



Water Sustainability - A unique opportunity in time

Water New Zealand Conference
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Dr Kerry Griffiths

IS Technical Director
Infrastructure Sustainability Council



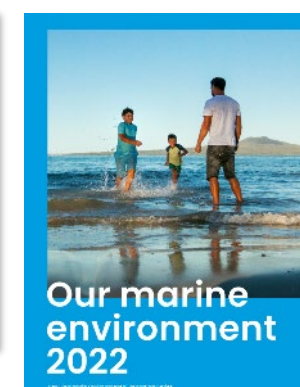
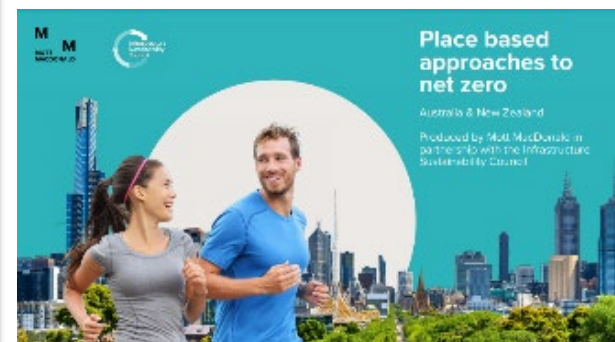
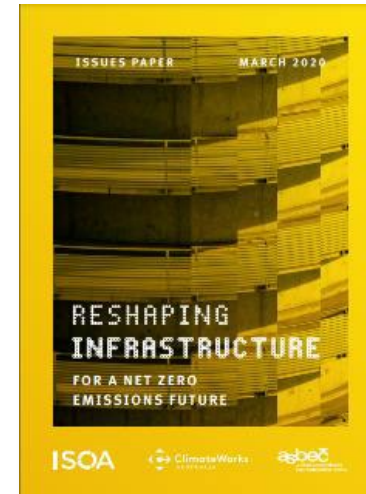
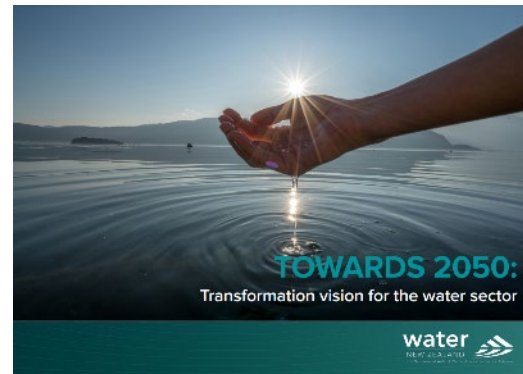
Rod Naylor

Global Water Lead
GHD

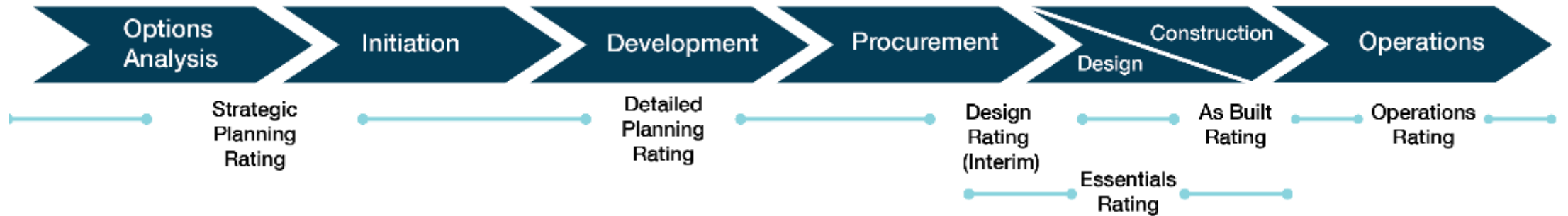


An opportunity for Lasting Impact

Infrastructure



Tool for sustainability outcomes



Governance	Environment	Social	Economic
Place	Energy & Carbon	Stakeholder engagement	Options Assessment & Business Case
Leadership & Management	Environmental Impacts	Legacy	Benefits Realisation
Sustainable Procurement	Resource Efficiency	Heritage	
Resilience	Water	Workforce Sustainability	
Innovation	Ecology		

