



**Australian Government**

**Australian Government response to the House of  
Representatives Standing Committee on Industry,  
Innovation, Science and Resources report:**

**The Now Frontier: Developing Australia's Space Industry**

**December 2022**

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## Introduction

The Australian Government welcomes the opportunity to respond to the report of the House of Representatives Standing Committee on Industry, Innovation, Science and Resources' Inquiry into developing Australia's space industry, *The Now Frontier: Developing Australia's Space Industry* (the Inquiry Report). The Australian Government thanks the Committee for its work, and the wide range of organisations and individuals who made contributions to this Inquiry.

The Inquiry Report was tabled in the House of Representatives on 2 December 2021. It made 38 recommendations for consideration of the Australian Government, encompassing coordination of national space policy, regulation and sustainability of space activities, improving systems and processes, national priorities for investment and resilience, international partnerships, space science, workforce, and access to markets. The report also recognised the role of space technologies in enabling a modern economy in Australia, as well as opportunities to derive greater benefits.

The Australian Government is focused on building a high wage, high productivity, and sustainable growth economy. Central to this is Australia being a country that makes things and one where Australian research, innovation, design and technology is commercialised here, creates jobs and sovereign capability, and is exported to the world.

Space has become a critical enabler of modern economies, and as a consequence our dependency on space technologies has grown. The Australian Government welcomes this report's contribution to the Government's future agenda on space. Part of that will be development of a robust and resilient space sector that can help achieve a future that is made in Australia. The Inquiry Report draws out that legacy approaches to growing the sector are no longer enough to assure a resilient, capable, and globally competitive space sector in Australia. The Australian Government, with key commitments including its Future Made in Australia Plan, the \$15 billion National Reconstruction Fund and the Buy Australian Plan, is committed to ensuring a strong and sustainable domestic industry. In turn, the space sector can play an important role in achieving the aims of these programs.

## Australian Government responses to Inquiry recommendations

Number	Recommendation	Australian Government Response
1 (2.104)	<p>The committee recommends that the Australian Government in consultation with industry seek to define:</p> <ul style="list-style-type: none"> <li>an overarching vision for the Australian space industry</li> <li>a set of long term national space priorities to guide and galvanise the Australian space industry</li> </ul> <p>with the aim of inspiring the Australian public, providing investment confidence, developing Australian space capabilities and positioning Australia as a globally competitive player</p>	<p><b>Agreed in Principle</b></p> <p>This recommendation will be considered in line with the Australian Government's future agenda.</p> <p>Consideration will take into account government priorities including critical technology development (such as robotics, quantum computing and artificial intelligence) and relevant reviews such as the Defence Strategic Review.</p>
1 (2.105)	<p>The committee recommends that these national missions be informed by the seven civil space priority roadmaps</p>	<p><b>Agreed</b></p> <p>The Australian Space Agency's roadmaps present pathways for Australia's space sector to capture international supply chain opportunities and support the capability needs of government. Roadmaps on <i>Communications technologies and services</i>, <i>Earth observation from space</i>, and <i>Robotics and automation on earth and in space</i> are published and available at <a href="https://www.industry.gov.au/australian-space-agency">https://www.industry.gov.au/australian-space-agency</a>.</p>
2 (2.106)	<p>The committee recommends that the Australian Government review the way it delivers funding to the Australian space industry with a focus on the development of space capability and capacity. This includes:</p> <ul style="list-style-type: none"> <li>broadening the funding streams to include contracts for specific space capability</li> <li>the necessity for industry co-funding where private entities are likely to be commercially disadvantaged</li> </ul>	<p><b>Agreed in Principle</b></p> <p>The Australian Government has a clear economic plan and budget strategy that will lift investment and build prosperity across the country. All Australian Government departments are expected to focus their efforts and resourcing to prioritise investments which are smart, responsible and targeted to align with government priorities.</p> <p>The \$15 billion National Reconstruction Fund will diversify and transform Australia's economy and industry, providing finance to drive investments that add value and capability in seven priority areas. This will help rebuild Australia's industrial capability and create secure, well paid jobs across the economy.</p>

