The 9th WaterLassAsia 2022 Virtual Event





Controlling Non-Revenue Water through Digital Technology & Artificial Intelligence

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Welcome to the 9th Virtual Edition of Water Loss Asia

The bi-annual Water Loss Asia (WLA) 2022 conference returns in a virtual format this year on 8-10 November. Supported by International Water Association (IWA) Water Loss Specialist Group, WLA 2022 brings together experts and leaders in the Non-Revenue Water (NRW) industry to bring you an exciting 3-day event on controlling non-revenue water through a deep exploration of digital technology and artificial intelligence available on the market today.

The COVID-19 pandemic has had a negative impact on global economies. The water industry was adversely affected, with unprecedented slowdowns and changes in working methods. On the other hand, it has accelerated positive digital transformation.

The resumption of commercial and social activities is both an opportunity and a challenge for water service providers. If properly managed, this can lead to improved economic and public health outcomes. In contrast, careless execution can expose more people to COVID-19 and force a return to response or emergency mode.

The water sector can rebuild a more sustainable and resilient water sector by addressing future health crises, accelerating universal access to water and sanitation, adopting appropriate digital technologies, and increasing irrigation system resilience for long-term water and food security. The 9^{th} edition of Water Loss Asia will focus on controlling non-revenue water through adoption of appropriate digital technology and artificial intelligence.



Digital Technological Tools to Reduce NRW

Digital technologies received a lot of attention during the pandemic because digitally prepared service providers were better able to cope. Further exacerbated by growing global concern about rising water scarcity levels. To cope with, and even anticipate, this trend, an increasing number of water service organisations are feeling the need to take a technological leap.

Some digital applications prevalent in high-income countries, may not be suited to the needs of emerging markets and developing economies. Factors such as high levels of unauthorised consumption and low water tariffs are particularly important in terms of mitigating commercial losses. They are also important in reducing physical losses and increasing energy efficiency.

The Identified Fields of Digital Opportunities are Considered in Three Categories:



Reduction of Commercial Losses

- Data mining for identification of illegal consumption and meter inaccuracies
- Customer applications
- Localization of illegal connections with ground-penetrating radar
- Detection of illegal bypasses analyzing hydraulic transient
- Smart metering for principal customers
- Apps for commercial field staff



Reduction of Physical Losses

- Multipurpose geographic information systems
- Drone technology
- Data analysis for prioritization of leak control and asset management
- Leak monitoring in large-diameter water main
- Smart pressure management valves
- Optimized flushing strategy for drinking water networks



Increase in Energy Efficiency

- Smart energy management systems
- Smart pumps for maximum energy efficiency
- Pump load profile monitoring for energy efficient optimization
- Early or real-time detection of pump malfunction
- Pump maintenance with digital applications
- Analytics of biogas to improve energy efficiency

Source: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH 2021 (https://www.researchgate.net/publication/347472857_Smart_Water_Management_-_Digital_applications_to_reduce_non-revenue_water_and_increase_the_ene rgy_efficiency_of_water_utilities_in_countries_with_emerging_markets_and_developing_economies)

The rapid pace of innovation will drive down costs, allowing more service providers to adopt new technologies. Consider which digital technologies have the greatest impact on service providers' ability to meet their service obligations. Consider the applicability of technology solutions to the operating context. Already, many start-ups based in emerging economies are developing digital solutions that are not only cheaper but potentially more appropriate for the local context.



Role of AI in NRW

According to the World Bank, water utilities lose approximately EUR 14 billion per year due to various water losses. Smart data-driven methods for detecting water losses in public networks are rapidly gaining popularity. These solutions are based on the use of the Internet of Things and Artificial Intelligence (AI) techniques using large real-time flow and pressure datasets collected via smart meters. The term "machine learning" is then used to extract information, validate hydraulic models, detect patterns, and highlight anomalies.

