



SWAN 2022 Conference Agenda

The 12th Annual SWAN Conference was held May 24-26, 2022 in Washington, DC at the Washington Marriott Georgetown featuring 40+ leading, global utility speakers. This year's theme "Connecting Innovation to Impact" focused on the economic, social, and environmental impact of data-driven water solutions. The first day included three Workshops on Digital Twins, Data-as-a-Service, and Coding for Young Professionals. There was also an APAC virtual panel and two, technical water and wastewater tracks on the last day. View the full programme below.

May 24, 2022 "Digital Twin Workshop"

10:00-10:10 am **Workshop Introduction**

Gigi Karmous-Edwards, Founder & Chair of the SWAN Digital Twin Work Group

10:10 – 10:30 am **Design Phase Digital Twin for Water Infrastructure Keynote**

Joao Pitta, Director of Water Management (NEOM) and Lars Christian Fredenlund, CEO (Cobuilder)

10:30 – 11:10 am **SWAN Digital Twin Work Group Highlights**

Leaders of the SWAN Digital Twin Subgroups (Holistic Architecture, Digital Twin Lifecycle, BIM and Asset Management, Outcomes and Applications)

11:10 – 12:00 pm **Continuous Evolution of Digital Twin Journeys**

Moderator: Ting Lu, Business Practice Leader for Digital Solutions, (Clean Water Services, US)

- *Patrick Bonk, Software Solutions Lead (Innovyze, an Autodesk company)*
- *Alireza Parhami, Sr. Hydraulic Modeling Lead - Operations and Engineering (DC Water, US) and Paul West, Senior Success Manager (Digital Water Works)*
- *Luke Butler, Director of Innovation (Qatium)*
- *Mark Drake, Service Programs Manager (Veolia Water Technologies)*

12:00 – 1:00 pm **Lunch Sponsored by Royal HaskoningDHV and GoAigua**

1:00 – 2:15 pm **Interactive Roundtable Session and Rapid Fire Summary**

- **Digital Twins for Sewer Networks: Outcomes & Applications**
Fazle Rabbi, Managing Engineer (City of Houston, US) and Pablo Calabuig, CEO North America (GoAigua)
- **Do you need dynamic simulation if you have machine learning based anomaly detection?**
Samantha Sloan, Drainage Area Manager (United Utilities) and Aris Witteborg, Leading Professional Digital Smart Water (Royal HaskoningDHV)
- **The Human Factor of Digital Twins**
Joukje Keuning, Program Manager Infra 2025 (Vitens)

- Data Quality and its Implication to Digital Twin Performance: Manual vs Automatic Validation
Andreu Fargas, Chief of Innovation, Technology & Energy (Consorci Aigües de Tarragona)
- Defining New Standard for Water Asset Information Handover, from Information Modeling
Min Zhong, Asset Information Management Lead (NEOM)
- Feeding your Digital Twin: Keeping them Alive
Yige Gao, Asset Management Engineer (Gwinnett County Department of Water Resources)
- Does the adoption of Digital Twins shift the balance of influence within an organisation and what does this mean for your future operating model?
Andy Smith, Smart Water Strategy Manager (Anglian Water)
- Catch Leak If You Can! Evolution of Leak Detection and Network Monitoring Strategies, from Digitalization to Digital Twin in the Water Distribution System
Ridzuan Ismail, Director - Water Supply (Network) Department and Sock Fang Hew, Principal Engineer (PUB, Singapore's National Water Agency)

2:15 – 2:45 pm **Refreshments and Networking**

2:50 – 3:45 pm **Driving Confidence in Insights from Digital Twins**

Moderator: Andy Smith, Smart Water Strategy Manager (Anglian Water, UK)

- *Jennifer Rebeiro, CIO (Greater Western Water, Australia)*
- *Agnethe Pederson, Industrial PhD Student (VCS Denmark)*
- *Jim Cooper, Global Director Water Optimisation & Chair of AWWA Digital Twin Committee (Arcadis)*
- *Elijah L. Williams, Water Reclamation Manager - Department of Water Resources (City of Greensboro, US) and Alyssa Mayer, Associate (Hazen and Sawyer)*

3:45 – 4:00 pm **Summary and Conclusion**

Gigi Karmous-Edwards, Founder & Chair of the SWAN Digital Twin Work Group

May 24, 2022 "Data-as-a-Service Workshop"

10:00 – 10:30 am **Workshop Introduction**

Meena Sankaran, Founder & CEO (KETOS)

10:30 – 10:50 am **Virtual Keynote:** *Tim Baines, Professor of Operations Strategy & Executive Director (Aston University/Advanced Services Group)*

10:50 – 12:15 pm **1st Interactive Roundtable Session (Brainstorming)**

Facilitators:

- *GianLuca Rolandelli, Global Product Manager - Smart Water Solutions (ABB) and Reid Campbell, Director, Engineering & Technology Services (Halifax Water, Canada)*
- *Joana Cassidy, Water Engineer (AGS, Portugal) and Amir Cahn, Executive Director (SWAN Forum)*
- *Danie Kotzé, Managing Executive: SAMS (Mezzanine) and Neil Tumber, Relationship Manager (The Advanced Services Group)*
- *Fionn Boyle, Program Manager (Anglian Water Services, UK) and Tertius Rust, Head of AMI and Digital Transformation (City of Cape Town, South Africa)*
- *Steen Jakobsen, Business Architect (VCS Denmark)*
- *Patrick McGowan, CEO & Founder (The Service Design Group)*

- 12:15 – 1:00 pm **Working Lunch Sponsored by ABB and AGS**
- 1:00 – 1:45 pm **Applying DaaS within Water: Real-Life Case Studies**
Moderator: Amir Cahn, Executive Director (SWAN Forum)
- *Joana Cassidy, Water Engineer (AGS, Portugal)*
 - *Bob Flaherty, Director, North America (Trimble Utilities)*
 - *Stephane Gervais, EVP Strategic Innovation, Partnership & Smart Data (LACROIX Group)*
- 1:45 – 2:45 pm **2nd Interactive Roundtable Session (Prototyping)**
- 2:45 – 3:15 pm **Refreshments and Networking**
- 3:15 – 4:15 pm **Key Takeaways led by Roundtable Facilitators**

May 24, 2022 “Young Professional Workshop”

Led by Peter Prevos, Manager Data Science (Coliban Water, Australia)

- 5:30 – 5:40 pm **Introduction and Icebreaker**
- 5:40 – 6:20 pm **What is Data Science and What is Good Data Science?**
- 6:20 – 7:05 pm **Data Storytelling and Data Visualization**
- 7:05 – 7:20 pm **Refreshments and Networking**
- 7:20 – 7:25 pm **Improve Coding Dexterity through Handcrafts**
- 7:25 – 7:35 pm **Building Your Data Science Toolkit**
- 7:35 – 8:25 pm **Interactive Coding Demo**
- 8:25 – 8:30 pm **Next steps, Summary, and Conclusion**

May 25, 2022 “SWAN 2022 Conference”

- 11:00 – 12:00 pm AEST **Connecting Innovation to Impact in Asia-Pacific**
Moderator: Mai Flor, Executive Director (Waterlinks, Philippines)
- *Dr. Mongkolaya (Molly) Rungvetvuthivitaya, Innovation Specialist (East Water, Thailand) and Carmen de Miguel, Strategic Marketing Manager, Water & Wastewater (Schneider Electric)*
 - *Wiljeim B. Laureola, Head, NRW Services (Maynilad Water Services, Inc., Philippines)*
 - *Ben Steel, Manager Water Service Performance (Logan Water, Australia)*
- 8:00 – 9:00 am **Breakfast Sponsored by Ampcus**
- 8:00 – 9:00 am **Young Professional Breakfast Sponsored by Master Meter**
- 9:00 – 9:10 am **Conference Introduction**
Nadia Abboud, President (ENAY Group) & Travis Kennedy, Group Publisher (Water Online & B2BrandWater)
- 9:10 – 9:30 am **Keynote: "An Inflection Point: The Future Impact of Smart Water."**
Kishia L. Powell - Chief Operating Officer & Executive Vice President (DC Water)
- 9:30 – 10:30 am **Connecting Innovation to Global Impact**
Moderator: George Hawkins, Founder & President (Moonshot Missions)

- *Ruben Fernandes, Executive Board Member (Águas e Energia do Porto, Portugal)*
- *Reid Campbell, Director, Engineering & Technology Services (Halifax Water, Canada) and Katie Umberg, Senior Management Consultant (Arcadis)*
- *Clayton MacDougald, Investment Manager - Water (Emerald Technology Ventures)*
- *Genevieve Edens, Director, Impact & ESG (WaterEquity)*

10:30 – 11:00 am **Refreshments and Networking**

11:00 – 11:45 am **From Small to Emerging: Unlocking the Value of Smart Water**

Moderator: Sarah Buck, Senior Director of Programs (Rural Community Assistance Partnership)

- *André Kowalewski, Senior Engineer - Water Services (Drakenstein Local Municipality, South Africa) and Dr. Alex Sinske, CTO (GLS Consulting)*
- *Jose Leon, Maintenance and Operations Director (Johnson County Wastewater, US)*
- *Chris Sosnowski, CEO (WaterClick)*

11:45 – 12:45 pm **Driving Equity and Resilience through Digital Asset Management**

Moderator: Zeynep Erdal, Integrated Solutions Director (Black & Veatch)

