

WATER USE CATEGORY: AGIC SUSTAINABILITY RATING TOOL

THINK.
CHANGE.
DO

AGIC Conference

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Introduction

- Institute for Sustainable Futures (ISF) is a research institute at University of Technology Sydney, set up in 1996:

To create change towards a sustainable future through independent, project-based research

- AGIC project: Water one of 8 categories for ISF
- Merged to 4 categories during development
- Prof Cynthia Mitchell - category lead

Today's Presentation

- Water in Australia
- Water in Infrastructure
- Project Approach
- Current state of the industry
- Vision for sustainable infrastructure
- Barriers
- Principles applied
- Credits

Water use in Australia

- Australia - driest continent on Earth
 - regular drought cycles
 - more frequent with climate change
- Water use in the context of efficient resource use in general
- Water efficiency and effectiveness
- Environmental and economic cost increase
- No national regulation/reporting on water use
- Different license requirements in different states

Approach

- Literature review
- Applied ISF experience
- Industry consultation
 - Workshops
 - Practitioner interviews
- Iterative development of criteria & review
 - peer reviewers and AGIC global review panel



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Water use in infrastructure

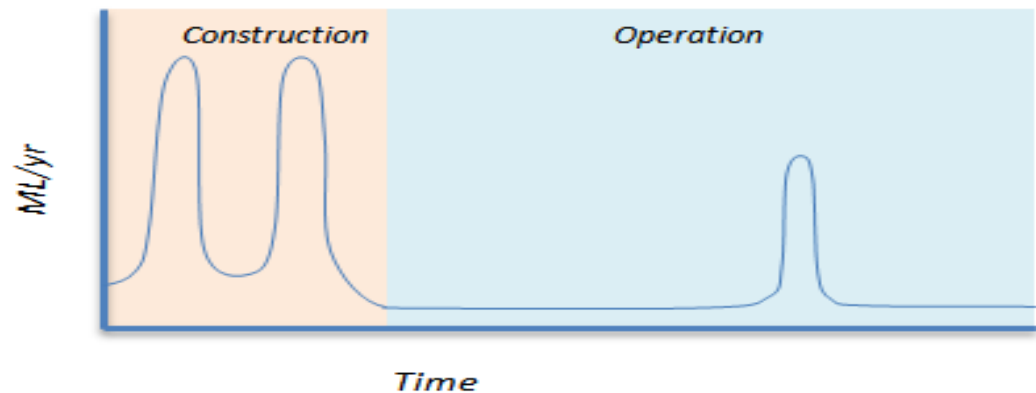
- Construction - largest use
- End uses vary according to project
- Dust suppression, ablutions, sub-grade stabilisation, wash down/cleaning etc.
- Need to question what is “good”
- Lack of project level data



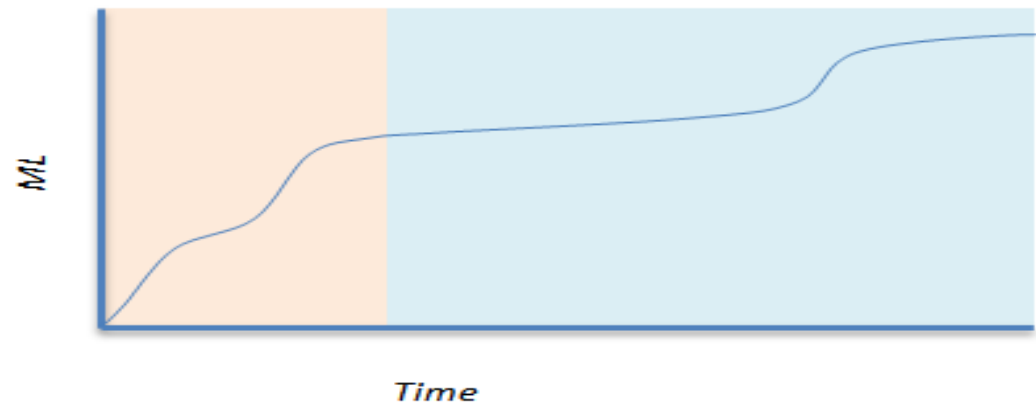
Water use in infrastructure

- Patterns of water use in infrastructure across phases
- Peaks vs average
- Measure and manage

Infrastructure type A – Annual water demand



Infrastructure type A – Cumulative water use



Vision

- Water efficiency integrated into project lifecycle
- Measurement/monitoring at project level is norm
- Establishment of typical water usage footprint for each type of project for each phase
- Infrastructure is adaptive and resilient
- Industry is skilled and has access to best practice information and support

Intent of WAT Credits

To facilitate development of infrastructure that:

- Minimises volume of water used per service output through demand management;
 - Encourages effective substitution of potable water with locally appropriate alternative sources; and
 - Minimises ecosystem impacts of local water extraction/harvesting.
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- Relates to *direct water use* not stormwater (waste) or water use in process (materials)

Barriers to overcome

- Project specific data
- Lack of incentives to reduce water
- Access to skilled people at appropriate points in lifecycle
- Communication across industry sectors



Source: ice.org.uk

Water Credits

- WAT - 1 - Reference footprint
- WAT - 2 - Measure Water Use
- WAT - 3 - Internal Benchmarking
- WAT - 4 - Replace Potable Water
- WAT - 5 - Support for industry/project benchmarking

Thank you

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