe leakage indicators such as high-rate (64-256 samples/sec) pressure sensors, hydrophones and flow meters installed at optimal locations - coupled with minute-by-minute data analytics for anomaly detection.

PUB : What are some personal stories that you have garnered, based on your experiences with these projects?

Robin : I have been in the water sector for nearly two decades dealing with various water technologies and applications across the entire water cycle. In this new era of digitalisation, the adoption of digital solutions in the water sector is moving at a very rapid pace as compared to other technologies. I am optimistic that this trend will continue at a strong pace especially with further costs reductions, optimisations and technological enhancements. We will have to adapt and upskill accordingly.

Having lived in several Asian cities over the past decade, I am fortunate to be living in Singapore where water services are reliable. This is something that I have not taken for granted and water conservation has become a way of life for my family.

PUB: There is a need for global collaboration to co-create solutions that address the world's water challenges. The Singapore Water Academy has a broad alumni network, comprising management executives and technical staff. What possible collaborations do you see between your organisation and other alumni?

Robin : As the largest pure player technology provider in the sector that offers solutions across the water cycle, we are committed to help convene the conversation about solving water challenges especially on the topic of power and promise of digital water. We can reach out and partner with fellow alumni in creating training material and content such as case-studies which can be shared with new cohorts during the Singapore Water Academy programme.



Xylem Watermark is Xylem's corporate citizenship and social investment program whose mission is to provide and protect safe water resources for communities in need around the world and educate people about water issues

PUB : You attended one run of the Singapore Water Management Series. What aspects of the programme drew you back? What are some of the valuable takeaways from this programme for you?

Robin : The programme is very well constructed and delivered by the faculty members and complemented with excellent networking and sharing opportunities. It was a privilege to be able to attend.