



Infrastructure Sustainability Council of Australia

How Sustainability is Improving the Operation of Infrastructure

Founded in 2007 as the Australian Green Infrastructure Council (AGIC) as a collaboration by 19 industry organisations, the AGIC evolved into the Infrastructure Sustainability Council of Australia (ISCA) in 2012. Since 2012, more than 85 infrastructure and civil works projects and assets, with a capital value of over \$110 billion, have been engaged in ISCA's Infrastructure Sustainability (IS) Rating Scheme.

According to David Singleton AM (Chair, ISCA), "An unfortunate reality across the globe is that infrastructure delivery often becomes a hostage to political agendas and therefore there are some questions that can and should be asked about whether the infrastructure we select is optimum."

"However, how do we know if an investment is optimum? How can we select infrastructure investments that are optimum? How do we determine what would be the best investments to make?"

"There is some understanding in Australia that we should be basing investment decisions on economic grounds (that is, does project A deliver better benefit in terms of cost than project B), however this may not be the best way to choose between certain projects."

"Projects are generally selected on economic grounds, but they should also be meeting 'other criteria' including the ability of the infrastructure to restore, regenerate and increase social, cultural, natural and economic capital."

"Therefore, we should ask: what are the 'other criteria' that these projects should be meeting?"

"Rather than settling for doing 'less bad', such as less environmental destruction or social disruption, we must aim from the outset to do more good."

"This 'other criteria' is the focus of work being undertaken by the Infrastructure Sustainability Council of Australia (ISCA), who in 2018 [launched] version 2.0 of the IS Rating Scheme, which provides a basis for planning of infrastructure - not only how it rates from a sustainability point of view, but also provides input into how we should best plan, design and operate this piece of infrastructure," said Singleton.

The Infrastructure Sustainability Rating Scheme

ISCA's IS Rating Scheme evaluates planning, design, construction and operation of all infrastructure asset classes beyond regulatory standards. The Scheme evaluates the sustainability performance of the quadruple bottom line (Governance, Economic, Environmental and Social) of infrastructure development. ISCA currently offers four rating phases: Planning, Design, As Built and Operations. The Scheme can be applied to a range of infrastructure types, including (but not limited to): airports, rail, roads, ports, utilities, water, waste, and telecommunications.

The IS Rating Scheme aims to:

- Provide a common national language for sustainability in infrastructure
- Provide a framework for consistent application and evaluation of sustainability in tendering processes
- Help in scoping whole-of-life sustainability risks for projects and assets, enabling smarter solutions that reduce risks and costs
- Foster efficiency and waste reduction, reducing costs
- Foster innovation and continuous improvement in the sustainability outcomes from infrastructure
- Build an organisation's credentials and reputation in its approach to sustainability outcomes

Since the first project registered for an IS Rating in 2012, more than 85 projects and assets have been involved in the program, with a capital value of over \$110 billion. IS rated projects represent approximately 20% of the engineering construction sector, with the Scheme mandated by almost all State Government transport agencies.

According to Ainsley Simpson (CEO, ISCA), "Over the past 12 months, ISCA certified 12 projects with a capital value of \$11.09 billion. These assets have created cumulative uplift in customer experience for 1.56 billion infrastructure users, be they commuters, community or consumers; reported a 70.4% reduction in carbon emissions and enhancement of 89ha of natural habitat."

"From an economic perspective, there have been no less than 15,842 construction and 1,282 operation phase jobs catalysed. Across the value chain, sustainability capability has been bolstered and knowledge has been proactively shared to over 2,000 sustainability champions across our network through training and events," said Simpson.

These numbers are set to rise, with version 2.0 of the IS Rating Scheme launched in July. This updated version of the Scheme provides a basis for planning of infrastructure – not only how it rates from a sustainability point of view, but also provides input into how to best plan, design and operate a piece of infrastructure.

According to Singleton, "This augmented rating scheme provides a basis for planning of infrastructure - the basis for determining not only how it rates from a sustainability point of view, but also to provide input into how we should best plan, design and operate this piece of infrastructure ... moving back up the planning and design decision tree."

"As part of ISv2.0 development, a planning rating has been investigated, which will focus on the decision-making processes applied by infrastructure proponents to reward projects that are the result of robust appraisals," said Singleton.

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Simpson is equally as positive on the effects that version 2.0 of the IS Rating Scheme will achieve. "The release of the next evolution of the IS rating scheme (Version 2.0) is a significant milestone. It is one that signals a shift in sustainability performance benchmarks driven by industry commitment"

"It is also a timely recognition that if you are going to create virtuous change and make informed investment decisions; the starting blocks are in the planning phase of the lifecycle. ISv2.0 is a phenomenal industry outcome made possible because all the sectors we serve expect more, and our communities and our environment deserve more," said Simpson.

