



WEDNESDAY, 8 MAY

4.00PM-5.30PM

W WORKSHOP ELEVEN

SA WATER PRESENTS: HACKING THE PRESENT FOR THE SHARED FUTURE WE WANT

ROOM 213

The SDG 6 Synthesis Report 2018 on Water and Sanitation tells us that “the world is not on track to achieve the global SDG 6 targets by 2030 at the current rate of progress”. We know that our current approaches are not enough; that we must do things differently if we are to meet these goals. The SDGs are interconnected; progress on one can affect progress on another. We need to apply a shared value approach to make progress on all the SDGs. Innovation is the key to unlocking shared value and transforming our world.

Presenters:

- › **Amanda Hirschhausen**, Strategy Specialist, SA Water, Adelaide
- › **Dr Colin Russo**, Managing Director, Engaging Futures, Brisbane
- › **Maryam Heshmat**, Executive Coordinator Strategic Planning, City of Gold Coast
- › **Sérgio Brodsky**, Founder and Principal, SURGE, Melbourne
- › **Dr Bernadette Eckermann**, Innovation Specialist, SA Water, Adelaide

Amanda will open the workshop by sharing how SA Water is moving beyond the conceptual to bring future thinking to life. Her experience in strategy development and deployment, energy for shaping the future and love of storytelling provides the starting point for our journey. Her involvement in urban cooling and liveability initiatives has identified several ingredients for transforming the future. Each of our speakers brings a different ingredient and you will experience how they come together during the high-speed hackathon.

We can prepare for the changes of the future using strategic foresight. **Colin** has twenty-five years’ experience engaging stakeholders of state and local government sectors. He is an award-winning futurist author with a PhD in long-term futures planning of cities. He has worked on major projects such as the City of Gold Coast’s Our Bold Future 2037, Desalination Plant Project and Raising of the Hinze Dam Wall. Colin will frame the future using the Unicity Futures Method, designed to transition people from today to our preferred future.

Maryam will share her experiences in creating a shared view of the preferred future within a local council area facing significant challenges. Maryam has over 10 years’ experience in strategic foresight and planning in the water and waste industries. She currently leads strategic thinking and adaptive approaches to infrastructure planning for Gold Coast Water and Waste. Maryam led and developed the Utility of the Future’s Foresight piece for Queensland Urban Utilities.

Sérgio is passionate about cities, culture and the role of brands and technology in society. A former ‘adman’ turned serial entrepreneur he will share how Urban Brand-Utility, his radically innovative brand communications’ theory, can help turn advertising into a regenerative force for the prosperity of cities. This will be supported by real-life case studies and a circular revenue model that effectively unlocks economic wealth from underutilised assets enabling the creation of shared value between the private-public-people-creative partnerships. Sérgio’s insights will spark new ideas with his fresh perspective.

Winner of the 2018 WInnovation Innovation and Intrapreneurship in Government award, **Bernie** is passionate about connecting people, enabling them to imagine and create better ways. She has worked in many fields, including manufacturing, the water industry and her own start-up. Bernie will share how SA Water are building innovation capability and unlocking opportunities across the organisation, from energy management to grass-roots idea generation. She will inspire you to be bold and creative as you begin the high-speed hackathon.

P PANEL TWELVE

SYDNEY WATER PRESENTS: DIGITAL INFORMATION - USING DATA DURING THE WHOLE LIFE OF THE ASSET. WHAT DOES AN INDUSTRY ROADMAP LOOK LIKE?

ROOM 216

Delivering water infrastructure without digital tools is unthinkable. Digital engineering is how we safely deliver infrastructure investment at the right cost and quality. Digital analytics is part of how we understand our customer’s needs, our assets and how we plan interventions or prioritise renewal.

The slow rate of asset replacement within the water sector however means that we are not going to be able to build our way out of trouble and we will rely on data acquisition tools and improved analytics to make sense of our aging infrastructure.

Unlocking the tremendous potential value in the data throughout the life cycle, with estimated much higher returns than at the asset creation stage, requires a structured and managed approach that is capable of being adapted as new technologies emerge or new ways of using that data are imagined.

A great deal of effort is currently wasted or duplicated or potential insights missed. What we need is a consistent, structured approach to procuring the digital asset along with the physical asset to maximise the value.

It is vital that the industry moves towards intelligent models that have all the advantages of the 3D models but incorporate information from the other dimensions like time, cost, safety or asset management requirements.

This session is intended for water industry professionals at all levels who want to engage in a discussion on a shared water industry roadmap for digital information and asset management.

