Urban Water R&D

The scale and complexity of challenges the urban water sector must address are increasing.

Australia has Commonwealth, State and Industry funded entities responsible for the development and management of R&D.

These entities facilitate the development of research directions, prioritise investment approaches, and manage the delivery of research & development outcomes.

These urban water R&D ‘Brokers’ have recognised there is value in a national and cooperative approach across their organisations.
AWRDC - Timeline

**Breakfast meeting**
- Ozwater 2010
  - Identified investing organisations

**R&D Broker Workshop**
- Ozwater 2011
  - Discuss idea of cooperative national approach

**Stakeholder Forum**
- Ozwater 2012
  - Progress towards R&D coordination
AWRDC – Intentions

Outcome Statements

Enhance strategic alignment – greater awareness of research themes/areas of commonality & gaps/industry requirements

Reduce duplication & increased research efficiency - optimised funding calls/enhanced leveraging for research/common metrics to measure success

Provide forums for engagement – government & industry/overseas research entities/input to research and policy discussions in Australia

Enhance knowledge management – identify and implement integration, adoption & communication opportunities

Coordinate investment opportunities – potential to address complex multidisciplinary problems beyond the scope of one entity
AWRDC – Initiatives

2012 Activities – AWRDC Terms of Reference

Cooperative investment – identifying mechanism(s) and options for co-investment

Enhancing engagement – supporting a Private Sector Water Forum and demystifying participant R&D through national and international forums

Managing knowledge – scoping an approach for national urban water knowledge collation, synthesis and appropriate access

Describing the landscape – Road-mapping existing investment

Contributing to future requirements – seeking consensus around our national needs and capabilities for urban water R&D
# AWRDC - Investment

<table>
<thead>
<tr>
<th>Water Research ‘Brokers’</th>
<th>Investment (over 5 years)</th>
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<tbody>
<tr>
<td>CoE Recycl (Nat.)</td>
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<td>CoE Desal (Nat.)</td>
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<td>CoE Groundwater (Nat.)</td>
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<td>Smart Water Fund (Vic)</td>
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<td>Urban Water Alliance (Qld)</td>
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<td>Goyder Inst. (SA)</td>
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<td>WQRA (Nat.)</td>
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<td>Water Utilities (Nat.)</td>
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<td><strong>Total Cash</strong></td>
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<td><strong>SIMPLE CASH LEVERAGE (1:1)</strong></td>
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# AWRDC – Investment

## Urban Water Themes

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<tr>
<th>Theme</th>
<th>AWRCE</th>
<th>NCEDA</th>
<th>WQRA</th>
<th>NGRRT</th>
<th>WSAA</th>
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Cooperative investment (project scale examples)

WQRA + NWC – Capacity building workshops on AGWR/ Bio-analytical tools ($200k)

NCGRT + Goyder – Climate change and downscaling (CSIRO; >$200K)

SEQUWSRA + WQRA – Pathogen source tracking (5 partners; $250K)

AWRCE + WQRA + WSAA – National Validation Framework (20 partners; $3mill)

NCEDA + AWRCE – Mapping Climate Resilient Water sources (BoM; CSIRO; $800K)

SWF + NCEDA – Concentrate management guidelines (VU; $220K)
Substantial investment in urban water R&D - multiple projects addressing numerous thematic elements

No overarching mechanism to understand/ capture current investment in R&D

No national framework to manage project data/ information/ knowledge

Concerns regarding the legacy of ‘corporate’ knowledge developed by time bound R&D organisations

DIISRT investment in e-data management ($400mill over 4 years)

AWRDC – scoping an approach for national urban water knowledge collation, synthesis and appropriate access
AWRDC – R&D Outcome Areas

Roadmapping existing research

**Long-term water supplies** - All water services are delivered to customers reliably and at agreed standards using an optimal and flexible mix of supply and demand options & Maintaining ongoing water supply and security contributes to and enhances social and economic development

**Acute extreme Events** - Society is adequately prepared and responds appropriately to the risks to life, infrastructure and natural assets posed by extreme events

**Safe and healthy water** - All Australia’s water supplies are safe and fit for their intended use & Aquifers, surface water bodies and their surrounding catchments are well managed to maintain ecosystem health

**Water and the community** - We have an informed and empowered community that understands the true value of delivering and managing water, and who take responsibility for using water wisely and for the purpose for which it was intended
AWRDC – Engagement

Forums - State/ National/ International

OzWater 2012 – AWRDC forum & update

Private Sector Engagement – support development of private sector water forum

Goyder Water Institute Forum – 28th May 2012

Urban Water Security Research Alliance Forum – 19th June 2012

Singapore Water Week – July 2012 industry stand with AWRDC representation

2012 National Needs and Capability Forum – underwrite an inaugural national forum with key urban water sector representatives
National Needs and Capability - Context

Fragmented and non-strategic R&D effort

- Multiple funders, brokers and providers
- No national statement of research needs
- Few opportunities to coordinate effort
- Difficulty in assessing return on investment
National Needs and Capabilities - Approach

Develop a common articulation of national priorities for urban water research in Australia

• properly informed by both ‘demand pull’ and ‘supply push’ perspectives
• recognising the broader urban water challenges and opportunities for research to deliver economic and environmental benefits

First Step - an annual, national forum including key research funders, providers and beneficiaries

• a roundtable approach in Canberra 2012
Needs and Capabilities Forum - Purpose

• Identify and discuss priority urban water R&D areas (including emerging issues)
• Discuss the capability, capacity and strengths of research providers to collectively deliver the priorities
• Explore opportunities for improved ways to cooperate and deliver more efficient and effective R&D outcomes & identify and address future priorities
Needs and Capabilities Forum - Outcomes

Expected outcomes

• statement of national research priorities and emerging national needs
• assessment of existing capacity to meet priority needs
• identification of opportunities for cooperation
• actions for the next 12 months

Agreement on an annual event and evolving focus
Needs and Capabilities Forum

It is not

• a new institution
• a funding body
• a mechanism to determine the investment decisions of participating institutions
• a mechanism to develop a funding case for particular research agendas
Where to from here?

Seek your views on the proposed approach

Engage with key stakeholders prior to the forum
  • to further develop the agenda and identify emerging priorities
  • to enable participants to bring forward representative views

Promote the forum at key state and national events
  • OzWater May
  • Goyder Institute Annual Forum, end May
  • SEQ Urban Water Alliance Forum, late June
Summary

The scale and complexity of urban water challenges cross scientific disciplines, industry sectors, and jurisdictional boundaries.

To be efficient and successful, Australia’s R&D investment needs to be coordinated, goal oriented, sustained, and supported by industry, State and Commonwealth governments.

Australia’s urban water R&D will benefit from cooperation across existing R&D ‘brokers’ and discussion and agreement with providers and beneficiaries on priority National needs for collaborative investment.