UK/Australia Space Bridge

Open Call for Project Proposals

In February 2021, UK and Australia signed a [Space Bridge](https://www.industry.gov.au/news/space-bridge-to-unite-australia-and-uk-space-industries) Framework arrangement aimed at enhancing cooperation in the space industry, with one of the focus areas including research.

[SmartSat CRC](https://smartsatcrc.com/), the [UK Science and Innovation Network](https://www.gov.uk/world/organisations/uk-science-and-innovation-network) and [Satellite Applications Catapult](https://sa.catapult.org.uk/) are seeking proposals for research projects that align to the mutual benefits of the UK and Australia and create collaboration through the *Space Bridge*. These preliminary phase projects, aim to create and foster partnerships across academia and industry in both the UK and Australia and could ultimately lead to bigger collaborative research projects that grow industry capacity, provide an innovative end-product or capability, and build upon the respective space ecosystems of each country to mutual benefit.

For this phase, there are four priority areas for research proposals:

* Earth Observation and Climate Resilience;
* Agriculture and Land Management from Space;
* Enabling Connectivity and Innovative Space Communications; and
* Quantum Technologies for Space.

It is expected that four projects will be funded in this round. These projects are to be groundwork research to be completed by 30 June 2022, with a cash request not to exceed AUD$100,000 (~GBP50,000). The outcome will be final project deliverables and a report which identifies potential follow-on tasks (noting that follow-on funding will be pursued separately and is not guaranteed).

Responses are due by **5pm Australian Eastern Standard Time, Monday 30 August 2021**, and must be compliant with the instructions and template attached.

# INSTRUCTIONS FOR CANDIDATES

**Priority Areas**

The following four topic areas, together with corresponding priority areas under each, have been identified as strategically beneficial to the mutual interests of each country. Proposals should align with one or more of the areas listed.

**Topic 1: Earth Observation and Climate Resilience**

* 1. Utilising existing and upcoming Earth Observation missions (e.g. [BIOMASS](https://www.esa.int/Applications/Observing_the_Earth/Biomass), [Aquawatch](https://www.csiro.au/en/about/challenges-missions/aquawatch))
	2. Calibrationand Validation leveraging expertise, geographic benefits and in-situ sites
	3. Water quality, soil moisture, biodiversity, environmental and natural capital factors
	4. End user applications for critical mineral resource assessment & mining operations
	5. Disaster resilience
	6. Standardisation and sharing of data products

**Topic 2: Agriculture and Land Management from Space**

1. Heat and frost prediction and management
2. Disease and pest management
3. Connectivity and in-situ network utilization for agricultural end-user applications
4. Yield production predictions with modelling and weather integration
5. Agricultural sustainability indicators measurement

**Topic 3: Enabling Connectivity and Innovate Space Communications**

1. Satellite communications and integration with 5G
2. 5G innovative applications and utilisation
3. Intelligent satellite backhaul (data transfer)
4. Innovative use of orbital regimes (LEO, GEO)
5. Flat Panel Antennas: next-generation satellite communications

**Topic 4: Quantum Technologies for Space**

1. Communication, sensing and navigation innovation
2. Cybersecurity for space assets
3. PNT applications (e.g. leverage UK Space-based PNT)

**Assessment Criteria**

Respondents must comply with the following:

1. Responses must be submitted by, and only include UK-based or Australian-based industry or research organisations;
2. A proposal must have at least one industry partner;
3. In addition, at least one partner must be UK-based and one Australia-based;
4. Proposals are to be submitted electronically to SpaceBridge@smartsatcrc.com, and received by ***5pm Australian Eastern Standard Time, Monday 30 August 2021***;
5. Proposals must address at least one of the Priority Topic Areas above;
6. Projects must commit to completing all deliverables before 30 June 2022;
7. Proposals must use the attached template. To assist in completing the project plan, some guidance information has been presented in the template. *All guidance is in red italic font*. It should be removed prior to submission;
8. The cash funding request must not exceed AUD$100,000 (~GBP50,000);
9. Proposals must address all the criteria in the provided template (these form the assessment criteria).