Water utilities can leverage knowledge and data available to make better decisions while improving service delivery and lowering costs by leveraging the power of artificial intelligence algorithms and big data analytics. The majority of water utilities begin their digital transformation with a SCADA connected to a network control centre, and then figure out how to leverage these ICT investments into tangible benefits. As a result, many water utilities' digital capabilities, particularly in developing nations, are not particularly effective for day-to-day operations and do not provide a clear advantage to customers.

Water utilities should make a gradual, pragmatic, and goal-oriented shift to digital. For water utilities to begin their digital transformation into smart water, physical-based methods are the way to go. Through data-driven approaches, the integration of SCADA data with advanced hydraulic modelling tools-including AI in water supply-complements physically based methodologies with powerful optimization and decision support tools, business intelligence, and knowledge management. Water utilities can analyse their technology capabilities and develop a realistic ICT road map by launching low-risk, low-scale pilot projects to test the potential benefits of AI approaches.

Virtual Conference



Controlling Non-Revenue Water through Digital Technology & Artificial Intelligence







2D Conference with 3 Streams



33 Speakers



12 Countries



Malaysia-Australia NRW Dialogue



1D Workshop

Country
Experiences

Outsourcing of NRW Reduction

Asset Management

NRW Management

Climate Change



YBhg. Dato' Seri Ir. Dr. Zaini bin Ujang

Secretary General, Ministry of Environment and Water, Malaysia

Keynotes





Dr. Ir. Ts. Hj. Mohmad Asari Daud President, Malaysian Water Association (MWA), Malaysia



Dwike RiantaraPerumda Air Minum
Tirta Mayang,
Indonesia



Stuart Hamilton Managing Director Hydro Tec Ltd, United Kingdom



Noorhashim Bin Baron

Senior Director, Standard Technical and Compliance Division of Water & Sewerage Regulatory Department, National Water Services Commission (SPAN)



Martin Shaw Solution Architect, Xylem Water Solutions

Malaysia Sdn. Bhd.

Conference Speakers



Tom Crowder
Director,
Crowder Consulting,
United Kingdom



Roland Liemberger NRW Management Advisor, Miya Group, Spain



Stuart Stapely NRW Specialist, Project Manager/Technical Lead, Urban Water Solutions, Australia



Sufian Sidek General Manager, Wyeth Water Consultants



Mark Nicol
International Sales Director Clean Water,
Mueller Water Products,
Singapore



Stephen Preston Managing Director, Water System Optimization (WSO), UK



Sune Dupont
Development Engineer (PhD),
Kamstrup A/S, Denmark



Manatsawee Nawik
Chief of Section, Water
Treatment Plant and Water
Distribution Design Section,
Metropolitan Waterworks
Authority (MWA), Thailand



Philippe Mappa Water Network Key Expert, Suez Group, France



Uri GutermannCEO
Gutermann, Switzerland



Edmund Riehle CEO, FAST GmbH, Germany



Joe Dalton Founder, HydrOptimise, Ireland



Phatta Bahadur Thapa Senior Manager, TEC International Co., Ltd. (TECI), Japan



Cor Merks Senior Water Systems Expert, Rambøll, Netherlands



Shuen Yuan
Senior Assistant Director
Sarawak Rural Water Supply
Department (JBALB)

Ts. Ir. Bernard Wong



Keshvinder Singh Consultant Smart Water, Schneider Electric Singapore



Kosei Nishida Civil Engineer Nihon Suido Consultants Co., Ltd., Japan



Afke Stellingwerff NRW Reduction Coordinator Procesmanager, Vitens, Netherlands



Hoese Michel Tornyeviadzi Researcher Fellow Norwegian University of Science and Technology, Norway



Peter van Thienen
Principal Scientist
KWR Water Research Institute &
Evides,Netherlands



