

Rapid Review Research Funding

Precincts & Infrastructure
Challenge

CONTACT

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BACKGROUND

The NSW Circular Taskforces bring together industry and research to help secure the social, economic and environmental benefits of transitioning to a circular economy. Cross-sector collaboration with industry, government, social enterprises, investors, and local communities will drive innovation and the development of new products, services, businesses and skills. NSW Circular has set out the value proposition for the state and its citizens (The circular economy opportunity in NSW) and has begun producing regular updates on sectors and trends.

NSW Circular is commissioning four Rapid Reviews, setting out the evidence - state of play, opportunities and next steps - on priority topics to advance the circular economy in New South Wales.

PRECINCTS & INFRASTRUCTURE TASKFORCE

NSW Circular's Precincts & Infrastructure Taskforce is working in the early stages of place and infrastructure planning to design circular precincts. The Taskforce brings together some of Australia's leading industry and government agencies to identify and share best practice on the integration of the circular economy in infrastructure and precinct development, such as Greater Sydney Commission, Arup, Western Parkland City Authority and Aurecon.

RAPID REVIEW PROCESS

In 2021, an initial tranche of Rapid Reviews will focus on problem statements or challenges identified by four of NSW Circular's Taskforces: Precincts & Infrastructure; Finance & Investment; Government; and Industry.

NSW Circular is dedicating \$68K (\$17K each) to four of its Taskforces to catalyse research that will assist in the delivery of the Taskforce's agreed Objectives. This research will be conducted by four research teams selected based on research proposals submitted through an EOI process. Our Rapid Review calls for EOIs from researchers and universities across NSW, in response to Research Questions determined by each of the four Taskforces. These EOIs will be reviewed by a Research Assessment Panel (the Panel), to determine the most suitable candidate to undertake the work.

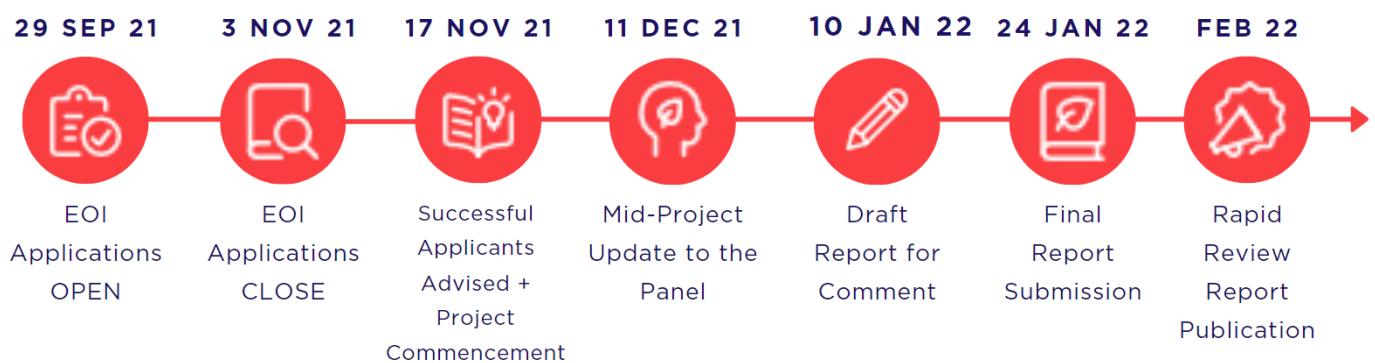
The core Panel will consist of:

- Ms Jodie Bricout (Panel Chair, Member of the NSW Circular Board)
- Ms Lisa McLean (CEO NSW Circular)
- Dr Donald Hector AM (nominee of The Royal Society of NSW)
- Dr Suzanne Pierce (Office of the NSW Chief Scientist & Engineer)
- Mr Chris Derksema (Sustainability Advisor, GSC & Precincts & Infrastructure Taskforce Representative)



TIMEFRAME

The four Rapid Review Challenge Statements are being released gradually during August 2021, and so each review will hold a unique project timeline, though with consistent time allowances for each component of the project. The timeline for the Precincts & Infrastructure Rapid Review is as follows:



SELECTION CRITERIA

To be eligible for the Rapid Review Research Funding research teams must be connected to a NSW university.

Proposals will be assessed on the following criteria:

1. Team Strength: Demonstrated knowledge and understanding of the problem/challenge to be addressed
2. Approach: Proposed approach to undertaking the review
3. Experience: Quality and experience of the team in undertaking reviews of this type and published works
4. Value: Time commitment and value for money
5. Collaboration: Weighting will be given to EOIs of equal merit which involve collaboration between two or more universities.

