

SMi Group Proudly Presents the 9th Annual conference...



Smart Water Systems

CONFERENCE:
20TH - 21ST

APRIL
2020

Delivering innovation and resilience through collaboration

Holiday Inn Kensington Forum, London, UK



BENEFITS OF ATTENDING:

- **Gather** first hand insight into Ofwat's emerging strategy: Driving transformational innovation in the sector
- **Learn** how industry and departmental collaboration will improve efficiency of service to the customer
- **Determine** how data analytics from new technological innovations (satellites) can lead to more efficient leakage detection and management
- **Updates** from both UK and European smart meter programmes and Results of Smart Meter Trials – showing the challenges facing water utilities after the smart meter roll out, as well as the lessons learned
- **Explore** whether IOT, AI and Automated Water Management can improve customer engagement and make networks more efficient
- **Find** out how the Upcoming Per Capita Consumption (PCC) targets are driving solutions to improve customer engagement and increase water reuse
- **Understand** how to harness digital solutions and benefit from digital transformation to achieve excellence in water management

CHAIR FOR 2020:

- **Jeremy Heath**, Innovation Manager, **Sutton and East Surrey Water Plc**

FEATURED SPEAKERS:

- **John Russell**, Senior Director, Strategy and Planning, **Ofwat**
- **Yong Cui**, Vice General Manager R&D Center, **Beijing Yizhuang Water Co. Ltd.**
- **Doug Spencer**, Head of Smart Metering, **Anglian Water**
- **Thomas Allen**, Smart Metering Data and Information Manager, **Thames Water**
- **Andy Clowes**, Head of Customer Insight and Strategy, **South East Water**
- **Nino Marino**, IT Manager, **Oasen**
- **David Elliott**, Group Chief Innovation Officer, **Wessex Water**
- **Ben Earl**, Water Efficiency Manager, **Southern Water**
- **Victor Pelin**, Digitalisation Strategist, **VA SYD**
- **Bert De Winter**, Chief Innovation Officer, **De Watergroep**
- **Kevin Parry**, Head of Data, Dwr Cymru, **Welsh Water**
- **Rose Jolly**, World Water Innovation Fund Manager, **Severn Trent**

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#SmartWaterSystems

Dear Participants,

We are absolutely delighted to welcome each of you to SMi's Smart Water Systems 2020 conference.

In every technology development, there comes a time when adopters have to stop talking about it, and instead start implementing it. In the UK, this last year has seen a significant increase in the number of smart networks and smart meter trials. There is little doubt that this is in part due to the industry challenge of achieving a minimum 15% drop in leakage within the next five years, coupled with equally challenging consumption reductions. At the same time, there has been an explosion of companies offering intelligent analysis and new communication protocols. Water Companies now face the challenge of an urgent need to implement technology, coupled with an ever more confusing choice of which one to adopt.

As always, we have gathered together experts in smart water systems from all over the world, and we anticipate that this conference will provide an ideal opportunity to learn about, understand and discuss the very latest technical advancements. We look forward to seeing you there!



Jeremy Heath, Innovation Manager,
Sutton and East Surrey Water

8.30 Registration & Coffee

9.00 Chairman's Opening Remarks

Jeremy Heath, Innovation Manager, **SESW**

COLLABORATION PUSHING THE INDUSTRY FORWARD

9.10 OPENING ADDRESS / KEYNOTE ADDRESS

Ofwat's emerging strategy: Driving transformational innovation in the sector

- Regulation as an enabler for innovation
 - o Setting ourselves up to promote innovation
 - o Increased coordination on innovation across regulators in the sector
 - o Create an environment that supports new ideas into the sector
- Innovation as a tool for addressing future challenges
 - o Company culture
 - o Effective joint working within the sector and beyond, including improved information-sharing
 - o Effective roll-out and adoption of proven technologies, methods or approaches at scale
- What are the main barriers to innovation in the sector and why?
- Collectively funded innovation competition
- Sector-wide joint innovation strategy

John Russell, Senior Director Strategy and Planning, **Ofwat**

9.50 How will collaboration of pioneering water companies to form the World Water Innovation Fund drive innovation for future generations?

- Water companies from around the world have come together to tackle some of the biggest issues facing water today
- The World Water Innovation Fund is seeing likeminded water companies share their knowledge through never seen before trials, research, disruptive thinking and ground breaking technology
- One year on since the fund's launch, this presentation will highlight the progress of the World Water Innovation Fund to date and identify future opportunities

Rose Jolly, Innovation World Fund Manager, **Severn Trent**

10.30 Morning Coffee

11.00 CASE STUDY: Wessex Water Open System approach – "How is Wessex Water using industry collaboration to improve efficiency of service?"



