



Australian Government
**Department of Industry,
Science and Resources**

SmartCrete Cooperative Research Centre – Industry-Led Research Collaborations Fund Guidelines

Opening Date: 1 December 2023

Closing Date and time: 5:00pm Australian Eastern Daylight Time on 23 February 2024
Please take account of time zone differences when submitting the application.

Where to apply Please submit the application package to: info@smartcretecrc.com.au

Enquiries: If you have any questions relating to the application process or the grant guidelines, please contact us at: info@smartcretecrc.com.au

Date guidelines released: 1 December 2023

Type of grant opportunity Open competitive

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1. Introduction

These guidelines contain information for the SmartCrete Cooperative Research Centre Industry-Led Research Collaborations Fund. It is recommended that you read these guidelines before applying.

Project applications must be submitted to SmartCrete by the lead applicant. Lead applicants and project collaborators are encouraged to engage with SmartCrete to discuss their project ahead of submission. You can contact SmartCrete CRC at: info@smartcretecrc.com.au.

This document sets out:

- The purpose of the program
- The eligibility and assessment criteria
- How applications must be made
- How applications will be considered and selected
- How funding will be administered
- How projects will be monitored and evaluated
- Responsibilities and expectations in relation to the opportunity

The program is administered by SmartCrete Cooperative Research Centre with funding provided by the Commonwealth Department of Industry Cooperative Research Centres program.

1.1 Background

Concrete is the second most used material in the world after water with over 2 billion tonnes of concrete produced each year and 30 million tonnes used in Australia per year. It is a critical building material which is literally the foundation of our built environment. Concrete has been revered for millennia as a versatile, durable, cheap, workable building material which can resist the elements, create complex shapes, and hold up to great compressive stress. Coupled with reinforcement, the sky is the limit in terms of the built environment we can engineer.

The Centre for Population forecasts that Australia's population will grow from 25.7 million to almost 30 million by 2032¹. With population growth, Australia will require new transport, commercial, housing and community infrastructure which will mean increasing demand for raw construction materials. While this will require consideration of alternative building materials, this is not a silver bullet, as alternative materials cannot provide the strength, longevity and durability of concrete and steel.

Concrete is a significant contributor to Australia's carbon emissions. The main binder used in concrete is cement, production of which is classified as a "heavy industry" as it requires high temperatures and releases carbon as part of the 'clinkerisation' chemical reaction. Approximately 8% of global carbon emissions are accounted for in the production of cement alone².

Australia requires significant investment in research, innovation, development and impact pathways to maintain access to critical building materials, support decarbonisation of concrete and secure the future of Australia's built environment.

1.2 About the Industry-Led Research Collaborations Fund

The SmartCrete Cooperative Research Centre – Industry-Led Research Collaborations Fund (Fund) is addressing critical knowledge and innovation gaps in Australia's concrete sector. This \$6 million fund

¹ <https://population.gov.au/publications/statements/2022-population-statement>

² <https://www.chathamhouse.org/2018/06/making-concrete-change-innovation-low-carbon-cement-and-concrete>

focuses on impact-driven industry-research collaborations to address pressing industry issues, deliver material change, innovative solutions, improved asset management, supply chain sustainability, new export markets and a technology ready workforce for Australia's concrete sector.

The program will invest in research projects which are led by industry and delivered by Australian registered researcher organisations.

The intended outcomes of the fund include:

- Establishing industry-research sector collaborations.
- SME participation in collaborative research.
- Collaborative research impact results.
- Increased research skills in industry and increased industry capability in research.
- Improved competitiveness, productivity and sustainability for industry participants and the broader Australia concrete sector.

1.3 Objectives of the Fund

The objectives of the Fund are to deliver research and innovative impacts in one of these core research themes:

1. **Sustainability, Environmental and Disposal:** Improved recyclability and incorporating the waste stream into the supply chain using three themes – circular economy, supply chain optimisation and quantification, and reduced carbon footprint.
2. **Engineered Solutions:** New cementitious materials, design innovation, and construction methodologies to improve engineered structures through three themes – new materials, construction, and maintenance processes, accelerated standards development.
3. **Asset Management:** Improved whole of life concrete infrastructure through three themes – sensor solution modelling, new sensor development and lifetime predictive modelling.

Key Issues to be addressed are as follows:

- Supply chain competitiveness:** Enhance capacity of the supply chain to meet market demand with direct impacts on construction costs, project viability and industry productivity.
- Increase innovation:** Improve industry productivity and pricing through creation and dissemination of innovation in concrete formulation, fit for purpose construction methods and rapid alignment of Australian Standards.
- Enhance asset longevity:** Adopt real time monitoring and sensing in assets to drive human intervention through predictive asset management to improve whole of life asset performance, durability and reduce maintenance costs.
- Emissions reduction:** Improve industry sustainability through the circular economy to repurpose alternative materials into the local and global supply chain and to reduce carbon emissions.