Paul Harris Global Head of Business Consulting, Isle Utilities, Australia



lan Rodgers
Product & Marketing Manager,
Xylem, Dubai,
United Arab Emirates



Cameron McPhail Business Consultant, Isle Utilities, Australia



Paul Fanner
NRW Management Advisor,
Fanner & Associates,
UK

Keynotes

Day 1 Speakers and Topics

Day 2 Speakers and Topics

Virtual Workshop

Enhancing NRW Management through Advanced AI and IoT

Al (Artificial Intelligence) and IoT (Internet of Things) convergence has the potential to reshape the way industries, businesses, and economies operate. Al-enabled IoT generates intelligent machines that emulate intelligent behaviour and aid in decision making with little or no human intervention.

Since the pandemic, many water service providers have adopted the use of cost-effective Internet of Things (IoT) and Artificial Intelligence (AI) technology to reduce water and revenue losses. This workshop takes you on a journey through the evolution of NRW Technology and customer metering. Methods for identifying water losses in public networks that are data-driven. The most recent NRW management approach is how to combine IoT and AI to make informed decisions, and the integration of digital technology and AI in NRW software.



Gary Wyeth Managing Director, Wyeth Water Consultants



Tom Crowder
Director,
Crowder Consulting, UK



Hugh Chapman Managing Director Aqua Analytics, Australia



Mark Nicol
International Sales Director
– Clean Water,
Mueller Water Products,
Singapore



Sharif Elnagar Associate Director, Crowder Consulting, UK



Mitchell Dixon Senior Consultant, Isle Utilities, Australia



lan Rodgers Product & Marketing Manager, Xylem, Dubai, United Arab Emirates

What Participants will learn

By attending this workshop, the participants will gain a better understanding of how AI and IoT can benefit water utilities in managing their NRW levels, specifically:

- 1. How digital metering and automatic meter reading processes are improving accountability of customer consumption and thus improving accuracy of apparent losses.
- 2. How hydraulic models can be utilized as a real time digital twin, to resolve issues as they happen and assist in developing new NRW management policies.
- **3.** How Al can assess the condition of buried assets and thus improve the efficiency of any asset replacement programmes.
- **4.** How management of Big Data is critical in analysing all of the multiple sensors installed in the network, that are feeding information back through the IoT.
- **5.** How technology has changed over the past 20 years and what changes we may see in the future.

Virtual Dialogue

Malaysia-Australia NRW Dialogue

Challenges Affecting Sustainable NRW Management

In Southeast Asia, Malaysia has been a forerunner in addressing NRW and has implemented many successful projects. However with low tariffs, the government is subsidising water operators and high NRW levels has affected utilities' revenue further. NRW has impacted operating costs, with high leakage levels creating more complications and expenses, making it difficult to create a sustainable management of water services. The Malaysian government is accelerating its plans to replace pipelines to reduce water loss, as well as implementing a number of NRW management projects within various States. In this dialogue, panellists will exchange the challenges they face in managing sustainable NRW projects and what solutions each country has developed to resolve these challenges.



Panelist 1
Sarawak's Journey in Implementing
NRW, the Challenges, Rewards, and
its Sustainability Goals

Dato' Ir. Alice Jawan Empaling Malaysian Water Association (Sarawak Branch)



Panelist 2
International Leakage
Management Benchmarking

Derek Atkinson Head of Global Benchmarking, ISLE Utilities, Australia



Panelist 3 **The Use of Data in NRW Management**

Khairul Effendy Tusam Director of Network, Ranhill SAJ Sdn Bhd, Malaysia



Panelist 4
Service Connections: The Weakest
Link In The Water Distribution
Network

Ken Goraya Strategic Asset Manager, Unitywater, Australia



Moderator

Gary WyethManaging Director,
Wyeth Water Consultants

Open for Registration

Join WLA2022 to play your part in rebuilding a more sustainable and resilient water sector by adopting appropriate digital & Al technologies, for long-term water security.