The development of ISv2.0 was a collaborative labour of love for ISCA and the infrastructure industry—the tool was developed for the industry, by the industry.

ISv2.0 received financial support from a range of public and private organisations including: the Australian Government Department of Jobs and Small Business, the Australian Government Department of Infrastructure and Regional Development and Cities, CPB Contractors, Lendlease, Level Crossing Removal Authority, Liberty, the NSW Government Office of Environment and Heritage, Queensland Government, Rail Projects Victoria, and Transport for NSW.

In addition, over 100 organisations invested more than 1,300 collective hours reviewing and updating the IS technical manual, and fine-tuning the specifications related to the development of new themes, categories and credits.

Sustainability Aspects in an IS Rating

There are several sustainability aspects considered in an IS Rating, which are outlined below.

Governance

Context: Rewards urban and landscape design that considers a project's surroundings and how it enhances liveability.

Leadership and Management: Rewards projects that align their sustainability strategy with the Sustainability Development Goals, assess risks and opportunities, and undertake knowledge and data sharing.

Sustainable Procurement: Covers social and environmental risks and opportunities within supply chains and rewards social outcomes such as engaging social enterprises. The category aligns with ISO 20400.

Resilience: Promotes the broader definition of resilience and looks at how infrastructure is contributing towards city, regional and community resilience.

Innovation: Rewards pioneering initiatives in sustainable design, process or advocacy.

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Economic

Options Assessment and Business Case: Rewards selection of sustainable initiatives using non-financial elements in decision-making.

Benefits: Encourages projects to track the costs and benefits outlined in the business case and compares them to the real outcomes though whole life of a project.

Environment

Energy and Carbon: Rewards a reduction in energy and emissions.

Green Infrastructure: Rewards the inclusion of green infrastructure, such as water sensitive urban design, green walls, and green roofs.

Environmental impacts: Addresses water discharges, noise, vibration, air quality and light pollution.

Resource Efficiency: Takes a circular economy, holistic approach to resource management, from reusing resources on-site to finding new and innovative uses for waste.

Water: Rewards water efficiency and the use of appropriate water sources.

Ecology: Rewards the maintenance or enhancement of ecological value.

Social

Stakeholder Engagement: Rewards effective stakeholder engagement.

Legacy: Rewards projects that leave a positive legacy for the community and environment.

Heritage: Rewards monitoring and management of European and Indigenous heritage.

Workforce Sustainability: Includes education and training; wellbeing; diversity and inclusion; workplace culture; workforce planning and encourages projects to think about the skills they need for the future.

The Certification Process

There are four stages in the IS Rating certification process:

1. **Registration:** Fill out a registration of interest (ROI) form and sign a rating agreement with ISCA.
2. **Assessment:** This is main stage, which is guided by support and interaction with a dedicated case manager.
3. **Verification:** This is undertaken by independent third-party verifiers and usually takes three months from submission to final score.

THE IMPACT OF IS RATED PROJECTS

Collectively, IS rated projects have:

- Avoided over 18 million tonnes of CO₂ (equivalent to the population of Brisbane's household energy for a year)



4. **Certification:** Projects are awarded an IS Rating based on an overall score:
- o 20 to 39: Bronze
 - o 40 to 59: Silver
 - o 60 to 79: Gold
 - o 80 to 94: Platinum
 - o 95 and Over: Diamond

About the Infrastructure Sustainability Council of Australia

The Infrastructure Sustainability Council of Australia (ISCA) is a member-based, not-for-profit peak body operating in Australia and New Zealand. Recently certified as a social enterprise ISCA's purpose is to accelerate sustainability in infrastructure through collaboration. ISCA does this through: :

- The IS Rating Scheme for planning, design, construction and operations of infrastructure assets
- Education, training and capacity building
- Connecting suppliers of sustainable products and services with projects through the ISupply program



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- Bringing together experts to share knowledge and lift the community of practice
- Recognising and rewarding best practice

With over 120 members, just some of the organisations involved with the ISCA include Arcadis, AECOM, Arup, BlueScope, Cardno, Coffey, Downer, the Galvanizers Association of Australia, GHD, John Holland, Lendlease, Liberty, PublicTransport Victoria, Queensland Government Department of Transport and Main Roads, Transport for NSW, Transurban, and VicRoads.

For more information, visit the ISCA website: <https://www.isca.org.au>

- Reduced material use by 74% compared to business as usual (equivalent to diverting all household waste in Dunedin from landfill for 2 years)
- Diverted over 167 million KL of water (equivalent to 67,000 Olympic swimming pools)
- Empowered over 2,000 sustainability champions through training and thought leadership events