The objective of this session is to paint the picture of the current status of the digital engineering and analytics in the water sector and infrastructure more broadly and articulate the benefits and challenges of an industry wide or a whole of government approach to digital information management.

Attendees will interact with a panel with different perspectives and co-create an industry roadmap for digital information, asset managements and analytics.

The objective of the discussion is take the first steps towards an industry wide digital information strategy which is connected to a broader ambition to manage infrastructure digitally.

Facilitator:

- › **Michael Ridger**, Interface Manager Major Projects, Sydney Water, Sydney

Panellists:

- › **Tammy Falconer**, Head of Asset Knowledge, Sydney Water, Sydney
- › **Simon Kerr**, Chair, Bim4Water UK and Digital Delivery Principal, Mottmac, Leeds, UK
- › **Julian Watts**, Director Engineering & Asset Management, KPMG, Melbourne
- › **Bruce Murnane**, Territory Manager SEAMS (Arcadis), Melbourne



WEDNESDAY, 8 MAY

4.00PM–5.30PM

W WORKSHOP THIRTEEN

CRC FOR WATER SENSITIVE CITIES PRESENTS: IMPLEMENTING A TRANSITIONS AGENDA FOR CREATING AUSTRALIAN WATER SENSITIVE CITIES

ROOM 212

Join us to advance Australia's water sensitive city transition agenda through the consideration of implementation strategies and actions.

Australian cities need to undergo urgent transformations to ensure they continue to support the health, wellbeing and prosperity of their communities. The emerging vision of Australian water sensitive cities offers a promising pathway forward, and if realised, the country will lead the world in transforming cities to ensure long-term liveability, sustainability and resilience in the face of climate change, population growth and urban intensification.

In the water sensitive city, water system services are critical for enabling broad aspirational outcomes for a city, such as healthy people and places, thriving protected ecosystems, sustainable efficient resource use through adaptive infrastructure, and innovative and strong economies. While there is not yet a water sensitive city in the world, the concept has captured people's imagination as a way of recognising the centrality of water for thriving future cities.

The Cooperative Research Centre for Water Sensitive Cities undertook an Integrated Research Project (IRP: WSC Visions and Transition Strategies) aimed at developing tools and processes to guide the transition journey for cities to become more water sensitive. The project applied an action research methodology, where stakeholders contributed to knowledge co-production with the research team through a series of participatory workshops, supported by supplementary engagement and analytical activities.

Envisioning and transition planning processes were run in six cities across Australia (Perth, Adelaide, Bendigo, Sydney, Gold Coast and Townsville) to develop local water sensitive city visions and transition strategies. Each process involved leading strategists, policy-makers, practitioners and academics from across the water, planning, environment, and development sectors from their city. The Bendigo process also involved members of the general community.

Water sensitive city visions and transition strategies were created for each city. These articulate a local water story, a 50-year water sensitive city vision, an assessment of current water sensitive performance using the CRCWSC's Water Sensitive Cities Index, as assessment of current transition progress and enabling context, and tangible strategies and actions for achieving the vision.

This Ozwater workshop invites participants from diverse organisations, including water utilities, government agencies, municipalities and consultants, to reflect on insights from this CRCWSC research and then develop and share ideas for implementing a WSC transition agenda across Australia.

The workshop objectives are to:

- ▶ Disseminate knowledge gained from the CRCWSC's Visions and Transition Strategies research project
- ▶ Develop shared understanding amongst participants of transition priorities and potential transition actions for Australian cities and towns as they shift towards water sensitive approaches
- ▶ Inspire and motivate participants to foster the networks, build the capabilities and implement the actions needed to advance their city's water sensitive city transition
- ▶ Insights gained through the workshop will be incorporated in a communicate that reflects on the progress of Australian water sensitive city transitions and provides recommendations for strategic and policy agendas at local, state and national scales.

Presenters:

- ▶ **Briony Rogers**, Visions and Transition Strategies Project Leader, CRC for Water Sensitive Cities, Melbourne
- ▶ **Katie Hammer**, Visions and Transition Strategies Project Manager, CRC for Water Sensitive Cities, Melbourne

W WORKSHOP FOURTEEN

CALIBRE & AWA VIC BRANCH PRESENT: NAVIGATING A PATHWAY TO A CIRCULAR WATER SECTOR

ROOM 217

The term Circular Economy is rapidly sweeping the water sector but ideas for embedding these principles are still lacking maturity. A recent review breaks down the circular economy as it relates to the water sector into three interrelated pathways: the water pathway; the material pathway and the energy pathway (IWA 2016). While Australia has made some head road into closing the water loop there is still much to be done with regards to closing the energy and material loops and these need to be included should the water sector truly move towards a circular economy.