Impact across the life cycle

Planning, designing, delivering and operating sustainable infrastructure



**Ability to influence
sustainability outcomes**

**Achievement of
sustainability outcomes**

Time

Rating Scheme Traction across ANZ

247 \$192bn

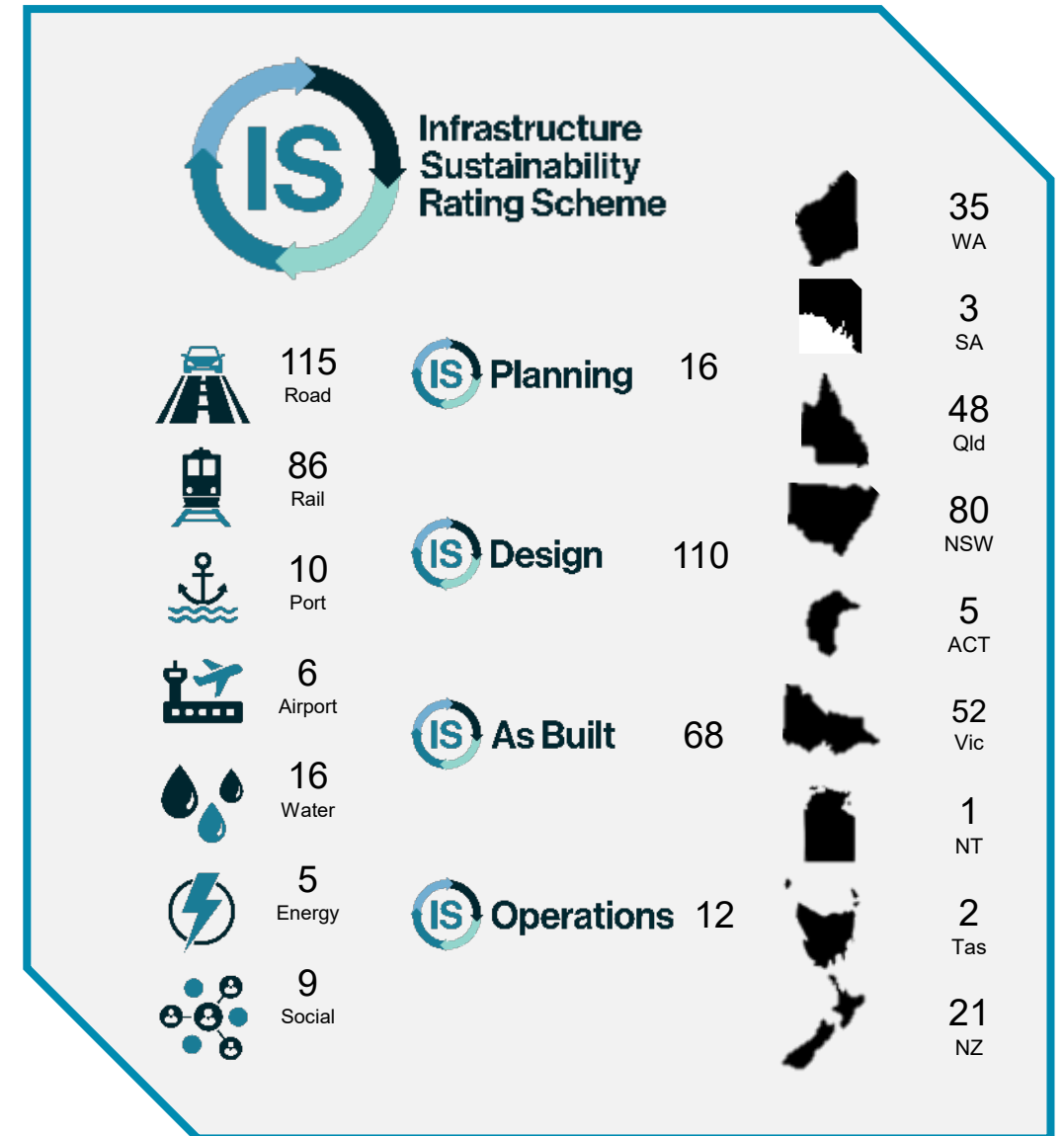
Active Ratings

Capital Value

NZ Ratings

\$26.3b

21 Ratings



IMPACT

The purpose of infrastructure is to enable people to thrive



Lifecycle material
emissions avoided
16%

Operating energy
emissions avoided
37%

Lifecycle energy
emissions avoided
27%

Projects that used materials
with sustainability credentials
70%

Resources diverted
from landfill
6.4M tonnes

Waste diverted