- Opening their systems, processes and data to wider markets and organisations they may not normally work with to solve problems more efficiently, and to reduce reliance on asset-based solutions that are not affordable or don't represent the best value in the long-term
- Collaborative open systems approach to innovation
- Achieve resilient services in a sustainable way, minimise the impact of activities through non-intrusive approaches and encourage the adoption of innovative techniques through partnership with the supply chain when asset optimisation or smarter construction is required
- Allow the supply chain to innovate and engage more proactively, understanding the required outcomes and suggest alternative approaches to deliver them
- Procure solutions that will reduce reliance on asset construction
- Significantly reducing costs and Improving resilience
- Providing a better value, more rounded service to our customers and the environment

David Elliott, Group Chief Innovation Officer, **Wessex Water**

DATA ANALYTICS FROM NEW INNOVATIONS IN TECHNOLOGY, AI, IOT AND DIGITISATION

11.40 Zero-vision for unplanned interruptions for customers

- Future City Water: A recently started state funded project. The overall aim is to achieve a smart and future proof concept for managing the drinking water system combining data from sensors eg DMAs, smart water meters etc and using state of the art technology with autonomous real time hydraulic models, machine learning behavioural sciences
- Leak detection using satellites: We are testing different technologies in large scale and are currently getting some interesting results and insights

Victor Pelin, Digitalisation Strategist, **VA SYD**

12.20 Networking Lunch

13.20 Transition from smart metering to smart utility

- Results and experiences from the US and Europe
- Digital transformation and lessons learned
- Creating real value from data

Søren Hebsgaard Knudsen, Country Manager UK, **Kamstrup** **kamstrup**

14.00 CASE STUDY: SES Water's Intelligent Network Project



- Our vision for the future of network management
- Our NBloT sensor roll out plan
- AI software data analysis for near real time network insights
- Advanced pressure control using AI
- Future proofing your network data strategy

Daniel Woodworth, Network Strategy Manager, **SES Water**

14.40 Oasen adopts a pioneering approach to public water provision with IoT

- Introduction (Oasen and main goals)
- Predict pipeline leakages and water consumption
- Smart valves in pipelines as a part of a digital twin
- A chatbot on the website and smart water meters to improve customer service
- Roadmap and examples for more data driven purification station
- The future is digital and 3D (for example HoloSuite Microsoft Amsterdam/ Hololens)

Nino Marino, IT Manager, **Oasen**

15.20 Afternoon Tea

15.50 Mitigate network outages & disruptions by digitising your water distribution system

- By digitising your water supply system, the maintenance and rehabilitation process can be streamlined
- Consumer disruptions will be reduced as the system continuously works to improve network performance
- Scenario management capabilities facilitate the shut-down planning process and generate notifications to affected customers

Jan Krejčík, Group Sales Executive for Urban Water & Regional Director for Central & Eastern Europe, **DHI Group**



16.30 Data and analytics at DWR Cymru Welsh Water – a use case

- A quick overview of the Data Team at Dwr Cymru Welsh Water (i.e. how it operates to directly support strategic objectives from across all areas of the organisation)
- The majority of the presentation will cover a specific use case (fbc). This will likely be a project/solution that has been recently completed, where the context aligns as close as possible with the main themes from the conference. In detail:
- The context around the business problem being addressed and how a data/analytics project was identified as the solution to the problem
- Exploratory work and initial findings, and how the Data Team work(ed) alongside business and domain experts collaboratively to fully understand the business problem
- An overview of the more advanced methods employed (which may centre on predictive modelling, operational research, machine learning etc. depending on the selected use case)
- How the results were perceived and how the outputs of the solution are / will be productionised so that the business area is able to make better data-led decisions
- Next steps for the solution and how it can be further enhanced or improved

Kevin Parry, Head of Data, **DWR Cymru Welsh Water**

Justin Doran, Data Governance Manager, **DWR Cymru Welsh Water**

17.10 Chairman's Closing Remarks and Close of Day One

Jeremy Heath, Innovation Manager, **SESW**

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8.30 Registration & Coffee**9.00 Chairman's Opening Remarks**Jeremy Heath, Innovation Manager, **SESW****9.10 CASE STUDY: Reclaimed water as the main water resource for supporting industrial development in E-Town of Beijing, China**

- Introduction of Yizhuang Water in E-Town
- Overview of E-Town
- Water reuse plan in E-Town
- Wastewater treatment in E-Town
- Water reuse in E-Town
- Smart Water Systems :Aqua-In System For Industry