The objective of this workshop is to expand thinking and to engage in an energetic and future focussed discussion around what is truly possible within a Circular Water Sector. Some of the ideas of this workshop will explore are outlined below.

Achieving a carbon positive water sector through integrated biogas systems: The UN World Water Development report described Wastewater as one of the world's largest untapped resources and through anaerobic digestion Australia could close the energy and material pathways.

New business models and new revenue streams: A circular water sector will see the creation of new business models that exploit the benefits of nutrient recovery and new energy sources. Understanding and preparing for this is critical to its transformation beyond a sector purely focused on water.

The role of policy support a circular water sector: A circular water sector cannot be achieved without policy in the short term. Understanding how policy can embed circular economy principles through mechanisms such as targets for reuse and secondary materials uptakes will be explored.

Cultural changes and developing a new mindset that promotes circular thinking: Understanding how the sector can be supported to expand its thinking and embrace processes that promote a circular way of thinking will be explored through case studies from outside of the sector.

We have a number of presenters who will help widen perspective as it relates to the circular economy and the water sector. Our panel includes:

Facilitator:

- ▶ **Dona Tantirimudalige**, Yarra Valley Water: Dona will lead this panel to help expand thinking and energise participants through highlighting what is possible with a Circular Water Sector

Presenters:

- ▶ **Sharon Pollard**, Federation Square: Sharon will give an external perspective into how Federation Square has taken a Circular approach to its operations
- ▶ **Angela Hoefnagels**, DELWP: Angela will share the work the Victorian Government is doing to shape a circular economy policy and how it might apply to the water sector
- ▶ **Gillian Hand-Smith**, Sustainability by Innovation: Gillian will share her global perspective on how waste to energy projects succeed and how we can shape a circular water sector.
- ▶ **Jurgen Thiele**, Calibre: Jurgen will talk about the potential inherent in integrated biogas systems and innovative ways in which they can close the materials and energy pathways

Following the presentations we will split the attendees to engage in specific themes that broaden the thinking of the participants as it relates to the unrealised potential of a circular water sector.



W WORKSHOP FIFTEEN

WATER RECYCLING SPECIALIST NETWORK PRESENTS:
IS AUSTRALIA READY TO DRINK RECYCLED WATER?

ROOM 218

A potable reuse future - a future where potable reuse is widely accepted as a water alternative to ensuring water security for Australia. What does it look like and how do we get there? Is Australia ready to drink recycled water?

Drought and growth in Australia's major cities is putting pressure on water supplies. Diversifying our water sources through desalination and water recycling helps secure our water supply system and provide resilience to extreme weather events resulting from climate change. Additionally, we are now starting to understand and quantify the benefits of an integrated catchment approach to water and wastewater planning. Australia has been recycling water for decades, however we have been mostly slow to fully embed it as a reliable supply and we have limited the ways we use it. Why? This workshop will focus on exploring the issues and barriers preventing wider adoption and acceptance of water reuse schemes, as well as the importance of stakeholder involvement and engagement.

The workshop will consist of four speakers followed by an interactive session involving all workshop attendees. The speakers will cover the many aspects associated with water recycling and potable reuse including recent technology advancements, policy and regulation challenges, customer consultation, and engaging constructively with politicians. As well as providing an understanding of the drivers and opportunities, barriers and challenges associated with water recycling and potable reuse.

Stakeholder involvement and engagement is critical to the successful implementation of any water reuse scheme. The interactive session will aim to understand the concerns of the various stakeholders, including policy makers, regulators, politicians, water utilities, and customers, when it comes to water recycling and potable reuse. Through the interactive session, attendees will have an opportunity to contribute and explore how the water industry can work collectively to address these concerns.

Everyone that attends the workshop will leave with an understanding of the barriers, challenges and opportunities associated with potable reuse. Australia may not be ready to drink recycled water; however, the workshop will aim to provide clarity on how the water industry will become future ready. The ideas and actions generated during the workshop will assist in creating a plan that will assist in shaping a potable reuse future in Australia.

We would encourage representatives from water utilities, community and stakeholder engagement, industry, research and universities, policy and regulation to attend what should be an interesting and engaging workshop.