3 (2.107)	The Committee recommends that the Australian Government examine ways to better coordinate and align civil and defence space priorities and investment.	<p><b>Agreed in Principle</b></p> <p>The Australian Government notes the Defence Strategic Review, due to be delivered in early 2023, will consider Defence's force posture and force structure and help Defence to better understand where it should prioritise investment, including Defence capability investment broadly, and Defence space capability investment.</p> <p>The Australian Government notes the multiple existing linkages between Defence and the Australian Space Agency.</p>
3 (2.108)	The Committee recommends that the Australian Government work with industry to identify current and future opportunities for the civil space sector to support Australian defence space requirements, including on projects such as DEF 799.	<p><b>Agreed in Principle</b></p> <p>Australian Defence space requirements have been derived from existing strategic guidance and will be considered through the Defence Strategic Review process, due to be delivered in early 2023. The Australian Space Agency will work with Defence to understand those requirements and consult industry to identify opportunities.</p>
4 (2.109)	The Committee recommends that the Australian Government establish a whole of government Ministerial Council on Space that comprises representatives from Commonwealth and State and Territory governments, stakeholders and industry groups to oversee the further development and coordination of the Australian space industry as a whole.	<p><b>Noted</b></p> <p>The Australian Government notes that a number of formal and ongoing consultative and representative bodies relating to Australia's space industry are operating and are routinely reviewed with the objective of continuous improvement.</p> <p>The Australian Space Agency is consulting with state and territory governments on models to coordinate the development of Australia's space industry. This includes consideration of high level bodies that would drive a national approach, as is the case in other nations with space capabilities.</p>

5 (2.110)	The Committee recommends that the Australian Government review or strengthen procurement policies and guidelines to ensure that Australian owned and operated space industry content is used where reasonably possible.	<p><b>Noted</b></p> <p>The Australian Government supports the development of strong sovereign industry sectors that supply to critical national systems, and will continue to support Australian industries to be competitive on a domestic and international level. This can be seen through a range of initiatives including the 10 point <i>Buy Australian Plan</i>.</p> <p>The <i>Buy Australian Plan</i> is part of the Australian Government's strategy to drive economic growth, rebuild and diversify Australia's industrial base and leverage government procurement to create sustainable industries.</p> <p>Building a more robust domestic industry capability, consistent with Australia's international trade obligations, through the Government's purchasing power will increase the nation's supply chain resilience, encourage innovation, improve broader economic, social and environmental outcomes, and support business recovery from recent and future economic shocks, such as those caused by the COVID-19 pandemic.</p> <p>Actions taken by Government in relation to procurement will consider and balance factors including international trade obligations, achieving value for money, the need to develop sovereign capability and mitigating supply chain vulnerabilities.</p>
5 (2.111)	As part of these procurement guidelines Australian Government departments and agencies be required to set out the rationale for procurement of any space products and services obtained from overseas, including why such a capability could not be sourced domestically.	<p><b>Noted</b></p> <p>See response to recommendation 5 (2.110).</p>
5 (2.112)	The Committee recommends that the Australian Government identify suitable points of contact within the Australian Space Agency or the broader Department of Industry, Science, Energy and Resources to assist industry navigate government procurement processes.	<p><b>Agreed in Principle</b></p> <p>The Business Information Contact Centre (AusIndustry), in the Department of Industry, Science and Resources (DISR), is an integral part of the Australian Government's front door for business, providing support, advice and referrals. The contact centre forms an important part of the Department's outreach function to business, including the space sector. These outreach functions include <a href="https://business.gov.au">business.gov.au</a>.</p>

