

PRELIMINARY RESULTS

Sustainability rating tools for infrastructure – lessons from global practice

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AECOM

Content

- ✓ Research purpose
- ✓ Tool use research – interviews and case studies
- ✓ Lessons learned / outcomes

RESEARCH PURPOSE

To enhance the ability of market-based infrastructure sustainability rating tools to improve sustainability outcomes for civil infrastructure development.

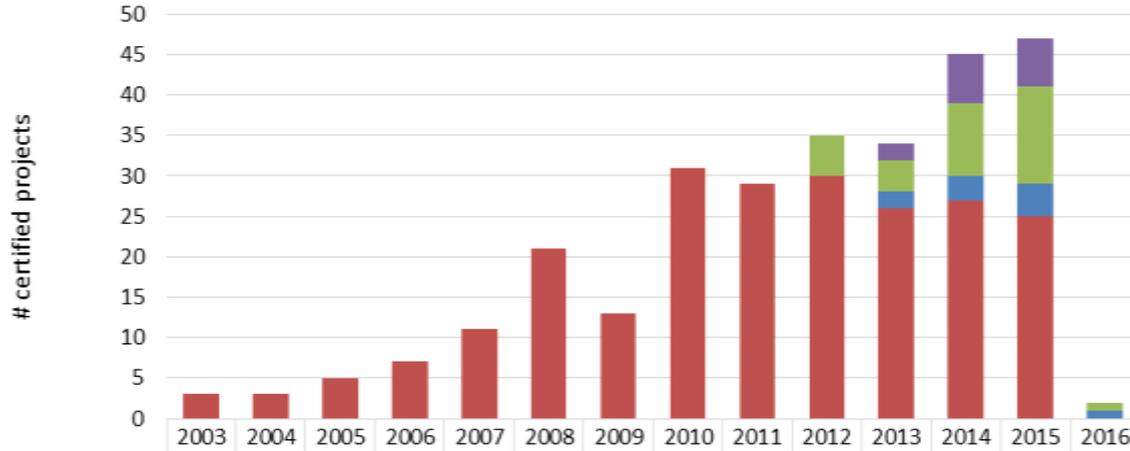
Actual use to date

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Industry-based rating tools



Rating Tool Case Studies*



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
IS											2	6	6	0
Greenroads										5	4	9	12	1
Envision											2	3	4	1
CEEQUAL	3	3	5	7	11	21	13	31	29	30	26	27	25	0

* includes 64% of CEEQUAL projects and 100% from the other 3 tools

As at 31 March 2016:

- >415 projects formally certified
- ~340 further projects registered

Envision Stats

10: Number of registered projects since January 1, 2018

16: Number of projects currently going through the Envision verification process

42: Number of Envision verified projects. See the [full list of verified projects](#).

59: Total number of registered projects to-date

6,900: Number of Envision Sustainability Professionals (ENV SPs) globally. Looking for an ENV SP near you? Access the [ENV SP directory](#). In addition, we provide a list of [Envision Qualified Companies](#) on our website. These are ISI members that have at least one ENV SP on staff so it is a long list. Don't see your company listed? [Contact us](#) today.

39,000,000,000: Dollar value of all registered and verified Envision projects

GREENROADS BY THE NUMBERS (MARCH 2018)