2. Funding amount and arrangements

SmartCrete Cooperative Research Centre has up to \$6 million available towards the Industry-Led Research Collaboration Fund.

2.1 Available Funding

Funding is available from 2023-24 until 30 June 2027 to support collaborative industry-research projects. Applicants may apply for a minimum of \$100,000 and a maximum of \$2 million in

SmartCrete funding for a total project size of \$200,000 to \$4 million. Project collaborators are responsible for any remaining eligible project expenditure, plus any ineligible expenditure.

2.2 Project Period

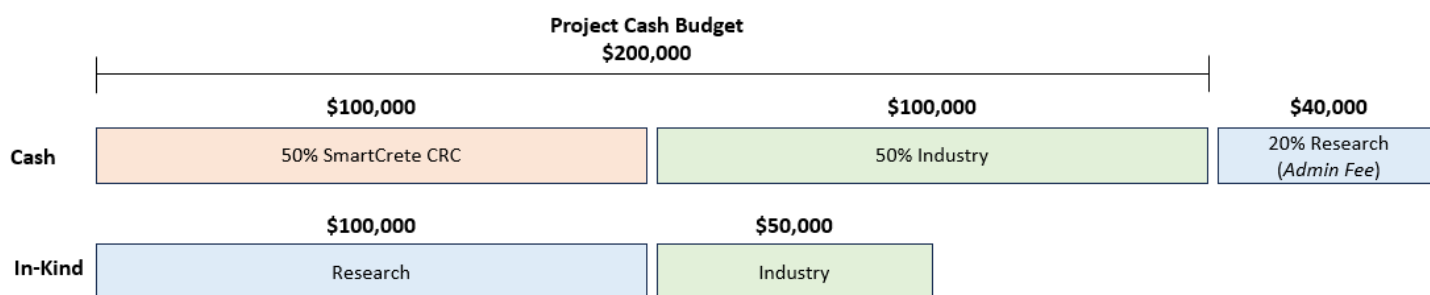
There is no minimum project period, but projects must be completed by 30 June 2027 at the latest.

2.3 Funding Arrangements

Non-research project participants must fund at least 50% of the eligible project costs with payments facilitated through SmartCrete CRC on a quarterly basis. SmartCrete will process all project payments to the research partner on accepted delivery of quarterly project milestones.

Research participants must pay an administration fee to SmartCrete representing 20% of the eligible costs. For research participants that are already partners of the SmartCrete CRC program, existing partner contributions can be utilised to make up this 20% fee. Research participants are also required to demonstrate a significant in-kind contribution noting the competitive nature of this fund with ‘value for money’ as a key merit criterion for assessment.

Example:



(Staff, Facilities, Field Site Access, etc.)

For funding of \$100,000, matched 50:50 by industry, the total project cash budget for use on eligible costs will be \$200,000. Research institutions are required to pay a \$40,000 administration fee and contribute significant in-kind value.

Factoring in an estimated \$150,000 in research and industry in-kind, the total project value could be \$350,000.

Funding for projects will be provided by SmartCrete CRC directly to research partners to fund eligible costs to deliver the project under a multi-party contractual agreement under the SmartCrete Project Agreement terms and conditions. The template SmartCrete Project Agreement can be found at [\[LINK\]](#).

Project Agreements will be negotiated with participants following the assessment, ranking and approval of projects by SmartCrete Cooperative Research Centre’s board of directors.

3. Eligibility Criteria

Applications will only be considered where all eligibility criteria have been satisfied.

3.1 Who is eligible to apply for funding?

Applications for funding are open to collaborative project teams which represent at least one registered research organisation and one industry partner.

Industry organisations can include registered companies, local and state government agencies. Commonwealth Agencies are not eligible to apply. Industry partners may be international or multinational organisations, however applications must demonstrate how the project will generate benefits for Australia.

Research organisations can include Australian [registered research agencies](#). Preference will be given to research agencies already partnered with SmartCrete CRC. You can review the full list of participating research agencies on our [website](#).