6 (2.113)	<p>The Committee recommends that the Australian Government examine the feasibility of establishing an expert technical advisor, similar to the model adopted in the United States, to support government with procurement of space based products and services, and the development of national missions.</p>	<p><b>Agreed in Principle</b></p> <p>The Australian Government will consider the need for independent technical advice to inform procurement of space based products and services as part of its future agenda.</p>
7 (2.114)	<p>The Committee recommends that the Australian Government examine options to increase the visibility of space across the Government and Parliament to emphasize its importance and communicate its relevance to Australians. This could include but not be limited to:</p> <ul style="list-style-type: none"> <li>• (a) Incorporating space as a specific focus of a joint or house parliamentary committee, including in the name of the committee</li> <li>• (b) Ensuring that a research position within the Parliamentary Library covers space related issues to ensure that adequate research support is available to Members and Senators</li> <li>• (c) Ensuring that adequate positions across the Australian public service can cover the breadth of space related issues and matters as they relate to particular departments and agencies.</li> </ul>	<p><b>Noted</b></p> <p>The Australian Government recognises the importance of communicating the relevance and benefits of space to Australians. The Australian Space Agency will continue to lead the coordination of space across the Australian Government, Parliament, and the community more broadly.</p> <p><b>Response provided against each sub-point of recommendation 7 (2.114) below:</b></p> <p><b>(a) Noted</b> The Australian Government notes that matters relating to joint or house parliamentary committees are a matter for consideration by Parliament.</p> <p><b>(b) Noted</b> The Australian Government notes that this is a matter for the Parliamentary Librarian and the presiding officers to consider.</p> <p><b>(c) Agreed in principle</b> Employment of appropriately skilled people in space-related roles and activities are a matter for the responsible departments and agencies.</p>
8 (2.115)	<p>The Committee recommends that, as part of the Australian Space Agency's post operational review, the following matters be given careful consideration:</p> <ul style="list-style-type: none"> <li>• Establishing the Australian Space Agency as a statutory authority</li> <li>• Separating its industry engagement and regulatory functions</li> <li>• Future workforce requirements, including engaging more staff with industry experience and technical expertise as required</li> <li>• Budget and resourcing to ensure that it is adequately positioned to meet its stated goals and objectives.</li> </ul>	<p><b>Agreed</b></p> <p>The Australian Government agrees to give consideration to this recommendation.</p>

9 (3.136)	The Committee recommends that the Australian Government define Australian sovereignty as it relates to the development of Australian space capability to ensure that Australia's space related interests are promoted and protected.	<p><b>Noted</b></p> <p>The Australian Government recognises the importance of ensuring sovereignty in critical areas of the economy.</p>
10 (3.137)	The Committee recommends that the Australian Government identify in consultation with the Australian space industry particular national space capabilities that can be designed, built and delivered by industry.	<p><b>Agreed in Principle</b></p> <p>The Australian Government will consider this recommendation in line with its future agenda, including through the National Reconstruction Fund.</p> <p>The Australian Space Agency's roadmaps inform pathways for Australia's space sector to grow and capture supply chain opportunities that support Australia's sovereign capability needs.</p>
11 (3.138)	The Committee recommends that the Australian Government consider ways to encourage stronger commercially attractive partnerships between global space primes and Australian businesses. These strategies should seek to engage and prioritise those companies that can demonstrate a commitment to growing the Australian space sector.	<p><b>Agreed in Principle</b></p> <p>The Australian Government acknowledges the role of global space primes in transferring technical knowledge to Australian industry and integrating Australian small and medium enterprises (SMEs) into global supply chains. The Australian Government also recognises the strength of Australian ideas that, given the right access to capital, can be uplifted to contribute to national wellbeing.</p> <p>The Australian Government operates a number of programs to support Australian businesses to access international markets, including through Austrade.</p>
11 (3.139)	The Committee recommends that this includes establishing a program to assist SMEs connect with primes and navigate the broader global space industry more generally.	<p><b>Noted</b></p> <p>The Australian Government is committed to supporting the growth of small to medium-sized enterprises (SMEs) and recognises the importance that expanding connections into global supply chains plays in achieving this.</p>



12 (3.140)	The Committee recommends that the Australian Government pursue policy settings that incentivise private sector investment in industry development including such things as matched funding or co-funding, taxation incentives, and public and private partnerships.	<p><b>Agreed in Principle</b></p> <p>The Australian Government's \$15 billion National Reconstruction Fund will diversify and transform Australia's economy and industry, providing finance to drive investments that add value and capability in seven priority areas. This will help rebuild Australia's industrial capability and create secure, well paid jobs across the economy.</p> <p>The Australian Space Agency will work with the Department of Industry, Science and Resources to explore mechanisms for supporting the Australian space sector through the National Reconstruction Fund, noting the broad application of space technology, including defence enabling capabilities (e.g. robotics), critical technologies (e.g. quantum computing) and advanced manufacturing.</p> <p>Additionally, the Australian Government operates a number of programs aimed at attracting and supporting strategic international investment, led by Austrade.</p> <p>Refer to the response for Recommendation 2 (2.106).</p>
13 (3.141)	The Committee recommends that the Australian Government expand support to SMEs to improve connections in global supply chains.	<p><b>Agreed in Principle</b></p> <p>The Australian Government is committed to supporting the growth of SMEs and recognises the importance that expanding connections into global supply chains plays in achieving this. Support for SMEs will be consistent with international agreements to open and non-discriminatory trade.</p> <p>The Australian Government operates a number of programs to support Australian businesses to access international markets, including through Austrade.</p>
13 (3.142)	The Committee recommends that the Australian Government streamline access to funding mechanisms and increase efficiency of investment by reducing complexity and enhancing transparency.	<p><b>Agreed in Principle</b></p> <p>The Australian Government is committed to reducing complexity and enhancing transparency in how it funds the support of Australian industry.</p> <p>The Australian Government is establishing the National Reconstruction Fund, which will provide investment to priority areas to help ensure Australian ideas are commercialised in Australia.</p>