from landfill
96%

Reduction in asphalt
from base case
8%

Reduction in concrete
from base case
140,272 tn

Operating water
use avoided
25%

Innovation:
41 Regional First
30 National First
4 World First

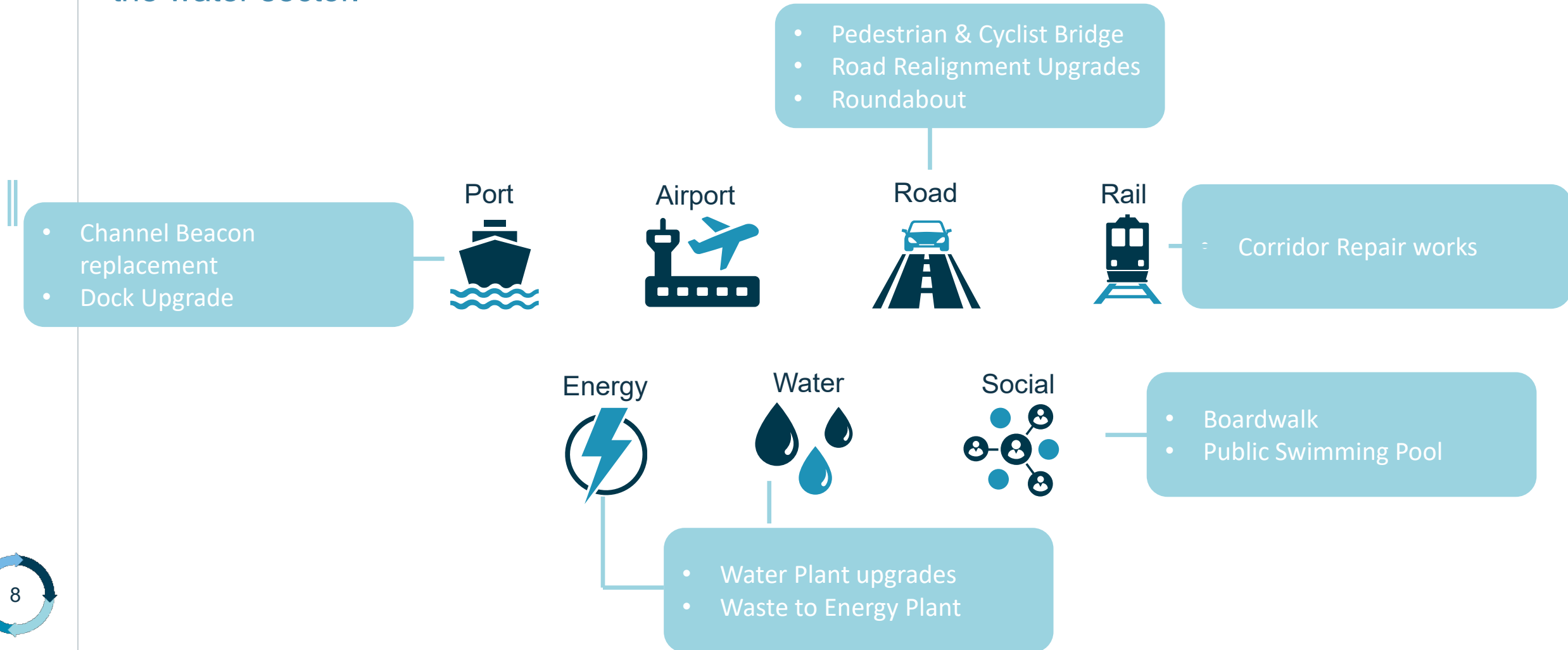
Certifications:
1 Planning
27 Design
19 As Built

Social Credits:
88% certified projects completed
stakeholder engagement strategies
80% certified projects undertook
heritage assessment and
management



IS Essentials for Projects <\$100m piloted

IS Essentials is suitable for a wide range of assets types. Of the 24 pilot projects, six are in the water sector.



IS Ratings - Water Sector drivers

Water Corporation - WA

Why pursue IS Ratings?