Yong Cui, Vice General Manager R&D Center, **Beijing Yizhuang Water Co., Ltd.****IMPROVEMENTS IN METHODS OF LEAKAGE DETECTION****9.50 Collaboration - "zero leakage and innovation"**

- Leak detection and location methods
- Basic mechanisms of bursts and leakage
- Leak repair-methods
- Laying leak-free new networks
- Water accounting and quantification
- Leakage innovation heatmapping

Jeremy Heath, Innovation Manager, **SESW****10.30 Morning Coffee****11.00 How can water quality sensor systems aid with leakage**

- Water quality systems and identification of suspect DMA's
- Water quality sensors and prioritisation of alarms from noise loggers and other leak detection systems
- Water quality and distribution system optimisation
- Using turbidity to control PRV's in dynamic DMA's
- Water quality and resilience

Mike Strahand, Managing Director Europe,
Analytical Technology Inc**WATER REUSE AND PER CAPITA CONSUMPTION LEVELS****11.40 Towards a circular water model**

- Sufficient clean water for everyone is a worldwide challenge, also in Flanders, due to climate change. De Watergroep has therefore defined in its strategy that we want to actively provide solutions by supporting the development of a hybrid business model in which local circular water reuse has an important place
- In the presentation, the approach of De Watergroep will be explained and examples will be given of concrete projects

Bert De Winter, Chief Innovation Officer, **De Watergroep****12.20 Networking Lunch****13.20 Delivering Target 100 – exploring new water reuse schemes**

- Signposting how new developments can meet lower water use standards
- Exploring the technical challenges that need to be overcome
- Understanding how customer acceptance is key to success

Ben Earl, Water efficiency Manager, **Southern Water****SMART METERING PROJECT UPDATES****14.00 Smart Water Metering – Good idea to good delivery**Tom Allen, Data and Insight Manager, **Thames Water Utilities Ltd****14.40 How are South East Water revolutionising how the water industry detects and prevents leaks, reduces environmental impact and ensures a highly resilient service for customers?**

- Our approach to testing the latest cutting edge digital water meters, sensors, advanced analytics and telecommunications channels
- Transmitting data for analysis from digital water meters at 2,000 homes in the trial area
- Combining data from a number of solutions for analysis
- How this might look in the future and what opportunities have we identified and how might this have informed our resilience strategies for both our network and our customers

Andy Clowes, Head of Customer Insight and Strategy, **South East Water****15.20 Afternoon Tea****15.50 CASE STUDY: Smart Water Metering Impacts on Demand and Learning for deployment**

- Review of the available data on UK smart water metering
- Case study outcomes from the AW Proof of Concept Trials
- Quantification of the benefits captured
- Lessons Learned on the challenges to deploy and install
- Innovation required to increase the efficacy of rollouts

Doug Spencer, Head of Smart Metering, **Anglian Water****16.30 CASE STUDY: Results and conclusions of the Smart Metering Pilot Projects**

- Description of the various pilot metering projects De Watergroep are running
- Highlight the types of water meters and different data protocols employed
- They are already in the net and will stay there for about one year.
- What results are needed to determine whether they will be rolled out to all our customers

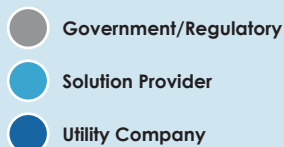
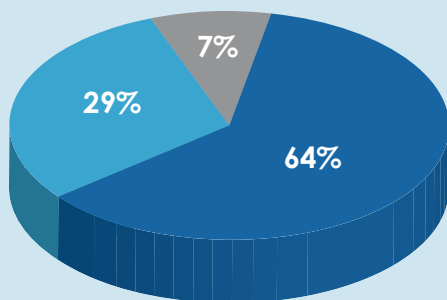
Cindy Vanderstraeten, Project Leader Smart Metering, Innovation,
De Watergroep**17.10 Chairman's Closing Remarks and Close of Day Two**Jeremy Heath, Innovation Manager, **SESW**

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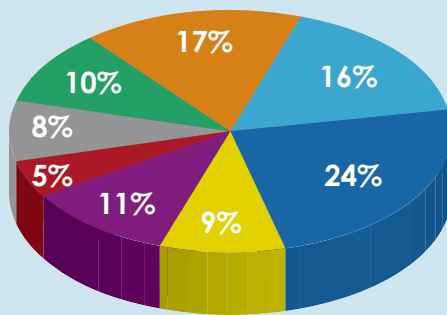
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By Organisation Type



By Job Title



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SMART WATER SYSTEMS

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