14 (3.143)	The Committee recommends that space be identified as a key infrastructure priority area. It recommends a national assessment of Australia's current and future space infrastructure requirements with particular emphasis on developing sovereign capability in identified areas.	<p><b>Noted</b></p> <p>The Australian Government will give consideration to this recommendation in line with its future agenda.</p>
14 (3.144)	This assessment should acknowledge the need for industry to access a range of infrastructure for research and development, and manufacture. It should build on the preliminary work set out by the SmartSat CRC.	<p><b>Noted</b></p> <p>This recommendation will be considered in line with the Australian Government's future agenda.</p>
14 (3.145)	The Committee recommends further consultation with Infrastructure Australia to establish whether it is best placed to undertake this work in consultation with industry.	<p><b>Noted</b></p> <p>The Australian Space Agency consults broadly across government in relation to space related infrastructure, leveraging engagement mechanisms of various portfolios to support consultation with the space sector. This includes the Department of Education in relation to national research infrastructure, the Department of Infrastructure, Transport, Regional Development, Communications and the Arts and its portfolio agencies in relation to broader infrastructure, and the Department of Home Affairs, particularly its Cyber and Infrastructure Security Centre.</p>
15 (3.146)	The Committee recommends that the Australian Government, in consultation with industry, examine the requirement to use international standards such as those used by the European Space Agency and NASA for all Commonwealth space procurements.	<p><b>Agreed in Principle</b></p> <p>The Australian Government recognises the importance of international standards for accessing global supply chains and meeting the expectations of the international marketplace.</p> <p>The Australian Space Agency is leading the Australian Government's activities in regard to civil Australian space sector standards. Recent activities include the Agency commencing the process for Australia's participation in the International Organization for Standardisation's TC20 standard (relating to aircraft and space vehicles). Additionally, the Agency is an observer member of the international Interagency Operations Advisory Group (IOAG) which deals with global matters related to space communications with a focus on interagency interoperability and standards.</p> <p>The Australian Government will continue to consult extensively on this matter.</p>

16 (3.147)	The Committee recommends that the Australian Government develop a specific ABS classification to provide a more accurate picture of the size of the Australian space industry and to help track its value and growth.	<p><b>Agreed in Principle</b></p> <p>The Australian Space Agency reports on the size, growth and other metrics of the space sector biennially through publishing economic snapshot reports.</p> <p>The Agency, in consultation with the ABS, is working to improve the basis for data collection in measuring change and growth in the Australian space sector.</p>
17 (3.148)	The Committee recommends that the Australian Government foster the growth of Earth Observation from space and data processing capabilities that benefit Australia across every sector of the economy.	<p><b>Agreed</b></p> <p>The Australian Government recognises the importance of Earth Observation data to the Australian economy and the Australian Space Agency released the space technology roadmap on <i>Earth Observation From Space</i> in November 2021.</p>
18 (3.149)	The Committee recommends that the Australian Government identify other off-Earth opportunities in partnership with international agencies.	<p><b>Agreed in Principle</b></p> <p>The Australian Space Agency, and other Australian Government Agencies, engage with international counterparts to identify opportunities for partnerships and collaboration, including in relation to off-Earth activities.</p> <p>The Agency is currently partnering with international agencies to collaborate on off-Earth opportunities, such as NASA's return to the moon through the Artemis mission, and the Indian Space Research Organisation's (ISRO's) Gaganyaan Human Spaceflight program. Other international engagements include the Bureau of Meteorology's collaboration with various agencies on meteorological satellites, and also with the Five Eyes Meteorological Community of Practice (the MET-5) including Canada, New Zealand, United Kingdom and the United States Air Force on Space Weather. Geoscience Australia and the Agency are also collaborating with the United States to develop satellite systems that will improve the quality of satellite Earth observation data, supporting improved monitoring of climate change impacts. CSIRO engages with NASA and the European Space Agency on deep space communications and spacecraft tracking, and with these and other international agencies on science and research collaborations.</p>