Strategic Drivers

- Corporate goals sustainability aspirations
- ESG Strategy
- Infrastructure WA requirements
- Capital Delivery review

Operational Drivers

- Bridging the gap between corporate goals and project sustainability performance.
- Enabling a best practice approach by influencing the decision-making culture of a project team to consider options beyond lowest cost.

Sydney Water - NSW

Using the ISC V2.1 Rating Tool to measure project sustainability outcomes aligned with Sydney Water's Strategy



IS Ratings - Water Sector drivers

Central Interceptor – Aotearoa New Zealand

- Act as a 'stock-take' of where the project was sitting and give an indication of what could be achievable for the As-built rating
- Provide independent verification of the baselining of resource data (energy, materials, water)
- Motivate the project team by being recognized for their commitment to sustainable outcomes and solidify the identity of the project.



Parkes Shire Council - NSW

- Third party recognition of PSC's approach to sustainable development
- Stretch target for the project team to work towards
- Challenge the contractor to prioritise sustainability outcomes
- Regional leadership - help "pave the way" for local Councils and utilities



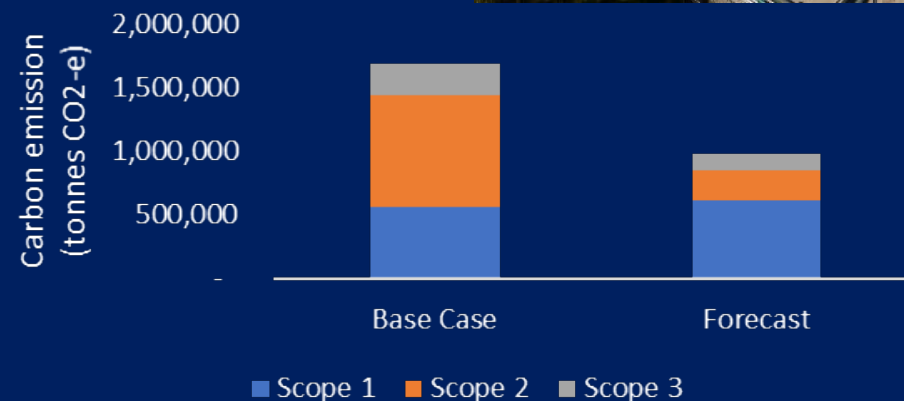
Sydney Water: Lower South Creek Treatment Program

Achievements

- 70% self-supply of renewable energy
- 8% reduction in embodied carbon
- 44.7% reduction in emissions compared to base case

IS Rating Benefits

- Formalising processes and systems
- Stakeholder consultation
- Knowledge share & awareness raising
- Working collaboratively with contractors and suppliers
- Showcases new technology, innovation and improvements internally.



Carbon emissions over construction and 50 years of operations

Channel Beacons replacement: Cairns and Weipa ports

Maritime Services Queensland

Fast facts

Rating achieved: IS Essentials Pilot Bronze

Firsts: The program of works to replace 30 beacons is part of the IS Essentials pilot project and the DTMR's first maritime project to register for an IS rating

Capex \$6M; project came in under budget

Achievements:

- New level of collaboration which sparked innovation, built capacity and drove cultural change
- Harnessed local knowledge and built relationships with Traditional Owners to find better, more sustainable ways of delivering infrastructure
- Specified sustainability in the tender documentation for construction
- Multiple resource efficiency / circular economy and enhanced safety initiatives



"By working with IS Essentials, we challenged many of our business-as-usual decisions to deliver safer, more sustainable infrastructure."

Amanda Scarpato

Director Maritime Program Management Office,
Maritime Safety Queensland

Queensland Department of Transport and Main
Roads

ISC Ratings and the Water Sector ?



United
Nations



Climate change is primarily a water crisis. We feel its impacts through worsening floods, rising sea levels, shrinking ice fields, wildfires and droughts.

However, water can fight climate change. Sustainable water management is central to building the resilience of societies and ecosystems and to reducing carbon emissions.