	2-Day Co	2-Day Conference		1-Day Workshop	
	RM/pax	USD/pax	RM	USD	
Member of IWA/MWA	675	180	540	145	
Normal Rate	750	200	600	160	
Group of 3 and above	675	180	540	145	
Students	400	105	300	80	

Online Registration (in RM)	
Online Registration	

(in USD)

Registration Form (Downloadable PDF form)

Virtual Conference Programme

Day 1: 8th November 2022 (Tuesday)

(GMT+8) Malaysia/Singapore Time

09:30 - 09:40		by Stuart Hamilton,			
	Chair of Water Loss Specialist Group, International Water Association				
09:40 - 10:25	Keynote and Opening by YBhg. Dato' Seri Ir. Dr. Zaini Ujang, Secretary General, Ministry of Environment and Water (KASA), Malaysia				
10:25 - 11:00	NRW in Indonesia and Jambi City, Dwike Riantara, Perumda Air Minum Tirta Mayang,Indonesia				
11:00 - 11:10	Break				
	Conference Hall 1 - Country Experiences Moderator: Mr. Mohamad Hairi bin Basri, MWA	Conference Hall 2 - Digital Technologies/Asset Management Moderator:			
	With Moraling Change Bush, With	Prof. Mohamed Haniffa bin Hj. Abdul Hamid, MWA			
11.10 - 11:50	DMA Characteristic Identification on Risk and Asset Analysis of MWA Pipe Network	Digital Utility Maturity Assessment - An International Perspective			
	Manatsawee Nawik Metropolitan Waterworks Authority, Thailand	Paul Harris & Cameron McPhail Isle Utilities, Australia			
11:50 - 12:30	Measurement Performance and Suitability of Ultrasonic Meter Compared to Mechanical Meters for Customer Metering Under Intermittent Supply	Sustainable Practices in Water Loss Management - For Improved Visibility and Reduced NRW			
	Phatta Bahadur Thapa TEC International Co., Ltd. (TECI), Japan	Keshvinder Singh Schneider Electric, Singapore			
12:30 - 13:10	Go Digital: NRW Management in Serian Division,	To Replace or not to Replace, that is the Question			
	Sarawak Ts. Ir. Bernard Wong Shuen Yuan Sarawak Rural Water Supply Department (JBALB), Malaysia	Mark Nicol Mueller Water Products, Singapore			
13.10 - 14:00	Lunch Break				
14:00 - 14:40		Keynote: NRW - Threat or opportunity?			
	Dr. Ir. Ts. Hj. Mohmad Asari Daud President, Malaysian Water Association (MWA), Malaysia				
	Moderator: Mark Nicol, Mueller Water Products, Singapore				
14:40 - 15:25	Keynote : Carbo	n Water Balance			
	Stuart Hamilton, Hydro	Tech Ltd, United Kingdom			
15:25 - 15:40	Break				
	Conference Hall 1 - Country Experiences Moderator: Adam Saffian bin Ghazali	Conference Hall 2 - Digital Technologies/Asset Management			
	Aliran Ihsan Resources Berhad	Moderator: Shamsul Fahmi bin Mohamad Padzli Premier Water Services			
15:40 - 16:20	The Water Loss Control Program of Vitens in the Netherlands Aiming to almost Eliminate NRW in 2030 at The Latest	Smart Water Meter with Embedded Acoustic Leak Detection Sune Dupont			
	Cor Merks (Rambøll) & Afke Stellingwerff (Vitens) Netherlands	Kamstrup, Denmark			
16:20 - 17:00	Performance Based NRW Management Contracts - Turnkey or Co-Management?	Large Diameter Pipeline Condition Surveys Ian Rodgers			
	Paul Fanner, Fanner Associates, UK	Xylem, Dubai			
17:00	End of Day 1				

