International Space Investment India Projects

Project Plan

<Project Title >

<Applicant Organisation>

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A note on page limits:

We encourage applicants to keep their submissions below 50 pages in total. As a guide we would suggest:

Strategic proposal – 10 pages max

Technical proposal – 25 pages max

Management plan – 10 pages max

Financial plan – 5 pages max

The responses provided in this project plan support your online application form (business.gov.au). You should refer to specific sections of this plan in your online application responses.

1 Strategic proposal

Maximum 10 pages

1.1 Project business case

1.1.1 Project rationale

Explain the importance of this project to your organisation and your partnership/consortium and how it fits into the aims of your business/es.

1.1.2 Business case

Detail the benefits of this project to your organisation's business case (or that of your project partners). This may include any potential commercial opportunities. Please note: if applicable, you may include references to relevant sections from any previous business case studies (e.g. economic benefit studies, etc) you have undertaken if the key information below has already been addressed in your existing documentation.

Key information may include:

- any product, process or service you intend to develop through this project that you may commercialise (in the space or non-space sectors)
- the potential market demand for your product, process or service
- how you will ensure the project will continue to deliver outcomes beyond the grant funding period
 - What are your plans for sustaining the project after the grant funding period and how firm are the plans and commitments?
 - What arrangements are in place for activities such as mission operations, data storage, mission disposal, report generation, project closeout etc that may occur beyond the grant period?
- your target market including:
 - o intended customers
 - o potential market size
- competitive analyses
- projected revenue growth for you and/or your project partners as a result of the project
- (if applicable) further evidence for your partnership with the Indian stakeholders in your application in addition to your separately uploaded Letter of Support or MoU. For example: press releases, photos of joint projects, design reviews etc.

1.2 Benefits to Australia

Explain how your project aligns with the individual objectives of the ISI India Projects grant opportunity (see Grant Guidelines section 2.1).

Describe which Mutual Priority Area (Grant Guidelines Appendix A) your project aligns with or will contribute to advancing capability within.

Key information may also include:

- The projected number of jobs to be created
- New collaboration pathways to be created
- International opportunities to be unlocked
- Benefits to other sectors

- Australian skills and capabilities to be utilised and grown
- Projected Technology Readiness Level (TRL) increase for the project (Note further more elaborate
 information on TRL is requested in sections below this section can be an executive summary)
- How your project will contribute to building a vision and a diverse, inclusive Australian space
 ecosystem that inspires businesses, the Australian community and the next generation of space
 workforce, researchers and entrepreneurs

2 Technical proposal

Maximum 25 pages

The technical proposal should provide information on the complete project, including technical considerations and proposed lifecycle. Please note: if applicable, you may include references to relevant sections in a feasibility study, mission concept review (MCR) or preliminary design review (PDR) for any of the below sections of the technical proposal if the outcome / requirement / challenge / risk etc. has already been addressed in your existing documentation.

2.1 Project objectives and outcomes

Applicants should briefly define the project objectives, outcomes and the current status of the project (e.g. completion of an MCR, PDR/CDR).

2.1.1 Project Objectives

Applicants should provide information on the project objectives.

2.1.2 Project Outcomes

Applicants should provide information on the intended outcomes.

2.1.3 Current status of the project

Information on the current status – could include photos, links to papers and articles published, current staffing levels etc.

2.2 Preliminary assessment of project challenges

Key information may include:

- a short description of key challenges and how they affect the design of your project
- any key trade-offs that have been necessary to narrow your solution space. Include an explanation of these trade-offs and, if possible, an example of one
- how project challenges would be mitigated
- any uncertainties or challenges still open to assessment.

2.3 Proposed project concept

2.3.1 Introduction of the project concept

Applicants should provide a technical overview of their project concept.

2.3.2 Project / system architecture

Applicants should provide an overview of project/system structure with justifications of these choices.

2.3.3 Concept of operations (CONOPS)

Applicants should detail their project concept and any critical or open points. Could include descriptions via flow charts or figures.

2.3.4 Project / system design and budgets

Key information may include:

- overall system design
- associated preliminary system-level budgets (and associated margin philosophies) including:
 - o mass
 - o power
 - o link
 - etc, as relevant to project.
- key system level design considerations and
- key design attributes
- trade studies

2.3.5 Systems engineering approach

Key information may include:

- how you would design the project/system
- how you would develop and derive your requirements
- how you would assess your design to ensure it is iterating towards a solution.
- how you expect to manufacture, procure, assemble, integrate and test the systems, technologies and products
- any standards you expect to use, adapt or tailor
- any key trade-offs that have been necessary to narrow your solution space. Include an explanation of these trade-offs, your approach undertaken in performing them, and if possible, an example of one
- how you would verify and validate your project/system and the requirements.

2.3.6 Critical technologies and current status of tech

Key information may include:

- the critical technologies
- whether the critical technologies are available to the consortium
- how you would acquire or develop the critical technologies (commercially off the shelf (COTS), develop in-house, etc.) and manage the associated technology risk
- the Technology Readiness Levels (TRLs) of the critical technologies.
- Photos of the project/critical tech in their current status

Table X: Preliminary critical technologies list

Critical technology	System/ subsystem	Description	Present TRL (0 – 9)	TRL evidence	How to obtain it (COTs, build in-house,)	Technology Organisation	Location of technology	Long Lead Item?	Comments

3 Management plan

Maximum 10 pages

3.1 Consortium overview

Summarise your choice of project consortium members. Explain why this is the best team to conduct your project. Are there any new collaborations? What are your combined strengths?