The following inclusions in a proposal will be highly regarded, and will assist in developing a highly competitive proposal:

* Creating a collaborative partnership across the two countries;
* Providing benefit to both countries;
* Having clearly defined outcomes with long term growth potential, leading to impact through commercial or other pathways;
* Alignment to one or more of the following priority documents:
	+ For UK: [Satellite Applications Catapult Strategy (2018-2023);](https://sa.catapult.org.uk/about-us/our-strategy/)
	+ For Australia: [SmartSat CRC Strategic Plan (2021-2025);](https://smartsatcrc.com/app/uploads/SS_StrategicPlan_Web.pdf)
* Cash and/or in-kind commitments to the proposed project.

**Assessment and Timelines**

SmartSat CRC will be managing the assessment process, in collaboration with the UK Science and Innovation Network and Satellite Applications Catapult.

The following timelines apply to this project call:

Project Call released: 19 July 2021

Project Responses due: 30 August 2021

Notification to preferred candidates: 15 September 2021

Finalise Contract / Project Commencement: by 15 October 2021

Interim report due: February 2022

Completion and delivery of contract deliverables: by 30 June 2022

**Further Information**

With regards to intellectual property developed for projects selected, the proponents will own project intellectual property for work funded on the project. Proponent must agree to provide a license back to the funders to allow them to fulfill any funding compliance requirements (which do not include commercial use).

For further information about this Project Call, please email: SpaceBridge@smartsatcrc.com

Project Response Template

# PROJECT SUMMARY

|  |  |
| --- | --- |
| Project Title | *Enter project title* |
| Project Summary | Provide a short (up to 200 word), plain English description that summarises the project, it’s key aims and outcomes. |
| Project Lead Organisation and Point of Contact | *Enter Lead Organisation name and address**Provide details of the project point of contact (name, email and phone number).* |
| Other participating Organisations | *Name each of the other organisations participating in the project* |

# PROJECT DETAILS, OUTCOMES AND OBJECTIVES

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| --- |
| *What are the intended primary outcomes and objectives of the project? Proposals may consider what gaps or areas of research are not currently being well addressed, current practise etc.**How does this project fit within the context of future, follow-on activity?**Outline the research project plan, including, as appropriate, a description of the experimental design, techniques and methods to be used.* *Demonstrate that the strategy is adequately developed, well integrated, feasible and appropriate to the aims of the project.**Provide a clear list of milestones/deliverables and delivery dates, noting that an interim report and brief presentation is due mid-project (likely February 2022), and all deliverables are to be finalised by 30 June 2022.***This section must not exceed two A4 pages.** |

# Strategic Alignment

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| --- |
| Briefly describe project alignment with national strategies for Australia and/or UK?Briefly describe the benefits of this project to the wider Australian/UK space sector and/or to other industry sectors. How does Australia/UK benefit from this project/collaboration.**This section must not exceed half an A4 page.** |

# Utilisation AND IMPACT

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| --- |
| Briefly describe the potential utilisation and impact the project can have. What end-users could benefit?Include potential follow-on activities and potential partners for that activity.**This section must not exceed half an A4 page.** |

# Project PARTICIPANTS and RESOURCES

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| --- |
| *Who are the participating organisations, and what overall expertise/resources/experience do they bring.**Provide a description of the key personnel on the project, a summary of their expertise, their role on the project and the level of involvement (time commitment) on the project. Indicate if they are being cash funded or provided in-kind.**Demonstrate that the team has the required expertise and availability to deliver the project outcomes.**Provide a brief statement to indicate how you have considered Diversity and Inclusion in your team composition. You can refer to* [*SmartSat D&I Guidance for Research Teams*](https://smartsatcrc.com/app/uploads/SmartSatCRC-DI-Guidance-for-Research-Teams.pdf)*.***This section must not exceed half an A4 page.** |

# Project BUDGET

|  |  |
| --- | --- |
| **Cash Budget Request** |  |
| **Type** | **Value (AUD/GBP)** | **Description** |
| Salary |  | *List each resource on a separate line, together with the amount of time proposed, charge rate, and provide a brief justification for the resources requested.**A competitive bid is expected to request salary funding at base (cost-like) rates rather than commercial rates.* |
| Other |  | *a brief justification for the resources requested.* |
| Total Cash Budget Request | Specify AUD/GBP |
| In-kind support (resources funded from other sources or by participating organisations) | In-kind (staff) | Provide details of any staff in-kind being provided on the project, if any. Include name (if known), position, time commitment for the project (expressed in person weeks). |
| In-kind (non-staff) | Prove details of any non-staff in-kind you propose to make available to the project, including a brief description and value. |