Sustainability Assessment & Rating Systems for Infrastructure: What next in scope, coverage, methodology and benefits?

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Rating Systems for Infrastructure: What next in scope ...?

• What are rating systems?
• Fundamentals of why sustainability rating systems for infrastructure were created
• How they are constructed and work, and why
• How they relate to the climate emergency
• What next in scope, coverage, methodology and benefits?

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What is Infrastructure Rating?

- A system of rating criteria
- Influencing tool ...
- Improving sustainability through best practice
- Team-based self-assessment
- Evidence-based
- Independent verification + Award

CEEQUAL®
delivered by bre

ISOA

Envision

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The IS Rating Scheme

Download registration of interest form to apply for an IS Rating

Rating Fees: Version 1.2 & Version 2.0

Click here for information on the IS International Rating Tool

Visit the ratings directory for a list of all IS Projects

What is it?
• “The IS Rating Scheme (IS) is Australia and New Zealand’s only comprehensive rating system for evaluating sustainability across the planning, design, construction and operational phases of infrastructure programs, projects, networks and assets.

• IS evaluates the sustainability performance of the quadruple bottom line (Governance, Economic, Environmental and Social) of infrastructure development.”
CEEQUAL is the evidence-based sustainability assessment, rating and awards scheme for civil engineering, infrastructure, landscaping and public realm projects.

Climate Resilience in the Built Environment

Climate resilience is an important consideration within the built environment. How can the construction industry mitigate our contribution to, and prepare for the impacts of a changing climate?
“CEEQUAL is the evidence-based sustainability assessment, rating and awards scheme for civil engineering, infrastructure, landscaping and public realm projects.

The objectives of CEEQUAL are to:

- Create a climate of sustainability awareness – and of continuous improvement.
- Promote the importance of setting a sustainability-driven strategy for the project or contract being assessed.
- Promote improved sustainability performance in project or contract specification, design and construction.
- Recognise and promote the attainment of high economic, environmental and social performance.
The future is riding on infrastructure.

Envision is a groundbreaking resource for professionals involved in planning, designing, building, and maintaining civil infrastructure that helps practitioners meet the challenge.

Create Free Account
“Envision provides a consistent, consensus-based framework for assessing sustainability and resilience in infrastructure.

Envision has five possible levels of achievement:

- Improved
- Enhanced
- Superior
- Conserving, and
- Restorative”
So, IS, CEEQUAL and Envision all have similar objectives or purpose.

They also have similar but not coincident structures.
# The 8 Sections of CEEQUAL Version 6

<table>
<thead>
<tr>
<th>Section</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management</td>
<td>Sustainability Leadership, Environmental management, Responsible construction management, Staff and supply chain governance, Whole life costing</td>
</tr>
<tr>
<td>Resilience</td>
<td>Risk assessment and mitigation, Flooding and surface water run-off, Future needs</td>
</tr>
<tr>
<td>Communities and stakeholders</td>
<td>Consultation and engagement, Wider social benefits, Wider economic benefits</td>
</tr>
<tr>
<td>Land use &amp; Ecology</td>
<td>Land use and value, Land contamination and remediation, Protection of biodiversity, Change and enhancement of biodiversity, Long-term management of biodiversity</td>
</tr>
<tr>
<td>Landscape and Historic Environment</td>
<td>Landscape and visual impact, Heritage assets</td>
</tr>
<tr>
<td>Pollution</td>
<td>Water pollution, Air, noise, and light pollution</td>
</tr>
<tr>
<td>Transport</td>
<td>Transport networks, Construction logistics</td>
</tr>
</tbody>
</table>
### The 4 Categories covered by IS