130+ Registered projects, worldwide

46 Certified Projects worldwide (8+ pending 2018)

>\$24 billion dollars in construction value in 11 states, 8 countries

297 Level 1 Sustainable Transportation Professionals



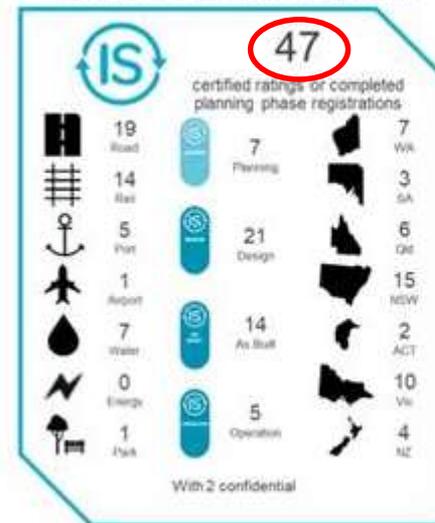
CEEQUAL

>360 certified projects since 2003

ISCA

Certified IS ratings

or completed IS planning phase registrations



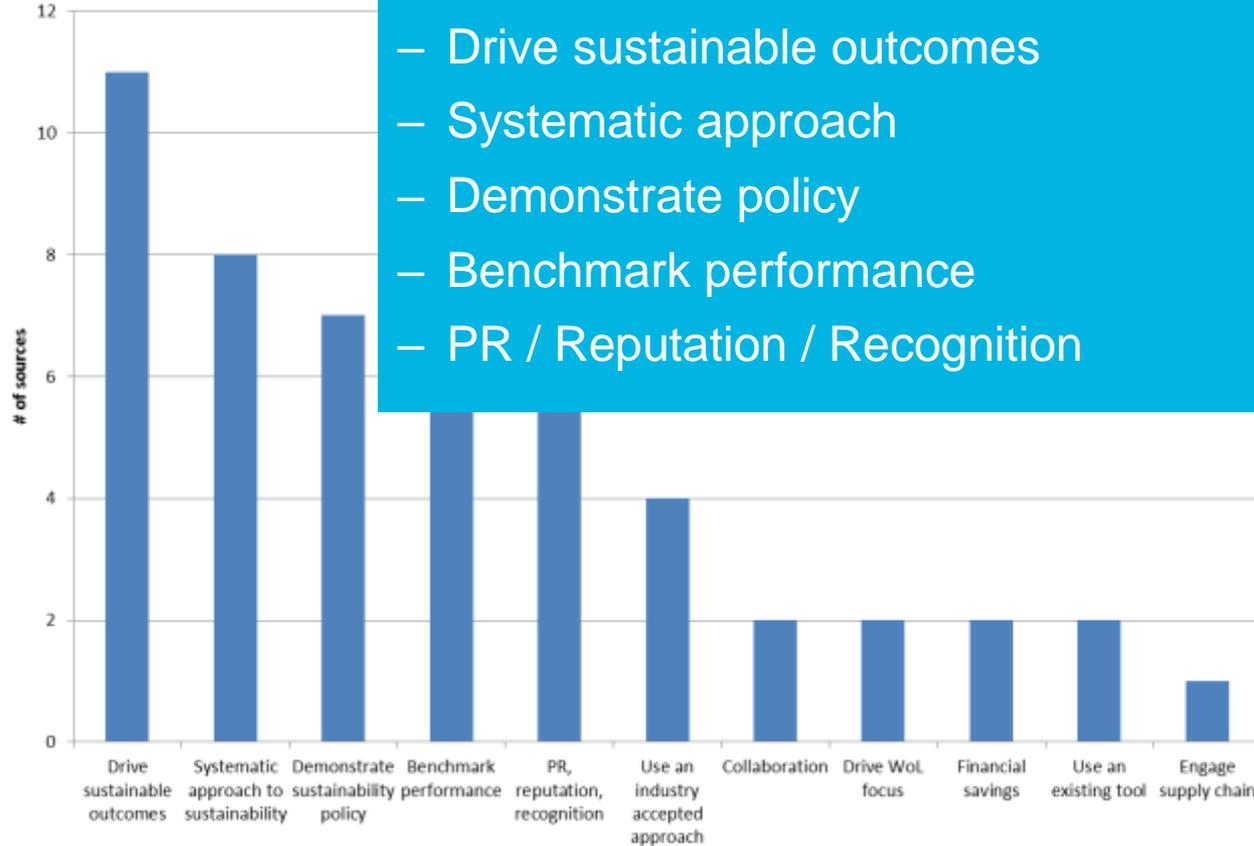
ISCA

Rating tool user experience

- 46 tool users
- 17 infrastructure owners
- ~480 projects

Top 5 reasons why organisations use the rating tools

- Drive sustainable outcomes
- Systematic approach
- Demonstrate policy
- Benchmark performance
- PR / Reputation / Recognition