^{*}Programme is subject to change

Day 2: 9th November 2022 (Wednesday) (GMT+8) Malaysia/Singapore Time

09:00 – 09:45	Keynote: An Overview of NRW Achievements in Peninsular Malaysia and FT Labuan Noorhashim bin Baron Senior Director, Technical Standard and Compliance Division, Water & Sewerage Regulatory Depart National Water Services Commission (SPAN), Malaysia				
	Conference Hall 1 - Big Data Moderator: Mansor Abd Ghani, MWA		Conference Hall 2 - NRW Management Moderator: Desmond Lim, Premier Water Services		
09:45 - 10:25	Trailing Artificial Intelligence to Find Leaks in Melbourne CBD Stuart Stapely, Urban Water Solutions, Australia		Managing NRW in Large Compounds Sufian Sidek, Wyeth Water Consultants		
10:25 - 10:40	Break				
10:40 - 12:40	Malaysia-Australia NRW Dialogue Moderator: Gary Wyeth Panelist 1 Sarawak's Journey in Implementing NRW, the Challenges, Rewards, and its Sustainability Goals Dato' Ir. Alice Jawan Empaling	10:40 11:10	Practices on Leakage Control in Chinese County-level Waterworks Yuxi Wang Beijing Fujitech Instrument & Equipment Co., Ltd., China		
	Malaysian Water Association (Sarawak Branch) Panelist 2 International Leakage Management Benchmarking Derek Atkinson Head of Global Benchmarking, ISLE Utilities, Australia	11:10 11:40	Visualization of Pressure In Water Distribution Networks using an Innovative Pressure Meter Kosei Nishida Nihon Suido Consultants Co., Ltd, Japan		
	Panelist 3 The Use of Data in NRW Management Khairul Effendy Tusam Director of Network, Ranhill SAJ Sdn Bhd, Malaysia	11:40 12:10	The Challenges of NRW Management on the Island of Guam Stephen Preston, Water System Optimization (WSO), UK		
	Panelist 4 Service Connections: The Weakest Link In The Water Distribution Network Ken Goraya Strategic Asset Manager, Unitywater, Australia	12:10 12:40	Using Digital Technology to Reduce and Control NRW Tias Alvin Papatria		
12:40 - 14:00	Lunch Break				
14:00 – 14:45	Keynote: Utilizing Smart Water Networks for NRW Management Martin Shaw, NRW Solution Architect, Xylem Inc., Singapore				
	Conference Hall 1 - Big Data Moderator: Mansor Abd Ghani, MWA		Conference Hall 2 - NRW Management Moderator: Khairul Effendy Tusam, Ranhill SAJ Sdn Bhd		
14:45 – 15:20	Remarkable Success with IoT Cellular Technologies within Non-Revenue Water Monitoring Systems around The Globe Uri Gutermann, Gutermann, Switzerland		Large Pipeline Monitoring through Inline Distributed Acoustic Sensing (DAS) Edmund Riehle, FAST GmBh, Germany		
15:20 – 16:00	Applying Best Practice to DMA Leakage Reduction Projects using Smart Solutions and Technologies Tom Crowder, Crowder Consulting, UK		Water Losses Management in Trunk Main: Philippe Mappa Suez Group, France		
16:00 – 16:30	Leakage Identification in Water Distribution Networks via Anomaly Detection Algorithms Hoese Michel Tornyeviadzi		Attempts at Outsourcing of NRW Reduction in the Middle East Gulf Region Joe Dalton		
16:30 – 17:00	First Practical Applications of Low-data, Low-assumptions Background Leakage Determination using mCFPD. Peter van Thienen KWR Water Research Institute & Evides, Netherlands		Digital Technology & Artificial Intelligence - New Excuses for Not Getting Serious on Leakage Reduction? Roland Liemberger, Miya, Austria		
17:00	End of WLA 2022 Conference				
17:00	End of WLA 2022 Conference				

^{*}Programme is subject to change

Virtual Workshop Programme

Day 3: 10 November 2022 (Thursday)