Presenters:

- › **Professor Stuart Kahn**, UNSW, Sydney
- › **Gemma Keane**, Associate, Water, Aurecon, Sydney
- › **Paul Plowman**, General Manager, Liveable City Solutions, Sydney Water, Sydney
- › **Mike Foster**, Manager External Relations, Seqwater, Brisbane
- › **Ian Law**, Principal, IBL Solutions, Sydney
- › **Lucia Cade**, Chair, South East Water, Melbourne

P PANEL SIXTEEN

OZWATER PRESENTS: PFAS AND THE WATER INDUSTRY -
REGULATION, INDUSTRY RESPONSE AND TREATMENT OPTIONS

ROOM 219

PFAS is a significant issue for the water industry in Australia and internationally. Issues arise for surface and groundwater drinking water sources, drainage and waterway management as well as sewage, recycled water and biosolids. There is confusion about guidelines for PFAS and the underlying health effects of exposure.

The PFAS compounds are widespread and difficult to treat. This panel will explore the current state of regulation, case studies from utilities, exposure concerns and treatment options. A number of short presentations from panellists will introduce issues of shared concern and form the basis of group discussion. There will be time for discussion with practitioners and researchers.

Facilitator:

- › **Dr David Cunliffe**, Principal Water Quality Advisor, Public Health Services, SA Health, Adelaide

Panellists:

- › *"PFAS and Exposure: Beyond Drinking Water"*
- › **Karen Teague**, Principal Risk Assessor, Coffey Services, Melbourne
- › *"A Water Utilities response to the PFAS NEMP"*
- › **Rachael Miller**, Head Water Quality, Water Corporation, Perth
- › *"A demand and supply management response to PFAS contamination of Katherine's town water supply"*
- › **Trevor Durling**, Senior Headworks Planning Engineer, Power and Water Corporation, Winnellie
- › *"Visualisation of PFAS contamination in groundwater"*
- › **Dr Samuel Skinner**, Environmental Engineer, Aurecon, Melbourne
- › *"Electrochemical oxidation pilot reactor demonstration project, coupling technology for PFAS destruction"*
- › **Rachael Casson**, Director of International PFAS Program, AECOM
- › *"Per- and Poly-Fluoroalkyl Substances - A New Challenge to Wastewater Treatment"*
- › **Matthew Askeland**, Senior Environmental Scientist - PFAS, ADE Consulting Group, Melbourne



WORKSHOP/PANEL PROGRAM

WEDNESDAY, 8 MAY

4.00PM-5.30PM

P PANEL EIGHTEEN

OFFICE OF THE TECHNICAL REGULATOR PRESENTS: DUAL RETICULATION CHALLENGES IN NEW URBAN DEVELOPMENTS

WOOD THEATRE - EXHIBITION HALL

In recent years, new developments have significantly increased around the country and a big proportion of them are now designed with dual reticulation being supplied to houses (meaning that both drinking and non-drinking water are supplied to dwellings). In dual reticulation arrangements, non-drinking water can be used for flushing toilets, washing machines and irrigating gardens.

This new trend has led to a number of issues being observed by the industry.

One of the main safety risks faced by consumers is the misconnection of both services, where the drinking water main and non-drinking water main are connected to the wrong inlet, resulting in customers drinking non-drinking water. Past incidents have shown that these misconnections can go undetected for years.

These issues are becoming more likely to increase with higher demand for new developments and has raised concerns for utilities and regulators. Some solutions have been put forward but are not always bulletproof and issues can vary from one State to another as a result of different legislation and regulation.

Other issues have also been experienced by the industry, such as high variance in demand based on external factors (i.e. drought) or a complex relationship with the regulators. Economic factors are also important to account for as the business case for recycled water is not always obvious.

As such, this panel will explore the various problems being experienced by different players in this space, comparing different States (Victoria, New South Wales and South Australia) where new developments have been booming and the provision of recycled water has significantly increased.

The panel will discuss the perspective of water utilities and regulators to understand the different perspectives and how the communication between all is essential to achieve the best outcome. The ultimate objective of the panel is to discuss the solutions that have been implemented to date, investigate how efficient those measures have been since their implementation and assess how some of these solutions could be applied in other jurisdictions. By sharing lessons learnt, the intent is to allow everyone to gain new knowledge and ideas to apply in their own situation and that ultimately it will result in better practice within the industry providing a safer and better outcome for the community.

Panellists:

- › **Naomi Struve**, Manager Water and Sewerage Infrastructure, Office of the Technical Regulator
- › **Kristen Knight**, Recycled Water Planning Manager, Yarra Valley Water
- › **Ben Blayney**, Product Manager Water, Sydney Water
- › **Amanda Smith**, General Manager, Strategy and Planning, City West Water

**AUSTRALIAN
WATER**
—
ASSOCIATION

Find us at stand

H01

**Visit our stand for a coffee
and a chat about Strategy '22**

With the launch of our next three-year strategic plan at Ozwater'19, come visit our interactive stand to find out what Strategy '22 is and what it means for you as a member of the Australian Water Association.