3.2 Project Eligibility and Merit Criteria

Applications must:

- Relate to eligible activities listed under paragraph 4.1 that is applied research (that is research which looks to find practical solutions for existing problems) into one of the following three research programs:
 - Sustainability, Environmental and Disposal:** Improved recyclability and incorporating the waste stream into the supply chain using three themes – circular economy, supply chain optimisation and quantification, and reduced carbon footprint.
 - Engineered Solutions:** New cementitious materials and construction methodologies to improve engineered structures through three themes – new materials, construction and maintenance processes, accelerated standards development.
 - Asset Management:** Improved whole of life concrete infrastructure through three themes – sensor solution modelling, new sensor development and lifetime predictive modelling.
- Demonstrate strong **industry-research collaboration** to identify research pathways that address pressing industry issues within the three research programs.
- Demonstrate a **clear impact pathway** through dissemination and utilisation of project outputs.
- Demonstrate **novelty in research** activities and intended outputs.
- Demonstrate clear **benefits and impact to Australia**. Applications will be required to address how the proposed research project will create tangible impact for the industry participants and the broader Australian concrete ecosystem.
- Research Partner: Is an Australian [registered research organisation](#) which demonstrates strong and directly relevant **research capabilities**.
- Industry Partners: Demonstrate clear **commitment** to the project and direct **pathway to enable impact**.
- Demonstrate **value for money**.

3.3 Who is not eligible?

Project proponents are not eligible to participate in the SmartCrete CRC Industry-Led Research Collaborations Fund if:

- The project does not meet the project eligibility criteria.
- The project industry participants are not currently trading, are insolvent or are in the process of receivership.
- The project research participant(s) is not an Australian [registered research organisation](#).
- The project does not meet the minimum financial contribution from industry and research partners.

4. What the funding can be used for

To be eligible the project must aim to meet the project objectives set out in section 1.3.

4.1 Eligible activities

Eligible activities are activities that have not yet commenced, that will generate new knowledge and innovation to support greater sustainability and viability of concrete in Australia under the research programs set out in section 3.2.

The project must undertake core and supporting research and development activities in line with the definitions provided by the [R&D Tax Incentive](#).

Core Activities

Activities with outcomes that a competent professional could not determine in advance based on current knowledge, information and experience. The outcomes are determined by applying a systematic progression of work that is based on the principles of established science and proceeds from hypothesis to experiment, observation and evaluation leading to logical conclusions.

New knowledge generated can be in the form of new or improved materials, products, devices, processes or services.

Supporting Activities

Activities that are directly related to core activities and are undertaken for the purpose of supporting the core activities.

Project activities may include:

- Research, including data collection, analysis and sectoral engagement.
- Laboratory experimentation.
- Field trials.
- Demonstrations.

Eligible expenditure items may include:

- salaries for researchers and support staff, fellowships and student stipends, and direct salary on-costs.
- the Direct Support Costs of Research and translation.
- Research consumables.
- The Direct costs associated with field trials and demonstrations.

It is expected that where possible, senior research staff and access to major facilities be provided to the project by the research partner as in-kind.

4.2 What funding cannot be used for

Expenditure items that are not eligible are:

- Salary over-heads.
- Purchase of major equipment.
- Construction of facilities such as buildings, laboratories.
- Maintenance of plant or facilities.
- Operational or commercial activities.

5. Assessment Criteria

Selection of projects for funding is a merit-based process. Eligible applications will be assessed against the assessment criteria set out below by the SmartCrete Impact and Investment Committee an independent expert panel with relevant expertise. We will assess the application based on the weighting given to each criterion. The SmartCrete Board will be the decision-maker.

The application form asks questions that relate to the assessment criteria below. The amount of detail and supporting evidence provided in the application should be relative to the project size, complexity and grant amount requested.

Eligible applications will be assessed in accordance with the following assessment criteria:

Assessment Criteria	Information Requirements	Weighting (Points)
Potential for Impact	Demand is established with a clear path to sectoral impact. Research goals and outputs are clearly defined with technical feasibility established. Impact plan is sophisticated and credible.	20
Demonstrated partner support in both cash and in kind.	Industry and Research cash funding and in-kind support meets or exceeds minimum CRC requirements stated in section 2.3.	15
Alignment with SmartCrete CRC research objectives.	Clear alignment with research objectives stated in section 1.3.	15
Ability of team to deliver project.	Highly capable research team supported in a significant research centre coupled with recognised industry participant	10
Feasibility and quality of project plan.	Well documented and novel research plan, appropriately resourced, solving a well-defined industry problem	10
Value-add across the concrete sector.	Clear sectoral and stakeholder benefit from the research outcome	10
Degree that Change-Enablers are incorporated in Project.	Key sectoral change enablers (eg. legislators, regulators, supply chain participants) have been considered and incorporated in the impact plan.	10
Level of inclusion, diversity, and equity.	Project demonstrates diversity in the project team considering gender, ethnicity, age, and skill sets. Project demonstrates how inclusivity will be implemented in the delivery of the project.	5
Cost effective use of resources.	Project demonstrates cost effectiveness. Project demonstrates good value for money.	5
TOTAL		100

6. How to apply

6.1 Timeline

The application process is shown in Table 1 below. Please note, the closing date will not change, however, the assessment and announcement dates are indicative only and are subject to change.