18 (3.150)	<p>The Committee recommends that consideration be given to developing a mechanism to identify and develop innovative space proposals such as space solar power technology in Australia.</p>	<p><b>Agreed in Principle</b></p> <p>The Australian Government will consider this recommendation, including mechanisms for backing Australian ideas and supporting commercialisation of innovative Australian technology that aligns with national needs.</p> <p>The Australian Government notes mechanisms in Defence (the Defence Innovation Hub and the Defence Science and Technology Star-Shot program) and CSIRO (including the Space Technology Future Science Platform) that identify and develop innovative technological proposals relevant to government Defence, science and industry priorities.</p>
19 (3.151)	<p>The Committee recommends that the Australian Government undertake broader industry engagement to:</p> <ul style="list-style-type: none"> <li>• Create awareness in adjacent sectors of opportunities to participate in the Australian space industry</li> <li>• Identify relevant skills and expertise within adjacent industries that could be transferable to the Australian space industry</li> </ul>	<p><b>Agreed in Principle</b></p> <p>The Australian Government's Jobs and Skills Summit, held 1-2 September 2022, brought Australians together to agree on immediate actions to help build a stronger economy and a stronger Australia. As an agreed outcome, the Australian Government has announced support for a Digital and Tech Skills compact between government, unions and technology employers. The compact affirms commitment from industry, government and unions to cooperate to help address skill shortages and grow the Australian tech sector.</p> <p>The Australian Government has also committed to releasing an Employment White Paper, which will further help shape the future of Australia's labour market.</p> <p>The Australian Space Agency is exploring the space sector's skills pipeline and workforce development needs to help inform this process. The Agency's work will include considerations of how to improve the transferability of skills from sectors adjacent to space and maximise opportunities for the wider workforce to participate in the Australian space sector.</p> <p>The Agency's consideration of ways to secure the space workforce pipeline will be informed by the work undertaken by organisations such as Jobs and Skills Australia and the SmartSat Cooperative Research Centre which has worked extensively with Australian industry to design an Australian Space Skills Taxonomy and to identify the future skills demands of the sector.</p>

19 (3.152)	The Committee recommends that the Australian Government better promote and engage non-STEM industries such as law, economics, finance, business and advisory services to ensure that these sectors are well equipped to support and maintain the operation of the Australian space industry and provide a specialist service in an international market.	<p><b>Agreed in Principle</b></p> <p>Refer to the response provided to Recommendation 19 (3.151).</p> <p>The Australian Government is aware of the broad range of professionals from non-STEM sectors that will need to contribute to technology intensive sectors, including space.</p> <p>The Australian Space Agency's consideration of ways to secure the space workforce pipeline will consider a pathway forward that recognises all the sub-sectors and diverse skills that underpin Australia's space industry.</p>
20 (3.153)	The Committee recommends that the Australian Government examine ways to better support and coordinate space medicine research, training and development to ensure that the translational benefits of aerospace medicine can be applied on Earth.	<p><b>Agreed in Principle</b></p> <p>The Australian Space Agency will work with other organisations, such as the Australian Antarctic Division and CSIRO, to support space medicine research, training and development through a number of collaborations across government.</p> <p>The <i>Applied Space Medicine and Life Sciences</i> roadmap, currently under development, will complement this work, and take into account Australia's niche capability in this domain.</p>
21 (4.77)	The Committee recommends that the Australian Government consider a national launch plan or strategy to support a sovereign capability in Australia including the investment, infrastructure and expertise required. This includes development of policies that preference Australian launch capability to support government space requirements.	<p><b>Agreed in Principle</b></p> <p>The Australian Government will consider this recommendation in line with its future agenda. The Australian Space Agency's <i>Access to Space</i> roadmap, currently under development, will inform this process.</p>