- *Ana Rita Santos, Coordinator - Water Engineering Services Sector (AGS, Portugal)*
- *Michele Samuels, Global Practice Manager - Asset Performance (Xylem)*
- *Adolfo Carpio, Project Manager, Asset Management Division (WSSC Water, US)*
- *Bojana Jankovic-Nisic, Chief of Strategy (Optimatics)*

12:45 – 1:45 pm **Lunch Sponsored by Xylem**

1:45 – 2:45 pm **Interactive Roundtable Session**

- *The Relevance and Value of Artificial Intelligence in the Water Industry
Ken Thompson, Vice President, Global Technology Lead - IoT and Smart Sensors (Jacobs)*
- *We Demystified Intelligent Water, Now Let's Demystify Water Loss Control
Jim Cooper, Global Director for Water Optimisation (Arcadis)*
- *Improve Sustainability: How to Transform Customer Behavior & Improve Service
Rebecca Willey, Technical Solutions Engineer (Innovyze, an Autodesk company)*
- *The Case for Putting Digital at the Center of Infrastructure: How can Government Institutions Influence the Adoption of Digital Solutions in the water sector?
Christine Boyle, Vice President of Digital Product Development (Xylem)*
- *Talkin' SaaS: The pitfalls of government tech and how water can access private-sector worthy software
Elaine Kelly, CRO & Co-Founder (Klir)*
- *Digital Transformation: Accelerating the Journey to Smart Water
Kelvin Hurdle, Water & Wastewater Industry Manager (Rockwell Automation)*
- *The Role of Smart Water in the Journey to Zero Pollution
Phil Tomlinson, Commercial Director (Metasphere)*
- *The Building Blocks & Benefits of a Digital Twin - A Follow up to the Continuous Evolution of the Digital Twin Journey
Joel Johnson, Manager of Product Success & Civil Engineering and Paul West, Senior Success Manager - Water Infrastructure (Bentley Systems)*
- *No Data Left Behind: Identifying & Generating Value from (Overlooked?) Data Sources
Vincent Page, Global Product Manager - Digital Services (De Nora Water Technologies)*

- Becoming Digital to Meet the Demands of the 21st Century
Freddie Guerra, North American Digital Water Lead (GHD Digital)
- SaaS, Daas, HaaS, Maas: How can I use 'as a service' products to run my utility?
Cory Sides, Technology Sales Manager - East (Mueller Water Products)
- How do utilities influence and support improved public health?
Alexandra Wallach, Head of Business Development Strategy (Kando)
- What are smart water opportunities in the developing world?
Fred Royan, Vice President/Global Leader, Sustainability and Circular Economy (Frost and Sullivan)
- Challenges and Solutions of Effective Data Collaboration from Building Information Modelling
Dane Chapman, Water BIM Lead (NEOM)

2:45 – 3:10 pm **Refreshments and Networking**

3:10 – 3:30 pm **SWAN Update and Leadership Awards**

3:30 – 4:20 pm **Forgot Your Password? Cybersecurity as a Mindset**

Moderator: Biju George, Executive Vice President, Utilities (Ampcus Inc.)

- *Jennifer Rebeiro, CIO (Greater Western Water, Australia)*
- *Andrew Hunt, Manager of Cyber Threat Intelligence (Bechtel)*
- *Cody Falcon, Digital Technology Leader, Energy Industries (ABB)*

4:20 – 4:40 pm **Virtual Keynote: "Taking the plunge into wastewater surveillance standards."**

Dr. Nancy Lin, Leader, Biomaterials Group (NIST - National Institute of Standards and Technology)

4:40 – 5:30 pm **Out of the Box Environmental Monitoring (Dams, Lakes, Rivers)**

Moderator: Ebie Holst, Director, Clusters & Innovation (Cleveland Water Alliance)

- *Christine Zheng and John Nguyen, Civil Engineering Associates (LADWP, US)*
- *Terry Daniel, Water Operations Director (GLWA, US) and Mahesh Lunani, Founder & CEO (Aquasight)*
- *Mike Meyers, Watermaster (Idaho Water District 63, US) and Rick Lucero, Public Sector IoT Specialist (Cisco)*

5:30 – 5:40 pm **Summary and Conclusion**

Nadia Abboud, President (ENAY Group) & Travis Kennedy, Group Publisher (Water Online & B2BrandWater)

6:00 – 8:00 pm **Drinks and Light Food Reception Sponsored by Jacobs**

May 26, 2022 "SWAN 2022 Conference"

8:00 – 9:00 am **Breakfast Sponsored by SUEZ**

Water Track

9:00 – 9:10 am **Welcome Remarks**

Chair: Janelle Boelter, Director of Infrastructure Management (SNWA and LVVWD, US)

9:10 – 10:00 am **When Customers Become Advocates**

Moderator: Javier Fernández Delgado, Deputy Director Telecontrol (Canal de Isabel II, Spain)