Table 1: Expected timeline

Date	Event
1 December 2023	Guidelines published and application period opens
23 February 2024	Application period closes
28 February 2024	Preliminary eligibility assessment of applications and contact applicants if further information is required
March 2024	Impact and Investment Committee reviews applications, recommendations provided to SmartCrete CRC Board
March 2024	Successful applicants are officially advised Prepare grant agreements with proponents

6.2 Application details

Applications must be completed on the SmartCrete Project Plan and Project Budget template which can be downloaded [here](#).

Applications must include (but are not limited to) the following information:

- Project details including any associated activities.
- Expected outcomes and benefits of the project and how it supports the objectives of the SmartCrete fund.
- Timetable and tangible milestones.
- A clear, comprehensive budget.

Applications must include the following documents created within the SmartCrete template:

1. Project Plan
2. Project Budget

Applications should be submitted to info@smartcretecrc.com.au before 5:00pm AEDT Friday 23 February 2024.

Applicants are encouraged to connect with SmartCrete through info@smartcretecrc.com.au for support completing the application.

7. Selection Process

7.1 Selection Process

Once an application is submitted, SmartCrete will review the application against the eligibility criteria. If eligible, it will then proceed to assessment by the SmartCrete Impact and Investment Committee. Only eligible applications will proceed to the assessment stage.

The Impact and Investment Committee will consider the application on its merits, based on:

- How well it meets the criteria.
- How it compares to other applications.
- Whether it provides value for money.
- The overall objectives of the funding opportunity.
- The evidence provided to demonstrate how the project contributes to meeting those objectives.

If the selection process identifies unintentional errors in the application, or points that require further clarification, we may contact the applicants to correct or clarify the information.

7.2 Who will approve funding?

The SmartCrete Board will decide which projects will receive funding and will consider the recommendations of the Impact and Investment Committee.

The Board decision is final in all matters including:

- The approval of the grant funds.
- The grand funding amount to be awarded.
- Any terms or conditions of the grant.

7.3 Notification of application outcomes

SmartCrete CRC will advise the outcome of the application in writing. Approved projects will be required to enter the SmartCrete Project Agreement. Funding for projects will be available once the Project Agreement has been executed by all parties.

Any project expenditure incurred before the execution of the Project Agreement is entirely at the risk of the project participants.

8 Monitoring and Reporting

8.1 Keeping us informed

Applicants will be required to report to SmartCrete CRC on any matter that is likely to affect the project including (but not limited to) the following details:

- Key changes in project participants or business activities, particularly if they affect its ability to complete the project and meet project payments as and when they fall due.
- Changes to the project participants name, addresses, nominated contract details.
- Events relating to a project that SmartCrete may attend.

These details will be provided to SmartCrete CRC in accordance with the Project Agreement.

8.2 Reporting

Project participants must submit reports in line with the Project Agreement. Routine reporting will be required on progress, and in relation to any variation in the project and include:

- Progress against agreed project milestones (including commencement and completion dates).
- Project expenditure, including expenditure of grant funds.
- Environmental, economic and social benefits generated by the project.
- Contributions of participants to the project.

The lead research participant is required to report the above information on the SmartCrete project progress report template quarterly.

9. Privacy and Confidentiality notice

9.1 Privacy

Personal information means information or an opinion about an identified individual, or an individual who is reasonably identifiable, whether or not the information or opinion is true or recorded in a material form.

We may disclose personal information to the independent expert panel with the Impact and Investment Committee and SmartCrete CRC Board.

We may also disclose personal information if:

- We are required or authorised by law to disclose it.
- Applicants agree to the information being disclosed, or
- Someone other than us has made the confidential information public.

The full SmartCrete privacy policy can be reviewed on our [website](#).

9.2 Confidentiality

An applicant can mark parts of an application as confidential with an explanation of the reason for confidentiality. For example:

- The information relates to a third party and/or is commercially sensitive.
- Disclosure of the information would cause unreasonable harm someone else, or;
- The information was obtained by you with an understanding that it will stay confidential.

We may disclose confidential information to the independent expert panel with the Impact and Investment Committee and SmartCrete Board.

We may also disclose confidential information if:

- We are required or authorized by law to disclose it.
- Applicants agree to the information being disclosed, or
- Someone other than us has made the confidential information public.

Confidential information will not be disclosed outside of the parties listed above unless the applicant's consent is obtained or otherwise as required or authorised by law. In some instances, the restriction on using or disclosing confidential information may affect an application, in which case we will consult with the applicant on how to manage the confidentiality issue.