



Submission on the International Space Investment (ISI) initiative program design

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Addressed to

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Confidentiality

This submission does not need to be kept confidential and may be made public.

Thank you for the opportunity to provide feedback on the draft program design for the International Space (ISI) Investment initiative. We do so in our capacity as representatives of the Science Party where our aim is to improve quality of life and drive society towards the pursuit of knowledge for the benefit of all of humanity.

Summary

In April 2019, the Australian Space Agency (the "**Agency**") published the "Advancing Space: Australian Civil Space Strategy 2019-28" (the "**strategy**").¹ The strategy is the Australian Space Agency's roadmap for modernising and making competitive the Australian space sector, positioning the government as a partner, facilitator and regulator to the industry.²

As part of the international pillar of the strategy, the government has allocated \$15 million towards an International Space Investment initiative (the "**initiative**") to fund strategic space projects.³ The intended outcomes for the initiative include generating employment and business opportunities for Australians, falling within the strategy's goals of creating an additional 20,000 Australian space industry jobs and \$12 billion GDP contribution by 2030.⁴

We see the initiative as a necessary and welcome step towards fulfilling the aims of the strategy, and in particular the Australian Space Agency's role in facilitating partnerships with counterpart space agencies and international organisations⁵ that "where consistent with national interests, open the door for Australian innovators and grow a connected, respected, and globally competitive space industry in Australia".⁶

Setting the conditions for growth (with the initiative comprising a key part of the first phase of the strategy) will require balancing the availability of potential partnerships with the national interest, and effectively prioritising prospects.⁷ Success in this will allow the Agency to engage fully with the opportunity.⁸

¹ See: <https://www.industry.gov.au/data-and-publications/australian-civil-space-strategy-2019-2028>.

² Australian Space Agency (2019), Advancing Space: Australian Civil Space Strategy 2019-2028, Canberra: Commonwealth of Australia, April; available at: <https://www.space.gov.au>, pp 8.

³ Funding for the initiative was announced in May 2018 in the 2018-19 Budget under the measure Australian Technology and Science Growth Plan – growing the Australian space industry, see: <https://www.minister.industry.gov.au/ministers/cash/media-releases/budget-2018-new-opportunities-and-jobs-australian-industry>.

⁴ Australian Space Agency (2019), Advancing Space: Australian Civil Space Strategy 2019-2028, Canberra: Commonwealth of Australia, April; available at: <https://www.space.gov.au>, pp 17.

⁵ Australian Space Agency (2019), Advancing Space: Australian Civil Space Strategy 2019-2028, Canberra: Commonwealth of Australia, April; available at: <https://www.space.gov.au>, pp 11.

⁶ Australian Space Agency (2019), Advancing Space: Australian Civil Space Strategy 2019-2028, Canberra: Commonwealth of Australia, April; available at: <https://www.space.gov.au>, pp 5.

⁷ Australian Space Agency (2019), Advancing Space: Australian Civil Space Strategy 2019-2028, Canberra: Commonwealth of Australia, April; available at: <https://www.space.gov.au>, pp 14.

⁸ Australian Space Agency (2019), Advancing Space: Australian Civil Space Strategy 2019-2028, Canberra: Commonwealth of Australia, April; available at: <https://www.space.gov.au>, pp 15.

Recommendations

- Expand on the list of priority counterpart space agencies, emphasising counterparts in states that share security ties with Australia, geographic proximity, and proven space capabilities.
- Ensure the application process is transparent, certain, and supported by resources and guidance for applicants on the expected standards of applications.
- Make funding available on a quarterly or semiannual basis, rather than annually, to avoid prejudicing time sensitive projects and to maintain industry momentum.

Direct responses to the questions raised in the International Space (ISI) Investment initiative consultation paper on the program's design

(1) Are there design features of the ISI that may restrict projects that could meet the program objectives? Do you do you consider there are additional requirements applicants should need to address to access grant funding under the program?

Having a single funding allocation window may be restrictive for industry. A wide application window could mitigate this, however applicants who need funding sooner may be compromised by the long wait time to funding. The better approach is to allocate funding on a quarterly or twice-yearly basis. This approach will be timely, certain, and is less likely to prejudice applicants needing quicker access to funding. Additionally, the Agency should provide resources and guidance on expected application standards. Adopting both approaches in the initiative's design will be facilitative for industry, meeting the objects of the international, national and responsible pillars of the strategy.