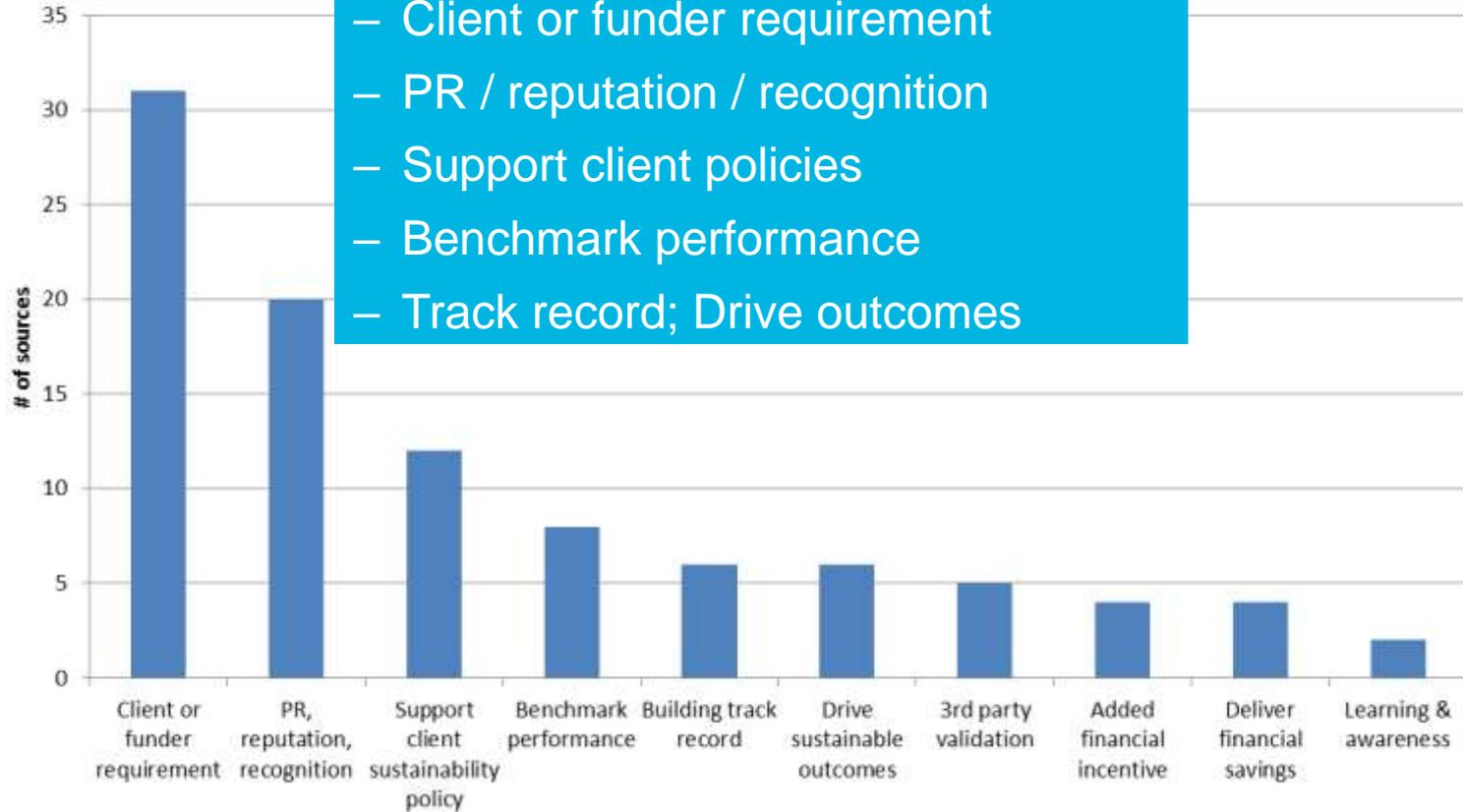
From infrastructure owners

“You want to know how to do a sustainable project – here it all is, just turn each question into a heading in your plan or a guidance and use the scoring into guidance of how to do it well. And really use this as early as possible as your ‘how to build something in a sustainable way’ guidance.”