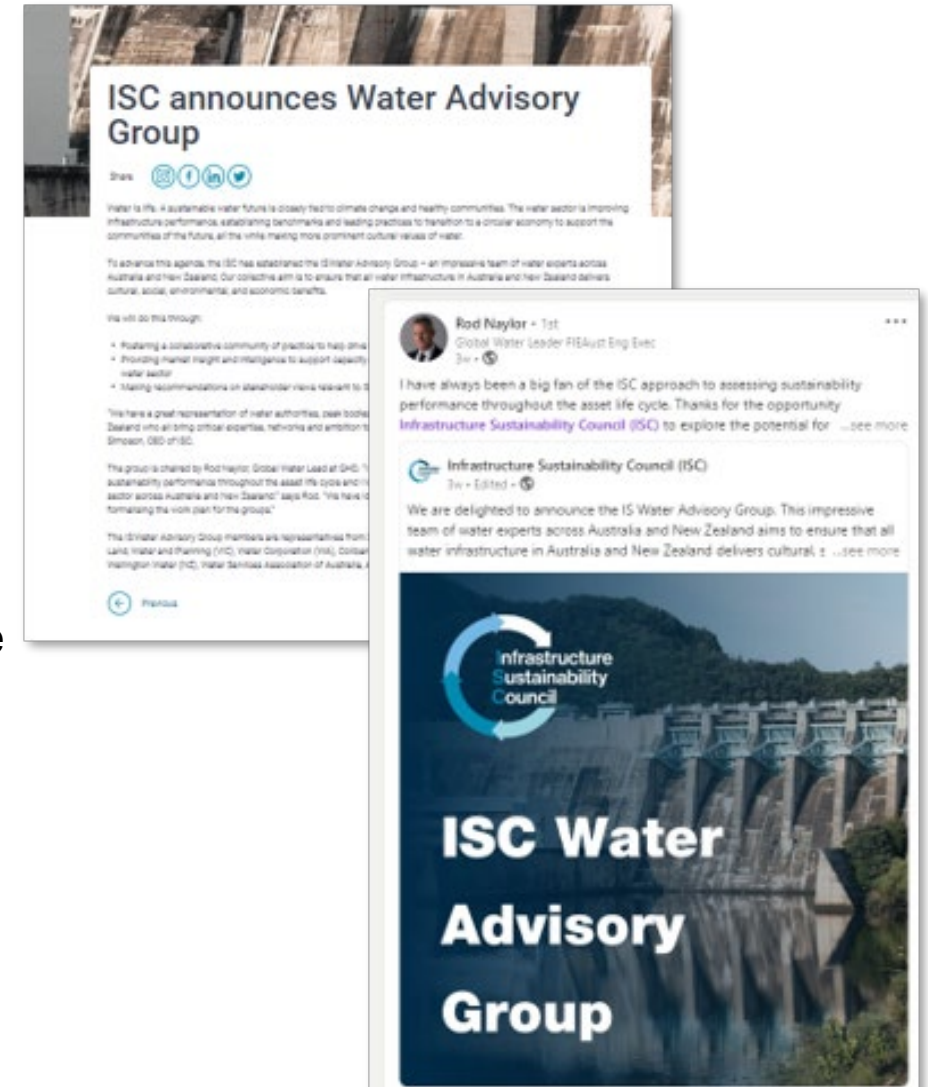
IS Water Advisory Group

Purpose

The Purpose of the Water Sector Advisory Group is to **enable Infrastructure Sustainability leadership in the water sector**, ensuring that all water infrastructure in Australia and New Zealand delivers cultural, social, environmental and economic benefits.

Objectives

- Foster a collaborative community of practice to help drive best practice and support industry transition
- Provide market insight and intelligence to support capacity and capability building for Infrastructure Sustainability in the water sector
- To report and make recommendations on stakeholder views relevant to ISC



Who are we as a Group?

A good representation of experienced people from across the water sector in Australia and New Zealand



AECOM

aurecon



KPMG

lumus

M M
MOTT MACDONALD

16 IS Rated Water Projects to learn from

IS Ratings help water projects achieve outstanding sustainability outcomes.