DELIVERABLES

- A verbal presentation mid-project to confirm progress and report any findings of note
- A draft report in electronic format six weeks from project initiation
- A final report eight weeks from project initiation
- The Review Team must be available to present their research findings to the relevant NSW Circular Taskforce

NOTE: Researchers will be encouraged to publish in international journals, conference proceedings, or other media.



PRECINCTS & INFRASTRUCTURE CHALLENGE STATEMENT

CHALLENGE DESCRIPTION

Identify practical approaches and tools to embed circular economy principles within infrastructure business case processes.

A business case is a tool used to make informed and evidence-based investment choices. Used across public, private and social-benefit sectors, robust business cases help ensure resources are allocated efficiently, meet objectives and mitigate risks.

Within government, detailed guidance on requirements for strategic and final business cases is available – see for example [NSW Treasury](#). However, while the level of detail and requirements may vary according to scale and sector, there are common elements. These include definition of the problem to be solved or opportunity to be realised, statement of need, an environmental scan, an assessment of cost, benefits, risks and value of options, and supporting evidence (financial and non-financial) for the preferred approach and implementation plan. Business cases that underpin infrastructure decisions have the capacity to significantly shape the form and operation of our future precincts, towns and cities.

Incorporation of sustainability considerations and circular principles in business and planning requirements is becoming more common and recognised for the social and economic opportunities they present– see for example [Infrastructure NSW](#), the [Smart Places Strategy](#), [Special Activation Precincts](#), the [2021 Australian Infrastructure Plan](#) and [BSCD Australia](#). At the same time, it is not clear that underlying assumptions or the financial and non-financial implications of circularity for the project, entity or supply chain are adequately or consistently captured. Similarly, whether there is a common language and understanding of circularity between project proponents, those tasked with assessing projects, decision-makers and governance boards. As observed by the World Business Council for Sustainable Development ([WBCSD](#)), “Even some of the most revered corporate sustainability companies face challenges in understanding what the circular economy is, its implications for their business and which methods to use for identifying the business case.”

Understanding national and international best practice approaches to incorporating circular economy principles into business case processes will support proponents and decision-makers to make more informed choices. It may also contribute to establishing a more standardised approach in NSW and Australia more broadly enabling wider social, economic and environmental outcomes to be consistently assessed and compared. This is of particular significance given infrastructure and precinct developments can both facilitate circular supply chains and minimise adverse infrastructure impacts (for example through careful use of resource inputs, operational energy and water savings, and shared use models).



CURRENT KNOWLEDGE

It is well-recognised that decisions and outcomes can be significantly impacted by business case assumptions and process design. In particular, what costs and benefits are quantified, and how that valuation occurs. There is a growing literature on circular business models and recognition of the central role of business cases in facilitating the transition to a circular economy*. However, it is not well understood how – or how well – these are being operationalised in the private, public or non-profit sectors.

This challenge includes:

1. A review of global literature (including grey literature) to identify:
 - a. strategic and operational frameworks and tools for incorporating circular principles in business cases, and guidance for business case developers, assessors and decision-makers (including financial and non-financial modelling assumptions and projected outcomes where relevant)
 - b. literature on efforts to collate or establish a common language and definitions of circularity for the purposes of business case development and assessment
 - c. data, reports or case studies on efforts to incorporate circularity into business cases, and/or to capture impacts and outcomes over time
 - d. surveys or reports of the information and educational needs of senior executives with decision-making responsibilities and governance boards to understand circular principles and their application (including but not confined to executives' and boards with roles specific to infrastructure and precinct developments)
 - e. surveys or reports on the level of executive 'circularity' literacy (including self-reported knowledge and understanding), and any examples of systematic attempts by governments or industry associations to standardise and improve the knowledge base of senior executives and governance Boards
 - f. factors that facilitate or impede incorporation of and reporting on circularity principles in business cases.
2. Summary and comment on:
 - a. approaches and resources that appear most pertinent to the NSW and Australian context, or that could be readily adapted
 - b. notable gaps that would benefit from further work, which may include policy, guidance, research or development of metrics and reporting frameworks.

* see for example [Platform for Accelerating the Circular Economy](#), Harvard Business Review [The Circular Business Model](#) (2021), WBCSD [8 business cases for the circular economy](#) (2017), Korse et al [Embedding the Circular Economy in Investment Decision Making](#) (2016)



ALIGNMENT & PRIORITY

The mission of the Precincts and Infrastructure Taskforce is to “identify and share best practice on the integration of the circular economy in infrastructure and precinct development”. This research will support the Taskforce’s engagement with governments and other decision-makers on how to embed the circular economy in precincts and infrastructure.

IMPACT

It is expected that the research proposed by this Challenge Statement will be of significant value to government and industry in Australia and inform policy and strategies related to precincts and infrastructure.