<table>
<thead>
<tr>
<th>Section</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Governance</td>
<td>Context; Leadership &amp; Management; Sustainable Procurement; Resilience; Innovation</td>
</tr>
<tr>
<td>Economic</td>
<td>Options Assessment and Business Case; Benefits</td>
</tr>
<tr>
<td>Environment</td>
<td>Energy and Carbon; Green Infrastructure; Environmental impacts; Resource Efficiency; Water; Ecology</td>
</tr>
<tr>
<td>Social</td>
<td>Stakeholder Engagement; Legacy; Heritage</td>
</tr>
</tbody>
</table>

### The 5 Categories covered by Envision

<table>
<thead>
<tr>
<th>Section</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of Life</td>
<td>Human wellbeing; mobility; community development</td>
</tr>
<tr>
<td>Leadership</td>
<td>Collaboration, planning, economy</td>
</tr>
<tr>
<td>Resource Allocation</td>
<td>Materials, energy, water</td>
</tr>
<tr>
<td>Natural World</td>
<td>Conservation; ecology</td>
</tr>
<tr>
<td>Climate and Resilience</td>
<td>Emissions, and resilience</td>
</tr>
</tbody>
</table>
Rating Systems for Infrastructure: What next in scope …?

• Differences are important but not significant to my question about what next
  ➢ IS
    ▪ A rating of the Planning process is now available
    ▪ Assessment is related to the SDGs
  ➢ CEEQUAL
    ▪ Strategy included with design assessment
    ▪ Assessment of whole life carbon, and resilience
  ➢ Envision
    ▪ Includes ‘Restorative’ performance in the assessment
Rating Systems for Infrastructure: What next in scope ...?

• Challenges for continuous improvement include:
  ➢ Leading-edge users want to be challenged to do better
  ➢ But mainstream users do not want to be challenged

• Possible Enhancements ...
  ➢ More specifics for different types of infrastructure
  ➢ Asset management rather than single projects
  ➢ Assessment of ‘worthwhileness’ from a sustainability point of view – tried in CEEQUAL V5, but based on judgement, not measurement
  ➢ A wider scope? – Project framing; social purpose; ethical justification; integration of SDGs; and response to climate emergency
CEEQUAL Version 6 Criteria on Reducing whole-life carbon emissions

Aim: To drive the assessment, reporting, and reduction of whole-life carbon emissions throughout the project’s planning, design, delivery and future management.

### Credit summary

<table>
<thead>
<tr>
<th>Assessment criteria</th>
<th>Strategy</th>
<th>Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.2.1 Carbon management</td>
<td>18 (up to)</td>
<td>18 (up to)</td>
<td>18 (up to)</td>
</tr>
<tr>
<td>7.2.2 Independent third-party certification of carbon management</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>7.2.3 Achieving carbon reduction targets</td>
<td>27 (up to)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.2.4 Exemplary level: Net zero carbon</td>
<td>1% (exemplary)</td>
<td></td>
<td></td>
</tr>
</tbody>
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### Assessment criteria

#### 7.2.1 Carbon management (fixed)

7.2.1.1 A carbon management approach has been adopted during the strategy, design, or construction of the project that fully or partially conforms with PAS 2080 as indicated in the table below.
Benefits Summary

- Positive reinforcement
- Business improvement
- Innovation
- Improved project management

Pinnacle Best Practice can be achieved by adopting practices that lead to the highest-scoring performance

- Identifying current performance
- Setting improvement plans
- Delivery of objectives and targets
- Identifying areas for improvement
- Demonstrating continual improvement
- Linkage to ISO14001

Competitiveness

Proactive management of sustainability aspects

Resource efficiency & cost savings
Sustainability and the climate emergency: How can Rating Systems help?

- Whether seeking a rating or not ...
- Use your chosen tool and PAS2080 to influence your design and management decisions on carbon
- Relate the criteria to the nature, scope, scale and context of your project, and its carbon-related targets
- Use the extensive guidance now available: ICE, RAEng
- Design to secure the highest rating available
- Manage specification & construction to deliver it
- The outcome is likely to be pinnacle best practice
Rating Systems for Infrastructure: What next in scope ...?

Thank you

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