22 (4.78)	<p>The Committee recommends that the Australian Government give consideration to further reforms to the <i>Space (Launch and Returns) Act 2018</i> and Rules 2019, in consultation with industry to ensure that regulatory provisions:</p> <ul style="list-style-type: none"> <li>• Support the growth and competitiveness of the Australian domestic industry</li> <li>• Ensure the safe and responsible management of the space environment</li> <li>• Are in line with the regulations used by similar space countries</li> </ul> <p>It is recommended that further engagement be undertaken with government and industry to determine the most suitable regulatory changes to best benefit growth and investment. Consideration may be given to the Adelaide Law School supplementary submission given to the inquiry.</p>	<p><b>Agreed</b></p> <p>The Australian Space Agency works collaboratively with industry and government to carry out its regulatory function effectively to ensure its regulatory framework is globally competitive, and its activities meet Australia's domestic and international obligations, such as through maintaining robust environmental performance, without overburdening industry.</p>
23 (4.79)	<p>The Committee recommends that the Australian Government give consideration to further suspending or amending the Australian launch permit application fees to ensure that Australian businesses are not financially or commercially disadvantaged, and remain competitive with other space countries.</p>	<p><b>Noted</b></p> <p>The Australian Government does not currently charge fees for launch applications.</p>
24 (4.80)	<p>The Committee recommends that the Australian Government establish dedicated and effective industry engagement mechanisms to guide stakeholders through the application and regulatory processes. This includes designated staff within the Australian Space Agency to work with industry, and the development of publicly available guidance documents.</p>	<p><b>Agreed</b></p> <p>The Australian Space Agency has established a dedicated section within its Office of the Space Regulator focusing on effective industry engagement. This section will focus on guidance documents as well as establishing mechanisms to engage with industry stakeholders and other interested parties through the application and regulatory processes.</p>
25 (5.65)	<p>The Committee recommends that the Australian Government continue its investment in sovereign situational space awareness and situational domain awareness capability including the infrastructure to support it.</p>	<p><b>Agreed in Principle</b></p> <p>The Australian Government supports investing in sovereign situational awareness and space domain awareness, including the infrastructure to support it.</p> <p>The Australian Space Agency's <i>Space Situational Awareness and Debris Mitigation</i> roadmap, currently under development, will provide guidance on opportunities for industry participation.</p>

26 (5.66)	<p>The Committee recommends that the Australian Government take a lead role internationally in implementing the Long Term Sustainability Guidelines for the United Nations Committee on the Peaceful Uses of Outer Space.</p>	<p><b>Agreed in Principle</b></p> <p>The Australian Government will continue to work with the Australian space sector and Member States of the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS) regarding implementation of the Long Term Sustainability Guidelines, including through the COPUOS Working Group on the Long Term Sustainability of Outer Space Activities.</p> <p>To complement Australia's existing regulatory frameworks and international commitments, the Australian Government will explore the need for a space sustainability framework to guide how Australia will carry out space activities responsibly, and approach implementation of the Long-Term Sustainability of Outer Space Activities (LTS) guidelines.</p>
27 (5.67)	<p>The Committee recommends that Australian regulators prioritise post-mission disposal, debris-neutral missions plans, and organisational capacity in identifying viable space projects.</p>	<p><b>Agreed in Principle</b></p> <p>The Australian Government acknowledges the importance of the sustainable and responsible use of space, as well as its broader impact on the terrestrial and marine environment; and notes that this is under consideration by the Australian Space Agency as part of development of the <i>Space Situational Awareness and Debris Mitigation</i> roadmap. A debris mitigation strategy based on an internationally recognised guideline or standard is a requirement for permits authorised under the <i>Space (Launches and Returns) Act 2018</i>. The Australian Government considers a number of factors when identifying viable space projects including capacity to deliver, incentivising private investment and impact to the broader space industry. The Australian Government will continue to consult to ensure that the ongoing development of Australia's space industry meets all applicable environmental standards.</p>
28 (5.68)	<p>The Committee recommends that the Australian Government continue to participate in international forums to:</p> <ul style="list-style-type: none"> <li>• Clarify how international law impacts commercial activities in space</li> <li>• Lead the development of enforceable and internationally agreed norms of behaviour in outer space</li> </ul>	<p><b>Agreed</b></p> <p>The Australian Government is committed to the development and implementation of norms that seek to ensure the safety, stability and sustainability of outer space, and will continue to participate in international forums such as the UN Open Ended Working Group (OEWG) on Reducing Space Threats through Norms, Rules and Principles of Responsible Behaviours, the UN Committee on the Peaceful Uses of Outer Space (COPUOS), and through other multi-lateral forums such as the Quadrilateral Security Dialogue (Quad) Space Working Group. In May 2022, Quad Leaders agreed to consult on rules, norms, guidelines and principles for the sustainable use of space through the Quad Space Working Group.</p>