- *Damon Boutwell, General Manager (Pace Water Systems, US) and Dave Johnston, Director Smart Infrastructure (Mueller Water Products)*
- *Nina Rossiter, Digital Water Analyst (Bluefield Research)*
- *Jonas Kneip Araújo, Innovation Lead (CORSAN, Brazil)*

10:00 – 10:30 am **Refreshments and Networking**

10:30 – 11:20 am **From Water Loss to Digital Efficiency Gains**

Moderator: Rik Thijssen, Business Development Manager (Vitens, Netherlands)

- *Nele Philips, Program Manager R&D Industry 4.0 (De Watergroep, Belgium)*
- *Rebecca Losli, Vice President of Engineering and Business Development (Missouri American Water Company) and Billy Kelly, Senior VP Business Development - Americas (Syrinx)*
- *Prof. Sunil Sinha, Director, Sustainable Water Infrastructure Management Center (Virginia Tech)*

11:20 – 12:10 pm **Who Led the Lead Out**

Moderator: Meena Sankaran, Founder & CEO (KETOS)

- *Michelle Cock, Utility Asset Manager (City of Salem, VA, US) and Greg Brazeau, VP of Sales (Trinnex)*
- *Chuck Hansen, Chairman & CEO (Electro Scan Inc.)*
- *Eric Schwartz, Co-Founder & Co-CEO (BlueConduit)*

Wastewater Track

9:00 – 9:10 am **Welcome Remarks**

Chair: Ken Thompson, Vice-President, Global Technology Lead – IoT and Smart Sensors (Jacobs)

9:10 – 10:00 am **The Smart Sewer Journey: People, Processes, Technology**

Moderator: Luis Montestruque, Principal (HydroDigital)

- *Srini Vallabhaneni, Smart Sewer Officer (KC Water, US)*
- *Mary Roman, Integrated Water Management, Technical Director (GHD)*
- *Jay Boyd, Director of Market Development (ADS Environmental Services)*

10:00 – 10:30 am **Refreshments and Networking**

10:30 – 11:20 am **Treatment Powered by Machine Learning**

Moderator: Alan Tucker, Technology Planning Solution Lead (Brown and Caldwell)

- *Katya Bilyk, Senior Associate (Hazen and Sawyer)*
- *Kim Ervin, Global Technology Leader for Master Planning & Applied Digital Tools (Jacobs)*
- *Xuhui Zeng, Civil Engineer (Greeley and Hansen, LLC)*

11:20 – 12:10 pm **A Wastewater Systems Thinking Approach**

Moderator: Amanda Siqueira, Co-Founder & CEO (VAPAR)

- *Tom Davies, Deputy Executive Manager, PDCA (Trinity River Authority of Texas, US)*
- *Samantha Sloan, Drainage Area Manager (United Utilities, UK)*
- *Alexandra Wallach, Head of Business Development & Strategy USA (Kando)*

Combined Track

12:10 – 1:10 pm **Lunch Sponsored by Metasphere**

1:10 – 2:10 pm **The Intersection of Data, Communication, and Regulation**

Moderator: Patrick Keaney, Worldwide Director of Development (Amazon/AWS Water)

- *Siya Bashe, Director, Commercial Services Department - Water and Sanitation Directorate (City of Cape Town, South Africa)*
- *Fionn Boyle, Strategic Innovation and Shop Window Lead (Anglian Water Services, UK)*
- *Elaine Kelly, Co-Founder & Chief Operating Officer (Klir)*
- *Shawn Dent, Digital Water Group, Principal Technical Lead (Carollo Engineers, Inc.)*

2:10 – 2:30 pm **Keynote: "A giant telescope built for Space discovers strategies to overcome extraordinary challenges on Earth."** *Jon Lawrence, James Webb Space Telescope (JWST) - Mechanical Systems Lead Engineer, Launch Vehicle Liaison (NASA)*

2:30 – 3:20 pm **The Future is Inclusive: A Smarter Way Forward**
Moderator: Joone Lopez, General Manager (Moulton Niguel Water District, US)

- *Calvin D. Farr, General Manager/CEO (Prince William County Service Authority, US)*
- *Paige Peters, Founder & CEO (Rapid Radicals Technology)*
- *Emma Weisbord, Digital Water Partnerships Lead (Royal HaskoningDHV Digital)*

3:20 – 3:30 pm **Closing Remarks**
Manuel Parra, VP Strategic Partnerships and Alliances (Xylem Inc.)

May 27, 2022 "DC Water Blue Plains Study Tour"

- 8:00 – 8:30 am **Arrival at Visitors Center**
- 8:30 – 9:00 am **Welcome and Overview of the Plant**
- 9:00 – 9:30 am **Visit to the Central Operations Area**
- 9:30 – 10:45 am **Visit to Process Areas**
- 10:45 – 11:00 am **Wrap up**