QUU WWTPs Operations	Completed	Operations 1Yr
Yarra Park Water	Completed	Operations 1Yr
ACT Healthy Waterways Project (AB)	Completed	v1.2 As Built
Enlarged Cotter Dam	Completed	v1.2 As Built
Parkes Water Treatment Plant	Completed	v1.2 As Built
Lower South Creek Treatment Program (AB)	Completed	v1.2 As Built
Whitsunday Sewage Treatment Plant (AB)	Completed	v1.2 As Built
ACT Healthy Waterways Project	Completed	v1.2 Design
Googong Fluoride Plant Upgrade	Completed	v1.2 Design
Lower South Creek Treatment Program (D)	Completed	v1.2 Design
Central Interceptor (D)	Completed	v1.2 Design
Whitsunday Sewage Treatment Plant (D)	Completed	v1.2 Design
The New Murray Bridge Wastewater Treatment Plant	Completed	v1.2 Design
Rookwood Weir Alliance	Completed	v1.2 Design
The New Murray Bridge Wastewater Treatment Plant	Completed	v1.2 As Built
Somerset Dam Improvement Project	Completed	v1.2 Design
Queanbeyan Palerang Regional Council Pool	In Progress	ISE Pilot Design
Love Branch Sewer Stage 3	In Progress	ISE Pilot Design
Yan Yean to Bald Hill pipeline	In Progress	ISE Pilot Design
Regional Renewable Organic Network	In Progress	ISE Pilot Design
Longwarry WRP	In Progress	ISE Pilot Design
Bendigo Water Reclamation Plant Sludge Processing Upgrade	In Progress	ISE Pilot Design
QPRC STP Upgrade	In Progress	v1.2 Design



Watercare's Central Interceptor achieves Leading Design Rating



Queensland Channel Beacons project FIRST certified IS Essentials Pilot

Insights and context

Water Sector and Assets:

- Diverse landscape of water authorities in Australia (300 utilities, of which the biggest 22 service 70% of population) and NZ (64 entities, reforms and consolidation planned)
- High diversity in project types
- Vast majority of projects are at <\$20m capex, few mega projects >\$100m
- High level of repetitive/recurring projects, often below \$1m range

Sustainability Status Quo:

- Utilities have either embedded or standalone sustainability policies at Corporate level, most referenced and/or report on the United Nations Sustainable Development Goals (UN SDGs) at Corporate Level
- Translation of corporate wide targets to project specific targets/measures can be challenging. Strong recognition that project targets need to support achievement of corporate targets.
- ESG compliance and reporting not an acute driver for sustainability measure but expected to become one very soon as new requirements emerge