(2) What international agencies and organisations do you work with, or would like to work with? Are you aware of projects that could be supported under the ISI?

The consultation paper identifies a number of counterpart space agencies as priority agencies for the purposes of the initiative. Amongst these is a reference to the Indo-Pacific region. There should be a greater emphasis on the region given these are Australia's nearest geographical neighbours, and so will likely have a greater degree of shared use cases for space applications and space projects. Doing so falls well within the ambit of the international pillar of the strategy as it unlocks potentially untapped regional capacities, while building on the responsible pillar to the extent those geographic neighbours have security ties with Australia. We suggest expressly including the below counterpart agencies (listed in no particular order) rather than referring to them as bloc (in addition to the priority counterpart space agencies already listed in the consultation paper).

- Space Research and Remote Sensing Organisation in Bangladesh. Noting Australian and Bangladesh have a history of joint participation in military

exercises⁹ and the SPARRSO is committed to "entirely peaceful and commercial" space operations.¹⁰

- China National Space Administration in the People's Republic of China. Noting the CNSA has had a number of significant milestones including crewed spaceflight in 2003,¹¹ multiple Moon landings with rover operations including the far side of the moon,¹² two attempts at landing on Mars,¹³ and developing an independent manned space station.¹⁴ Additionally its other administrative regions have domestic satellite development and rocket launch capabilities.¹⁵
- Indian Space Research Organisation in India. Noting Australia and India share a commitment to security and defence,¹⁶ and that the ISRO has landed probes on the Moon and Mars,¹⁷ and holds the record for the number of satellites (104) placed into orbit from a single launch.¹⁸
- National Institute of Aeronautics and Space in Indonesia. Noting Australia and Indonesia maintain ongoing military ties,¹⁹ and the LAPAN operates its own domestic satellite systems.²⁰
- Malaysian National Space Agency in Malaysia. Noting Australia's security ties with Malaysia under the Five Power Defence Arrangements and Australia's

⁹ C Hamal, *Nepal, US armies to hold joint military exercise*, Nepal Republic Media (4 March 2016).

¹⁰ S Rahman, *Bangladesh Plans To Launch Satellite*, The Daily Star (27 November 2009).

¹¹ *China Puts Its First Man In Space*, BBC News (15 October 2003), available at: <http://news.bbc.co.uk/2/hi/asia-pacific/3192330.stm>.

¹² *Chang'e 4 spacecraft sends images after landing on far side of the Moon in world first for China*, ABC News (4 January 2019), available at: <https://www.abc.net.au/news/2019-01-03/china-lands-on-the-far-side-of-the-moon-change4/10681620>.

¹³ A Jones, *China's first Mars spacecraft undergoing integration for 2020 launch*, Space News (29 May 2019), available at: <https://spacenews.com/chinas-first-mars-spacecraft-undergoing-integration-for-2020-launch/>.

¹⁴ *China plans manned space station in 2019*, SBS News (28 April 2017) available at: <https://www.sbs.com.au/news/china-plans-manned-space-station-in-2019>.

¹⁵ M Strong, *Taiwan to launch one satellite a year over the next decade*, Taiwan News (13 February 2019), available at: <https://www.taiwannews.com.tw/en/news/3637374>.

¹⁶ J Garnaut, *Narendra Modi and Tony Abbott reveal new India-Australia military agreement*, The Age (Fairfax Media: 18 November 2014).

¹⁷ *India makes history with successful maiden voyage to Mars*, The Telegraph (24 September 2014), available at: <https://www.telegraph.co.uk/news/worldnews/asia/india/11117678/India-makes-history-with-successful-maiden-voyage-to-Mars.html>.

¹⁸ E Barry, *India Launches 104 Satellites From a Single Rocket, Ramping Up a Space Race*, The New York Times (15 February 2017), available at: <https://www.nytimes.com/2017/02/15/world/asia/india-satellites-rocket.html>.