“We feel we’re making better projects. It does allow for a baseline for all folks and it’s really a communication tool to the policymakers of our commitment.”

Top 5 reasons why project teams use the rating tools

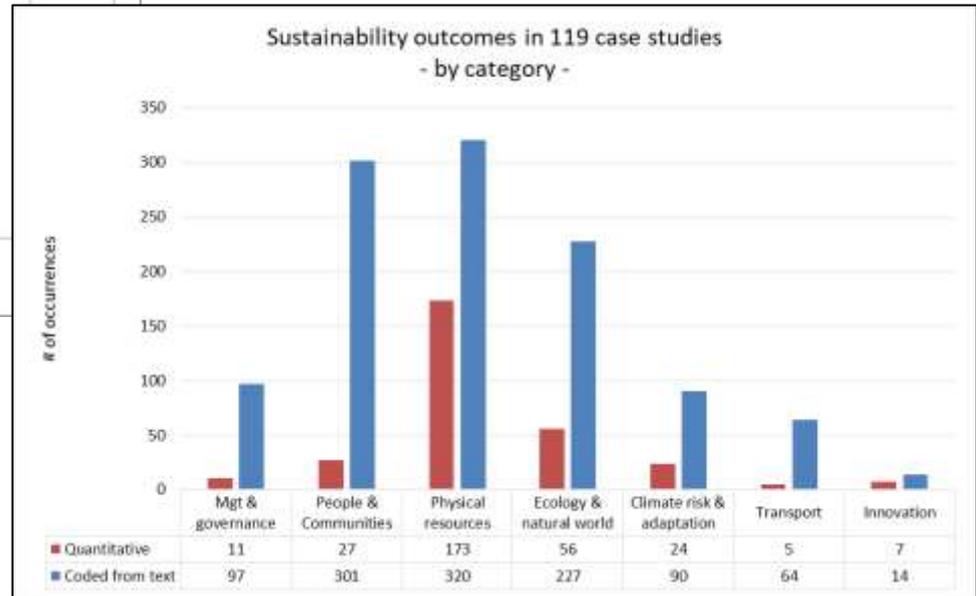
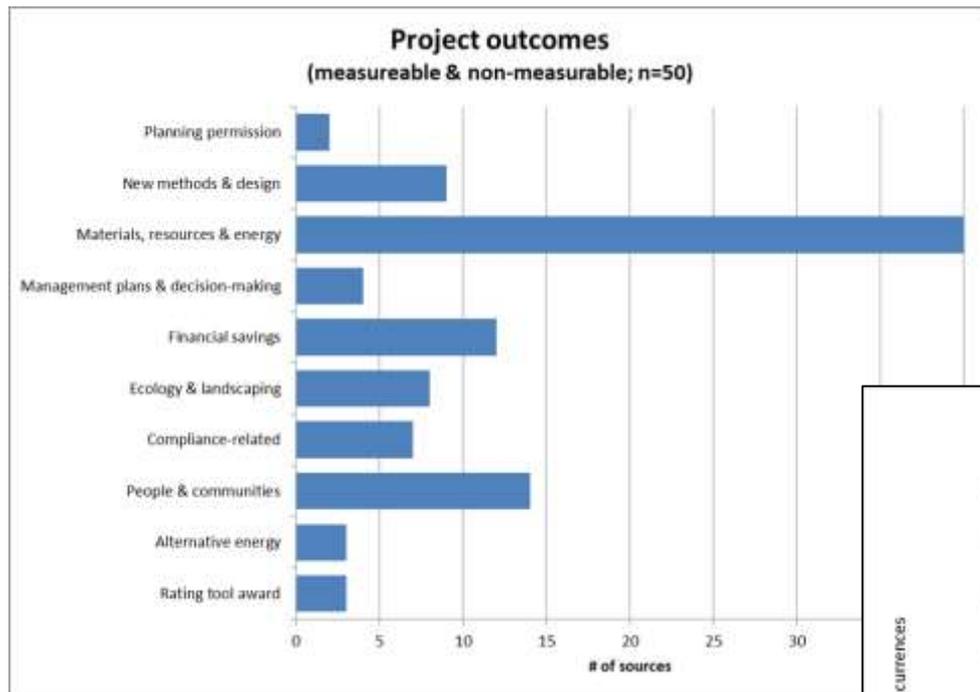
- Client or funder requirement
- PR / reputation / recognition
- Support client policies
- Benchmark performance
- Track record; Drive outcomes