3.1.1 Consortium information and capability

Table X: Consortium capability matrix, with evidence.

Note: the table is a guidance only – the consortium can present the information in the most suitable format addressing the criteria.

	Organisation 1 name	Organisation 2 name	Organisatio n 3 name	Organisation 4 name	Comment
Main area of expertise					
Years active in space industry and space projects					
Has flight heritage been achieved if relevant? (Provide information on how it helps the current project)					
Number of staff involved in space projects (FTE)					
Prior projects in space (up to 10) and max 200 words description per project					
Role in Current project (PSI, Science Lead, SME, Manufacturing partner etc) (Heading only)					

	Organisation 1 name	Organisation 2 name	Organisatio n 3 name	Organisation 4 name	Comment
% of funds received from the Grant amount					
% of investment in the Project					
Location					

3.2 Management of the project

3.2.1 Governance

Describe your overall project governance structure.

You should also clearly articulate the governance of the consortium, as this framework will be vital to manage your project. You may wish to provide a RACI matrix.

3.2.2 Stakeholder management

Key information may include:

- your key internal stakeholders (internal managers at the consortium organisation, etc.) and how they would be managed including any controls you would like in place
- your key external stakeholders (e.g. suppliers, the Agency, etc.) and how they would be managed including any controls you would like in place
- how changes of and with stakeholders would be managed
- the key roles required to support stakeholder management

3.2.3 Technical management

Key information may include:

- how you would manage the pathway to the achievement of your objectives
- how would/have you derive requirements at all levels (system/sub-system/equipment/component) in order to achieve the objectives
 - o you may wish to supply the high level requirements that address your objectives
- how you would manage the requirements along with changes in the requirements
- how you would manage the change or non-conformances of technical project aspects
- how technical information would be managed
- what management controls would need to be in place to ensure the system works
- the key roles required to support technical management.
- how you would manage scope creep and ensure it does not add significant risk to the project

3.2.4 Risk management

Key information may include:

- a short description of key mission risks/challenges and how they affect the design of your project
- how project risks/challenges would be mitigated. You may wish to insert a risk register.
- any uncertainties or challenges still open to assessment.
- how risk would be managed
- the controls you would need to put in place
- how you would ensure risk does not exceed acceptable levels
- how changes to risk would be managed
- the key roles required to support risk management
- mitigations identified
- resource allocation plans and strategies to manage the risks.

Information on this topic can be found in <u>Guidelines for Risk Management</u> and <u>NASA Risk Management</u> Handbook.

3.2.5 Quality management

Key information may include:

- any critical aspects that may affect quality or the delivery of the intended outcomes
- how you would manage quality of the project including the controls you would have in place
- how on-conformances of your project would be managed
- details of and justification for how you would utilise your review panel, the critical roles and competencies, and details of members
- the key roles required to support quality management.

3.2.6 Regulation management

Key information may include:

- an explanation of the regulatory management required for the project
- the critical aspects of this management
- the key roles required to support regulatory management.

3.2.7 IP management

Key information may include:

- how the consortium intends to manage IP
- the critical aspects of this management

3.2.8 Security management

Key information may include:

- Your framework for managing national security risks
- Your approach to cybersecurity management
- Data security and storage considerations, including across consortium partners
- Approach to Defence Export control regulations

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3.2.9 Consortium dispute resolution strategy

Detail the dispute resolution strategy you will use to resolve any disputes between consortium members and ensure the Australia-India relationship is protected.

3.3 Facilities

Provide details of all facilities you plan to use during mission development including capabilities and reasons for use. Any facilities critical to mission success should be clearly identified.

Provide details of any Australian facilities that could be used but are unavailable – specify reasons on why they are deemed unavailable – schedule, access restrictions etc.

3.4 Software and tools

Provide details of all software and tools you plan to use during mission development including capabilities and reasons for use. We are looking for specific list of engineering, project management, version control, communication tools/software/applications, cloud data platforms that the consortium intends to use for the project only. (Common tools such as MS Office etc do not have to be listed)

3.5 Key personnel

Key information may include:

• key personnel in technical, management and quality teams, % of their time dedicated to the project, including their skills experience and the work packages they would support.

3.6 Work breakdown structure and descriptions

Provide a diagram of your proposed work breakdown structure and summary descriptions here. You should indicate which organisation would be performing the work.

Provide a flow chart and description of your work logic.

3.7 Schedule

Provide a flow chart of your work logic including key milestones, key interface points between project partners and decision points.

Key information may include:

- a diagrammatic summary of your project schedule
- a justification of your project schedule, schedule drivers and key schedule risks
- proposed progress meetings and reviews, including milestones and major decision points
- team meeting occurrence and rationale.

Tentative dates for transfer of spacecraft hardware for tests from partner A to B for example.

4 Financial plan

Maximum 5 pages

Key information may include:

- a summary of your budget
- justification and assumptions of the project budgets
- the contingency and margins used in the budget to manage risk
- how you would manage the contingency throughout the project
- evidence for % of funds spent in Australia and information on how the rest of funds will be used for activities for instance in overseas partner locations
- any further comments you wish to add in support of Assessment criterion 4 (Grant Guidelines section 6.4)