Moderator: Gary Wyeth

09:00 – 09:15	Welcome Address and Introduction				
09:15 – 09:35	Evolution of NRW Technology				
	Gary Wyeth, Managing Director, Wyeth Water Consultants				
09:35 – 10:35	Advanced NRW Management in Australia				
	Hugh Chapman, Managing Director, Aqua Analytics, Australia				
10:35 – 10:50	15 mins break				
10:50 – 11:10 Evolution of Customer Metering					
	Gary Wyeth, Managing Director, Wyeth Water Consultants				
11:10 – 12:10	Digital Metering				
	Mitchell Dixon, Senior Consultant, Isle Utilities, Australia				
12:10 – 12:30	Q&A				
12:30 – 13:30	Lunch Break				
13:30 – 14:30	Real Time Digital Twin Modeling				
	lan Rodgers, Product & Marketing Manager, Xylem Inc., Dubai				
14:30 – 15:30	Utilising Data and Artificial Intelligence to make Informed Decisions on Water Distribution Networks				
	Mark Nicol, International Sales Director, Mueller Water Products, Singapore				
15:30 – 15:45	15 mins break				
15:45 – 16:45	Advances in NRW Software to Integrate Digital Technology & Artificial Intelligence				
	Tom Crowder, Director and Sharif Elnagar, Associate Director, Crowder Consulting, UK				
16:45 – 17:15	Q&A				
17:15 – 17:30	End of Workshop				

^{*}Programme is subject to change

Sponsorship Opportunities

Connect your business with contacts in this close gathering of all the NRW professionals in one place. Boost your company's brand visibility before or during the virtual event by taking full advantage of our sponsorship and advertising opportunities.

Sponsorship Packag	ges	Platinum	Gold	Sliver
Digital Promotion & P	ublicity			
Marketing Materials	Logo display	J	√	1
Event Website	Home Page Logo display with hyperlink	√	√	1
	Home Page Middle Rotating Banner Ad	√	-,	1.5
	Inner page Middle Rotating Banner Ad	- 1	√	1
	Sponsors Page with logo, company write-up and hyperlink	300 words	200 words	150 words
Virtual Platform	Registration Page Logo display with hyperlink	√	√	J
	Registration Page Carousel Banner Ad	√	-	-
Social Media Channel	Sponsor's promotional post on WLA Facebook page	2	1	i.e.
EDMs	Logo display with hyperlink	√	√	√
	One Banner Ad with hyperlink	√	√	-
	Product Spotlight	1	-) -
Virtual Conference &	Workshop			!
Auditorium	Sponsors wall banner Logo display	1	√	√
Canfanana	Speaking opportunity - one slot	√	=	164
Conference	2-day Conference Pass	4	2	1
Workshop	1-day Workshop Pass	4	2	1
Virtual Exhibition				
Virtual Booths	Platinum Booth (value RM 5,000/USD 1,500)	√	27	_
	Business Booth (value RM 4,500/USD 1,300)	-,	√	-
	Standard Booth (value RM 3,500/USD 1,000)	-	-	√
Main Lobby	Sponsor's banner	1	20	=
	Sponsor Wall banner Logo display	√	√	√
Exhibitors Page	Banner (Slider Banner Format)	1	1	1
Programme	Advertisement (A4 size)	√	√	√
E-book	Sponsor's Page with logo and write-up	√	√	V
Appreciation	Sponsor's Appreciation certificate & Plaque	√	√	√
Sponsorship Amount (before 6% SST)		RM 15,000 USD 4,300	RM 10,000 USD 3,000	RM 5,000 USD 1,500

NOTF:

- Advertising Period: 01 May 2022 10 November 2022
- · Inclusion of sponsor's logo in advertising & promotion materials is subject to the date of sponsorship confirmation
- Logo and artwork are to be provided by the advertiser and be of high resolution. Placement, sizes and format will be provided in detail in the Sponsorship Brochure.
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Water Loss Asia