From experienced users

“We felt that having a third party to bring in technical expertise and have a sense of the industry would provide additional value to the projects we’re working on”.

“Another reason I’ve done it on two or three projects is because, when we know we’ve been doing some really good stuff from an environmental point of view and we’ve wanted to get recognition for it.”



- *18 projects reused 100% of excavated materials and 12 projects collectively reused over 2.8 million cubic metres of surplus site materials;*
- *16 projects purchasing between 14 – 54% recycled content materials, 6 projects collectively used 542 kilotonnes of imported recycled content material and 1 project replaced 10,000 tonnes of asphalt with 17,000 used tyres;*
- *10 projects stored and reused 100% of topsoil on site;*
- *17 projects installed LED lighting;*
- *12 projects diverted 90% or more of their waste from landfill and six projects together diverted more than 741 kilotonnes;*
- *13 projects avoided truck movements through using onsite materials and alternative transport, and 4 projects used either biodiesel or hybrid vehicles;*
- *Electricity: 4 projects reported operational savings and 3 reported construction savings;*
- *Water savings: reported on 11 projects through efficiency measures or use of non-potable water, with 3 projects reducing potable water use by 100%;*
- *3 road projects reported pavement design lives of 40 years or more;*
- *5 projects reported between 75 – 90% recyclability of components at end of life.*

Influence “on individual’s own practice”