¹⁹ L Murdoch and M Bachelard, *Indonesian jets in Australian war games*, The Sydney Morning Herald (Fairfax Media: 18 July 2012); and *Aust and Indonesia hail bilateral ties*, The Australian (News Corp: 3 April 2012).

²⁰ MD Ibrahim, *Planning and Development of Indonesia's Domestic Communications Satellite System PALAPA*, Online Journal of Space Communication (Issue 8: Fall 2005), pp 3, Available at: https://spacejournal.ohio.edu/issue8/his_marwah3.html.

ongoing military support to Malaysia,²¹ and that Malaysia's own Astronautic Technology Sdn Bhd offers domestic satellite development capabilities.²²

- Pakistan Space and Upper Atmosphere Research Commission in Pakistan, Noting Australia and Pakistan share a mutual defence pact,²³ and that the SUPARCO has launched an unmanned spacecraft, and has a 2040 space strategy focussed on satellite development and launches.²⁴
- Korea Aerospace Research Institute in South Korea. Noting the KARI has placed one satellite in geosynchronous orbit,²⁵ and is investing heavily in its local satellite and rocket technology as part of its lunar exploration program.²⁶

While these counterparts are at differing stages of experiential and technological development, each represents an opportunity for engagement within the bounds of Australian policy and commercial norms that should not necessarily be overlooked in phase 1 or phase 2 of the strategy.

(3) *Can you suggest any other ways that the ISI could support your organisation or other Australian organisations to gain better access to international space agency programs, projects or activities?*

Create a formal pipeline for joint funding and/or direct participation in international projects.

Additional Feedback

The timeline proposed for the initiative²⁷ is appropriate, given the need to balance projects that need funding, with appropriately identified opportunities that don't compromise national security but which offer the greatest prospects for meeting the aims of the strategy.

²¹ *History of the Australia-Malaysia Defence Relationship*, Australian High Commission, Malaysia (12 March 2018), available at: <https://malaysia.highcommission.gov.au/files/klpr/History%20of%20the%20Australia-Malaysia%20Defence%20Relationship.pdf>.

²² K Singh, *Malaysian Space Agency Created To Maximize Efficiency And Impact*, Digital News Asia (8 March 2019) available at: <https://www.digitalnewsasia.com/digital-economy/malaysian-space-agency-created-maximize-efficiency-and-impact>.

²³ *Pakistan and Australia hold security dialogue*, Dawn Newspaper (2 November 2012), available at: <https://www.dawn.com/news/761091/pakistan-and-australia-hold-security-dialogue>.

²⁴ *Pakistan's First National Communication Satellite Launched Today*, Pakistan Space and Upper Atmosphere Research Commission (SUPARCO) (11 August 2011), available at: <http://www.suparco.gov.pk/downloadables/PAKSAT%201R%20Press%20Release.pdf>.

²⁵ H An, *Seeking independence in space: South Korea's space program (1958–2010)*, Quest: History Of Spaceflight (2013), Issue 20(2), 34–51, available at: https://www.academia.edu/12374249/Seeking_Independence_in_Space_South_Koreas_Space_Program_1958-2010.

²⁶ G Ju, *Korean Pathfinder Lunar Orbiter (KPLO) Status Update*, KPLO Program Office KARI (Korea Aerospace Research Institute) (10 October 2017), presentation available at: <https://www.hou.usra.edu/meetings/leag2017/presentations/tuesday/ju.pdf>.

²⁷ See: Table 2 in the consultation paper.

Science Party - Submission to the Australian Space Agency, Department of Industry Innovation and Science on the International Space (IS) Investment initiative consultation paper on the program's design dated 12 June 2019

The processes of the assessment committee for the initiative should be transparent, and it should be comprised of representatives from the Agency and the local industry.²⁸

The application pack for the initiative should include a pro forma of the funding agreement and/or indicative expected terms from the Australian Government. This will offer certainty and transparency, and standardises industry norms, which scalable efficiency benefits.²⁹

We applaud the Agency's commitment to minimising administrative burdens and collecting information specifically necessary for an application.³⁰

²⁸ See item 4.2 in the consultation paper.

²⁹ See item 4.3 in the consultation paper.

³⁰ See item 4.4 in the consultation paper.