



Australian Government

A photograph of the Earth from space, showing the continent of Australia. A bright sun flare is visible on the left side of the frame, creating a lens flare effect. The background is a dark starry sky.

Principles for a
**National Space
Industry Policy**

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Foreword

Australia's ongoing social and economic wellbeing and our nation's security depend on access to space-based systems. Telecommunications, weather forecasting, banking, natural resource management, and transport also now rely on access to space-based systems and the information they provide.

This information helps us develop solutions to some of Australia's and the world's biggest challenges: from climate change and managing disasters to improving productivity and service quality. Location-based services using global navigation satellites systems are creating new modes of interaction between people and places.

Space also provides opportunities for Australian industry such as satellite operations and services, and data processing; it is important for Australia's capacity to develop and utilise space technology through our space science and research capabilities and assists in maintaining and strengthening international relationships and cooperations, leading to long term Australian skill development and employment.

Resilient access to space systems and the benefits they provide is of national importance to Australia.

However, Australia does not currently have a space policy that: provides a clear understanding of our space interests and objectives; identifies existing and emerging opportunities, areas of leverage and facilitates competitive advantages; and prepares us to meet future challenges effectively.

The Australian Government has recognised the need for a policy that will articulate a comprehensive national space strategy and facilitate better coordination of space activities across Government.



The national space industry policy will identify that Australia will continue to rely to a substantial degree on international support for critical national security and civilian functions enabled by space systems. Moreover Australia will continue to accept a substantial degree of dependence on global supply chains for space system capability. Cooperation and partnerships with other countries, including for joint activities, are essential to Australia's engagement with space.

The national space industry policy will, however, also identify priorities to develop Australia's nascent and growing capabilities to assure access to critical space-enabled services, encourage investment and to add to Australia's standing as a contributing and influential partner in our alliances and international relationships. The national space industry policy will further support Australian participation in research, innovation and skills development in areas of national significance or excellence and ensure we are able to make the most of space system capabilities and information, while taking into account our national security interests.

This document sets out the core principles that will be the backbone and direction of Australia's National Space Industry Policy. The policy will be consistent with the overall resource and policy guidance set down by the Australian Government and will provide a vision for Australia's future use of space.



Principles

1. Focus on space applications of national significance

Australian Government efforts will focus on the following space applications that have a significant security, economic and social impact.

Earth Observation: observing the Earth from space provides crucial data to support important national requirements, such as weather and warning services, disaster mitigation and climate change. It helps protect and manage our natural resources for sustainable development and the future health and prosperity of Australia. Regionally, Earth Observation is the basis for cooperative international efforts towards measurement, reporting and verification of forest carbon stocks.

Satellite Communications: space can be a significant tool for direct-to-home delivery of information, including TV broadcasting and broadband services, ensuring universal access, in addition to supporting Australia's defence commitments around the world. Space systems can be used to collect information and provide advanced communication networks with global coverage.

Position, Navigation and Timing: space based navigation and timing devices are critical to Australia's smart infrastructure and social, economic and national security. They improve the regulation of air traffic and shipping, facilitate the management of mobile fleets such as taxis, trucks and farm equipment, provide time-stamping for financial transactions, provide precision measurements for civil engineering, agriculture and water management. They assist individuals with navigation tasks and enable location-based services.

The Australian Government recognises that it is also the integration of these applications that underpins critical national capability in areas such as search and rescue operations; disaster management and recovery; utilities and infrastructure; mapping, planning and land management; weather and climate prediction, monitoring, verification and reporting.

While accepting that space launch activities could be undertaken in Australia if a commercial, scientific or educational venture wishes to do so, Australian Government support for such activities will be limited to: providing a regulatory environment under the *Space Activities Act 1998*; providing access to the generally available programs and services to support investment attraction, innovation and research; and, subject to preliminary assessment, facilitating government-to-government arrangements.

2. Assure access to space capability

Ensure resilient access to those space systems on which we rely now and to those important to our future national security, economic, environmental and social well-being.

Australia will continue to rely to a substantial degree on international support for critical functions enabled by space systems and the information which comes from them. And Australia will continue to accept a substantial degree of dependence on global supply chains for space system capability.

Australian access to international space systems has rested in part on geographic and other comparative advantages as a location for ground station facilities and for ground-based calibration and verification activities. Australia will continue to encourage further investment, to make the most of these advantages, and will manage the risks associated with over-reliance on their continuing importance.

Australian access to and effective use of international space systems and information has also relied on the respect it has achieved through international scientific and technical collaboration. Australia will enable further collaboration, through appropriate strategic investments in research infrastructure and expertise, to help secure these benefits into the future. As well as delivering high quality research outcomes, this collaboration is key to effective use of space-based information and extraction of value from our investments.

Access to radiofrequency spectrum is an important dimension of Australia's ability to leverage access to space system capability from international interest in locating ground station facilities in Australia. Australia will facilitate access to the radiofrequency spectrum in a way that balances the

requirements of space systems with other services, consistent with statutory requirements and principles for spectrum management.

Australia will ensure it has the infrastructure, capabilities and skills to access, process, store, integrate, use and distribute the data and information from space systems. This will include embracing all public and commercial stakeholders involved in providing space systems or space-enabled products and services.