29 (5.69)	<p>The Committee recommends that the Australian Government examine the feasibility of more green technology in the Australian space sector, and ways to ensure that the industry is not contributing to an already congested environment.</p>	<p><b>Agreed in Principle</b></p> <p>The Australian Government is committed to reducing Australia's emissions to 43 per cent below 2005 levels by 2030 and achieving net zero emissions by 2050. Emissions targets have been enshrined in legislation.</p> <p>All industries, including the space sector, will need to work collaboratively to transition to green technology and achieve emissions targets. Australian Government initiatives, such as the National Reconstruction Fund, will support industry to maximise the benefits of new green technology.</p> <p>The Australian Space Agency's <i>Space Situational Awareness and Debris Mitigation</i> roadmap, currently under development, will, through the lens of industry opportunities, provide recommendations to minimise new debris and manage the risks generated from existing debris.</p>
30 (6.89)	<p>The Committee recommends that the Australian Government prioritise and promote the importance of space science as fundamental to innovation and growth of the Australian space sector. This includes:</p> <ul style="list-style-type: none"> <li>• Specific reference to space science in the Australian Space Agency's Charter and Australian Civil Space Strategy</li> <li>• Examining options for better coordination of space science across Commonwealth and state and territory agencies; and</li> <li>• Identifying a set of national space science research and innovation priorities to enable stakeholders to make informed decisions regarding investment and research and development.</li> </ul>	<p><b>Agreed in Principle</b></p> <p>The Australian Government acknowledges the importance of science, including space science, as a key enabler of innovation and growth within the Australian economy, and will give consideration to this recommendation in line with the Government's future agenda.</p> <p>The Australian Government is also renewing the National Science and Research Priorities and National Science Statement to ensure they reflect Australia's modern society and provide a vision for the Australian science system.</p>
31 (6.90)	<p>The Committee recommends that the Australian Government review the model for research and industry collaboration to ensure that it fosters the best outcomes to support innovation, development of space capability, and industry growth.</p>	<p><b>Agreed in Principle</b></p> <p>The Australian Government recognises that increasing collaboration between businesses, research organisations and government in Australia will improve commercialisation outcomes, drive productivity growth and create new jobs.</p> <p>The Australian Government will consider mechanisms to foster research and industry collaboration to achieve these outcomes, which could be facilitated through initiatives such as the National Reconstruction Fund and the Cooperative Research Centres (CRC) Program.</p>



31 (6.91)	This includes access by academia and industry to cross sector research funding streams and programs.	<p><b>Agreed in Principle</b></p> <p>The Australian Government is committed to supporting Australian business and academia to collaborate and undertake cross sector research that will stimulate the growth of industries such as the Australian space industry.</p> <p>The Australian Government will consider opportunities for cross-sector research funding streams and programs through initiatives such as the CRC Program and the National Reconstruction Fund.</p>
32 (6.92)	The Committee recommends that the Australian Government examine options to protect the intellectual property security of stakeholders within the Australian space industry to ensure that collaboration between academics, industry and government can occur in a secure environment.	<p><b>Agreed in Principle</b></p> <p>The Australian Government recognises the importance of keeping Australia's home-grown space innovation and intellectual property (IP) secure to encourage collaboration between academics, industry and government.</p> <p>The Australian Government notes the programs and resources already in place to assist Australian companies to protect themselves from IP theft. This includes the Australian Cyber Security Strategy 2020 to confront cyber threats including intellectual property theft, as well as the University Foreign Interference Taskforce's (UFIT) Guidelines to Counter Foreign Interference in the Australian University Sector. UFIT sets out principles designed to strengthen the resilience of Australian universities against threats to intellectual property, whilst maintaining their ability to collaborate on and commercialise their research. IP Australia's SME Portal assists small and medium businesses to access detailed information on IP rights and usage.</p>
32 (6.93)	The Committee recommends that the Australian Government consider options for industry to commercialise publicly funded research and development and intellectual property creation in a competitive environment.	<p><b>Agreed in Principle</b></p> <p>The Australian Government recognises the importance that successful commercialisation of research and development and generation of new intellectual property play in driving the growth of Australia's space sector.</p> <p>The Australian Government will consider options for further driving commercialisation of research and generation of new intellectual property.</p>