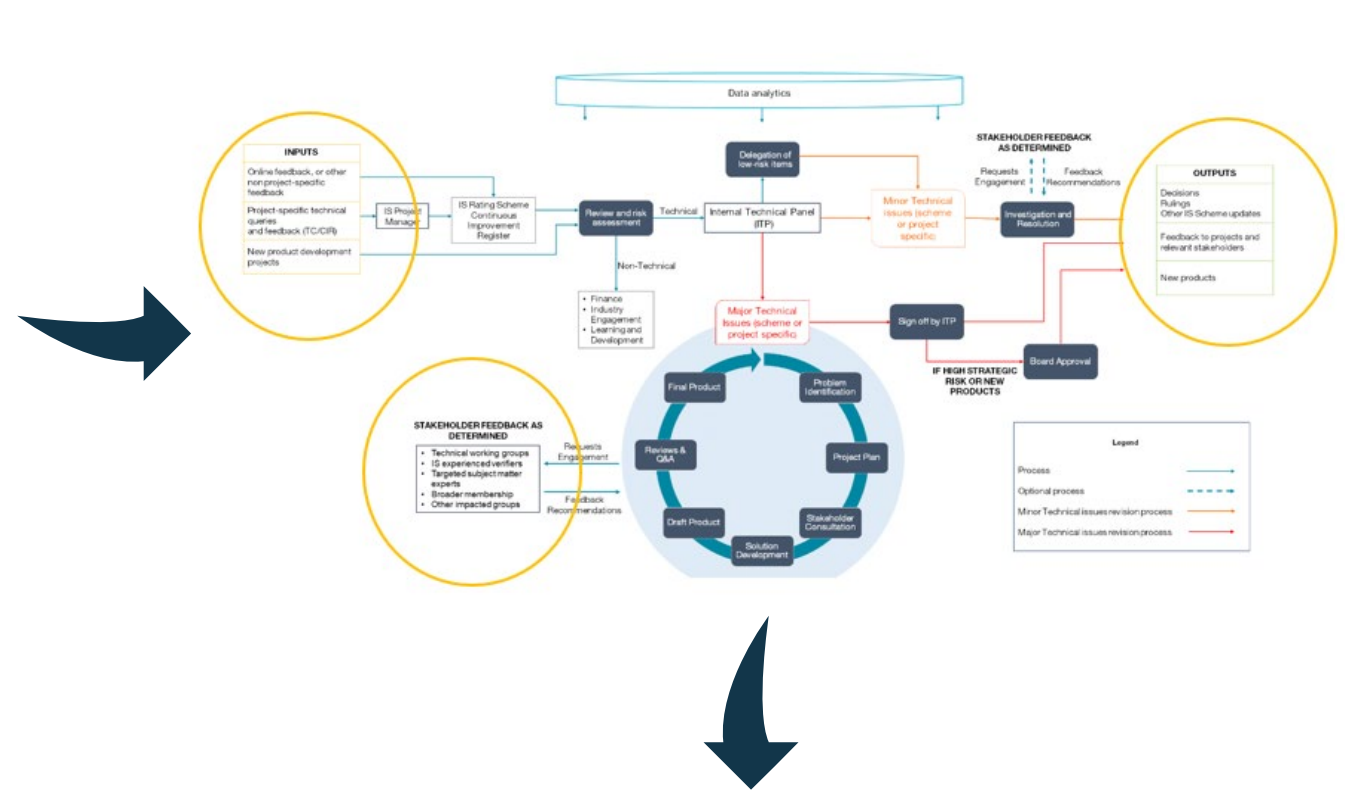
IS WAG and ISC Next Steps



Report to the ISC

IS Water Advisory Group

18/09/2023



Continuing Development of ISC Offer for Implementation in the Water Sector

For the Water Sector – 7 Considerations

An opportunity to build internal sustainability capability and capacity through doing

A way to ensure knowledge and skills gained are shared and documented for durability in company systems

A way to bridge the gap between Corporate Goals and Project Performance

Prepare for emerging ESG reporting requirements

Can support where appropriate private investment and green finance

Engender sector-wide collaboration to build consistent and reliable base case data

Coordinate supply chain alignment and capability to deliver a sustainable future

Consider IS Rating as a tool to create internal capacity, teams, tools and policies to embed sustainability across the organisation

- We have heard from IS ratings users that going through the IS Ratings process helps internal capacity building and setting up tools and processes to ensure sustainability outcomes, especially in organisations that are beginning this journey.
- If applied at the organisational level, these tools and processes can help the organisation achieve sustainability outcomes beyond the individual project.

Ensure knowledge and skills gained are shared across the organisation for overall impact and to ensure capacity does not get lost when staff leave

- We have heard from IS ratings user that spreading and keeping capacity within the organisation can be challenging, especially when staff are leaving.
- Where this is managed well, the legacy of doing and IS Rating or other sustainability initiatives will remain in the organisation embodied in the workflows and systems and the documentation generated.

Consider IS ratings as a tool for contributing to corporate sustainability targets on a project level

- Benchmarking exercise looked at sustainability maturity of water sector.
- All surveyed organisations had some sustainability strategies, mostly referenced SDGs, most had goals or targets.
- Goals were often disconnected from corporate to project level, there was a strong recognition that projects needed to contribute to corporate levels.

Prepare for emergent ESG reporting requirements

- ESG reporting is expected to become a more prominent driver even without private funding, as governments adopt reporting requirements, e.g. Victoria's FRD24 environmental reporting requirements for public entities.
- Data obtained during a rating process can be used in ESG reporting.

Consider IS Ratings as a tool to access private investment, where applicable, and reduced cost of capital

- Private investment, although currently the exception, could become more common in the water sector as investment needs grow, especially in New Zealand after the water sector reform.
- IS rating tools have been used to define and assure sustainability performance targets in sustainable finance (e.g. sustainability linked loans).

Base case: develop sector based consistent BC/BAU data

- Feedback from the group is that providing the Base Case is a difficult task for water projects, given the lack of sector benchmark data.
- Water sector specific guidance and / or benchmark data are desirable creating an opportunity for the sector to collaborate on joint business as usual data individually or through an association (AWA or WSAA, VicWater or IWN).

Coordinated collaboration across sector and its supply chain around sustainability

- All surveyed organisations had some sustainability strategies, mostly referenced SDGs, most had goals or targets.
- Sector collaboration including the supply chain around sustainability challenges and innovation can help drive impact faster and move the benchmark.

The ISC Invitation to "Water".....

<https://www.iscouncil.org>



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<https://www.ghd.com/en-nz/the-future/future-of-water>



Thank You | Ngā mihi

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