The Australian Government acknowledges the linkages between space-related infrastructure and the Australian Government's *Critical Infrastructure Resilience Strategy*, and will consider opportunities for greater coordination and collaboration, particularly through the Trusted Information Sharing Network.

Australia will continue to develop its nascent and growing capabilities to assure access to critical space-enabled services. However, the Australian Government does not see an Australian satellite manufacturing or launch capability as an essential element of its approach to assured access to critical space-enabled services.

Australia will, over time, continue to invest, as appropriate, in systems, sensors or satellites, as identified through the Australian Government's National Broadband Network, and through international collaboration and partnerships. Any such investment will be within the overall resource and policy guidance provided by the Australian Government.

Consistent with the Australian Industry Participation National Framework, the Australian Government will encourage industry participation in its space activities.

3. Strengthen and increase international cooperation

Australia will strengthen those relationships and cooperative activities on which Australia relies, and will continue to rely to a substantial degree, for space system capabilities.

Relationships with key allies and partners including the United States, the United Kingdom, Canada and New Zealand, Japan and the European Union are a priority.

Australia will increase its engagement with others in the Asia-Pacific region, who are our regional neighbours with developing capabilities that may be complemented by Australia's space capabilities.

Australia will seek to strengthen and enhance its international partnerships to secure access to space systems and the information they provide, and to assist in areas such as research collaborations, skill and knowledge transfer and development, sharing resources and information, influencing capability development and encouraging the peaceful use of space.

Australia will identify and develop its nascent and growing capabilities and add to its standing as a contributing and influential partner in our alliances and international relationships.

The Australia Government will continue to encourage international science and technology collaboration, making the best use of limited resources.

Australia encourages and supports the data sharing principles of the Group on Earth Observations (GEO), which help ensure full, open, timely and low-cost access to Earth observation data from international space systems.

4. Contribute to a stable space environment

Australia will continue to support rules-based international access to the space environment; promoting peaceful, safe and responsible activities in space.

Australia will contribute in our alliances and international relationships to strengthening stability in space, including through monitoring and managing the space environment. Space situational awareness can support this by monitoring and predicting events in space such as collisions between satellites or with space debris.

Australia will support appropriate international space arms control and transparency and confidence-building measures, giving careful consideration to proposals to establish further international norms for space activities, including the European Union's proposal for an international *Code of Conduct for Outer Space Activities*.

Australia will support necessary national and international regulatory frameworks, including the *Space Activities Act 1998* and international protocols and treaties that support the use of space by the Australian Government, allies and commercial users.

5. Improve domestic coordination

Enhance the coordination, understanding and strategic direction of Australia's uses and approach to space.

Australia will maintain a central point of contact, coordination and policy development on civil space issues within the Australian Government and develop a whole-of-government approach to space systems, capabilities and issues. The Department of Defence will continue to lead on defence and military space related matters, while the Department of Foreign Affairs and Trade will continue to lead on space-related international security and arms control issues.

The Australian Government will continue to support information sharing across government agencies. Australia will leverage space-derived data acquisition and infrastructure investments to achieve whole of government outcomes.

Improved coordination of space-based technologies and services, including coordinated procurement of services from the growing commercial sector, will increase awareness of their relevance to Government policies and programs and their cross-government inter-dependencies. It will allow for the identification of key data requirements and synergies; help manage risk; exploit the full cost-effective potential of data access; and achieve efficiencies.

6. Support innovation, science and skills development

Promote collaboration between Australian public and private research and development organisations with industry in space-related activity, including space science, research and innovation in niche areas of excellence or national significance.

Space technologies and services can bring about greater efficiencies and encourage innovation making Australia more productive and competitive. Satellite communications can facilitate universal access to faster internet services, allowing people and business everywhere to take full advantage of new communication tools and next generation technologies. Earth observation from space supports climate change modelling and the management of natural resources, while global navigation satellites improve transport, farming and logistics systems and enable new-location based services. These space technologies and services will help transform existing industries and build new ones that provide quality jobs.

Collaboration between Australian public and private research and development organisations, including universities, with industry in space-related activity, including space science, research and innovation and linking these activities internationally to strengthen cooperation, will foster excellence, build on organisational competitive advantages and enhance national capabilities. This will ensure that our next generation of engineers, scientists and wider workforce are equipped with the skills needed to secure, and excel in, the jobs of the future.

Australia will use the context of space to engage students and teachers in science, mathematics and engineering education.

7. National Security and economic well-being

Australia's space activities will be used to enhance – and guard against threats to – our national security and economic well-being.

Australia will protect its national security and other interests, using domestic, alliance and international arrangements, as appropriate.

Australia will continue to improve the space capabilities of the Australian Defence Organisation to access space, gain the benefits of space-based systems and protect Australia from foreign exploitation by space-based capabilities.

Australia will develop government-business partnerships to progress technological space research and indigenous space capabilities which will contribute to national security, and identify and mitigate against vulnerabilities derived from our reliance on space assets that could impact our economic prosperity.

Australia will explore the development of new space-borne capabilities to address challenges such as natural disasters, energy and resource security, while improving our response to traditional security challenges.

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