33 (7.80)	The Committee recommends that the Australian Government develop a community education and outreach program to promote the diversity of employment, careers and opportunities within the space sector.	<p><b>Agreed in Principle</b></p> <p>The Australian Government has announced immediate actions from the Jobs and Skills Summit, including a review of existing STEM government programs that can be reformed to support greater diversity in Australia’s growing STEM sector.</p> <p>As part of its responsibility to inspire the Australian community and the next generation of space entrepreneurs, the Australian Space Agency works with industry, the education sector and other stakeholders to promote the role space plays in improving the lives of Australians, impacts of the space sector on the economy, and its important role in supporting STEM activities.</p> <p>The Agency is considering ways to secure the space workforce pipeline and will continue to consult with Australian industry on measures to promote the diversity of opportunities within the space sector.</p>
33 (7.81)	This campaign should also target underrepresented groups within the space industry to help increase diversity across the sector.	<p><b>Agreed in Principle</b></p> <p>The Australian Government recognises the value of increasing and highlighting employment and participation opportunities for underrepresented groups in Australia’s space sector and associated education and careers pathways.</p> <p>The Australian Space Agency is considering ways to secure the space workforce pipeline that will support the outcomes of the Australian Government’s Jobs and Skills Summit, which included a commitment to review STEM programs to attract and retain more women, First Nations people, Australians in regions, those who are culturally and linguistically diverse, people with a disability and Australians from low socio-economic backgrounds into STEM careers.</p> <p>The Government also announced actions from the Jobs and Skills Summit for strengthened requirements for employers with 500 or more employees to commit to measurable targets to improve gender equality in their workplaces.</p>

34 (7.82)	The Committee recommends that the Australian Government promote the value of STEM through primary, secondary and tertiary years to ensure a continued pipeline of specialist and technical expertise is available to support and sustain the Australian space sector.	<p><b>Agreed in Principle</b></p> <p>The Australian Government recognises the value of STEM-related education in maintaining a future supply of highly trained and educated workers to support and sustain the Australian space sector.</p> <p>The Australian Space Agency is considering ways to secure the space workforce pipeline that will consider linkages to government programs to grow STEM education and employment pathways, guided by the outcomes of the Jobs and Skills Summit.</p>
35 (7.83)	The Committee recommends that the Australian Government examines options to improve education to industry pathways within the sector.	<p><b>Agreed</b></p> <p>The Australian Space Agency is considering ways to secure the space workforce pipeline and will consider options to improve education and training pathways and raise awareness of potential career pathways into the Australian space sector. This work will be informed and supported by the outcomes of the Jobs and Skills Summit, including for digital and tech fields.</p>
36 (7.84)	The Committee recommends that the Australian Government introduce a program to better connect adjacent industries with transferrable skills to the space industry.	<p><b>Agreed in Principle</b></p> <p>The Australian Space Agency is considering ways to secure the space workforce pipeline, informed by consultation across government and industry.</p> <p>This work will consider pathways for improving the interconnectedness of Australia's space industry with adjacent sectors to promote greater skills transfer, as well as consideration of options to attract international talent and commercial enterprise to the Australian space industry.</p>
37 (7.85)	The Committee recommends that the Australian Government examine ways to maximise the benefits of rural and regional Australia to foster the growth of the Australian space industry.	<p><b>Noted</b></p> <p>The Australian Government notes that the space industry is well positioned to support remote and regional communities, and is supportive of communities wishing to explore opportunities to engage in space activities.</p> <p>Australia's regional areas already host a significant number of space facilities used to communicate with satellites, improve space data and monitor deep space.</p> <p>The Australian Government has committed to an improvement in NBN satellite services that will improve regional Australian access to the internet through increased data allowances and unmetered usage between midnight and 4 pm.</p>

38 (7.86)	The Committee recommends that the Australian Government examine options to improve engagement and relocation of international workers and commercial enterprise to the space industry.	<p><b>Agreed</b></p> <p>The Australian Space Agency's consideration of ways to secure the space workforce pipeline will include consideration of options to attract global talent, including Australian expats, and commercial enterprise to the Australian space industry. This work will be informed and supported by the outcomes of the Jobs and Skills Summit.</p>
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