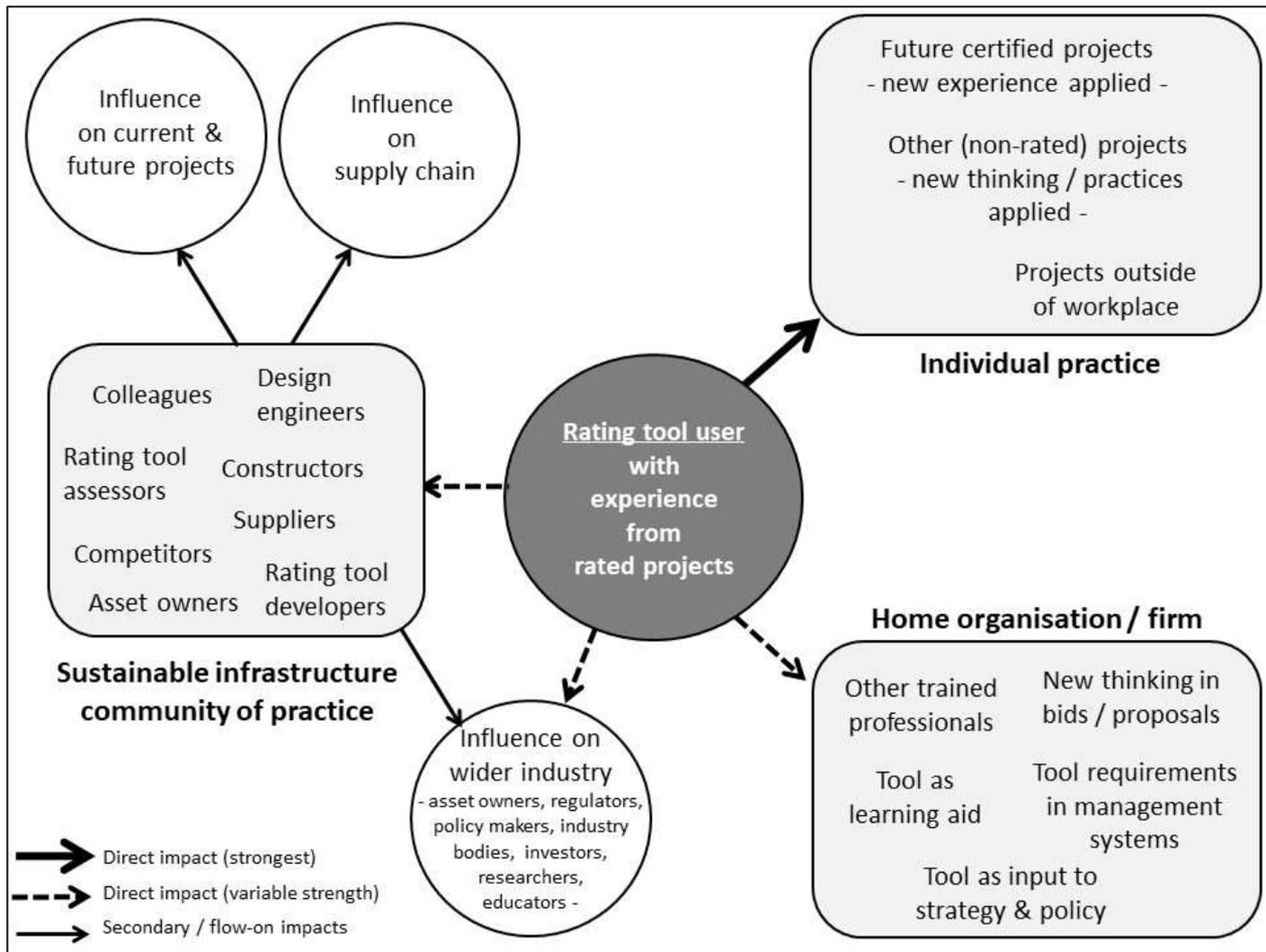
Strongly to extremely influential

*“For me personally, it’s **raised my awareness in a lot of specific areas.** You know like biodiversity and ecology and water footprinting. That was something I really didn’t know a lot about.”*

*“the tool and having it connect us with **other like-minded sustainable focussed engineers** has allowed us to think creatively and adopt some other principles from other projects.”*

“I think in the wider marketplace, the fact that these tools exist in and of themselves that changes the territory.

So you may not necessarily use it, but the fact that it exists gives you an entrée to discussion, an entrée into raising some of the agenda.”



Lessons learned

- Getting the best from rating tool use
- Infrastructure organisation maturity model

Formal use

- Guide project team on sustainability action
- Assess sustainability outcomes on projects
- Project certification

Informal use

- Uncertified project assessments
- General guide on infrastructure sustainability
- Inform policy and management systems
- Learning aid / conversation enabler

Influence

- Enabler for individual practice
- Organizational policy and practices
- Community of practice
- Industry knowledge and norms
- Supply chain effects

*“the more that sustainable practices are in the air,
the more salient they become and the more likely
individual people and groups of people
(organisations, city councils, nations) are to
replicate them.”*

Nikki Harré, 2011

Increasing Infrastructure Sustainability Maturity

Role of rating tool

From ad hoc awareness raiser to educator to benchmark and standard setter to strategy supporter.

Rating tool use

From limited ad hoc initiatives to trial projects to multiple projects or programmes to infrastructure network to infrastructure system.

Reporting on sustainable infrastructure

From ad hoc initiatives to tool ratings to project-level outcomes to whole of organisation outcomes to system outcomes.

Unaware

Early user

Managed user

Progressive user

Leading user

A "swing" in attitude or behaviour from learning focus to management focus.

A "swing" in attitude or behaviour from management focus to strategic leadership focus.

Focus on compliance requirements, ratings as the benchmark and single project boundaries ↓ as maturity ↑

Focus on strategic intent, outcomes as the benchmark, continuous improvement and infrastructure systems ↑ as maturity ↑

Kia ora! Thanks

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